

APX™ TWO-WAY RADIOS

APX 3000

DETAILED SERVICE MANUAL



Foreword

The information contained in this manual relates to all ASTRO® APX™ 3000 digital portable radios, unless otherwise specified. This manual provides sufficient information to enable qualified service shop technicians to troubleshoot and repair an ASTRO APX 3000 digital portable radio to the component level.

For details on the operation of the radio or level 1 or 2 maintenance procedures, refer to the applicable manuals, which are available separately. A list of related publications is provided in the section Related Publications.

Product Safety and RF Exposure Compliance

ATTENTION! Before using this radio, read the guide enclosed with your radio which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following web site which lists approved accessories: www.motorolasolutions.com/APX

Manual Revisions

Changes which occur after this manual is printed are described in FMRs (Florida Manual Revisions). These FMRs provide complete replacement pages for all added, changed, and deleted items, including pertinent parts list data, schematics, and component layout diagrams. To obtain FMRs, contact the Customer Care and Services Division (refer to [“Appendix A Replacement Parts Ordering”](#)).

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Notes

Document History

The following major changes have been implemented in this manual since the previous edition:

Edition	Description	Date
68012007045-A	Initial edition	Nov. 2012
68012007045-B	Updated schematics, PCB, Part list table for UHF1 and updated RX troubleshooting chart, pg 5.	Feb.2013
68012007045-C	Added in new bands: VHF & UHF2	Jun. 2013

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Related Publications

APX 3000 Digital Portable Radios Basic Service Manual	68012007044
APX 3000 Digital Portable User Guide.....	68012007043

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Commercial Warranty

Limited Warranty

MOTOROLA COMMUNICATION PRODUCTS

I. What This Warranty Covers And For How Long

MOTOROLA SOLUTIONS INC. (MOTOROLA") warrants the MOTOROLA manufactured Communication Products listed below (Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

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Product Accessories	One (1) Year

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This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. How To Get Warranty Service

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by Motorola through one of its authorized warranty service locations. If you first contact the company which sold you the Product, it can facilitate your obtaining warranty service. You can also call Motorola at 1-888-567-7347 US/Canada.

V. What This Warranty Does Not Cover

- A. Defects or damage resulting from use of the Product in other than its normal and customary manner.
- B. Defects or damage from misuse, accident, water, or neglect.
- C. Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- D. Breakage or damage to antennas unless caused directly by defects in material workmanship.
- E. A Product subjected to unauthorized Product modifications, disassemblies or repairs (including, without limitation, the addition to the Product of non-Motorola supplied equipment) which adversely affect performance of the Product or interfere with Motorola's normal warranty inspection and testing of the Product to verify any warranty claim.
- F. Product which has had the serial number removed or made illegible.
- G. Rechargeable batteries if:
 - any of the seals on the battery enclosure of cells are broken or show evidence of tampering.
 - the damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified.
- H. Freight costs to the repair depot.
- I. A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with MOTOROLA's published specifications or the FCC certification labeling in effect for the Product at the time the Product was initially distributed from MOTOROLA.
- J. Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- K. Normal and customary wear and tear.

VI. Patent And Software Provisions

MOTOROLA will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and MOTOROLA will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

- A. that MOTOROLA will be notified promptly in writing by such purchaser of any notice of such claim;
- B. that MOTOROLA will have sole control of the defense of such suit and all negotiations for its settlement or compromise; and
- C. should the Product or parts become, or in MOTOROLA's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit MOTOROLA, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by MOTOROLA.

MOTOROLA will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by MOTOROLA, nor will MOTOROLA have any liability for the use of ancillary equipment or software not furnished by MOTOROLA which is attached to or used in connection with the Product. The foregoing states the entire liability of MOTOROLA with respect to infringement of patents by the Product or any parts thereof.

Laws in the United States and other countries preserve for MOTOROLA certain exclusive rights for copyrighted MOTOROLA software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola software. MOTOROLA software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such MOTOROLA software or exercise of rights in such MOTOROLA software is permitted. No license is granted by implication, estoppel or otherwise under MOTOROLA patent rights or copyrights.

VII. Governing Law

This Warranty is governed by the laws of the State of Illinois, USA.

Notes

Chapter 1 Introduction

1.1 General

This manual includes all the information needed to maintain peak product performance and maximum working time for the ASTRO APX 3000 radio. This detailed level of service (component level) is typical of the service performed by some service centers, self-maintained customers, and distributors.

Use this manual in conjunction with the *APX 3000 764–870 MHz, UHF1 (380–470 MHz), UHF2 (450–520 MHz) and VHF (136–174 MHz) Digital Portable Radios Basic Service Manual*, which can help in troubleshooting a problem to a particular printed circuit (PC) board.

Conduct the basic performance checks outlined in the basic service manual first to verify the need to analyze the radio and to help pinpoint the functional problem area. In addition, you will become familiar with the radio test mode of operation, which is a helpful tool. If any basic receive or transmit parameters fail to be met, the radio should be aligned according to the radio alignment procedure.

Included in other areas of this manual are functional block diagrams, detailed theory of operation, troubleshooting charts and waveforms, schematics, and parts lists. You should become familiar with these sections to aid in determining circuit problems. Also included are component location diagrams to aid in locating individual circuit components and some IC diagrams, which identify some convenient probe points.

[Theory of Operation](#), contains detailed descriptions of the operations of many circuits. Once you locate the problem area, review the troubleshooting flowchart for that circuit to fix the problem.

1.2 Notations Used in This Manual

Throughout the text in this publication, you will notice the use of warnings, cautions, and notes. These notations are used to emphasize that safety hazards exist, and care must be taken and observed.

NOTE: An operational procedure, practice, or condition that is essential to emphasize.



Caution

CAUTION indicates a potentially hazardous situation which, if not avoided, might result in equipment damage.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or injury.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or injury.

Chapter 2 Radio Power

This chapter provides a detailed circuit description of the power distribution of an ASTRO APX 3000 radio.

2.1 General

In the ASTRO APX 3000 radio, power (B+) is distributed to the main board.

Power for the radio is provided through a battery supplying a nominal 7.5 Vdc directly to the transceiver. The following battery types and capacities are available:

Table 2-1. IMPRES Batteries

Part Number	Description
NNTN8305_	IMPRES Li-Ion Ultra-Slim Battery (1250mAHr)
NNTN8128_	IMPRES Li-Ion Slim Battery (1900mAHr)
NNTN8129_	IMPRES Li-Ion High Capacity Battery (FM, 2300mAHr)
PMNN4424_	IMPRES Li-Ion High Capacity Battery (2300mAHr)

Chapter 3 Theory of Operation

This chapter provides a detailed circuit description of the ASTRO APX 3000 mainboard. When reading the theory of operation, refer to the appropriate schematic and component location diagrams located in the back of this manual. This detailed theory of operation can help isolate the problem to a particular component.

The ASTRO APX 3000 radio, which is a single-band synthesized radio, is available in the UHF1 (380–470 MHz), UHF2 (450–520 MHz), VHF (136–174 MHz) and 700/800 MHz (764 to 870 MHz) frequency bands. All ASTRO APX 3000 radios are capable of both analog operation (12.5 kHz or 25 kHz bandwidths), ASTRO mode operation (12.5 kHz digital only), and X2-TDMA mode (12.5 kHz only).

The ASTRO APX 3000 radio ([Figure 3-1](#)) consists of the following:

- **Main Board** – contains all transmit, receive, and frequency generation circuitry, including the digital receiver back-end IC and the reference oscillator. The mainboard also contains a dual core processor, which includes both the micro controller unit (MCU) and a digital signal processor (DSP) core, the processor's memory devices, an audio and power supply support integrated circuit (IC), a digital support IC, external power amplifier, as well as combination Global Positioning System (GPS) and Bluetooth 2.1 IC and front-end circuitry. The main board also contains a Bluetooth Controller (ACVR) IC and supporting circuitry, a 3-axes digital accelerometer and a Tye III Secure IC (MACE).
- **Top Control**– Contains an ON/OFF switch button and a programmable top button.
- **Back Kit**–Consist of one TX/RX LED that is solid amber upon receive and red on PTT. Bottom LED represents the Bluetooth LED that will emit Blue color LED at programmable flashing rate.

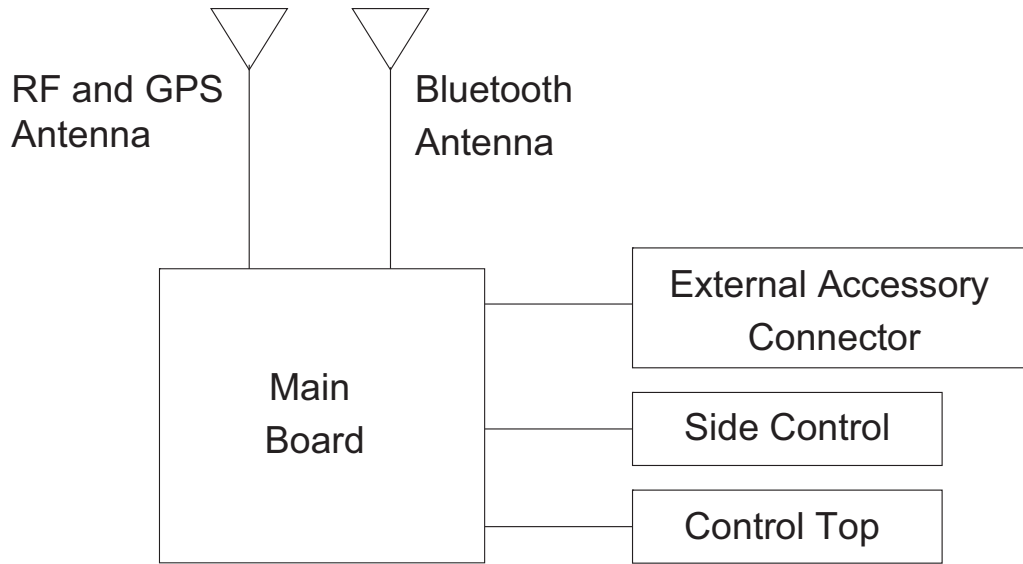


Figure 3-1. APX 3000 Overall Block Diagram

3.1 Main Board

The main board performs the transmitter and receiver functions necessary to translate between voice and data to modulated radio-frequency (RF) carrier at the antenna. The main board contains all the radio's RF circuits for the following major components:

- Receiver
- Transmitter
- Frequency Generation Unit (FGU)
- Controller

Figure 3-2, Figure 3-3 and Figure 3-4 illustrates the UHF1, UHF2, VHF and 700/800 MHz transceiver block diagrams.

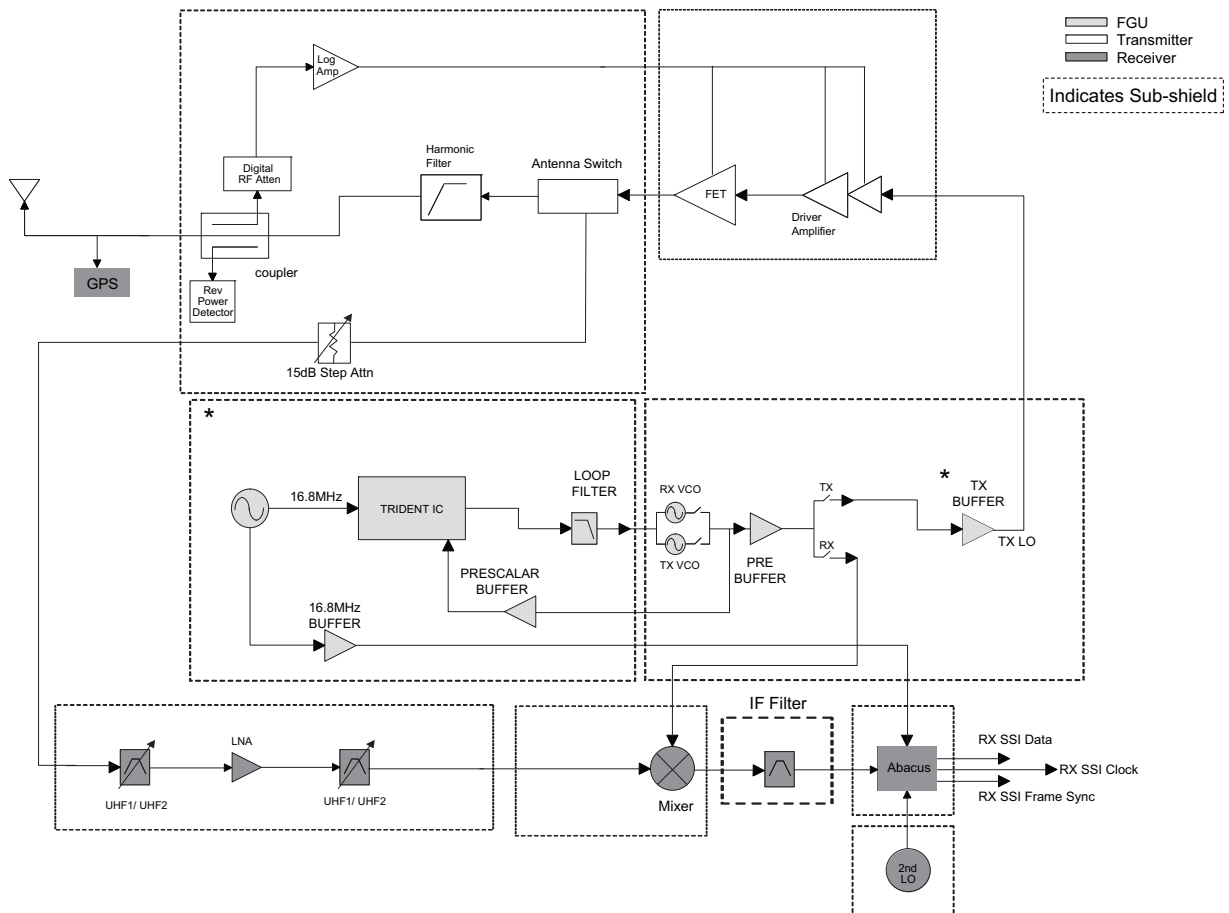


Figure 3-2. Transceiver (UHF1/ UHF2) Block Diagram (Power and Control Omitted)

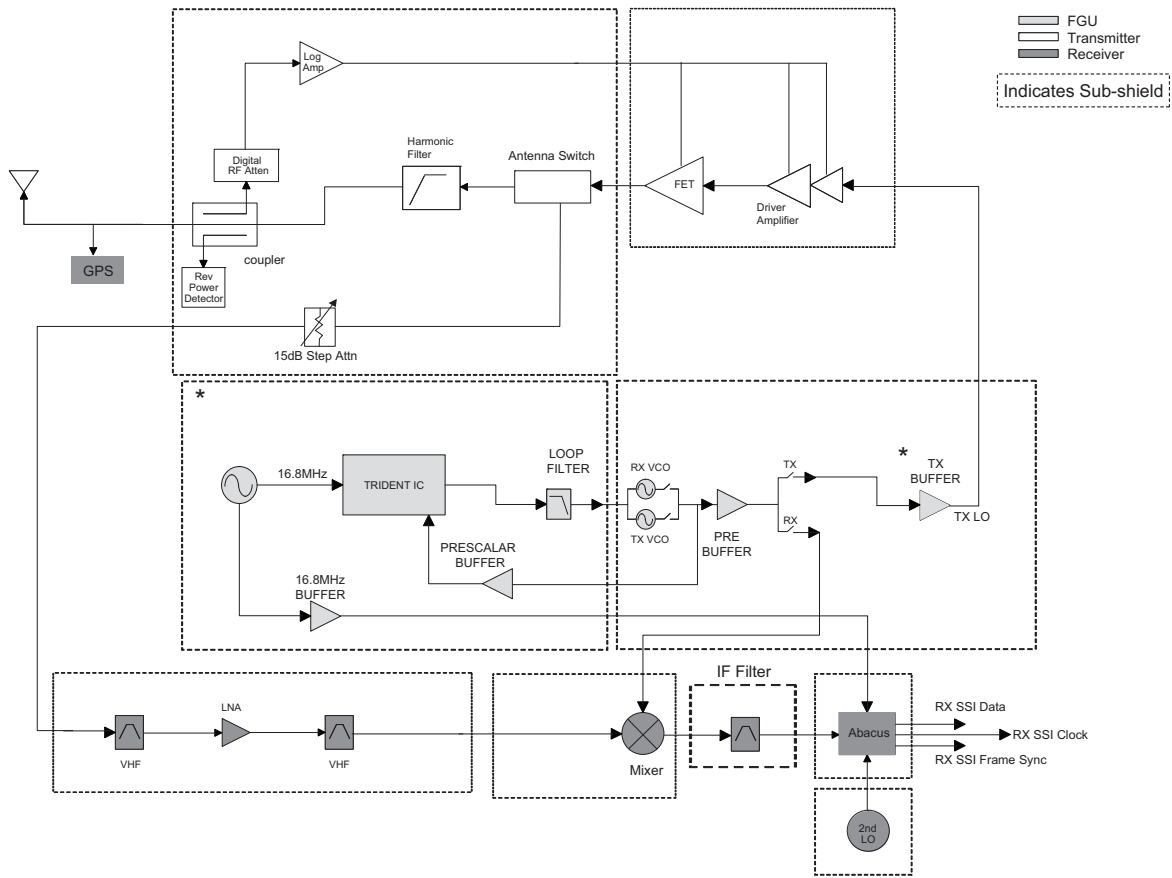


Figure 3-3. Transceiver (VHF) Block Diagram (Power and Control Omitted)

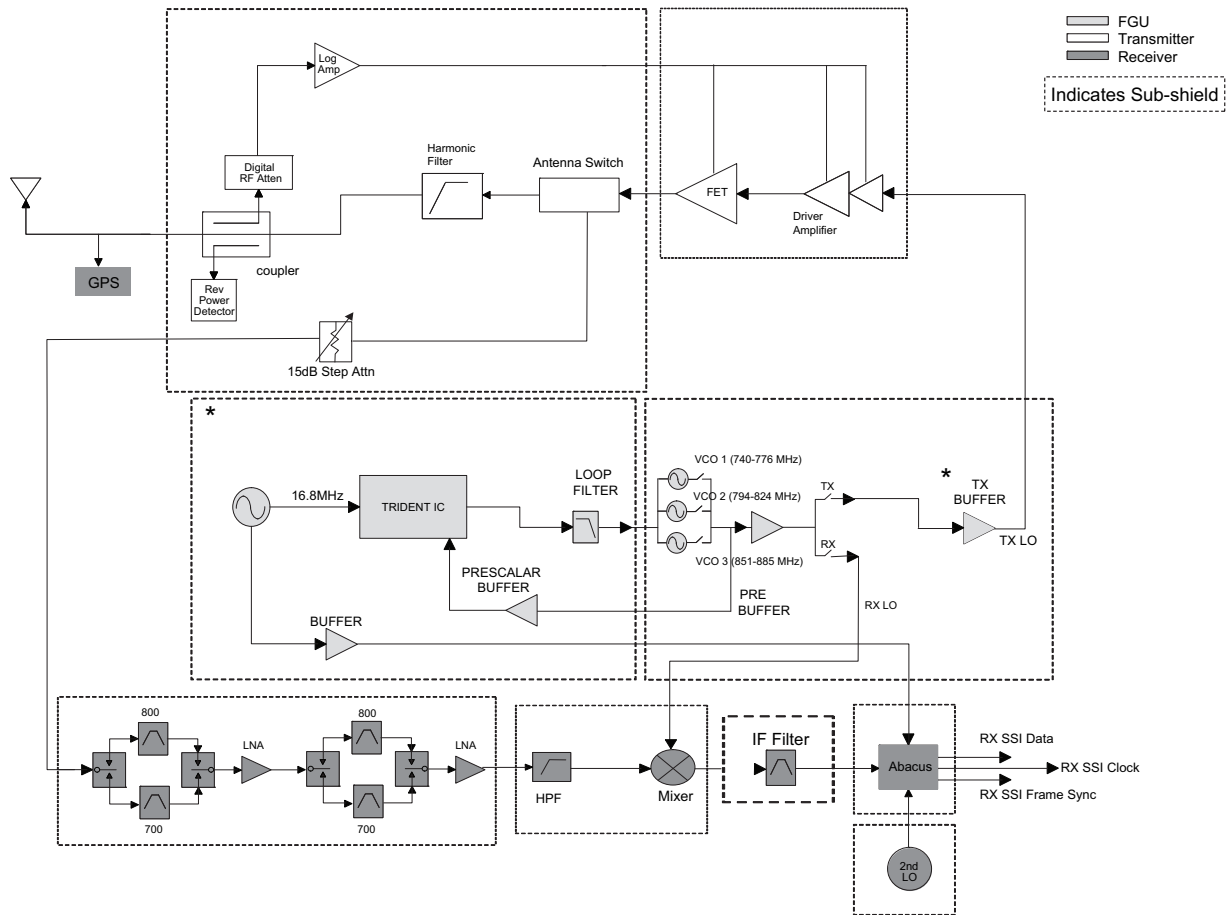


Figure 3-4. Transceiver (700/800 MHz) Block Diagram (Power and Control Omitted)

3.1.1 Interconnections

This section describes the various interconnections for the main board.

3.1.1.1 Battery Connector M101

Battery connector M101 solders to the transceiver printed circuit board. The connector has 5 gold plated contacts that mate with the battery, two contacts for positive, two for negative and one for the Dig_Battery_Data. Signal descriptions are in [Table 3-1](#).

Table 3-1. Battery Connector J3

Pin No.	Signal	Description
1	DC_BATT	Battery positive terminal, nominally 7.5 Vdc
2	Dig_Battery_Data	Battery status, from battery to controller
3	Ground	Battery negative terminal, tied to PCB ground

3.1.1.2 Power Conditioning Components

DC power-conditioning components include zener diodes, capacitors, ferrite beads, a power inductor, and the fuse. Diodes VR200 and VR101 provide over-voltage protection. Ferrite beads (designated E, etc.) and capacitors suppress electromagnetic interference from the main board.

The power-line filter consisting of L200, C202, and C203 suppresses digital noise from the controller board switching power supplies that could degrade the transmitter spectral purity.

Ground clips M103, M104 and M105 make contact between the main board ground and the radio chassis. The chassis connection is a necessary electrical reference point to complete the antenna circuit path. Shields SH1 through SH17 appear on the schematic to show their connection to ground.

3.1.2 Receiver

The RF signal is received at the antenna and is routed through the Harmonic Filter, followed by the Antenna Switch and the 15dB Step Attenuator IC. The latter contains a switchable attenuator that is enabled at predetermined RF power thresholds present at the antenna port. The output of the attenuator leads to the receiver front end section.

- UHF1/ UHF2 band (See Figure 3-5./ See Figure 3-6.)
- VHF band (See Figure 3-7.)
- 700/800 MHz band (See Figure 3-8.)

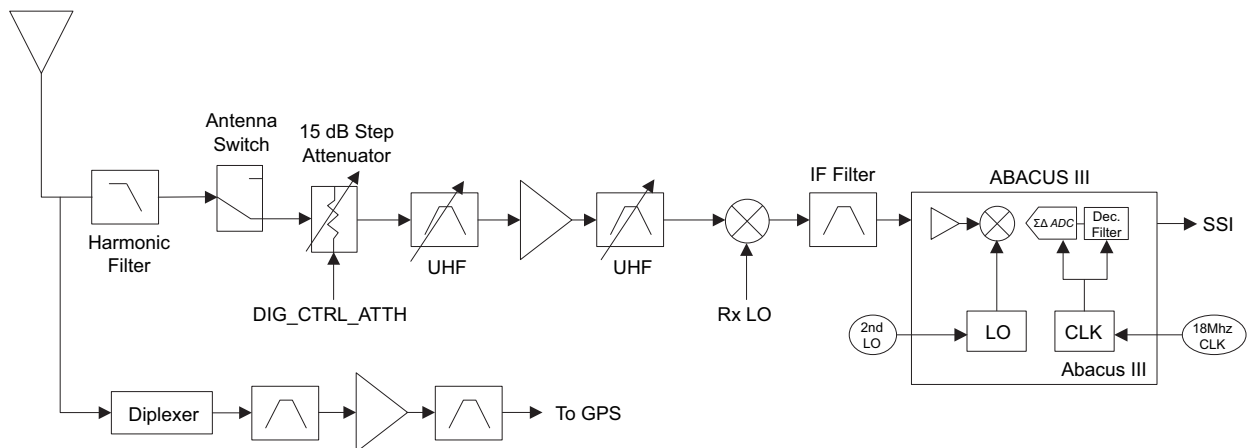


Figure 3-5. Receiver Block Diagram (UHF1)

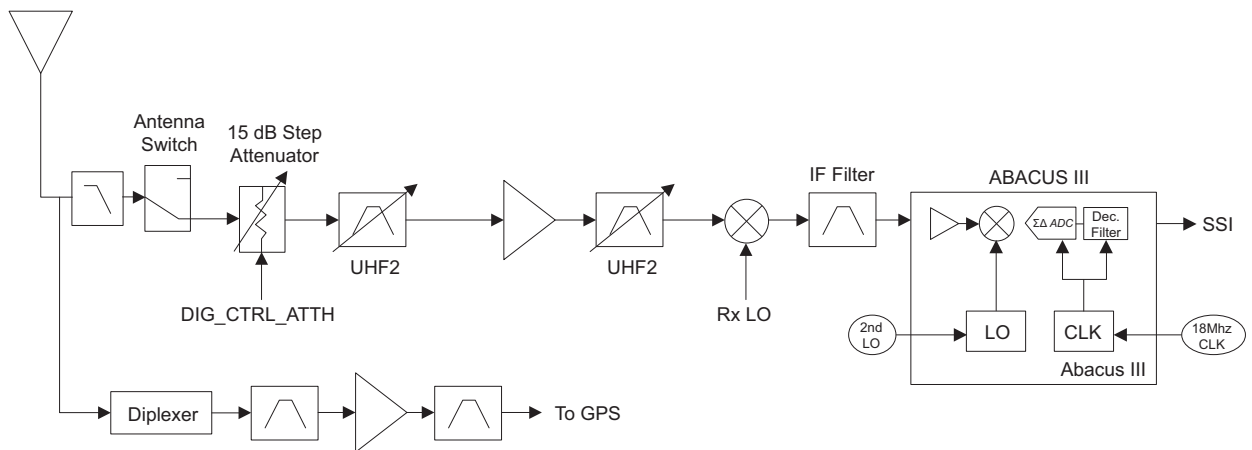


Figure 3-6. Receiver Block Diagram (UHF2)

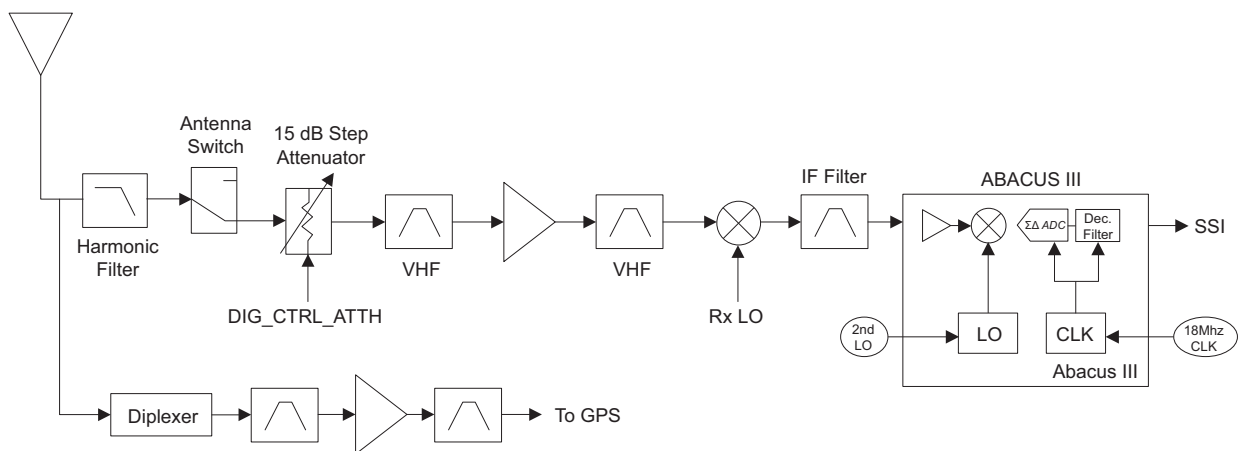


Figure 3-7. Receiver Block Diagram (VHF)

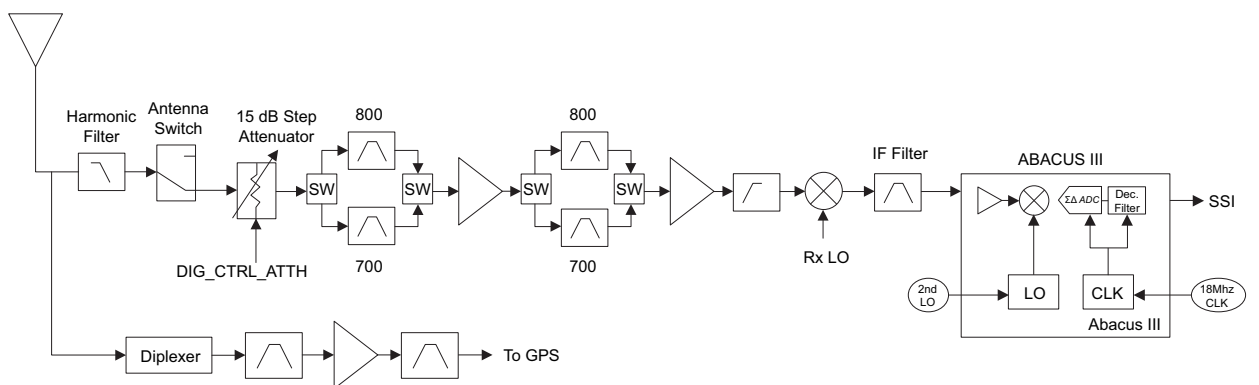


Figure 3-8. Receiver Block Diagram (700/800 MHz)

3.1.2.1 UHF1 Front-End

From the 15 dB Step Attenuator (U2602), a UHF signal is routed to the first pre-selector filter followed by a Low Noise Amplifier (LNA) and a second pre-selector filter. Both filters are discrete and tunable designs and are used to band limit the incoming energy and suppress known spurious responses such as Image and the $\frac{1}{2}$ IF spur. The LNA active device is an NPN transistor (U1932) with active bias provided by transistor pair (Q1922).

The output of the second pre-selector filter is applied to the RF port of the Mixer IC (U507) via a balun transformer (T506). The Mixer IC is driven by a Local Oscillator (LO) signal at the LO port to down-convert the RF signal to a 109.65 MHz intermediate frequency (IF). The down converted IF signal is passed through a crystal filter (FL502) which drives the input of the Abacus 3 Analog to Digital Converter IC (AD9864) (U601).

3.1.2.2 UHF2 Front-End

From the 15 dB Step Attenuator, a UHF2 signal is routed to the first pre-selector filter followed by an LNA and a second pre-selector filter. Both filters are discrete and tunable designs and are used to band limit the incoming energy and suppress known spurious responses such as Image and the $\frac{1}{2}$ IF spur. The output of the second pre-selector filter is applied to the RF port of the Mixer IC. The Mixer IC is also excited by a Local Oscillator (LO) signal at the LO port to down-convert the RF signal to a 109.65 MHz intermediate frequency (IF). The down converted IF signal is passed through a crystal filter which drives the input of the Abacus 3 Analog to Digital Converter IC (AD9864).

3.1.2.3 VHF Front-End

From the 15 dB Step Attenuator (U2702), a VHF signal is routed to the first pre-selector filter followed by a Low Noise Amplifier (LNA) and a second pre-selector filter. Both filters are discrete designs and are used to band limit the incoming energy and suppress known spurious responses such as Image and the $\frac{1}{2}$ IF spur. The LNA active device is an NPN transistor (U304) with active bias provided by transistor pair (Q303). The output of the second pre-selector filter is applied to the RF port of the Mixer IC (U507) via a balun transformer (T506). The Mixer IC is driven by a Local Oscillator (LO) signal at the LO port to down-convert the RF signal to a 109.65 MHz intermediate frequency (IF). The down converted IF signal is passed through a crystal filter (FL502) which drives the input of the Abacus 3 Analog to Digital Converter IC (AD9864) (U601).

3.1.2.4 700/800 MHz Front-End

From the 15 dB Step Attenuator (U2302), a 700 MHz or 800 MHz band signal is routed to an SPST band select switch (U402) which selects the 700 or the 800 band signal and routes it to the appropriate first pre-selector filter (FL401). A second band select switch (U404) selects the output of the appropriate filter and applies it to an LNA followed by a similar pre-selector filter/ band-select switch circuit. The signal is then routed to a second LNA (U407) whose output is applied to a discrete image filter. Both preselector filters are Surface Acoustic Wave designs used to band limit the received energy and suppress known spurious responses such as Image and the $\frac{1}{2}$ IF spur.

The output of the discrete image filter is applied to the RF port of the Mixer IC (U507) via a balun transformer (T506). The Mixer IC is driven by a Local Oscillator (LO) signal at the LO port to down-convert the RF signal to a 109.65 MHz intermediate frequency (IF). The down converted IF signal is passed through a crystal filter (FL502) which drives the input of the Abacus 3 Analog to Digital Converter IC (AD9864)(U601).

3.1.2.5 Analog To Digital Converter

The ADC IC's front end down converts the first IF to a second IF, a 2.25 MHz signal, by mixing a 107.4MHz LO signal generated by an integrated synthesizer and external VCO with active device U602 and resonator L604. The second IF is sampled at 18 MHz, a signal generated by an integrated clock synthesizer and VCO device with external resonator L605.

The sampled signal is decimated by a factor of 900 to 20 kHz and converted to SSI format at the ADC's output. The Serial Synchronous Interface (SSI) serial data waveform is composed of a 16 bit in-phase word (I) followed by a 16 bit Quadrature word (Q). A 20 kHz Frame Synch and a 1.2 MHz clock waveform are used to synchronize the SSI IQ data transfer to the Digital Signal Processor IC (OMAP) for post-processing and demodulation.

3.1.3 Transmitter

The transmitter takes modulated RF from the FGU and amplifies it to the rated output power to produce the modulated carrier at the antenna.

NOTE: Refer to List of Transceiver Schematics and Board Overlays for a listing of transmitter-related schematics that will aid in the following discussion.

The transmitter (Figure 3-9 and Figure 3-10) for the UHF1/UHF2/VHF radio consists of one MOSFET high power transistor for the UHF1/UHF2/VHF band. The same topology applied for the 700/800 MHz radio (Figure 3-11) where one MOSFET high power transistor is used for the 700/800 MHz band. The high power transistor is driven by an RF driver IC that receives its input signal from the voltage controlled oscillator. Transmitter power is controlled by a discrete power control circuit that senses the output of a directional coupler and adjusts PA control voltage to maintain the correct power level. The TX signals pass through the antenna switch that will provide switching mechanism from transmit to receive path. The signal then route through each respective harmonic filters, an embedded directional coupler and finally to the antenna.

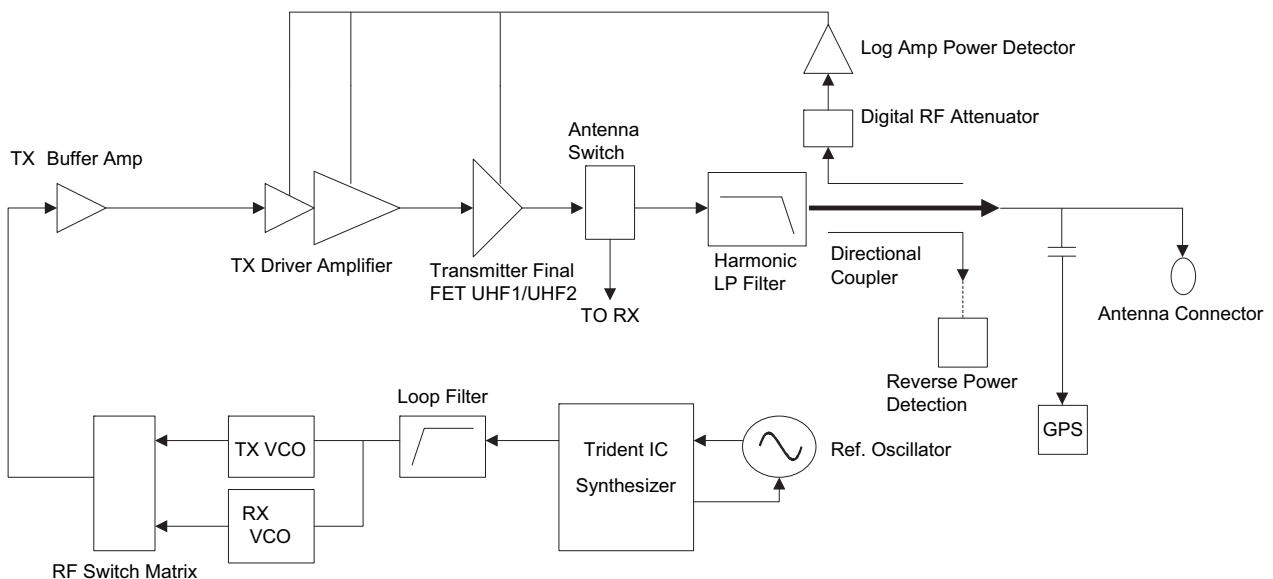


Figure 3-9. Transmitter Block Diagram (UHF1/ UHF2)

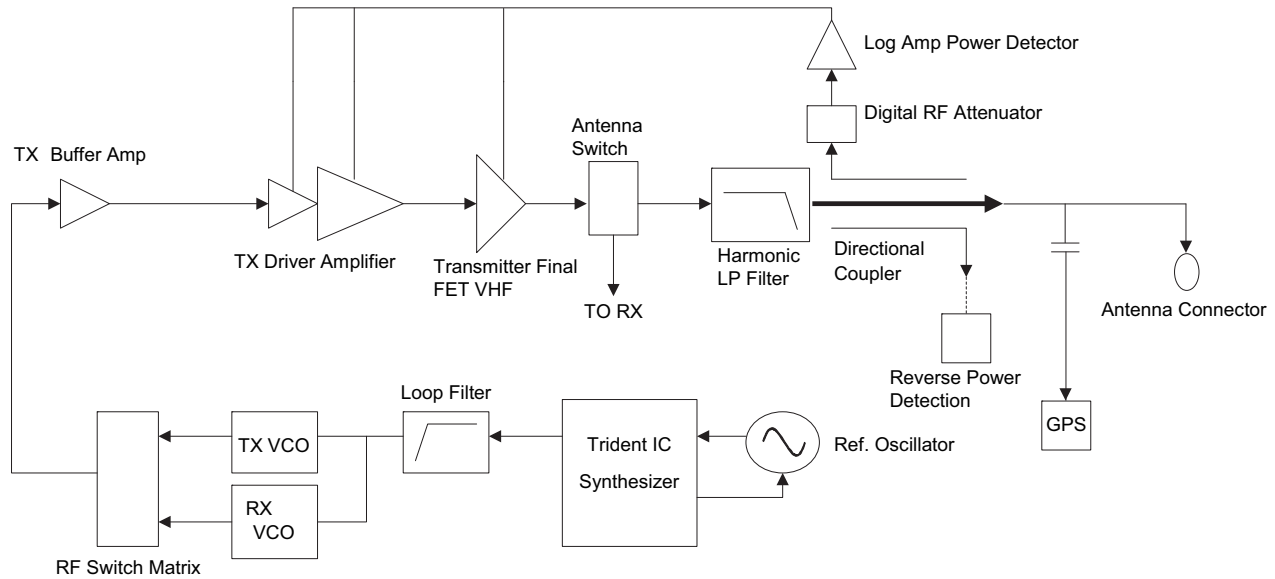


Figure 3-10. Transmitter Block Diagram (VHF)

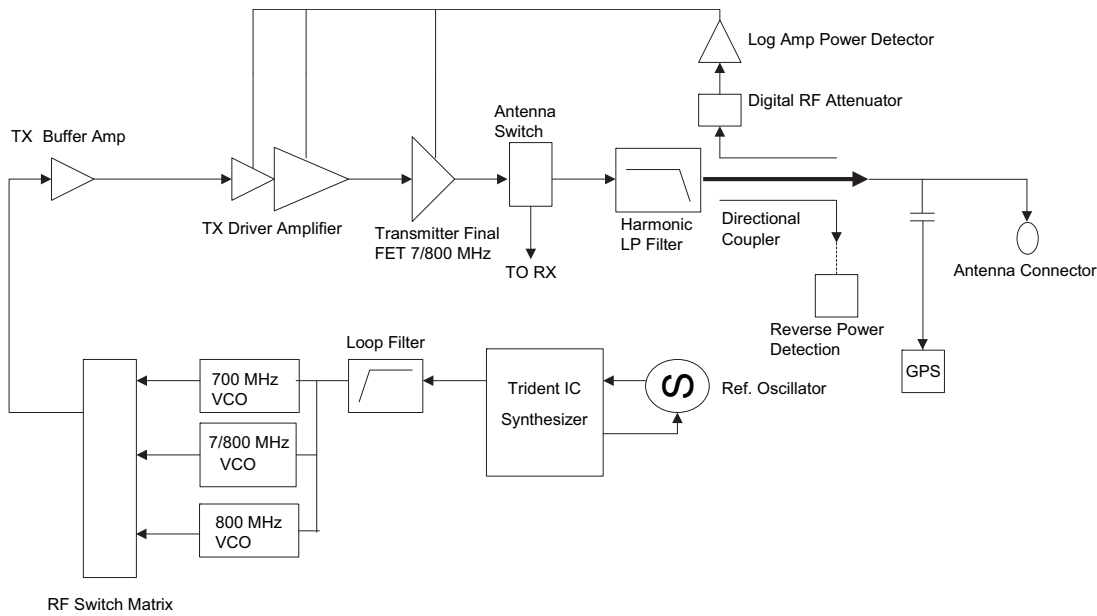


Figure 3-11. Transmitter Block Diagram (700/800 MHz)

3.1.3.1 Driver Amplifier

The driver amplifier IC (UHF1/ UHF2 – U1602, VHF– U902 and 700/800 MHz– U1002) contains one LD MOS FET amplifier stages and an internal resistor bias networks. Pin 16 is the RF input. Modulated RF from the FGU, at a level of +3 dBm \pm 2 dB, is coupled through a blocking capacitor to the gate of FET-1. An LC inter-stage matching network connects the first stage output VD1 to the second stage input G2. The RF output from the drain of FET-2 is pin 6 (RFOUT1). Gain control is provided by a voltage applied to pin 1 (VCNTRL). Typical output power is about +27 dBm (500 mW) with VCNTRL at 5.5 V.

UHF1/ UHF2: L1601 and C1604 is the inter-stage matching network of the driver amplifier IC, C1607, C1610, L1604, C1613, C1614, L1605 and C1616 serves as matching circuit of the driver IC to the final device of Q1601. Capacitor C1607 also works as DC block to the circuit.

VHF: C927, L907 C920, C921, L908, C922, L909, C924, L910, C923, C928 and C925 are the elements of the output matching network apart from a transmission-line structure. The Gate biasing is applied through a biasing network consist of R903, R904, R905, C915 and C917.

700–800 MHz: L1002, C1002 and C1004 are the inter-stage matching network. Components C1013 and C1023 match the output impedance to the input of the final device (Q1001); capacitor C1013 also serves as the DC block.

3.1.3.2 Power Amplifier Transistor

The power amplifier transistors, (UHF1/UHF2 – Q1601, VHF – Q901 and 700/800 MHz – Q1001) are Silicon N-channel MOSFETs housed in a high-power, surface-mount, PMM package. To prevent thermal damage, it is essential that the heat sink of the power module be held in place against the radio chassis using the RF board screw. All FETs are matched using a lowpass topology. Drain bias is applied through L1606 for UHF1/ UHF2, L906 for VHF and L1007 for the 700/800 MHz. Gain is dynamically controlled by adjusting the gate bias. The gate is insulated from the drain and source so that gate bias current is essentially zero

UHF1/ UHF2: C1620, C1621, C1622, L1609, C1624, L1610, C1623, C1628 and C1625 are the elements of the output matching network apart from a transmission-line structure. The Gate biasing is applied through a biasing network consist of R1603, R1604, R1605, C1615 and C1617.

VHF: C927, L907 C920, C921, L908, C922, L909, C924, L910, C923, C928 and C925 are the elements of the output matching network apart from a transmission-line structure. The Gate biasing is applied through a biasing network consist of R903, R904, R905, C915 and C917.

700–800 MHz: The input impedance-matching network is C1013 and C1023. A transmission-line structure and C1019, C1020, L009 and C1021 form the output-matching network. Gate bias applied through R1003, R1004, C1015 and R1005.

3.1.3.3 Directional Coupler

A directional coupler senses the transmitter forward and reverse power as control signals in the transmitter's automatic level control (ALC) loop. Isolated ports are terminated with external resistors.

UHF1/ UHF2/ VHF/ 700–800 MHz: The directional coupler consists of three embedded transmission lines.

3.1.3.4 Harmonic Filter

The harmonic filter is a high-power, low-loss, low-pass filter. Its purpose is to suppress transmitter harmonics. The filter also improves receiver out-of-band rejection. Shield SH8 must be in place to achieve the required stop band rejection.

UHF1: The harmonic filter apply discrete components as the circuit line up. The pass band is up to 520 MHz while the stop band is above 1200 MHz.

UHF2: The harmonic filter apply discrete components as the circuit line up. The pass band is from 450–520 MHz while the stop band is above 900 MHz.

VHF: The harmonic filter apply discrete components as the circuit line up. The pass band is up to 174 MHz while the stop band is above 550 MHz.

700–800 MHz: The harmonic filter uses both discrete components and transmission lines. The pass band is up to 870 MHz, and the stop band is above 1500 MHz.

3.1.3.5 Antenna Switch

The antenna switch consists of discrete components which comprise three ports, transmit, receive and output path. During transmit mode, the antenna switch will be turned ON via Filter_Raw B+ and input logic gate from Ant_Swi. When the conditions are fulfilled, the antenna switch will be turned ON and the signal will route to the output port as it will notice high impedance on the receive path. The same concept is applied during the receive mode where the switch is in OFF state, which provides high RF impedance on the transmit mode.

3.1.3.6 Reverse Power Protection

The radio, while in receive mode is constantly monitoring the input power from the antenna. This power is sensed by the directional coupler and channeled into an RF detector U1106. The matching network between the coupler and the detector consists of R1107, L1102, C1105 and C1107. Once the input RF level exceeds a certain limit, the detector trips a logic circuit which enables attenuation to protect the RF front end. This is to protect the front end from receiving large signal damage.

3.1.3.7 Transmitter Power Control

In TX mode, the transmitter Automatic Level Control (ALC) section enables the transmitter and controls the TX power in all modes. Power control is based on a unique dual control loop approach which utilizes voltage control in one loop and current control in the other. The voltage control loop is normally used in all transmit modes. The only time the current control loop controls TX power is during the end of a TX slot in TDMA (F2) mode in the event transmitter saturation is detected. Several other functions included in the TX ALC section of the radio are RX/TX switching, thermal cutback of power, current cutback of power, and reverse power detection with means to disable the receiver in the event of high reverse power at the antenna port.

3.1.3.7.1 Voltage Control Mode

The heart of the voltage control loop is a logarithmic amplifier based power control IC, U1105. Quad DAC, U1125, receives the power tuning values via the SPI bus and converts them into a voltage at VOUTB. Resistors, R1121 and R1122, form a voltage divider to set the full-scale value of the DAC, in this case approximately 1.4V. This power set voltage is then fed to the power control IC through the current cutback op amp, U1130, and then into a lesser-of-two voltage decision circuit, consisting of U1126 and U1127. This circuit, used exclusively in voltage control mode, provides the important function of combining the MAKO ramp output with the DAC power set voltage to permit power leveling since the MAKO DAC max amplitude cannot be controlled during TDMA mode. In all other TX modes, the MAKO output is a fixed voltage, approximately 1.5V, which is always higher than the DAC control voltage. The lesser-of-two circuit will then select the smaller input, the set voltage from U1125, resulting in immediate TX turn on in analog or ASTRO mode. IN TDMA mode, the MAKO line is a piecewise linear ramp whose timing is in accordance with F2 requirements. At $t = 0$, the ramp line is smaller than the TX set voltage so the MAKO ramp will control the TX power level, resulting in a slower ramping up of the TX power. This continues until the MAKO ramp output reaches the level of the power tuning DAC (which is always lower than the MAKO ramp maximum) which causes control of TX power to be turned over to the power tuning DAC. The output of the selector circuit passes through a 2nd order low pass filter (U1142) and then to the log amp, U1105. The low pass filter performs the dual function of improving transient ACPR by transforming a linear ramp with corners into a smooth second order waveform and by acting as a reconstruction filter for the DAC. The log amp converts RF power fed back from the TX PA into a current which is summed with the current from the conversion of the setpoint voltage from DAC U1125. Any imbalance between the RF input level and the level corresponding to the setpoint voltage is corrected at the VAPC output of the log amp which in turn drives the control voltage input of the RFPA. The setpoint voltage effectively nulls the error in the loop caused by changes in the RF level fed back to the log amp. RF from the RFPA is coupled through a directional coupler embedded in the PC board and passed through a LC equalizer and then to digital attenuator, U1112, which is used to implement thermal cutback in the

event of an over-temperature condition. Current protection and limiting in voltage control mode is provided by cascaded difference amplifiers, U1129 and U1130. A fixed threshold is provided by voltage divider, R1169 and R1170. SPDT switch, U1144, changes the current limit threshold based on the type of battery present. This threshold is based on the conversion characteristic of the current shunt monitor circuit of U1101. The output of the current shunt monitor is fed to the first stage of the difference amplifier. The setpoint voltage for the log amp is fed through the second stage of the difference amplifier. When the current shunt monitor voltage exceeds the fixed threshold, the first stage produces an output greater than 0V. Once the output of the first stage (U1129) is greater than zero, this value is subtracted from the setpoint voltage to the log amp in the second stage (U1130), resulting in a progressive cutback of power in the event PA current continues to climb above the threshold.

3.1.3.7.2 Thermal Cutback

Thermal cutback works only in voltage control mode, which is the primary mode of TX power control. Temperature is sensed by IC U1103 and is located next to RFPA finals. Comparators, U1113 and U1114, establish two temperature trip points. The combined logic of the comparators and logic gate, U1121, together with the truth table of the digital attenuator IC, U1112, determine the amount of attenuation of the RF feedback to the log amp. Rated TX power is achieved with the attenuator at its maximum attenuation of 7 dB. The first temperature threshold will subtract 3 dB of TX power and the next (highest) trip point an additional 3 dB for 6 dB total.

3.1.3.7.3 Current Control Mode

In TDMA mode, excessive transient adjacent channel splatter caused by the RFPA, when it is under a greater degree of compression than is expected at nominal supply voltage, is mitigated through a system of saturation detection and switching of the TX power control mode from the voltage control loop to the current control loop. Comparator U1131 compares the log amp output in voltage control mode to a threshold voltage from DAC C", which sets the threshold for handover to current control mode and establishes the upper supply rail for the output of current loop integrator, U1104. This threshold is tuned in the factory to correspond to transmitter rated power which means that the threshold for handover occurs at a level corresponding to rated power minus 6% which is set by divider R1162 and R1163. When PA saturation exceeds this threshold and the MAKO T/R control signal (DIG_GPIO49) and DIG_DMCS combine logically to signal the end of the data portion of the TX slot, D-flip flop U1132 latches which in turn switches (via U1133 SPDT switch) the output of the current loop integrator, U1104, which sends the control voltage to either the UHF1, UHF2, VHF or 700/800 MHz band PA.

Integrator, U1104, acts as a PI (Proportional Integral) controller in current mode. Current feedback from the PA is obtained through current shunt resistor R1103 and sent to the current shunt monitor/ current to voltage converter, U1101. U1101 has a known gain characteristic for the current-to-voltage conversion. The MAKO ramp is passed through a RC low pass filter for smoothing and on to the current control integrator where it is proportioned with the voltage output of the current shunt monitor. The integrator supply voltage comes from DAC C" of the Quad DAC, U1125. By way of tuning the DAC C" value to match TX rated (tuned) power, this approach fixes the upper limit of the control voltage in current control mode to correspond to the tuned power level, further reducing excess adjacent channel splatter.

3.1.3.7.4 PA Offset, Control Voltage Gain Scaling

An offset voltage is applied to the control voltage at a summing junction made up of R1174 and R1154 as a means of further improving transient adjacent channel splatter in the freq band by pre-biasing the PA. The output of SPDT switch, U1145, is sent to a non-inverting, gain-scaling amplifier, U1601 (UHF1/ UHF2), U901 (VHF) or U1001 (700/800 MHz) and then to the PA driver and final.

3.1.4 Frequency Generation Unit (FGU)

The frequency-generation function is performed by several ICs; multiple voltage-controlled oscillators (VCOs); and associated circuitry. The reference oscillator provides a frequency standard to the Trident IC, which controls the VCOs. There are also buffers that amplify the VCO signal to the correct level for the next stage. [Figure 3-12](#) and [Figure 3-14](#) below shows a block diagram of the FGU Section.

UHF1/ UHF2: Two VCOs are employed: one to generate the first RX LO and the other to generate the transmit injection signals.

VHF: Two VCOs are employed: one to generate the first RX LO and the other to generate the transmit injection signals.

700–800 MHz: Three VCOs are used to cover the entire 700/800 MHz band.

- VCO1 covers the RX 800 MHz band and the TX 700 MHz (764–776 MHz) band
- VCO2 covers the TX 700/800 MHz (794–824 MHz) band
- VCO3 covers the TX 800 MHz (851–870 MHz) band and the RX 700 MHz band

NOTE: Refer to List of Transceiver Schematics and Board Overlays for a listing of FGU-related schematics that will aid in the following discussion.

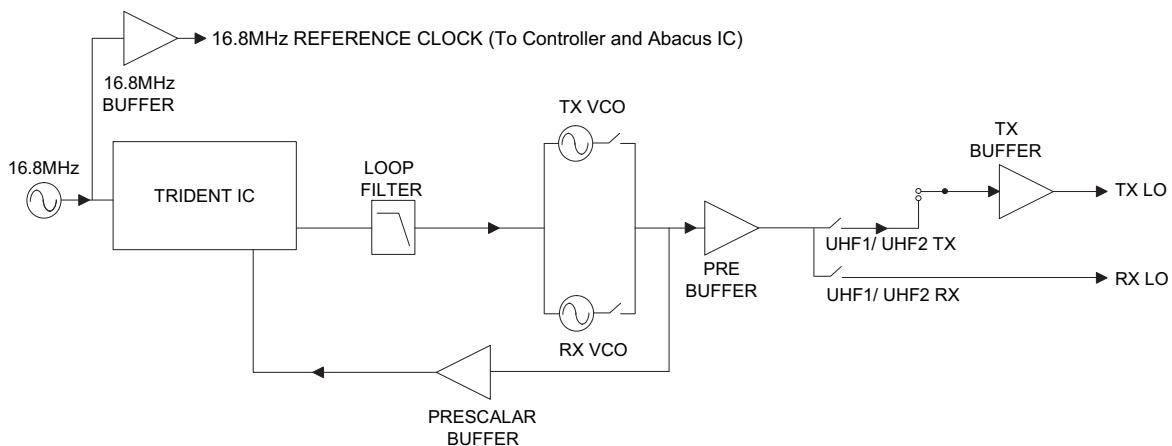


Figure 3-12. Synthesizer Block Diagram (UHF1/ UHF2)

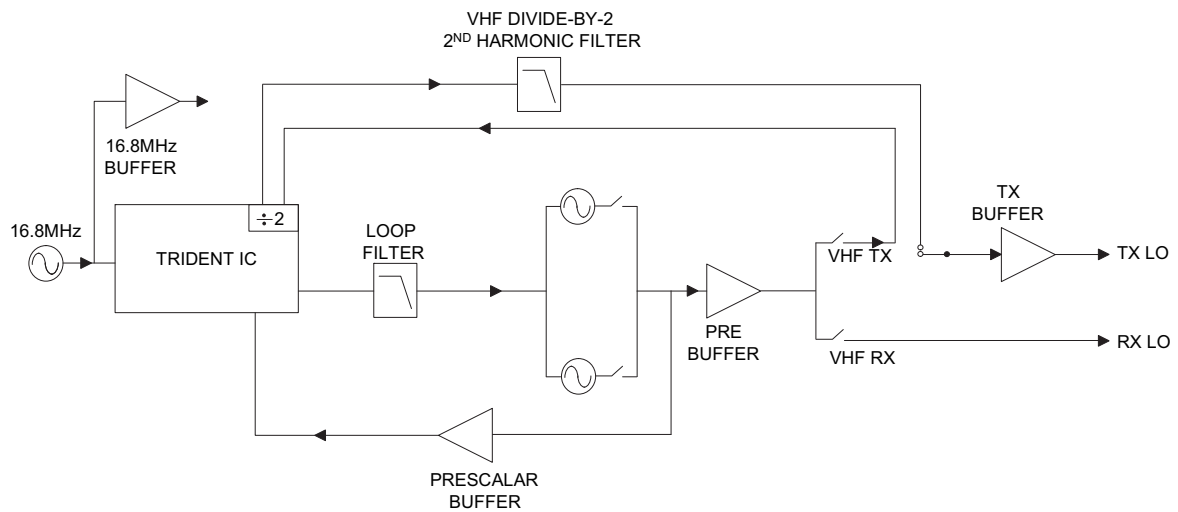


Figure 3-13. Synthesizer Block Diagram (VHF)

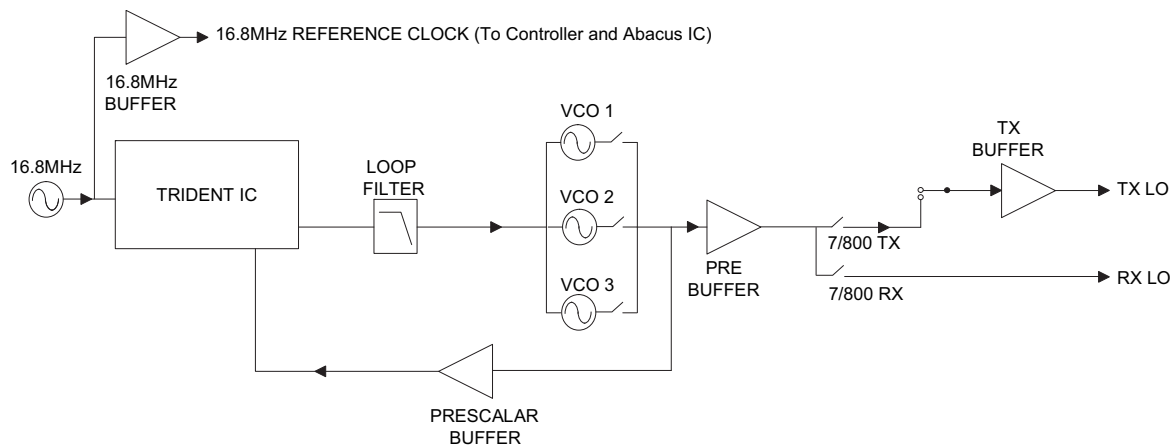


Figure 3-14. Synthesizer Block Diagram (700/800 MHz)

3.1.4.1 Reference Oscillator Y701

The radio's frequency stability and accuracy is derived from the Voltage-Controlled Temperature-Compensated Crystal Oscillator (VCTCXO), Y701. This 16.8 MHz oscillator is controlled by the voltage from the AUX_DAC pin of the Trident IC, U702, that can be programmed through a serial peripheral interface (SPI). The oscillator output at pin 3 is coupled through capacitor C736 to the Trident IC reference oscillator input. This reference is then passed through an internal buffer and is then coupled to the external BJT buffer (comprised of U746 and supporting circuitry) via C739. These buffers provide isolation for the 16.8 MHz output to the controller circuitry and ABACUS IC. Components L753 and C754 form a low-pass filter to reduce the harmonics of the 16.8 MHz.

3.1.4.2 Trident IC U702

The Trident IC, U702, is a multiple protocol, multiple band transceiver Motorola-proprietary, CMOS IC, with built-in dual-port modulation. The Trident IC incorporates frequency division and comparison circuitry to keep the VCO signals stable. The Trident IC is controlled by the MCU through a serial bus. All of the synthesizer circuitry is enclosed in rigid metal cans on the transceiver board to reduce interference effects. Separate power supply inputs are used for the various functional blocks on the IC. Inductors L727, L733, L735, L738 and L741 provide isolation between the IC and the different power supplies. Host control is through a four-wire, smart SPI interface (pins D8, D9, D10 and C11). Some of the Trident IC functions include frequency synthesis, reference clock generation, modulation control, voltage multiplication and filtering, near-integer spurious reduction, RF divide-by-two and auxiliary SPI.

3.1.4.3 Synthesizer

Frequency synthesis functions include a low band and high band mode prescaler, a phase detector, a programmable loop divider and its control logic, a charge pump, and a lock detector output. Fractional-N synthesizer principles of operation are covered in detail in the manufacturers' literature. No similar discussion will be attempted here.

3.1.4.4 Clocks

U702, pin K5 (REF_IN), is the 16.8 MHz reference oscillator input from the VCTCXO (Y701).

3.1.4.5 Modulation

To support many voice, data, and signaling protocols, APX 3000 radios must modulate the transmitter carrier frequency over a wide audio frequency range, from less than 10 Hz up to more than 6 kHz. The Trident IC supports audio frequencies down to zero Hz by using dual-port modulation. The digital audio signal at pin F11 (TXD) is transferred to the Trident baseband circuitry via the TX Serial Synchronous Interface (SSI) bus. The data is then internally divided into high and low-frequency components, which modify both the synthesizer dividers and the external VCOs through a signal on HP_MOD_OUT (pin L9). The DSP scaling is adjusted to achieve a flat modulation frequency response during the transmitter modulation balance calibration.

3.1.4.6 Voltage Multiplier and Superfilter

Pins H10 (VMULT2) and H11 (VMULT1) together with diode arrays D722 and D723 and their associated capacitors form the voltage multiplier. The voltage multiplier generates 10.625 Vdc to supply the phase detector and charge-pump output stage at pin F1 (MN_CP_VCC). The superfilter is an active filter that provides a low-noise supply for the VCOs. The input is a regulated 5 Vdc from DC_LIN_5V at pin K4 (SF_SPLY). The output is a superfiltered voltage at pin J5 (SF_OUT).

3.1.4.7 Loop Filter

The components connected to pins G3 (MN_CP) and G2 (MN_ADAPT_CP) form a 4th-order, RC low-pass filter. Current from the charge-pump output, MN_CP, is transformed to voltage VCO_VCTRL, which modulates the VCOs. Extra current is supplied by MN_ADAPT_CP for rapid phase-lock acquisition during frequency changes. The lock detector output pin B4 (TEST1_LCKDET) goes to a logic '1' to indicate when the phase-lock loop is in lock.

3.1.4.8 Buffers and VCOs

Q731 and surrounding circuitry is the prescaler buffer that takes the output of the VCOs and feeds the prescaler input to the Trident IC, pin G1 (M_PRSC).

Q756 and surrounding circuitry is a buffer that provides the correct drive level to the receiver section (via the transmission line RX_LO) and to the input to the TX buffer (Q774 and surrounding circuitry). Q745 and surrounding circuitry provide the bias to the buffer. The buffer formed by Q756 and its associated circuitry is called a pre-buffer” at this stage.

R703, R704 and R707 help provide some extra isolation to the receiver.

Q774 and surrounding circuitry is the transmit injection buffer. The transmit injection buffer provide the correct drive level to the transmitter section (via the transmission line TX_INJ). Q767 and surrounding circuitry provide the bias to the transmit injection buffer.

UHF1: The voltage-controlled oscillators are varactor tuned. The voltage (0.3V – 10.6V) varies as it is being applied to varactors D3102 to D3105 and D3135 to D3138 of their respective Voltage-Controlled Oscillator (VCO). The capacitance of the varactors also varies, thereby changing the output frequency of the VCOs. Both the VCOs are used to cover the entire 90MHz bandwidth of the UHF range 1, 380MHz to 470MHz band.

- TX VCO covers the transmit frequencies from 380MHz to 470MHz
- RX VCO covers the receive Local Oscillator (LO) frequencies from 489.65MHz to 579.65MHz

The TX VCO and the RX VCO are selected using GPO1 and GPO2 respectively.

To select the UHF RX VCO, pin E5 (GPO1_TEST1) must be at a high logic level and pin D5 (GPO2_TEST2) must be at a low logic level. The output of the RX VCO is then fed to pin 5 (RF2) of switch U3001. The output of U3001 is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 5 (RF2) then goes to the attenuator (comprised of R703, R704 and R707) and then fed to the receiver section via the RX_LO transmission line.

To select the UHF TX VCO, pin D5 (GPO2_TEST2) must be at a high logic level and pin E5 (GPO1_TEST1) must be at a low logic level. The output of the TX VCO is then fed to pin 4 (RF1) of switch U3001. The output of U3001 is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

UHF2: The voltage-controlled oscillators are varactor tuned. The voltage (0.3V – 10.6V) varies as it is being applied to varactors D3102 to D3105 and D3135 to D3138 of their respective Voltage-Controlled Oscillator (VCO). The capacitance of the varactors also varies, thereby changing the output frequency of the VCOs. Both the VCOs are used to cover the entire 90MHz bandwidth of the UHF range 2, 450MHz to 520MHz band.

- TX VCO covers the transmit frequencies from 450MHz to 520MHz
- RX VCO covers the receive Local Oscillator (LO) frequencies from 559.65MHz to 629.65MHz

The TX VCO and the RX VCO are selected using GPO1 and GPO2 respectively.

To select the UHF2 RX VCO, pin E5 (GPO1_TEST1) must be at a high logic level and pin D5 (GPO2_TEST2) must be at a low logic level. The output of the RX VCO is then fed to pin 5 (RF2) of switch U3001. The output of U3001 is then split into two signals, one to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 5 (RF2) then goes to the attenuator (comprised of R703, R704 and R707) and then fed to the receiver section via the RX_LO transmission line.

To select the UHF2 TX VCO, pin D5 (GPO2_TEST2) must be at a high logic level and pin E5 (GPO1_TEST1) must be at a low logic level. The output of the TX VCO is then fed to pin 4 (RF1) of switch U3001. The output of U3001 is then split into two signals, one to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

VHF: The voltage-controlled oscillators are varactor tuned. The voltage (0.3V–10.6V) varies as it is being applied to varactors D3206 to D3209 and D3246 to D3249 of their respective Voltage-Controlled Oscillator (VCO). The capacitance of the varactors also varies, thereby changing the output frequency of the VCOs. Both the VCOs are used to cover the entire 38 MHz bandwidth of the VHF, 136 MHz to 174 MHz band.

- TX VCO covers the transmit frequencies from 136 MHz to 174 MHz
- RX VCO covers the receive Local Oscillator (LO) frequencies from 245.65 MHz to 283.65 MHz

The TX VCO and the RX VCO are selected using GPO1 and GPO2 respectively. To select the VHF RX VCO, pin E5 (GPO1_TEST1) must be at a high logic level and pin D5 (GPO2_TEST2) must be at a low logic level. The output of the RX VCO is then fed to pin 5 (RF2) of switch U3238. The output of U3238 is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 5 (RF2) then goes to the attenuator (comprised of R703, R704 and R707) and then fed to the receiver section via the RX_LO transmission line.

To select the VHF TX VCO, pin D5 (GPO2_TEST2) must be at a high logic level and pin E5 (GPO1_TEST1) must be at a low logic level. The output of the TX VCO is then fed to pin 4 (RF1) of switch U3238. The output of U3238 is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

700–800 MHz: The voltage-controlled oscillators are varactor tuned. The voltage (0.3V – 10.6V) varies as it is being applied to varactors (VR3010M22, VR3003M22, VR3012M22 and VR3013M22 for 700MHz), (VR3011M22, VR3004M22, VR3014M22 and VR3015M22 for 700/800MHz) and (VR3048M22, VR3017M22, VR3020M22 and VR3021M22 for 800MHz) of their respective Voltage-Controlled Oscillator (VCO). The capacitance of the varactors also varies, thereby changing the output frequency of the VCOs. Three VCOs are used to cover the entire 700/800 MHz band.

- VCO1 covers the RX 800 MHz band and the TX 700 MHz (764 - 776 MHz) band
- VCO2 covers the TX 700/800 MHz (794 - 824 MHz) band
- VCO3 covers the TX 800 MHz (850 - 870 MHz) band and the RX 700 MHz band

Three VCOs are selected using GPO1, GPO2 and GPO8 respectively.

To select the 700 RX VCO, pin D6 (GPO8) must be at a high logic level and pin E5 (GPO1) and pin D5 (GPO2) must be at a low logic level. The output of the 700 RX VCO is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer input. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 5 (RF2) then goes to the pi attenuator (comprised of R703, R704 and R707) and then fed to the receiver section via the RX_LO transmission line.

To select the 800 RX VCO, pin E5 (GPO1) must be at a high logic level and pin D5 (GPO2) and pin D6 (GPO8) must be at a low logic level. The output of the 800 RX VCO is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer input. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 5 (RF2) then goes to the pi attenuator (comprised of R703, R704 and R707) and then fed to the receiver section via the RX_LO transmission line.

To select the 700 TX VCO, pin E5 (GPO1) must be at a high logic level and pin D5 (GPO2) and pin D6 (GPO8) must be at a low logic level. The output of the 700 TX VCO is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer input. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

To select the 700/800 MHz TX VCO, pin D5 (GPO2) must be at a high logic level and pin E5 (GPO1) and pin D6 (GPO8) must be at a low logic level. The output of the 700/800 MHz TX VCO is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer input. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

To select the 800 TX VCO, pin D6 (GPO8) must be at a high logic level and pin E5 (GPO1) and pin D5 (GPO2) must be at a low logic level. The output of the 800 TX VCO is then split into two signals. One to the Prescaler buffer input and the other to the prebuffer input. The output of the prebuffer is then fed to pin 1 (RFC) of U738. The output of U738, pin 4 (RF1) then goes to the transmit injection buffer (comprised of Q774 and surrounding circuitry). The output of the transmit buffer, then goes to the transmit section via the TX_INJ transmission line.

Notes

3.2 Controller

3.2.1 Controller Overview

This section provides a detailed circuit description of the APX 3000 controller design. The controller design consists of the following board and flexes:

Printed Circuit Boards

- Main Board

Flexes

- Main Flex
- Side Controls
- Top Control
- NFC with LED

The controller interconnection diagram (Figure 3-12) shows the various physical components of the design, along with how they are all connected. It also shows the key distinguishes between a flex connection and a board-to-board connection. A brief description of each of the components is provided below.

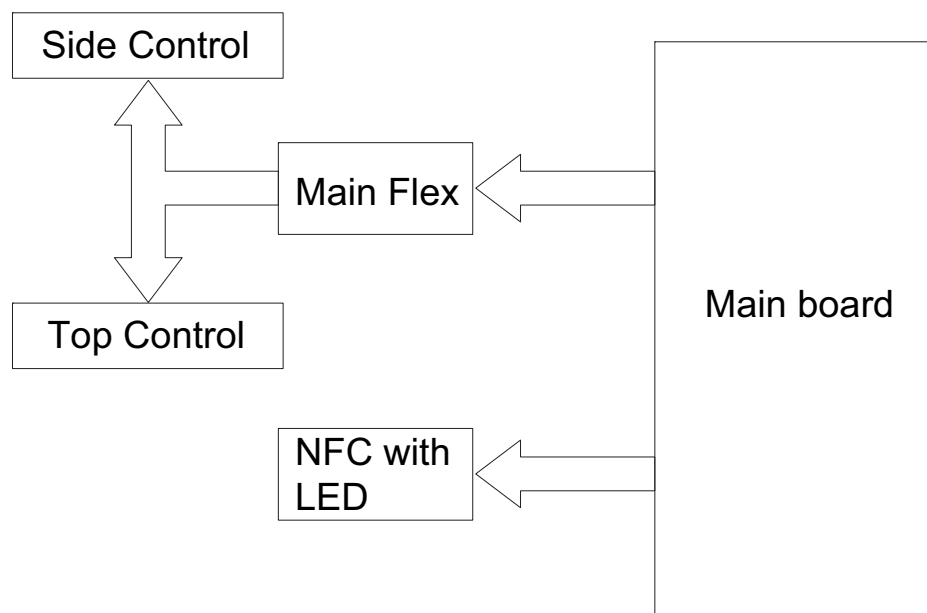


Figure 3-15. Controller Interconnection Diagram

3.2.1.1 Main Controller Components and Connections

3.2.1.1.1 Main Board Controller section

The controller section contains the OMAP1710 dual-core processor, FLASH and SDRAM memory, Audio circuitry (MAKO and CODEC IC's), a Complex Programmable Logic Device (CPLD), AVR controller IC for Bluetooth 2.1 and support circuitry, a 3-axes digital accelerometer, a Type III encryption IC and interfaces to the other components in the controller design.

Connectors

- Main Flex – J1
- NFC with LED – J2
- Debugging – J2401

3.2.1.1.2 Main Flex

The front cover kit contains a main flex integrated with connectors to main board, side control flex, top control flex.

3.2.1.2 NFC Flex with LED

The Flex contains a NFC Coil antenna used for Bluetooth secure pairing. There are 2 LEDs on the flex. The Tx/Rx LED is solid amber upon receive, red on PTT and blinking amber on receiver. The Bluetooth LED shows fast blinking blue upon waiting to pair and slow blinking blue after paired. The solid blue indicates a Bluetooth fatal error.

3.2.1.2.1 Top Control Flex

The top control consist of an ON/OFF switch and a programmable button. The flex connect to the main flex through a 12-pin connector.

3.2.1.2.2 Side Controls Flex

The side controls flex contains the Top Side Button, Middle Side Button, Up Arrow Button and Down Arrow Button. The flex connects to the main flex through a 10-pin connector.

3.2.1.3 Controller Electrical Architecture

An overview of the Controller electrical architecture is shown in [Figure 3-16](#) below. The major components and electrical interfaces are shown.

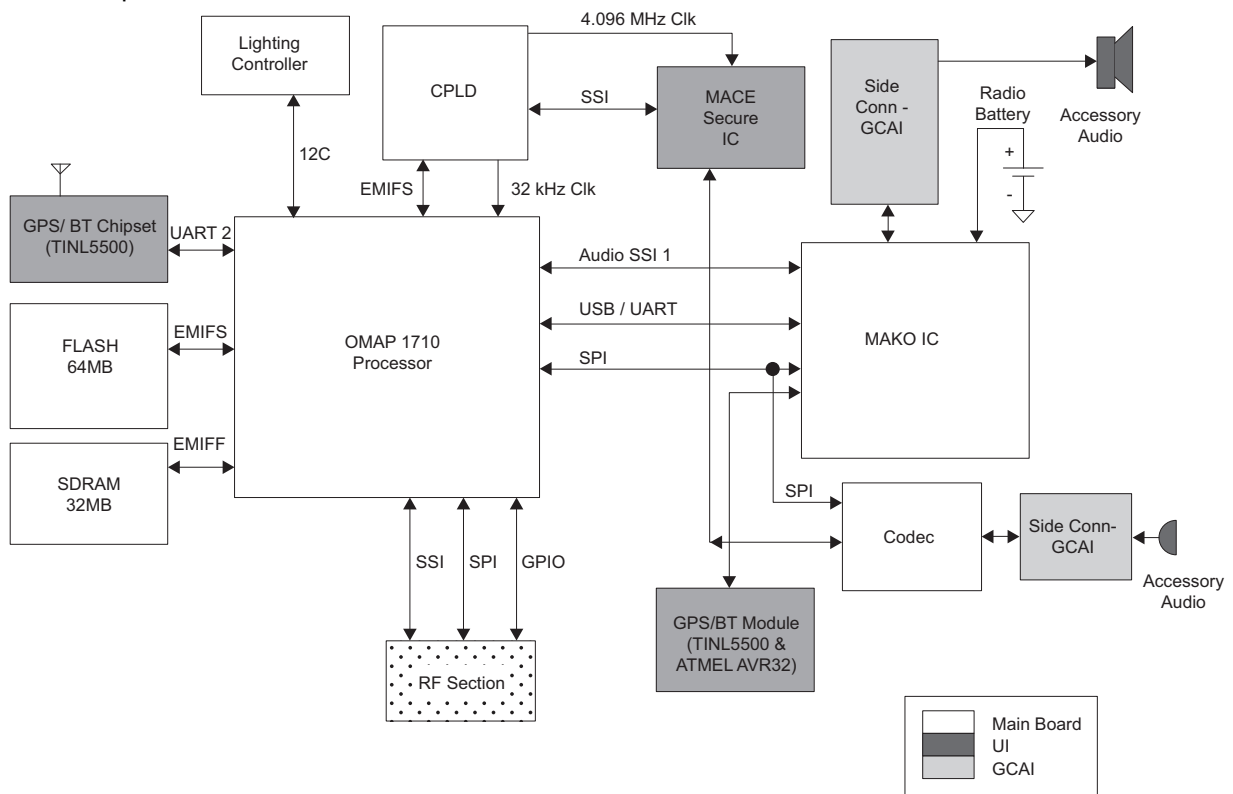


Figure 3-16. Controller Electrical Overview

The functional blocks of the controller are:

- DC Distribution
- Clock Sources
- Processor / Memory
- CPLD
- Audio – External
- MAKO
- User Interfaces

3.2.2 DC Distribution

SW_B+ supply comes from a pass FET (Q6501) that is powered by UNSW_B+ (battery voltage). The FET is activated once the power switch is in its on position. SW_B+ supplies the power for the entire controller. SW_B+ supplies MAKO and the external regulators. MAKO and the external regulators then regulate the voltage to the desired level. (See Figure 3-17.)

OMAP's core is supplied by V_SW_1.4 (U6507). 1.85 LDO supplies OMAP's IO, FLASH, CPLD, DDR, and MACE. See Table 3-2 for DC supplies and sources.

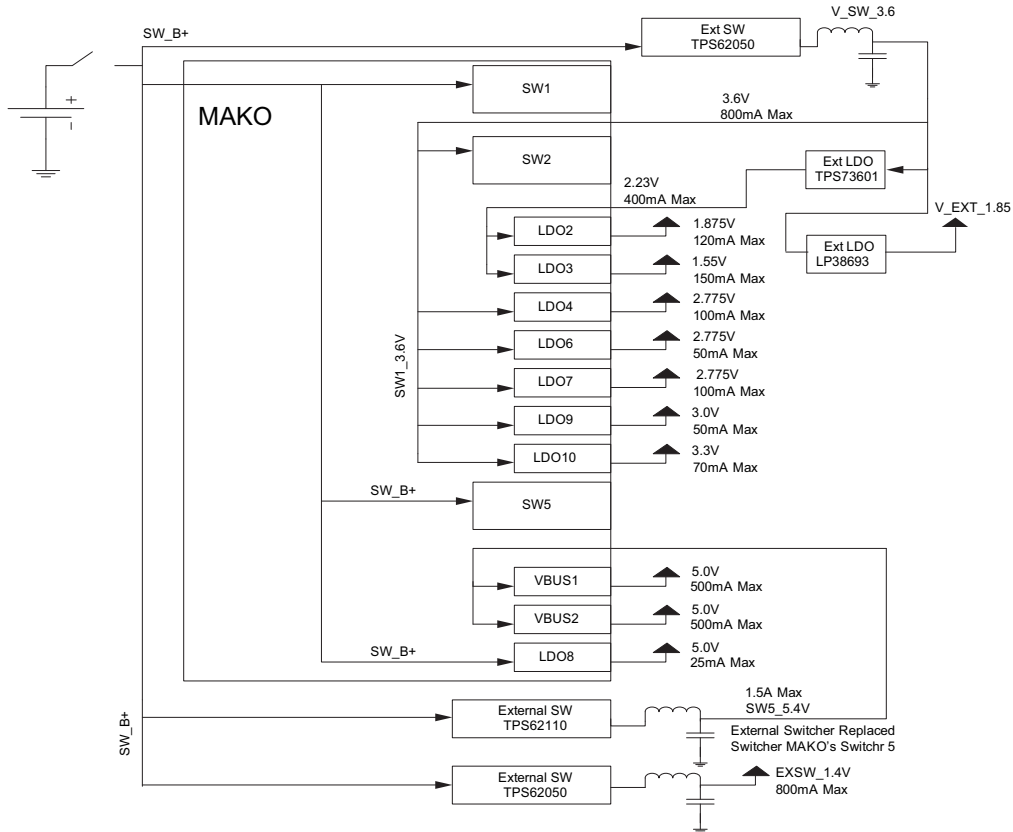


Figure 3-17. Controller DC Block Diagram

Table 3-2. DC Supplies and Sources for Controller

	V_SW_3.60	V_SW_1.4	V_EXT_1.85	V_SW_5	VBUS1	VBUS2	V_1.875	V_2.75D	V_2.775	V_3.0A	SW_B+
OMAP CORE		X									
OMAP IO			X								
DDR			X								
FLASH			X								
CPLD			X								
MACE			X								
CODEC							X			X	
GPS	X										
MAKO	X								X		X
USB SPLY						X					
16.8 SQR								X			

3.2.2.1 DC Distribution Major Components

The controller's DC section is made up of MAKO and external regulators. This section will give an overview of the schematics and circuitry that makes up the major supplies of the DC architecture.

3.2.2.1.1 MAKO

MAKO (U6501) is a custom power management IC manufactured by Atmel. MAKO controls almost all of the LDO supplies to the controller. [Table 3-3](#) illustrates all of MAKO's LDO and the supplies that feed them. [Figure 3-17](#) shows all of MAKO's LDOs their voltage level and components that can be accessed to verify operation. [Figure 3-17](#) also shows where the battery supply and on off switch can be accessed. MAKO is also responsible for the timing sequence for the enabling of the regulators which is discussed further in [section 3.1.3.7.1](#) and [section 3.1.3.7.3](#) on pages 3-12 and 3-13.

Table 3-3. MAKO's LDO and Supplies

Name	Ref	Description	Level
ON_OFF_SWITCH	TP6210	ON/OFF Switch. Radio on when GND	GND
UNSW_B+	F_UNSW_B+	Radio Battery Voltage	6 – 9V
SW_B+	C6593	Radio Supply Voltage	6 – 9 V
V_SAVE	C6538	LDO Output Present When Battery is Attached	2.5 V
V_1.875	C6581	LDO Output	1.875 V
V_1.55	R6561	LDO Output	1.55 V
V_2.775D	R6563	LDO Output	2.775 V

Table 3-3. MAKO's LDO and Supplies (Continued)

Name	Ref	Description	Level
V_2.775_EXP	R6562	LDO Output	2.775 V
V_2.8_RF	R6564	LDO Output	2.8 V
V_5.0A	R6565	LDO Output	5.0 V
V_3.3	R6566	LDO Output	3.3 V
V_3.0A	R6567	LDO Output	3.0 V

3.2.2.1.2 External Regulators: V_SW_1.4, V_SW_3.60

The controller board contains two TPS62050 regulators in order to regulate voltages of 1.4V and 3.6V. The TPS62050 is a synchronous step-down adjustable regulator. The switching regulator is capable of sourcing 800mA. Its output can be adjusted by using a voltage divider tied to the feedback pin. The regulators are powered from SW_B+. Figure 3-18. is the schematic for the V_SW_1.4 regulator. Figure 3-18. illustrates the supporting circuitry for the TPS62050.

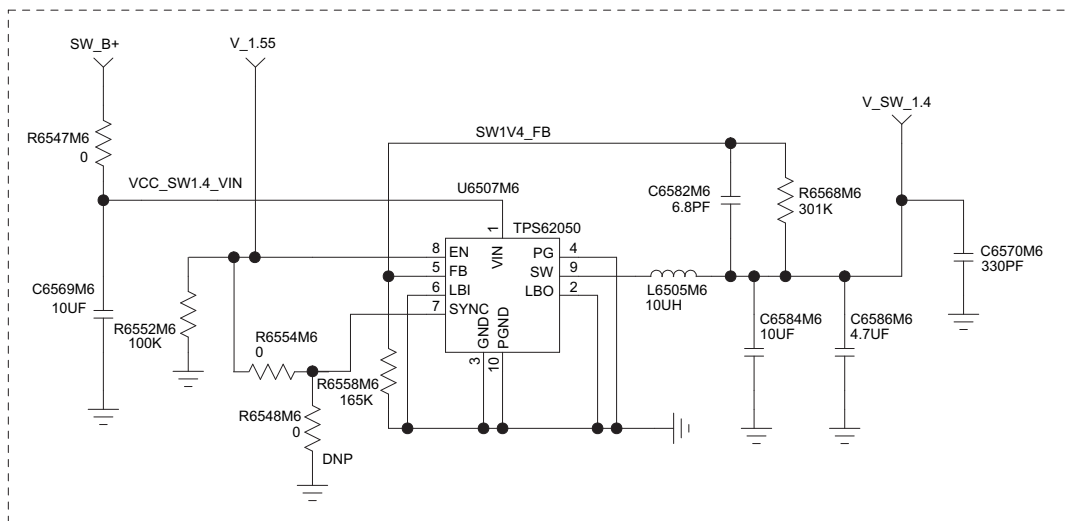


Figure 3-18. V_SW_1.4 Switched Power Supply

3.2.2.1.3 External Switcher 5

The controller board uses an external TI regulator (TPS62110, U6505) to regulate to 5.4V. The TPS62110 is a 1.5A capable synchronous step down converter. The output is adjusted using a voltage divider to the feedback pin. The regulator is powered from SW_B+. Figure 3-19 illustrates the SW5 circuitry. The SW5 circuit also includes or-gate logic that facilitates implementation of current saving PFM mode when the radio is in standby mode.

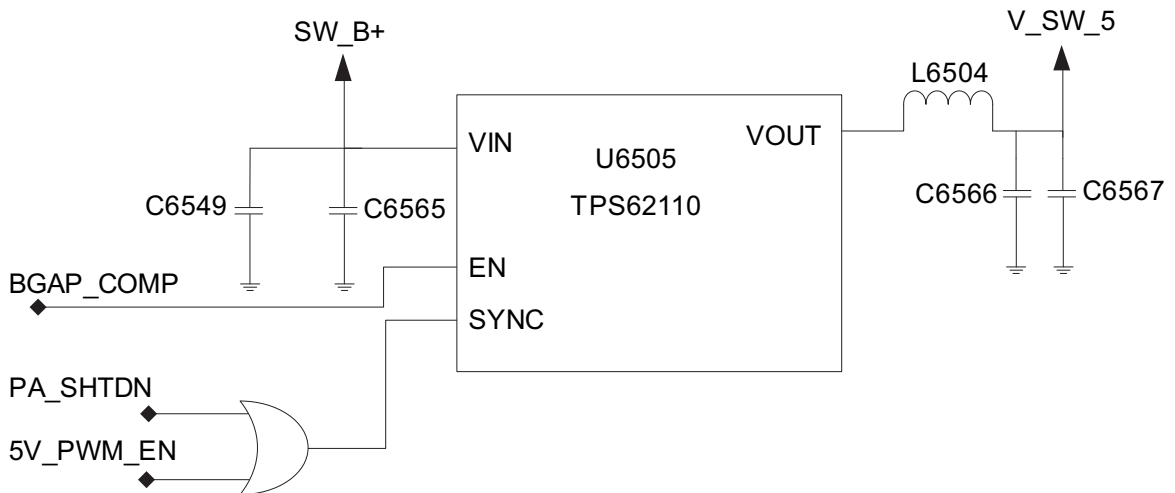


Figure 3-19. 5V Switched Power Supply

APX 3000 has Pulse Switching option.

Mode 1: Pulse Frequency Modulation (PFM). A relatively noisy but highly efficient pulsing mode for Switched power supplies.

Mode 2: Pulse Width Modulation (PWM). Pulsing mode that is cleaner than PFM, used when risk of RF interference is present which includes both transmit and receive radio modes.

Table 3-4. Pulse Switching Combination

PA_SHTDN	5V_PWM_EN	SYN	MODE
0	0	0	PFM
0	1	1	PWM
1	0	1	PWM
1	1	1	PWM

3.2.2.1.4 Power-up Timing

The powering up of the radio starts with the MAKO. Once the radio switch is pushed to 'ON' and battery voltage is supplied, a pass FET is activated to deliver battery voltage to MAKO and external regulators. The external 3.6 V is first turned on then MAKO activates its 24.576 MHz clock, and the remaining regulators begin to turn on. Once all the regulators have turned on, MAKO releases its reset. The CPLD is then powered on from the 1.875 V external regulator and takes MAKO 24.576 MHz clock and divides it to 32.768 kHz in order to provide for OMAP. OMAP starts to power up upon receiving voltages 1.4 V, 1.85 V, and the 32.768 kHz clock. OMAP then activates its 12 MHz clock and releases its reset. It then starts to run the boot loader stored in flash. A more detailed timing view of the regulators is shown in [Figure 3-20](#).

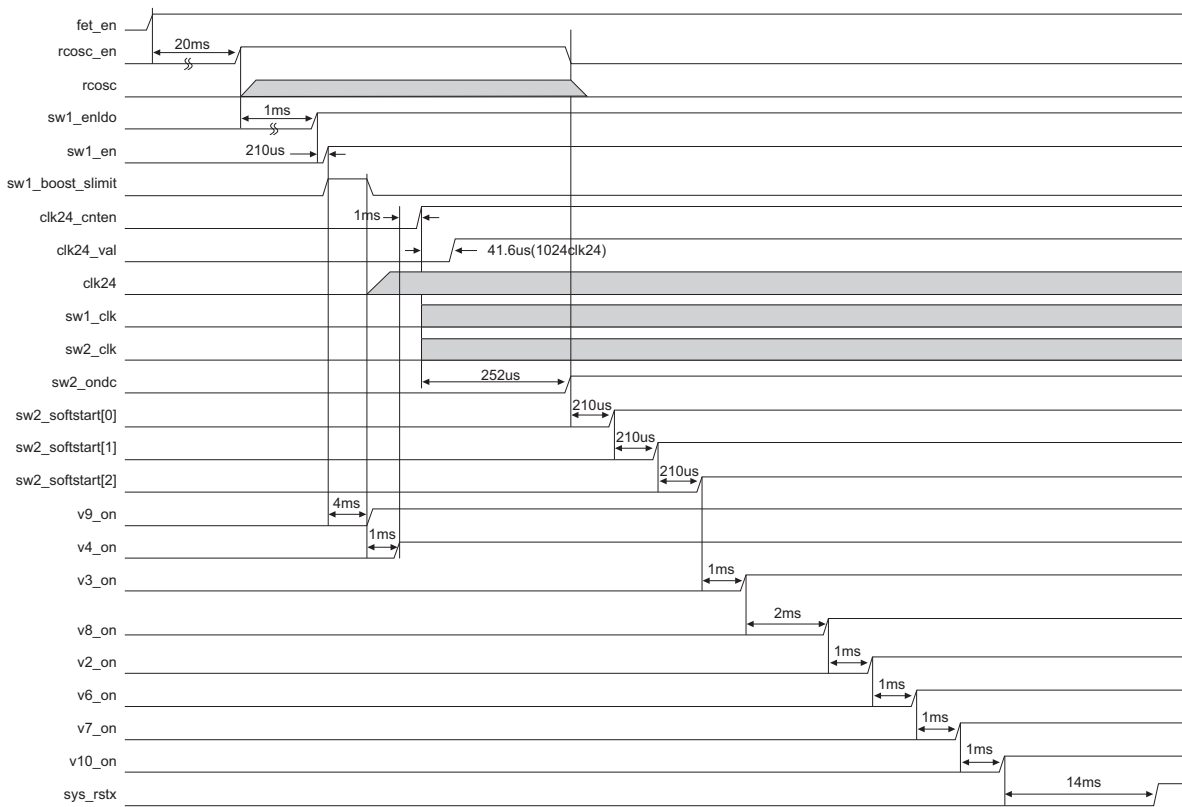


Figure 3-20. Power-up Timing Regulators

3.2.3 Clock Sources

The main board contains multiple crystal clock sources. These sources are active upon power-up. The controller receives a 16.8 MHz sine wave from the RF section, which is shaped into square wave and fed to the OMAP timer input. Screen shots and test points for these clock signals are shown in [Chapter 6](#).

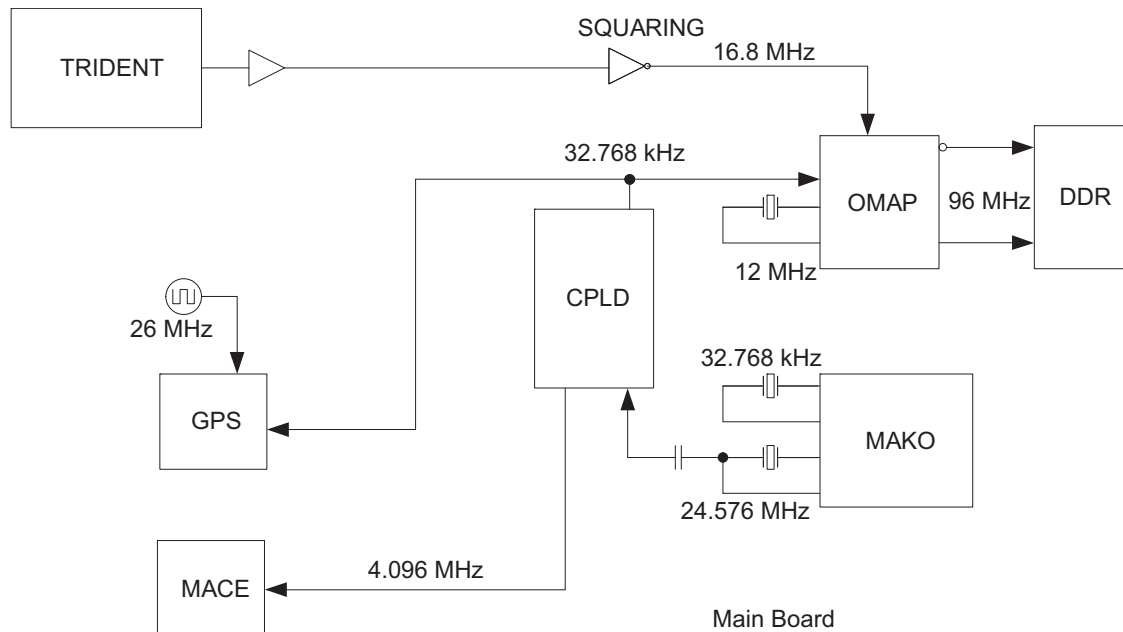


Figure 3-21. Controller Clock Architecture

Table 3-5. Controller Clock Distribution

Clock Source	Frequency	Type	Description	Clock Recipient	Suggested Probe Points
Y6501	24.576 MHz	Crystal Oscillator	MAKO 24 MHz & tapped into CPLD	U6501, U6101	R6574
Y6502	32.768 kHz	Crystal Oscillator	MAKO RTC	U6501	C6541
Y6601	12 MHz	Crystal Oscillator	OMAP CPU Clock	U6302	C6601
U6302	96 MHz	OMAP GPIO	DDR Clocks (Complementary signals)	U6301	TP6307 & TP6308
U6101	4.096 MHz	CPLD GPIO	MACE Clock	U2510	R6113
U6101	32.768 kHz	CPLD GPIO	OMAP Boot-Up clock & GPS/Bluetooth digital clock	U6302 & U2401	R6114 (GPS/BT) & R6115 (OMAP)
Y701	16.8 MHz	Crystal Oscillator	RF Frequency Synthesizer IC (Trident) TCXO	U6302	R6218

3.2.4 OMAP Processor and Memory

3.2.4.1 OMAP Processor (U6302)

The OMAP1710 dual core processor lies at the center of the controller design. The processor features utilized in the controller design include:

- ARM9 CPU core
- C55X DSP core
- 16KB shared internal RAM
- SSI Interfaces
- USB Interfaces
- Timers & Watchdog Timers
- Keyboard Matrix Interface
- 1-Wire Interface
- LCD Controller
- I2C Interface
- SPI interface
- External Memory Synchronous Interface
- External Memory Asynchronous Interface
- UARTs
- GPIOs

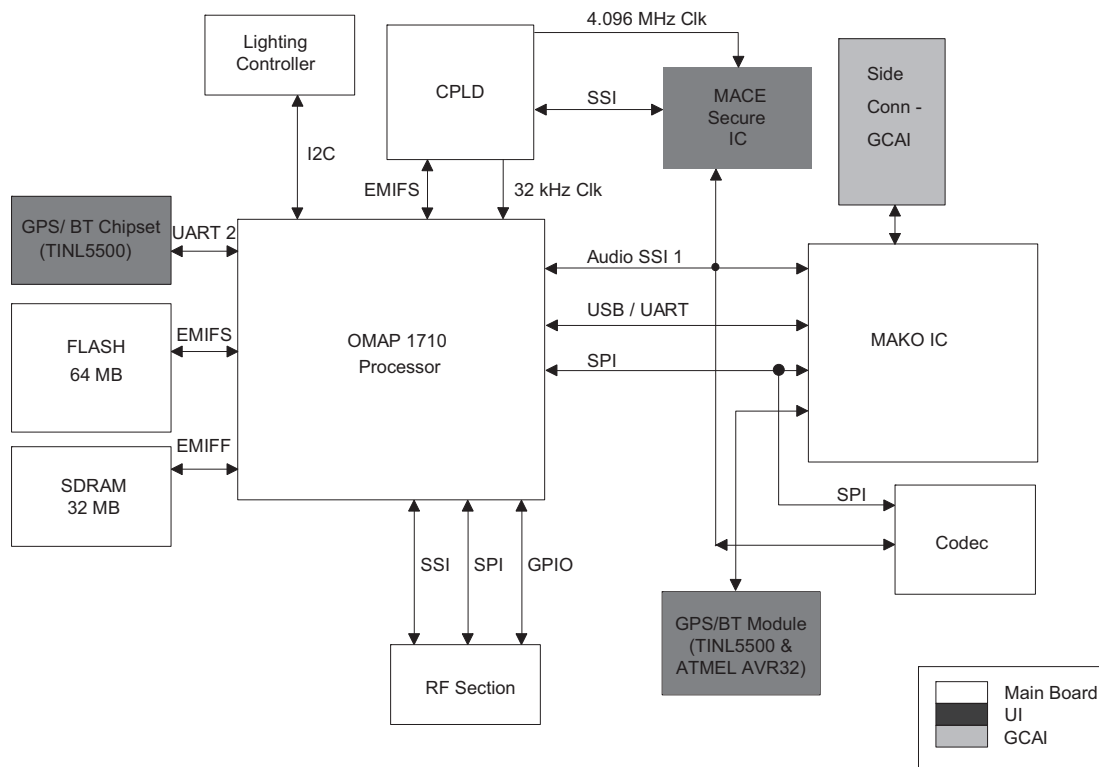


Figure 3-22. Overview of OMAP Interconnection with Controller Peripherals

3.2.4.2 Memory

In addition to the internal RAM, the OMAP 1710 Processor (U6302) features three distinct external memory interfaces. All memory devices are located on the main board, as elaborated in [Figure 3-22](#). The external memory interface is shown in [Figure 3-23](#).

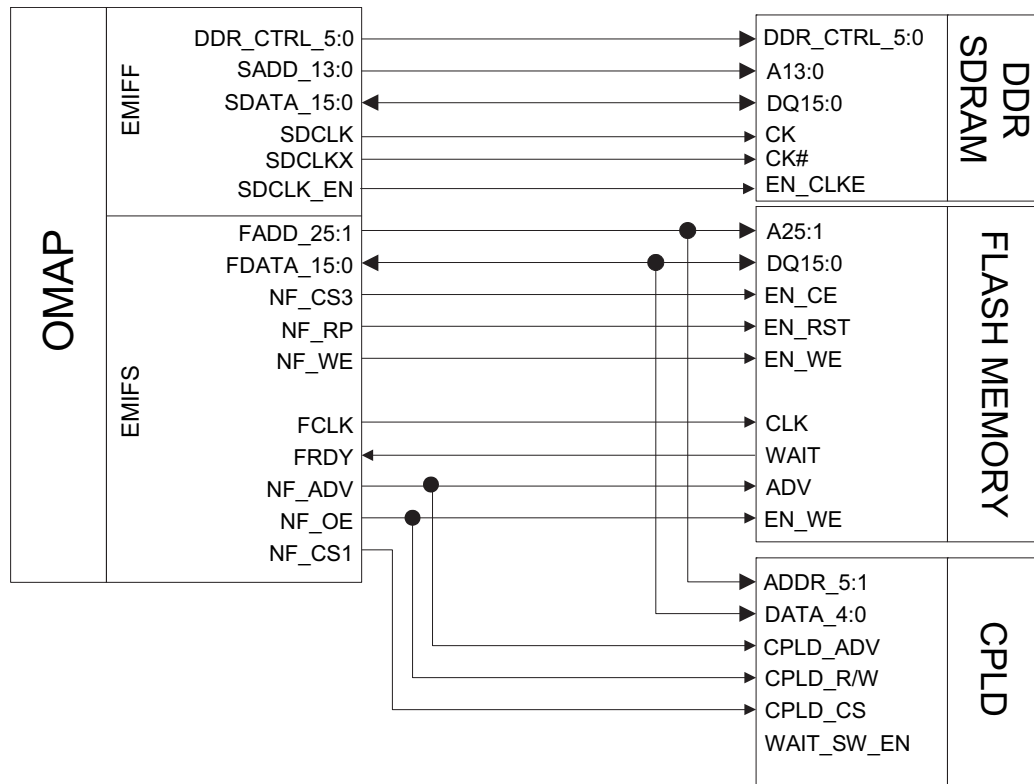


Figure 3-23. OMAP Memory Interface

3.2.4.3 Asynchronous External Memory Interface

The EMIFS is used for transferring data between the ARM or DSP cores and the 64 MB External NOR Flash memory (U6304). The Flash memory is a non-volatile memory unit, primarily used to store the radio's executable code, along with device configuration values, event logs, and initialization codes. The flash memory is primarily accessed during the main board's power up and power down cycles.

3.2.4.4 Flash Memory (6304)

The Flash memory located in close proximity to the OMAP processor is a 64 MB Numonyx 65nm StrataFlash. The flash interface uses 16 data bits and 25 address bits. The flash IC is enabled by OMAP processor's CS3 line. The flash IC also features a WAIT line that is capable of halting data flow between the processor and flash IC while operating in synchronous read mode.

3.2.4.5 CPLD Interface (U6101)

The CPLD (U6101) registers are also mapped to the Asynchronous External Memory Interface. These registers control the CPLD GPIO pins and enable the OMAP to expand its GPIO capability via memory mapped IO.

3.2.4.6 Synchronous External Memory Interface

This interfaces the OMAP to a 32 MB Double Data Rate (DDR) RAM IC (U6301). Upon boot-up OMAP configures this interface to operate in synchronous mode at 96MHz. This volatile memory unit is primarily accessed during code execution.

3.2.4.7 Double Data Rate (DDR) Memory (U6301)

The 32MB DDR Synchronous DRAM IC is interfaced to the OMAP using 13 address bits and a 16bit data bus. The DDR IC is driven by a complementary clock signal originating from the OMAP IC. The DDR clock is initialized to 96MHz by the OMAP boot code. Additional control signals are also dedicated for the DRAM interface.

3.2.4.8 Peripheral Devices

The OMAP processor is equipped with multiple buses and interfaces that are configured for peripheral interconnection.

3.2.4.8.1 Receive and Transmit SSI

These two interfaces are dedicated for communicating with the RF deck digital interface, carrying receive and transmit base band signals. The OMAP processor generates the clock and FSYNC signals for the receive SSI interface. The RF deck generates these signals for the transmit SSI interface.

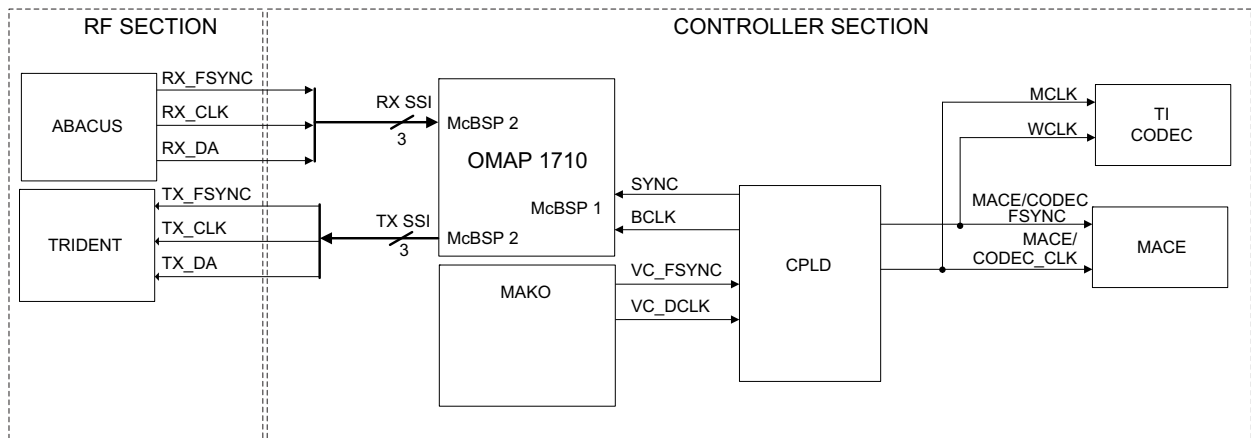


Figure 3-24. RX / TX SSI Configuration

3.2.4.8.2 Audio SSI

OMAP's McBSP1 interface is configured as a SSI interface dedicated to carry transmit and receive audio data to peripheral devices. The peripherals connected to this bus include MAKO, Audio CODEC, MACE and CPLD. MAKO generates the clock and frame sync signals for this bus.

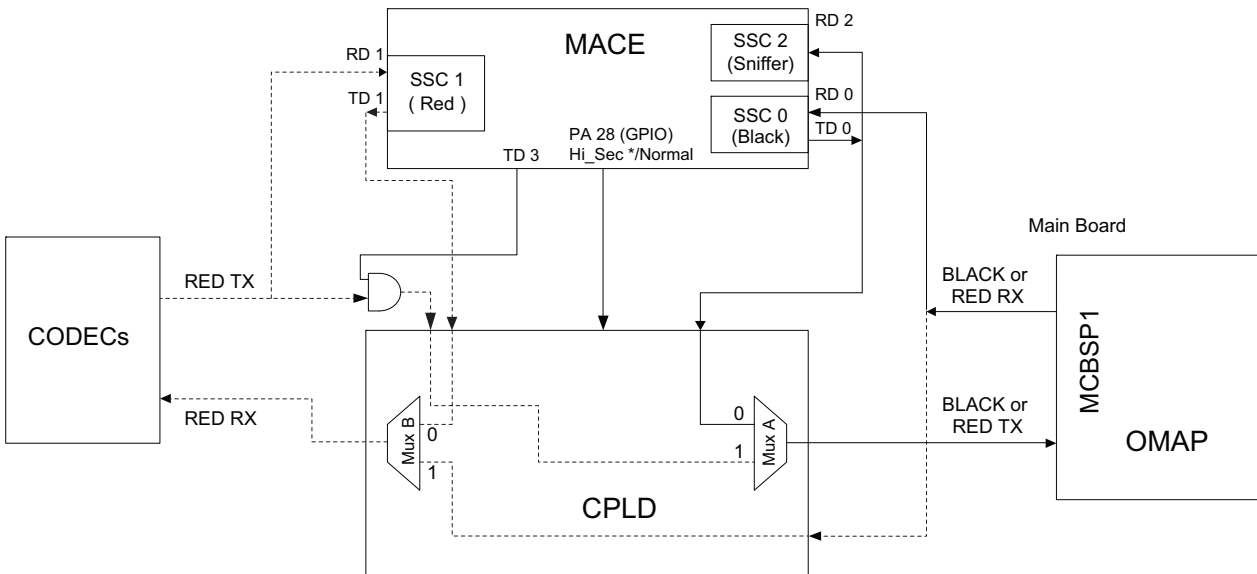


Figure 3-25. Audio SSI Configuration

3.2.4.8.3 ARM SPI

This SPI interface is controlled by OMAP's ARM core. Devices connected to this bus include MAKO, display controllers and the audio CODEC.

3.2.4.8.4 DSP SPI

This SPI interface is controlled by the DSP core of the OMAP processor. This bus is used to configure and control devices on the RF deck.

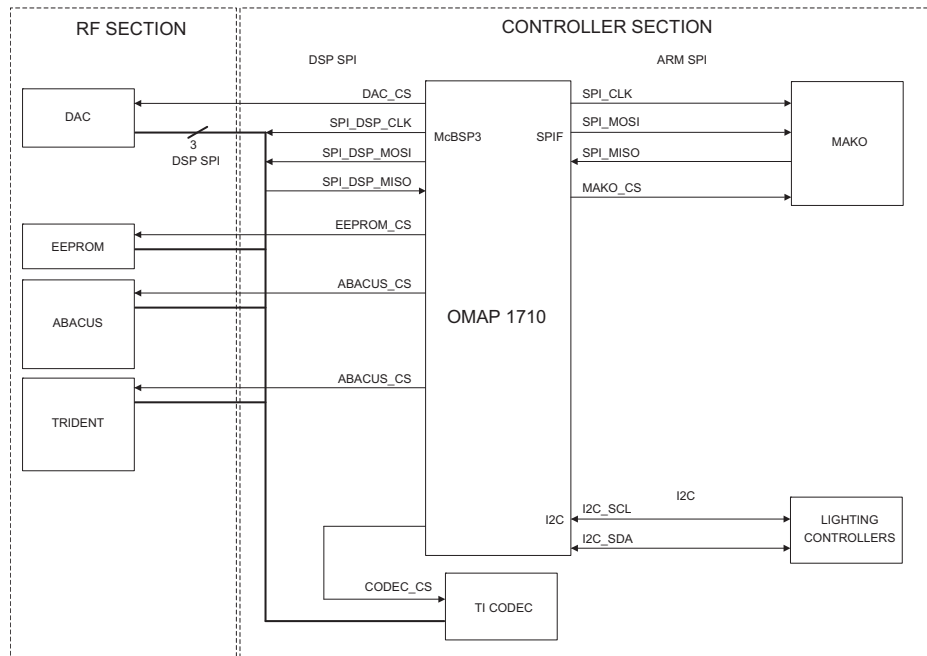


Figure 3-26. SPI and I2C Configuration

3.2.4.8.5 1-Wire

The OMAP's 1-wire line is available on the Main Board Connector J1 pin 9. The signal is routed through Main flex.

3.2.4.8.6 USB

The OMAP CPU's USB port is routed to the side connector via J1. The USB signals on the side connector are illustrated in [Figure 3-22](#).

3.2.4.8.7 UARTs

Two of OMAP's UARTs are configured for peripheral interfacing.

The four-wire UART1, which is capable of hardware flow control, is available on the side connector for accessory devices. The signals are level translated via MAKO and routed to the side connector via J1.

OMAP's UART2, which is a two wire interface, capable of software flow control only, is connected to the GPS receiver IC on the Main board.

3.2.4.8.8 CPLD (U6101)

The CoolRunner IC is a complex programmable logic device (CPLD) programmed specifically for the APX product line. The CoolRunner IC is flash based and comes pre-programmed. It is contained in an 8x8mm, 132 BGA package with 0.5mm ball spacing. The primary functions of the CPLD are clock generation, GPIO expansion, SSI clock and frame sync direction control, F2 multiplexing, secure data control, main display off-loading, and clock inversion.

An external linear regulator, U6508, supplies the CPLD's 1.875 V core voltage. The 1.875 V core voltage is used for the CPLD's internal logic and I/O buffers. MAKO's 24.576 MHz clock source is used by the CPLD to generate a 32.768 kHz clock for OMAP booting, real time clock/timer, and for GPS. It is also used to generate 4.096 MHz for the MACE IC.

The CPLD is controlled through OMAP's EMIFS interface. It supports 31 configurable GPIOs. It also supports 20 input only pins that are accessible through an EMIFS read operation. Some of the GPIOs supported by the CPLD include GCAI_GPIO_0, F2_PARAMAMP_MON, and USB_CURR_LIM. Some examples of the inputs the CPLD is programmed to support are some of the top and side controls buttons (MON, SIDE_1 and SIDE_2) and board ID.

Figure 3-27 below shows the basic CPLD interfaces.

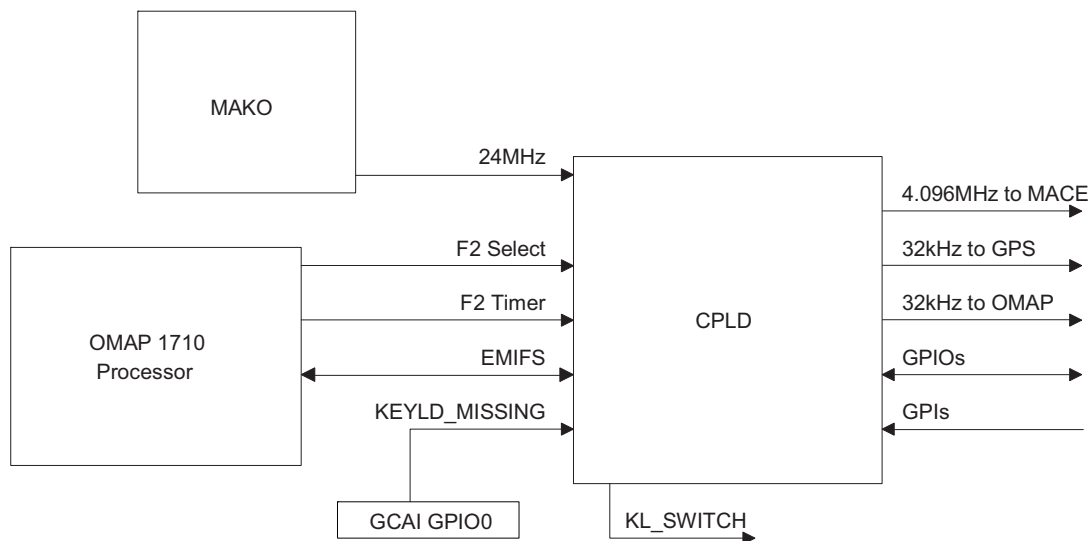


Figure 3-27. CPLD Block Diagram

3.2.5 Audio

The audio section of the Controller design consists of:

- TI AIC33 voice CODEC
- MAKO audio sub-block

3.2.5.1 TX Audio path

The TX audio paths begin with accessory microphone. There is one external microphone path going to the main flex connector.

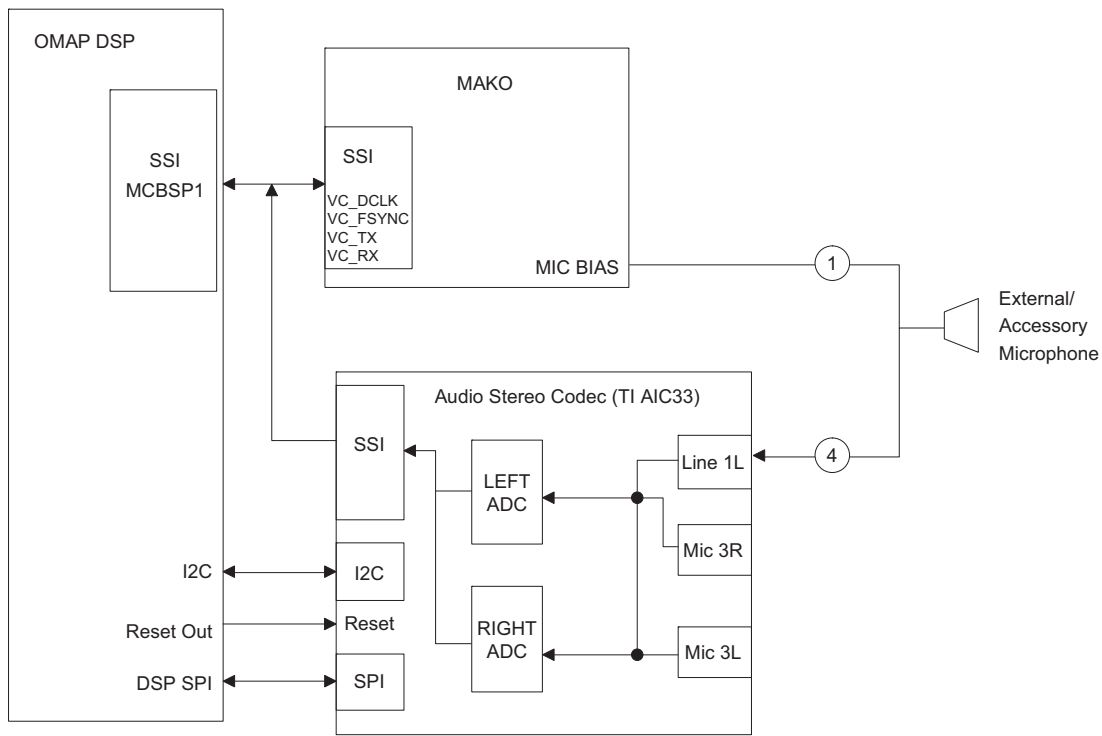


Figure 3-28. Audio TX Path Block Diagram

The external microphone path will be supported by the TI AIC33 CODEC, using the LINE1LP pin on the IC. The LINE1LP is multiplexed with the MIC3R within the CODEC, and selected as the input when the external microphone path is chosen as the TX audio source. The TI CODEC amplifies and samples the external microphone signal. The digital data is sent to the OMAP1710's DSP through the McBSP1 port using the audio SSI bus.

3.2.5.2 RX Audio path

The RX audio path supports one external speaker.

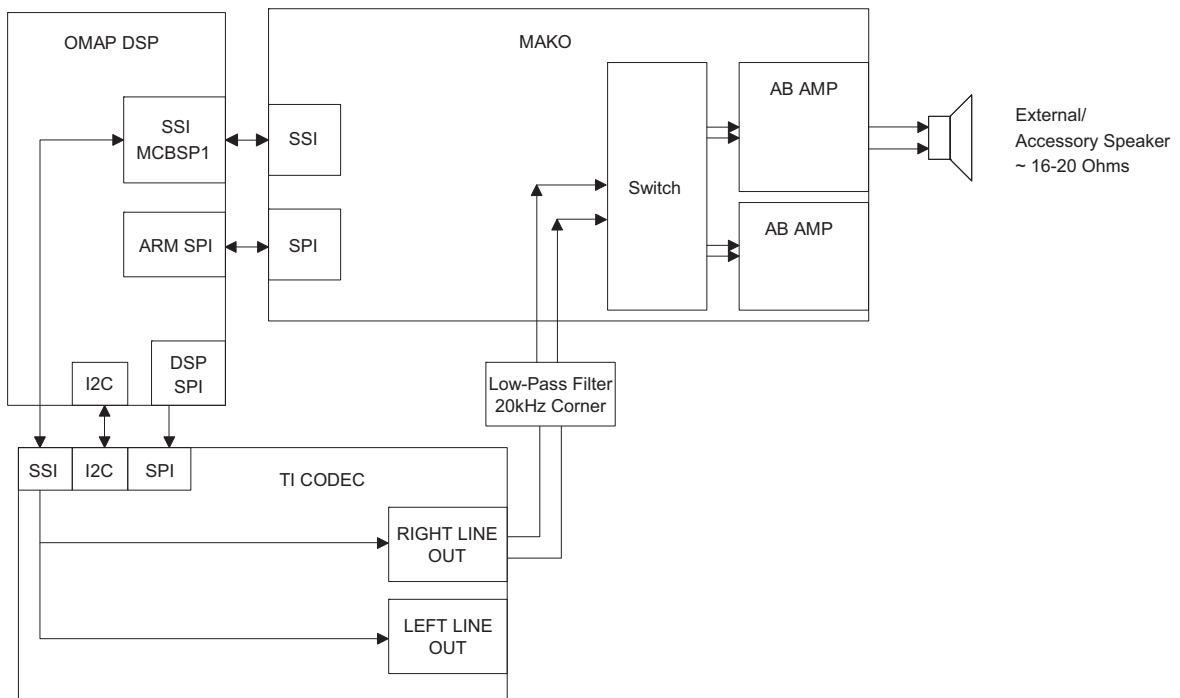


Figure 3-29. RX Audio Path Block Diagram

For the external speaker path, the digital audio data is sent from the OMAP1710's McBSP1 port to the TI AIC33 CODEC for digital to analog conversion and volume control. The external speaker path uses the MAKO IC's class-AB audio power amplifier to drive 16 Ohm to 28 Ohm external speakers. The input to MAKO IC's audio power amplifier is fully differential and comes from the TI CODEC's RIGHT_LOP and RIGHT_LOM. The output of the MAKO IC's audio amplifier is also fully differential and available on pins EXT_SPKR_P and EXT_SPKR_M.

3.2.6 User Interface

3.2.6.1 Top Control

The Top Control contains an ON/OFF switch and a programmable push button. The Top Control also includes a TX/RX LED that is solid amber upon receive, red on PTT, and blinks amber on secure RX and Bluetooth LED. The Top Control components are mounted on flex which connects to the Main board connector J1 and J2.

When the On/Off switch is pushed to ON (green), the switch is grounded and Mech_Sw is pulled low. Mech_Sw is an input to MAKO (U6501). The logic low input enables an external FET (Q6501) gate voltage, FET_ENX, which switches UN_SW_B+ to SW_B+ and turns the radio on.

The programmable Top Button is by default used for Bluetooth on/off. It is also biased to 1.875 V (R6507) and is an input (EMERG_BTN_X) to the CPLD and MAKO. A button press is detected when EMERG_BTN_X is pulled low.

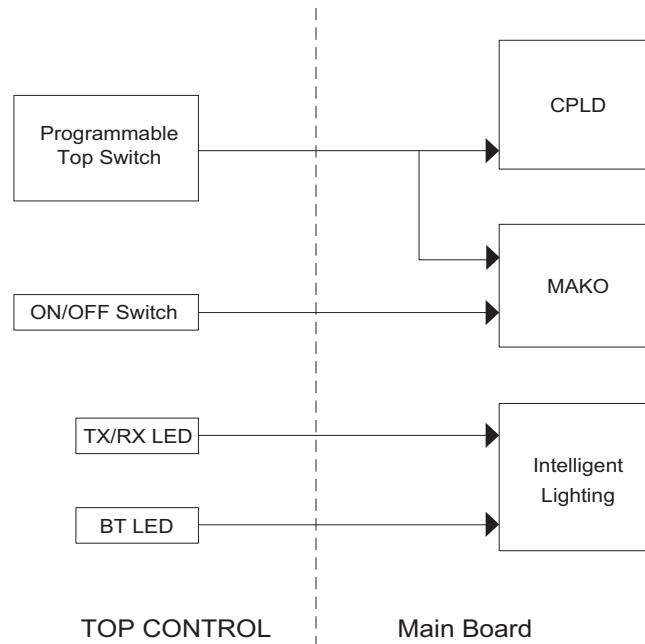


Figure 3-30. Control Top Block Diagram

3.2.6.2 Side Controls

The side controls include four programmable, buttons (Side Top Button, Side Middle Button, Up arrow and Down arrow). These components interface to the main flex via a connector through side control flex. The main flex routes the side controls signals to main board through connector J1. See [Chapter 7](#) for pin out names and numbers.

Up Arrow Button (R4006), Down Arrow Button (R4007) and the top side button (R6101) are inputs to the CPLD and are biased to 1.875V. A button press is detected when the OMAP reads a 'LO' state from the CPLD EMIFS interface. Middle side button (R4005) is connected directly to OMAP and a button press is detected when a LO state is read.

3.2.6.3 GCAI

The GCAI (Global Communications Accessory Interface) connector is a 15 pin interface located on the side of the radio. The connector interfaces the radio with accessories and is used for programming. When the OMAP (U6501) detects that an accessory has been attached through a logic low on GPIO0, it will identify the device by reading the GCAI_ONE_WIRE line. Once the device type is identified, the appropriate signals are multiplexed through MAK0 to the main flex connector for the particular device. [Figure 3-31](#) is a block diagram of the GCAI interface.

Mounted to the side connector is a flex that houses ESD protection circuitry. The universal side connector interfaces with the main flex via the J2 connector of the main board. The figures below show the connections and signal assignments from the universal connector to the controller board.

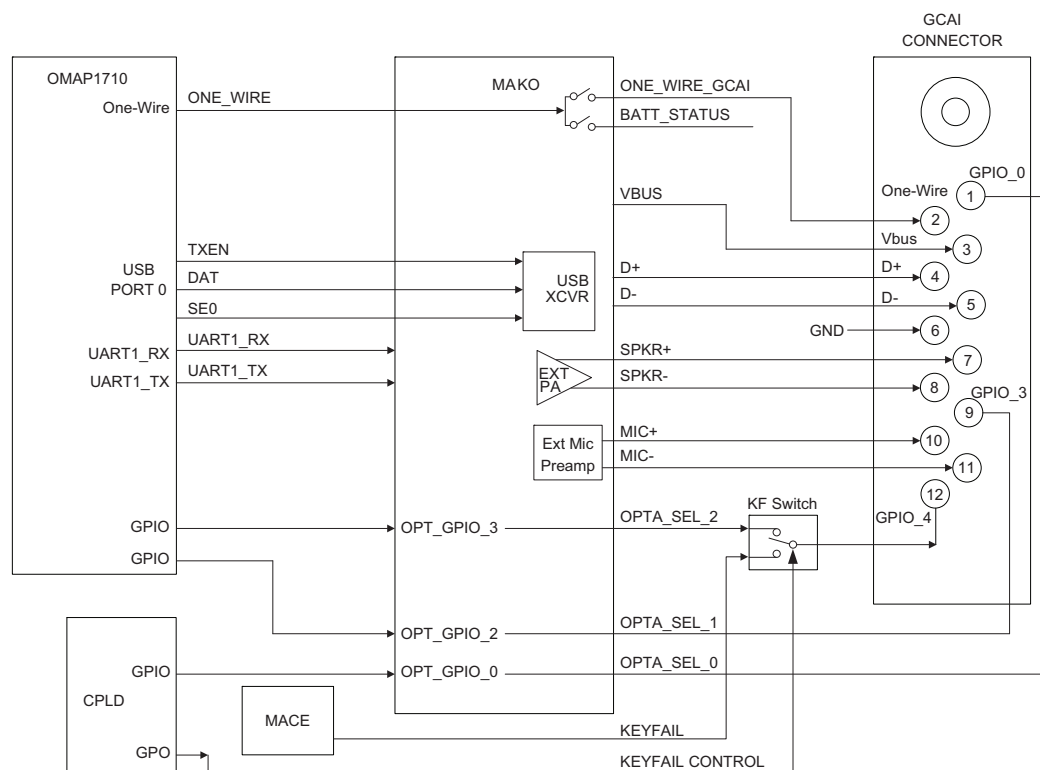


Figure 3-31. GCAI Signal Configuration

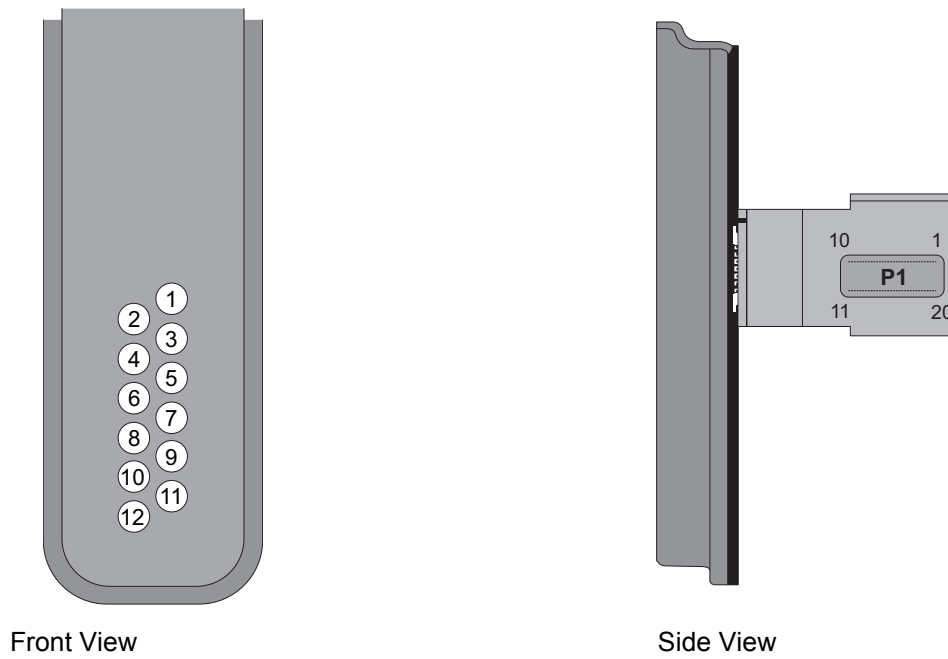


Figure 3-32. GCAI Connector

Table 3-6. P1 Pin Assignment

P1 PIN ASSIGNMENT	SIGNAL
1	GND
7	GCAI_USB_P_GPIO1
5	GCAI_USB_N_GPIO2
3	GCAI_RTS_GPIO_3
11	GCAI_CTS_GPIO_4
17	GCAI_MIC_N
19	GCAI_MIC_P
25	GCAI_SPKR_N
23	GCAI_SPKR_P
9	FCAI_ONE_WIRE
13	GCAI_GPIO0
28	GCAI_VBUS_5V
26	GCAI_VBUS_5V

Table 3-7. GCAI Connector Pin Assignment

PIN ASSIGNMENT	SIGNAL
1	GCAI_GPIO0 / PwrOn
2	GCAI_ONE_WIRE
3	GCAI_VBUS_5V
4	GCAI_USB_P_GPIO1 / TxDc / FillReq
5	GCAI_USB_N_GPIO2 / RxDc / FillData
6	GND
7	GCAI_SPKR_P / LineOut+
8	GCAI_SPKR_N / LineOut-
9	GCAI_RTS_GPIO_3 / OTG-ID / FillSen
10	GCAI_MIC_P
11	GCAI_MIC_N
12	GCAI_CTS_GPIO_4 / KeyFail / FillClk

3.2.7 Encryption

The encryption circuitry is placed on the main board. The encryption circuitry is designed to digitally encrypt and decrypt voice and ASTRO data in the APX 3000 radio. The Motorola Advanced Crypto Engine (MACE) IC is the main component in the encryption design, and has some discrete support circuitry along with the interfaces to the main board IC's (CPLD, OMAP, and Audio CODEC).

NOTE: The MACE IC is NOT serviceable. The information contained in this section is only intended to help determine whether a problem is due to the MACE IC or the radio itself.

Figure 3-33 below shows the Encryption architecture for the APX 3000 radio.

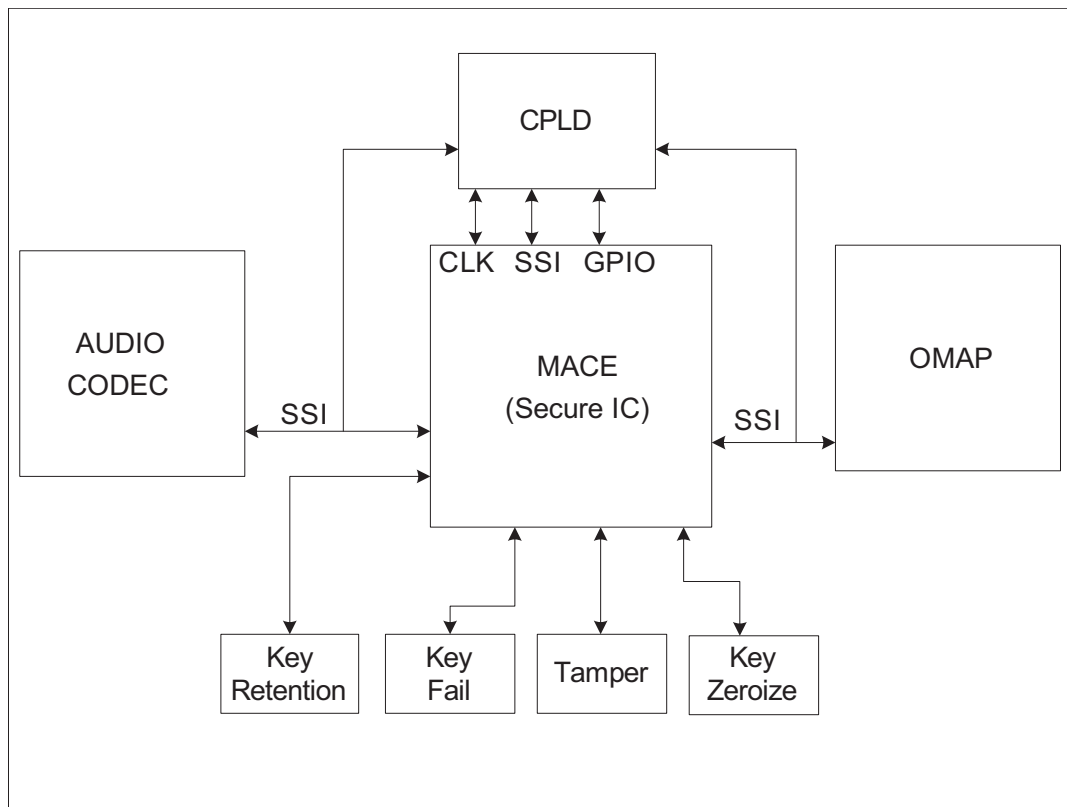


Figure 3-33. APX 3000 Encryption Architecture

As shown in Figure 3-33 above, the encryption design consists of 5 blocks:

- MACE IC
- Key Loading
- Key Retention
- Tamper
- Key Zeroize.

3.2.7.1 MACE IC

The encryption module uses the MACE IC and an encryption key variable to perform its encode/decode function. The encryption key variable is loaded into the MACE IC, via the GCAI (side) connector, from a hand-held, key variable loader (KVL). The MACE IC contains the particular encryption algorithm purchased.

Once the MACE IC has its encryption keys and algorithm, it communicates with the radio's host processor (OMAP) through the Synchronous Serial Interface (SSI) bus. Both commands and audio (clear and encrypted) are sent through the SSI bus. A communication failure between the host processor and the secure module will be indicated as an ERROR 09/10 message on the display when the radio is connected to DRSM.

Figure 3-8 below lists the corresponding kit numbers.

Table 3-8. Secure Board KIT Numbers

KIT Number	Description
MLE4858_	APX 3000 RF Board Kit, UHF1
MLE4912_	APX 3000 RF Board Kit, UHF2
MLD4565_	APX 3000 RF Board Kit, VHF
MLF4094_	APX 3000 RF Board Kit, 700/800 MHz

The MACE IC relies on a 4 MHz clock source provided by the CPLD, the clock is connected to MACE's XIN pin (U2510-P5).

3.2.7.2 Key Loading / Fail

Key variables are loaded into the MACE IC through the keyfail line. The signal originates from the GCAI connector (pin 11 of J2 on the main board). The signal is then selected by a multiplexer (U4003) controlled by CPLD output, KEYFAIL_CTRL, and the signal is routed to the MACE's KYLD pin (U2510-B10).

3.2.7.3 Key Retention

The key variables are retained within the MACE IC's memory (SRAM or FLASH). The keys can be infinite key retention or 30-seconds key retention, depending on how the codeplug is set up. When set to infinite key retention, the keys are stored in the FLASH memory inside the MACE IC. When set to 30-second retention, the keys are stored in SRAM, and will be erased when the radio's battery is removed (after the 30 second delay). The key retention delay circuit controls this time through a comparator op-amp circuit (U2526). When the battery is removed, VSAVE (nominally 2.5 V) will eventually drop to 0V after 30 seconds, which will result in a 0V output from U2526. This output is the input to the CONT_1.875 regulator (U2525), which is nominally 3.3 V. When the regulator's output is 0 V, the keys in MACE's SRAM will be erased.

3.2.7.4 Tamper

The tamper function is intended to erase the encryption keys in a tampering situation. If the radio chassis is opened during operation, the tamper signal, which is normally connected to ground through spring contact M2533, will be disconnected from ground. This will be sensed by MACE through its tamper pin TPR0 (U2510-M2). Once this condition is sensed, the encryption keys will be erased.

3.2.7.5 Key Zeroize

The encryption keys can also be manually erased if infinite key retention is not turned on in codeplug, by holding down the Side Top button and emergency buttons during radio power-up. These two button inputs both connect to a dual transistor Q2537, which will release the Key_ZEROIZE signal sensed by MACE's TPR0 (U2510-M2). Once this condition is sensed (floating high), the encryption keys will be erased.

To troubleshoot the encryption circuitry, refer to the flowcharts in [Chapter 5 "Troubleshooting Charts"](#).

3.3 Global Positioning System (GPS)

The APX 3000 GPS architecture employs the Texas Instruments NL5500 GPS IC (U1301) (located on the Main Board) which decodes GPS signals at 1575.42 MHz (L1 band). It is capable of producing a final position solution including full tracking and data decode capability. The GPS signal is received by the main RF/GPS combination antenna. The GPS signal is then diplexed at the antenna port via a series resonant network, C1315 and L1316 which provides a very low capacitive load to the transceiver. Additional GPS diplexing components include L1117 and C1122 which provide proper termination at the transceiver path output to minimize GPS signal leakage at the antenna port tap point at C1314. The GPS signal will then go through a SAW filter (FL1301), LNA (U1304), and a second SAW filter (FL1303), which then connects to the NL5500's GPS RF input (U1301 pin L2). The NL5500 IC is connected to the main OMAP processor via UART2. It is a two wire UART interface (TX and RX with no handshaking).

The GPS receiver is setup in an autonomous continuous navigation mode where the current position is updated once per second. The GPS receiver continuously tracks satellites for as long as the radio is powered on to ensure the best possible accuracy. In the event the radio loses visibility of the satellites due to terrain or environmental factors such as driving through a tunnel or entering a building, the GPS will temporarily lose its position fix. If the signal outage is long enough, a power savings algorithm will then cycle the GPS in and out of a sleep mode to save battery life until the radio has moved back into an environment where the GPS signal is present.

The following table lists the power, clock, and I/O connections from the GPS IC to various peripherals.

Table 3-9. Power and I/O Pins for NL5500

Signal Name	Type	NL5500 ball(s)	Source/Destination [ref] (board)	Description
VBAT	Power	A2, H1, D8	VSW_3.6 [U6504] (Main Board)	Main NL5500 power supply
VDDS	Power	B3, G10, K5, E2	VCC_1.85 [U6508] (Main Board)	I/O Power Supply
VDD_TCXO	Power	G1	VSW_3.6 [U6504] (Main Board)	TCXO Power Supply
RTC_CLK	Clock	H9	CPLD IO74 [U6101] (Main Board)	32kHz RTC
TCXO_CLK_LV	Clock	F1	TCXO [Y1304] (Main Board)	26MHz TCXO
GPS_nShutdown	Input	D5	CPLD IO91 [U6101] (Main Board)	GPS Reset
GPS_UART_TX	Output	F5	OMAP pin R9 [U6302] (Main Board)	GPS UART TX to OMAP UART RX
GPS_UART_RX	Input	E3	OMAP pin M18 [U6302] (Main Board)	OMAP UART TX to GPS UART RX
LNA_ENABLE	Output	H6	LNA [U1304] (Main Board)	GPS External LNA Enable
GPS_LNA_IN	Input	L2	GPS antenna/front-end	GPS RF Input from antenna

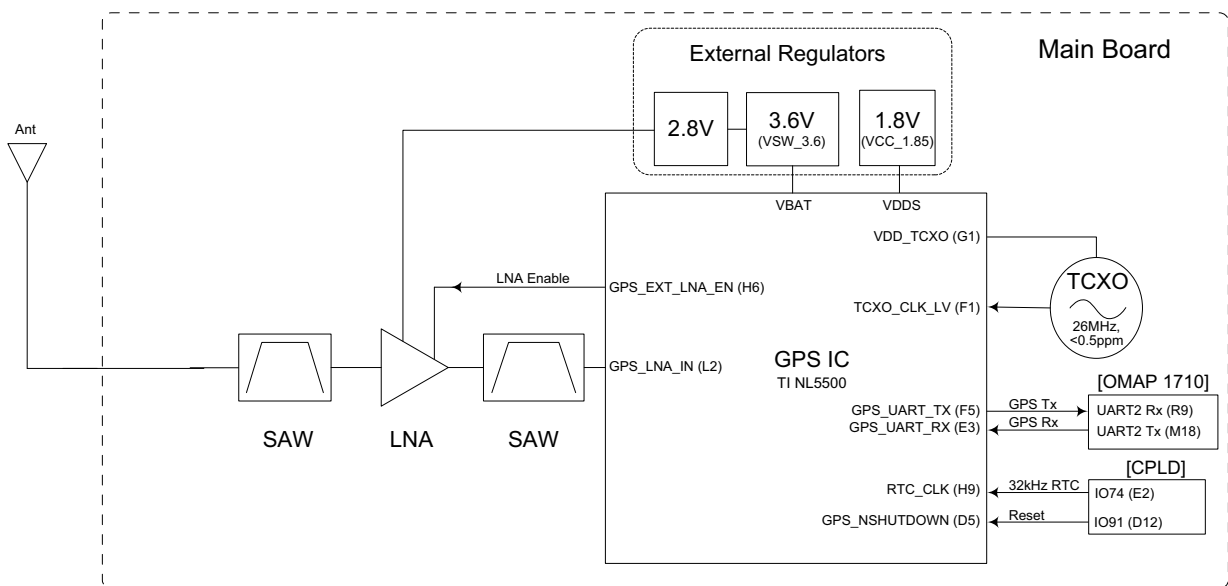


Figure 3-34. GPS Block Diagram

3.4 Accelerometer

3.4.1 General Overview

Accelerometer capabilities are achieved by the 3-axes nano” accelerometer IC (LIS331DL) located on the expansion board. The LIS331DL is a digital output linear accelerometer in a LGA package. It is powered by the 3.3 LDO regulator placed in the expansion board. The complete device includes a sensing element and an IC interface to provide the signal to the AVR IC. When acceleration is applied to the sensor, an imbalance in capacitance is produced. This imbalance is measured and converted to an analog voltage that is finally available to the user by an analog to digital converter. The acceleration data is accessed through an SPI interface and presented to the AVR.

NOTE: Please refer to User Guide and CPS for further details.

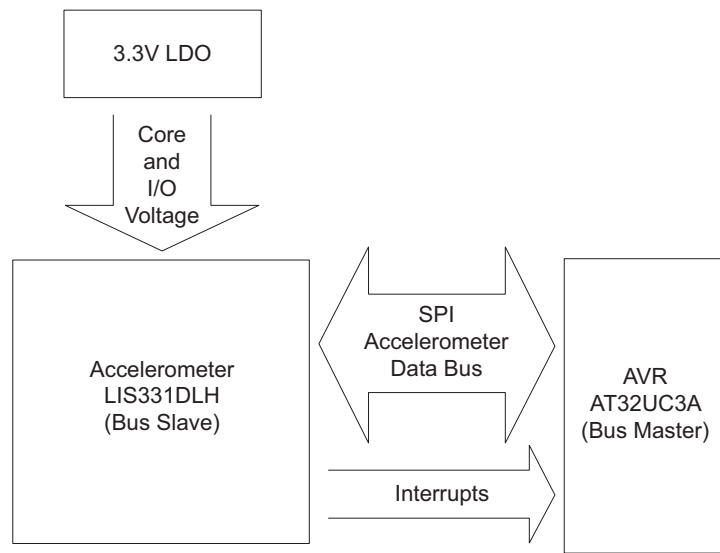


Figure 3-35. Accelerometer Block Diagram

The registers embedded on the LIS331DL are accessed through SPI serial interface. The following pins are responsible for the SPI communication.

Table 3-10. SPI Interface

Pin Name	Pin Description
CS	SPI Enable
SPC	SPI Serial Port Clock
SDI	SPI Serial Data Input
SDO	SPI Serial Data Output

CS is the serial port enable and it is controlled by the AVR (SPI Master). It goes low at the start of the transmission and toggles high at the end. SPC is the serial port clock and it is also controlled by the AVR. It is stopped high when the CS is high (no transmission). SDI and SDO are respectively the serial data input and output. These lines are driven at the falling edge of SPC and should be capture at the rising edge of SPC.

The following table provides a list of the registers and their respective addresses used for the accelerometer IC (LIS331DL).

Table 3-11. Register Address Map

Name	Type	Register Address		Default	Comment
		Hex	Binary		
Reserved (do not modify)		00 – 0E			Reserved
WHO_AM_I	r	0F	000 1111	110010	Dummy register
CTRL_REG1	rw	20	010 0000	111	
CTRL_REG2	rw	21	010 0001	0	
CTRL_REG3	rw	22	010 0010	0	
CTRL_REG4	rw	23	010 0011	0	
CTRL_REG5	rw	24	010 0100	0	
HP_FILTER_RESET	r	25	010 0101		Dummy register
REFERENCE	rw	26	010 0110	0	
STATUS_REG	r	27	010 0111	0	
OUT_X_L	r	28	010 1000	output	
OUT_X_H	r	29	010 1001	output	
OUT_Y_L	r	2A	010 1010	output	
OUT_Y_H	r	2B	010 1011	output	
OUT_Z_L	r	2C	010 1100	output	
OUT_Z_H	r	2D	010 1101	output	
Reserved (do not modify)		2E – 2F			Reserved
INT1_CFG	rw	30	011 0000	0	
INT1_SOURCE	r	31	011 0001	0	
INT1_THS	rw	32	011 0010	0	
INT1_DURATION	rw	33	011 0011	0	
INT2_CFG	rw	34	011 0100	0	
INT2_SOURCE	r	35	011 0101	0	
INT2_THS	rw	36	011 0110	0	
INT2_DURATION	rw	37	011 0111	0	
Reserved (do not modify)		38 – 3F			Reserved

NOTE: Refer to the part data sheet for a detailed explanation of the registers.

3.5 Bluetooth

The Bluetooth feature allows the radio the ability to connect wirelessly to a Bluetooth accessory or data terminal. This feature is implemented using a combination of Bluetooth/GPS integrated circuit (IC, U1301), a low-frequency receiver (NFC, U2403), and a host controller (U2415) with external 128 MB SDRAM (U2413). The Bluetooth IC sends data to the host controller processor over an HCI USART link. The host controller processor communicates to the OMAP processor on the RF board through a dedicated USB port.

Each APX accessory that is capable of Bluetooth communication will have its own unique Bluetooth address. An external audio accessory headset can establish a digital connection using a low-data rate GFSK modulated signal hopping on 79 x 1 MHz wide Bluetooth channels from 2402 MHz to 2480 MHz in the ISM band. Bluetooth uses a frequency hopping spread spectrum (FHSS) technique to spread the RF power across the spectrum to reduce the interference and spectral power density. The frequency hopping allows the channel to change up to 1600 times a second (625 us time slot) based on a pseudo random sequence. If a packet is not received on one channel, the packet will be retransmitted on another channel.

The Bluetooth feature is accompanied by a Low-Frequency (LF) detection circuit. Once a radio has the Bluetooth feature enabled, a user can tap their LF enabled Bluetooth audio accessory with the radio at the pairing spot to establish a secure Bluetooth connection. The LF circuit provides the ability of a secure pairing connection with a Bluetooth accessory by sending secure messages including the BT address of the external accessory during pairing. The LF circuit uses a 125 kHz signal to communicate the secure pairing information over a dedicated SPI bus between the Bluetooth accessory and the AVR32 processor.

Low-frequency transmission is done by the host controller itself using a NOR gate. The LF antenna is located on the radio's back housing with a blue dot marking. The antenna is connected to the LF receiver IC on the mainboard via a flex. The Bluetooth antenna is a stamped metal folded monopole antenna mounted on the radio's front housing:

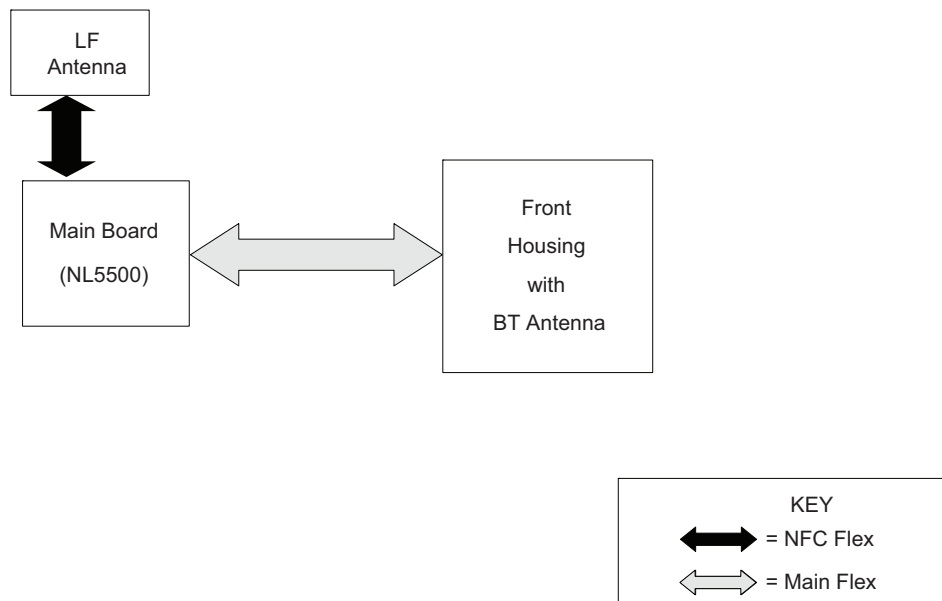


Figure 3-36. Relation of Bluetooth & LF Antenna Assembly to Main Board

To connect a Bluetooth accessory, the blue pairing indicators on the accessory and the radio should be brought close to each other with the Bluetooth feature enabled and on in the radio. The LF/Bluetooth connection flow is shown in [Figure 3-37](#).

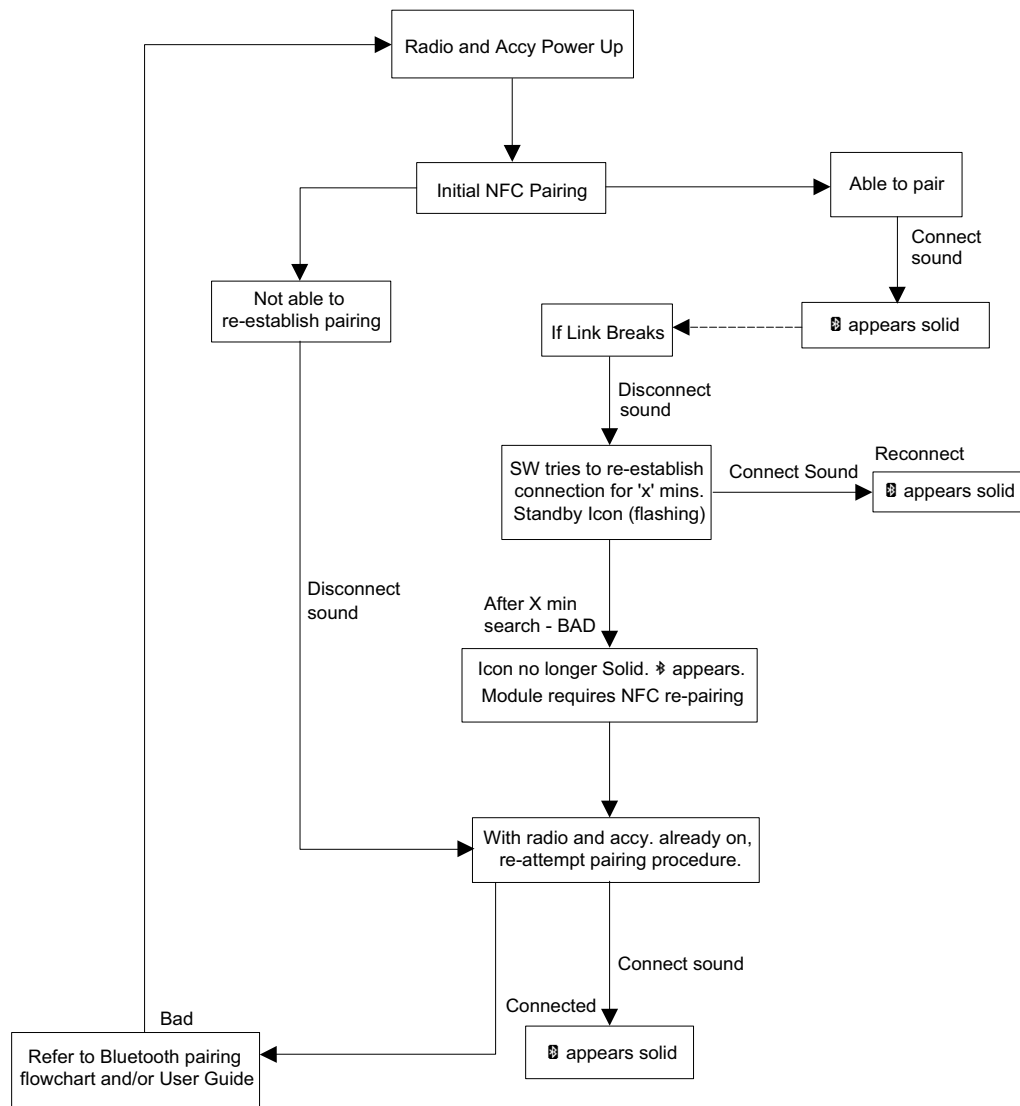


Figure 3-37. Bluetooth Connection Flowchart

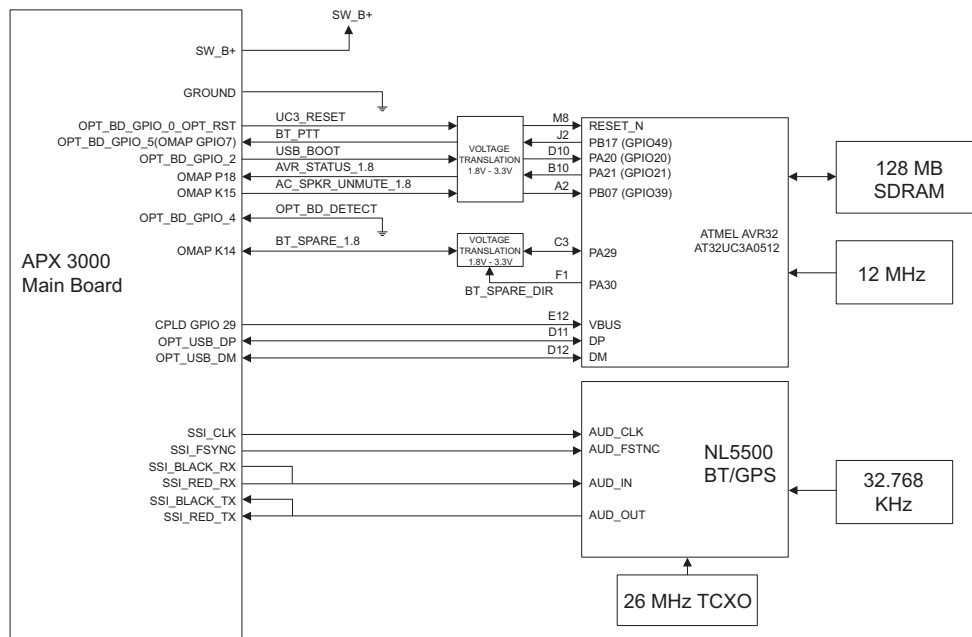


Figure 3-38. Bluetooth/Controller Interface with Clock Sources

The Bluetooth IC transceiver is connected to a dedicated Bluetooth antenna. Between the IC and antenna is a band-pass filter as shown in Figure 3-39.

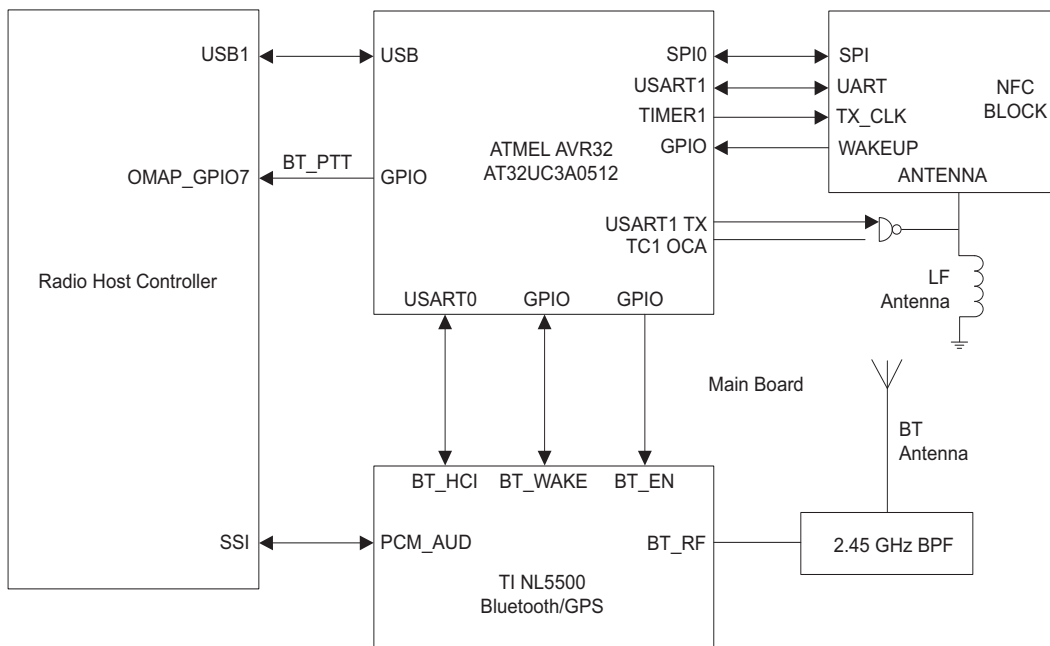


Figure 3-39. Bluetooth Functional Block Diagram

To verify the Bluetooth transmitter is operational, an RCMP command can be sent to transmit a constant carrier waveform on a Bluetooth frequency. To verify the LF transmit feature is operational, an RCMP command can be sent to transmit a constant carrier waveform at 125 kHz. There are similar RCMP commands for verifying BT/LF RSSI when a CW BT/LF signal is applied near the antennas of the BT/LF circuitry.

The Low-Frequency block diagram below shows the main connections:

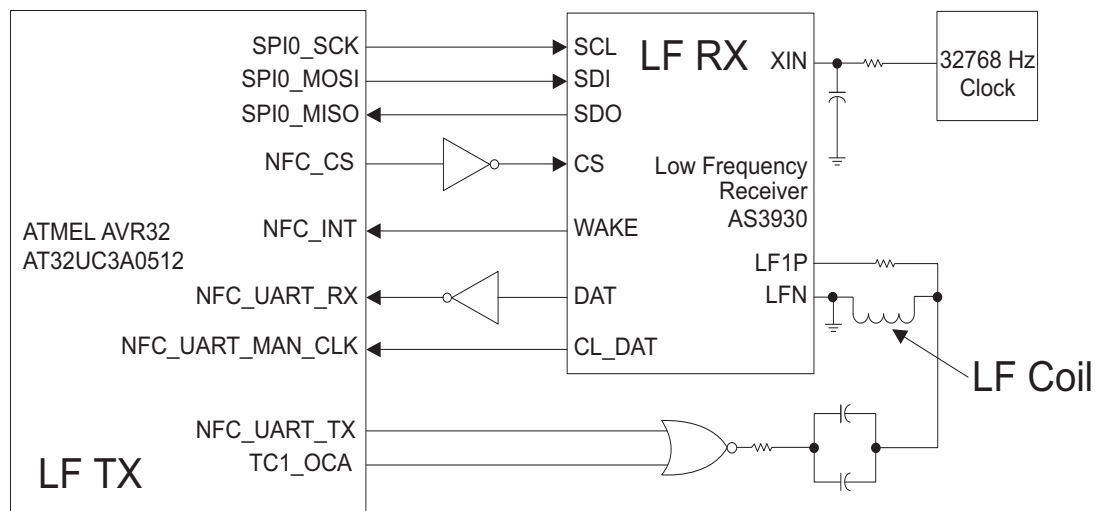


Figure 3-40. Bluetooth Low-Frequency Circuit Block Diagram

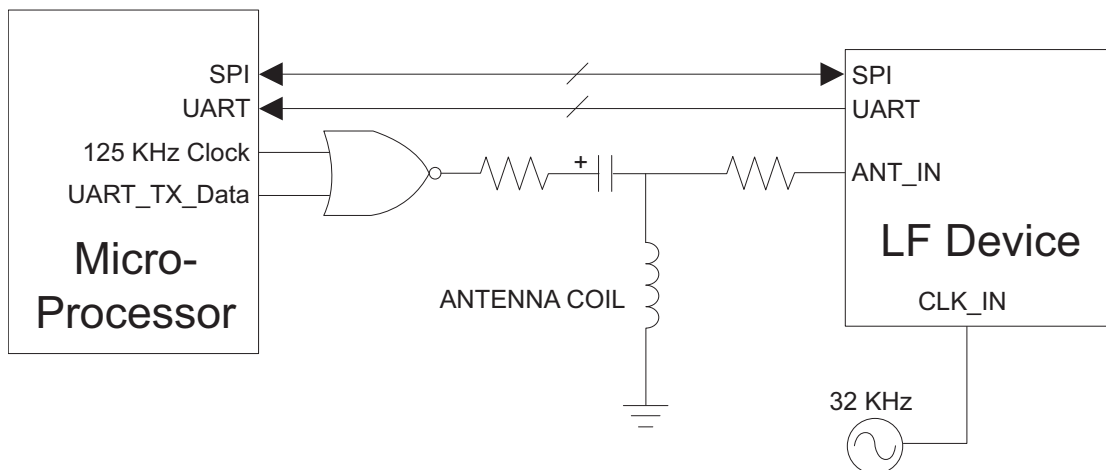


Figure 3-41. Bluetooth Low-Frequency Pairing Data Path

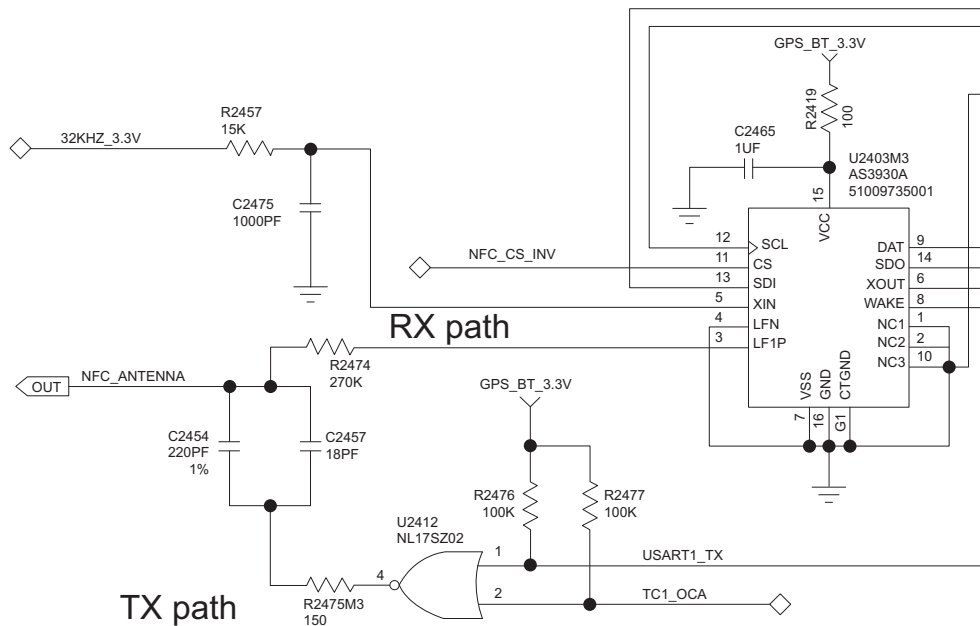


Figure 3-42. Detailed Low-Frequency Transmit/Receive Paths

3.5.1 Bluetooth Power

Our Bluetooth IC operates from a 3.6V (U6504, VBAT) switching regulator located on the Main board to supply the Bluetooth IC core and a 1.85V (U6508, VDD5) supply for the I/O. It has a shutdown (U2415 pin L3) that must be high for operation to work. The power-up/down sequence required for operation is shown in Figure 3-43.

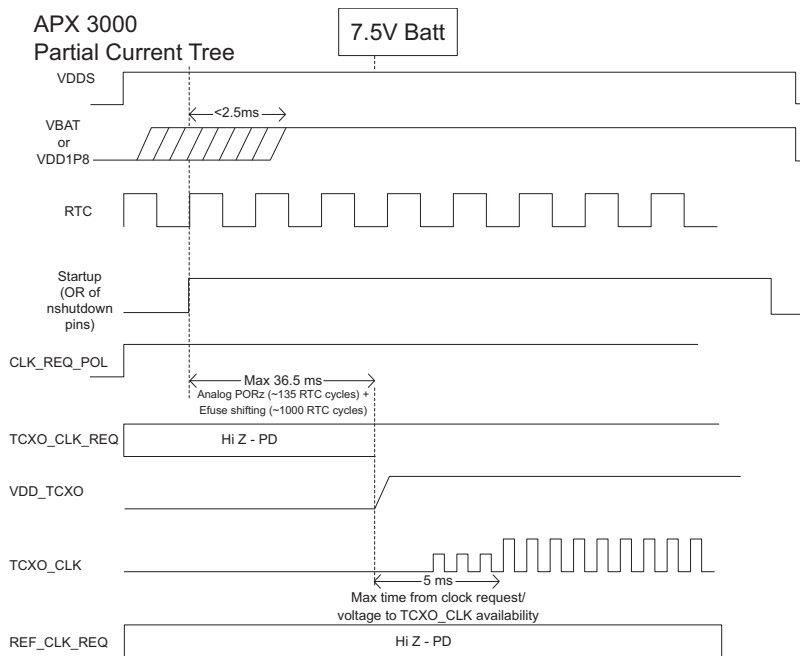


Figure 3-43. Chip Power-Up/Power-Down Sequence (External Input/Output Shown)

The host processor operates from a 3.3V LDO regulator (U2402). The 1.85V regulator enables the 3.3V LDO regulator output. The LF receiver IC is powered from a 3.3V LDO regulator (U2402).

Figure 3-44 is a partial current tree showing the flow of current from the battery to the Bluetooth-related major components sourced by the 3.6V switching regulator on the Main Board.

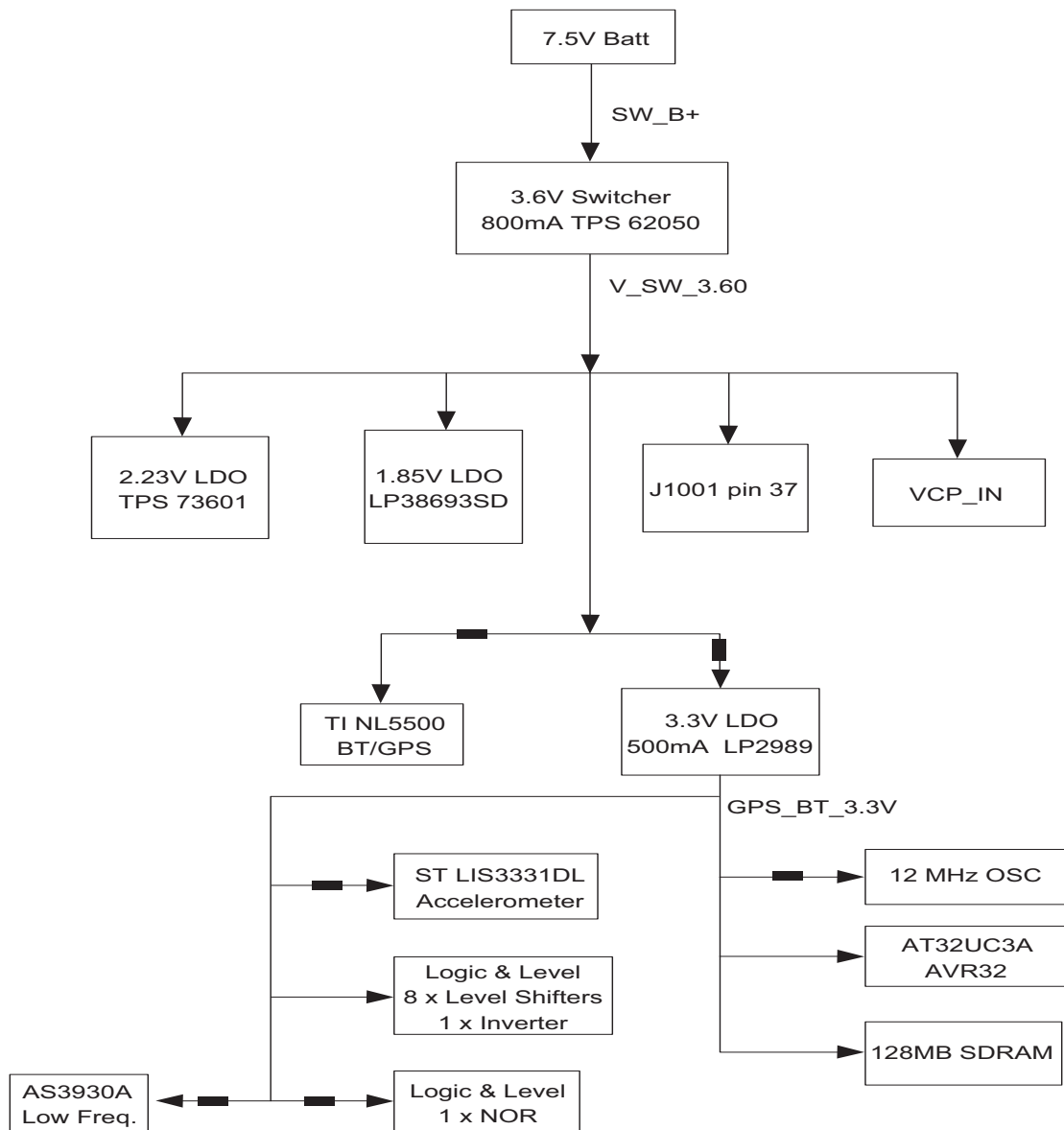


Figure 3-44. Current Distribution Tree for Bluetooth Circuitry

3.5.2 Bluetooth Clocks

The Bluetooth IC requires a 26 MHz TCXO (Y1304, TCXO_CLK) for the core and a 32.768 kHz (U6101 pin E2 on Main Board, RTC_CLK) slow clock for the USART. This is the same clock used for the GPS portion of the BT/GPS combination IC.

The host processor IC requires a 12 MHz crystal oscillator (Y2475) clock. The LF receiver IC requires a 32.768 kHz (U6101 pin E2 on Main Board, RTC_CLK) clock.

3.5.3 Bluetooth I/Os.

The communication between the Bluetooth IC and the host controller is by a four-wire HCI USART0 bus (RX, TX, CTS, RTS). The Bluetooth IC receives a firmware update over the USART0 each time it is powered on. The LF receiver IC transmits its data over the USART1. USART2 is used for displaying debugging messages.

Table 3-12. Bluetooth Host Processor UART I/O

Signal Name	Pad Name	GPIO	MUX Function	Schematic Name	I/O
USART0 – RXD	PA00	0	A	BT_UART_TX_3.3V	I
USART0 – TXD	PA01	1	A	BT_UART_RX_3.3V	O
USART0 – RTS	PA03	3	A	BT_UART_CTS_3.3V	O
USART0 – CTS	PA04	4	A	BT_UART_RTS_3.3V	I
USART1 – RXD	PA05	5	A	USART1_RX	I
USART1 – TXD	PA06	6	A	USART1_TX	O
USART1 – CLK	PA07	7	A	USART1_CLK	I
USART2 – RXD	PB29	61	A	AVR_USART2_RX	I
USART2 – TXD	PB30	62	A	AVR_USART2_TX	O

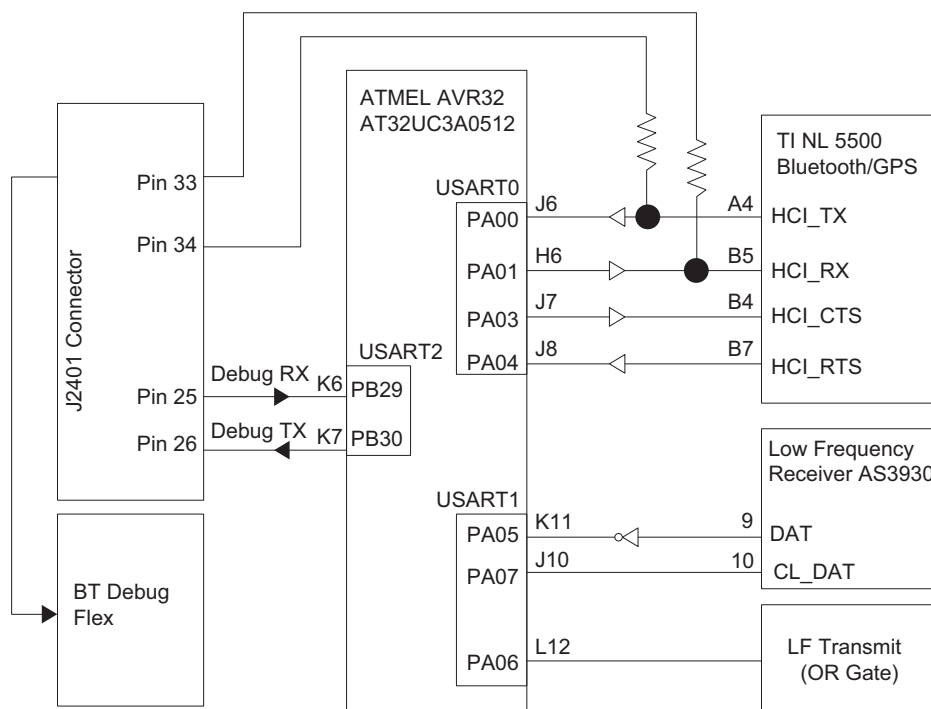


Figure 3-45. Bluetooth LF UART Connection Block Diagram

The Bluetooth IC shutdown (U2415 pin L3) and wakeup (U2415 pin K3) pins are also connected to the host controller. A Bluetooth PTT pin on the host controller (U2415 pin J2) tells the OMAP (U6302 pin Y5) when the user pressed the PTT button on the Bluetooth accessory. As the BT IC I/O is 1.8V, but the host controller I/O is 3.3V, level shifters are employed for interconnection between the two.

The host processor IC is connected to the LF receiver IC by a four-wire SPI bus. This SPI bus also communicates with an on-board accelerometer. The LF transmitter circuit uses a 125 kHz signal (U2415 pin M3) that is turned on and off (OOK) by the USART1_TX signal (U2415 pin L12).

Table 3-13. SPI I/O

Signal Name	Pad Name	GPIO	MUX Function	Schematic Name	I/O
SPIP – NPCS[2]	PA09	9	B	SPIO_CS2	O
SPIP – NPCS[0]	PA10	10	A	NFC_CS	O
SPIP – MISO	PA11	11	A	SPIO_MISO	I
SPIP – MOSI	PA12	12	A	SPIO_MOSI	O
SPIP – SCK	PA13	13	A	SPIO_CLK	O

The host processor is connected to the 3.3V SDRAM using a synchronous interface. The host processor is connected to the OMAP on the Main Board by a full-speed USB (D11 & D12). VBus is a sense line only.

Table 3-14. USB I/O

Signal Name	Pin Name	Pad Name	Schematic Name	I/O
GPIO19	C12	PA19	USB_BOOT_3.3V	I
GPIO20	D10	PA20	ATMEL_BOOT	I
DP	D11	–	BT_AVR_USB_DP	I/O
DM	D12	–	BT_AVR_USB_DM	I/O
VBUS	E12	–	BT_AVR_VBUS	I

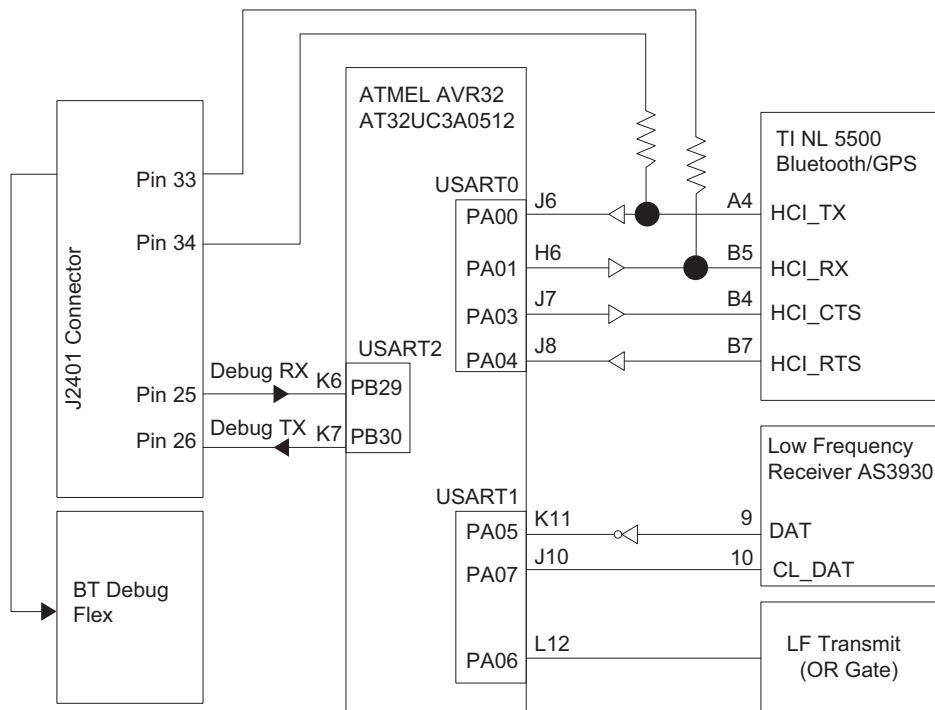


Figure 3-46. Bluetooth USB Interface To Main Board

The ATMEL bootloader is being used as a first stage bootloader that will jump to the Motorola bootloader, which is a stage two bootloader. GPIO20 is used by the ATMEL bootloader to trap in Flash mode. GPIO19 will be used by the Motorola bootloader to trap in Flash mode. Both pins are active low.

The Bluetooth audio is sent over a two-channel PCM/SSI interface to the audio codec (U6405) on the Main board.

Table 3-15. GPIO I/O

Signal Name	Pad Name	GPIO	Schematic Name	I/O
GPIO41	PB09	41	BT_HOST_WAKEUP_3.3V	I
GPIO49	PB17	49	BT_PTT_3.3V	O
GPIO50	PB18	50	BT_SHUTDOWN_3.3V	O
GPIO51	PB19	51	BT_WAKEUP_3.3V	O

Notes

Chapter 4 Troubleshooting Procedures

The purpose of this chapter is to aid in troubleshooting problems with the ASTRO APX 3000 radio. It is intended to be detailed enough to localize the malfunctioning circuit and isolate the defective component. It also contains a listing of service tools recommended for PC board repair at the component level.



Caution

Most of the ICs are static sensitive devices. Do not attempt to disassemble the radio or troubleshoot a board without first referring to the following Handling Precautions section.

4.1 Handling Precautions

Complementary metal-oxide semiconductor (CMOS) devices, and other high-technology devices, are used in this family of radios. While the attributes of these devices are many, their characteristics make them susceptible to damage by electrostatic discharge (ESD) or high-voltage charges. Damage can be latent, resulting in failures occurring weeks or months later. Therefore, special precautions must be taken to prevent device damage during disassembly, troubleshooting, and repair. Handling precautions are mandatory for this radio, and are especially important in low-humidity conditions. DO NOT attempt to disassemble the radio without observing the following handling precautions.

1. Eliminate static generators (plastics, Styrofoam, etc.) in the work area.
2. Remove nylon or double-knit polyester jackets, roll up long sleeves, and remove or tie back loose-hanging neckties.
3. Store and transport all static-sensitive devices in ESD-protective containers.
4. Disconnect all power from the unit before ESD-sensitive components are removed or inserted unless otherwise noted.
5. Use a static-safeguarded workstation, which can be accomplished through the use of an anti-static kit (Motorola part number 01-80386A82) or equivalent. This kit includes a wrist strap, two ground cords, a static-control table mat and a static-control floor mat.

4.2 Recommended Service Tools

Table 4-1 lists recommended service tools that can be used for PC board repairs at the component level. For listings of additional service tools, service aids, and test equipment that are recommended for all levels of service, refer to the APX 3000 basic service manual (see Related Publications).

Table 4-1. Recommended Service Tools

Motorola Part Number	Description	Application
PMLN6208_	Chassis Opener	Used to disassemble chassis from housing
66012031001	Battery Adapter	Used in place of battery to connect radio to an external power supply.
66012075001	Vacuum Test Fixture	To connect the vacuum/pressure hose to the radio.
NLN9839_	Vacuum Pump Kit	Vacuum pump with gauge and vacuum hose. Requires Vacuum Test Fixture (66012075001).
5880384G68	SMA to BNC Adapter	Adapts radio's antenna port to BNC cabling of test equipment.
RVN5224_	Customer Programming Software (CPS) and Tuner Software	CPS allows customer-specific programming of modes and features. Tuner software required to perform alignment of radio parameters.
PMKN4012_	Programming Cable	Used to program the radio through Customer Programming Software and Tuner Software.
PMKN4013_	Programming/Service Cable	Used to program and service the radio through Customer Programming Software and Tuner Software.
RLN4460_	Portable Test Set	Used for radio performance checks. Connects to radio's universal connector and allows remote switching and signal injection/outputs for test equipment measurements.
66012036001	APX 3000 Covert Board Debugging Fixture	To be assembled with Flex, Debug (0104055J17), flex, Extended Main (0104052J79), Assy, Flex, NFC (0104052j74), front housing kit (0104052J79), and FSTN Display with Bezel (72012008001).

4.3 Standard Bias Table

Table 4-2 outlines some standard supply voltages and system clocks which should be present under normal operation. These should be checked as a first step to any troubleshooting procedure.

Table 4-2. Standard Operating Bias – DC Voltages

Name	Reference	Description	Level
ON_OFF_Switch	TP6210	ON_OFF_Switch. Radio on when GND	GND
UNSW_B+	F_UNSW_B+	Radio Battery Voltage	6–9V
SW_B+	C6593	Radio Supply Voltage	6–9V
V_SAVE	C6538	LDO Output Present When Battery is Attached	2.5V
V_1.875	C6581	LDO Output	1.875V
V_1.55	R6561	LDO Output	1.55V
V_2.775D	R6563	LDO Output	2.775V
V_2.775_EXP	R6562	LDO Output	2.775V
V_2.8_RF	R6564	LDO Output	2.8V
V_5.0A	R6565	LDO Output	5.0V
V_3.3	R6566	LDO Output	3.3V
V_3.0A	R6567	LDO Output	3.0V
V_EXT_1.85	R6570	LDO Output	1.85V
V_SW_1.4	C6570	Switcher Output	1.4V
V_SW_3.60	C6561	Switcher Output	3.6V
V_2.23	C6573	LDO Output	2.23V

Table 4-3. Standard Operating Bias – Clock Sources

Clock Source	Reference	Description	Frequency
Y6501	R6533	MAKO 24MHz & tapped into CPLD	24.576MHz
Y6502	C6541	MAKO RTC	32.768KHz
Y6601	C6601	OMAP CPU Clock	12MHz
U6302	TP6307 and TP6308	DDR Clocks (Complementary signals)	96MHz
U6101	R6113	MACE Clock	4MHz
U6101	R6115	GPS RTC clock	32.768KHz
Y701 (RF board)	R6218	RF Freq synth IC (Abacus) TCXO	16.8MHz

4.4 Power-Up Self-Check Errors

Each time the radio is turned on, the MCU and DSP perform a series of internal diagnostics. These diagnostics consist of checking such programmable devices as the FLASH ROMs, the EEPROM, and SRAM devices.

Problems detected during the power-up self-check routines are presented as error codes on the radio's display. For non-display radios, the problem is presented at power up by a single, low-frequency tone. [Table 4-4](#) lists possible error codes, a description of each error code, and a recommended corrective action.

Table 4-4. Power-Up Self-Check Error Codes

Error Code/ Error Message	Description	Corrective Action
01/02	FLASH ROM Codeplug Checksum Non-Fatal Error	Reprogram the codeplug
01/12	Security Partition Checksum Non-Fatal Error	Send radio to depot
01/20	ABACUS Tune Failure Non-Fatal Error	Turn the radio off, then on
01/22	Tuning Codeplug Checksum Non-Fatal Error	Send radio to depot
01/81	Host ROM Checksum Fatal Error	Send radio to depot
01/82	FLASH ROM Codeplug Checksum Fatal Error	Reprogram the codeplug
01/88	External RAM Fatal Error – Note: Not a checksum failure	Send radio to depot
01/90	General Hardware Failure Fatal Error	Turn the radio off, then on
01/92	Security Partition Checksum Fatal Error	Send radio to depot
01/93	FLASHport Authentication Code Failure	Send radio to depot
01/98	Internal RAM Fail Fatal Error	Send radio to depot
01/A2	Tuning Codeplug Checksum Fatal Error	Send radio to depot
02/81	DSP ROM Checksum Fatal Error	Send radio to depot
02/88	DSP RAM Fatal Error – Note: Not a checksum failure	Turn the radio off, then on
02/90	General DSP Hardware Failure (DSP startup message not received correctly)	Turn the radio off, then on
09/10	Secure Hardware Error	Turn the radio off, then on
09/90	Secure Hardware Fatal Error	Turn the radio off, then on

Note: *If the corrective action does not fix the failure, send the radio to the depot.*

4.5 Power-Up Self-Check Diagnostics and Repair (Not for Field Use)

Table 4-5 lists additional action items that can be used for the diagnosis and resolution of the error codes listed in Table 4-4.

Table 4-5. Power-Up Self-Check Diagnostic Actions

Error Code/ Error Message	Diagnostic Actions
01/02	This non-fatal error will likely recover if the radio's power is cycled. In the event that this does not resolve the issue, the radio should be reflashed. If the error remains, send the radio to depot.
01/12	The radio should be sent to the depot for reflashing of the security codeplug.
01/20	Cycling radio power should resolve this issue.
01/22	The radio should be sent to the depot for reflash of the tuning codeplug followed by retuning of the radio.
01/81	The radio should be sent to the depot for reflashing of the host code.
01/82	The radio should be sent to the depot for reflashing of the radio codeplug.
01/88	Reflashing of the radio should first be performed. If this fails to resolve the issue, send the radio to depot.
01/90	Cycle power to radio. Continued failure indicates a likely IC failure. In this event, radio should be sent to the depot for isolation and repair of the problem IC.
01/92	The radio should be sent to the depot for reprogramming of the security codeplug.
01/93	The radio should be sent to the depot for reflashing of the host code.
01/98	Send radio to the depot.
01/A2	The radio should be sent to the depot for reflashing of the tuning codeplug followed by re-tuning of the radio.
02/81	The radio should be sent to the depot for examination.
02/88	Cycle power to the radio. If this does not fix the problem, then the radio should be sent to the depot for reflashing of the DSP code.
02/90	Cycle power to the radio. If this fails to fix the problem, then the radio should be sent to the depot for reflashing of the DSP code.
09/10	Cycle power to the radio. If this fails then follow instructions in the secure hardware failure troubleshooting flowchart.
09/90	Cycle power to the radio. If this fails then follow instructions in the secure hardware failure troubleshooting flowchart.
Hardware board failed	Bluetooth error. Send radio to depot for examination.
Hardware board mismatch	Updating the firmware should resolve the error message.

Table 4-5. Power-Up Self-Check Diagnostic Actions (Continued)

Error Code/ Error Message	Diagnostic Actions
Hardware board mismatch then Man-Down HW error	Updating the firmware should resolve the error message.

Chapter 5 Troubleshooting Charts

This section contains detailed troubleshooting flowcharts. These charts should be used as a guide in determining the problem areas. They are not a substitute for knowledge of circuit operation and astute troubleshooting techniques. It is advisable to refer to the related detailed circuit descriptions in the theory of operation sections prior to troubleshooting a radio.

5.1 List of Troubleshooting Charts

Most troubleshooting charts (see [Table 5-1](#)) end up by pointing to an IC to replace. It is not always noted, but it is good practice to verify supplies and grounds to the affected IC and to trace continuity to the malfunctioning signal and related circuitry before replacing any IC. For instance, if a clock signal is not available at a destination, continuity from the source IC should be checked before replacing the source IC.

Table 5-1. Troubleshooting Charts

Troubleshooting	Page No.
Main Troubleshooting	
Main Troubleshooting Flowchart	5-3
Power-Up Failure	
Main Board	5-4
B+ Incorrect Voltage	5-5
Low LDO10 V_3.3 Voltage	5-6
Low LDO3 V_1.55 Voltage	5-7
Low LDO8 V_5.0A Voltage	5-8
Low VBUS2 Voltage	5-9
Low V_SW_1.4 Voltage	5-10
Low V_2.23 Voltage	5-11
Low V_SW_3.6 Voltage	5-12
Low V_SW_5 Voltage	5-13
Low V_EXT_1.85 Voltage	5-14
DC Supply	
DC Supply 5 Volt Failure	5-15
DC Supply 3.6 Volt Failure	5-16
DC Supply 3 Volt Failure	5-17
DC Supply 1.85 Volt Failure	5-18

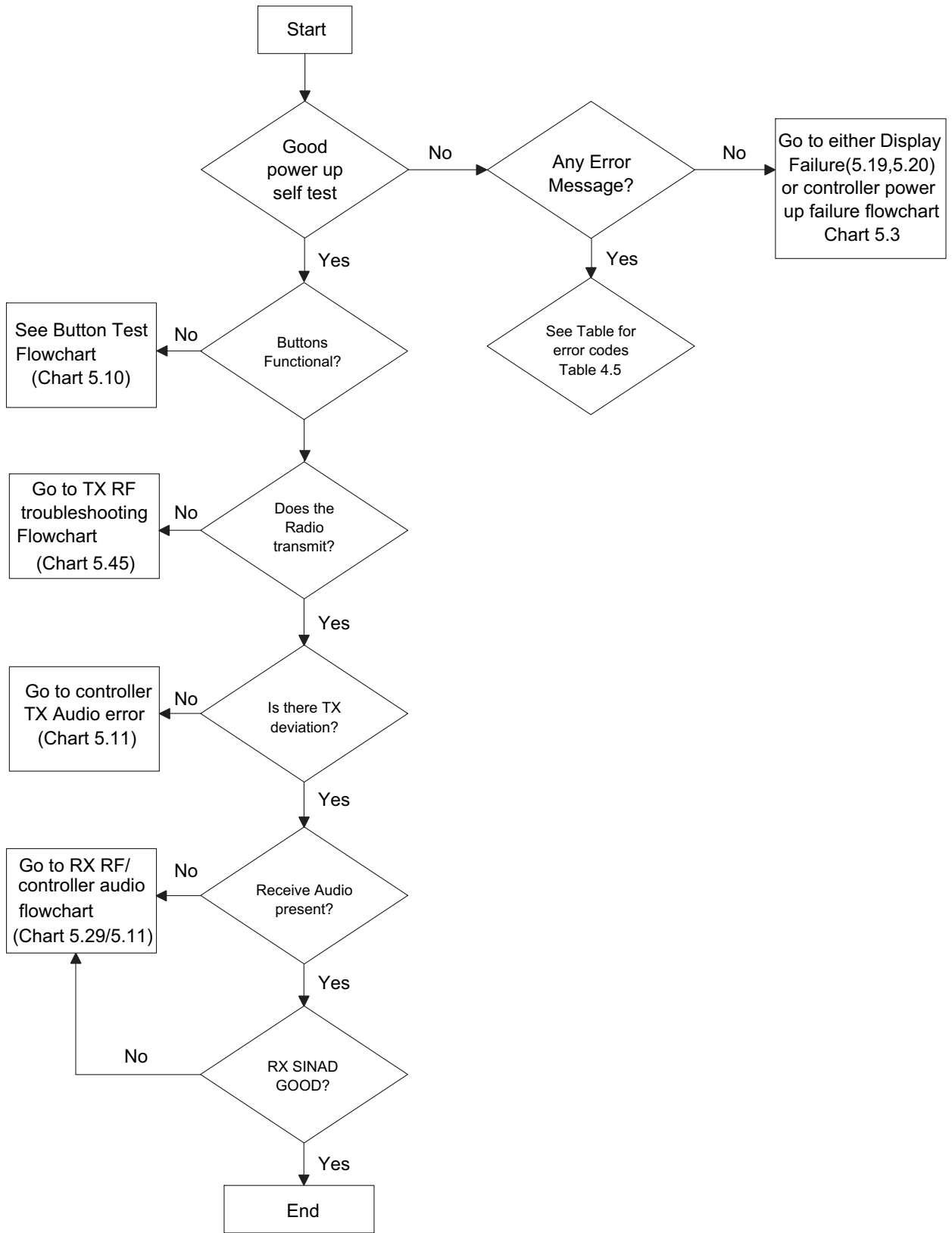
Table 5-1. Troubleshooting Charts (Continued)

Troubleshooting	Page No.
DC Supply 1.8 Volt Failure	5-19
DC Supply 1.5 Volt Failure	5-20
DC Supply 1.4 Volt Failure	5-21
Button	
Side Button Error	5-22
Audio	
External Audio	5-23
External Mic Failure	5-24
Keyload/ Secure Hardware/ Memory	
Keyload Failure	5-25
Secure Hardware Failure	5-26
RX RF	
RX RF Failure	5-27
FGU	
FGU Failure	5-37
VCO	
VCO Failure	5-38
GPS	
GPS Failure	5-43

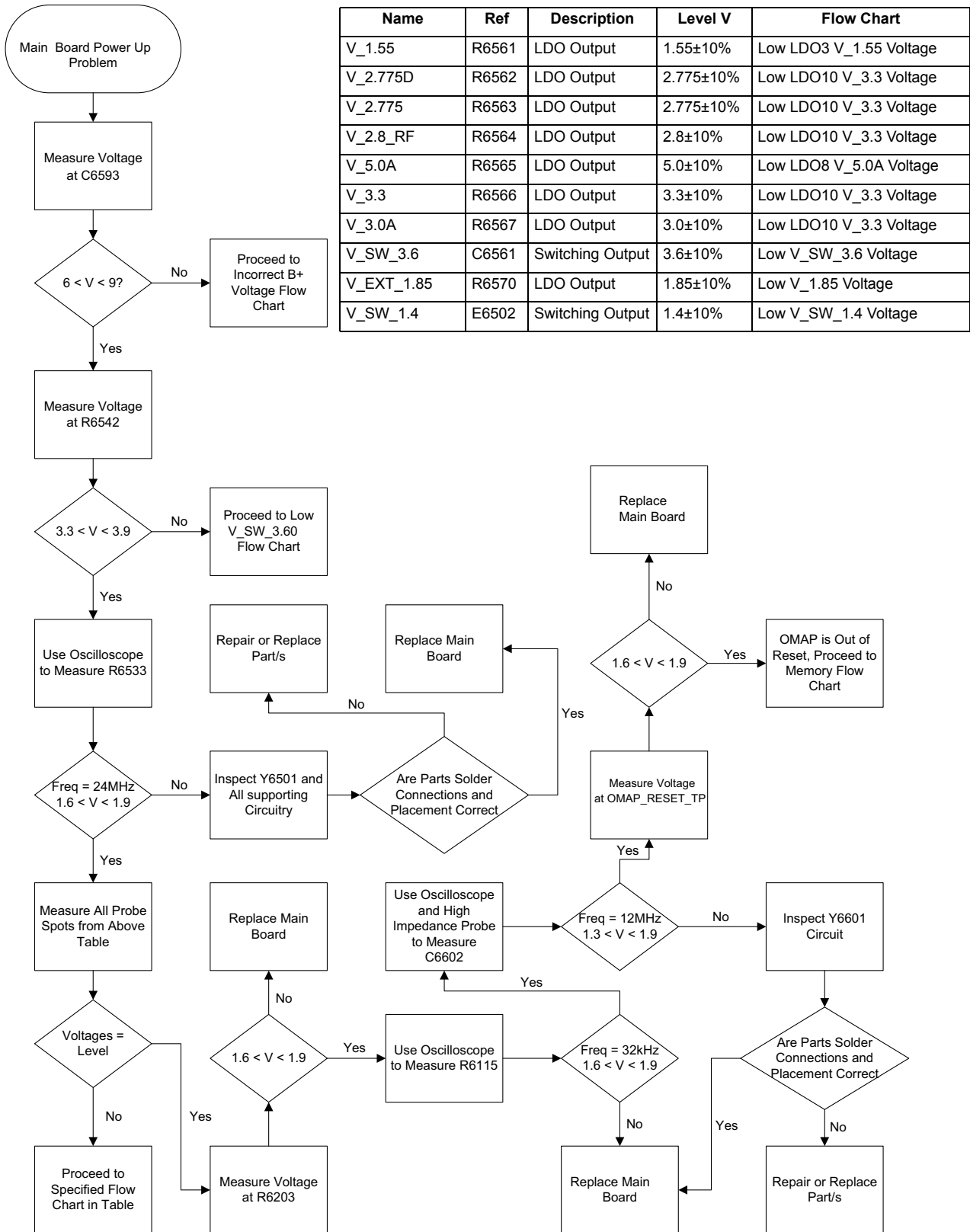
Table 5-1. Troubleshooting Charts (Continued)

Troubleshooting	Page No.
GPS Failure	
Bluetooth Failure – Pairing Issue	5-44
Bluetooth Failure – LCD Indication	5-47
PA Failure	
PA Failure	5-50
PA Failure – Page 1 (UHF1/UHF2)	5-51
PA Failure – Page 2 (700/800 MHz)	5-52
PA Failure – Page 3 (VHF PA)	5-53
PA Failure – Page 4(ALC)	5-54

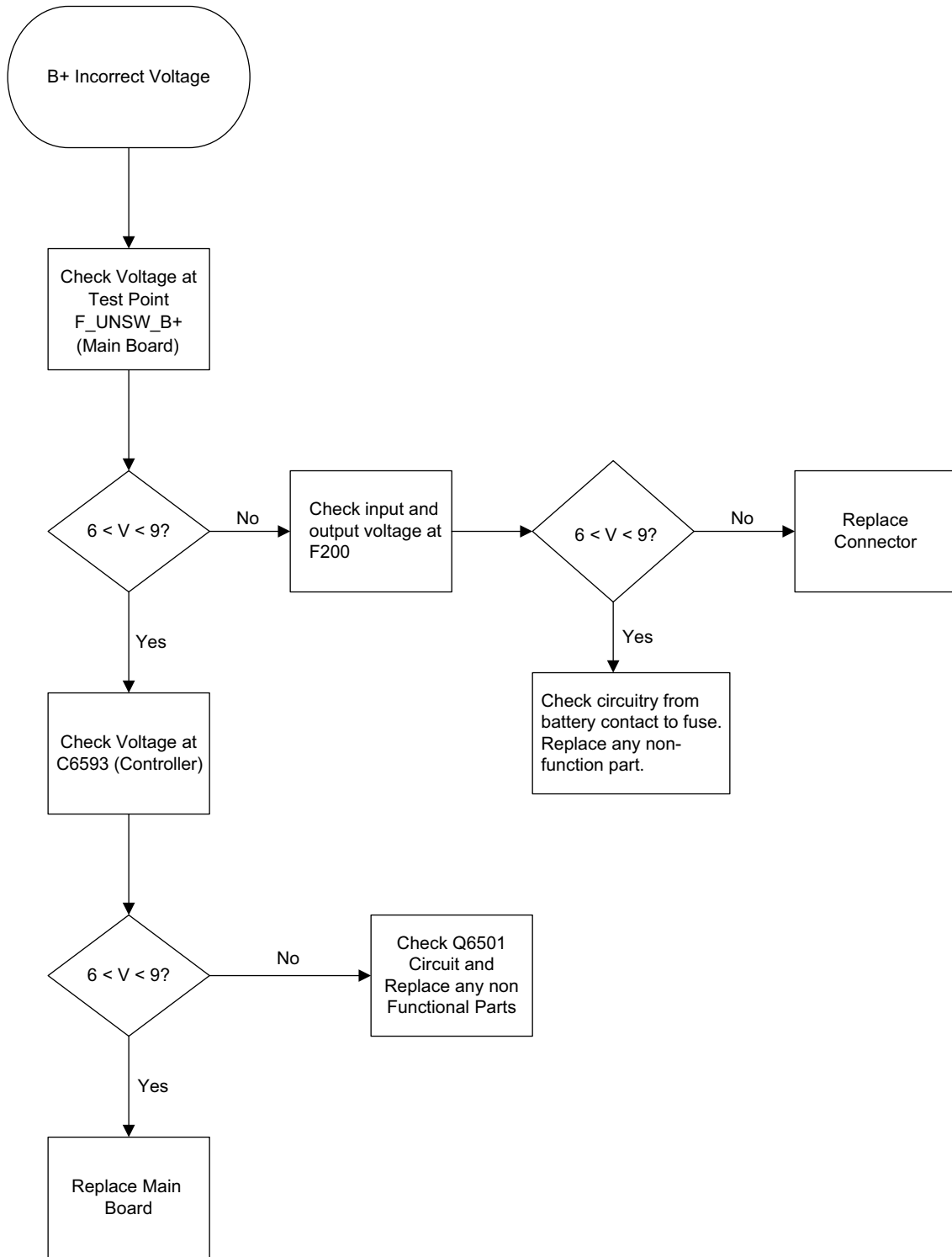
5.2 Main Troubleshooting Flowchart



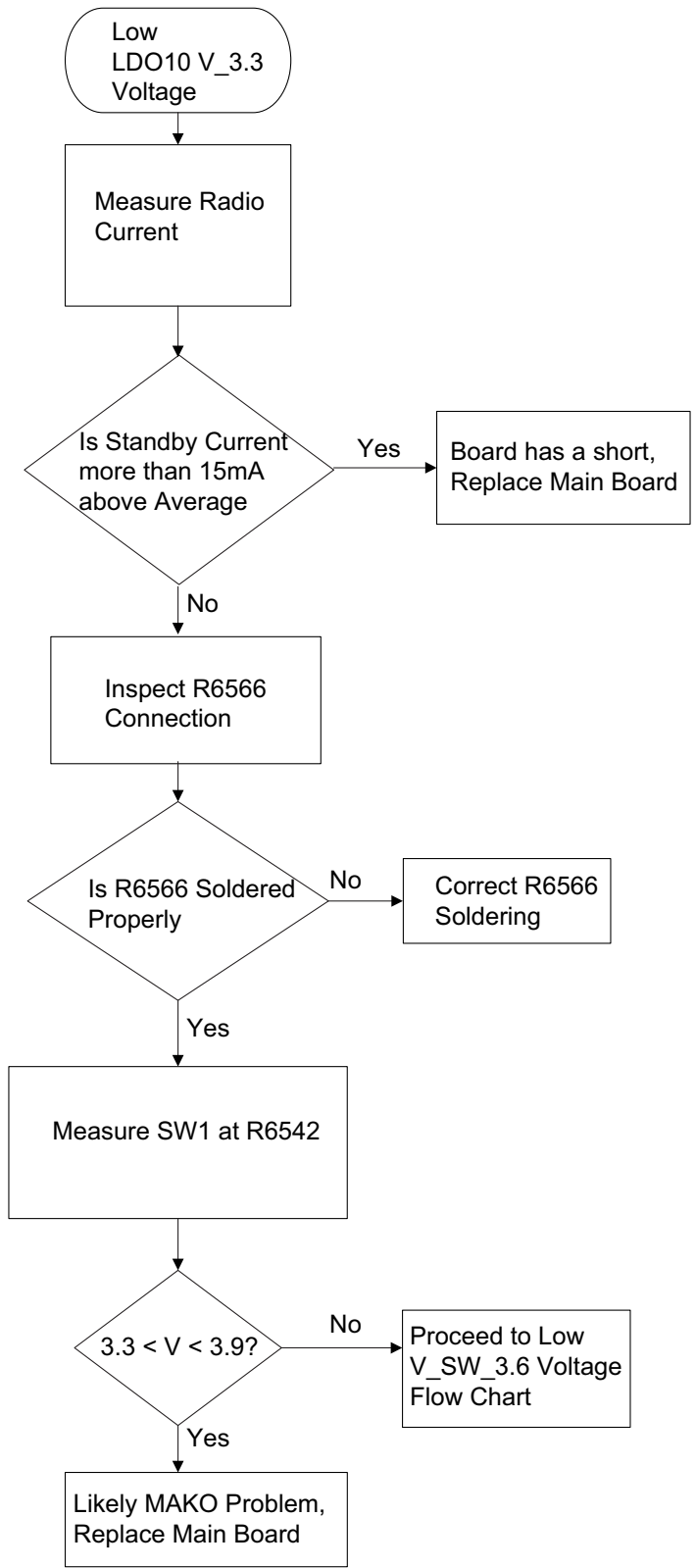
5.3 Power-Up Failure – Main Board



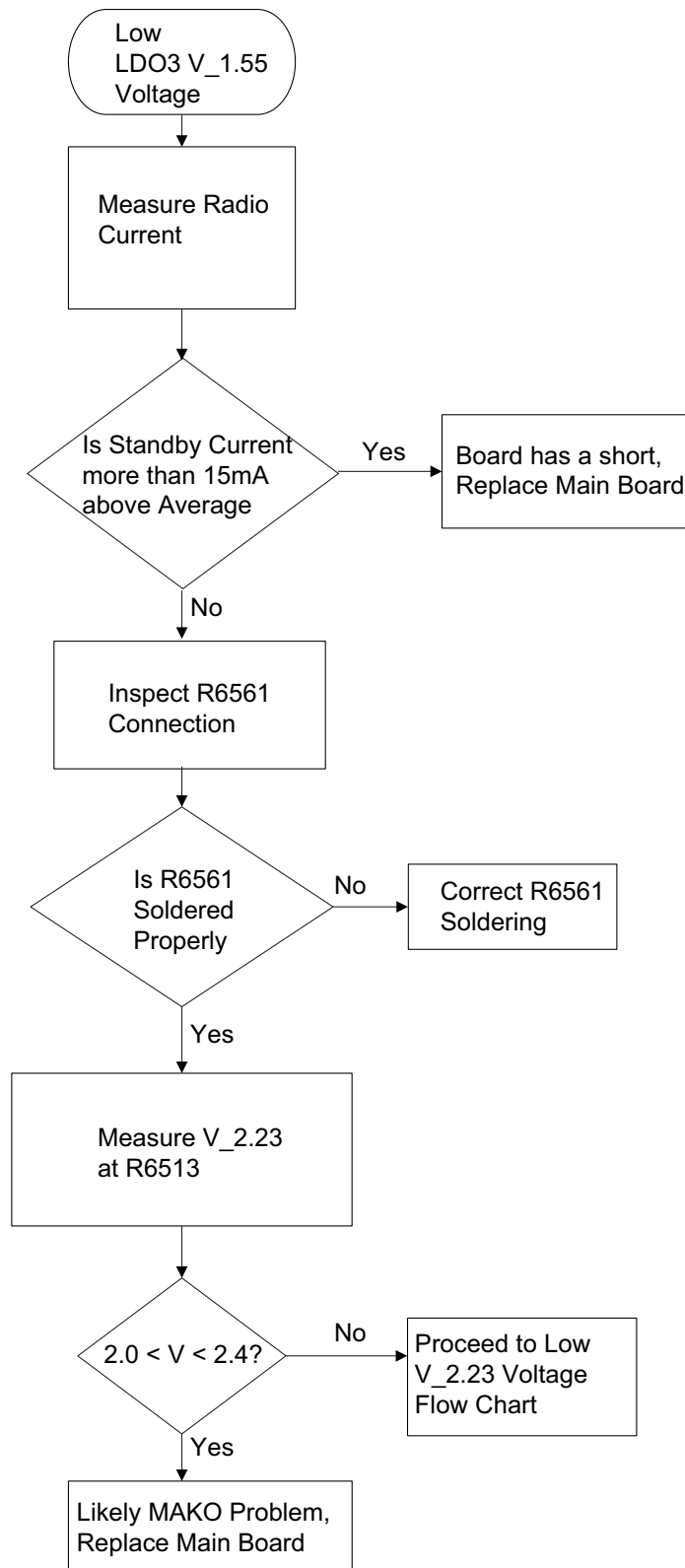
Power-Up Failure – B+ Incorrect Voltage



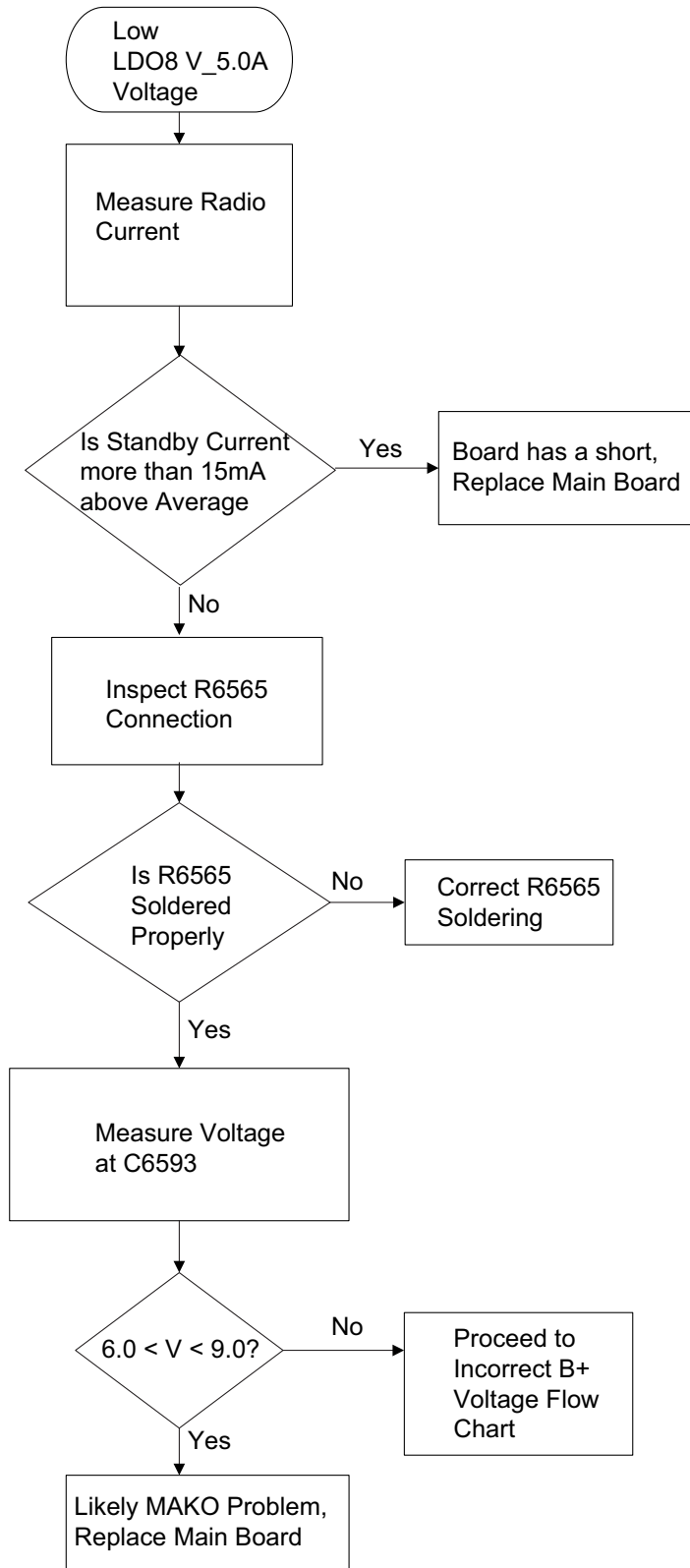
Power-Up Failure – Low LDO10 V_3.3 Voltage



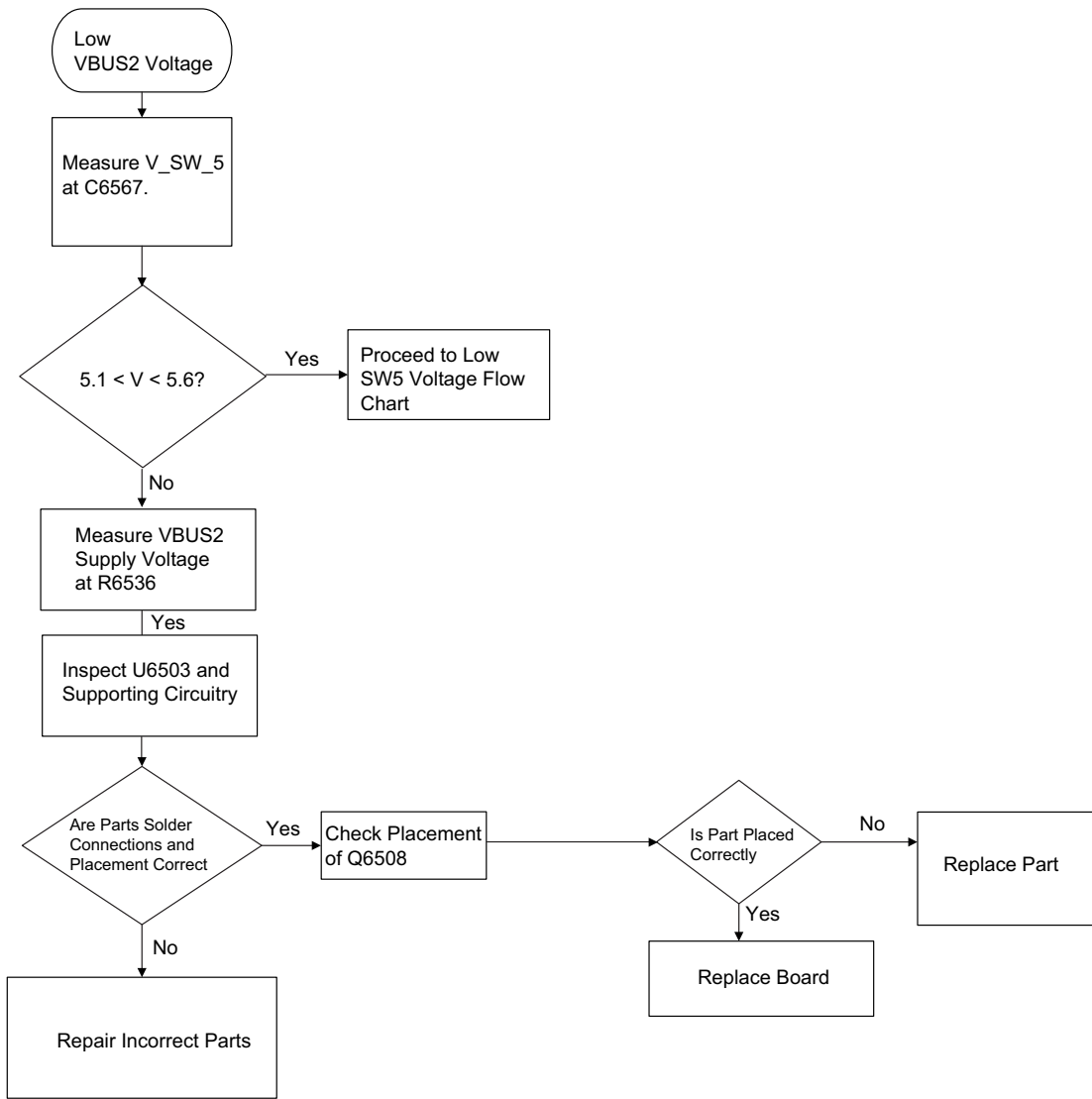
Power-Up Failure – Low LDO3 V_1.55 Voltage



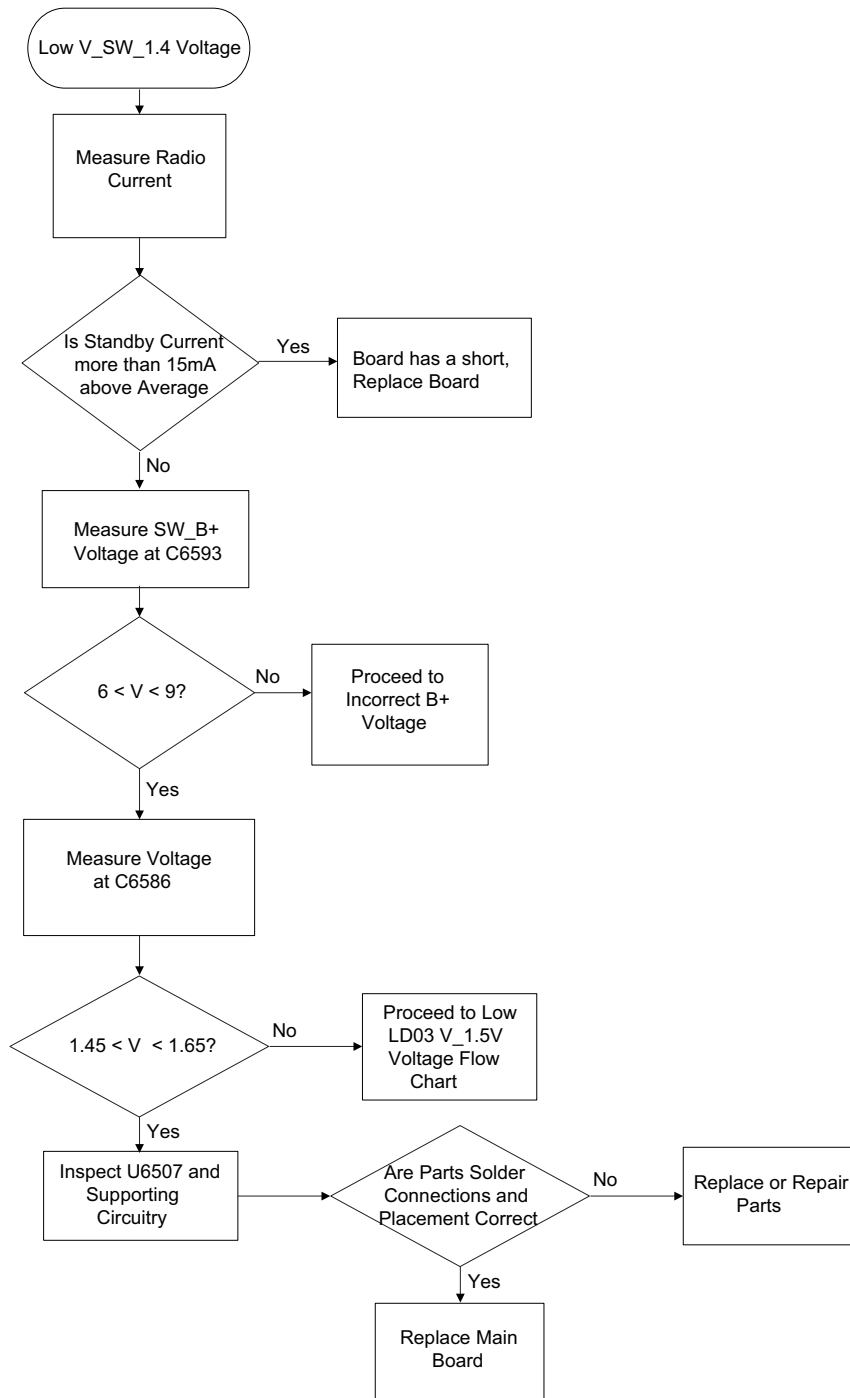
Power-Up Failure – Low LDO8 V_5.0A Voltage



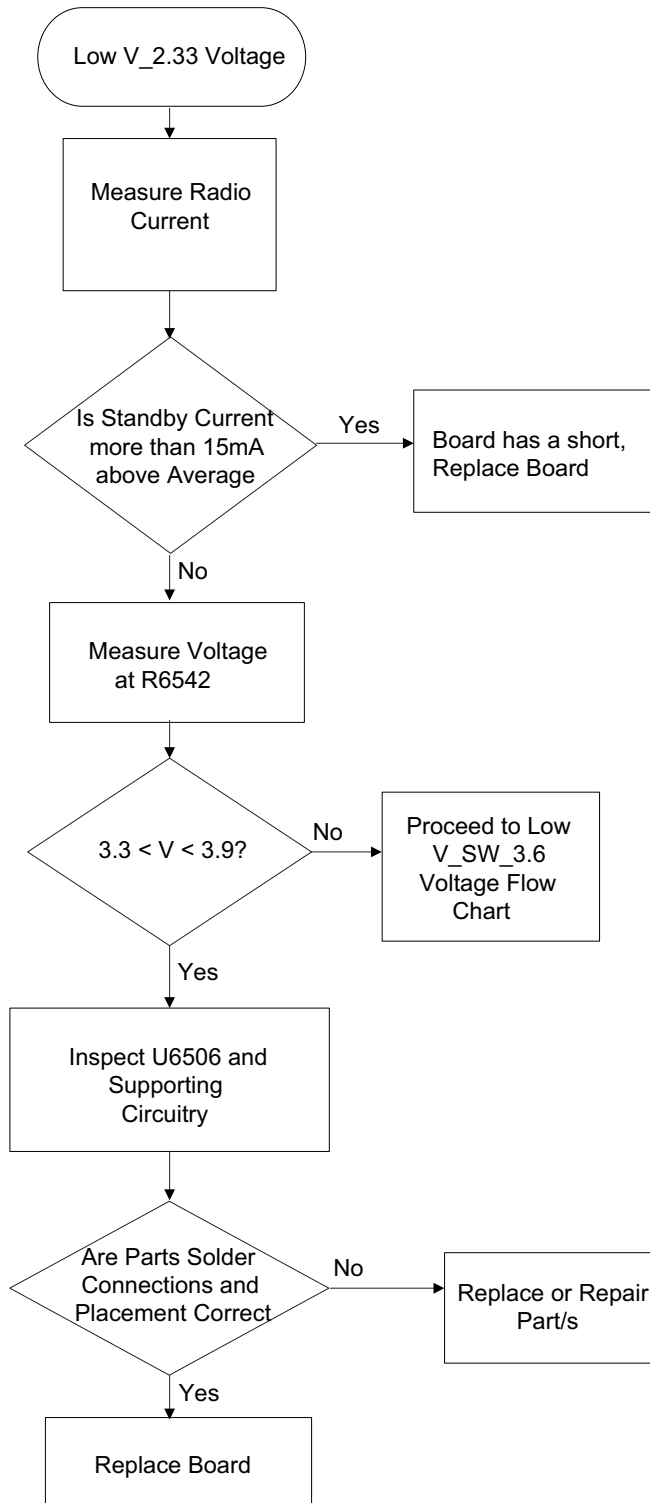
Power-Up Failure – Low VBUS2 Voltage



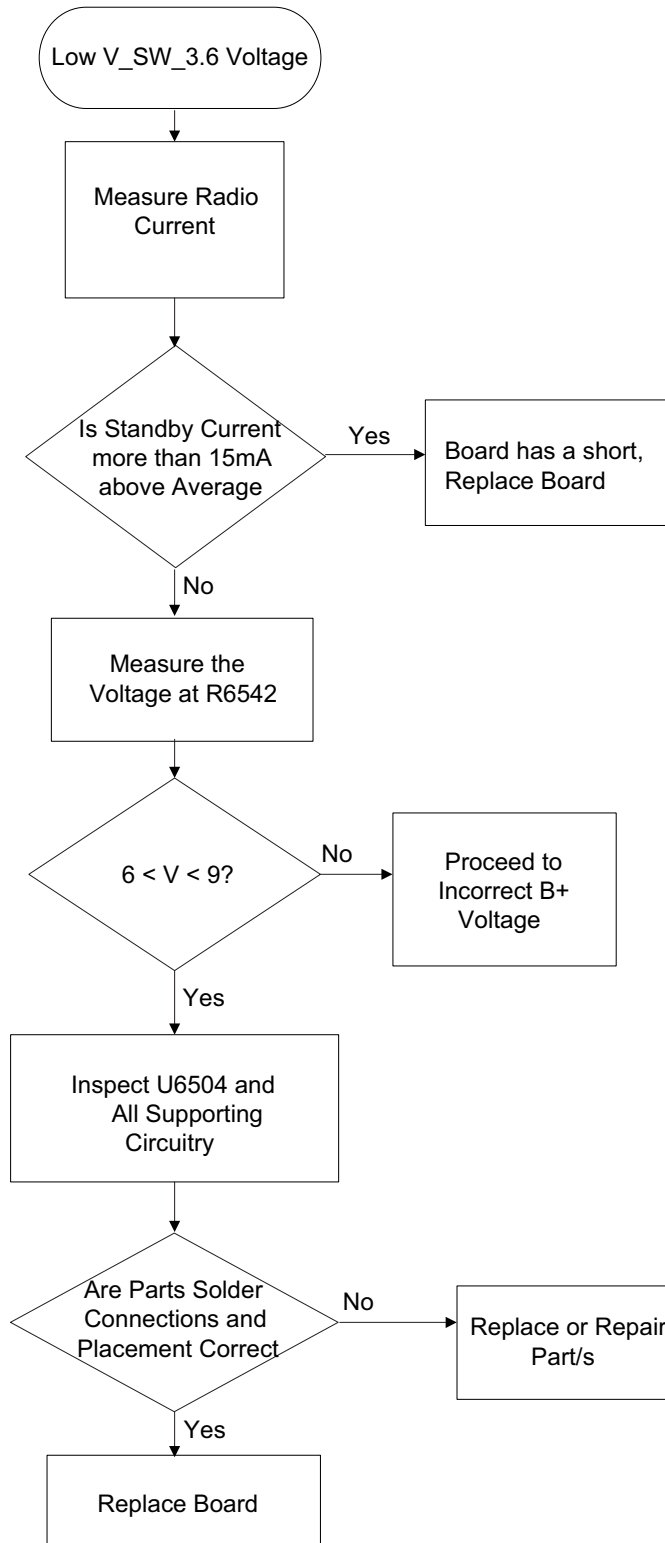
Power-Up Failure – Low V_SW_1.4 Voltage



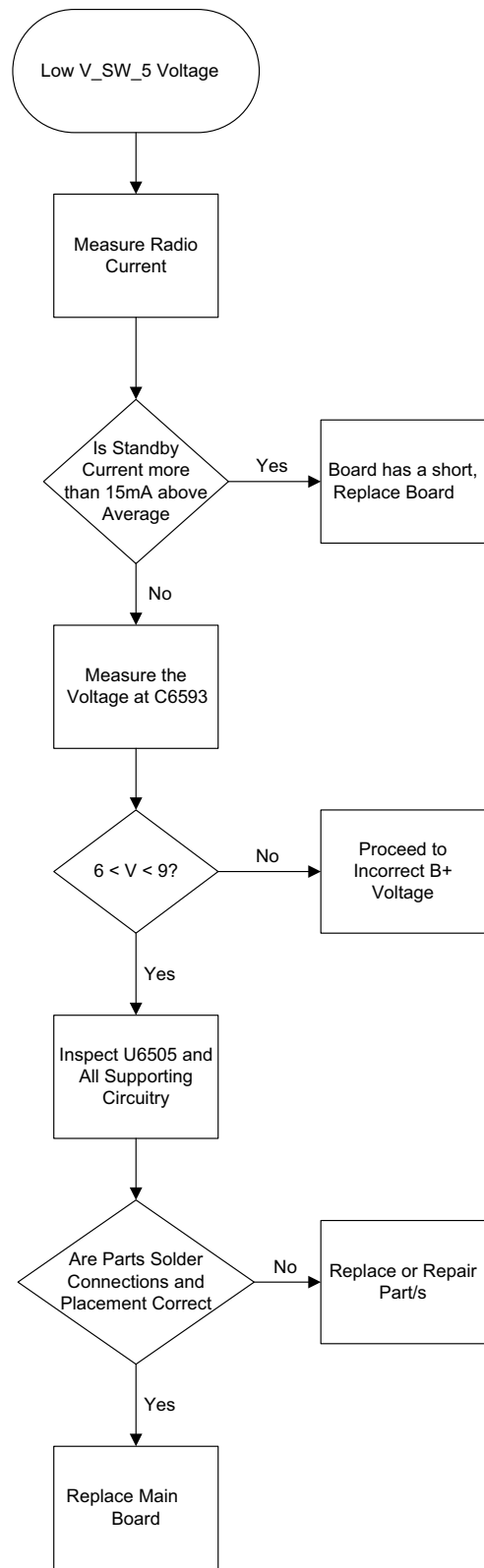
Power-Up Failure – Low V_{2.23} Voltage



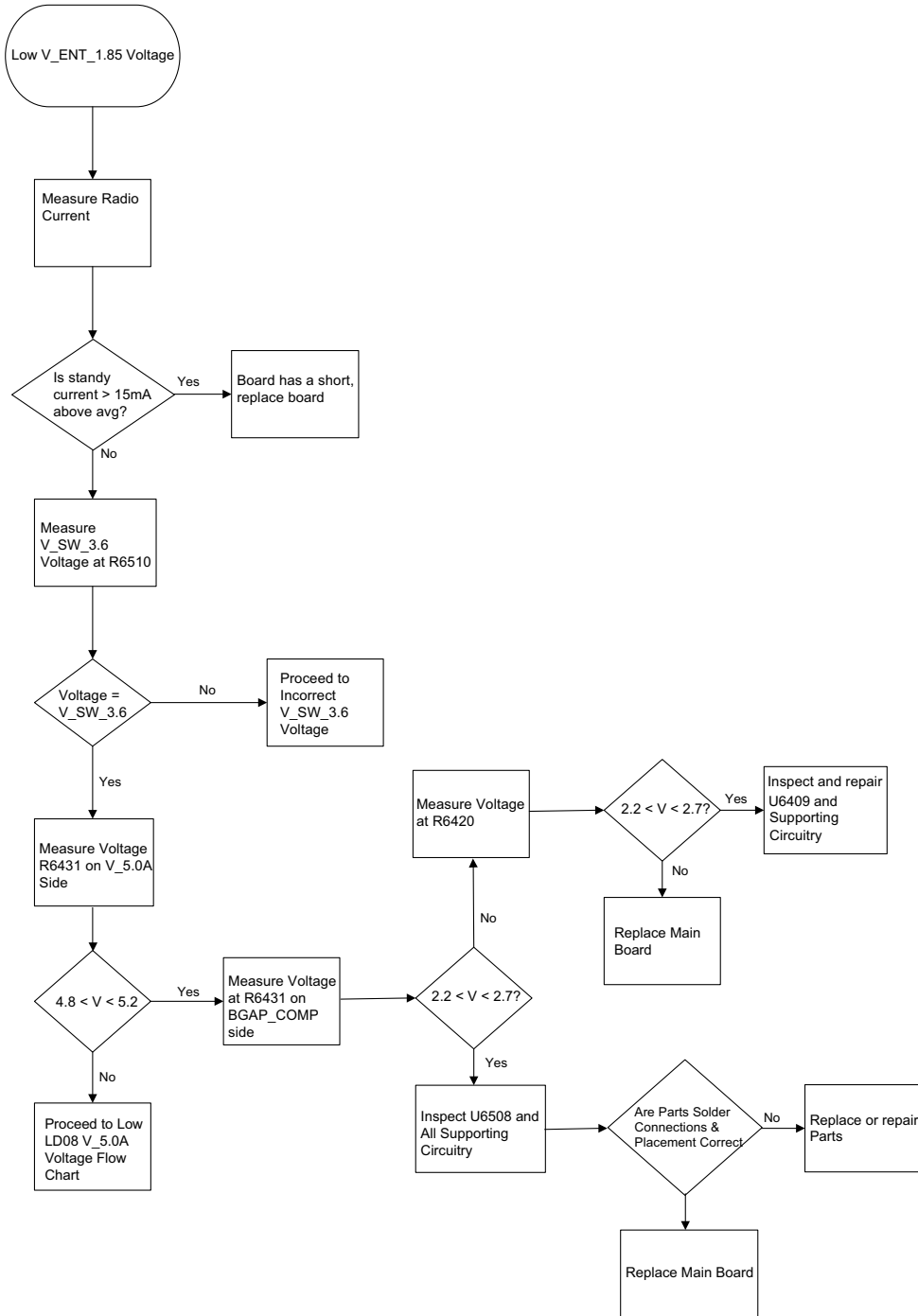
Power-Up Failure – Low V_SW_3.6 Voltage



Power-Up Failure – Low V_SW_5 Voltage

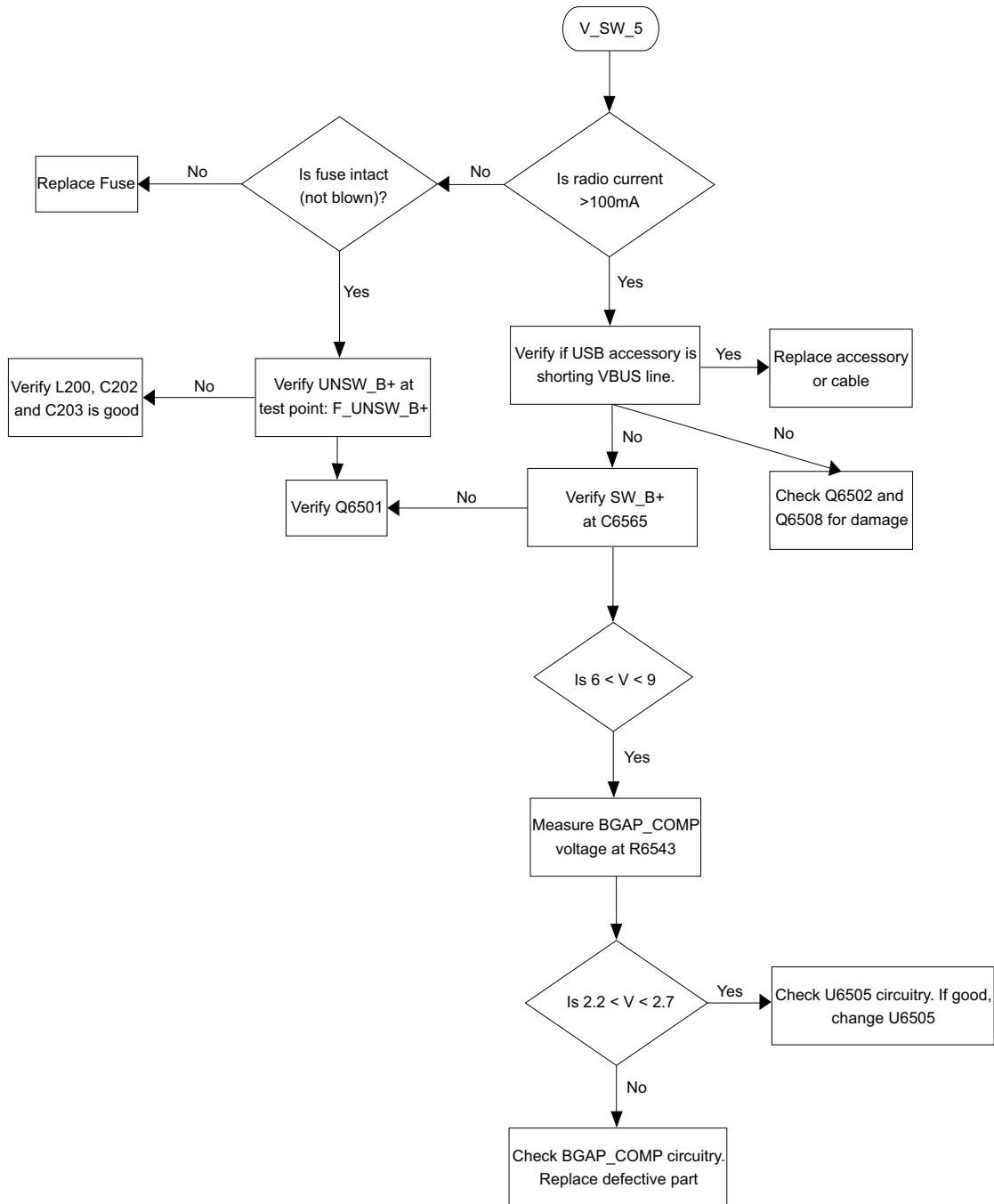


Power-Up Failure – Low V_EXT_1.85 Voltage

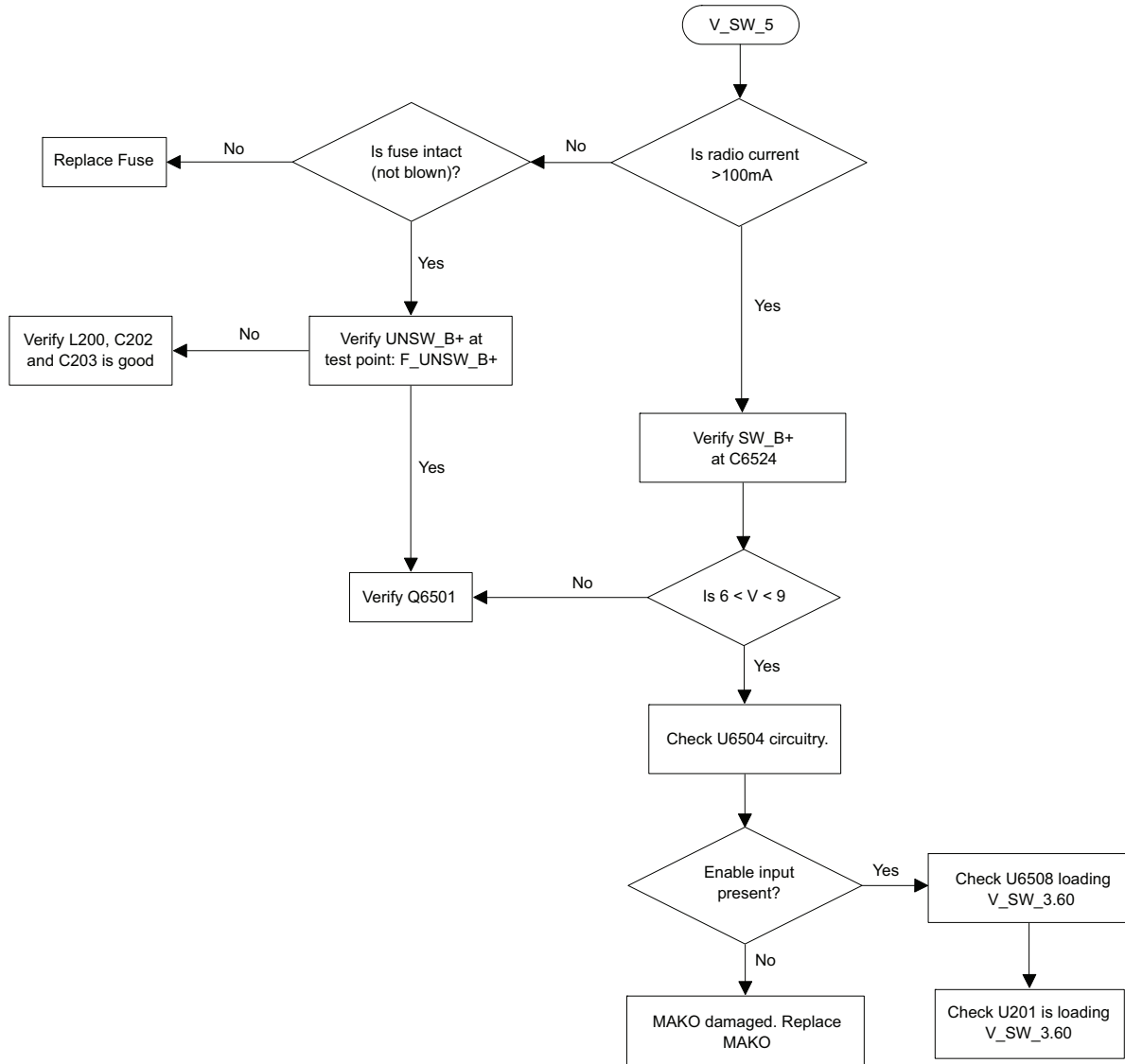


5.4 DC Supply Failure

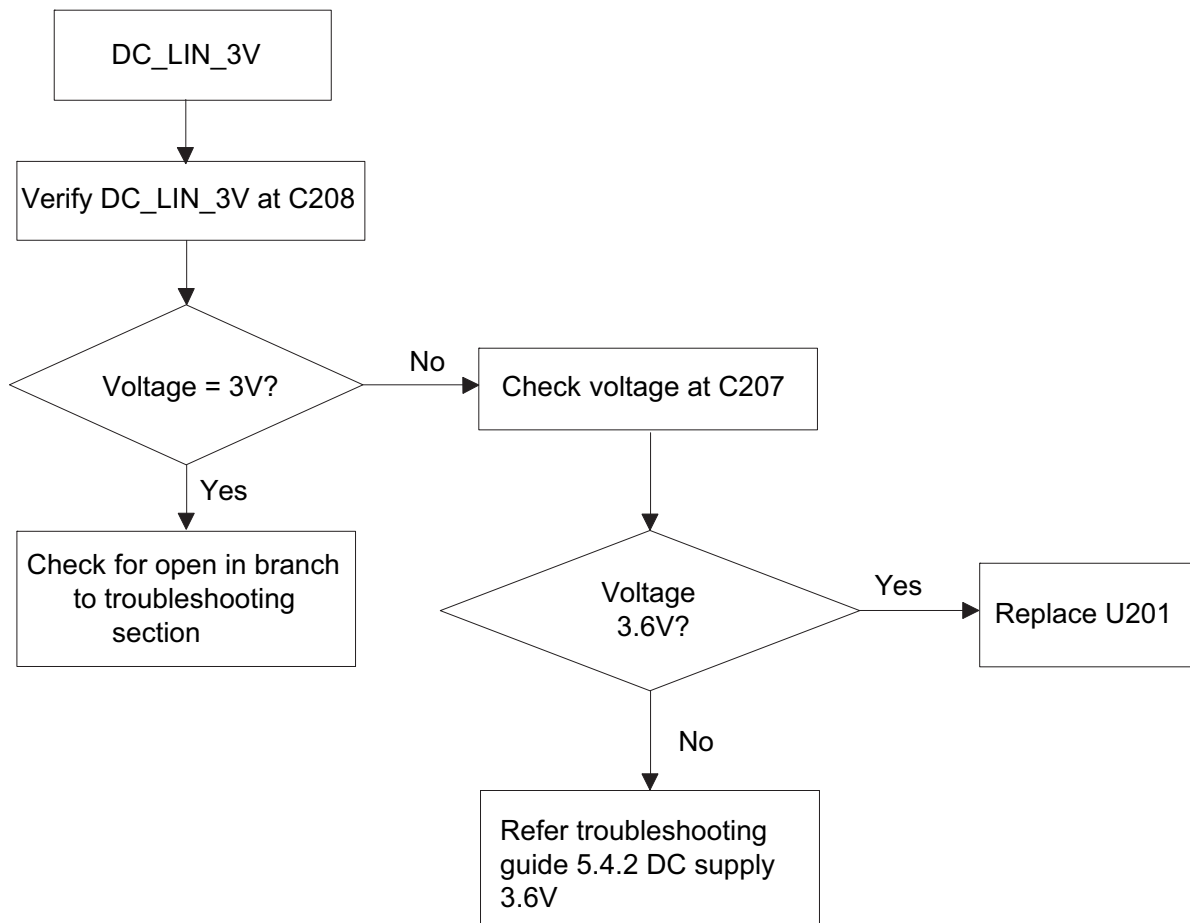
5.4.1 DC Supply 5 Volt Failure



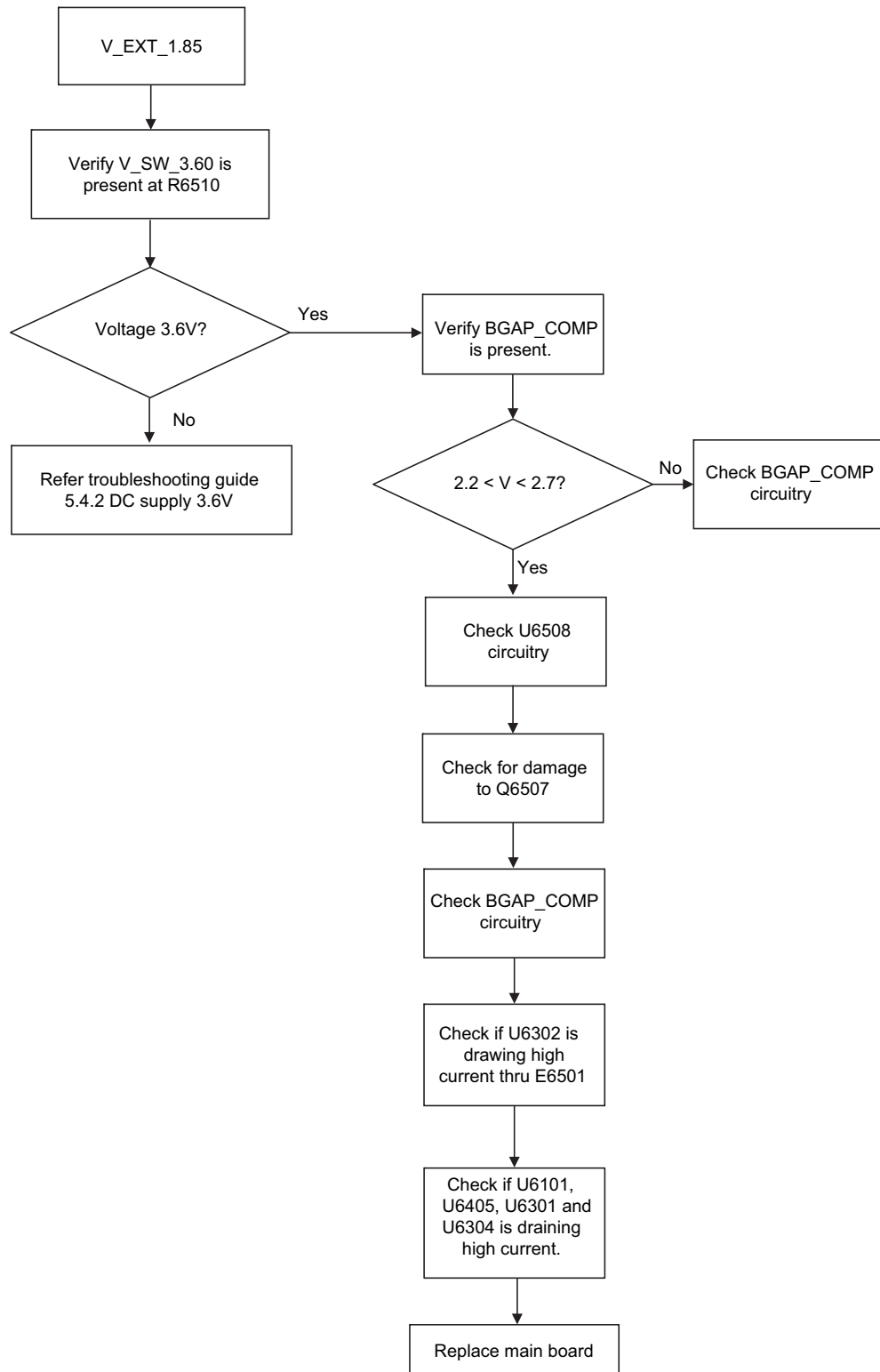
5.4.2 DC Supply 3.6 Volt Failure



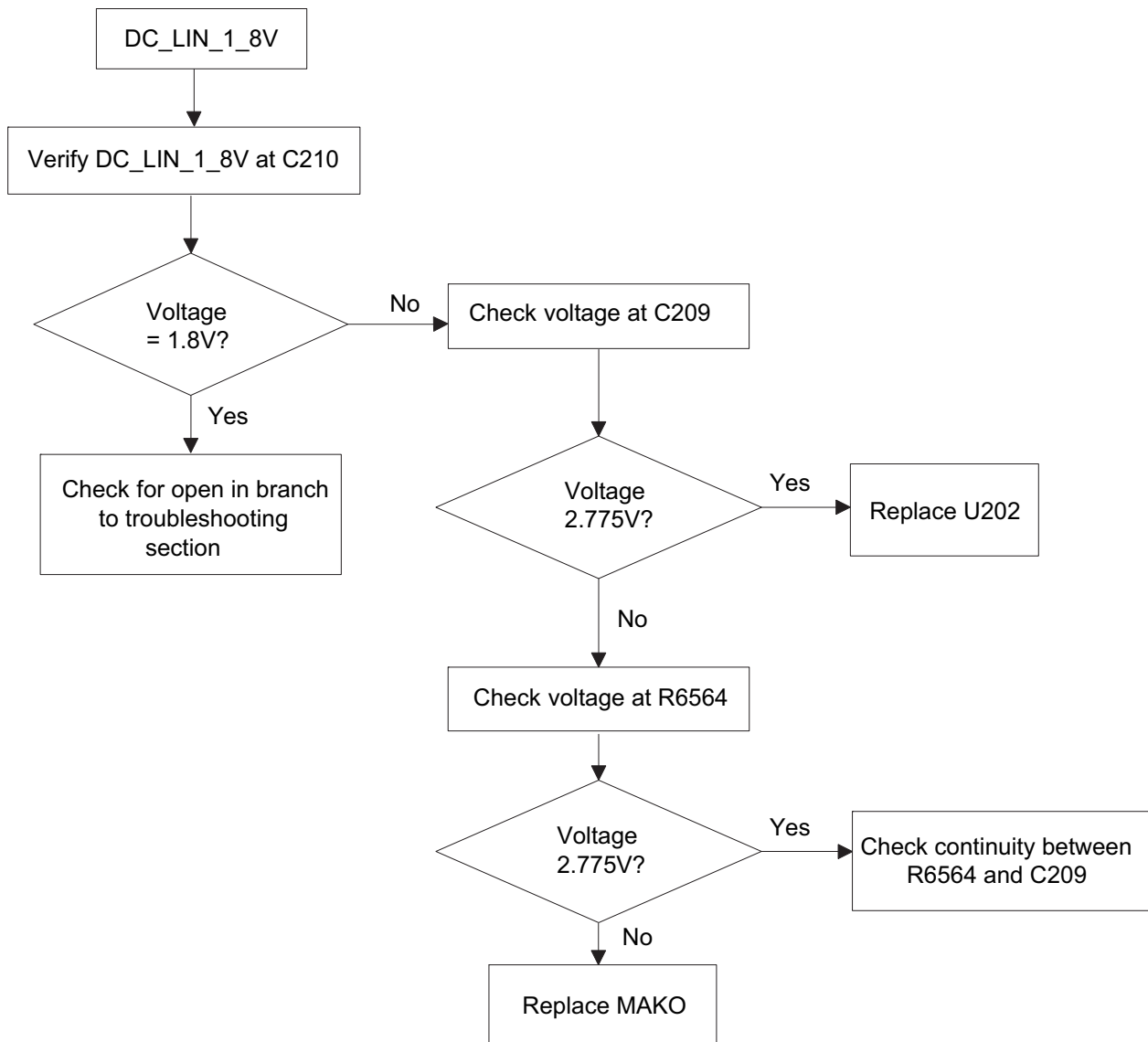
5.4.3 DC Supply 3 Volt Failure



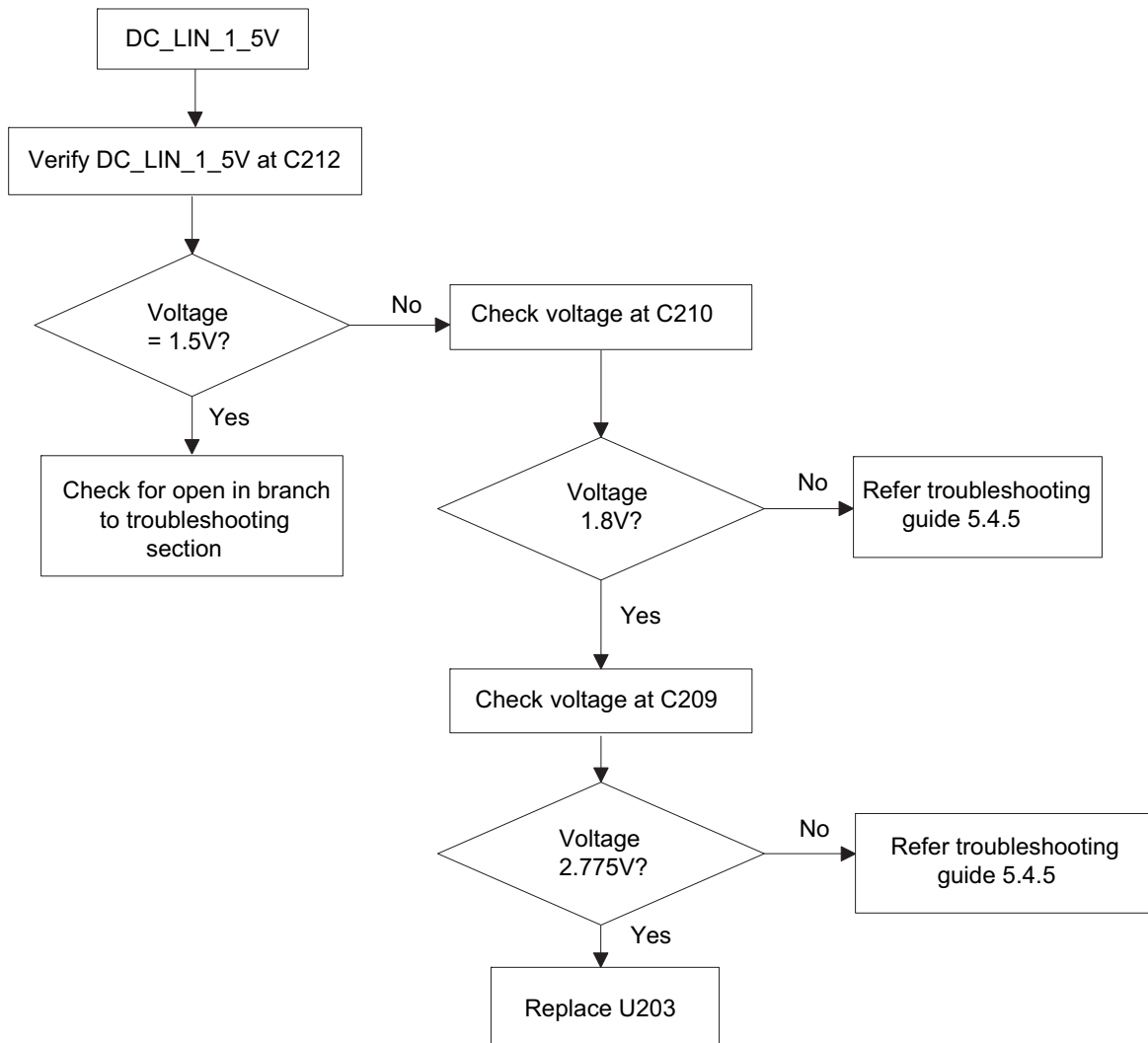
5.4.4 DC Supply 1.85 Volt Failure



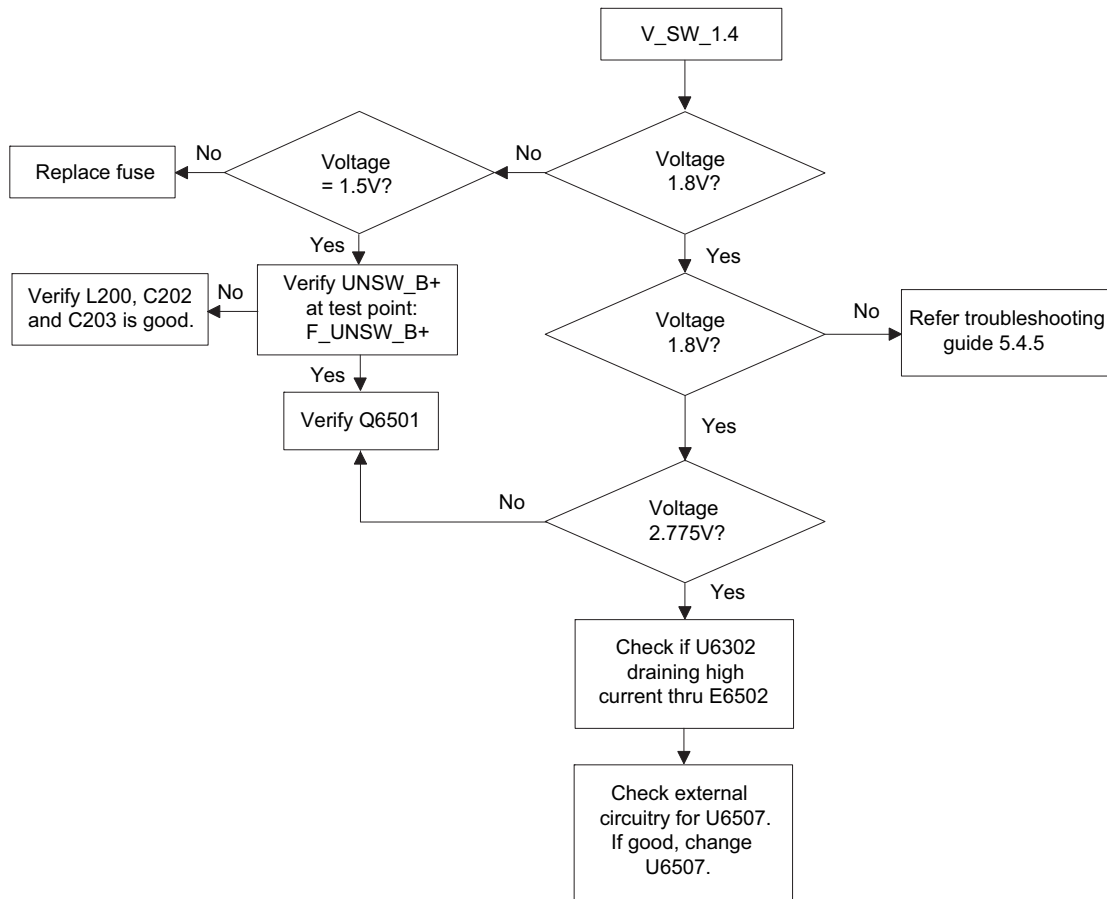
5.4.5 DC Supply 1.8 Volt Failure



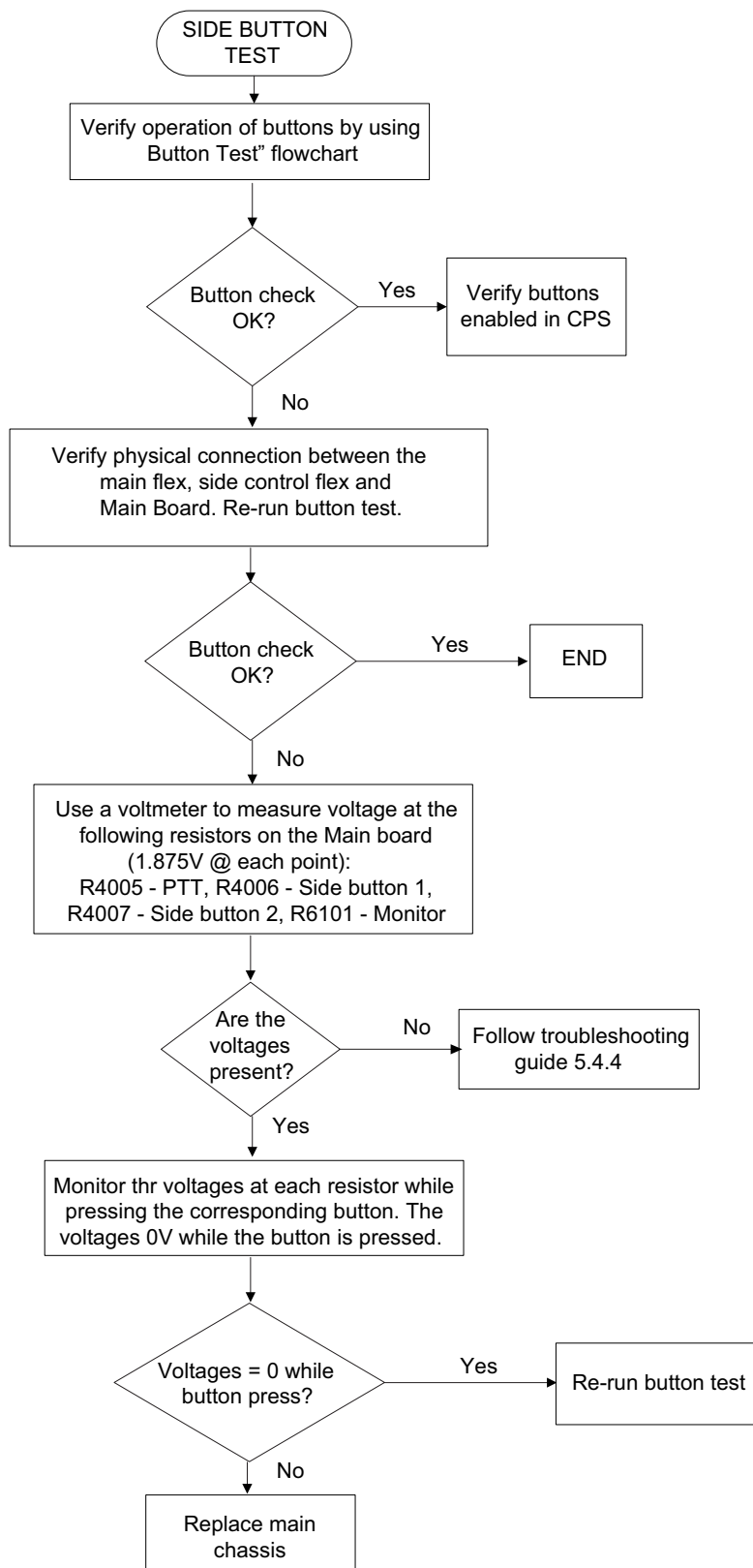
5.4.6 DC Supply 1.5 Volt Failure



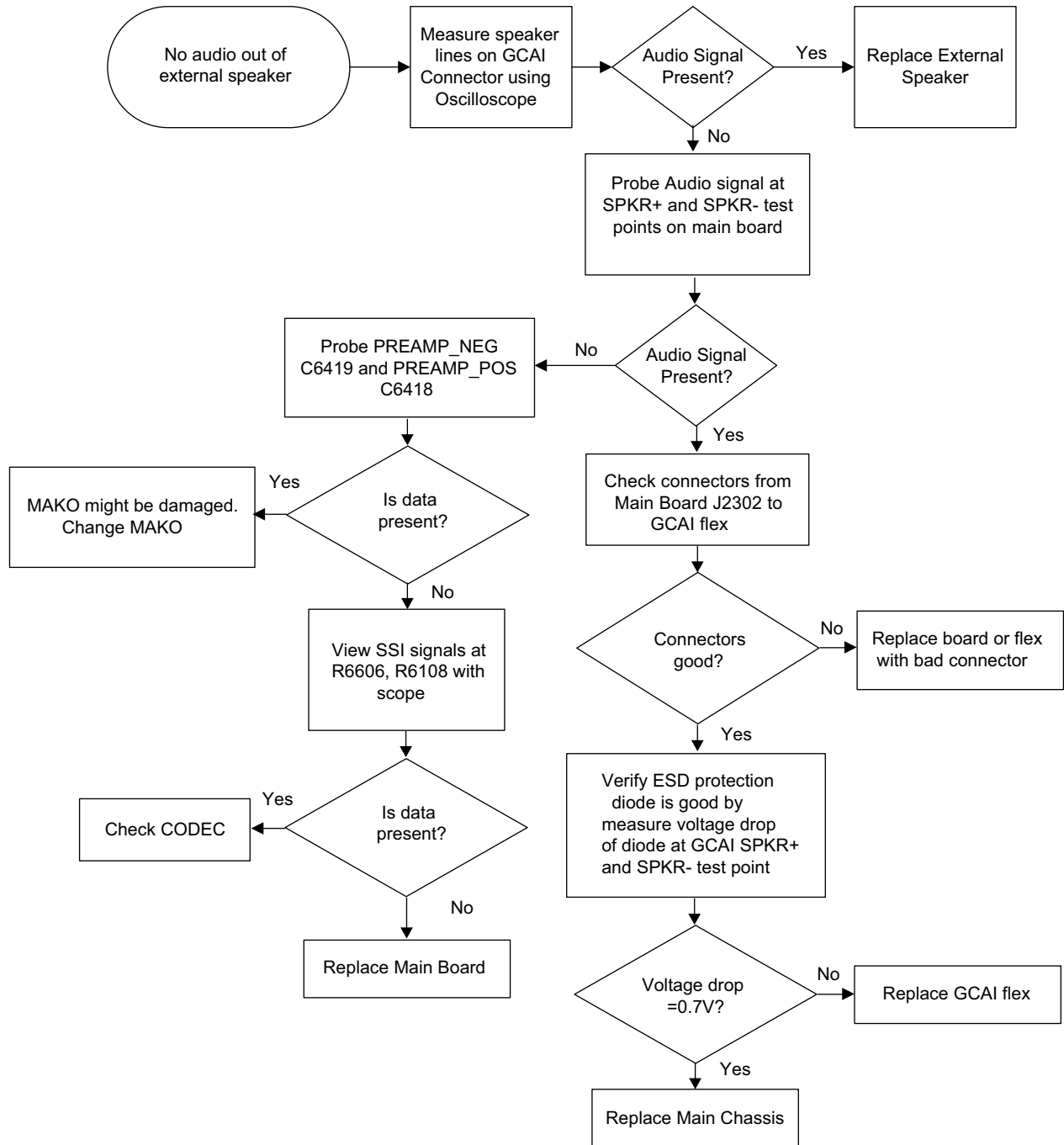
5.4.7 DC Supply 1.4 Volt Failure



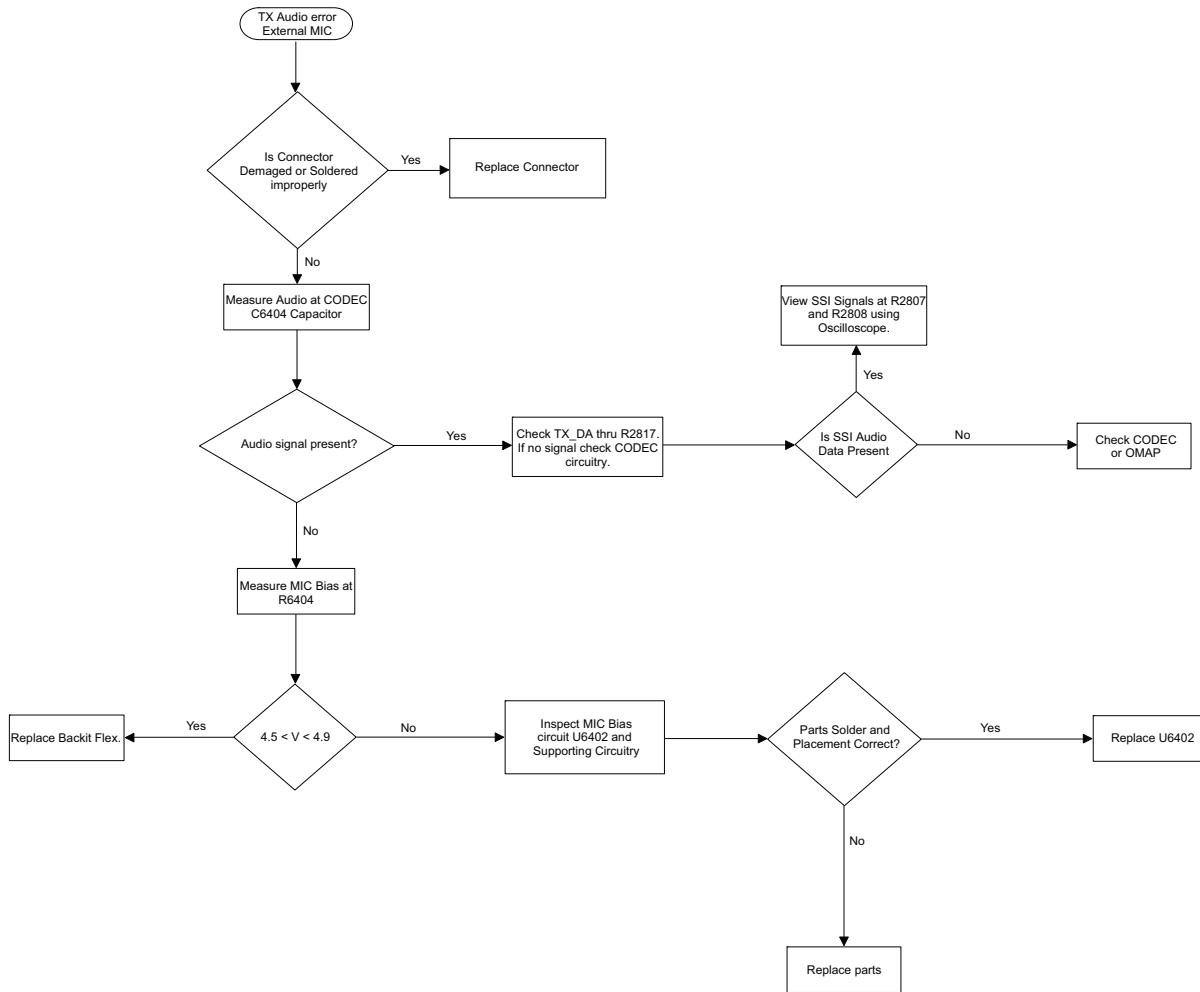
5.5 Side Button Error



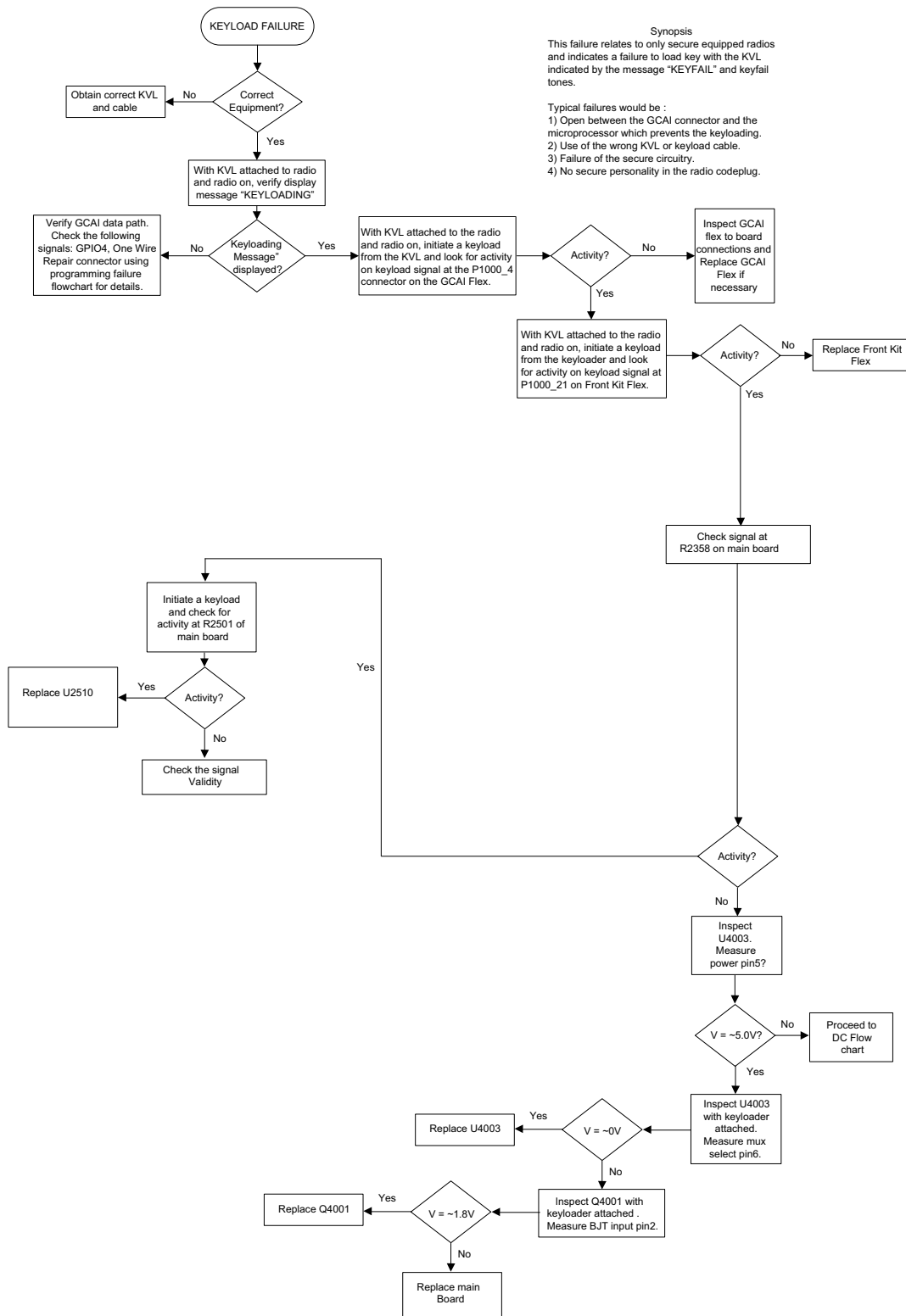
5.6 RX Audio Error – External Audio



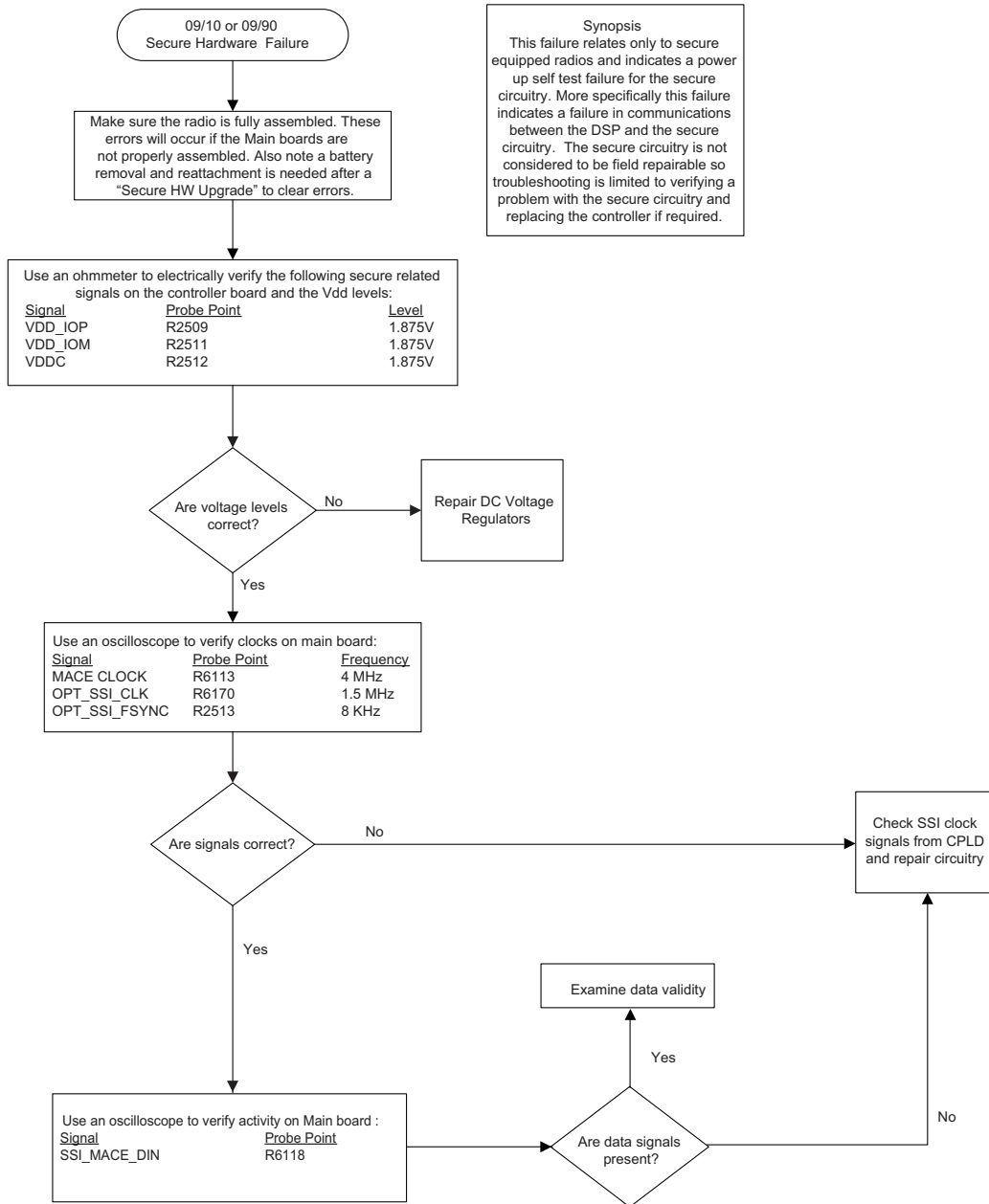
5.7 TX Audio Error – External Mic Failure



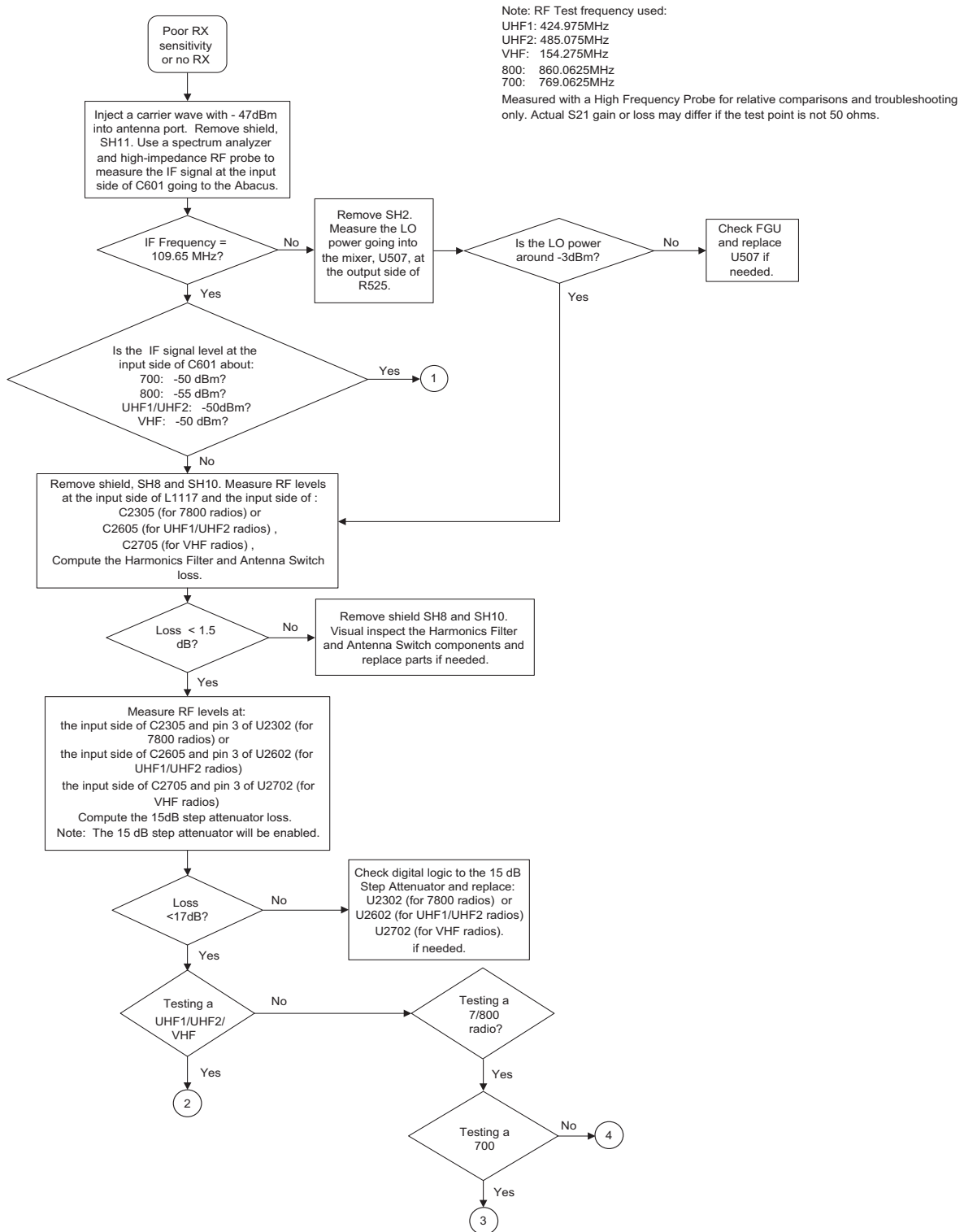
5.8 Keyload Failure



5.9 Secure Hardware Failure

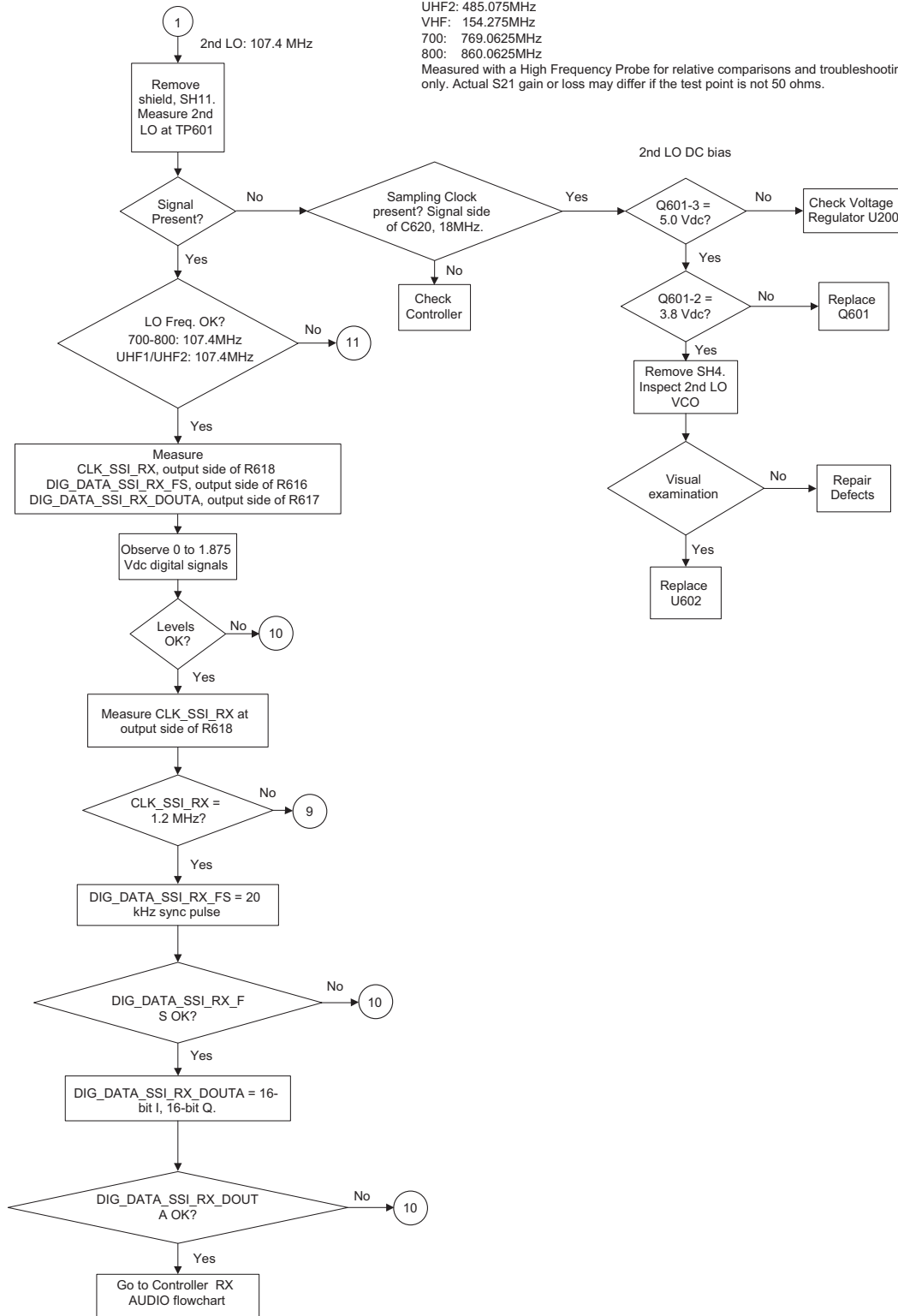


5.10 RX RF Failure – Page 1

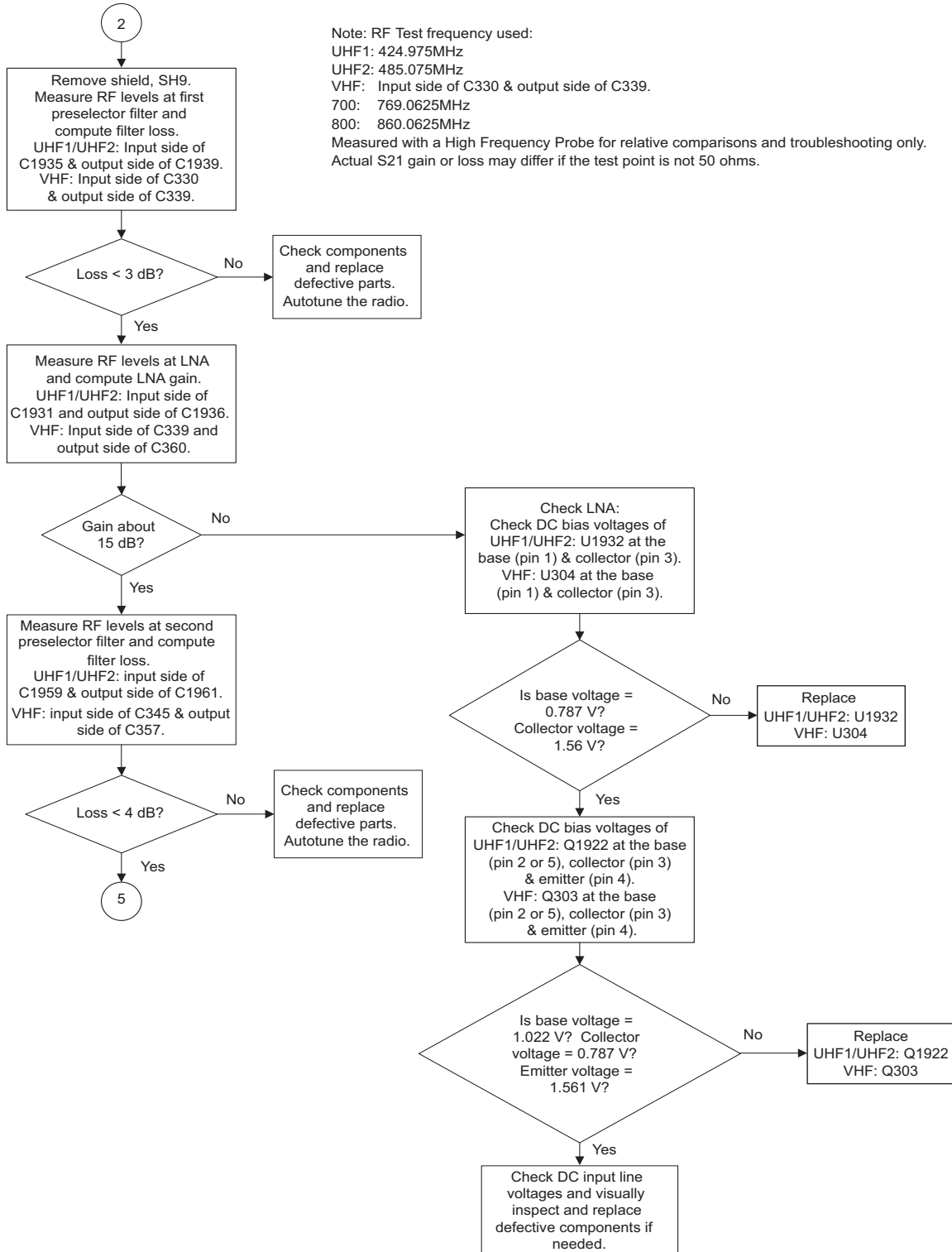


RX RF Failure – Page 2

Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

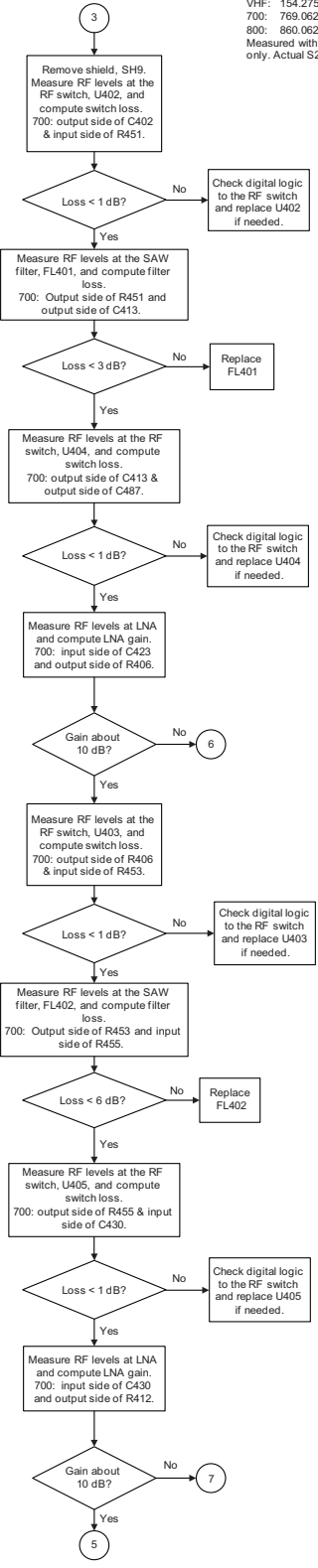


RX RF Failure – Page 3



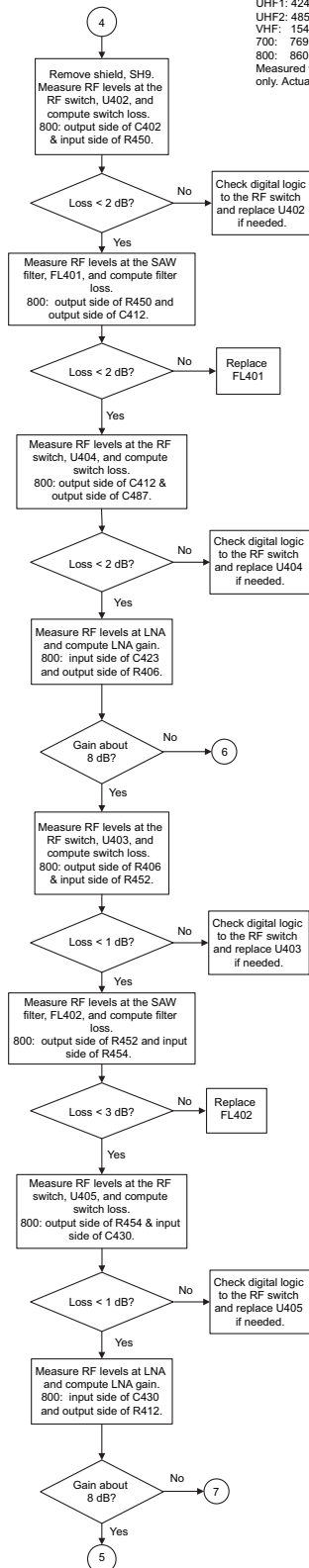
RX RF Failure – Page 4

Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

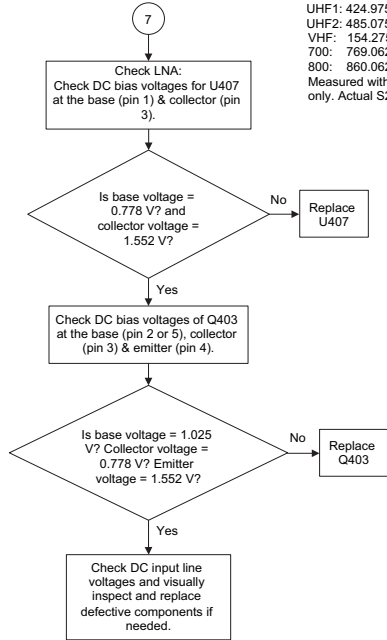
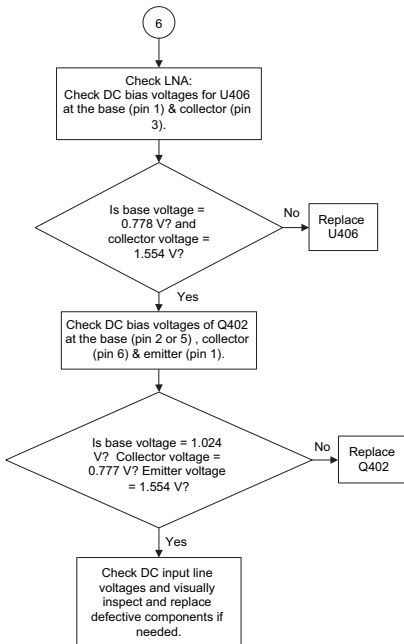


RX RF Failure – Page 5

Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.



RX RF Failure – Page 6



Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

RX RF Failure – Page 7

Note: RF Test frequency used:

UHF1: 424.975MHz

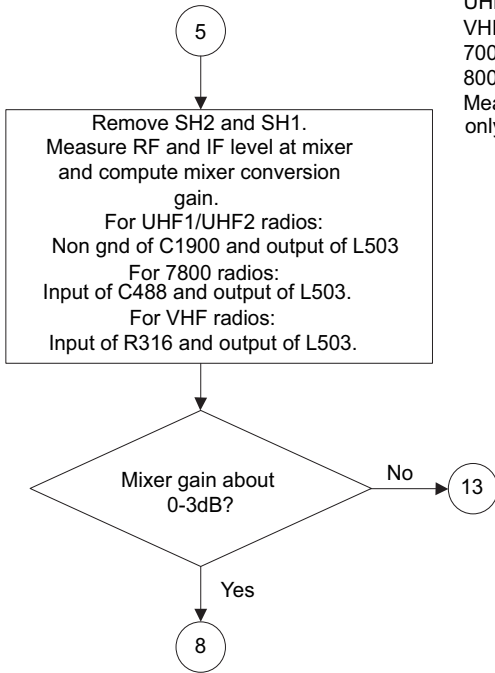
UHF2: 485.075MHz

VHF: 154.275MHz

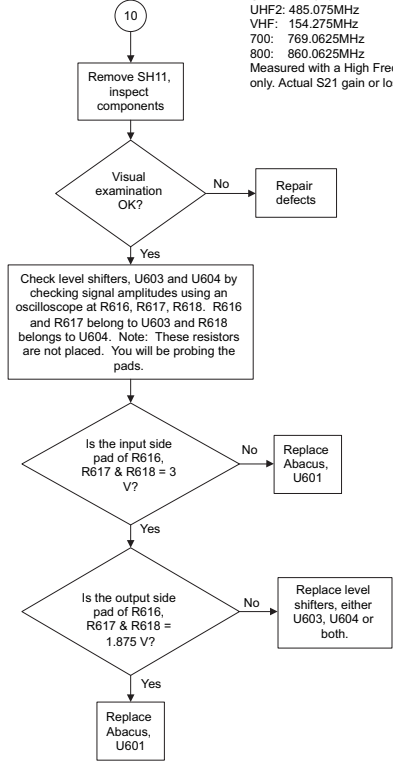
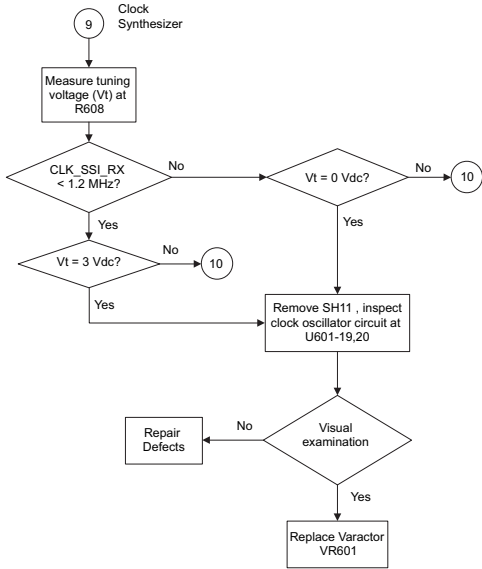
700: 769.0625MHz

800: 860.0625MHz

Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

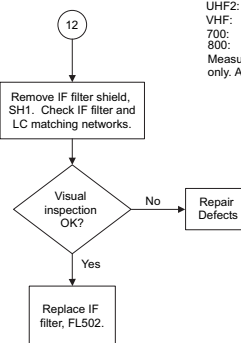
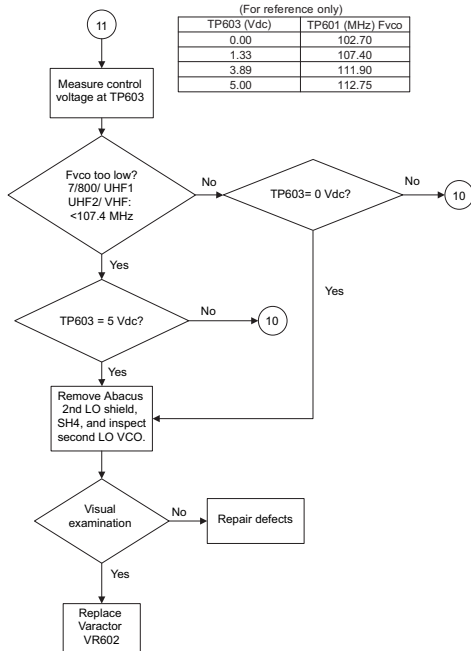


RX RF Failure – Page 8



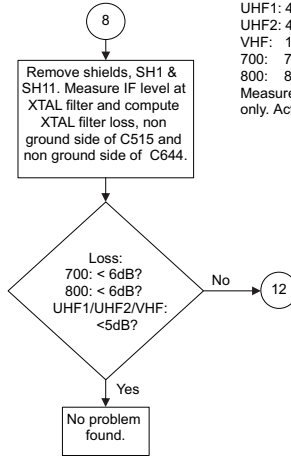
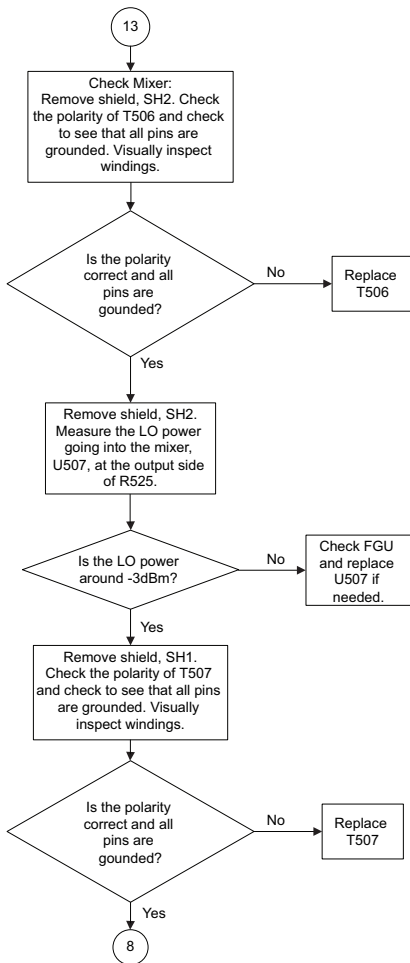
Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

RX RF Failure – Page 9



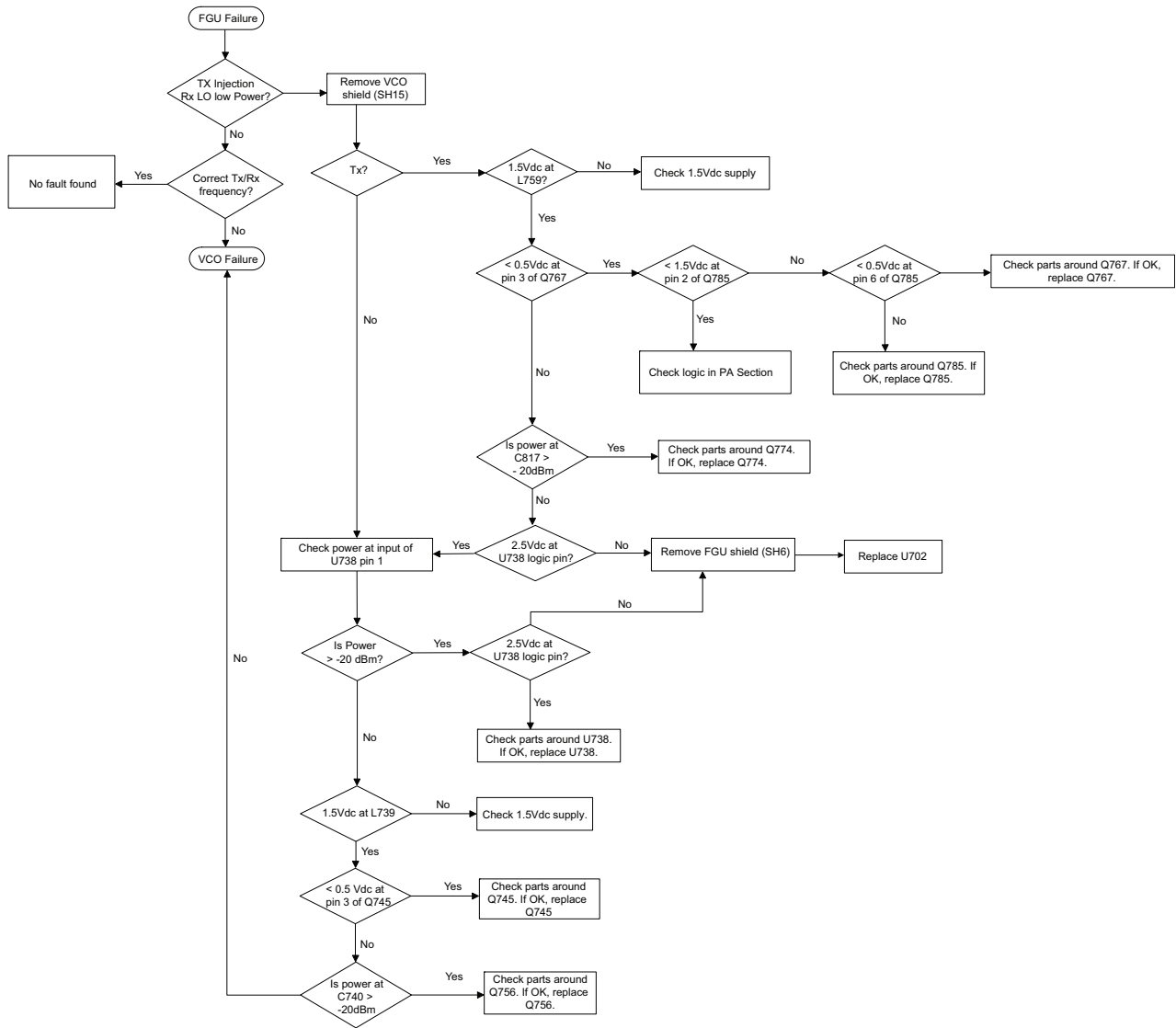
Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

RX RF Failure – Page 10

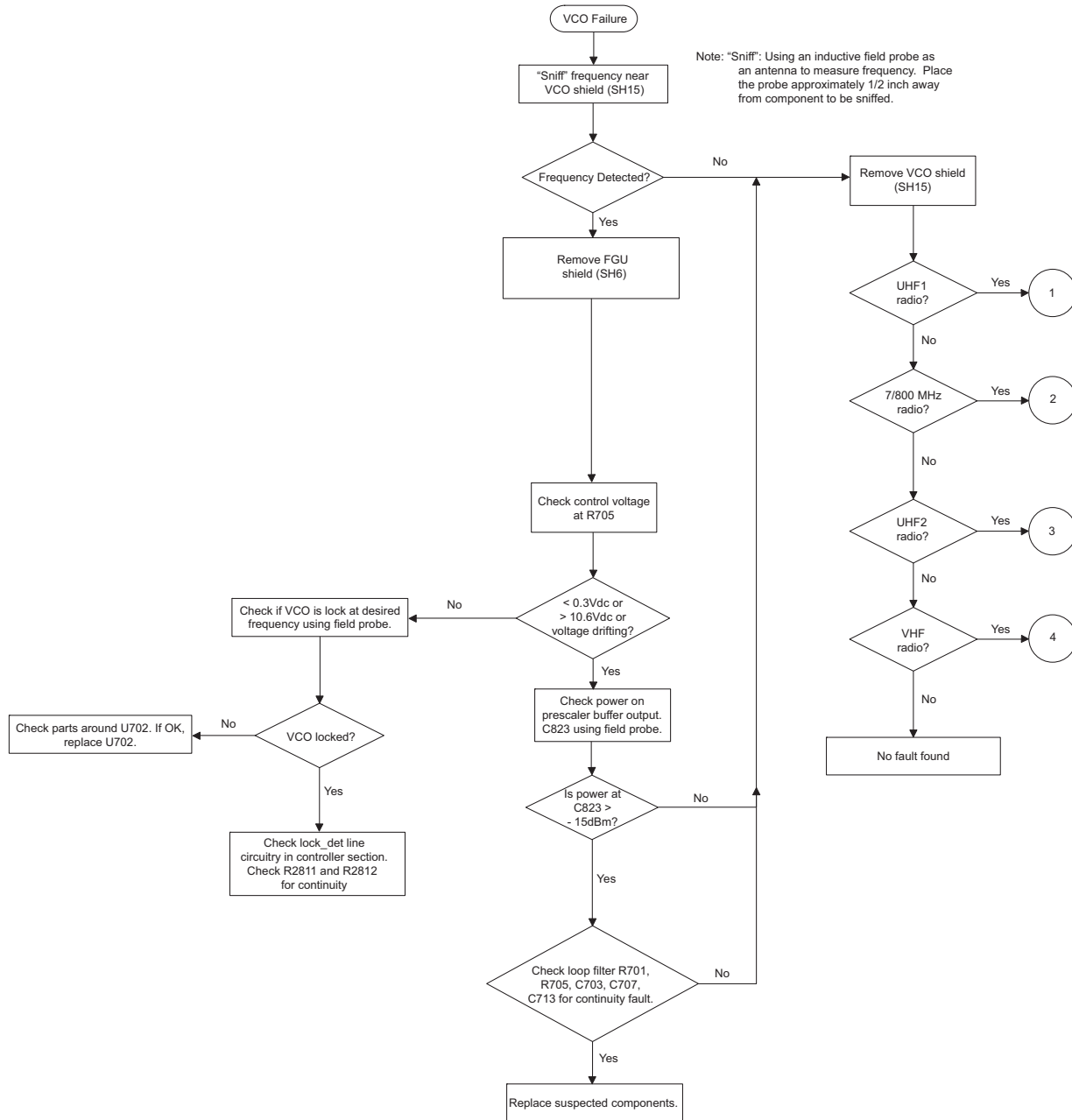


Note: RF Test frequency used:
 UHF1: 424.975MHz
 UHF2: 485.075MHz
 VHF: 154.275MHz
 700: 769.0625MHz
 800: 860.0625MHz
 Measured with a High Frequency Probe for relative comparisons and troubleshooting only. Actual S21 gain or loss may differ if the test point is not 50 ohms.

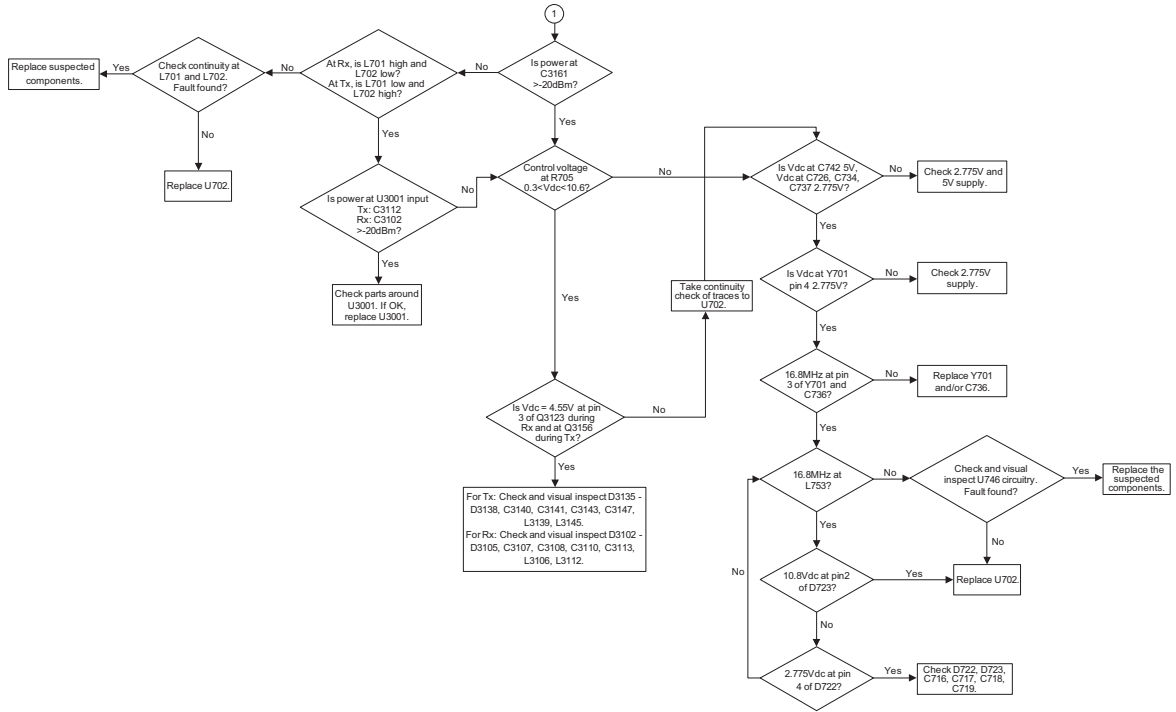
5.11 FGU Failure



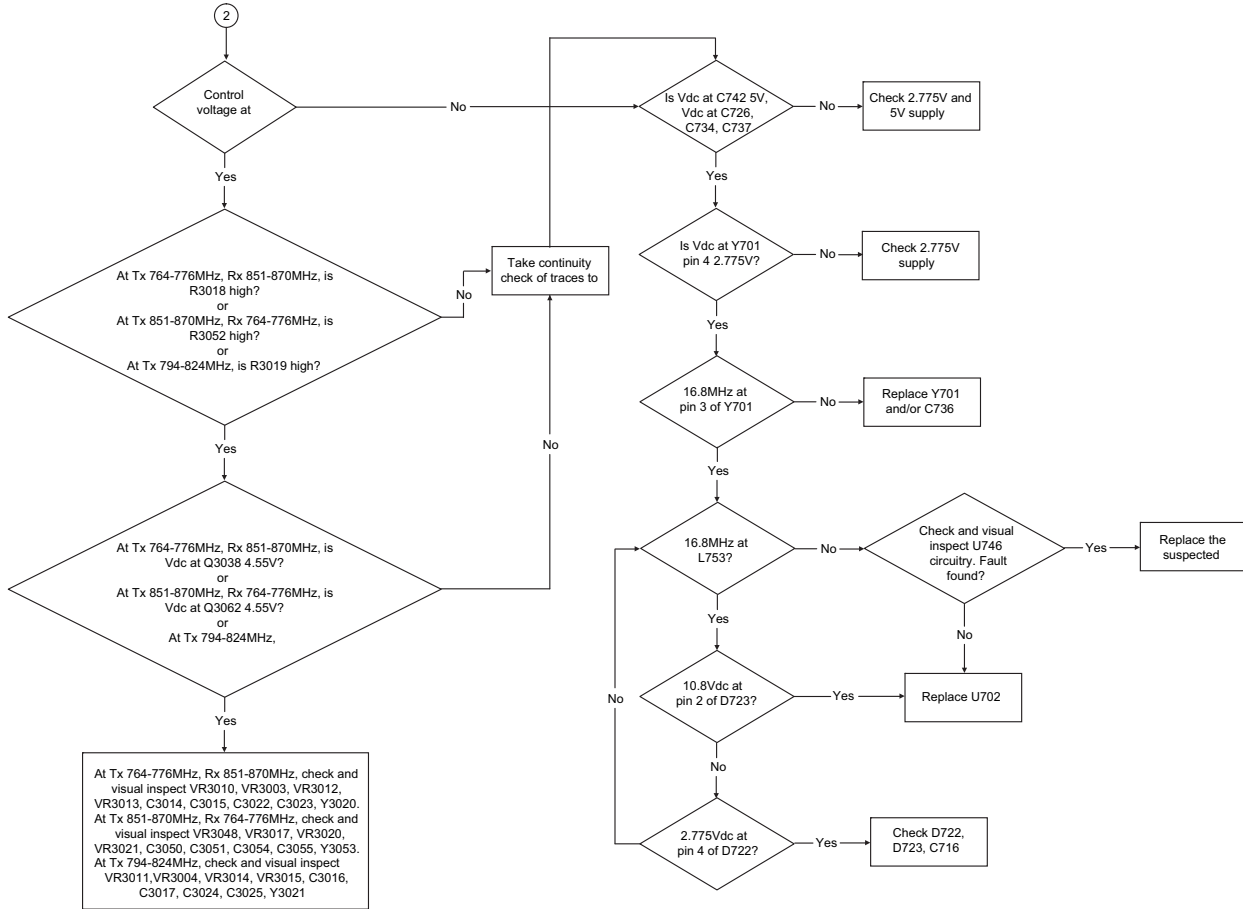
5.12 VCO Failure – Page 1(VHF, UHF1, UHF2, 7/800MHz)



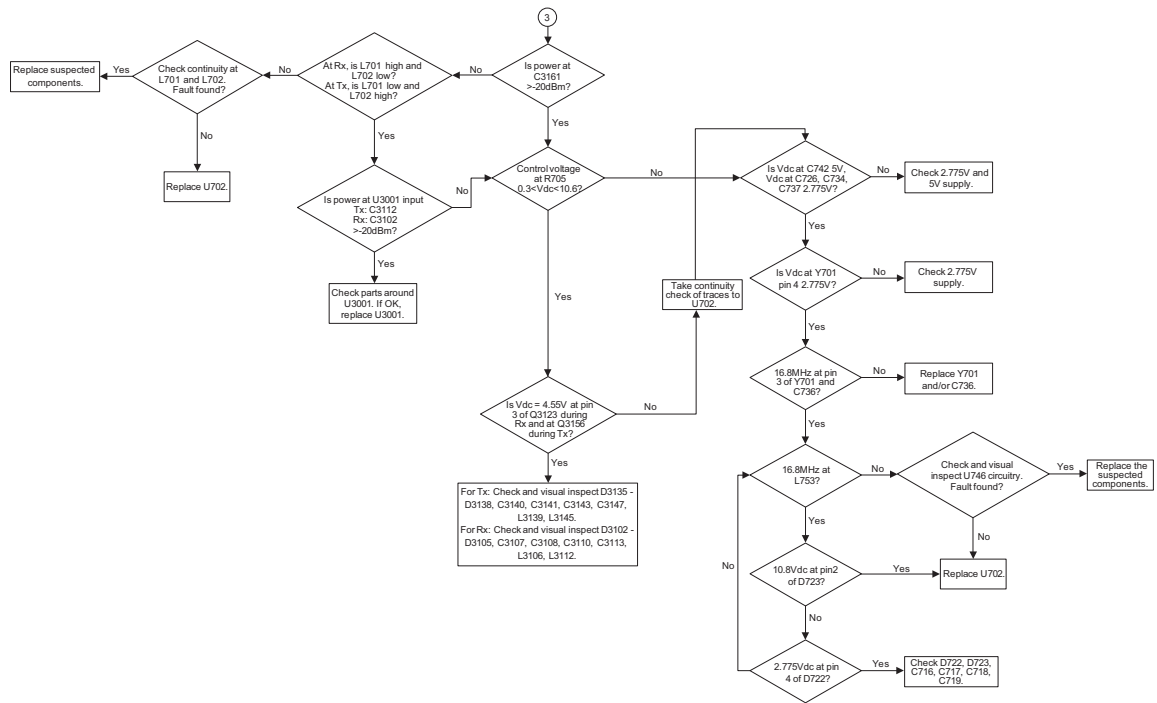
VCO Failure – Page 2 (UHF1)



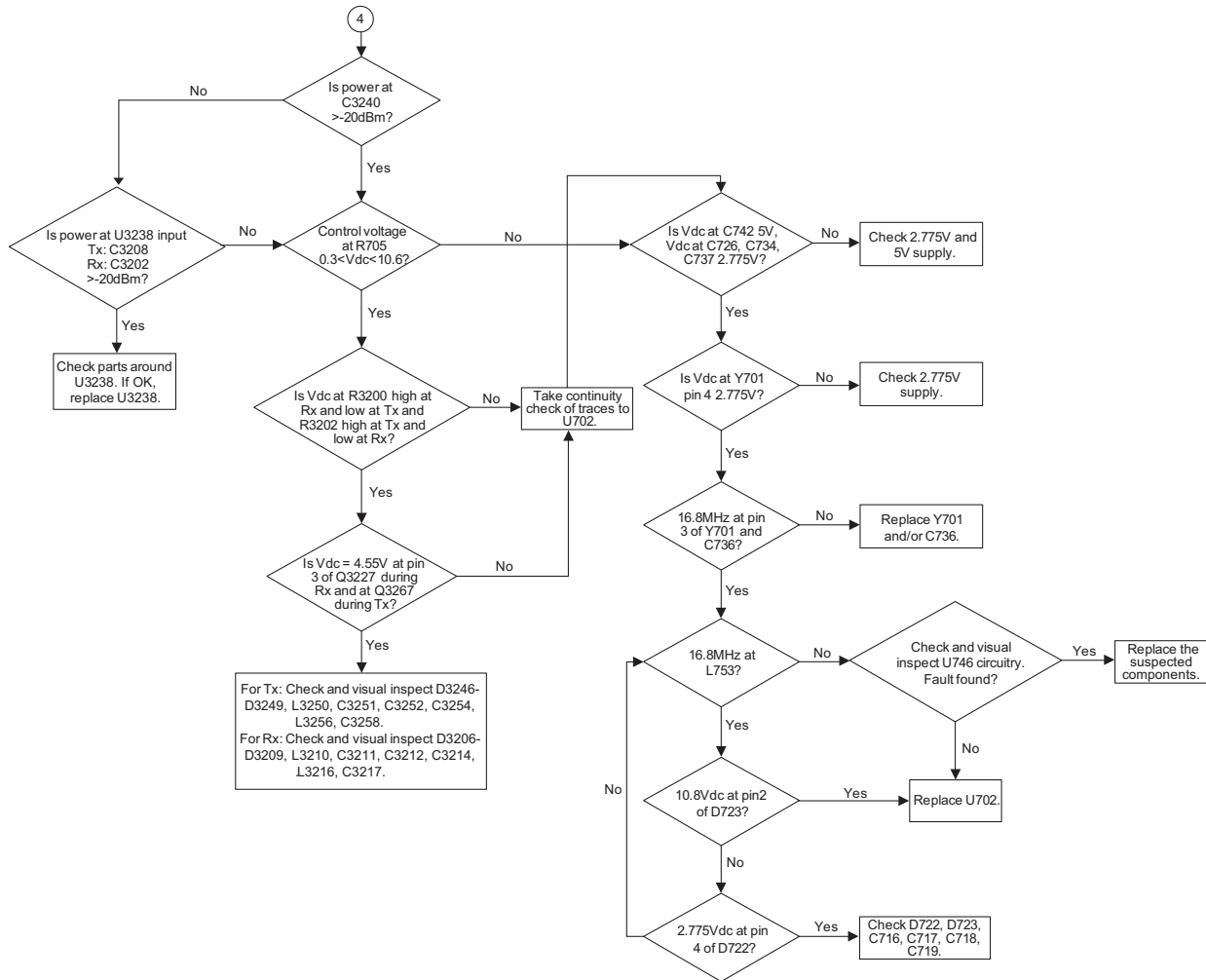
VCO Failure – Page 3 (7/800MHz)



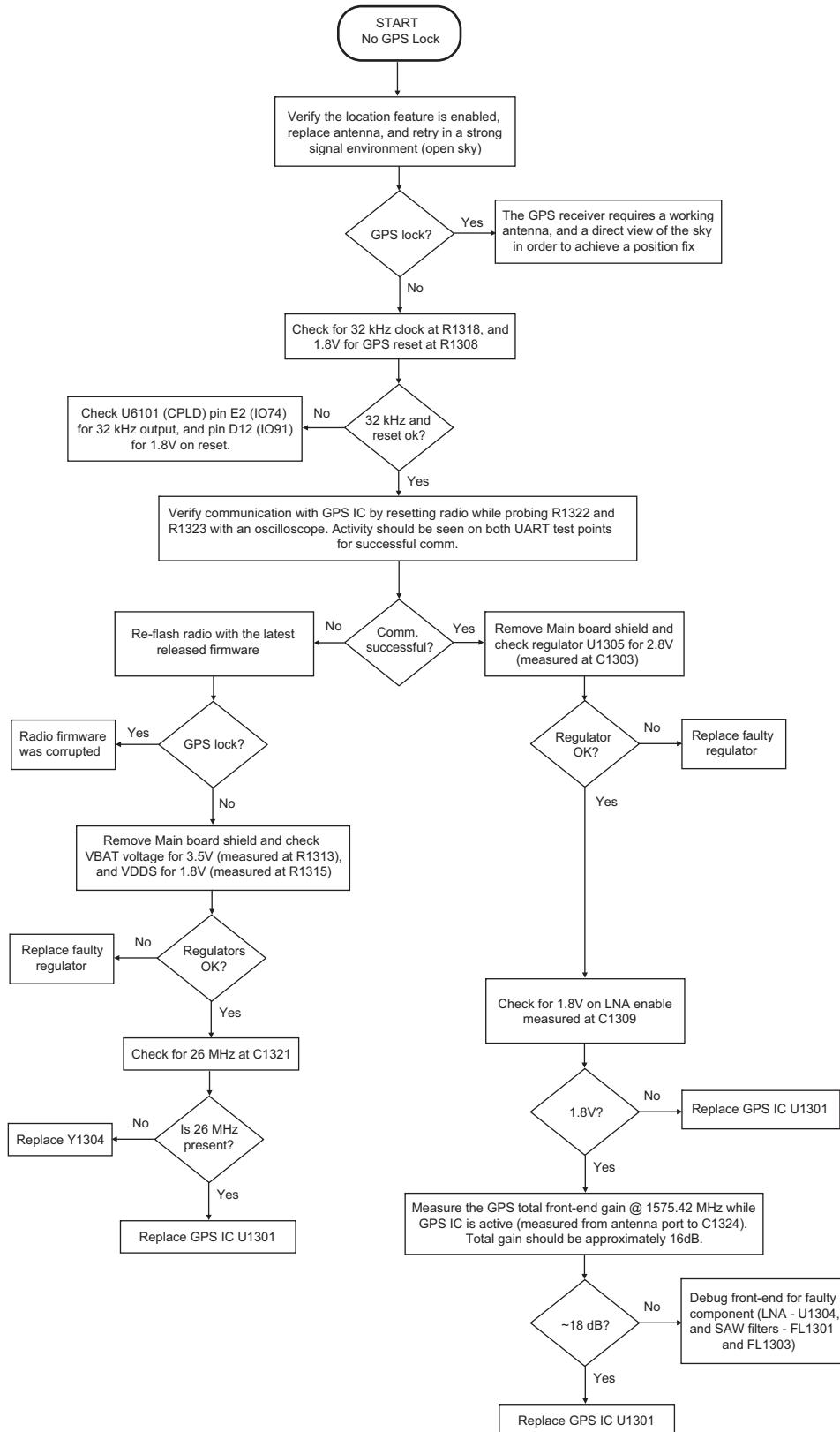
VCO Failure – Page 4(UHF2)



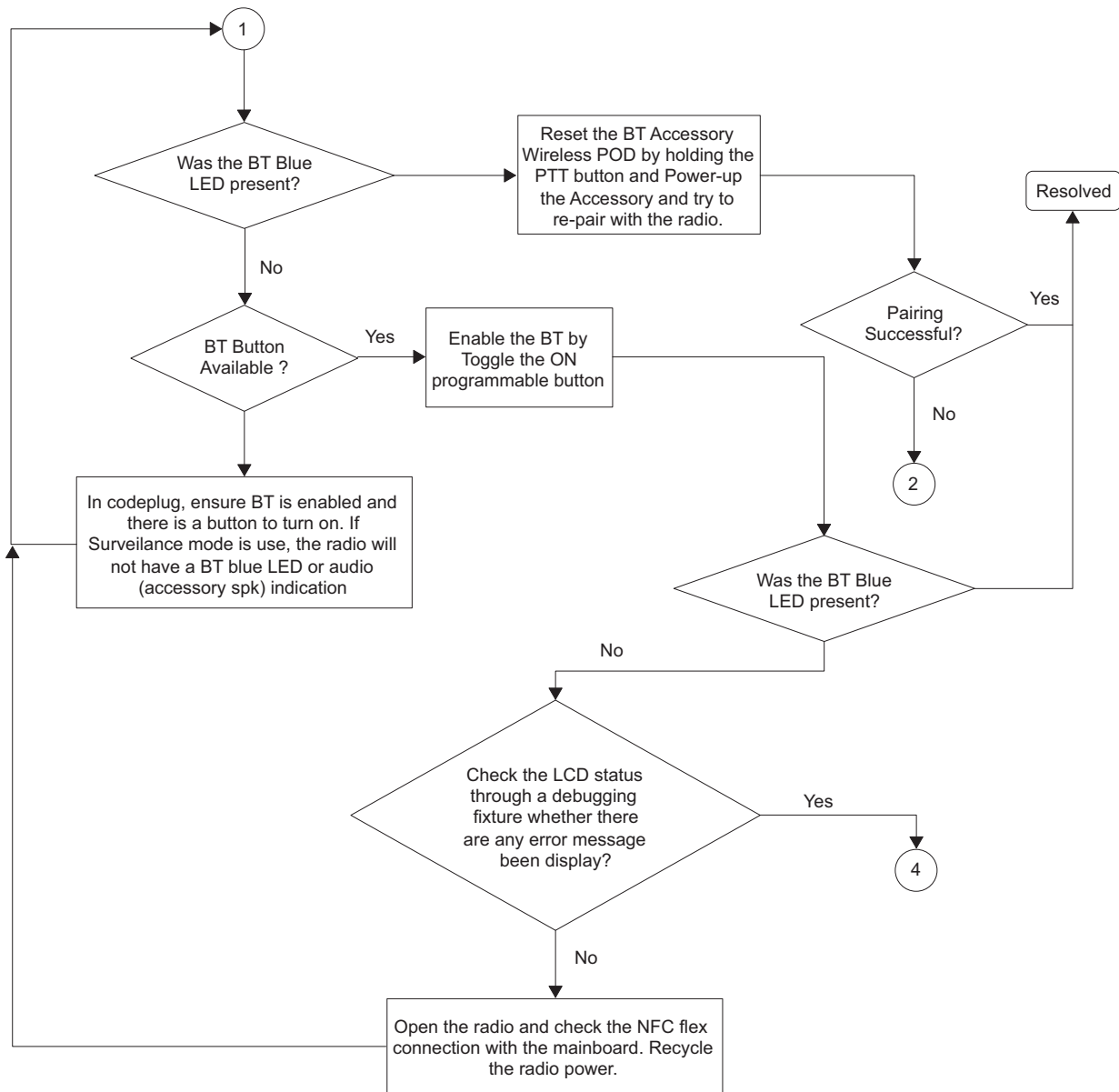
VCO Failure – Page 5(VHF)



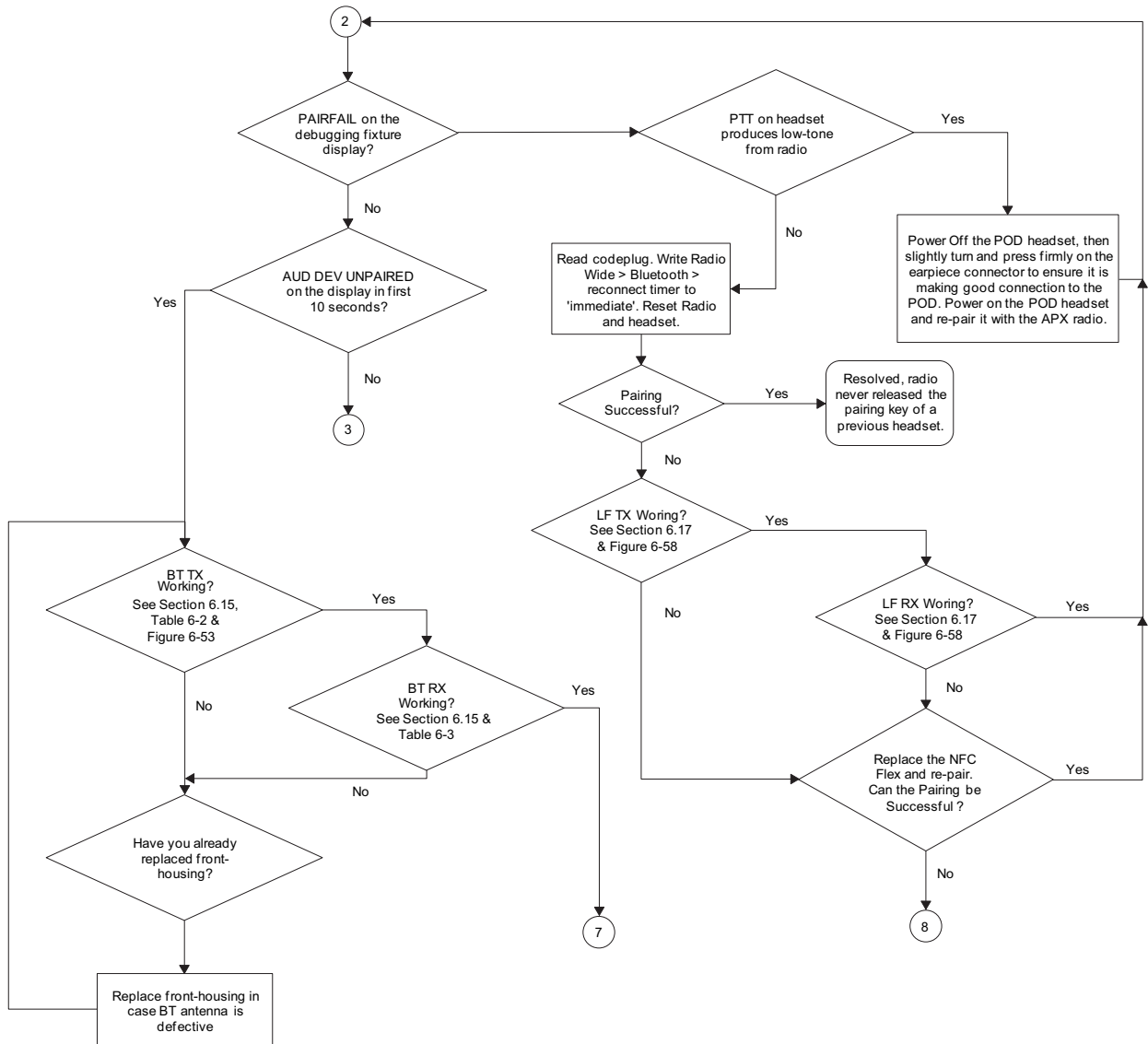
5.13 GPS Failure



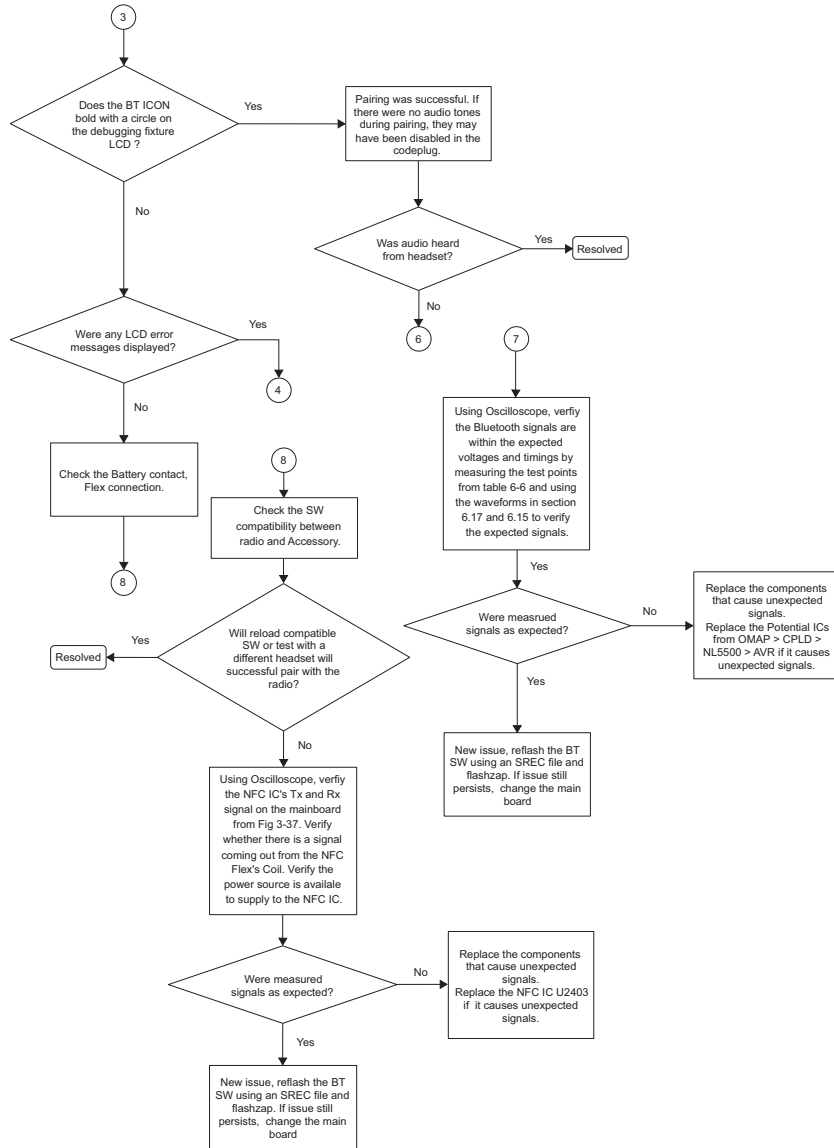
5.14 Bluetooth Failure – Pairing Issue



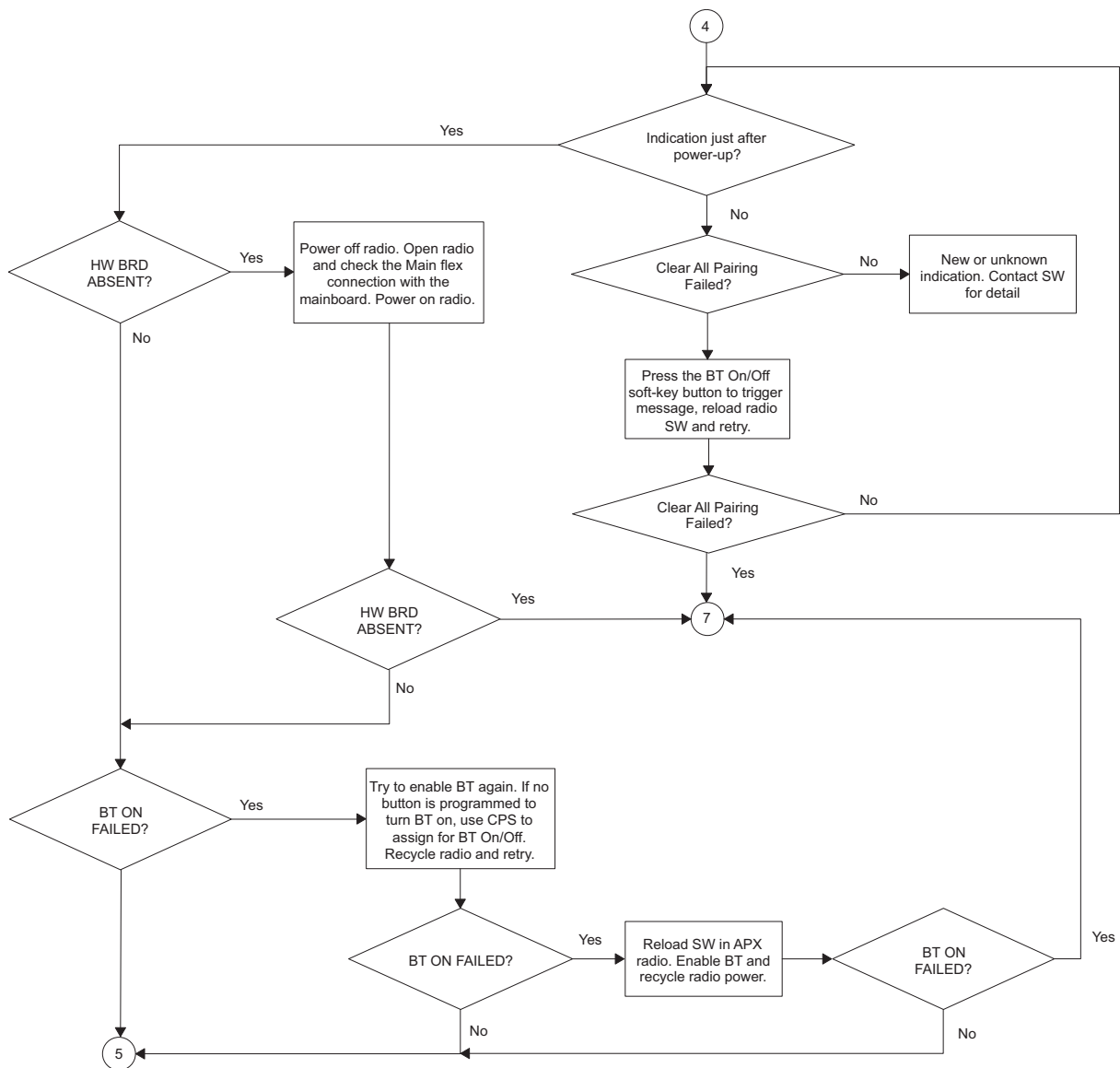
Bluetooth Failure – Pairing Issue (Page 2)



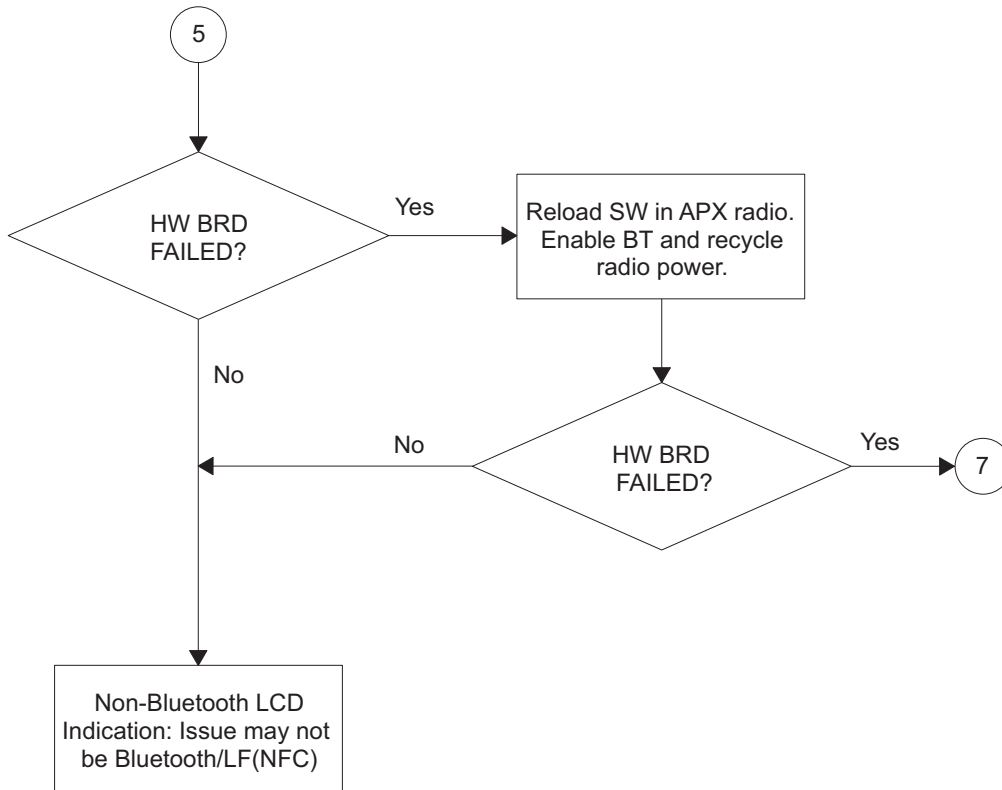
Bluetooth Failure – Pairing Issue (Page 3)



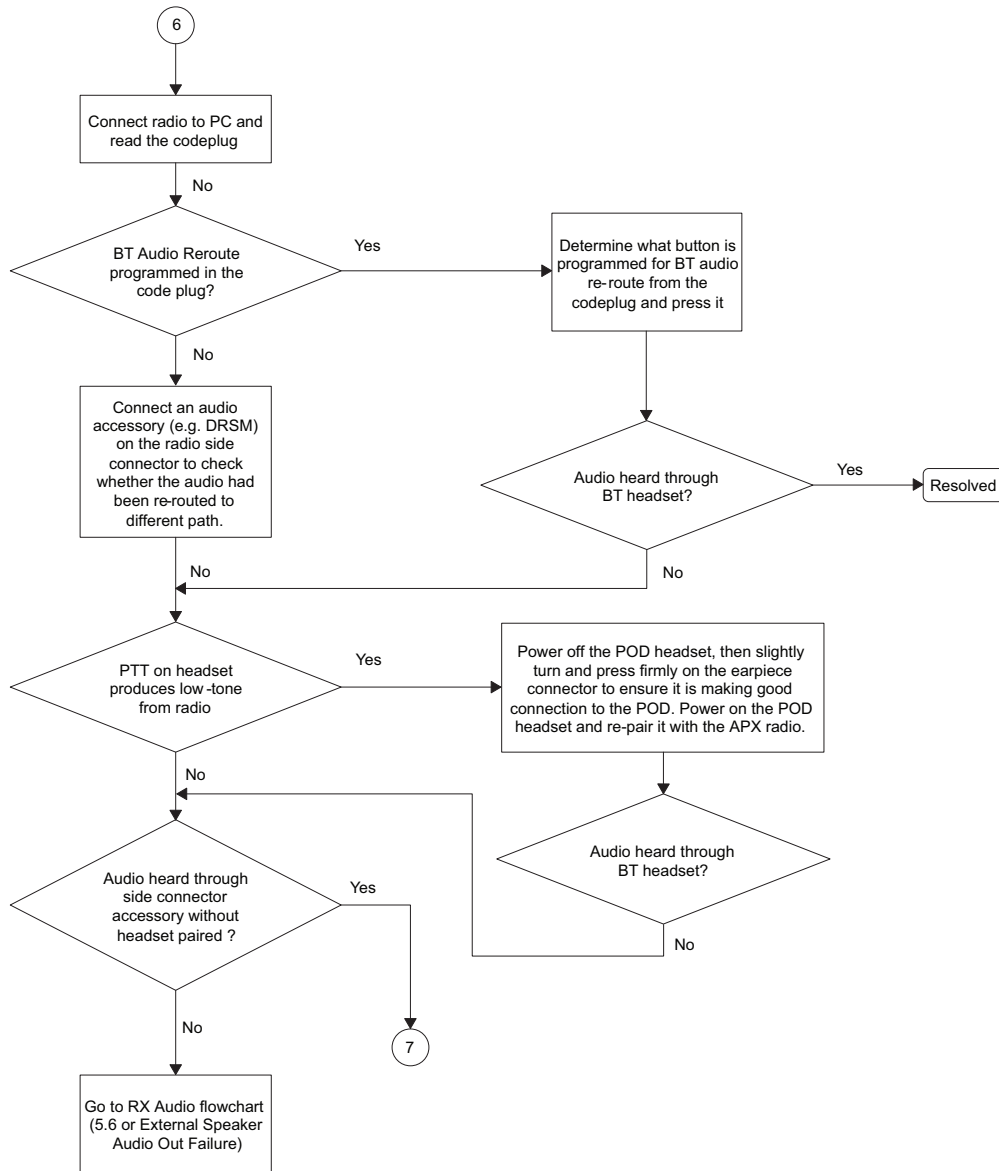
Bluetooth Failure – LCD Indication(Page 1)



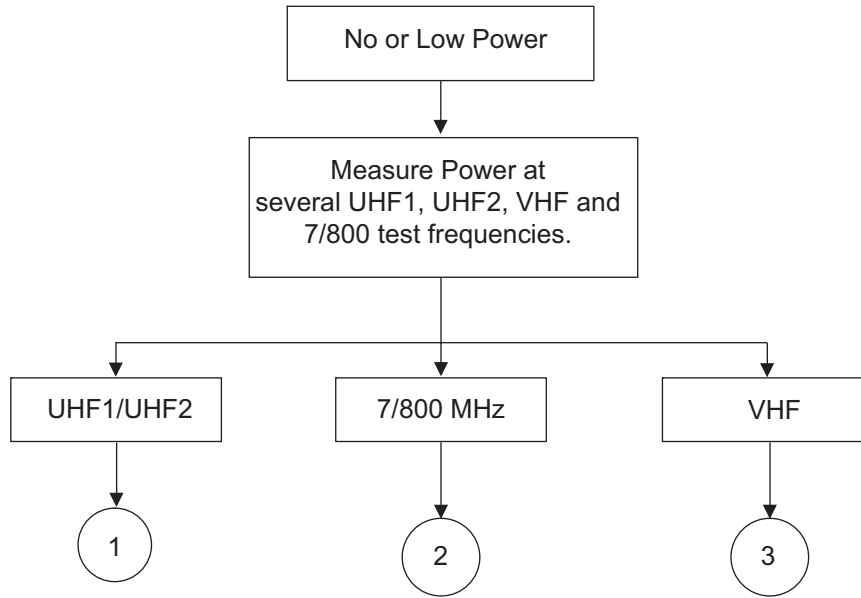
Bluetooth Failure – LCD Indication (Page 2)



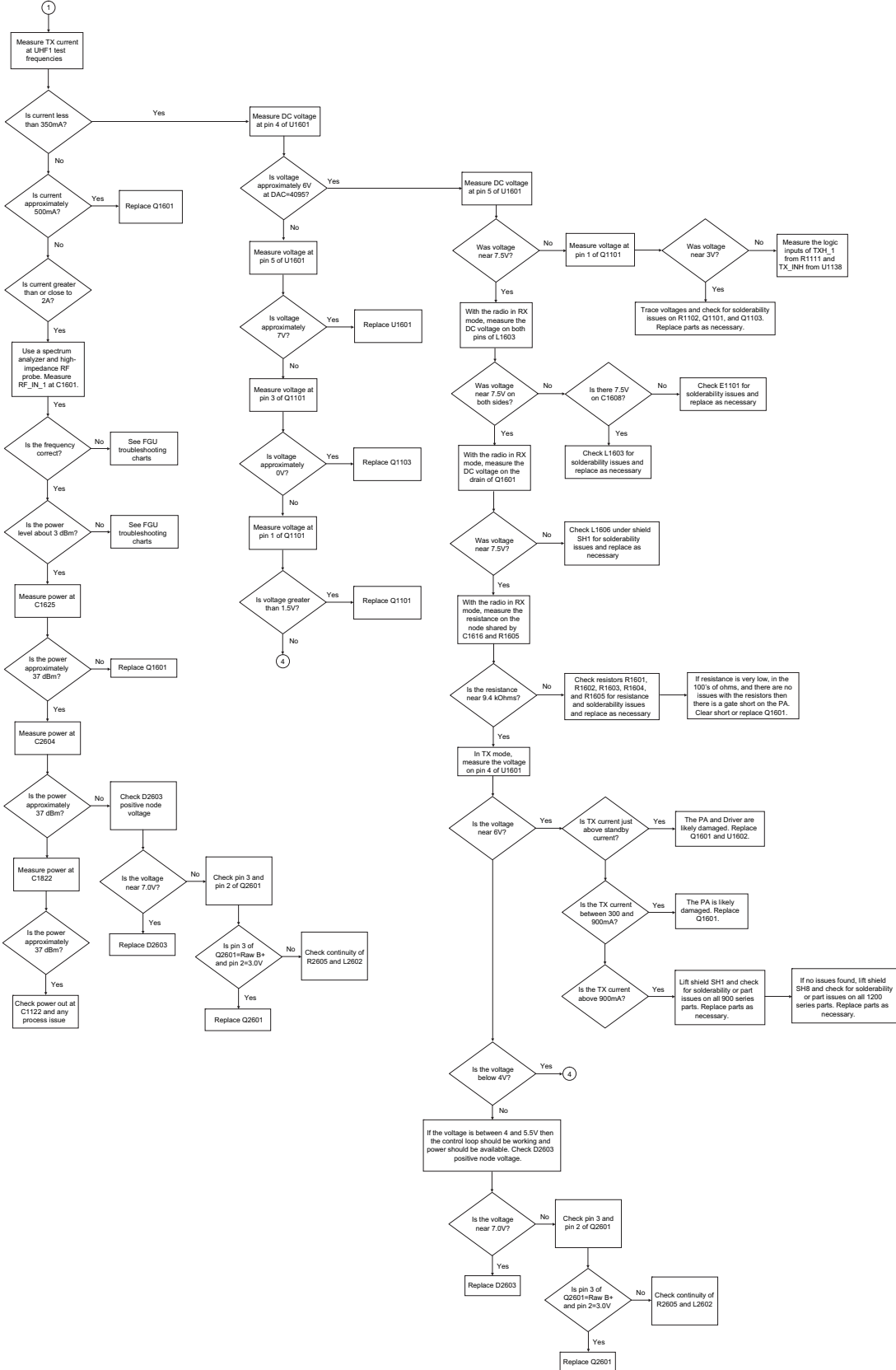
Bluetooth Failure – LCD Indication (Page 3)



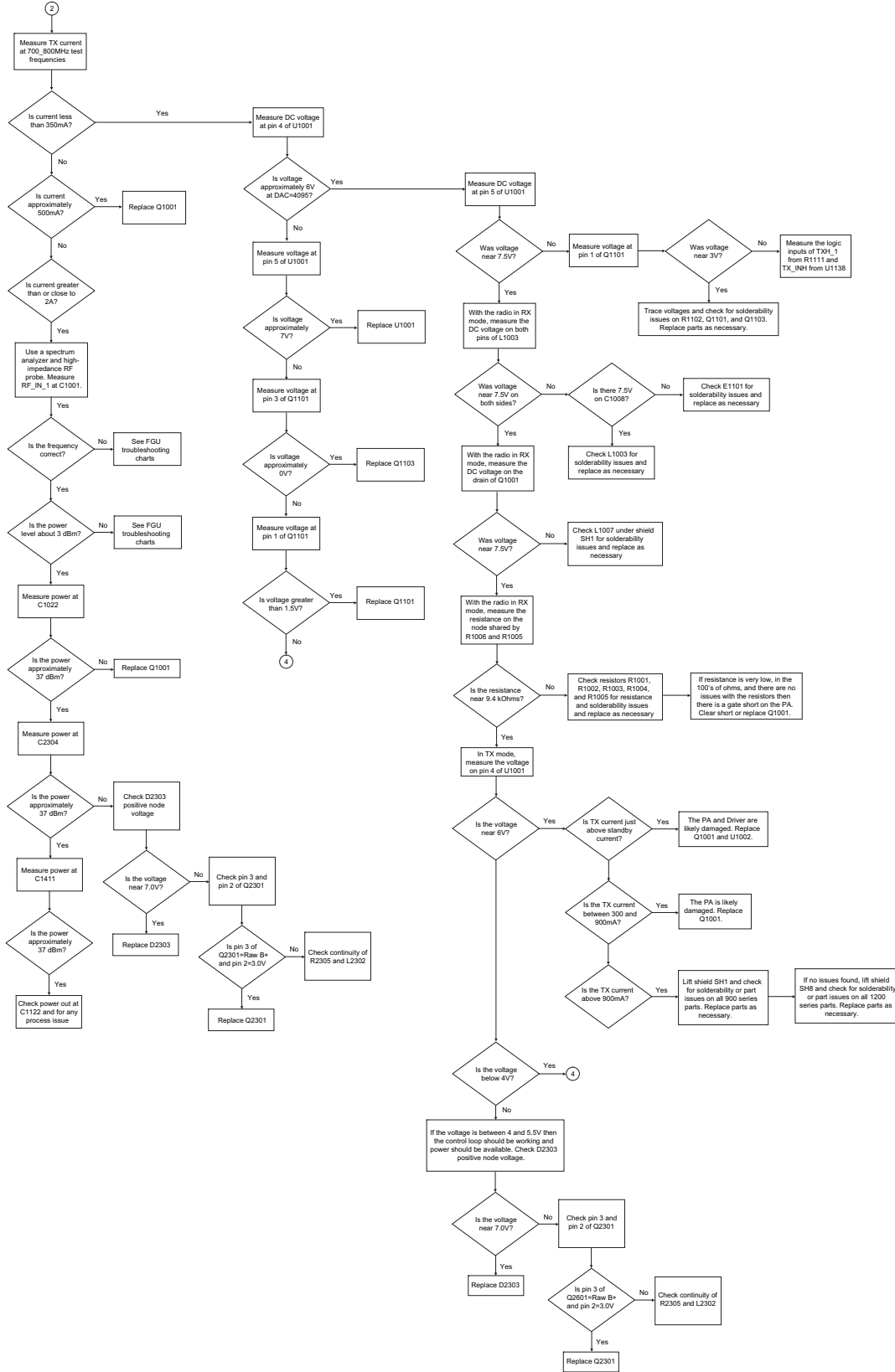
5.15 PA Failure – Main



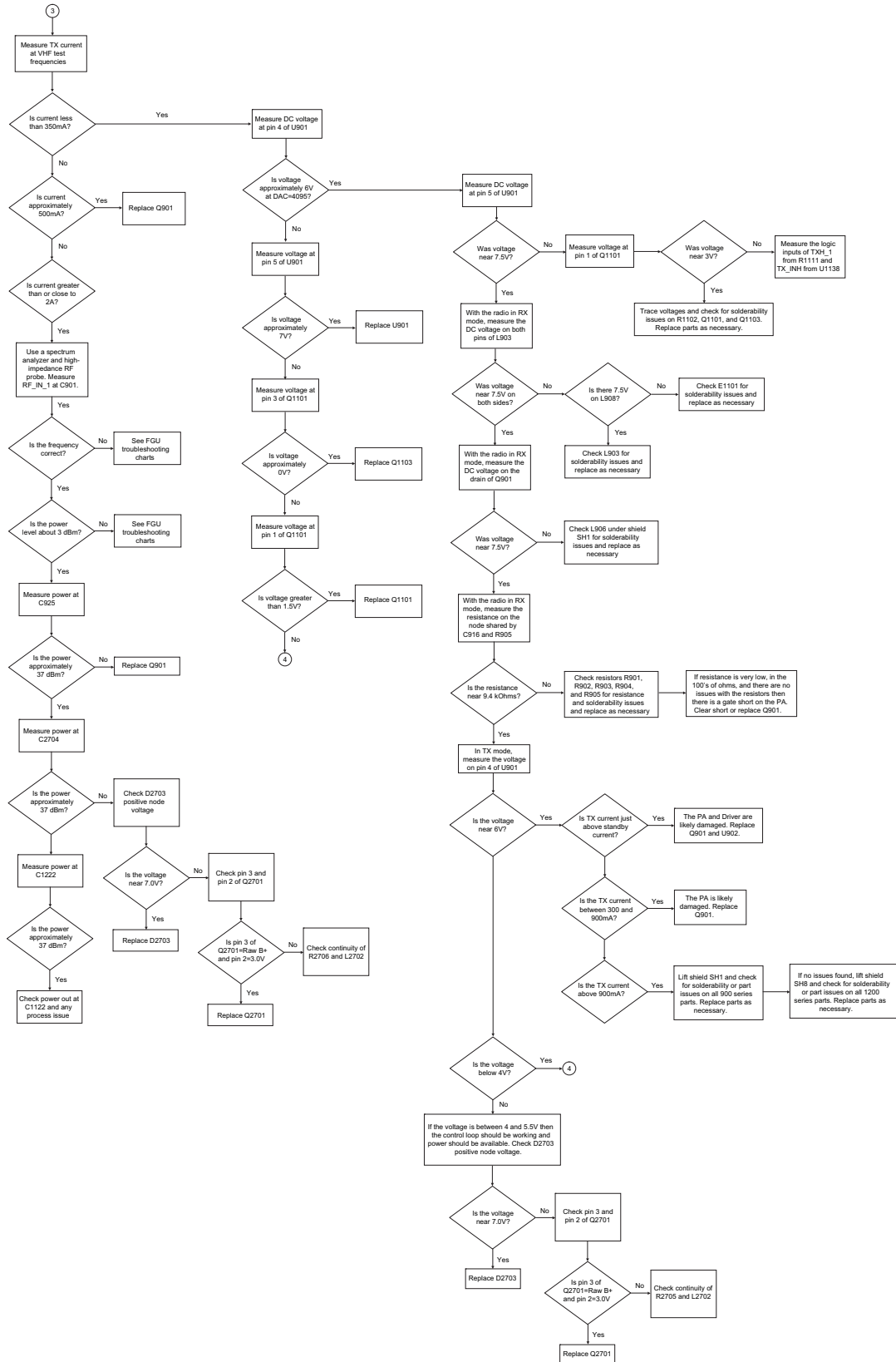
PA Failure – Page 1 (UHF1/UHF2)



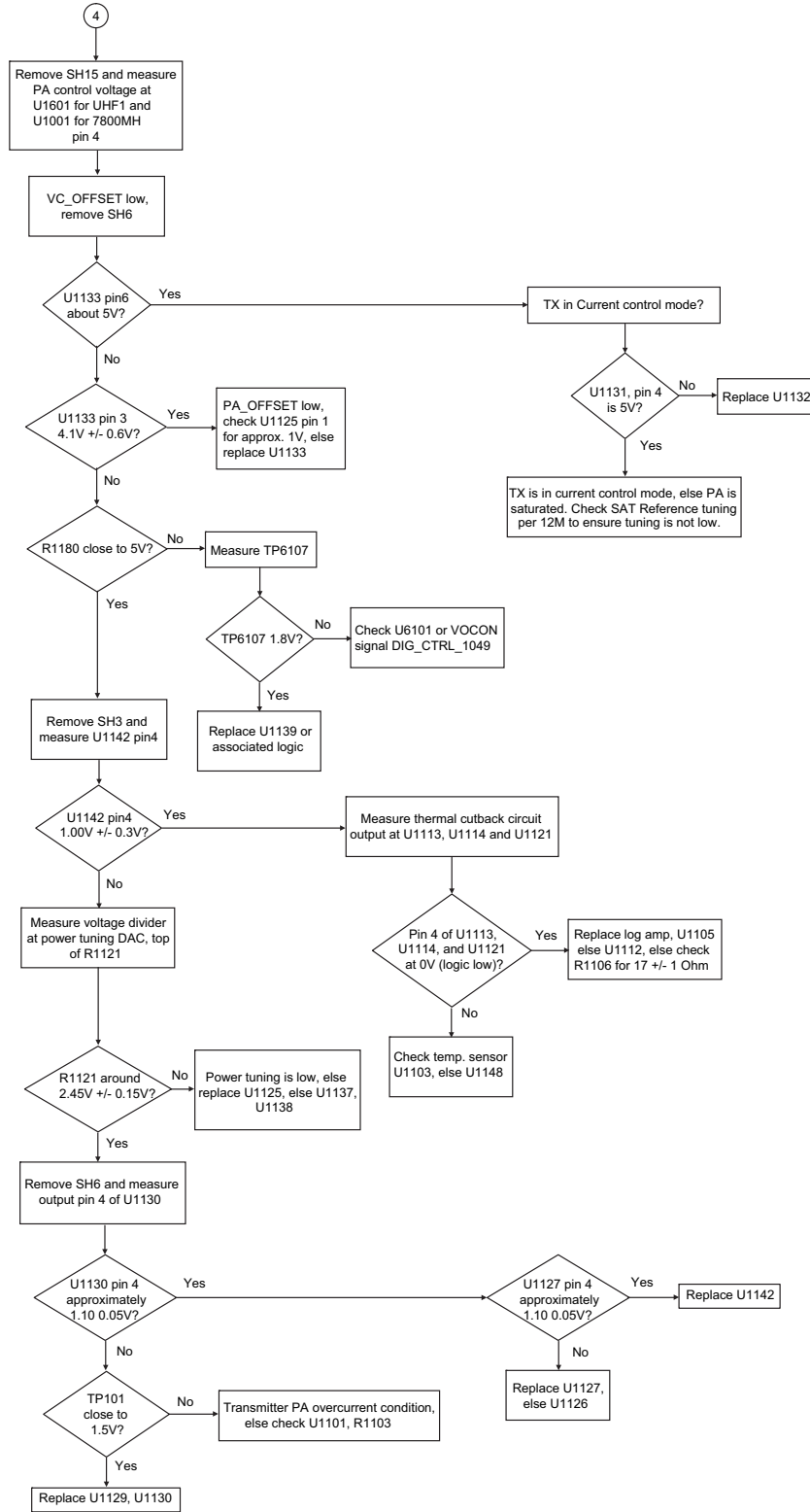
PA Failure – Page 2 (700/800 MHz)



PA Failure – Page 3 (VHF PA)



PA Failure – Page 4(ALC)



Chapter 6 Troubleshooting Waveforms

This chapter contains images of waveforms that might be useful in verifying operation of certain parts of the circuitry. These waveforms are for reference only; the actual data depicted will vary depending on operating conditions.

6.1 List of Waveforms

Table 6-1 lists each waveform and the page on which the waveform can be found.

Table 6-1. List of Waveforms

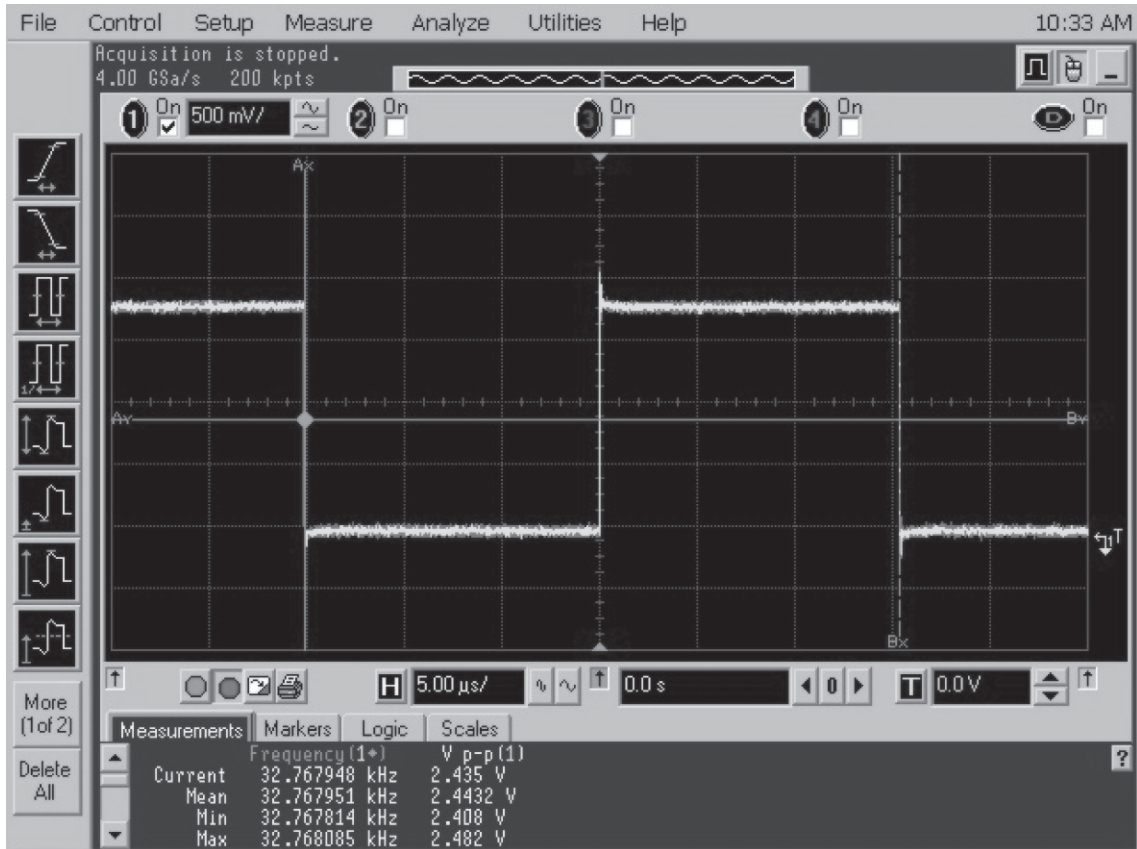
Waveform	Page No.
Clocks	
32 kHz Clock	6-2
4 MHz Clock	6-3
12 MHz Clock	6-4
16.8 MHz Clock	6-5
24 MHz Clock	6-6
Audio SSI	
Red Tx	6-7
Red Rx	6-8
SYNC.	6-9
BCLK	6-10
RX SSI	
CLK.	6-11
DA	6-12
FSYNC.	6-13
TX SSI	
CLK.	6-14
DA.	6-15
FSYNC.	6-16
SPI	
CLK	6-17
CS	6-18
I2C BUS	
SCL	6-19

Table 6-1. List of Waveforms (Continued)

Waveform	Page No.
SCL 5V	6-20
SDA	6-21
One Wire	
1-Wire	6-22
GCAI	
GPIO0	6-23
GPIO4 / Keyfail during Keyload	6-24
USB	
D-	6-25
D+	6-26
SDRAM	
CLK	6-27
CLKX	6-28
FLASH CONTROL	
ADV	6-29
CS3	6-30
OE	6-31
RDY	6-32
WE	6-33

6.2 Clocks

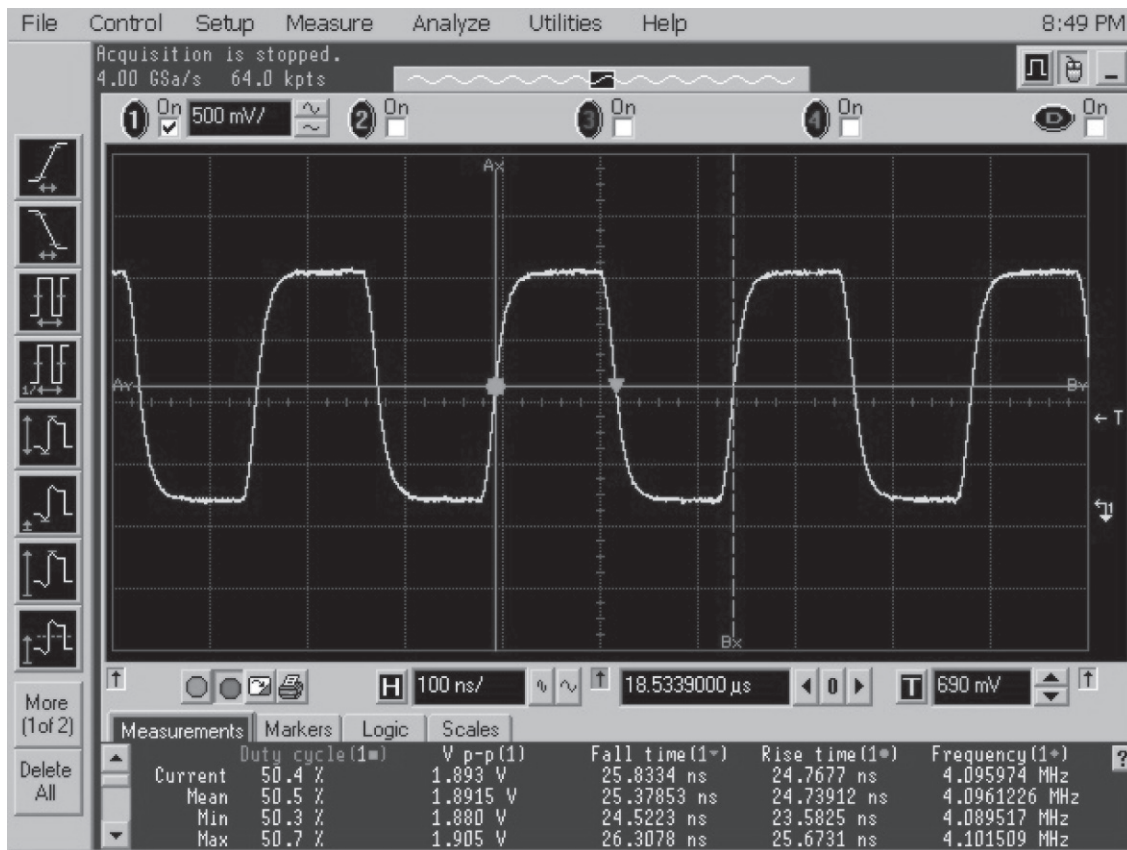
6.2.1 32 kHz Clock



Trace 1: Trace recorded at R6115.

Figure 6-1. 32 kHz Clock Waveform

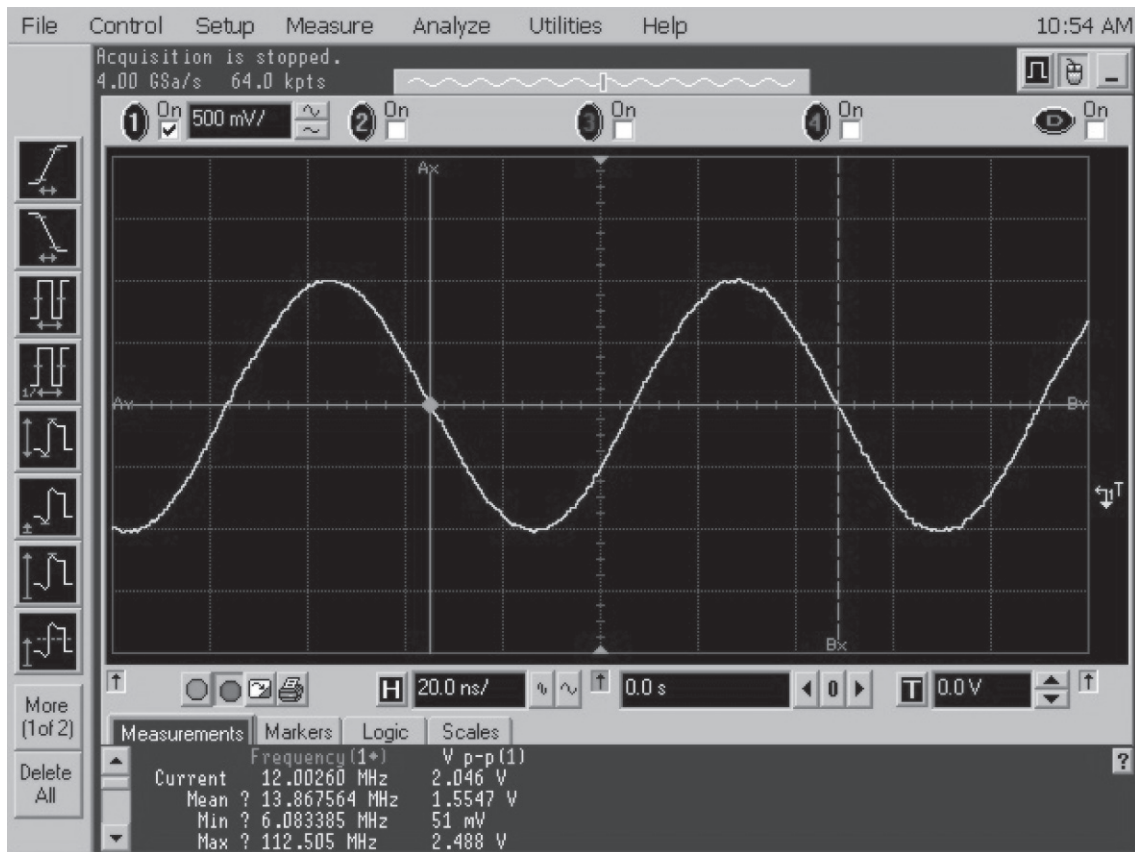
6.2.2 4 MHz Clock



Trace 1: Trace recorded at R6113.

Figure 6-2. 4 MHz Clock Waveform

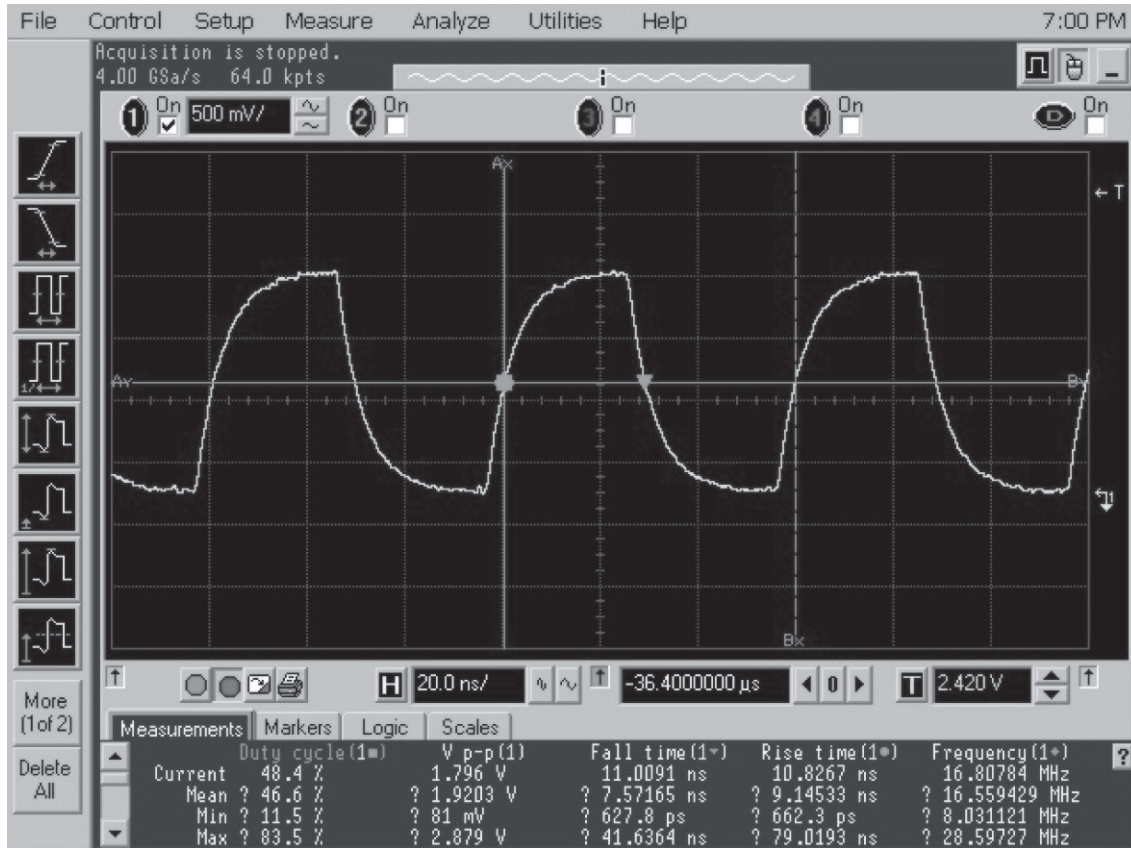
6.2.3 12 MHz Clock



Trace 1: Trace recorded at C6601.

Figure 6-3. 12 MHz Clock Waveform

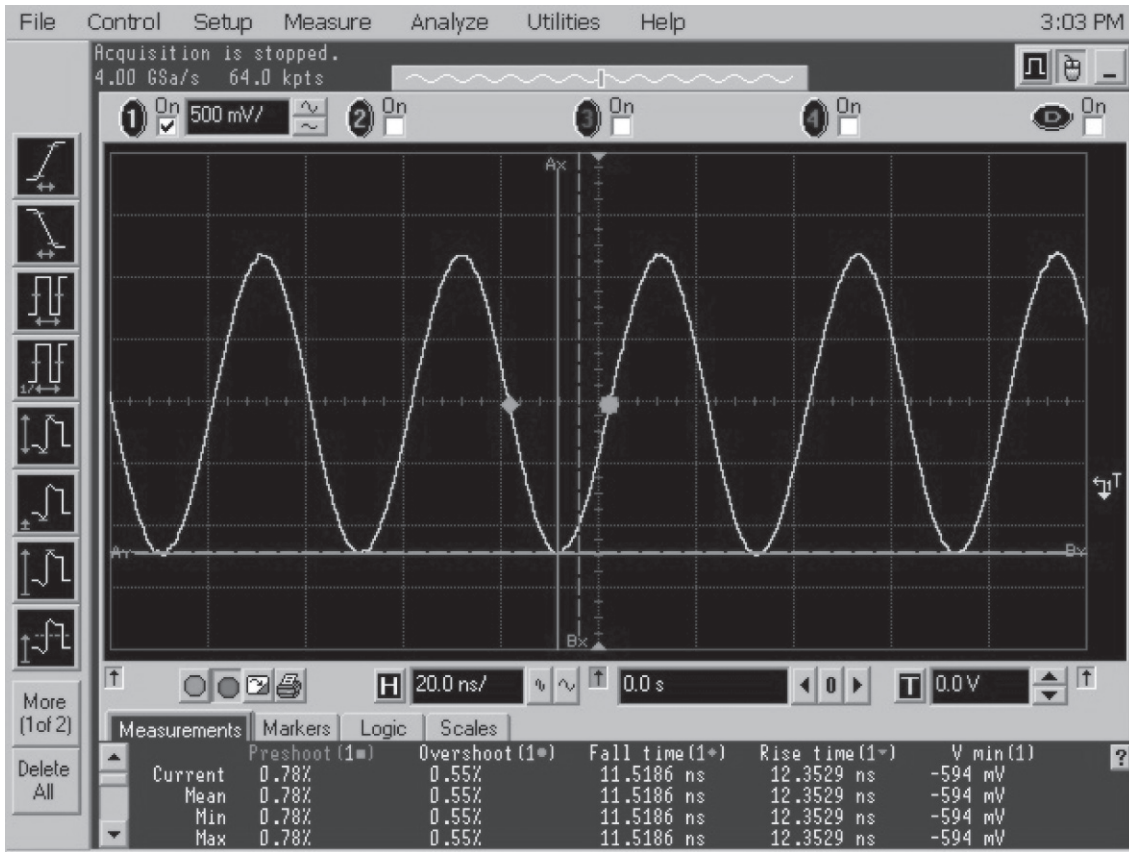
6.2.4 16.8 MHz Clock



Trace 1: Trace recorded at R6217.

Figure 6-4. 16.8 MHz Clock Waveform

6.2.5 24 MHz Clock

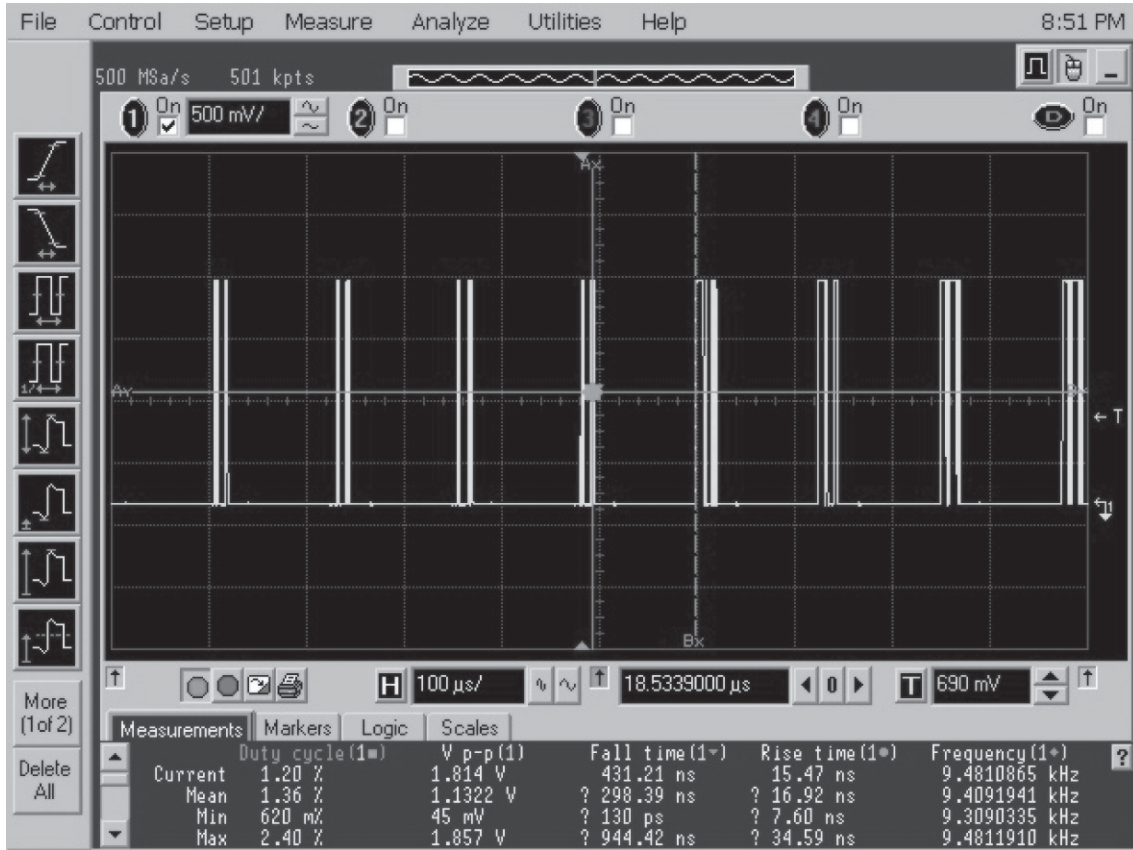


Trace 1: Trace recorded at C6592.

Figure 6-5. 24 MHz Clock Waveform

6.3 Audio SSI

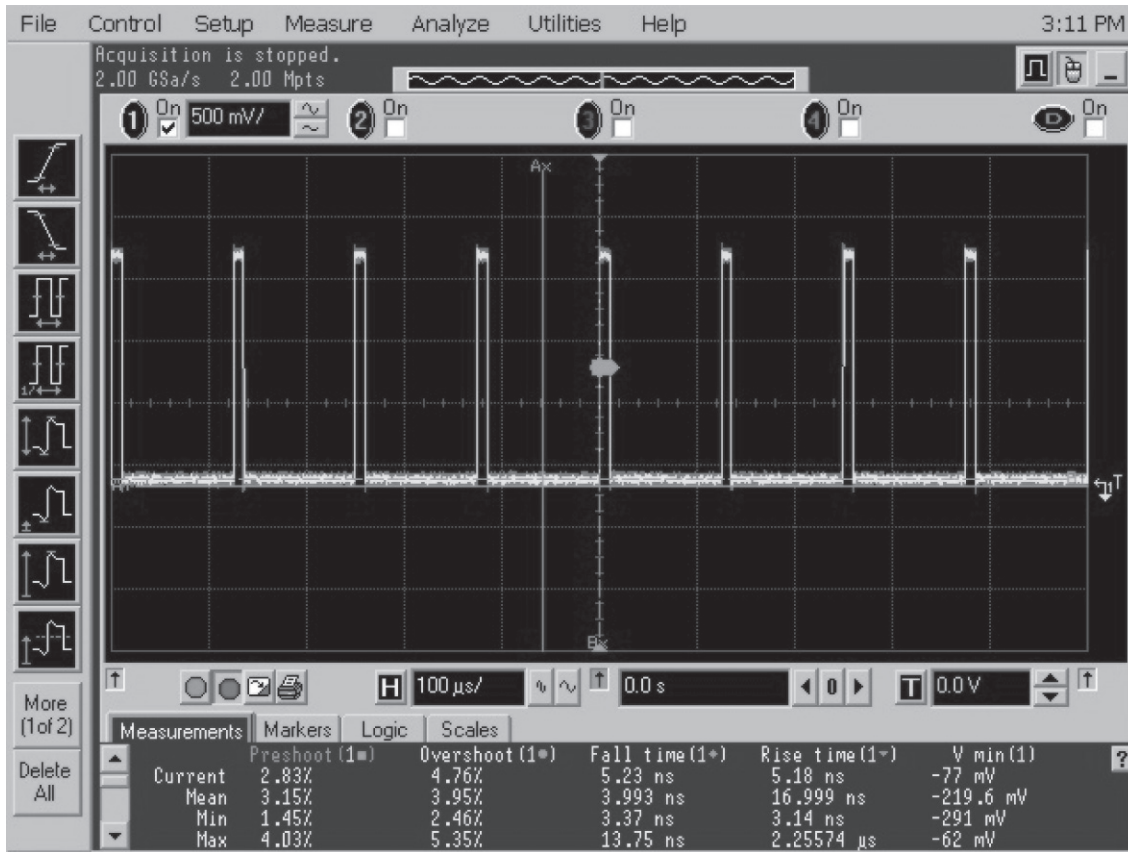
6.3.1 Red Tx



Trace 1: Trace recorded at R6618.

Figure 6-6. Audio SSI – Red Tx Waveform

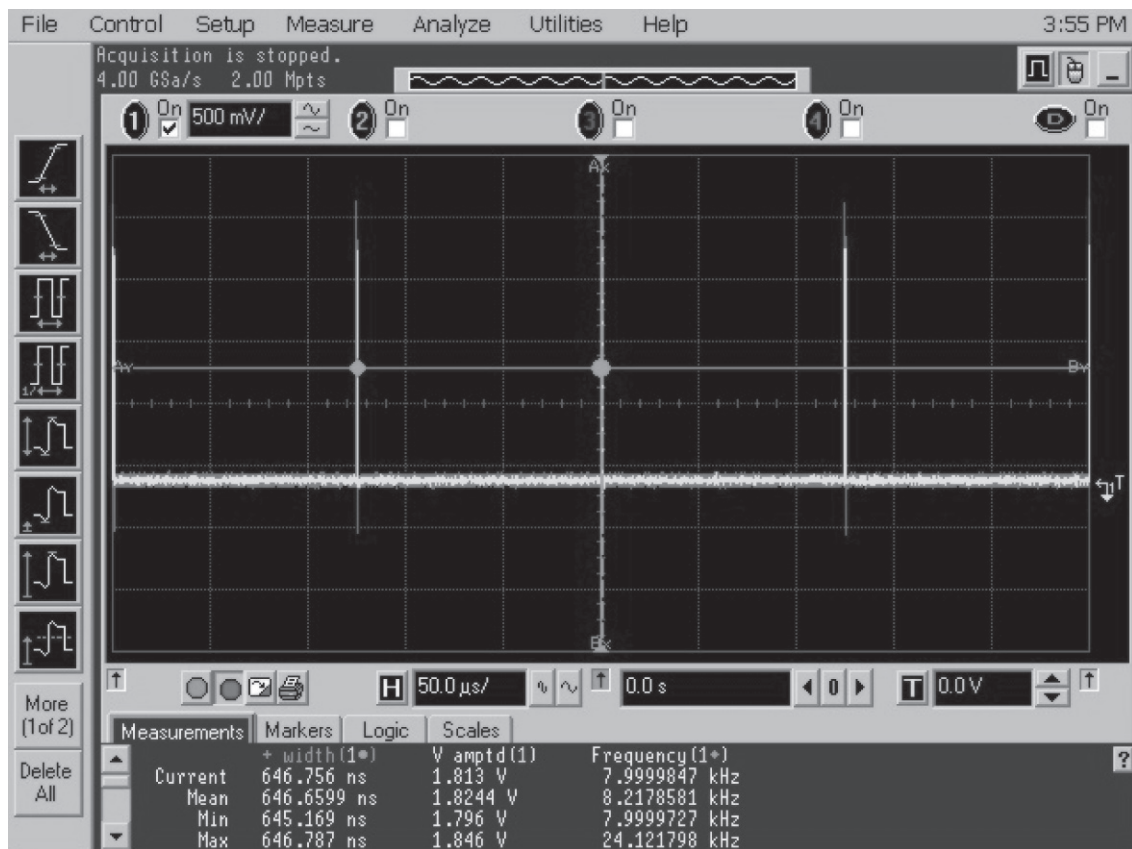
6.3.2 Red Rx



Trace 1: Trace recorded at R1332.

Figure 6-7. Audio SSI – Red Rx Waveform

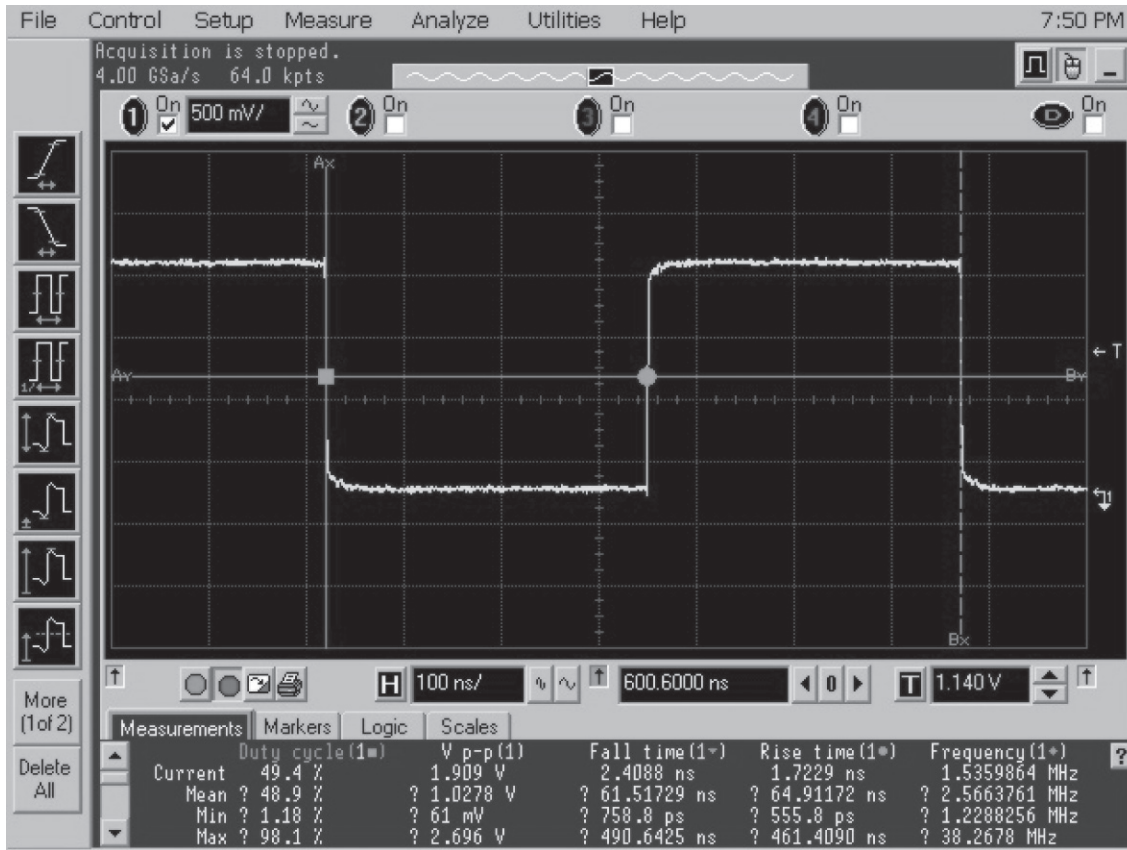
6.3.3 SYNC.



Trace 1: Trace recorded at Pin 30 of J2301.

Figure 6-8. Audio SSI – Sync. Waveform

6.3.4 BCLK

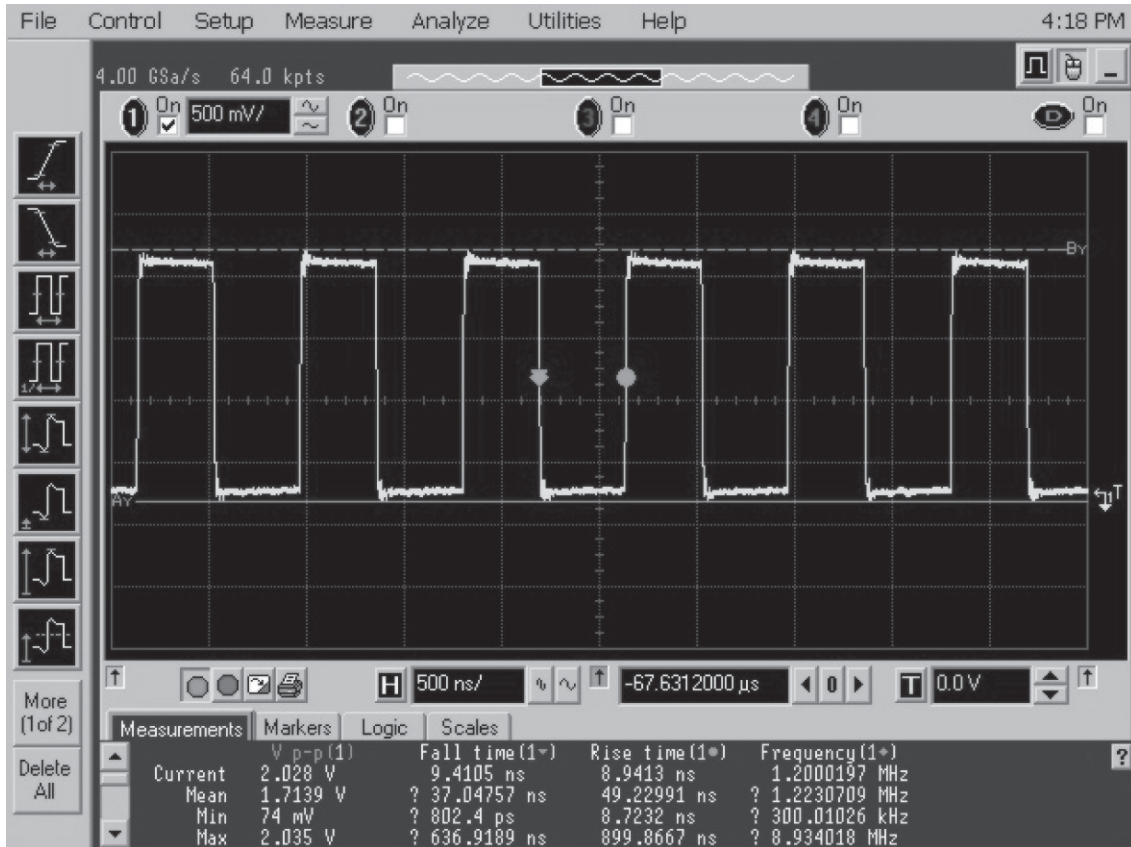


Trace 1: Trace recorded at R6107.

Figure 6-9. Audio SSI – BCLK. Waveform

6.4 RX SSI

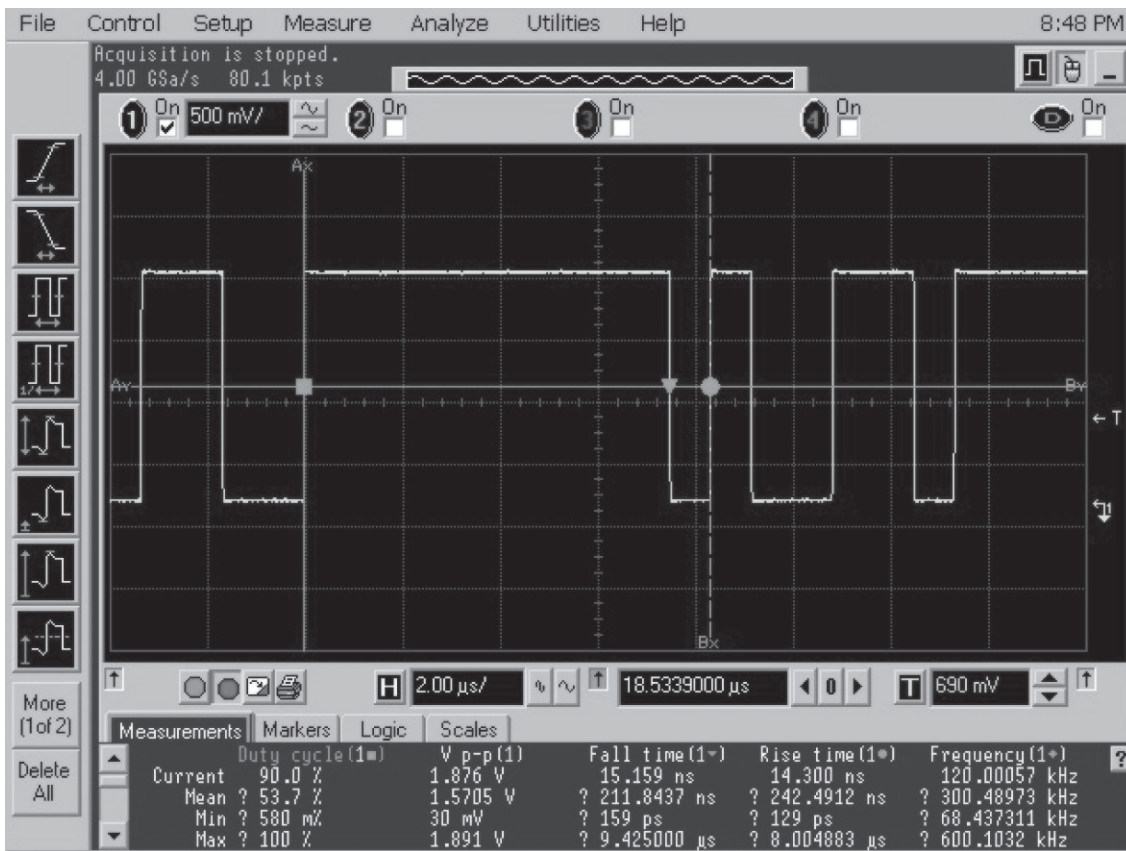
6.4.1 CLK.



Trace 1: Trace recorded at R2806.

Figure 6-10. RX SSI – CLK. Waveform

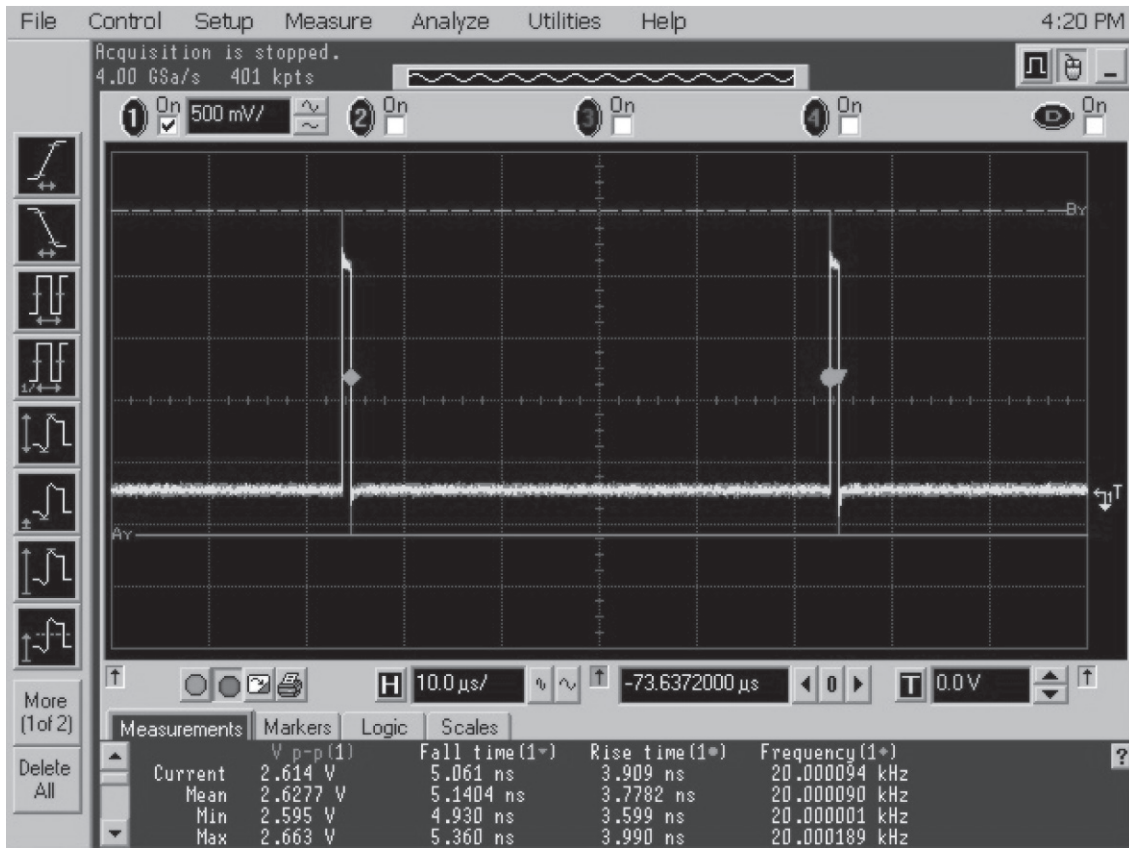
6.4.2 DA



Trace 1: Trace recorded at R2805.

Figure 6-11. RX SSI – DA Waveform

6.4.3 FSYNC.

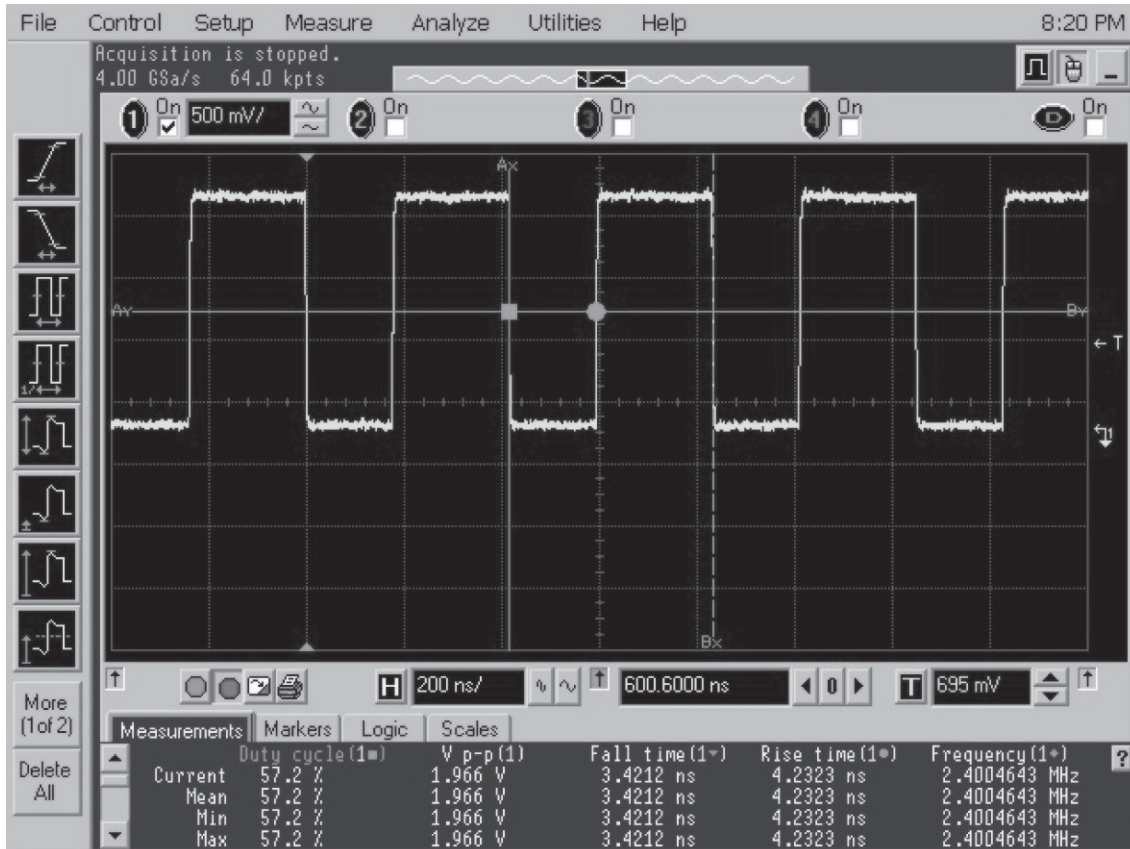


Trace 1: Trace recorded at R2804.

Figure 6-12. RX SSI – FSync. Waveform

6.5 TX SSI

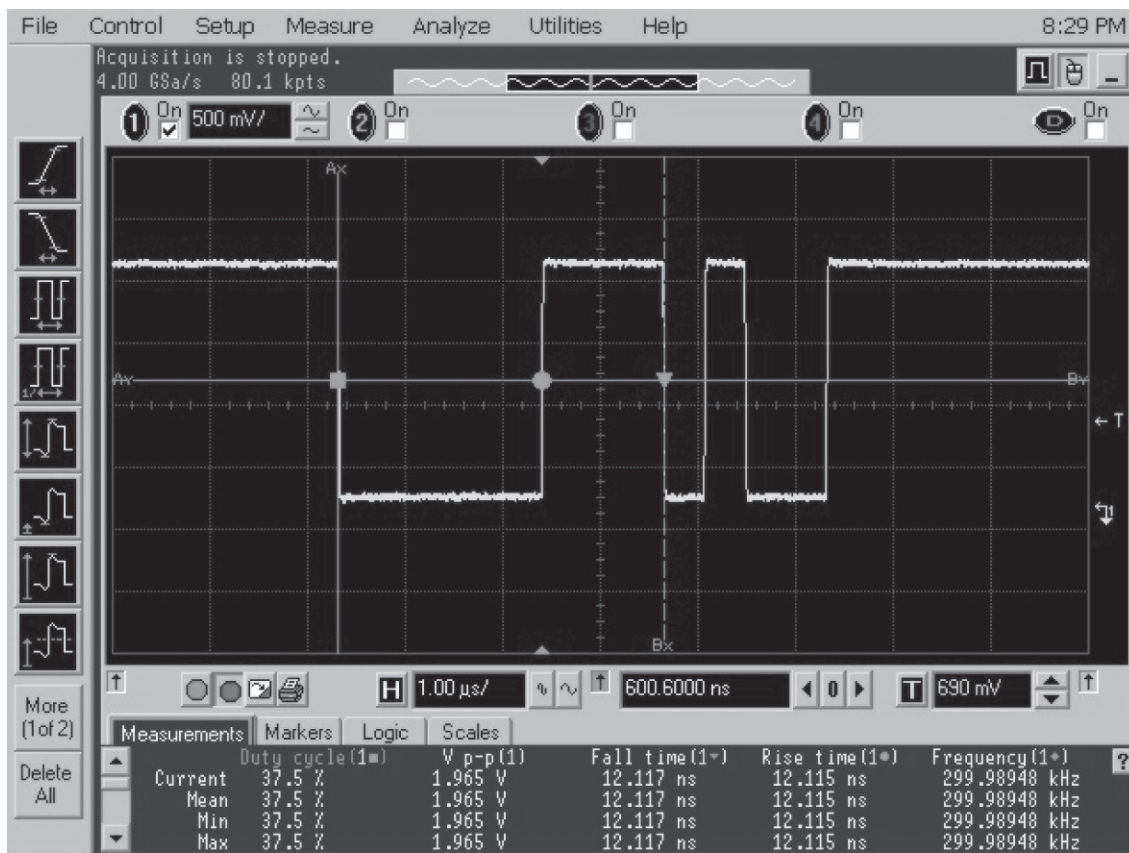
6.5.1 CLK.



Trace 1: Trace recorded at R2808.

Figure 6-13. TX SSI – TX CLK. Waveform

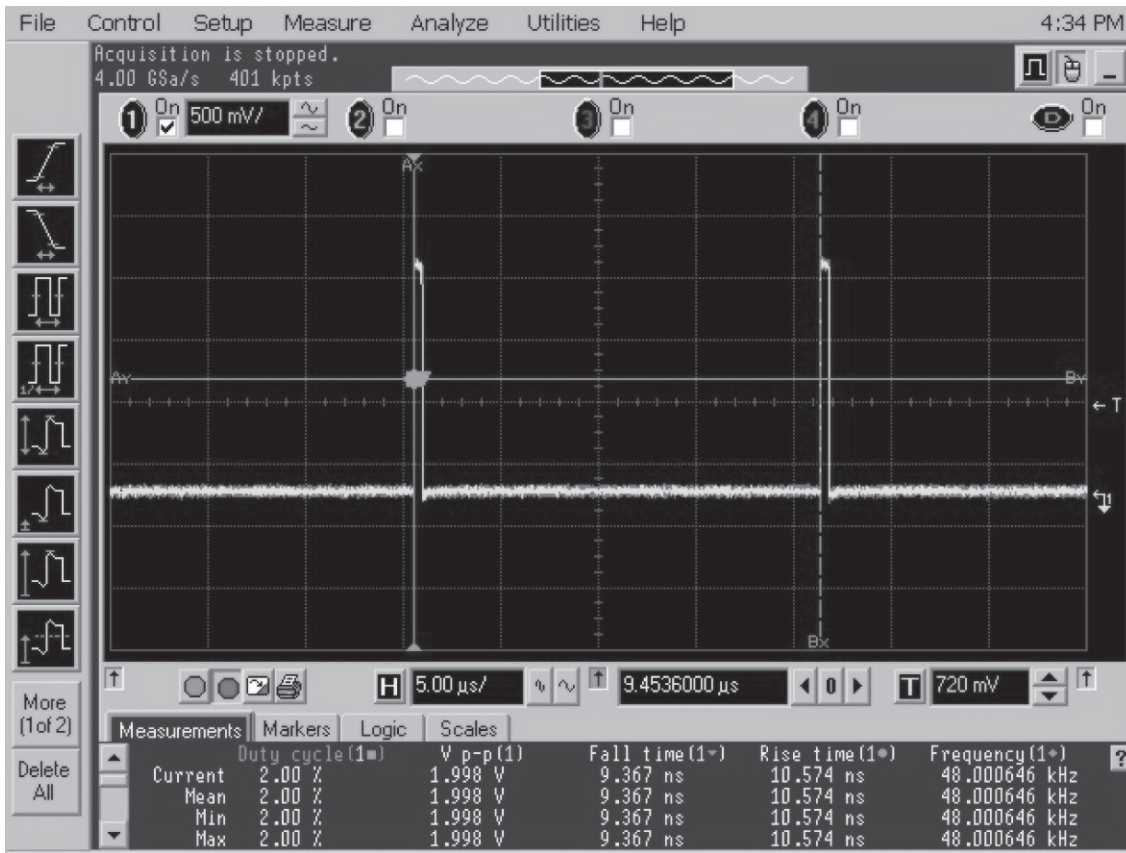
6.5.2 DA.



Trace 1: Trace recorded at R2817.

Figure 6-14. TX SSI – DA Waveform

6.5.3 FSYNC.

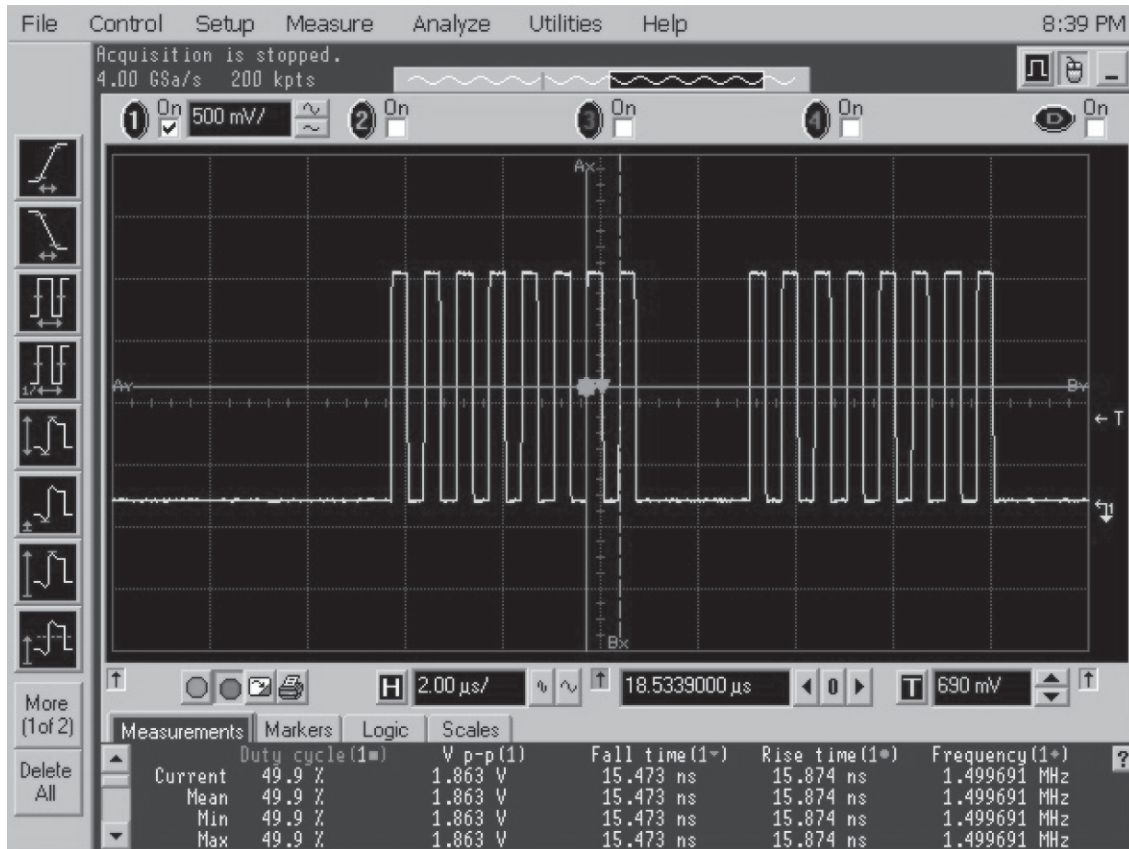


Trace 1: Trace recorded at R2807.

Figure 6-15. TX SSI – FSync. Waveform

6.6 SPI

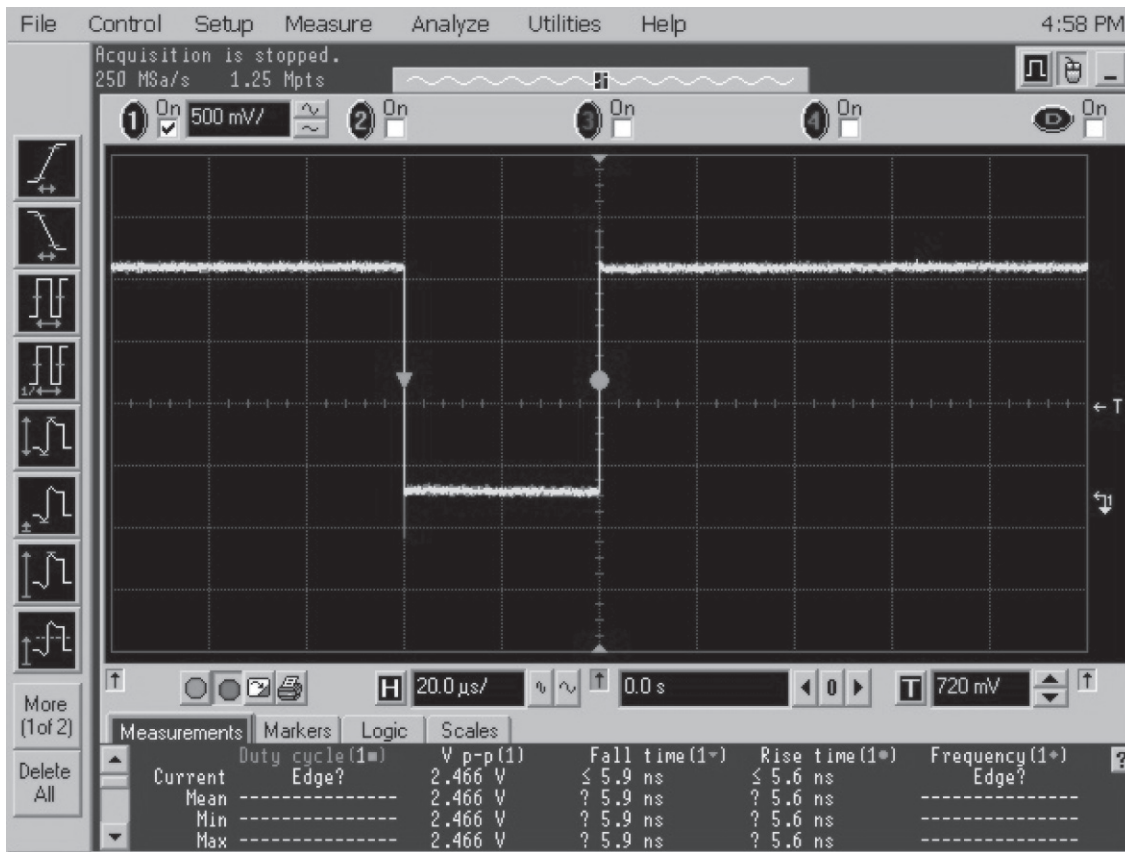
6.6.1 CLK



Trace 1: Trace recorded at R2803.

Figure 6-16. SPI – CLK Waveform

6.6.2 CS

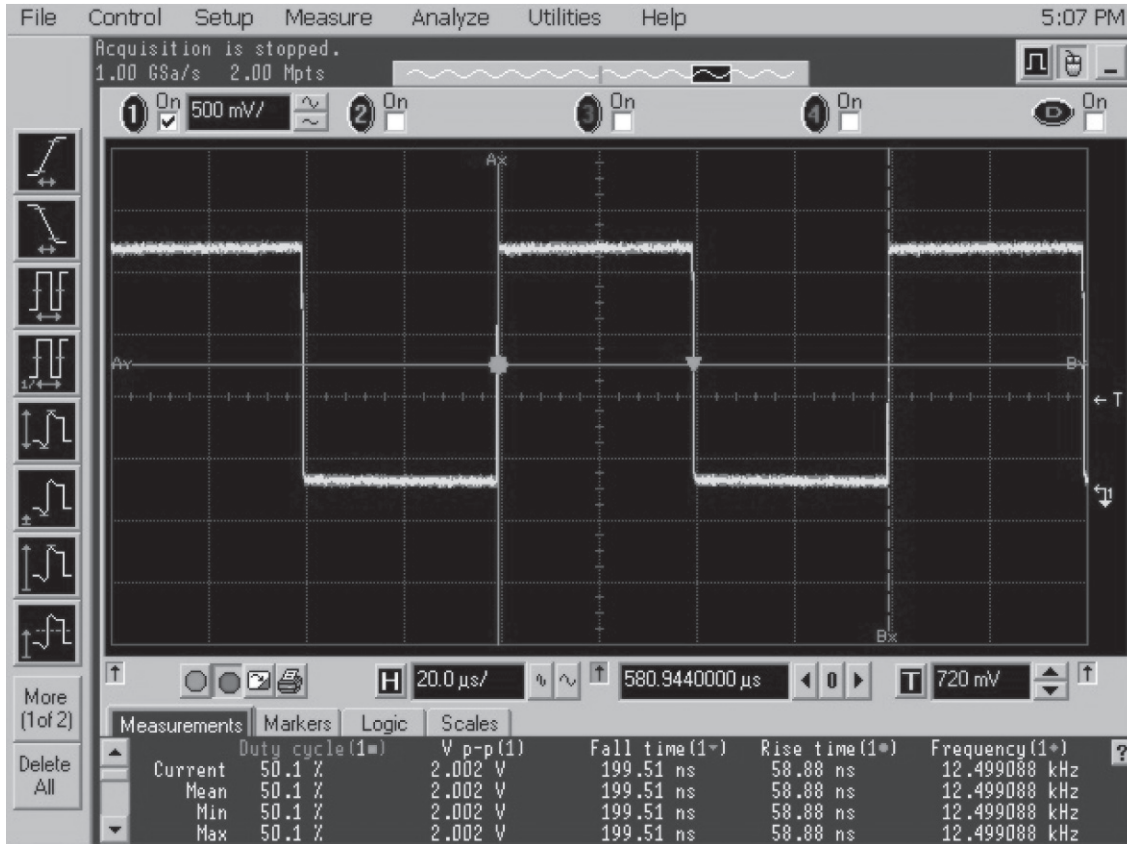


Trace 1: Trace recorded at R6602.

Figure 6-17. CS Waveform

6.7 I2C BUS

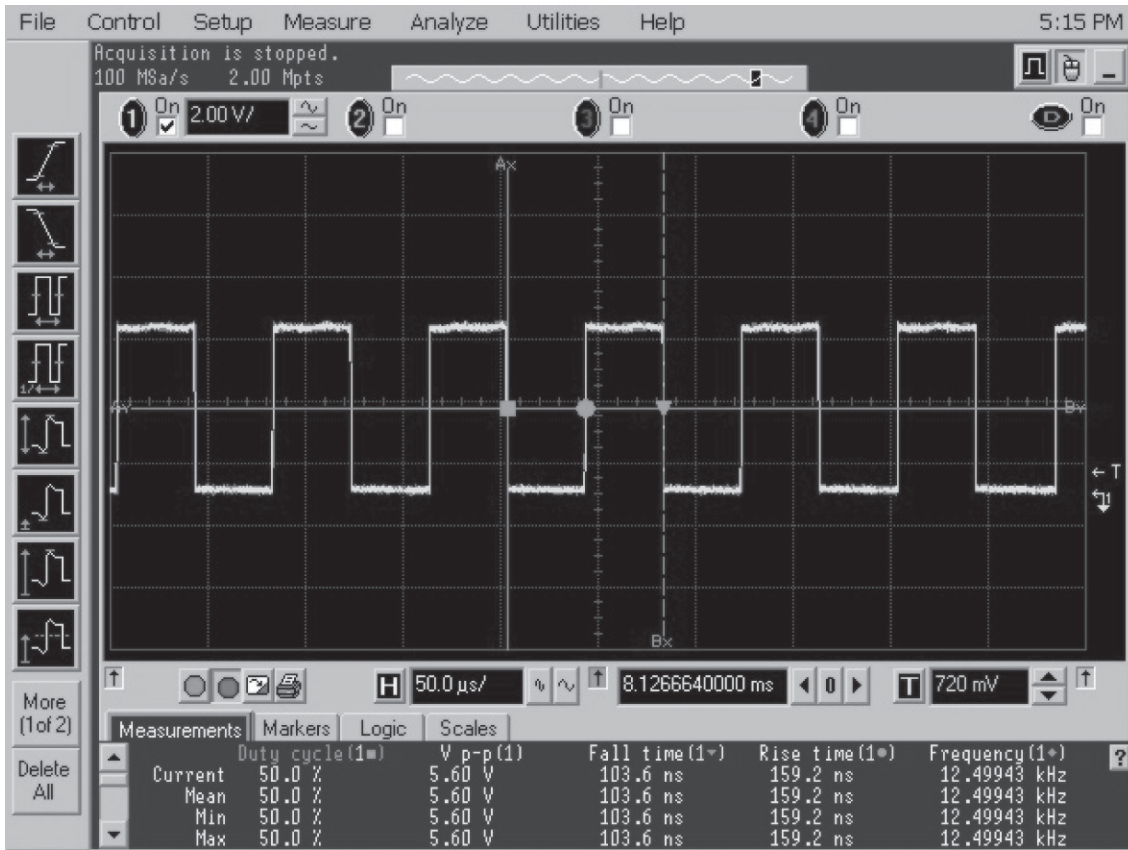
6.7.1 SCL



Trace 1: Trace recorded at R6208.

Figure 6-18. I2C Bus – SCA Waveform

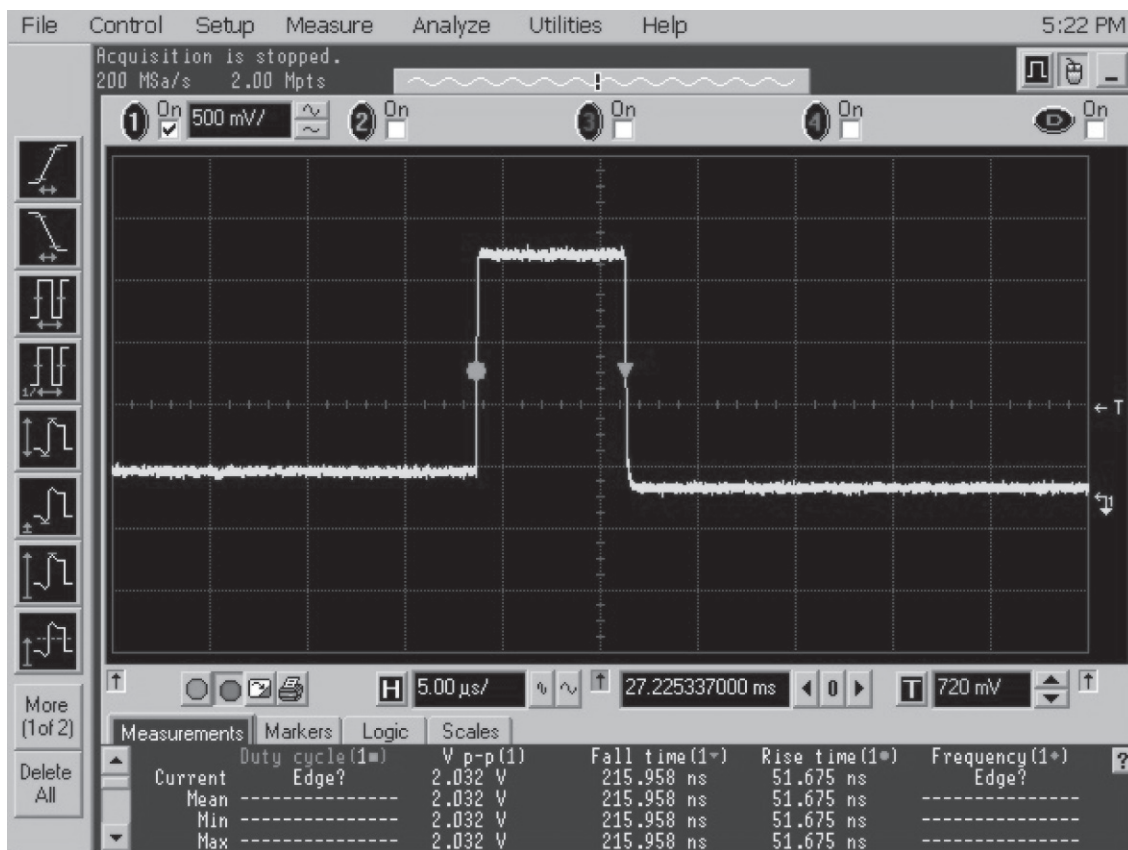
6.7.2 SCL 5V



Trace 1: Trace recorded at R2204.

Figure 6-19. I2C Bus – SCA 5V Waveform

6.7.3 SDA

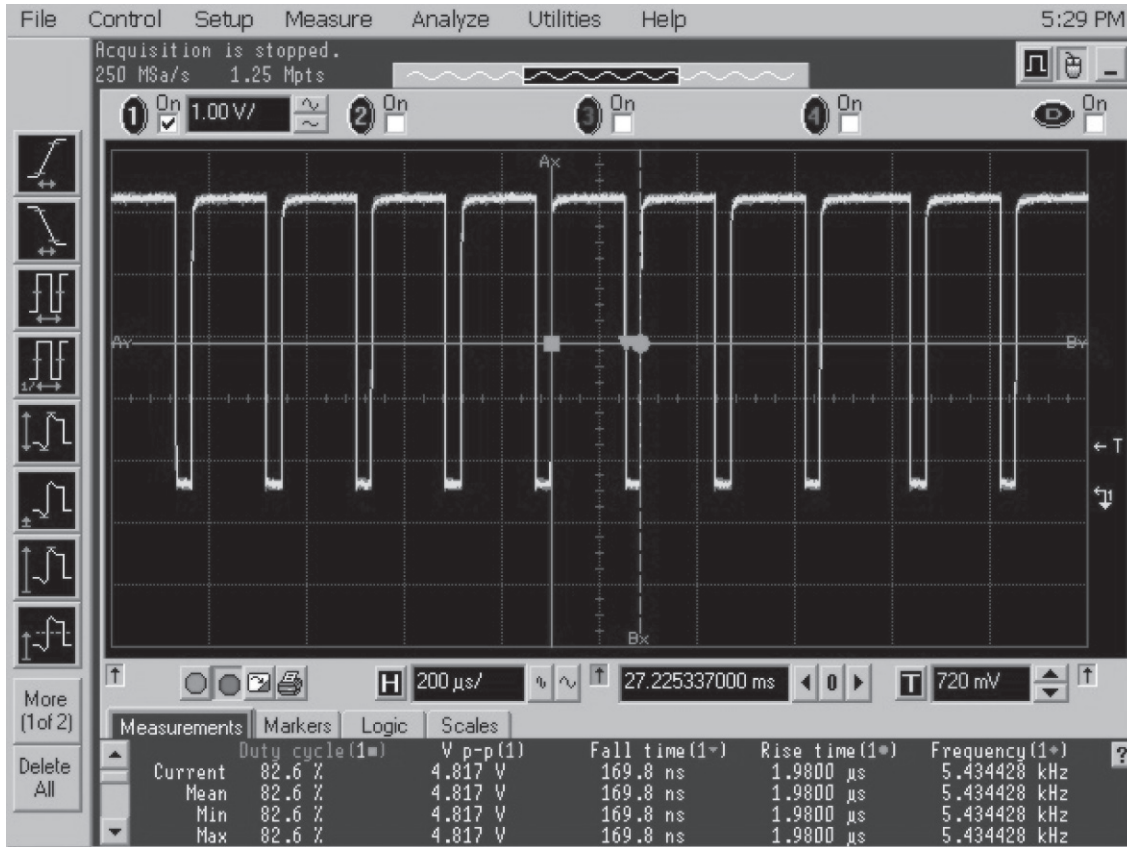


Trace 1: Trace recorded at R6209.

Figure 6-20. I2C Bus – SDA Waveform

6.8 One Wire

6.8.1 1-Wire

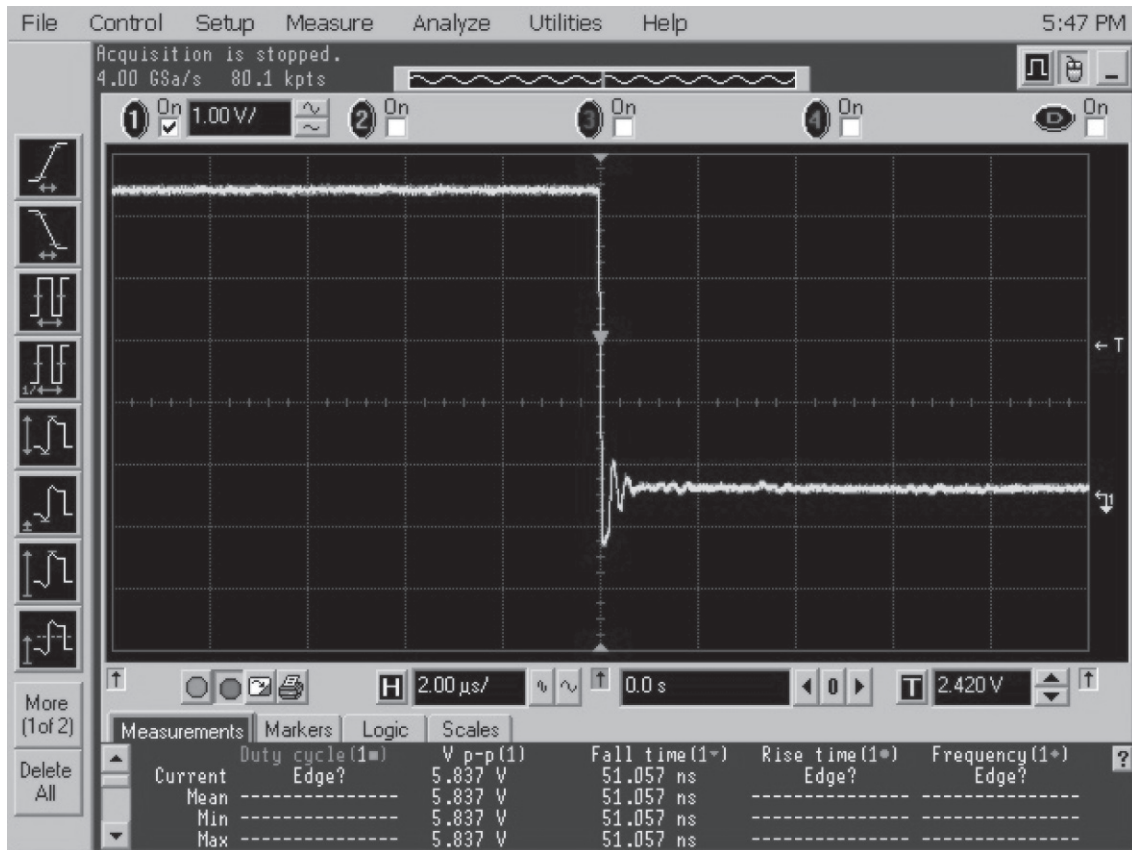


Trace 1: Trace recorded at R4009.

Figure 6-21. 1-Wire Waveform

6.9 GCAI

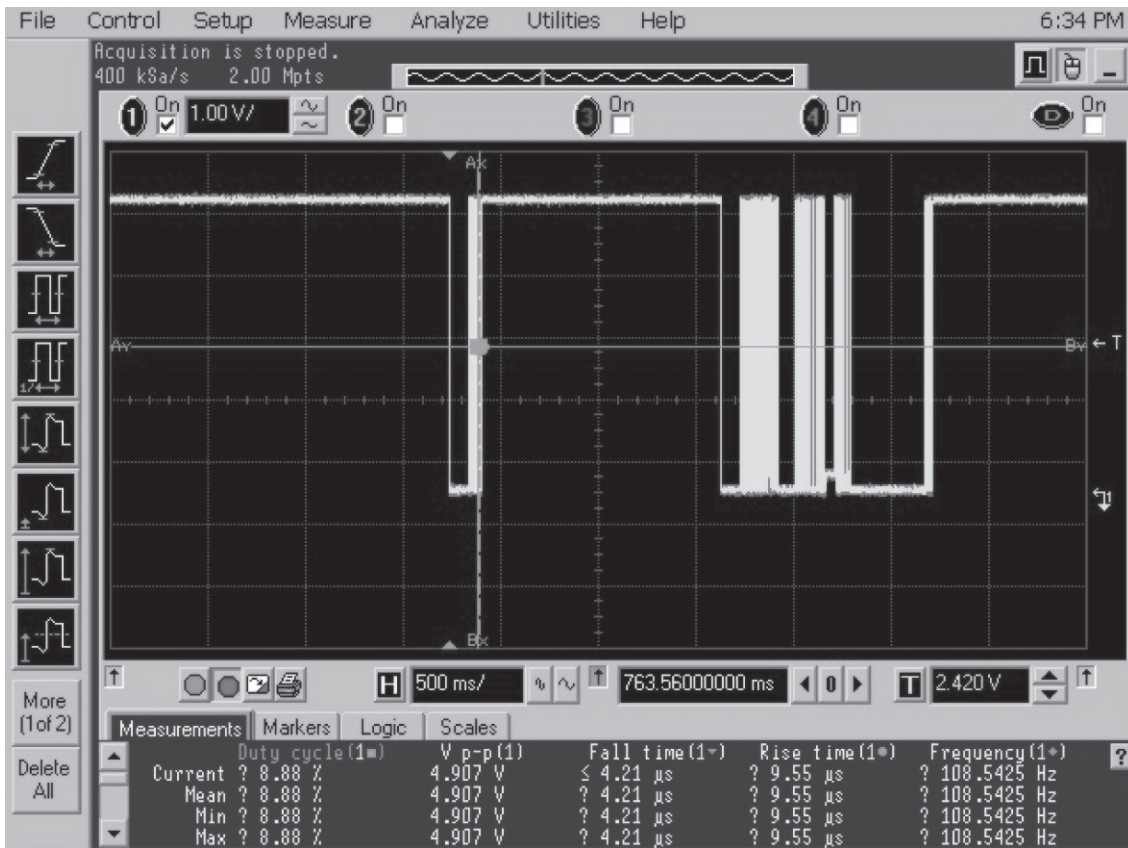
6.9.1 GPIO0



Trace 1: Trace recorded at D4001 (test point GPIO0).

Figure 6-22. GCAI – GPIO0 Waveform

6.9.2 GPIO4 / Keyfail during Keyload

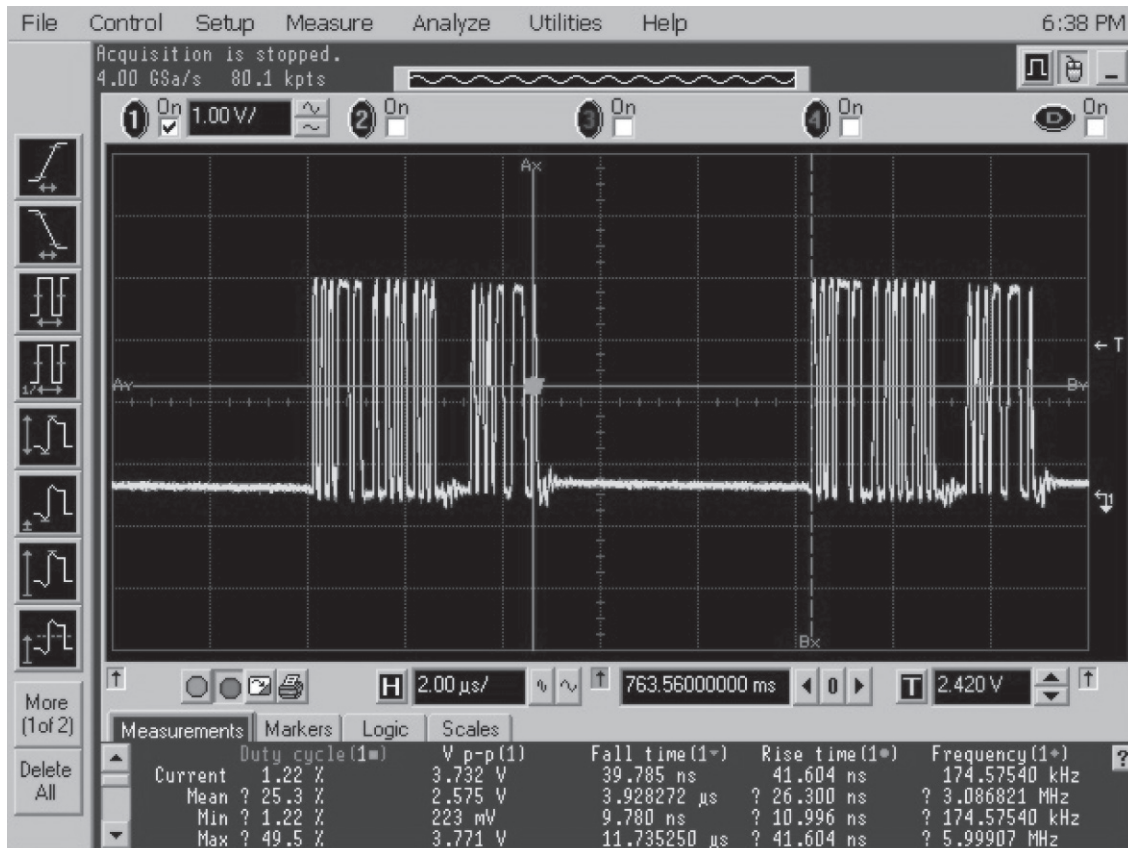


Trace 1: Trace recorded at P2001_21 or R2005 or C2006 (DNP).

Figure 6-23. GCAI – GPIO4 Waveform

6.10 USB

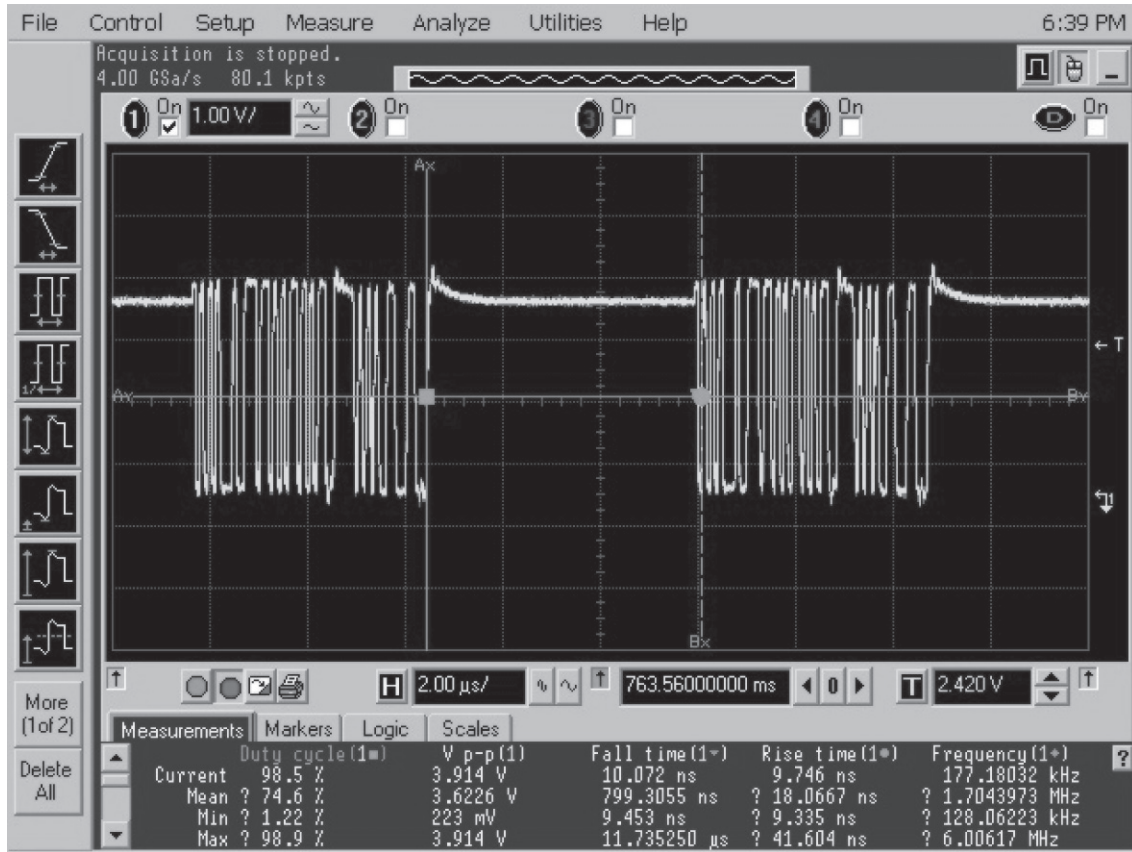
6.10.1 D-



Trace 1: Trace recorded at TP F_GCAI_USB-.

Figure 6-24. USB – D- Waveform

6.10.2 D+

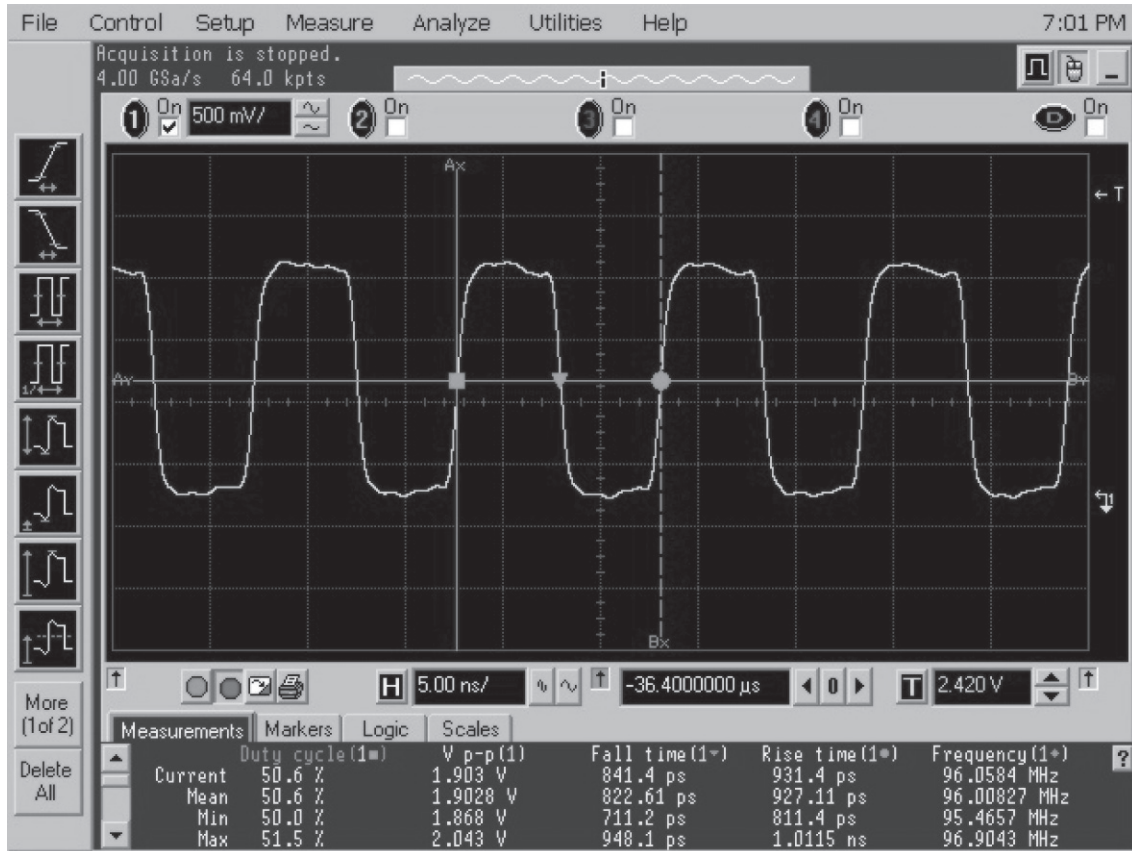


Trace 1: Trace recorded at TP F_GCAI_USB+.

Figure 6-25. USB – D+ Waveform

6.11 SDRAM

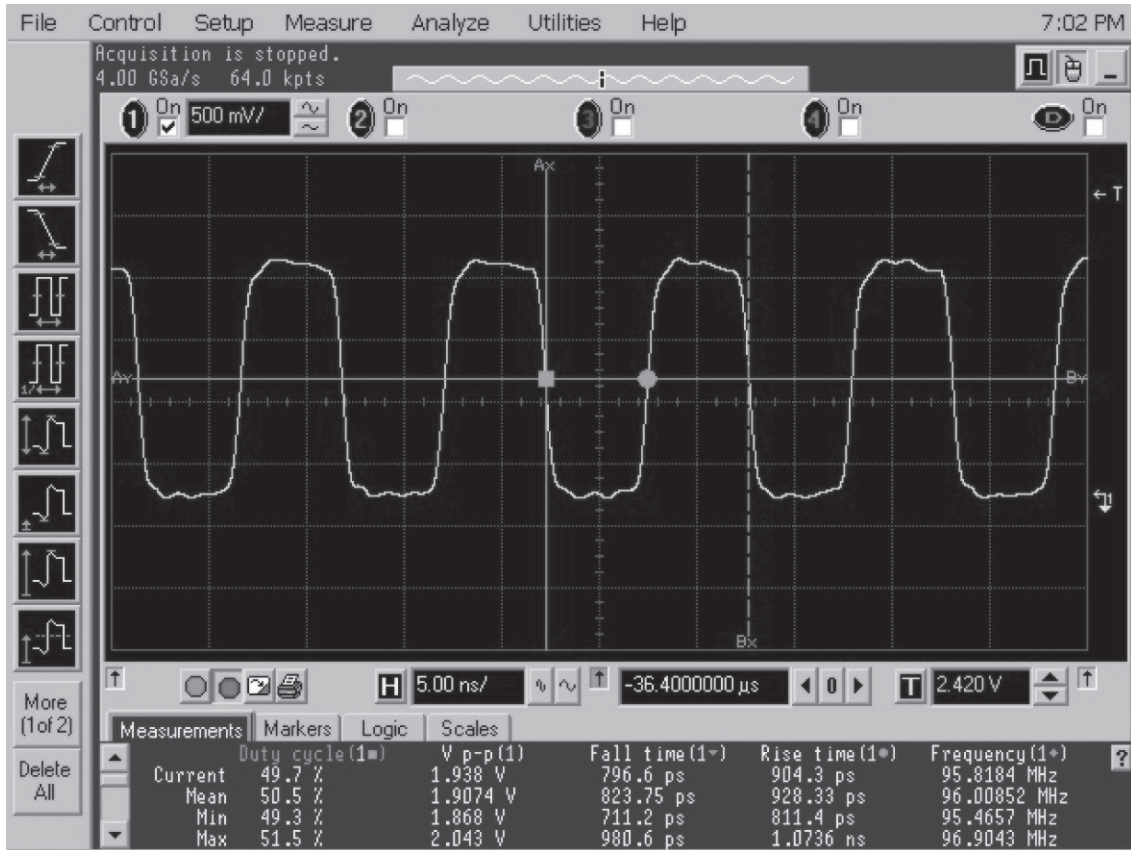
6.11.1 CLK



Trace 1: Trace recorded at TP6307.

Figure 6-26. SDRAM – CLK Waveform

6.11.2 CLKX

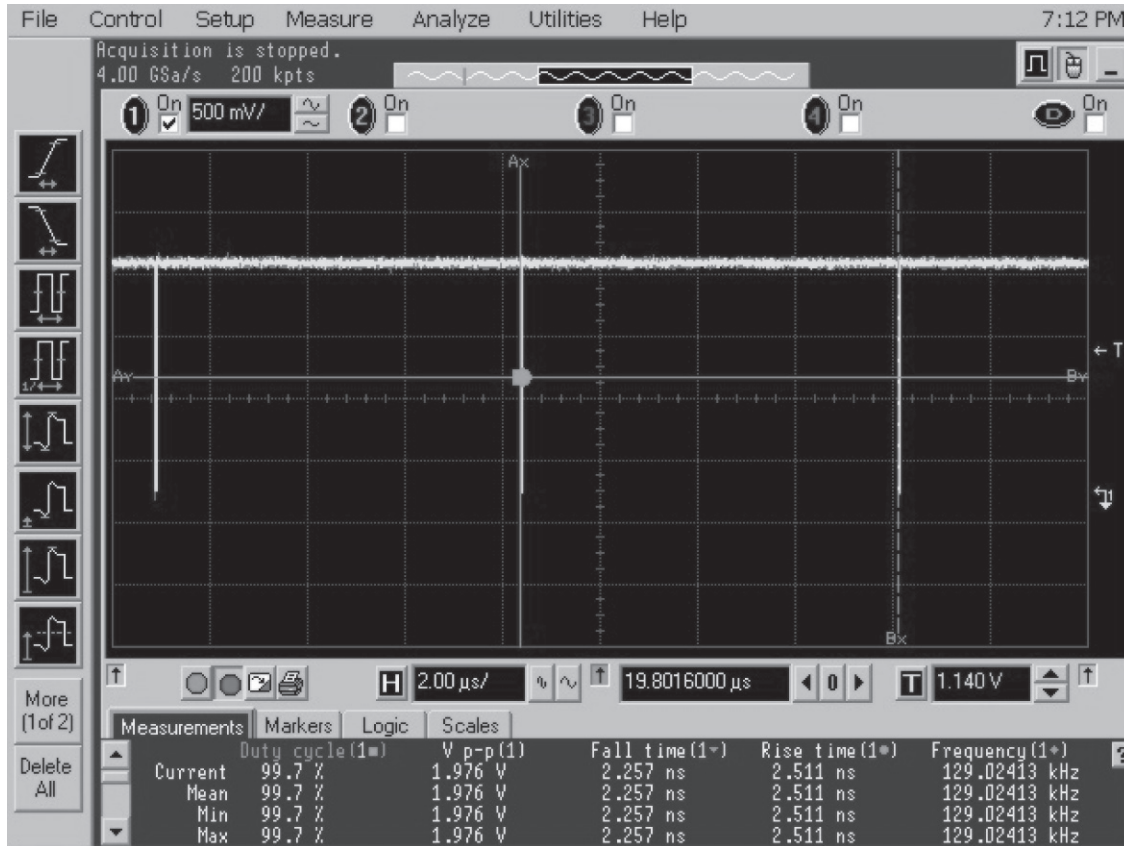


Trace 1: Trace recorded at TP6308.

Figure 6-27. SDRAM – CLKX Waveform

6.12 FLASH CONTROL

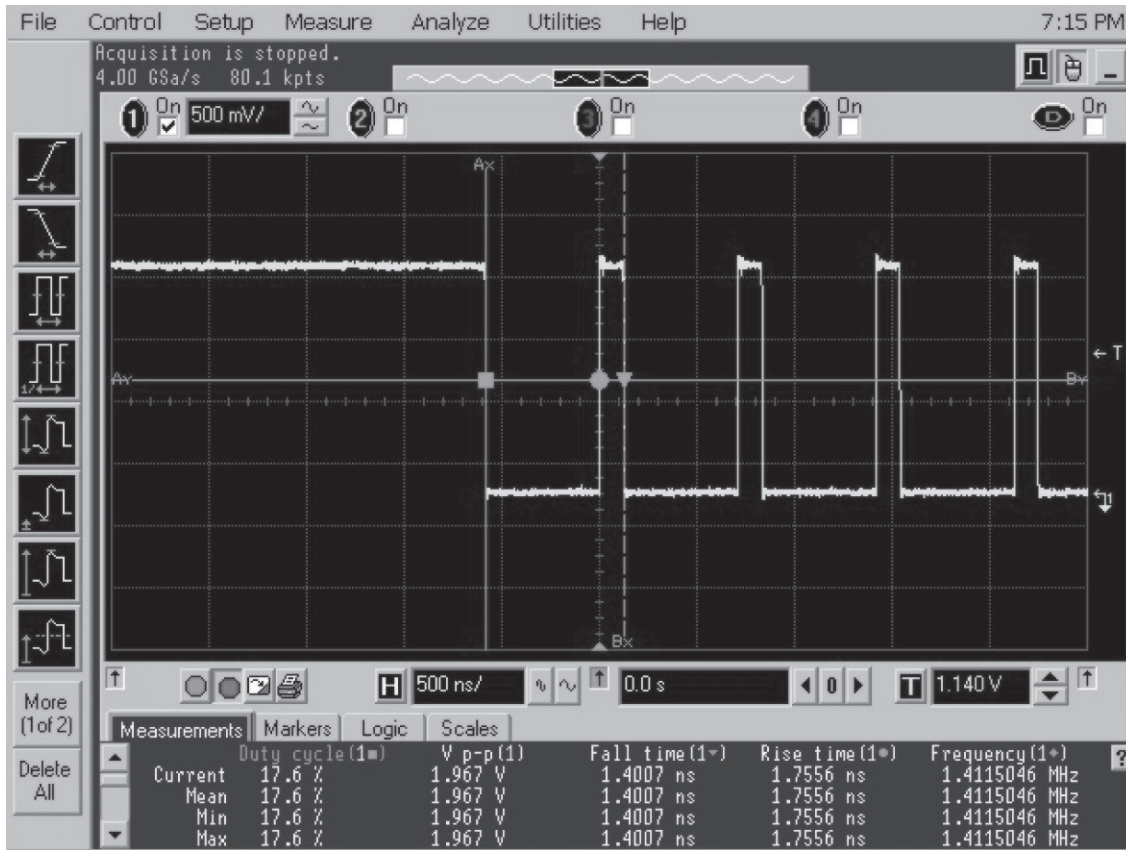
6.12.1 ADV



Trace 1: Trace recorded at R6314.

Figure 6-28. FLASH CONTROL – ADV Waveform

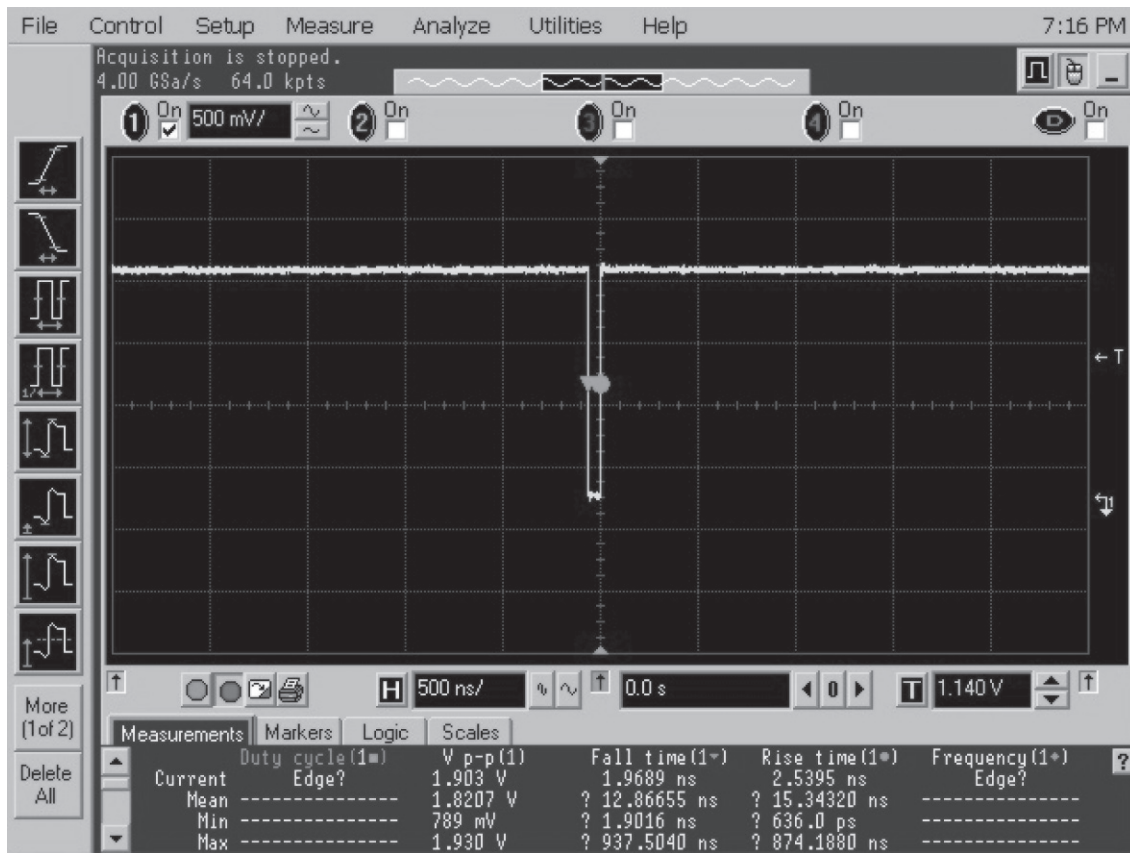
6.12.2 CS3



Trace 1: Trace recorded at R6311.

Figure 6-29. FLASH CONTROL – CS3 Waveform

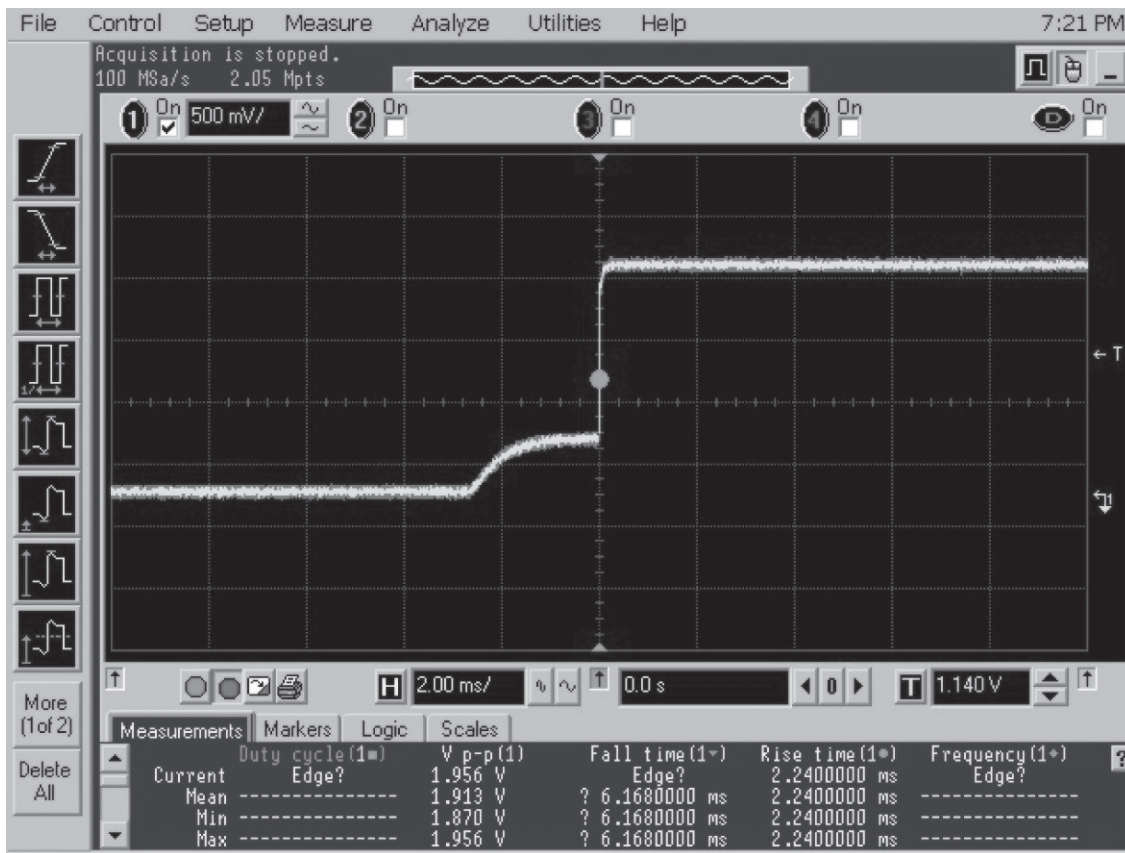
6.12.3 OE



Trace 1: Trace recorded at R6312.

Figure 6-30. FLASH CONTROL – OE Waveform

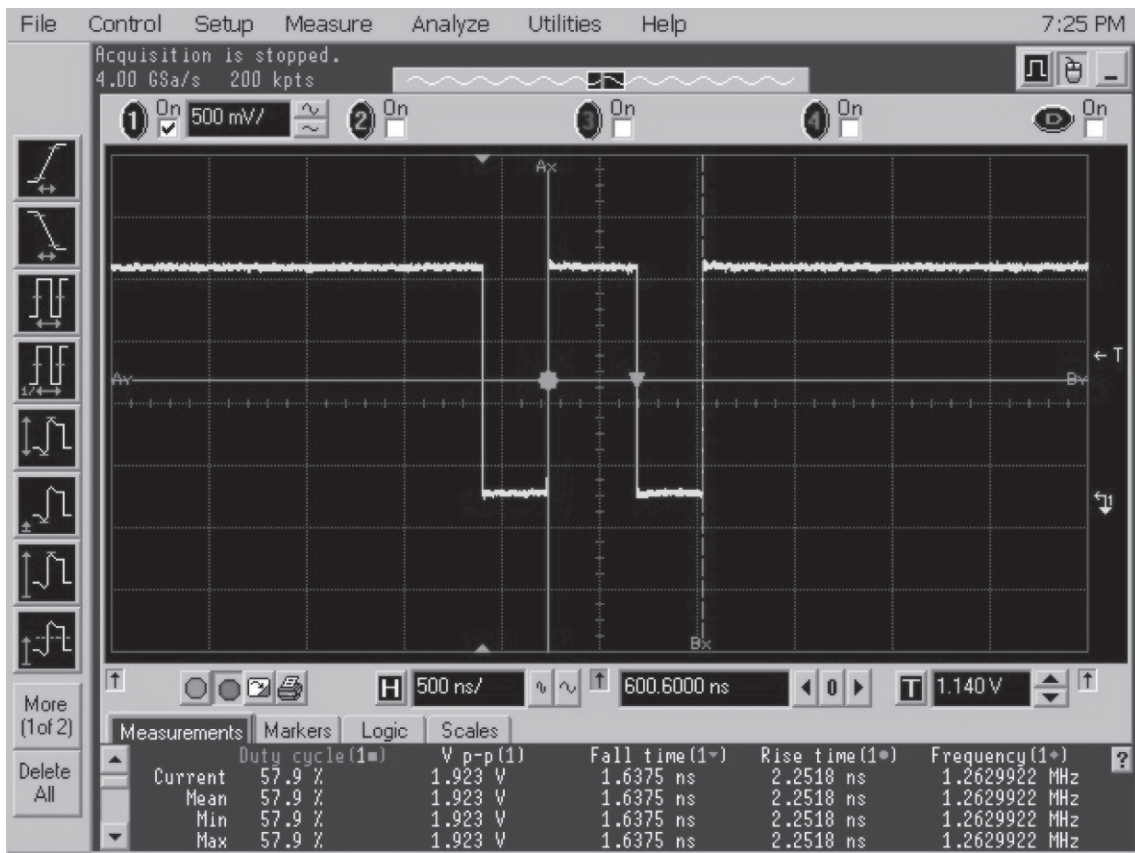
6.12.4 RDY



Trace 1: Trace recorded at R6316.

Figure 6-31. FLASH CONTROL – RDY Waveform

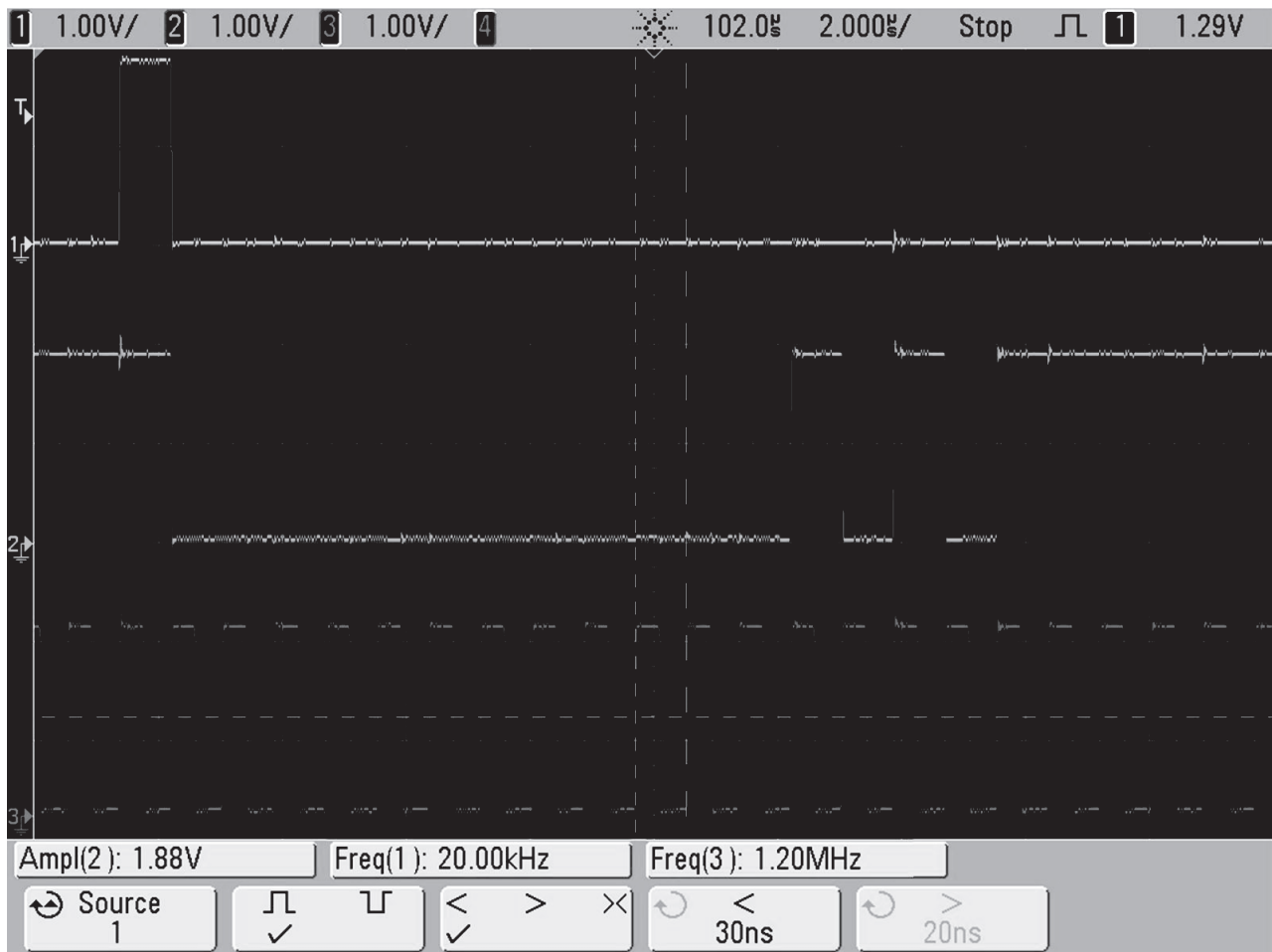
6.12.5 WE



Trace 1: Trace recorded at R6313.

Figure 6-32. FLASH CONTROL – WE Waveform

6.13 Receive Baseband Signals

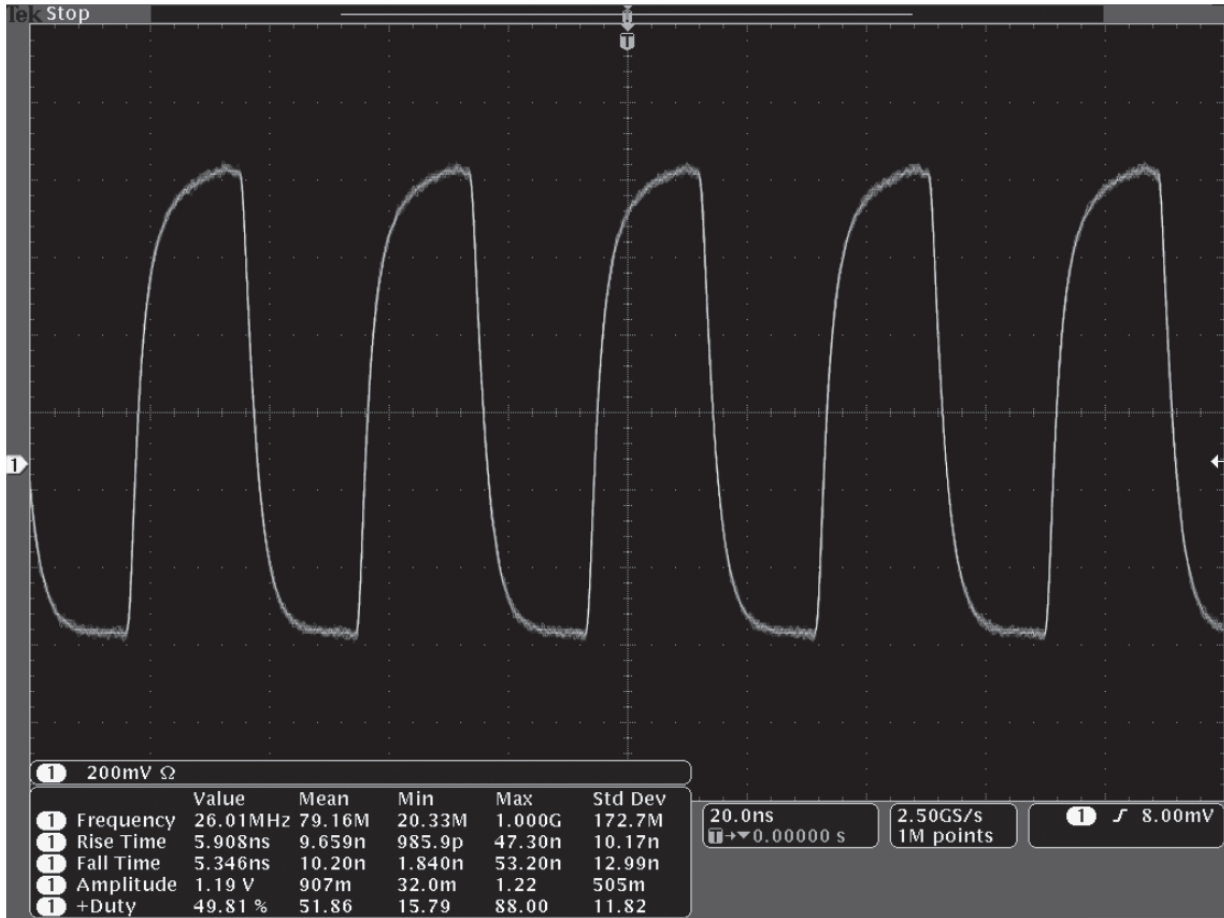


Trace 1: DIG_DATA_SSI_RX_FS at R616.
 Trace 2: DIG_DATA_SSI_RX_DOUTA at R617.
 Trace 3: CLK_SSI_RX at R618.

Figure 6-33. Received Baseband Waveforms

6.14 GPS

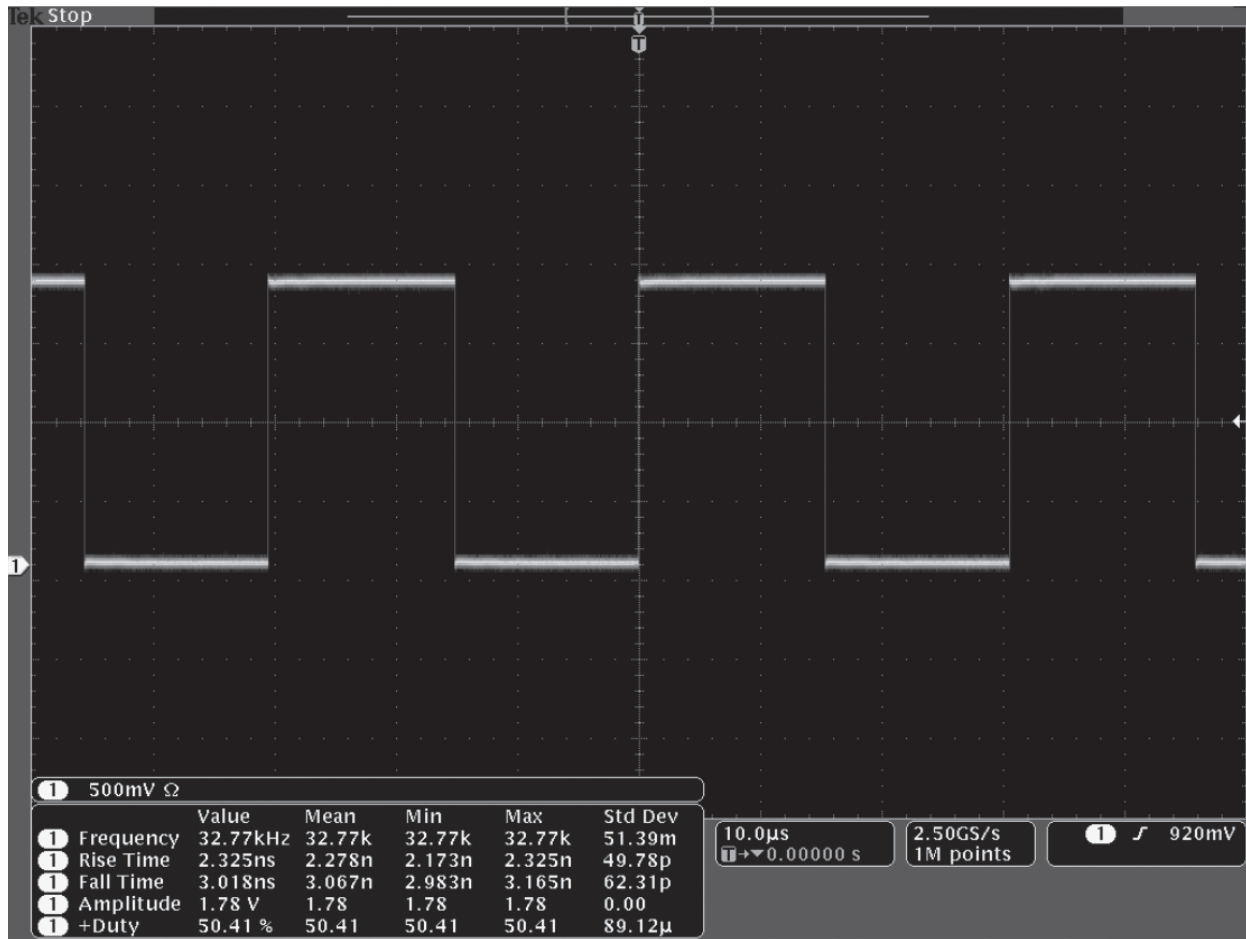
6.14.1 GPS TCXO (26 MHz TCXO)



Trace 1: Trace recorded at C1321 at Main Board.

Figure 6-34. GPS TCXO Waveforms

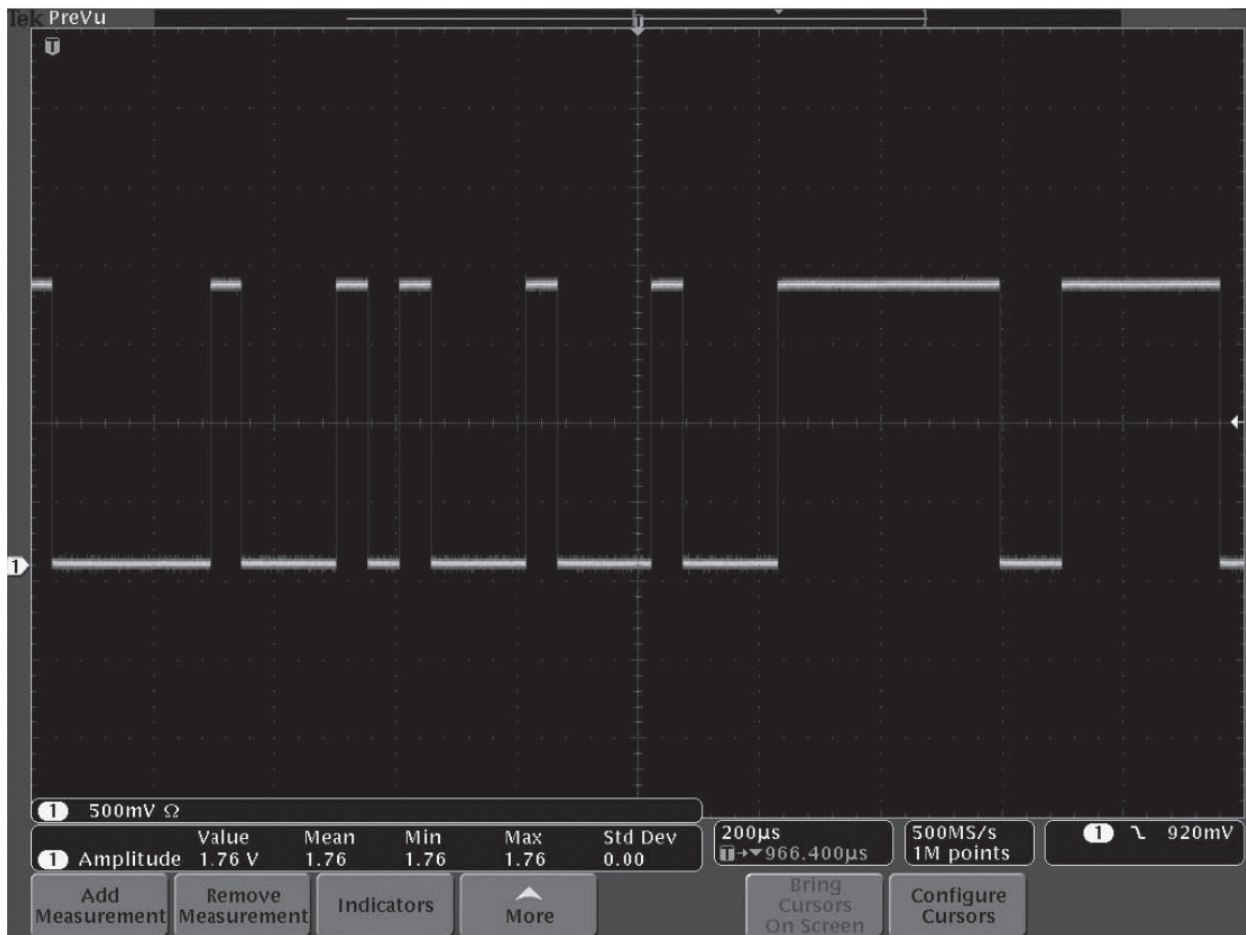
6.14.2 GPS RTC (GPS 32 kHz RTC)



Trace 1: Trace recorded at R1318 of Main Board.

Figure 6-35. GPS RTC Waveforms

6.14.3 GPS UART (RX / TX) Data



Trace 1: Trace recorded at R1322 (TX) / R1323 (RX) of Main Board.

Figure 6-36. GPS UART DATA Waveforms

6.15 Bluetooth Troubleshooting Waveforms

A Bluetooth radiated or conducted signal at 2.402 GHz and a LF radiated signal at 125 kHz can be used to verify the receiver and transmitter on the radio are operational. A spectrum analyzer (such as an Aeroflex 3920 Digital Radio Test Set) can be used to verify the presence of BT signal at the BT antenna contact pin (M1301), while the LF signal can be tapped at C2454 or C2457 on the main board's top plane. A signal generator can be used to test the APX 3000 BT/LF receivers. Radiated Bluetooth TX/RX testing should be performed before conducted testing is performed in the fixture since the radio does not have to be opened for radiated testing. To test the presence of a radiated Bluetooth TX signal, an external Bluetooth antenna should be connected to the input of the spectrum analyzer. To test the presence of a radiated Bluetooth RX signal, an external Bluetooth antenna should be connected to the output of a signal generator set to TX CW 2.402 GHz. The radio front housing (below the ON/OFF switch) should be brought near the antenna during testing. The following is the procedure to activate the Bluetooth/LF transmitter or receiver using RCMP commands:

To send an RCMP command, connect a RS-232 com port GCAI cable between the radio and PC. Start HyperTerminal on com 1 (typical RS-232 port) using these settings: 9600 baud, 8-bit, non-parity, stop bit = 1, HW flow control. Type, AT#DEBUG", then type rcmpraw:000c".

Bluetooth Command to TX 2.402 GHz CW

Probe the Bluetooth antenna contact pin (M1301) on Main board with a 6 dB attenuator in-line connected to a spectrum analyzer. Set the spectrum analyzer to 2.402 GHz center, 10 MHz span, RBW of 300 kHz, a VBW of 1 MHz, and a sweep time of 2.5 ms. There are two commands to verify a spectrum analyzer can read a 2.402 GHz wave from the radio BT transmitter. Enter the rcmpraw:00390207 command first, then enter rcmpraw:0039020100000F0006 (on SR 7.9 SW, use this command:

rcmpraw:0039020100000F, but be aware that the TX signal may time out in less than 10 minutes).

Table 6-2. Bluetooth Command to TX

TEST	RCMPRAW CMD	RESPONSE
Bluetooth TX at 2.402 GHz CW Modulation	rcmpraw: 00390207	Success: 8039000207 Failure: 8039010207
	rcmpraw: 0039020100000F0006	Success: 8039000201 Failure: 8039010201

Successful Example Entry:

Type:rcmpraw:000c

Response:800c00

Type:rcmpraw:00390207

Response:8039000207

Type:rcmpraw:0039020100000F0006

Response:8039000201

Bluetooth Command to RX 2.402 GHz

The RSSI should increase significantly in the presence of a 2.402 GHz nearby signal. Using an external signal generator source signal of 2.402 GHz connected to an external Bluetooth antenna, bring it close to the Bluetooth antenna contact pin (M1301) on Main board, send this command to read the 2.402 GHz RSSI

Table 6-3. Bluetooth Command to RX

TEST	RCMPRAW CMD	RESPONSE
Bluetooth RX at 2.402 GHz	rcmpraw:0039020D00	Success: 803900020dBB, where BB is the RSSI in hex. Failure: 803901

If no signal is detected, the response will be 803900020d80.

If no test equipment is available, an APX radio with BT functional could be used to verify the test radio. Hold the radios with the front housing face to face. One radio could be used to TX while the other radio is used to RX.

Low Frequency (LF) Command to TX 125 kHz CW

Set the spectrum analyzer at 125 kHz center, 10 MHz span, RBW of 1 kHz, a VBW of 3 kHz, and a sweep time of 25 ms. Use this command to verify the LF coil is emitting a 125 kHz pulse by probing C2454 or C2457 with a spectrum analyzer:

Table 6-4. Low Frequency Command to TX

TEST	RCMPRAW CMD	RESPONSE
Low Freq. 125 kHz TX	rcmpraw: 00390303	Success: 8039000303* Failure: 8039010303*
Note: * In SR 7.9 SW release, the response is 8039000302 for a success and 8039010302 for a failure.		

Low Frequency (LF) Command to RX 125 kHz

Use this command to verify the LF coil is receiving a 125 kHz pulse generated by a signal generator by tapping on C2454 or C2457. The result contains the LF RSSI. This command is not in the initial SW release but is included in SR 7.11 SW:

Table 6-5. Low Frequency Command to RX

TEST	RCMPRAW CMD	RESPONSE
Low Freq. 125 kHz RX	rcmpraw: 00390305	Success: 80390003BB, where BB is the RSSI in hex. Failure: 803901

If no signal is detected, the response will be 8039010305.

A fast verification that requires no additional test equipment can be done by sending the LF TX command, then the LF RX command directly afterwards. If both the transmitter and receiver are working, the response should be 803900030x, where x is typically between 4 and 6. Even if the response passes, the LF coil may be physically damaged. It is best to open the radio and observe the coil to ensure it is not damaged.

To test the LF RX using SR 7.9 SW, a POD accessory is required to verify communication.

These are the Bluetooth-related conducted signals that can be measured from test points on the main board.:

Table 6-6. Bluetooth Test Points

TP	TP Name	Net Name	Description	Voltage	Measured
4	TP2416	BT_AVR_VBUS	USB VBUS	5	4.96
5	TP2413	BT_AVR_RESET	BT AVR Reset	1.85	1.73
9	R6705	VCC_1.85	VCC 1.85	1.85	1.86
10	TP2417	USB_BOOT_1.8V	USB Boot 1.8V	1.8	1.81
11	TP2466	ATMEL_BOOT	Atmel Boot	3.3	3.04
12	M1	GND	Ground	0	–
13	R6563	V_2.755D	VCC 2.775	2.775	2.74
14	TP2414	BT_AVR_USB_DP	USB+	3.3	3.43
15	TP2415	BT_AVR_USB_DM	USB-	3.3	3.47
16	R6542	V_SW_3.6	VSW 3.6	3.51	3.49
17	R1318, R2407	32KHZ	32 kHz clock	1.85	1.87

6.15.1 Summary of Bluetooth Power Up Sequence

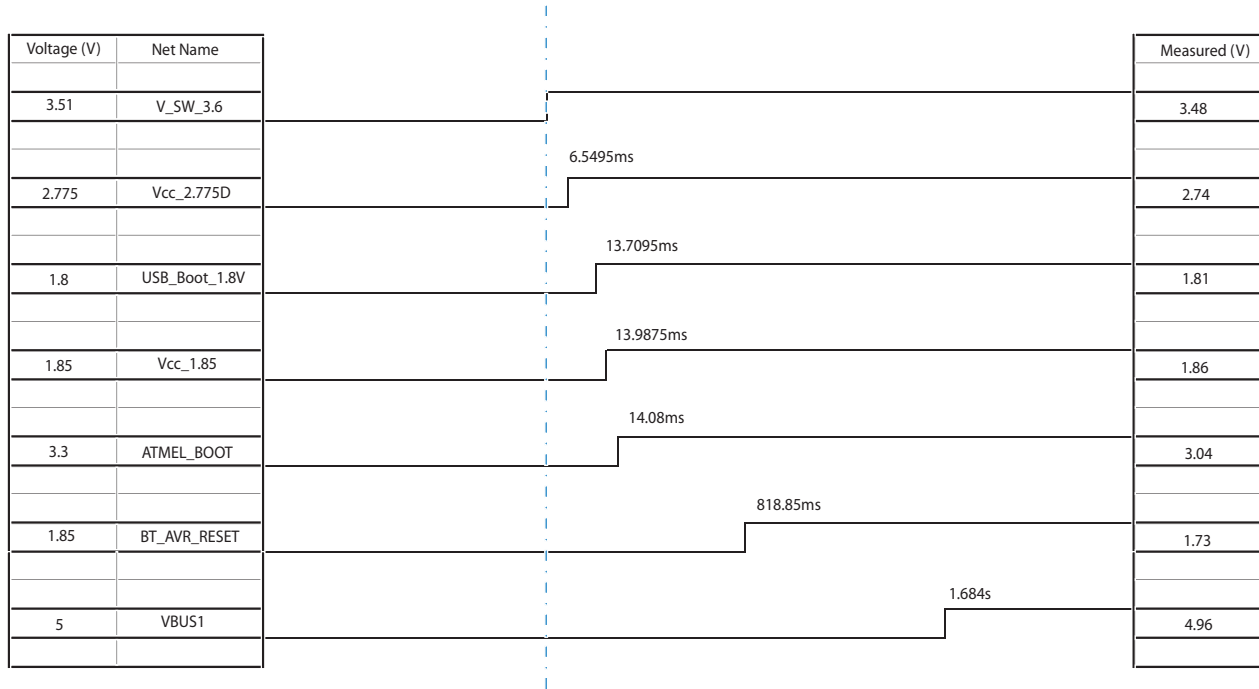


Figure 6-37. Summary of Bluetooth Power Up Sequence

6.15.2 Bluetooth Startup: Vmax of TP16



Figure 6-38. Startup Waveforms – Vmax of TP16

6.15.3 Bluetooth Startup: Timing Difference of TP9 to TP16

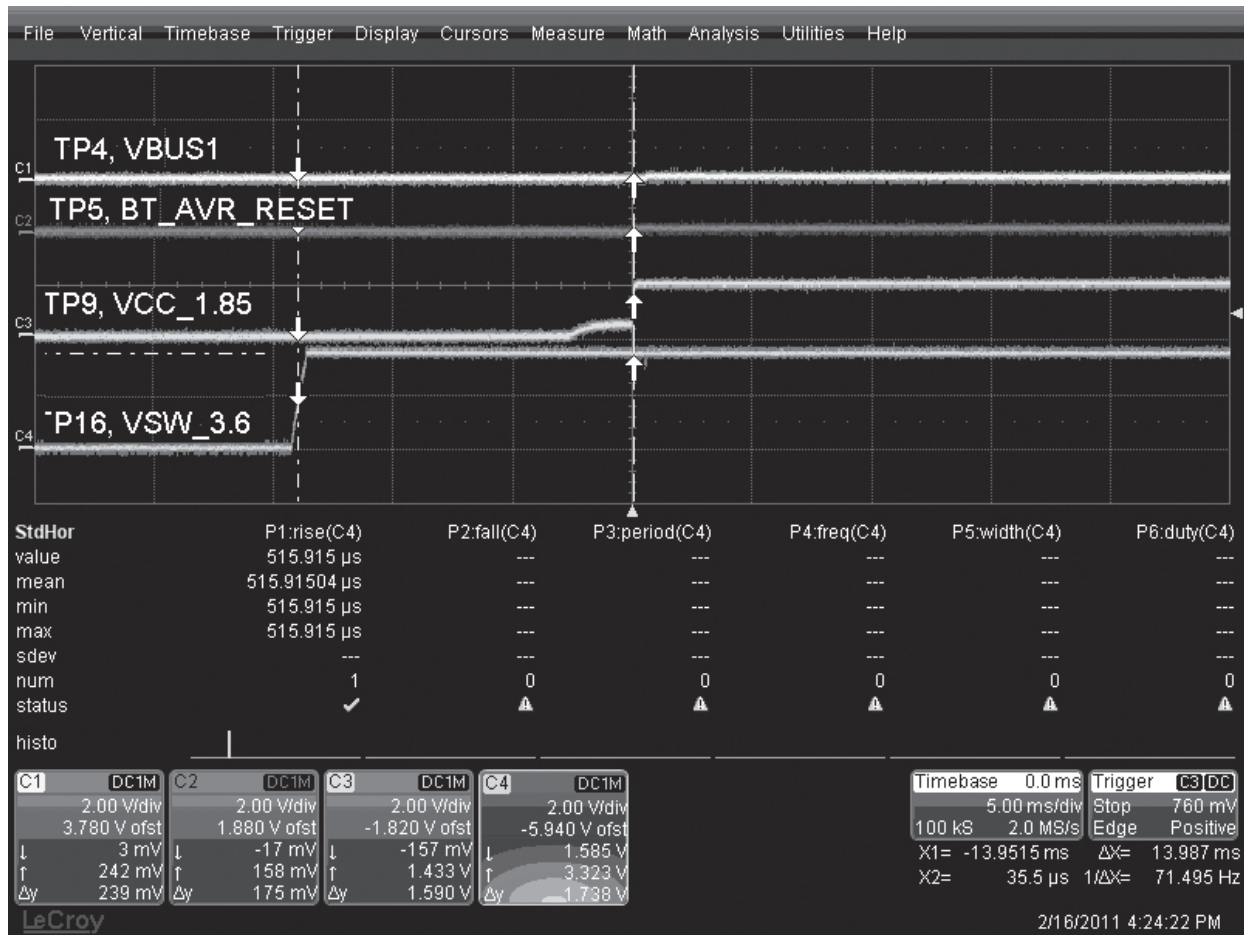


Figure 6-39. Startup – Timing Difference of TP9 to TP16

6.15.4 Bluetooth Startup: Timing Difference of TP5 to TP16 and Voltage Statistics



Figure 6-40. Startup – Timing Difference of TP5 to TP16 and Voltage Statistics

6.15.5 Bluetooth Startup: Timing Difference of TP4 to TP16 and Time Statistics

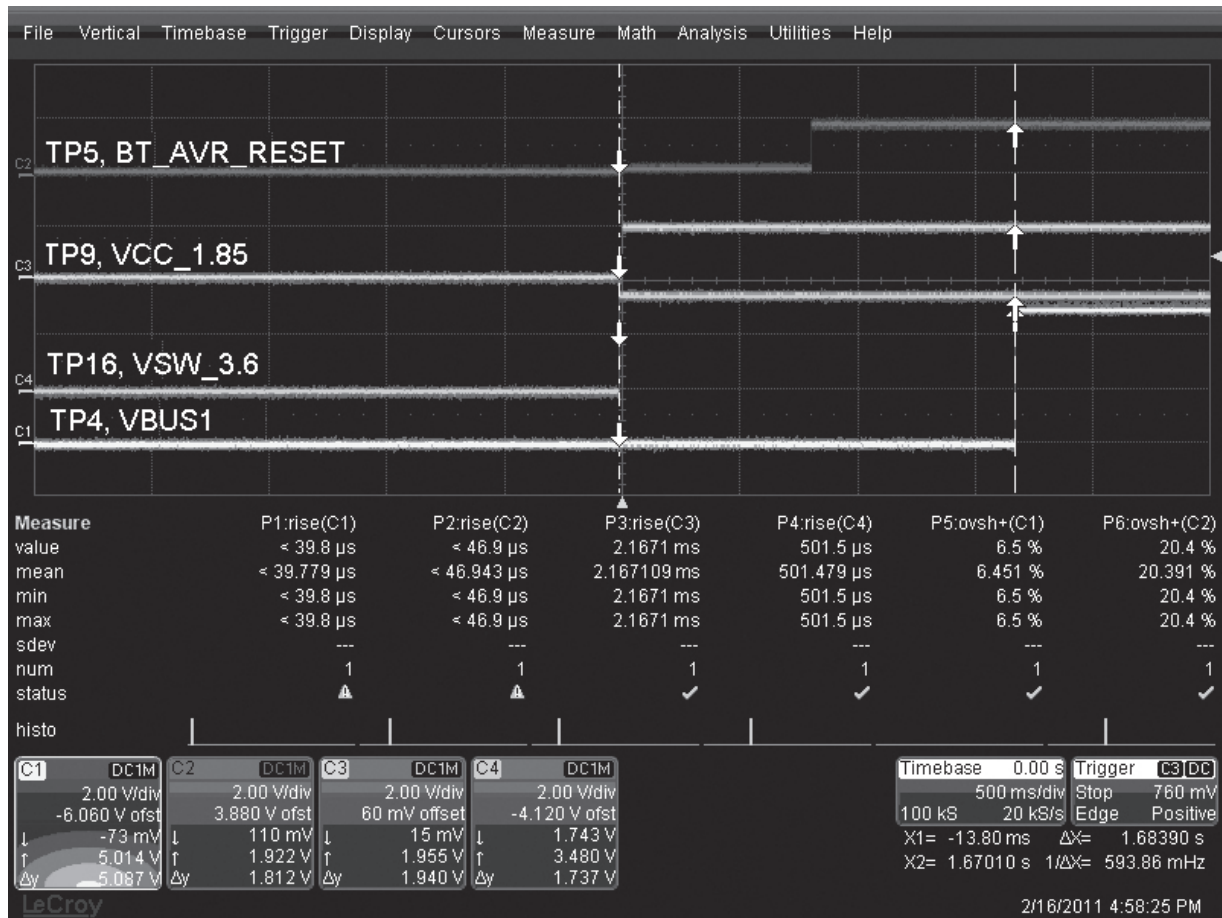


Figure 6-41. Startup – Timing Difference of TP4 to TP16 and Time Statistics

6.15.6 Bluetooth Startup: Timing Difference of TP4 to TP5 and Time Statistics

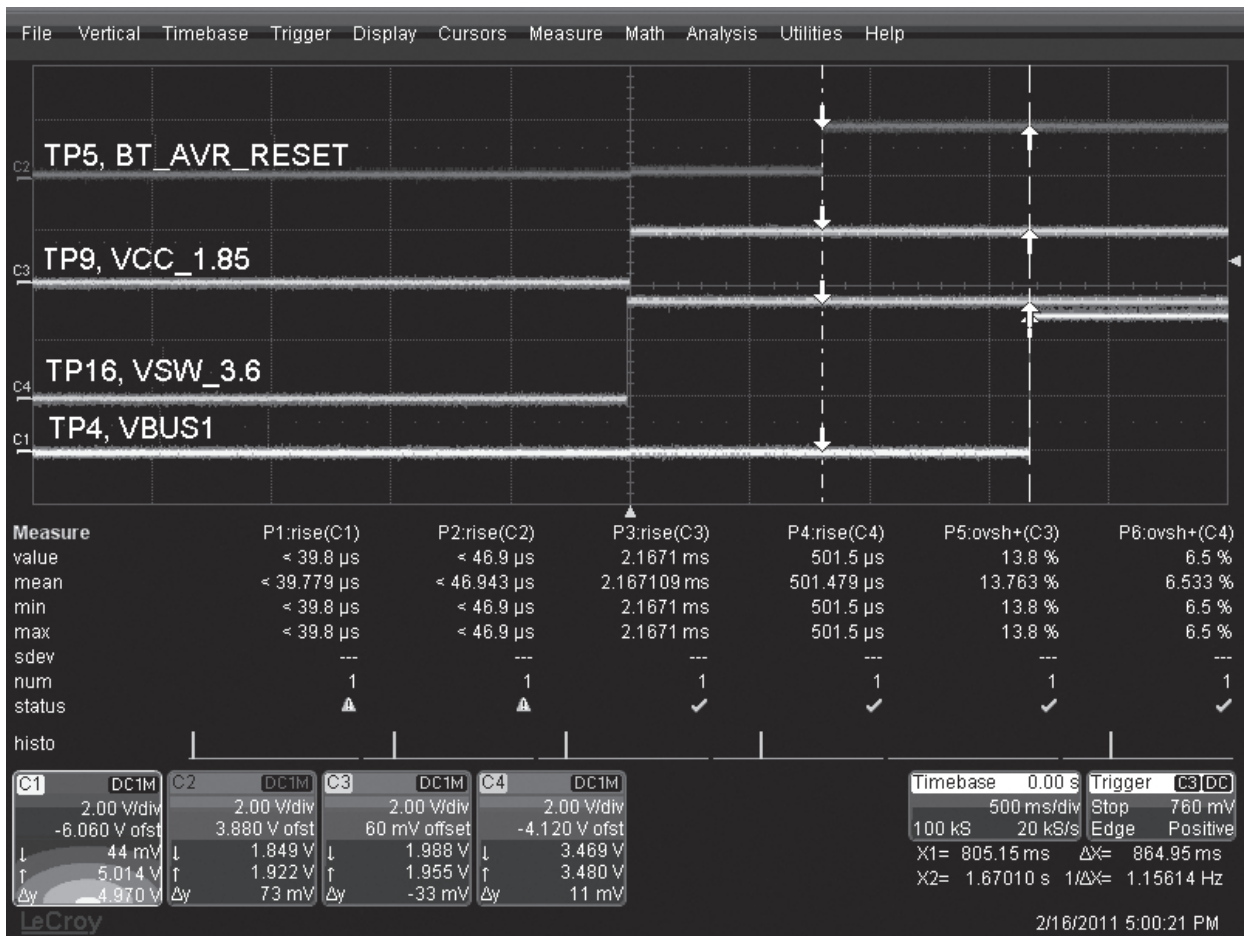


Figure 6-42. Startup – Timing Difference of TP4 to TP5 and Time Statistics

6.15.7 Bluetooth Startup: Vmax of TP5 and Time Statistics

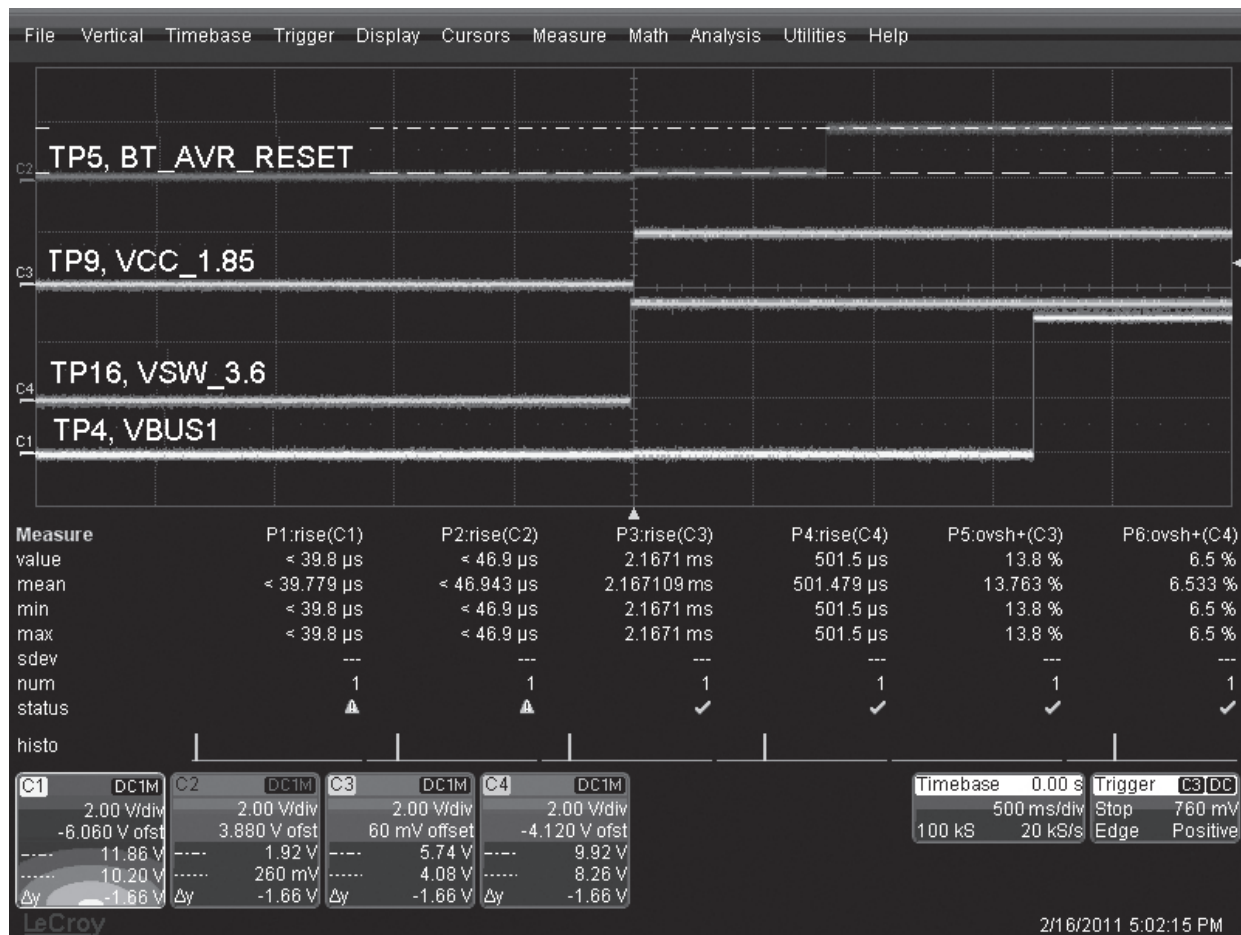


Figure 6-43. Startup – Vmax of TP5 and Time Statistics

6.15.8 Bluetooth Startup: Vmax of TP4 and Time Statistics



Figure 6-44. Startup – Vmax of TP4 and Time Statistics

6.15.9 Bluetooth Startup: Vmax of TP5 and Voltage Statistics

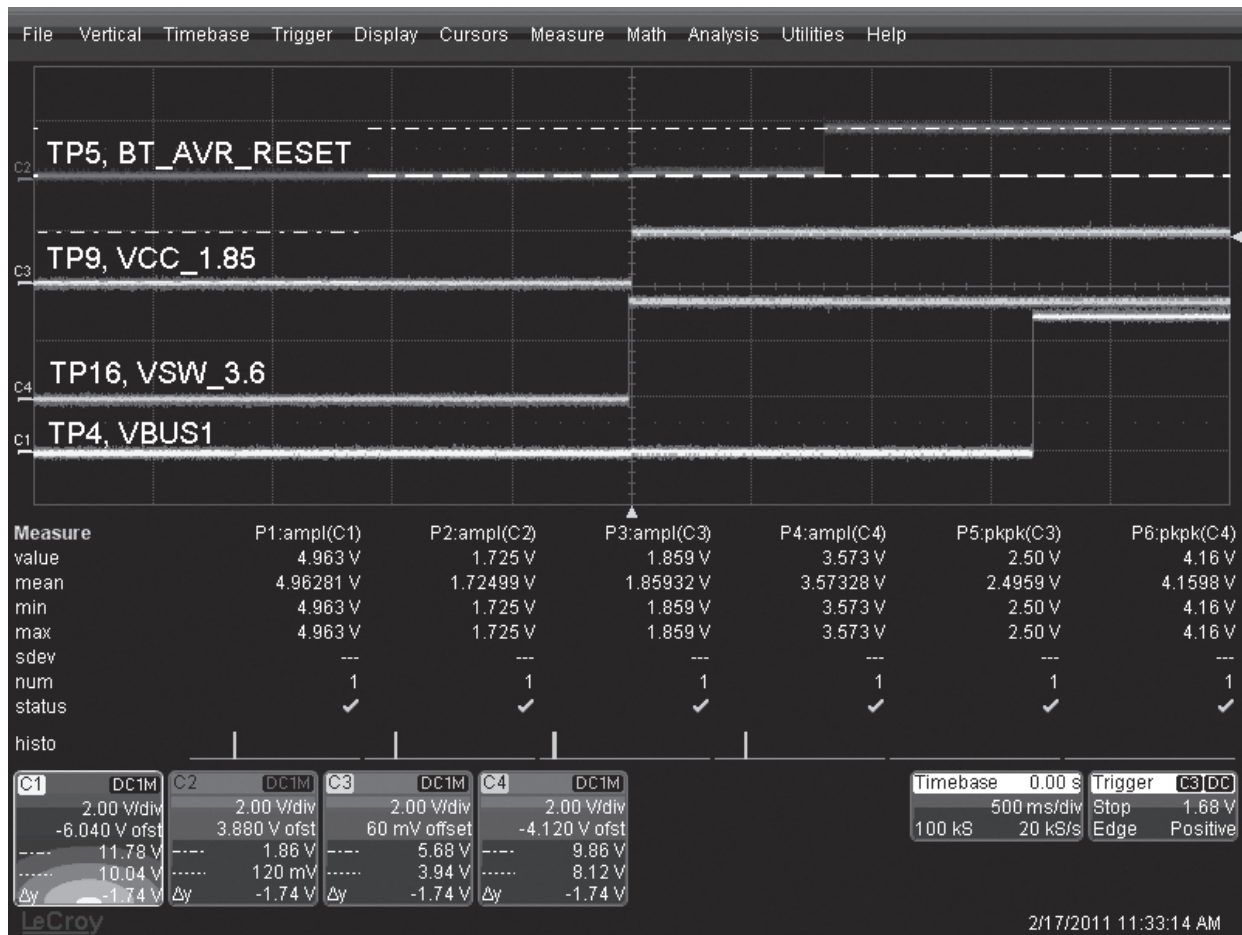


Figure 6-45. Startup – Vmax of TP5 and Voltage Statistics

6.15.10 Bluetooth Startup: Vmax of TP9 and Voltage Statistics

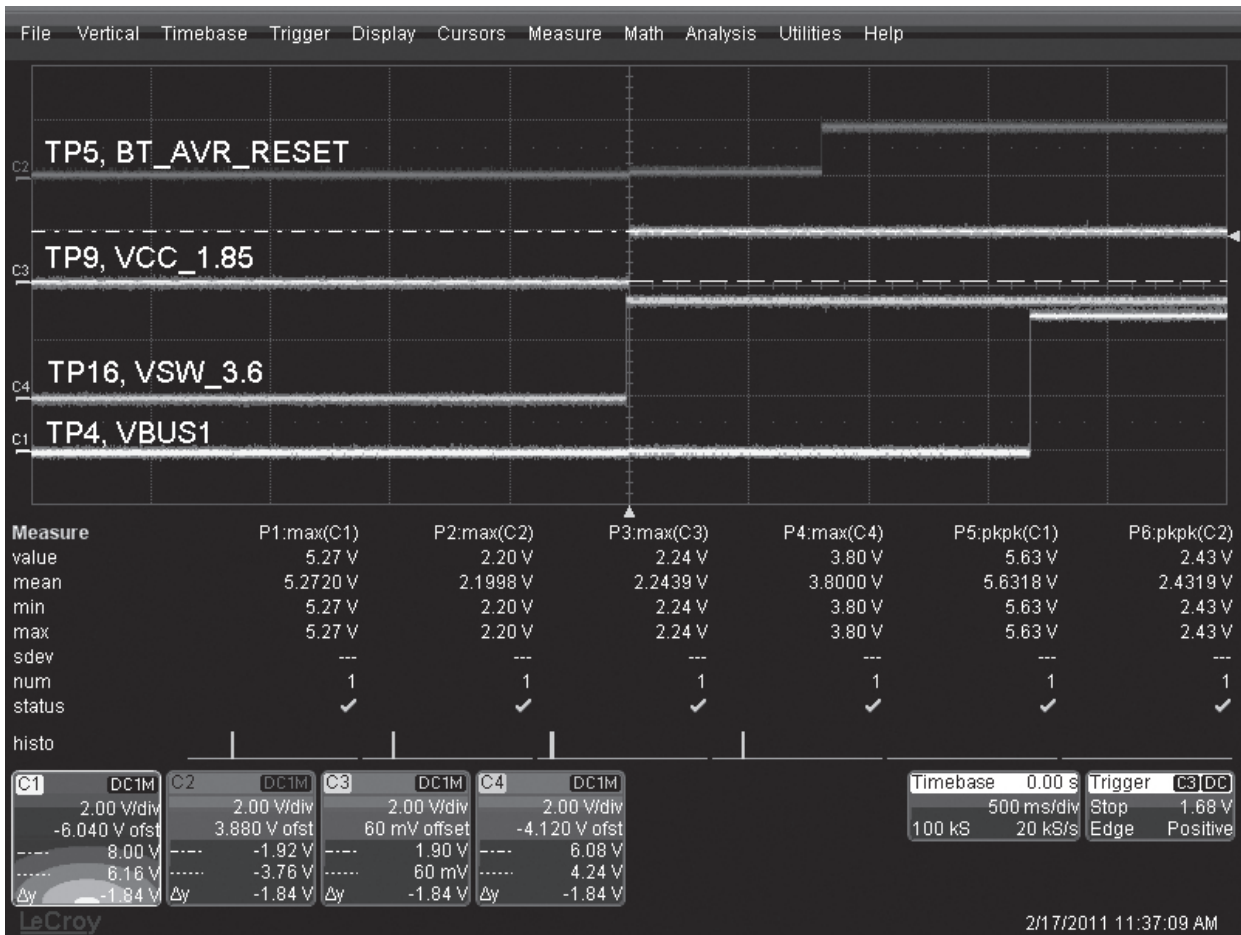


Figure 6-46. Startup – Vmax of TP9 and Voltage Statistics

6.15.11 Bluetooth Startup: Vmax of TP10 and Time Statistics

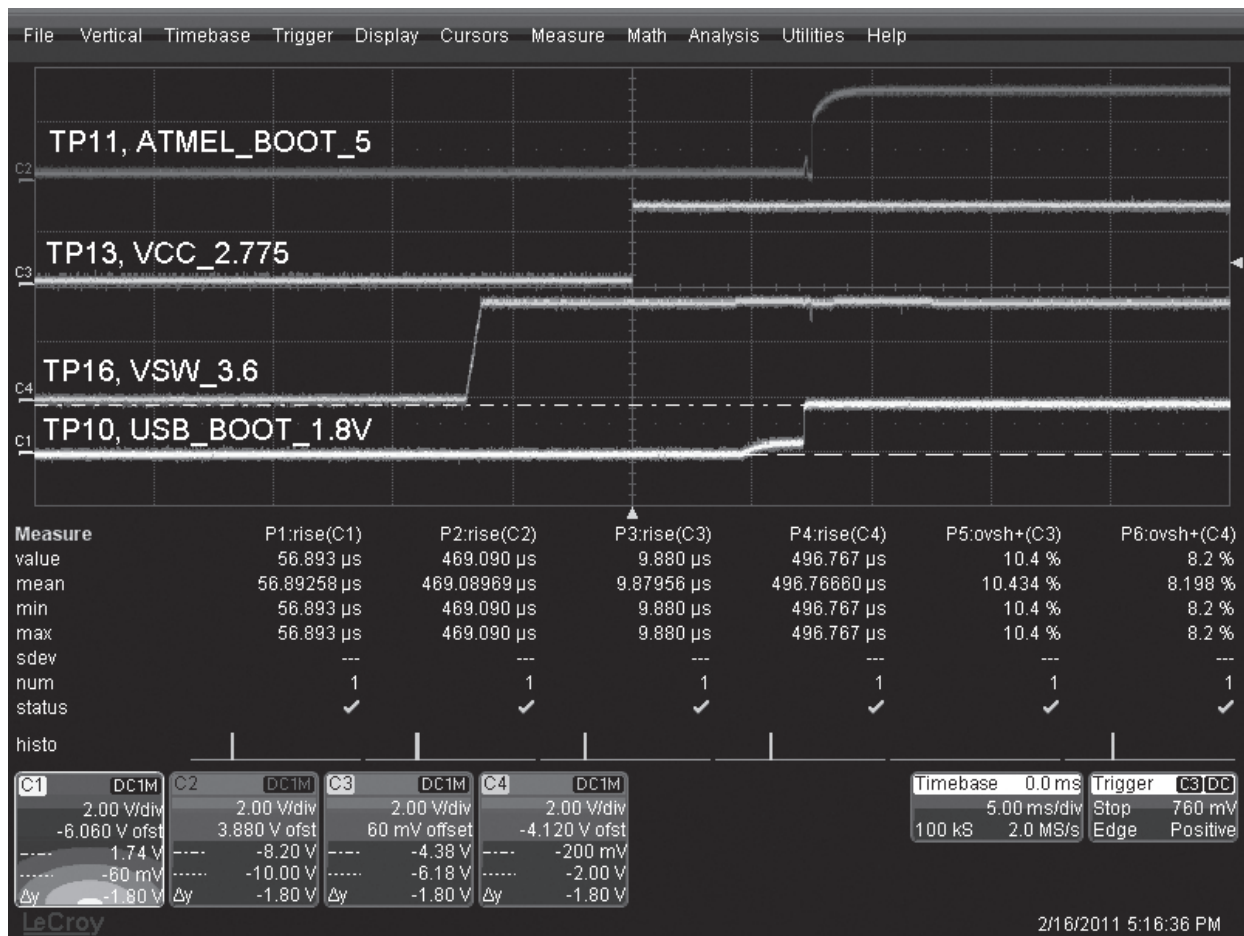


Figure 6-47. Startup – Vmax of TP10 and Time Statistics

6.15.12 Bluetooth Startup: Vmax of TP16 and Voltage Statistics

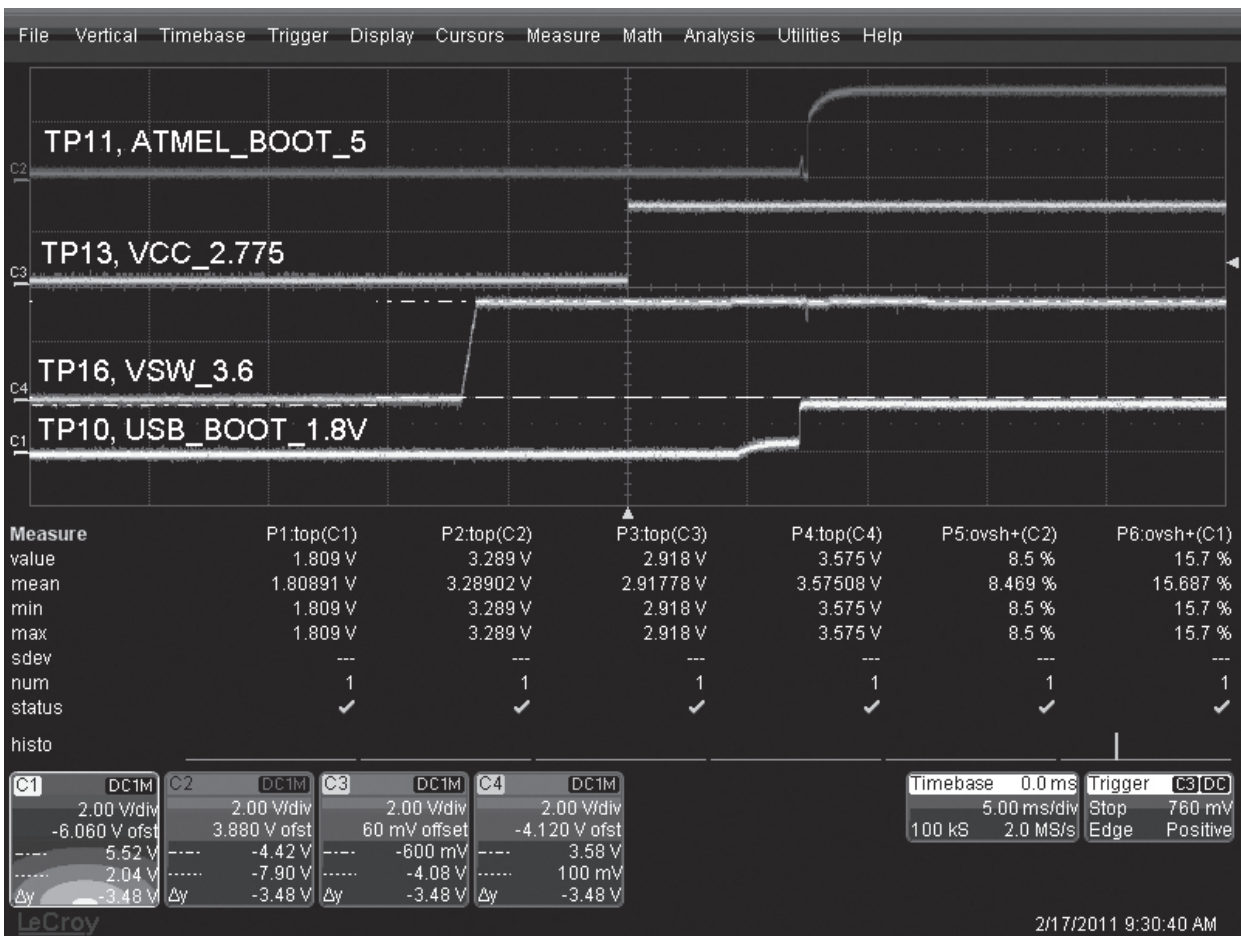


Figure 6-48. Startup – Vmax of TP16 and Voltage Statistics

6.15.13 Bluetooth Startup: Vmax of TP13 and Voltage Statistics

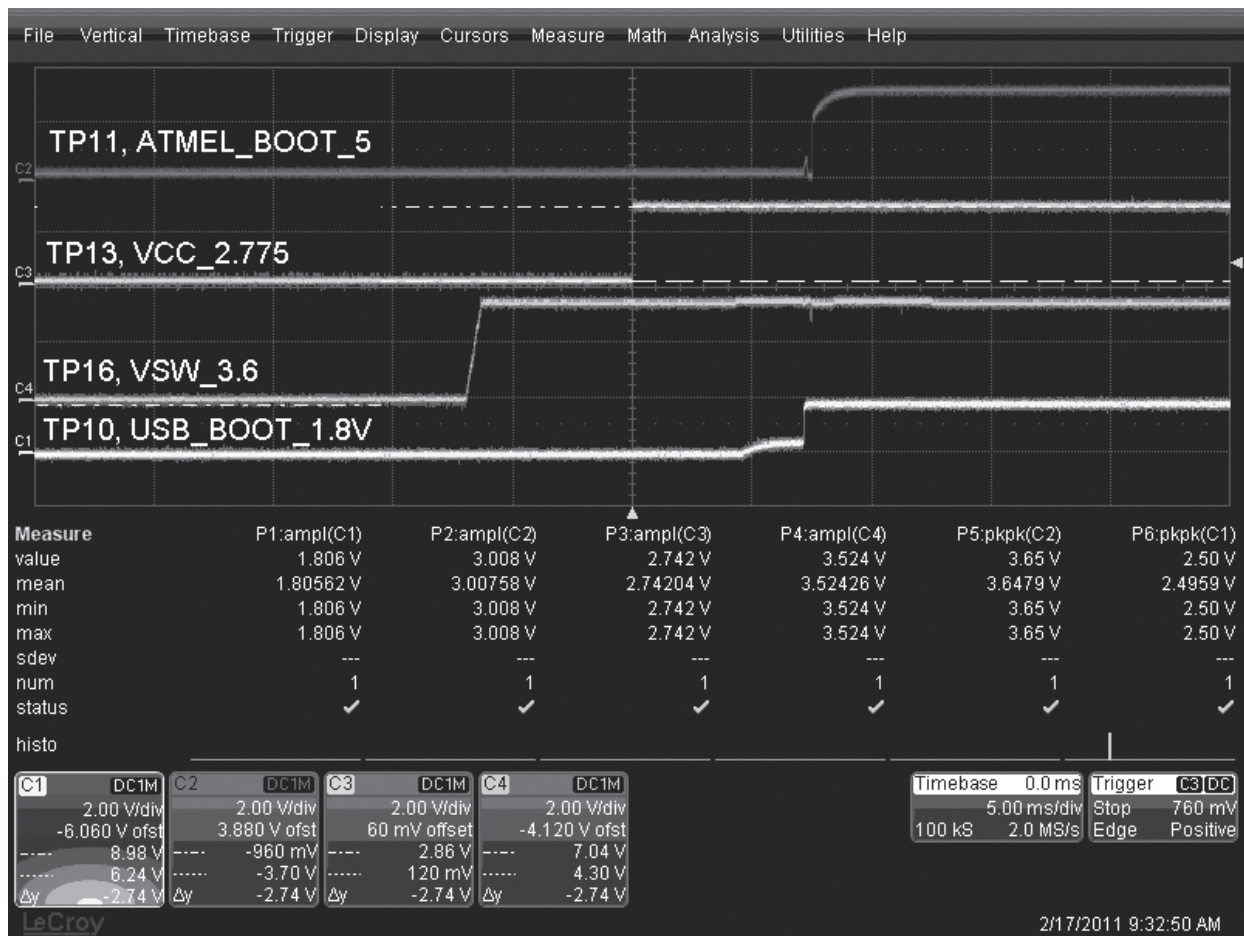


Figure 6-49. Startup – Vmax of TP13 and Voltage Statistics

6.15.14 Bluetooth Startup: Vmax of TP11 and Voltage Statistics

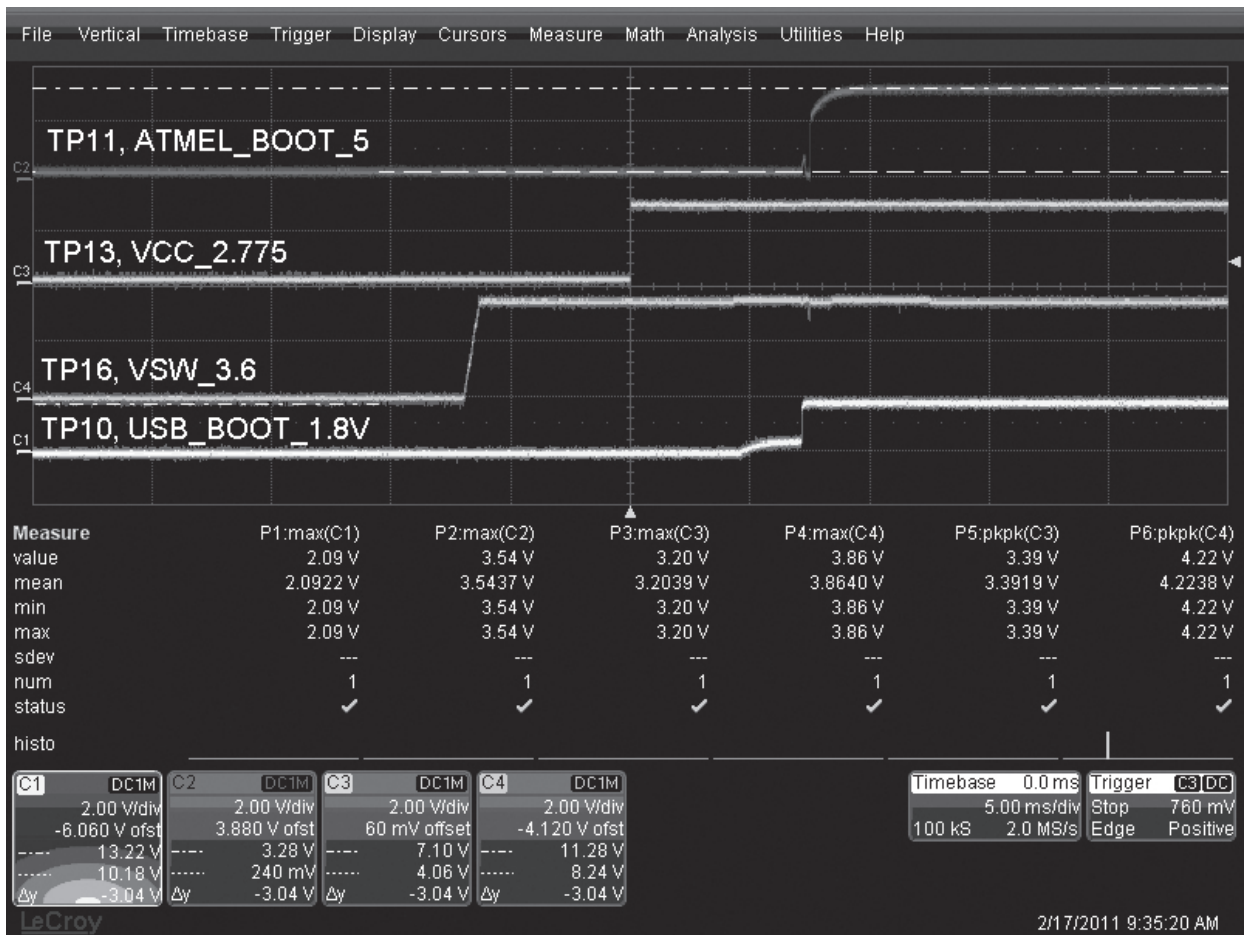


Figure 6-50. Startup – Vmax of TP11 and Voltage Statistics

6.15.15 Bluetooth Startup: Timing Difference of TP13 to TP16 and Time Statistics

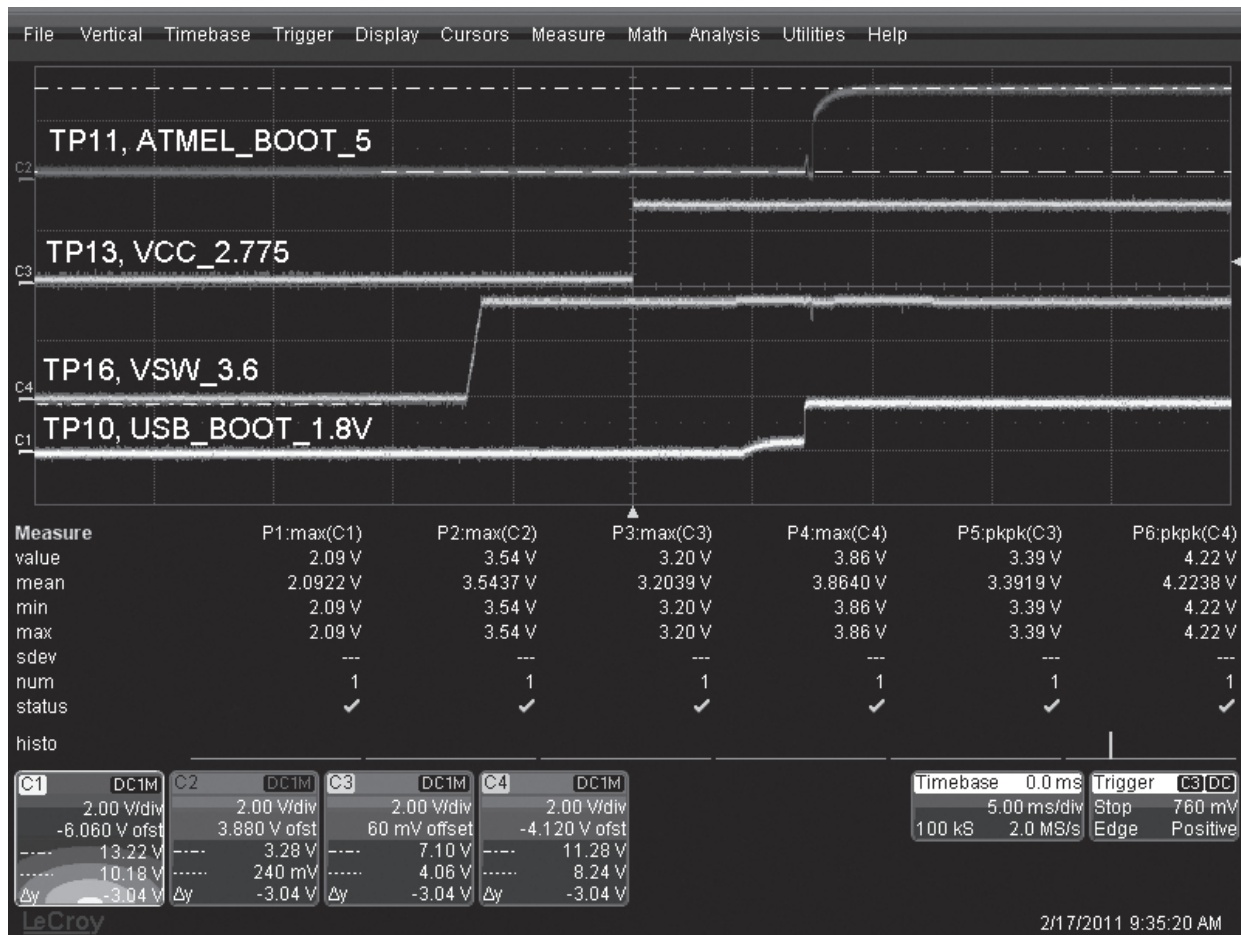


Figure 6-51. Startup – Timing Difference of TP13 to TP16 and Time Statistics

6.15.16 Bluetooth Startup: Timing Difference of TP10 to TP13 and Time Statistics

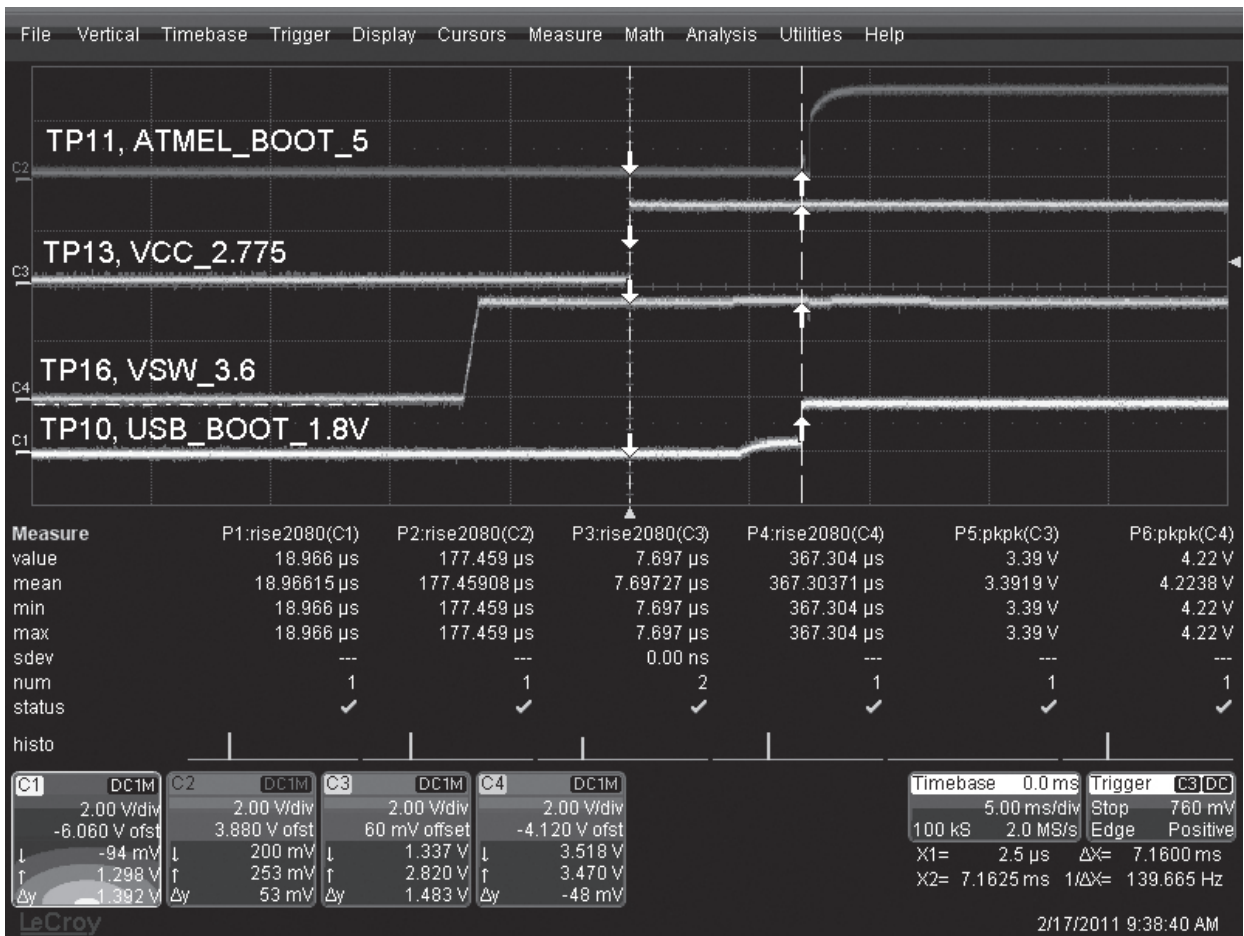


Figure 6-52. Startup – Timing Difference of TP10 to TP13 and Time Statistics

6.15.17 Bluetooth Startup: Timing Difference of TP11 to TP13 and Time Statistics

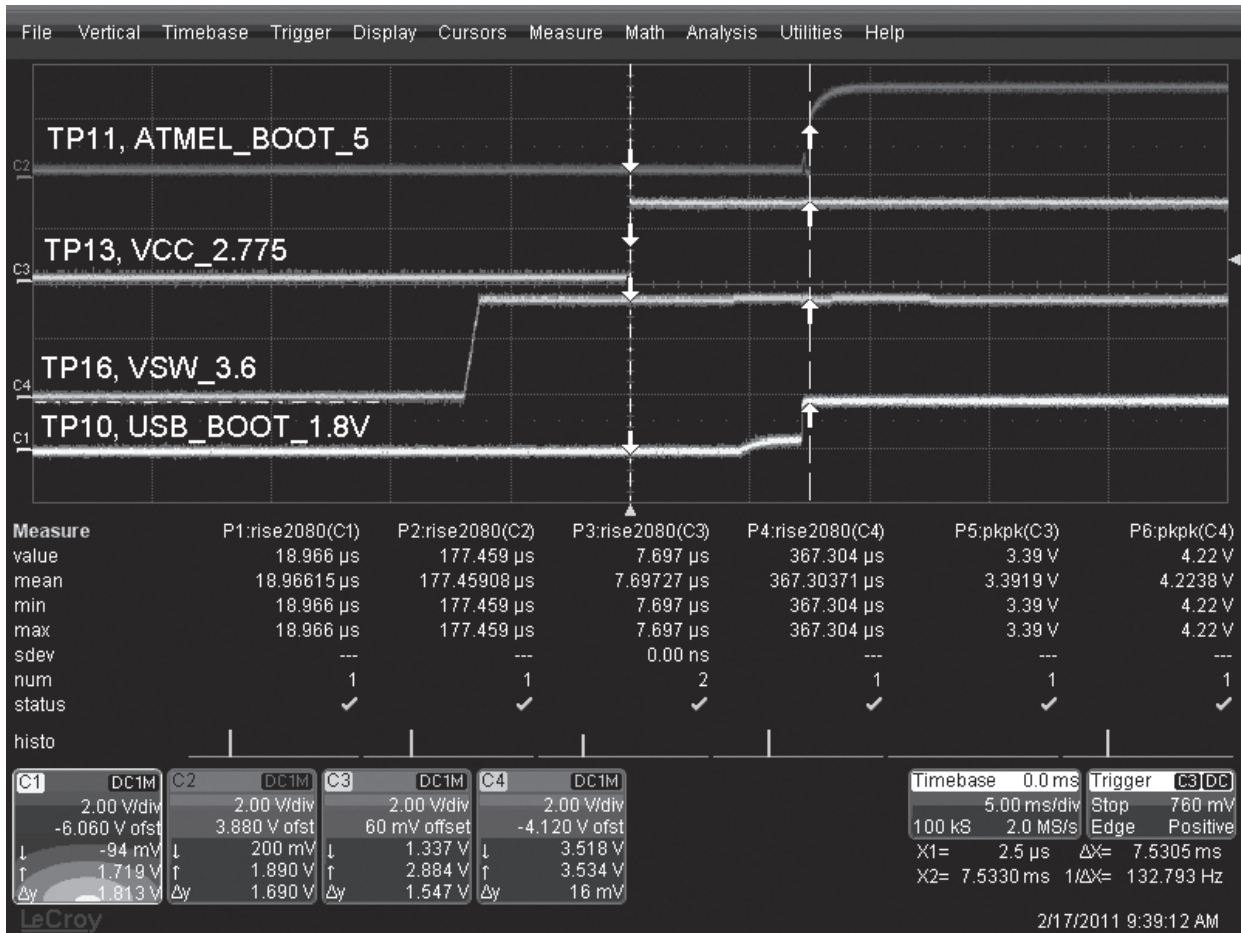


Figure 6-53. Startup – Timing Difference of TP11 to TP13 and Time Statistics

6.15.18 Bluetooth CW on Spectrum Analyzer

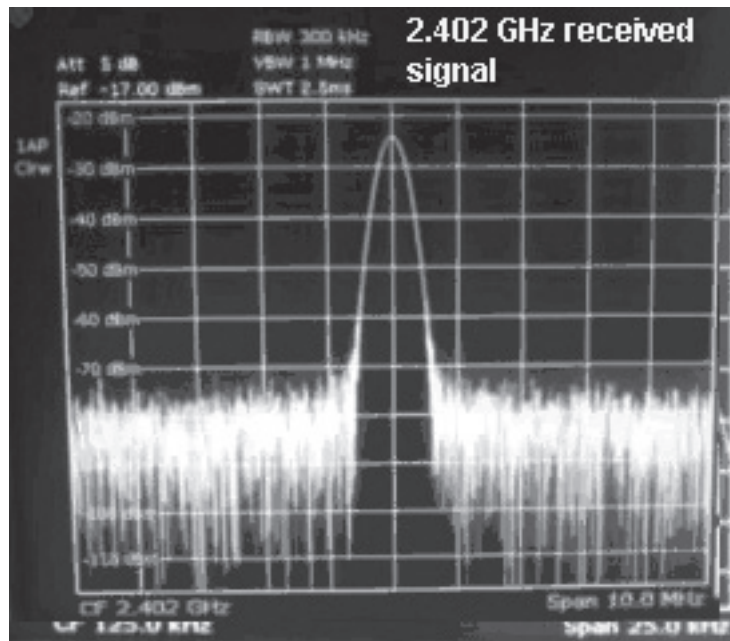


Figure 6-54. Bluetooth CW on Spectrum Analyzer

6.16 Bluetooth Steady-State

6.16.1 Waveforms – USB D+ Vmax and Packet Timing with Statistics

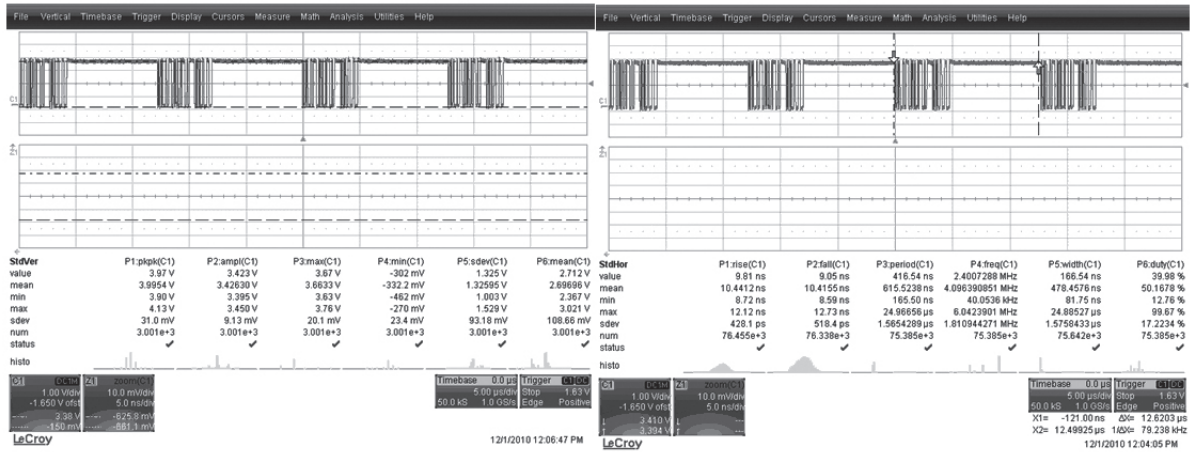


Figure 6-55. USB D+ Vmax and Packet Timing with Statistics

6.16.2 Waveforms – USB D- Vmax and Packet Timing with Statistics

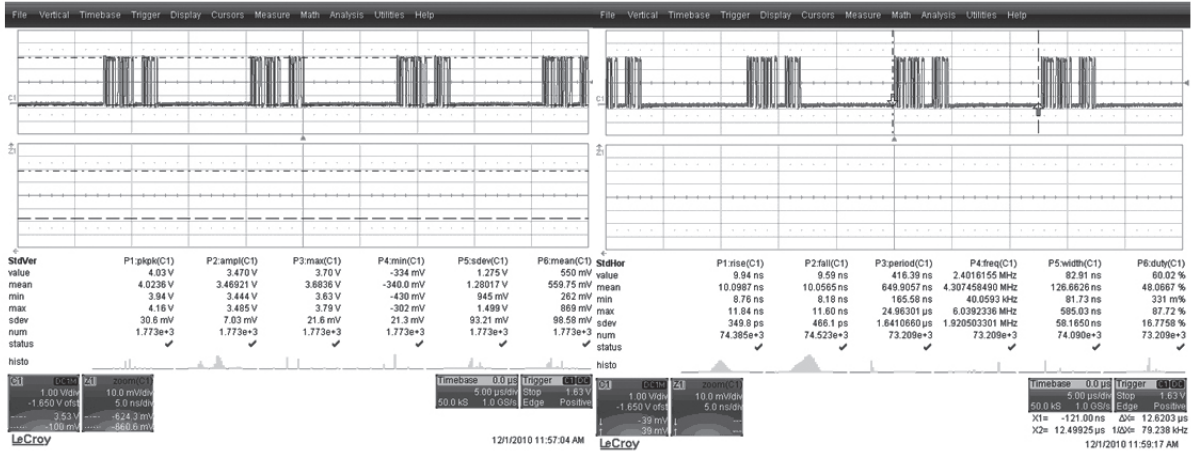


Figure 6-56. USB D- Vmax and Packet Timing with Statistics

6.16.3 Waveforms – V_SW_3.6 Voltage Statistics

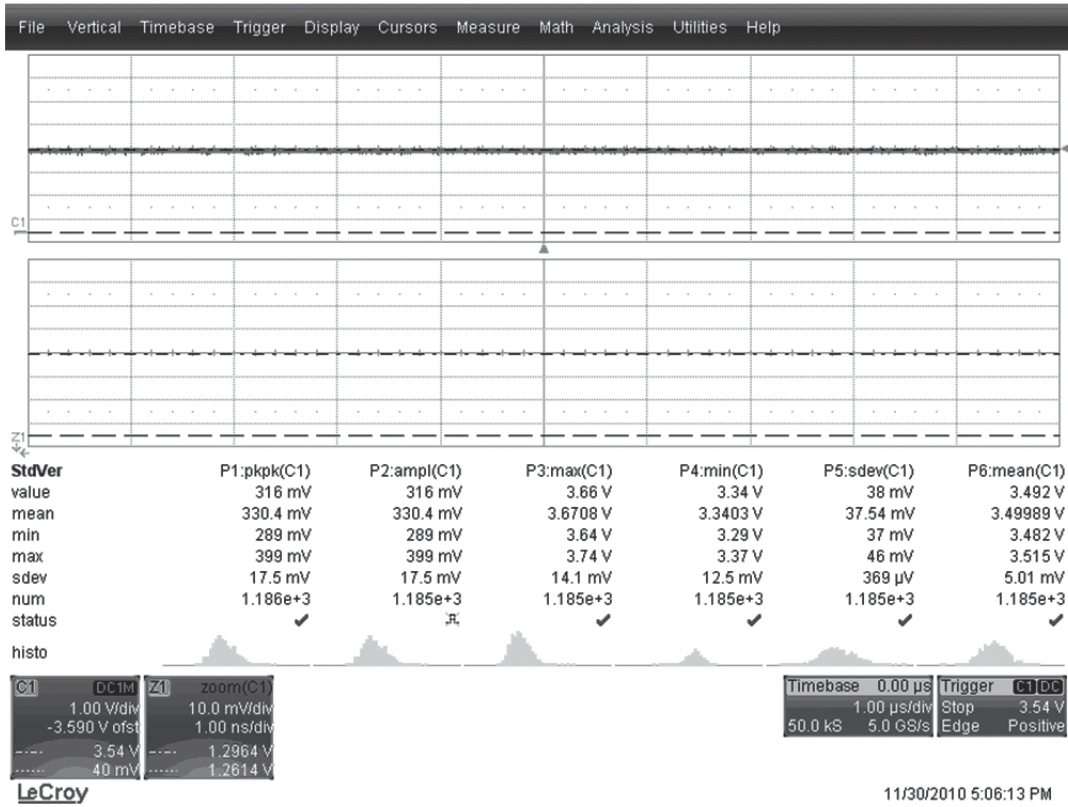


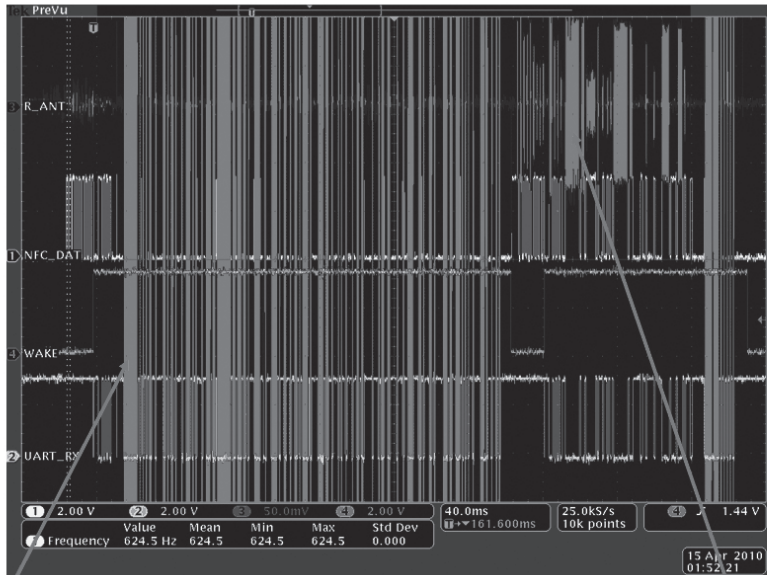
Figure 6-57. V_SW_3.6 Voltage Statistics

6.16.4 Waveforms – 32 kHz clock Vmax with Statistics



Figure 6-58. 32 kHz clock Vmax with Statistics

6.16.5 Waveforms – LF Coil with TX and RX



Data taken from LF inductor contact at C2454 or C2457 while pairing with a headset

TX Voltage can be as high as 40V

OOK used

NFC TX

NFC RX

Figure 6-59. LF Coil when TX and RX

6.17 LF CW on Spectrum Analyzer



Figure 6-60. LF CW on Spectrum Analyzer

Notes

Chapter 7 Troubleshooting Tables

7.1 List of Board and IC Signals

Due to the nature of the schematic-generating program, signal names might be different when they are not directly connected to the same point. The tables in this chapter provide a cross reference to the various pinouts for these signals. [Table 7-1](#) lists and provides links to each of the tables in this chapter.

Table 7-1. List of Tables of Board and IC Signals

Table No.	Table Name	Page No.
7-2	Mainboard to main flex connector interface Pin-Out	7-2
7-3	Main Flex connector to main board connector interface Pin-Out	7-3
7-4	Side Button Flex connector Pin-Out	7-4
7-5	Top Control Flex connector Pin-Out	7-4
7-6	NFC Flex connector interface Pin-Out	7-5
7-7	Overall GPIO pin functions	7-5
7-8	Primary IC Reference Designator	7-13

Table 7-2. Mainboard to main flex connector interface Pin-Out

Test Place	Main Board	
	Signal Name	Pin #
Chassis	GND	J1-1
Chassis	GND	J1-2
R2364	GPIO_3_RTS_FILLSENSE	J1-3
R4005	MIDDLE_SIDE_BUTTON	J1-4
F_GCAI_USB-	GPIO_2_DM_RXDC_FILLDATA	J1-5
R4006	UP_ARROW_BUTTON	J1-6
F_GCAI_USB+	GPIO_1_DP_TXDC_FILLREQ	J1-7
R4007	DOWN_ARROW_BUTTON	J1-8
F_GCAI_1WIRE	GCAI_1WIRE_5V	J1-9
C2331	TOP_SIDE_BUTTON	J1-10
R2358	GPIO_4_CTS_KEYFAIL_FILLCLK	J1-11
TP6210	ON_OFF_SWITCH	J1-12
F_Vbus2	VBUS2	J1-13
C2115	TOP_BUTTON	J1-14
F_Vbus2	VBUS2	J1-15
Chassis	GND	J1-16
Gpio0	GPIO_0	J1-17
Chassis	GND	J1-18
None	EXT_MIC_NEG_DP	J1-19
SPKR-	EXT_SPKR_NEG_DP	J1-20
TP6102	EXT_MIC_POS_DP	J1-21
SPKR+	EXT_SPKR_POS_DP	J1-22
Chassis	GND	J1-23
Chassis	GND	J1-24

Table 7-3. Main Flex connector to main board connector interface Pin-Out

Test Place	Main Board	
	Signal Name	Pin #
	GND	P1-1
	GND	P1-2
	GCAI_RTS_GPIO3	P1-3
	MIDDLE_SIDE_BUTTON	P1-4
	Gcai_USB_N_Gpio2	P1-5
	UP_ARROW_BUTTON	P1-6
	Gcai_USB_P_Gpio1	P1-7
	DOWN_ARROW_BUTTON	P1-8
	Gcai_one_wire	P1-9
	TOP_SIDE_BUTTON	P1-10
	Gcai_Gpio4_cts	P1-11
	ON_OFF_SWITCH	P1-12
	Gcai_Vbus_5V	P1-13
	Emerg_Btn	P1-14
	Gcai_Vbus_5V	P1-15
	GND	P1-16
	Gcai_GPIO0	P1-17
	GND	P1-18
	EXT_MIC_NEG_DP	P1-19
	GCAI_EXT_SPKR_N	P1-20
	EXT_MIC_POS_DP	P1-21
	GCAI_EXT_SPKR_P	P1-22
	GND	P1-23
	GND	P1-24

Table 7-4. Side Button Flex connector Pin-Out

Test Place	Main Board	
	Signal Name	Pin #
	GND	P1-1
	Top_Arrow_Button	P1-2
	GND	P1-3
	Middle_Arrow_Button	P1-4
	GND	P1-5
	Up_Arrow_Button	P1-6
	GND	P1-7
	Down_Arrow_Button	P1-8
	GND	P1-9
	GND	P1-10

Table 7-5. Top Control Flex connector Pin-Out

Test Place	Main Board	
	Signal Name	Pin #
	GND	P1-1
	GND	P1-2
	On_Off_switch	P1-3
	Top_Button	P1-4
	GND	P1-5
	GND	P1-6
	GND	P1-7
	GND	P1-8
	GND	P1-9
	GND	P1-10
	GND	P1-11
	GND	P1-12

Table 7-6. NFC Flex connector interface Pin-Out

Test Place	Main Board	
	Signal Name	Pin #
	GND	P1-1
	GND	P1-2
	TX_RX_LED_AMBER	P1-3
	V_Sw_5	P1-4
	TX_RX_LED_RED	P1-5
	V_Sw_5	P1-6
	TX_RX_LED	P1-7
	GND	P1-8
	BT_BLUE	P1-9
	GND	P1-10
	GREEN_LED	P1-11
	Red_LED	P1-12

Table 7-7. Overall GPIO pin functions

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
NC	NC	M8		Output		0	Output	
codec_cs	DSP SPI chip select for TI dual CODEC	Y1	0	Output		1	Output	
abacus_cs	DSP SPI chipselect for Abacus IC	L3	0	Output		0	Output	
trident_cs	DSP SPI chipselect for Trident IC	V6	0	Output		0	Output	
synthesizer_lock	RF synthesizer lock detect	V15	1=Lock	Input	None		Input	None
f2_timer_dmcs	Timer output compare for DMCS or SYNCB	M20	1	Output			Input	Pull-down
mako_tx_rx	Trigger for Mako DAC ramp	L14	1=TX	Output			*Input	None
T_Display_Toggle	Radio display detection	G19	0	Output		0	Output	
dac_cs	RF DAC chip select	T19	0	Output			Input	Pull-down

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
middle_side_button	Middle side button input	T20	0	Input	None		Input	Pull-down
mako_intx	Mako main interrupt	P15	0	Input	None		Input	None
mako_usb_intx	Mako USB interrupt	AA9	0	Input	None		Input	Pull-down
mako_option_intx	Mako Option interrupt	Y12	0	Input	None		Input	None
	Unused and Unwired OMAP Pin	M14		Input	Pull-down		Input	Pull-down
top_display_cs	Top LCD SPI chip select	P3	0	Output		1	Output	
	Unused and Unwired OMAP Pin	V19		Output		0	Output	
mako_cs	Mako IC SPI chip select	N15	1	Output			Input	Pull-down
mortable	Specifies Mobile or Portable hardware	W13	0=Portable	Input	None	0	Output	
gcai_gpio3	GPIO3	AA15		Input	None	0	Output	
gcai_gpio4	GPIO4	R14		Input	None		Input	Pull-down
bluetooth_ptt	PTT signal from Bluetooth AVR	Y5	0=Pressed	Input	Pullup		Input	Pull-down
f2_timer_input_capture	"Receives one of three timing signals mux'ed through CPLD - Abacus Sync, DMCS, Ramp DAC Trigger.	"P20		Input	Pull-down		Input	Pull-down
bt_avr_status	AVR status read by OMAP	P18		Input	Pullup		Input	Pull-down
enc_wakeup	MACE encryption wakeup	A6	1	Output		1	Output	
enc_reset	MACE encryption reset	B6	0	I/O	Pullup	1	I/O	Pullup
5V_pwm_en	Forces SW5 to PWM	P14	1	Output	Pullup	0	Output	Pullup
gcai_gpio2	GPIO2	C13		Input	None		Input	None
gcai_gpio1	GPIO1	C11		Input	None		Input	None
gcai_gpio0	GPIO0	M7		Input	None		Input	None

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
gcai_vbus_i_limit	Current limit select for GCAI VBUS	C6	1=500mA	Output		0	Output	
f2_paramon_mon	Factory use to test F2 transmit timing. Allows TX/RX signal to appear on GCAI GPIO3.	C5	1=Factory Test	Output	Pullup	0	Output	Pullup
top_disp_data_ctrl	Select for data or control on top display(Not Used in WWP)	P12	1=data	Output		0	Output	
top_display_reset	Reset for color front display(Not Used in WWP)	M12	0	Output		1	Output	
	Unused and Unwired OMAP Pin	N13		Output		0	Output	
	Unused and Unwired OMAP Pin	M14		Output		0	Output	
	Unused and Unwired OMAP Pin	N14		Output		0	Output	
gps_shutdown	Shutdown to GPS	D12	0	Output		0	Output	
rf_reset	Reset to RF board	A8	0	Output		0	Output	
	Unused and Unwired OMAP Pin	B7		Output		0	Output	
	Unused and Unwired OMAP Pin	B8		Output		1	Output	
		C7	0	Output	None	1	Output	None
	Unused and Unwired OMAP Pin	J2		Input	None		Input	None
	Unused and Unwired OMAP Pin	M8		Input	None		Input	None
bt_usb_boot	Bluetooth 'boot' signal	P8	0	Output	None		Input	None
bt_avr_reset	Bluetooth AVR32 Reset signal	M13	0	Output	None		Input	
key_fail_switch	Enables keyload path for MACE secure.	A12	1	Output		0	Output	
NC	Not Used	M6	TBD	Input	Pullup		Input	None
NC	Not Used	N11		Input	None		Input	3
NC	Not Used	K14		Input	None		Input	None

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
NC	Not Used	J13		Input	None		Input	None
NC	Not Used	K13		Input	None		Input	None
emergency	Emergency pushbutton	N7	0=Pressed	Input	Pullup		Input	Pullup
NC	NC	N6		Input	Pullup		Input	Pullup
NC	NC	N8		Input	Pullup		Input	Pullup
sb2	Side button #2	N5	0=Pressed	Input	Pullup		Input	Pullup
sb1	Side button #1	M5	0=Pressed	Input	Pullup		Input	Pullup
monitor	Monitor button	P11	0=Pressed	Input	Pullup		Input	Pullup
cpld_ver4	CPLD version identifier bit 4	(REG)		Register			Register	
cpld_ver3	CPLD version identifier bit 3	(REG)		Register			Register	
cpld_ver2	CPLD version identifier bit 2	(REG)		Register			Register	
cpld_ver1	CPLD version identifier bit 1	(REG)		Register			Register	
cpld_ver0	CPLD version identifier bit 0	(REG)		Register			Register	
board_id8	Controller Board ID bit 8	H12		Input	Pullup		Input	Pullup
board_id7	Controller Board ID bit 7	H13		Input	Pullup		Input	Pullup
board_id6	Controller Board ID bit 6	G13		Input	Pullup		Input	Pullup
board_id5	Controller Board ID bit 5	F13		Input	Pullup		Input	Pullup
board_id4	Controller Board ID bit 4	D13		Input	Pullup		Input	Pullup
board_id3	Controller Board ID bit 3	E13		Input	Pullup		Input	Pullup
board_id2	Controller Board ID bit 2	C14		Input	Pullup		Input	Pullup
board_id1	Controller Board ID bit 1	D14		Input	Pullup		Input	Pullup
board_id0	Controller Board ID bit 0	F14		Input	Pullup		Input	Pullup

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
none	OMAP GPIO1 determines default state of some EMIFS pins. Latched on rising edge of PWR_ON_RESET. Pulled low on PCB	R19		Input	Pull-down	0	Input	Pull-down
none	"Unused, defaults to UART2.BCLK in reset mode 0. Pulldown on PCB	"Y4		Output	None	0	Output	None
omap_mpu_boot	Pin pulled high on PCB to select external boot on EMIFS CS3 (flash memory)	J20		Input	None	1	Input	None
reset_mode	Determines reset mode of OMAP. Latched on rising edge of PWR_ON_RESET. Pulled low on PCB (mode 0).	P12		Input	None	0	Input	None
mako_resetx	"Master cold reset input for entire 1710 chip, controlled by Mako IC	"R12	0	Input	None		Input	None
mako_resetx	"MPU (ARM9) subsystem reset input, tied to PWRON_RESET (R12) on PCB	"U20	0	Input	None		Input	None
omap_reset	"Reset output from OMAP used for CODEC, CPLD, Front Display, Lighting Controllers, MACE Tamper ckt.	"AA20	0	Output	None	0	Output	None
NC	NC	R18		Input	Pull-down		Input	Pull-down
NC	NC	Y8		I/O	Pullup		Input	Pull-down
NC	NC	W8		I/O	Pullup		Input	Pull-down
NC	NC	V8		I/O	Pullup		Input	Pull-down

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
NC	NC	W15		I/O	Pullup		Input	Pull-down
NC	NC	R10		I/O	Pullup		Input	Pull-down
uart1_tx	UART1 Serial Transmit Data	Y14		Output	None	0	Output	Pull-down
uart1_rx	UART1 Serial Receive Data	V14		Input	Pullup		Input	Pull-down
uart1_rts	UART1 Request To Send (output)	AA15		Output	None	0	Output	Pull-down
uart1_cts	UART1 Clear To Send (input)	R14		Input	Pullup		Input	Pull-down
uart3_tx	UART3 Serial Transmit Data	M18		Output	None	0	Output	Pull-down
uart3_rx	UART3 Serial Receive Data	L14		Input	Pullup		Input	Pull-down
usb1_txen	USB1 Transmit Enable	W16	0	Output	None		Input	None
usb1_data	USB1 Bidirectional Data	W14		I/O	None	0	Output	Pull-down
usb1_se0	USB1 Bidirectional Single Ended Zero	R13		I/O	None	U	Output	Pull-down
usb0_txen	USB0 Transmit Enable	W4	0	Output	None	1	Output	Pull-down
usb0_data	USB0 Bidirectional Data	P9		I/O	None		Input	None
usb0_se0	USB0 Bidirectional Single Ended Zero	R8		I/O	None		Input	None
ssi_omap_clock	SSI Clock into OMAP	G21		Input	None		Input	None
ssi_omap_sync	SSI Sync into OMAP	H15		Input	None		Input	None
ssi_omap_txd	SSI Serial Data from CODEC	H20		Input	None		Input	Pull-down
ssi_omap_rxd	SSI Serial Data to CODEC	H18		Output	None	0	Output	Pull-down
spi_arm_clk	ARM SPI Clock from OMAP	U19		I/O	Pull-down		Input	None
spi_arm_mosi	ARM SPI Data from OMAP	W21		I/O	Pull-down	0	Output	Pull-down

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
spi_arm_miso	ARM SPI Data into OMAP	U18		Input	Pull-down		Input	Pull-down
spi_dsp_clk	DSP SPI Clock from OMAP	N14		I/O	Pull-down		Input	None
spi_dsp_mosi	DSP SPI Data from OMAP	P14		Output	Pull-down		Input	Pull-down
spi_dsp_miso	DSP SPI Data into OMAP	AA17		Input	Pull-down		Input	Pull-down
gps_uart_tx	UART Data from OMAP to GPS IC	M18		Output	None	0	Output	Pull-down
gps_uart_rx	UART Data from GPS IC to OMAP	R9		Input	Pullup		Input	Pull-down
16.8_mhz_clk	Timer Reference Clock Input	N18		Input	None		Input	Pull-down
trident_ssi[0]	Transmit SSI Clock from RF Board	Y6		Input	Pull-down		Input	Pull-down
trident_ssi[1]	Transmit SSI Frame Sync from RF Board	W7		Input	Pull-down		Input	Pull-down
trident_ssi[2]	Transmit SSI Data from OMAP	AA5		Output	Pull-down	0	Output	Pull-down
abacus_ssi[0]	Receive SSI Clock from RF Board	V7		I/O	Pull-down		Input	None
abacus_ssi[1]	Receive SSI Frame Sync from RF Board	W6		I/O	Pull-down		Input	None
abacus_ssi[2]	Receive SSI Data from RF Board	P10		Input	Pull-down		Input	Pull-down
scl	I2C Clock	T18		I/O	None		Input	None
sda	I2C Data	V20		I/O	None		Input	None
rtck	JTAG Clock from Controller	Y17		I/O	None	U	Unknown	None
tck	JTAG Clock from JTAG box to Controller	W18		Input	None		Input	Pull-down
ntrst	JTAG Reset from JTAG box	Y18		Input	None		Input	
omap_tms	JTAG Test Mode Select from JTAG box	V17		Input			Input	Pull-down

Table 7-7. Overall GPIO pin functions (Continued)

Signal Name	Description	Pin or Ball #	Active State	SW Initialized		HW Reset		
				Direction	*PU	State	Direction	*PU or PD
omap_tdo	JTAG Data out from Controller	AA19		Output		0	Output	None
tdi	JTAG Data in from Controller	Y19		Input			Input	Pull-down
nemu0	"Emulation pin 0, not used, pulled high on PCB	"V16		I/O			Input	Pullup
nemu1	"Emulation pin 1, not used, pulled high on PCB	"W17		I/O			Input	Pullup

Note:

* PU = Pull Up

* PD = Pull Down

Table 7-8. Primary IC Reference Designator

Primary IC	Reference Designator	Component Location
OMAP 1710	U6302	MAIN BOARD (top-side)
DDR memory	U6301	MAIN BOARD (top-side)
FLASH IC	U6304	MAIN BOARD (top-side)
CPLD	U6101	MAIN BOARD (top-side)
Audio Codec	U6405	MAIN BOARD (bottom-side)
MACE	U2510	MAIN BOARD (bottom-side)
MAKO	U6501	MAIN BOARD (bottom-side)
Top Lighting Controller	U2205	MAIN BOARD (top-side)
BLUETOOTH & GPS Combination IC	U1301	MAIN BOARD (bottom-side)
BlueTooth AVR processor	U2415	MAIN BOARD (top-side)
SDRAM	U2413	MAIN BOARD (top-side)
Accelerometer	U2416	MAIN BOARD (bottom-side)
Battery contact springs	M101	MAIN BOARD (bottom-side)
VCO (UHF1)	Q3123	MAIN BOARD (bottom-side)
VCO (UHF1)	Q3156	MAIN BOARD (bottom-side)
VCO (7800)	Q3038	MAIN BOARD (bottom-side)
VCO (7800)	Q3039	MAIN BOARD (bottom-side)
VCO (7800)	Q3062	MAIN BOARD (bottom-side)
PA Final stage device	Q1001	MAIN BOARD (bottom-side)
Mixer	U507	MAIN BOARD (top-side)
Trident	U702	MAIN BOARD (top-side)
Abacus III	U601	MAIN BOARD (bottom-side)

Notes

Chapter 8 Schematics, Boards Overlays, and Parts Lists

This chapter contains the schematics, board overlays, and parts lists for the APX 3000 radio. Use them in conjunction with the theory of operation and the troubleshooting procedures, charts, and waveforms to isolate a problem to the component level.

When schematics are viewed on line or as a PDF file, colors can be seen that denote power and signal paths. The red color denotes voltage paths, blue denotes the receive path, and green denotes the transmit path.

The following tables list the pages where the schematics and board overlays for the APX 3000 radio are found.

8.1 List of Transceiver Schematics and Board Overlays

Table 8-1. List of Transceiver Schematics and Board Overlays

Transceiver Board Schematic/Board Layout	Page No.
UHF1: (84012513001)	
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Transceiver (RF) Board Overall Schematic Blocks.	8-4
Antenna Switch Circuit	8-5
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Power Amplifier Circuit	8-7
Automatic Level Control Circuit	8-8
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Receiver VCO Circuit	8-12
Transmitter VCO Circuit	8-13
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Controller Overall Schematic Blocks	8-17
GPS Bluetooth Circuit – 1 of 2	8-18

Table 8-1. List of Transceiver Schematics and Board Overlays (Continued)

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GPS Bluetooth Circuit – 2 of 2	8-19
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Lighting Control Circuit	8-21
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Transceiver (RF) Board Overall Schematic	8-62
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Table 8-1. List of Transceiver Schematics and Board Overlays (Continued)

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VHF: (84012512001_A)	
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Receiver Back End Mixer	8-124
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Table 8-1. List of Transceiver Schematics and Board Overlays (Continued)

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UHF2: (84012616001)	
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Table 8-1. List of Transceiver Schematics and Board Overlays (Continued)

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Transceiver (RF) Board Layout – Top Side	8-198
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8.2 Main Board Block: UHF1 (84012513001_A)

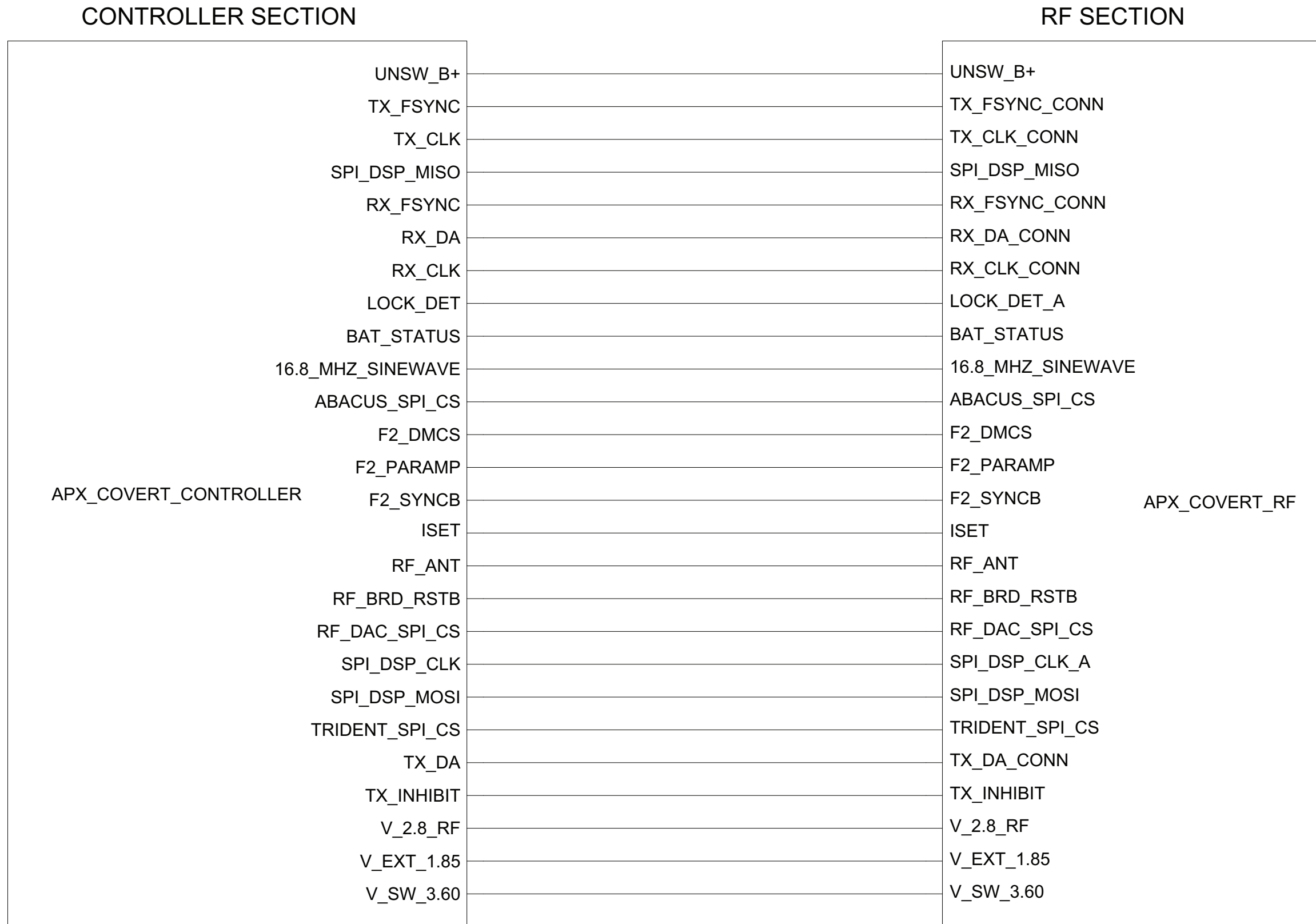


Figure 8-1. Main Board Block

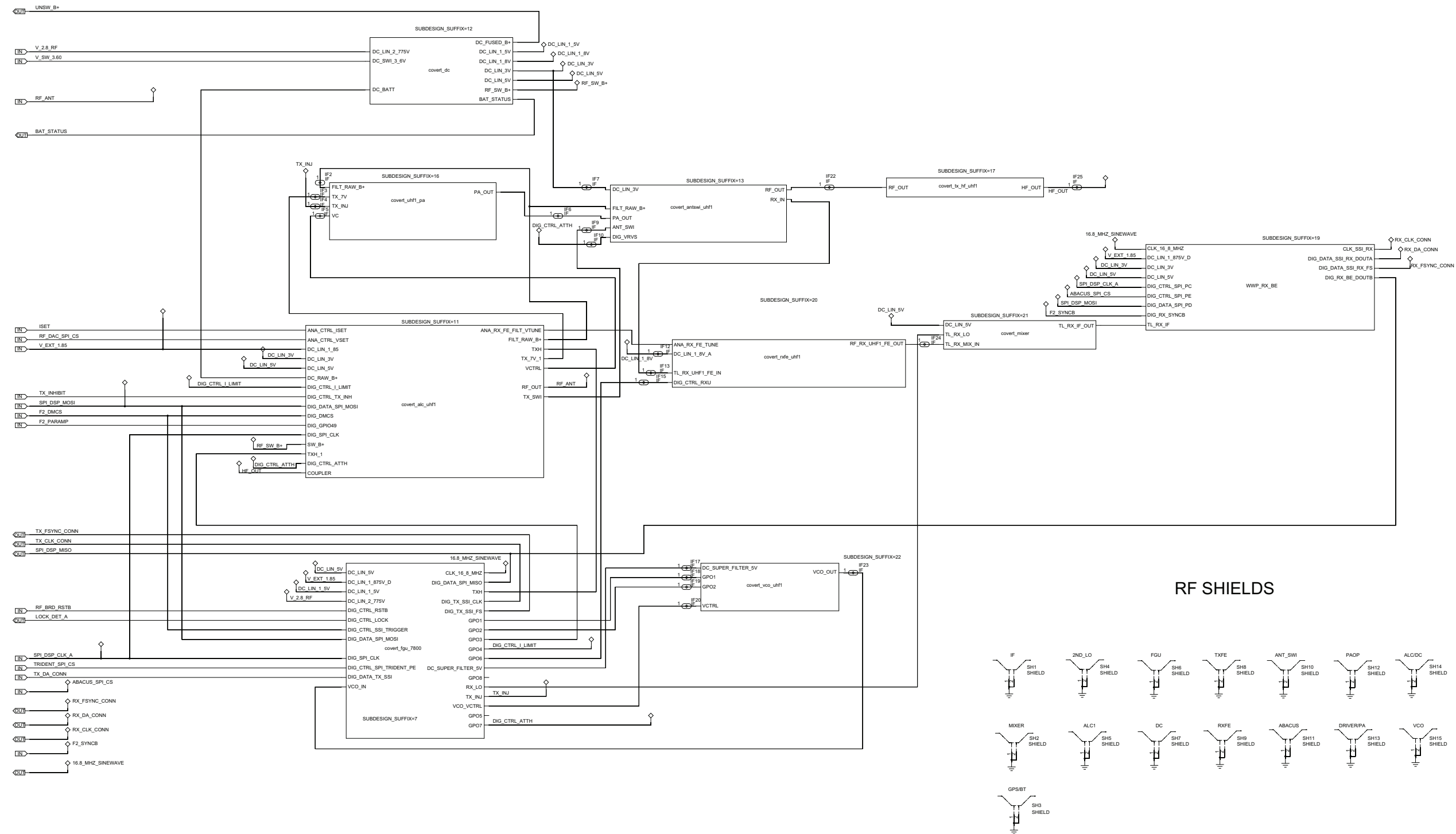


Figure 8-2. Transceiver (RF) Board Overall Schematic Blocks.

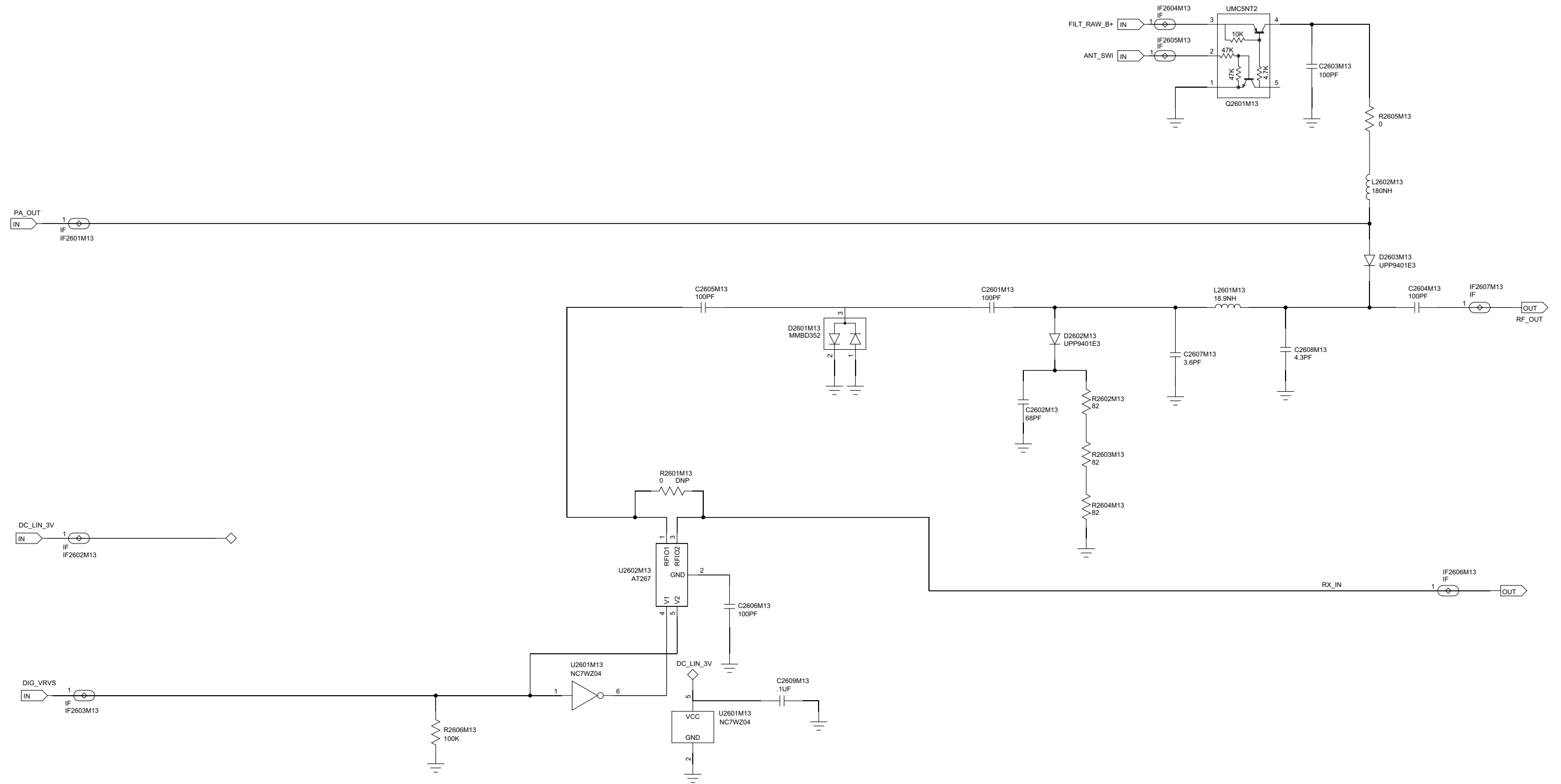


Figure 8-3. Antenna Switch Circuit

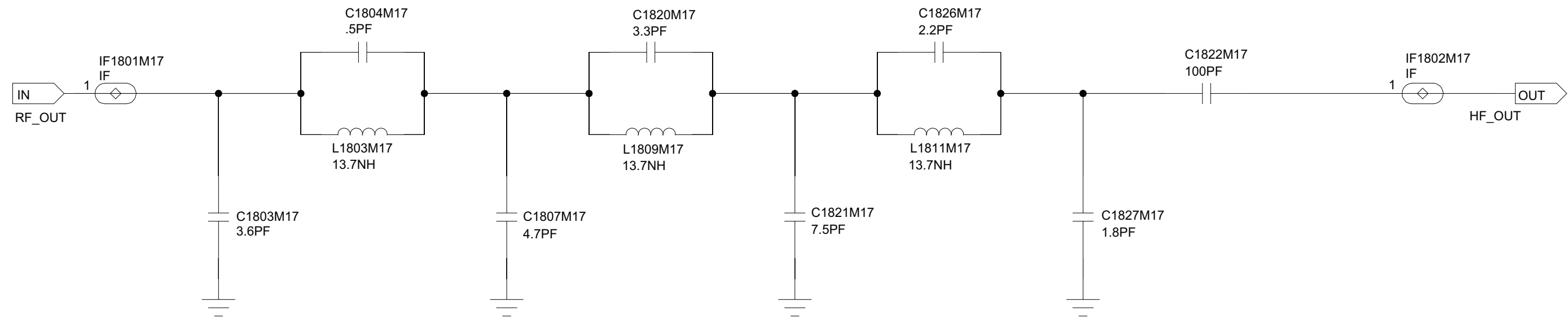


Figure 8-4. Transmitter HF Circuit

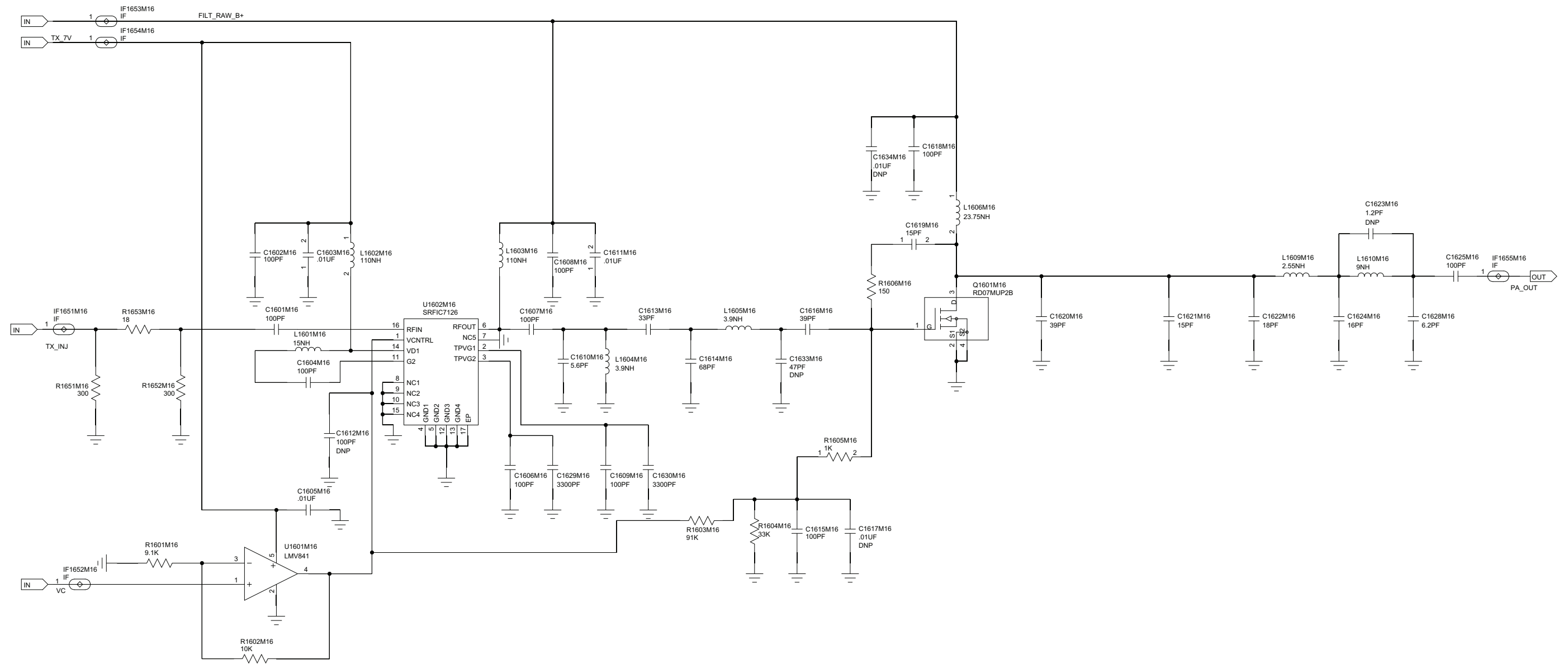


Figure 8-5. Power Amplifier Circuit

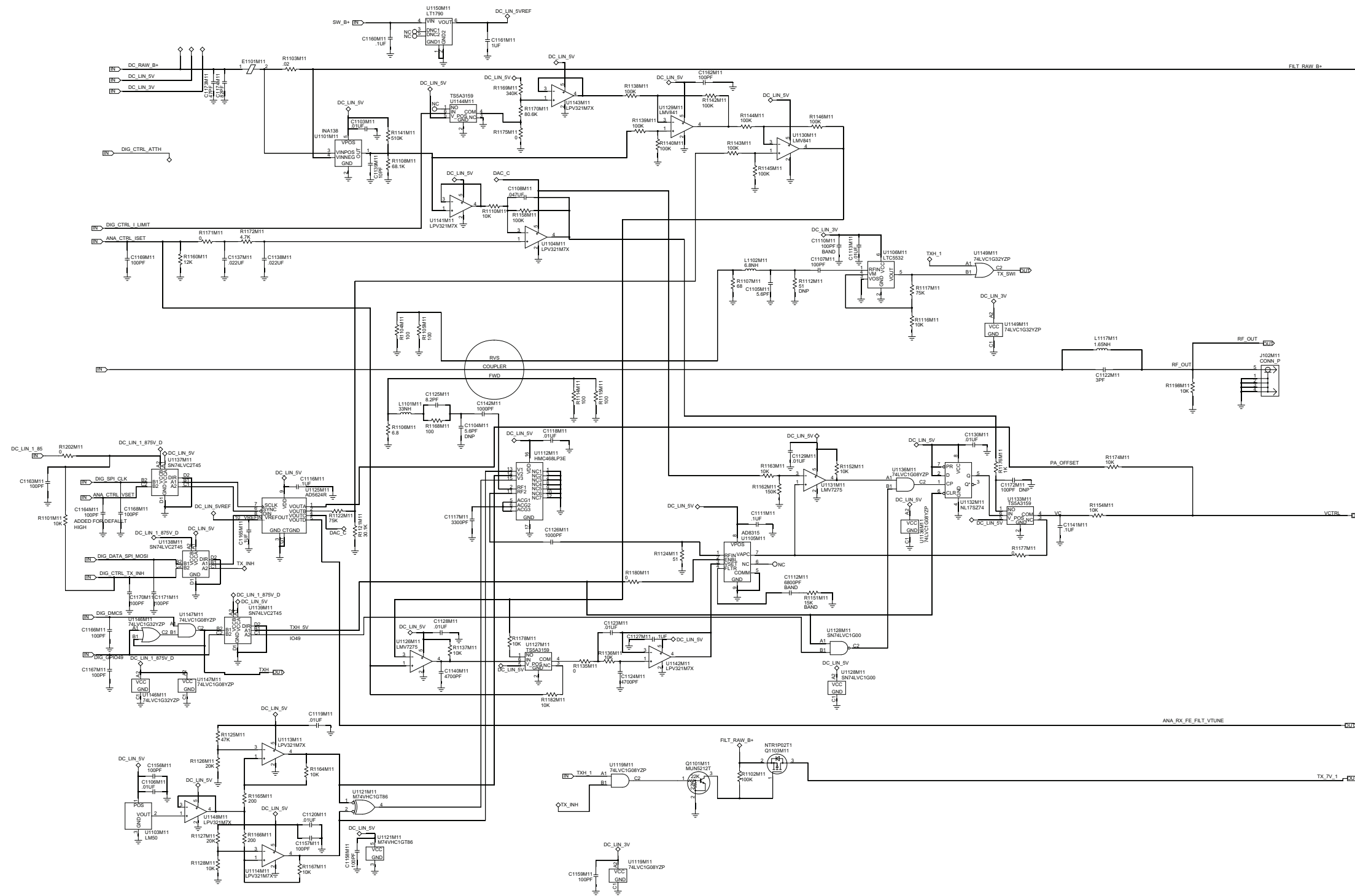


Figure 8-6. Automatic Level Control Circuit

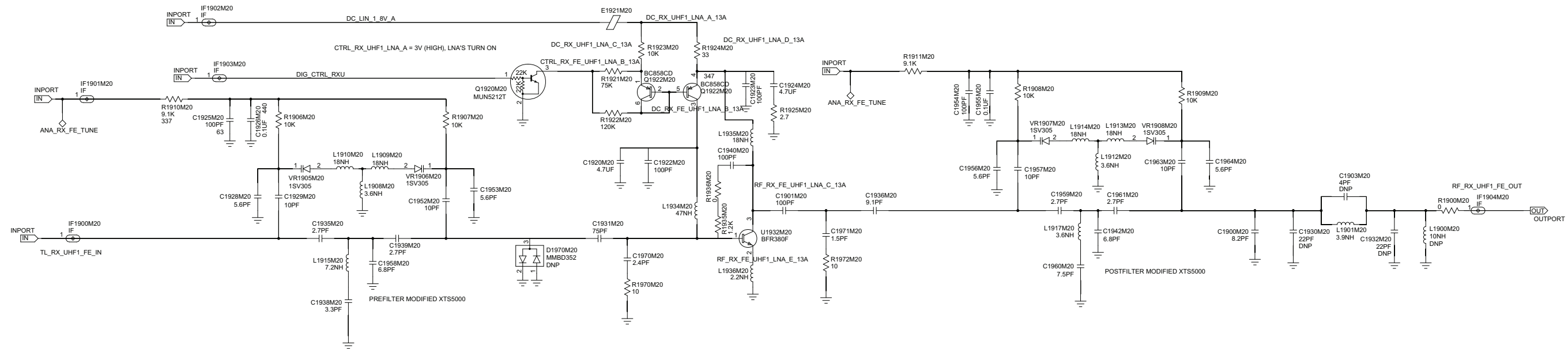


Figure 8-7. Receiver Front End Circuit

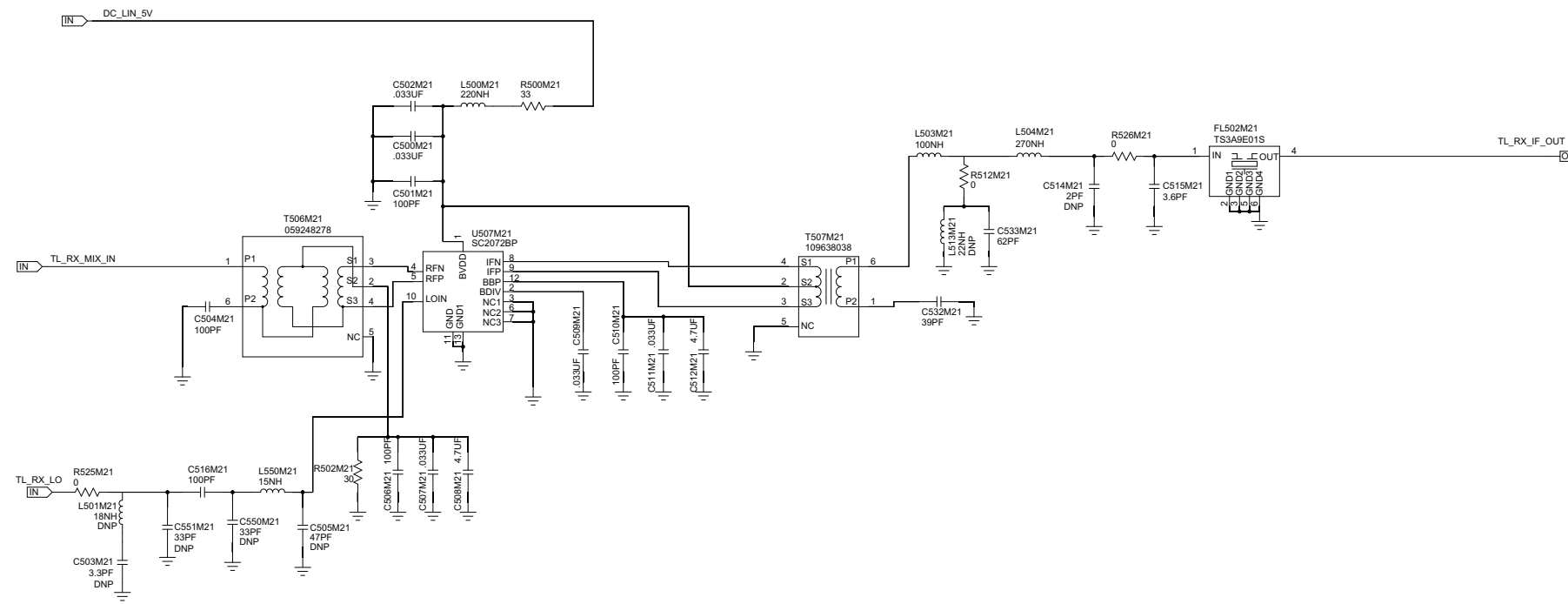


Figure 8-8. Receiver Back End Mixer

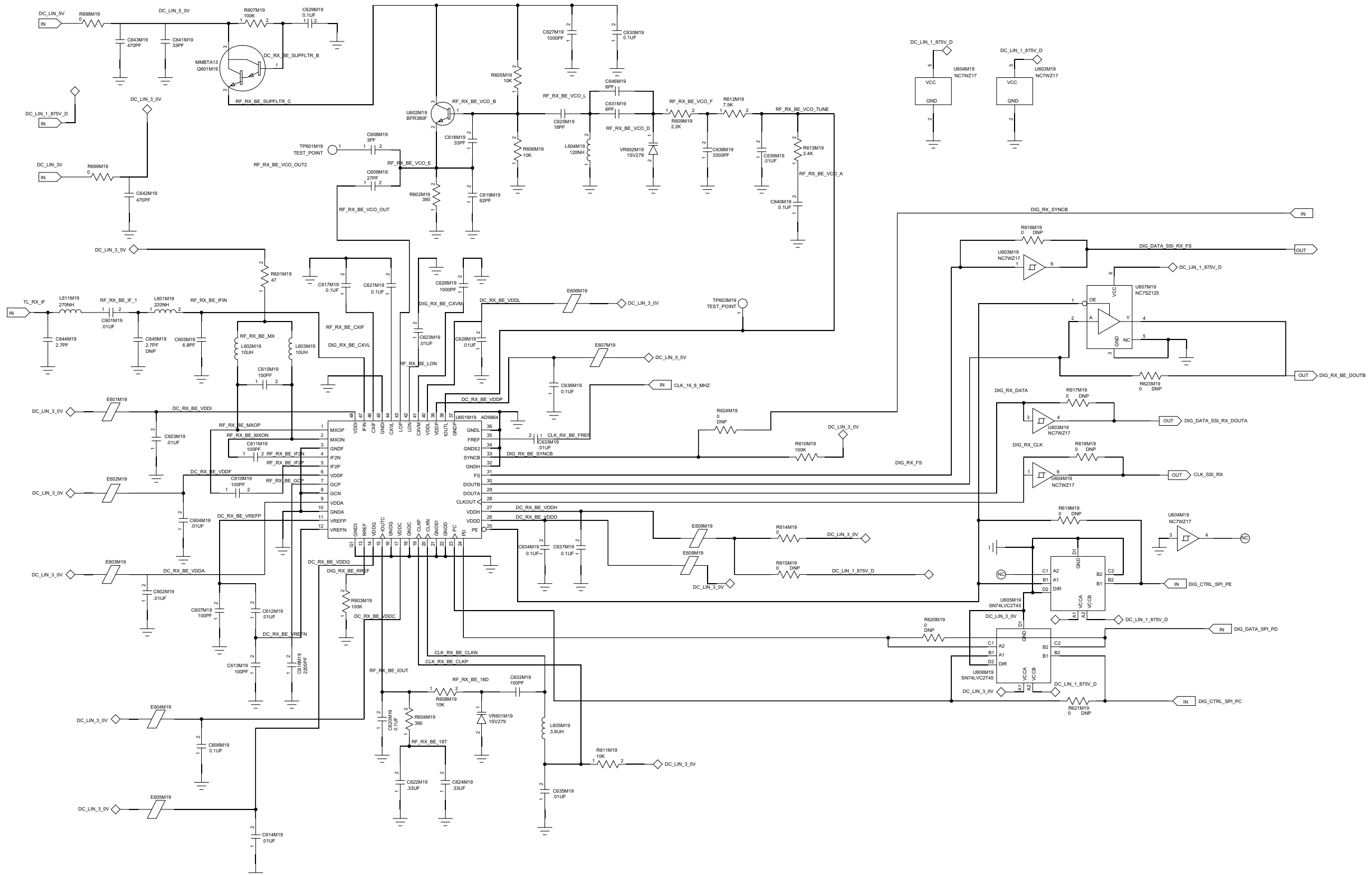


Figure 8-9. Receiver Back End

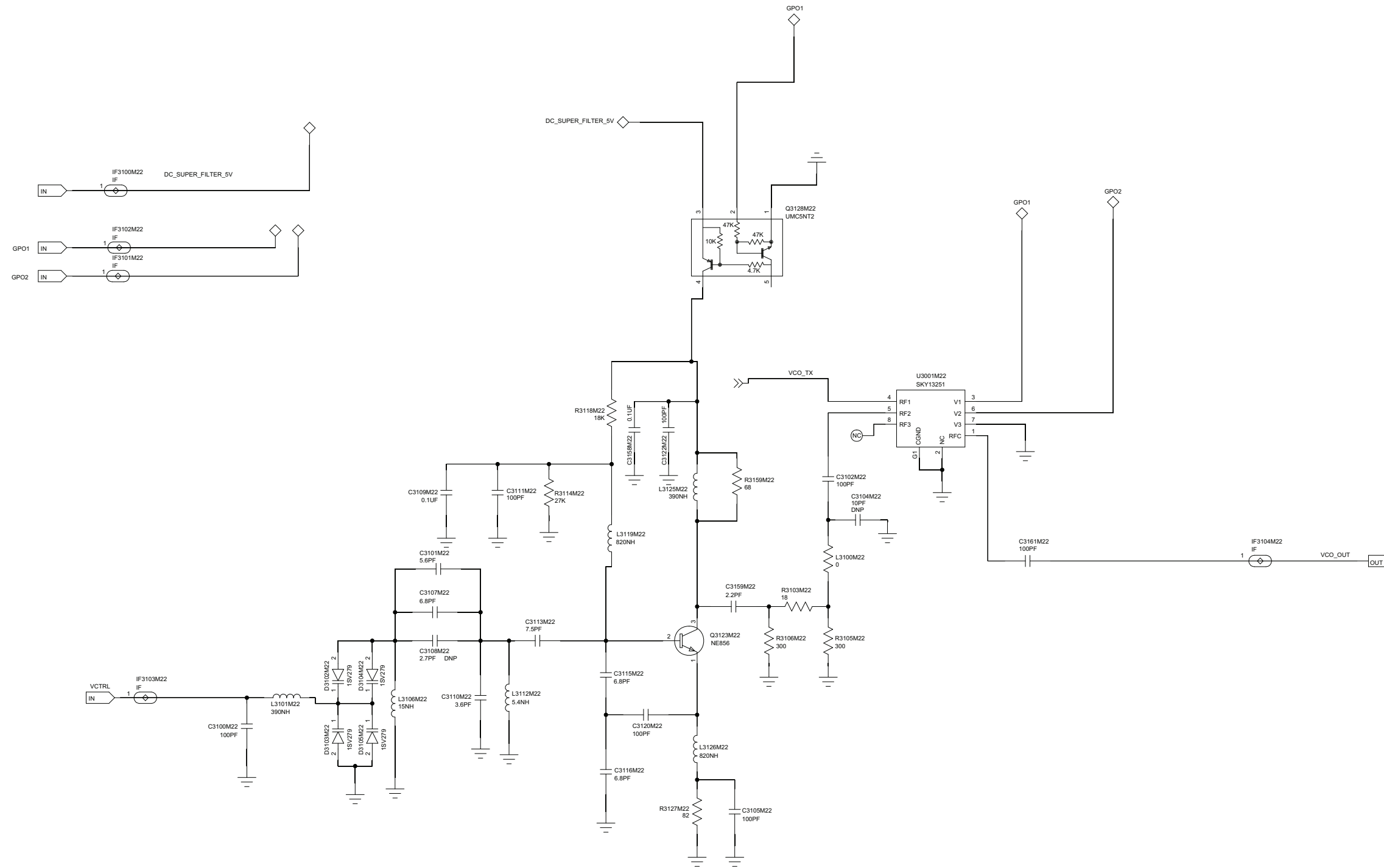


Figure 8-10. Receiver VCO Circuit

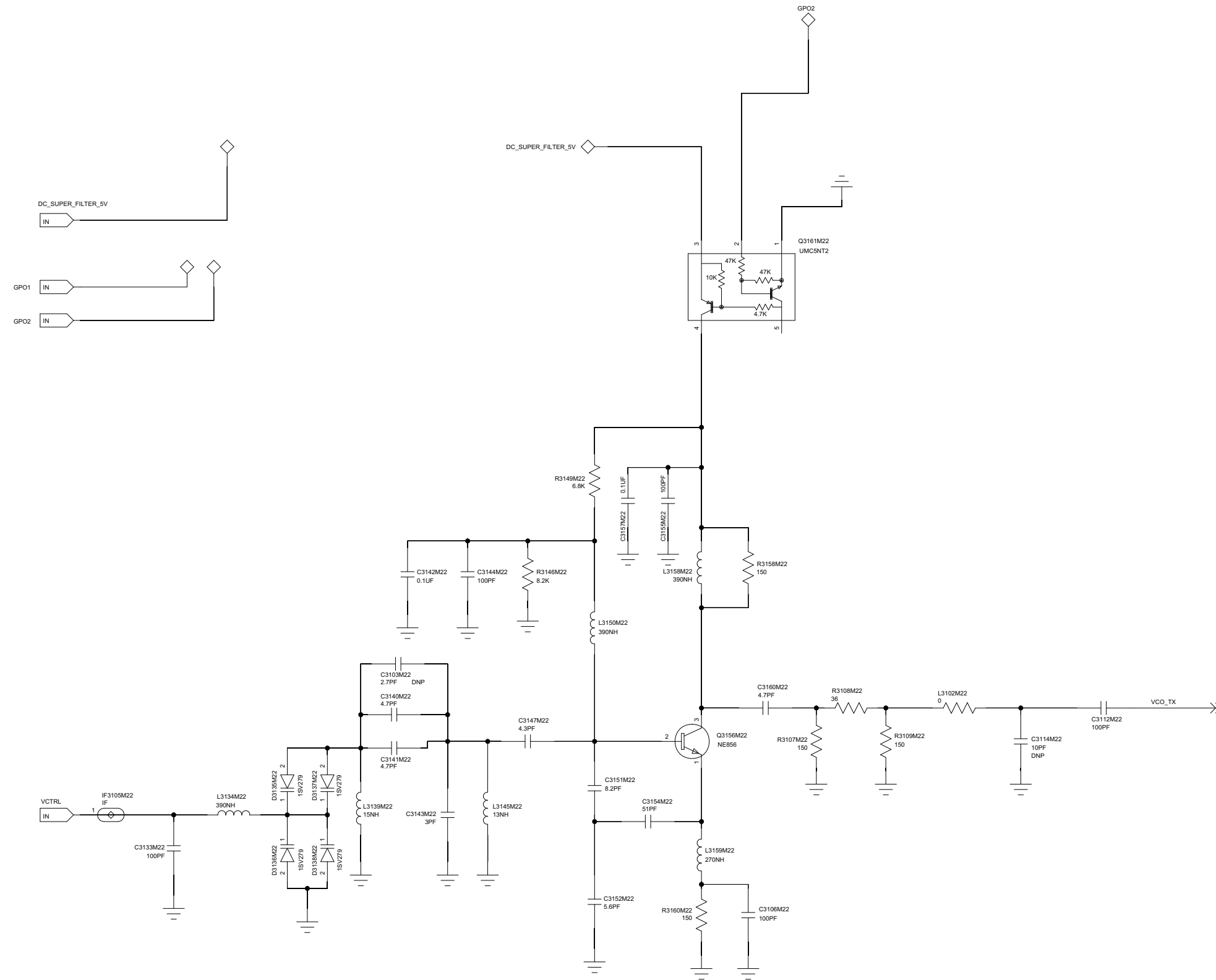


Figure 8-11. Transmitter VCO Circuit

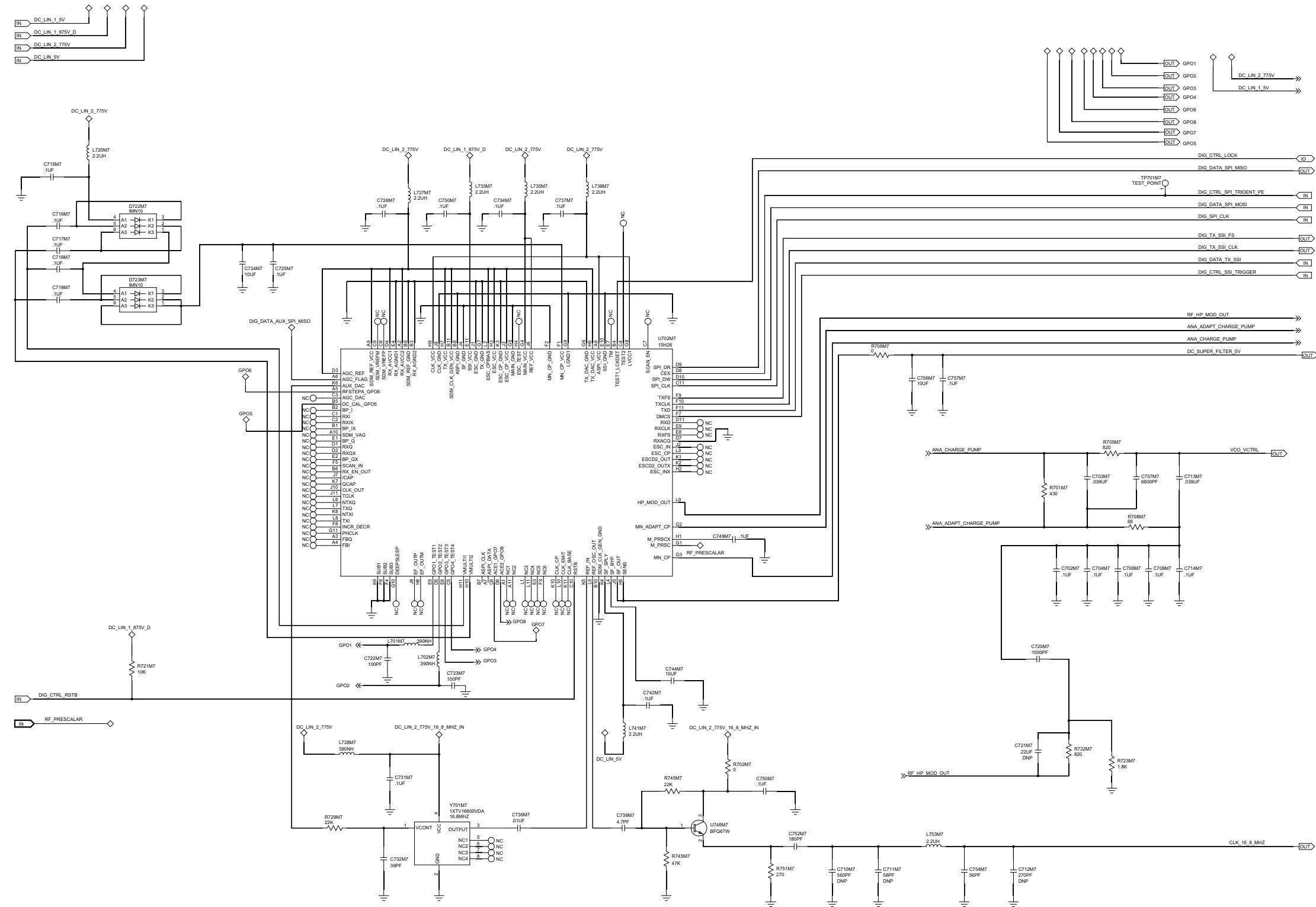


Figure 8-12. Frequency Generation Unit Circuit – 1 of 2

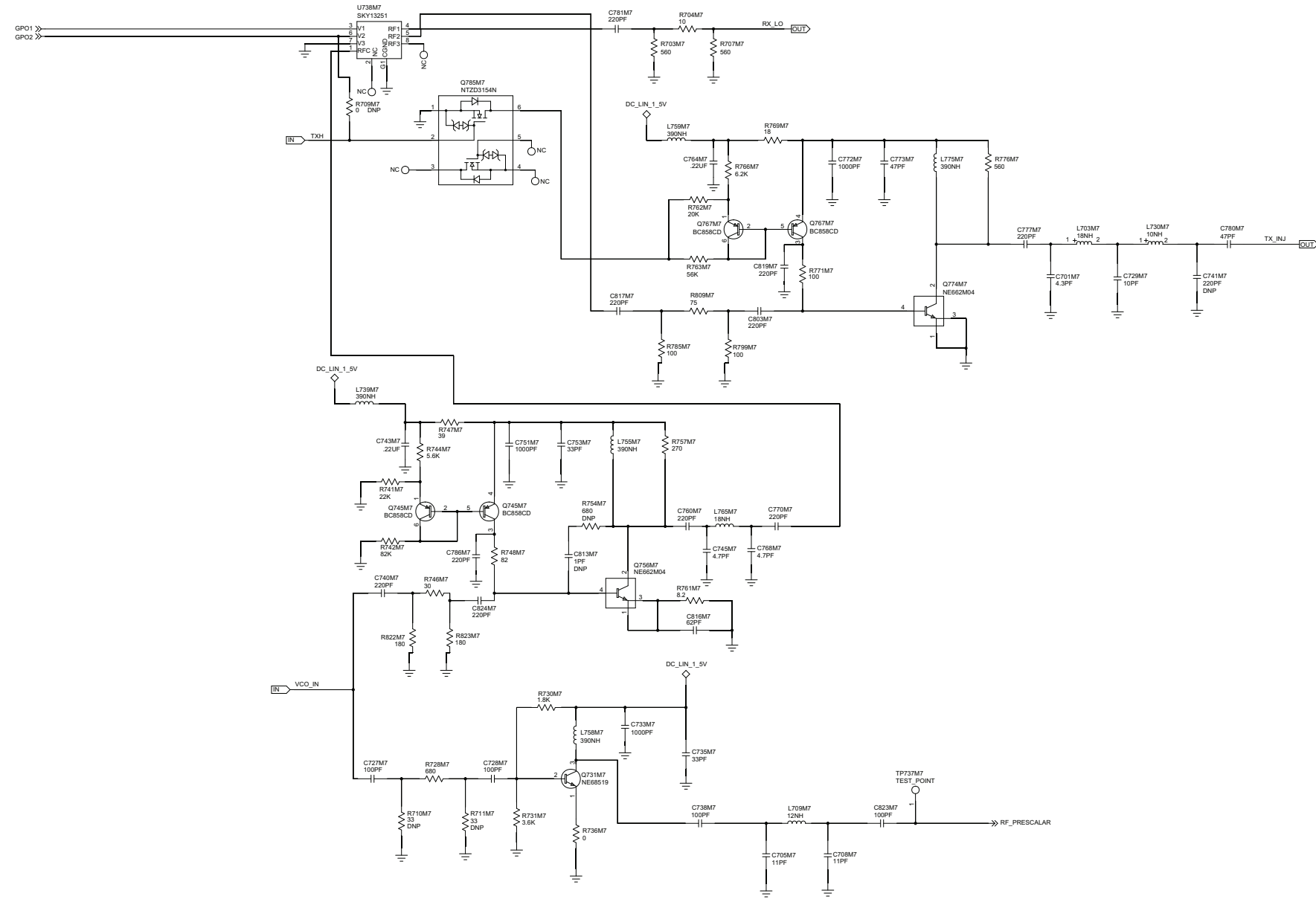
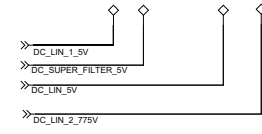


Figure 8-13. Frequency Generation Unit Circuit – 2 of 2

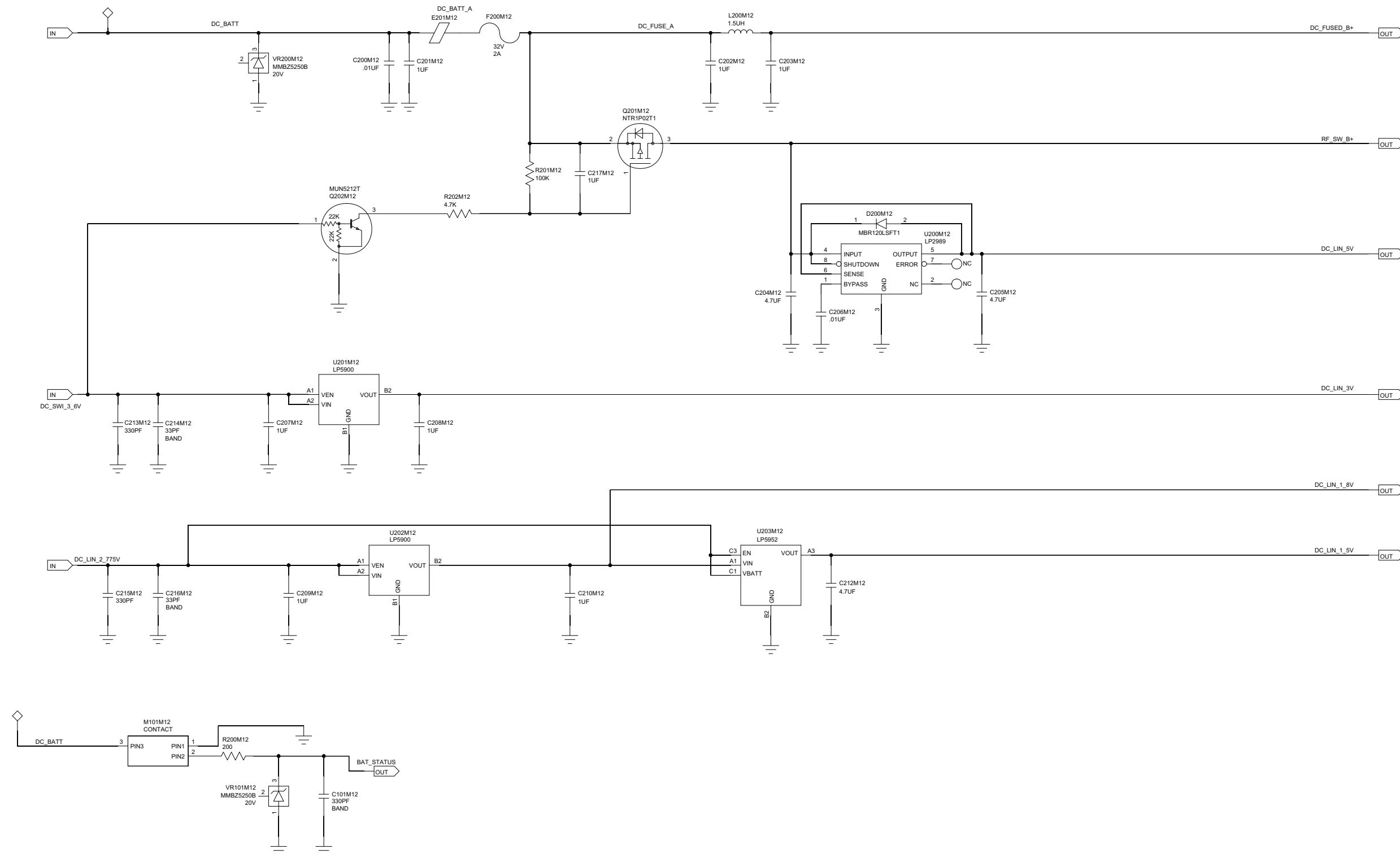


Figure 8-14. DC Circuit

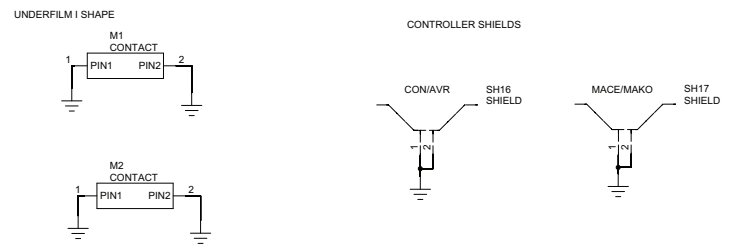
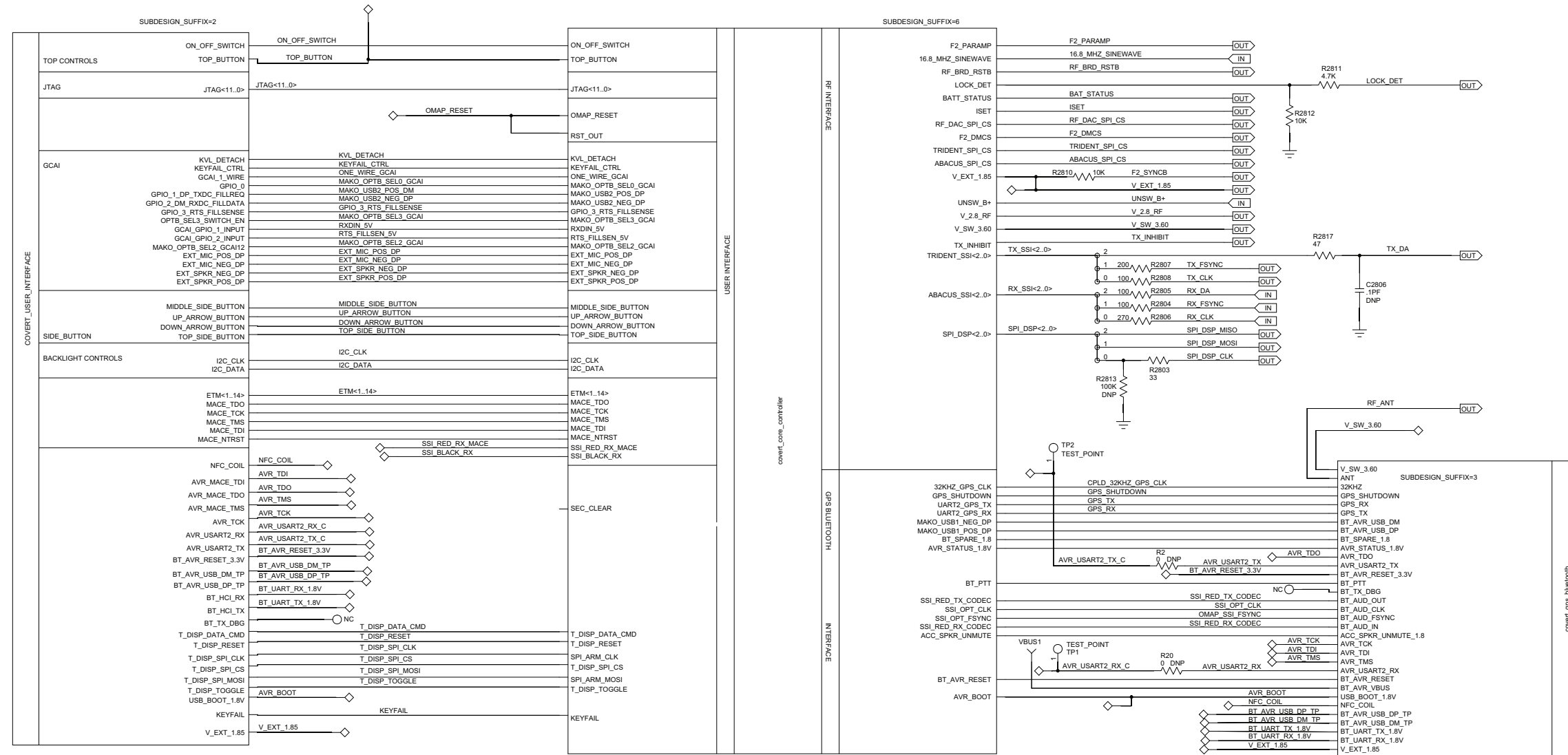


Figure 8-15. Controller Overall Schematic Blocks

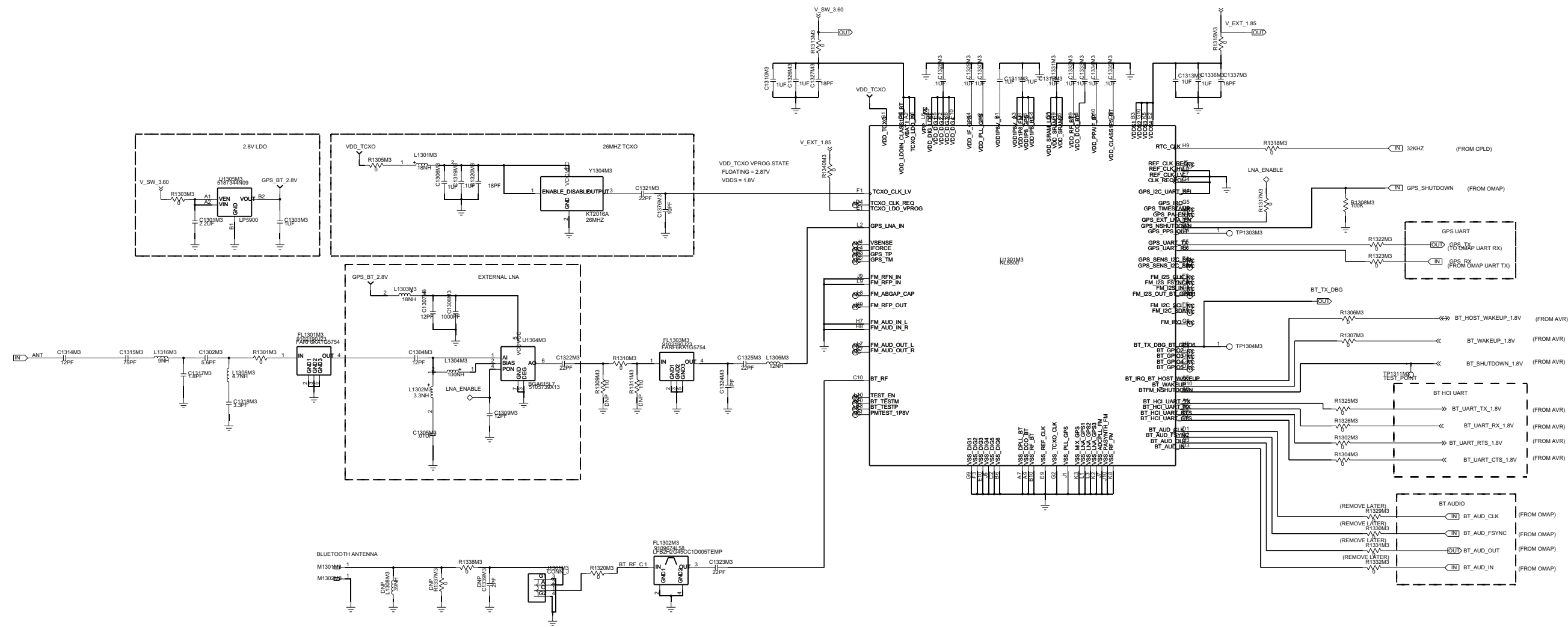


Figure 8-16. GPS Bluetooth Circuit – 1 of 2

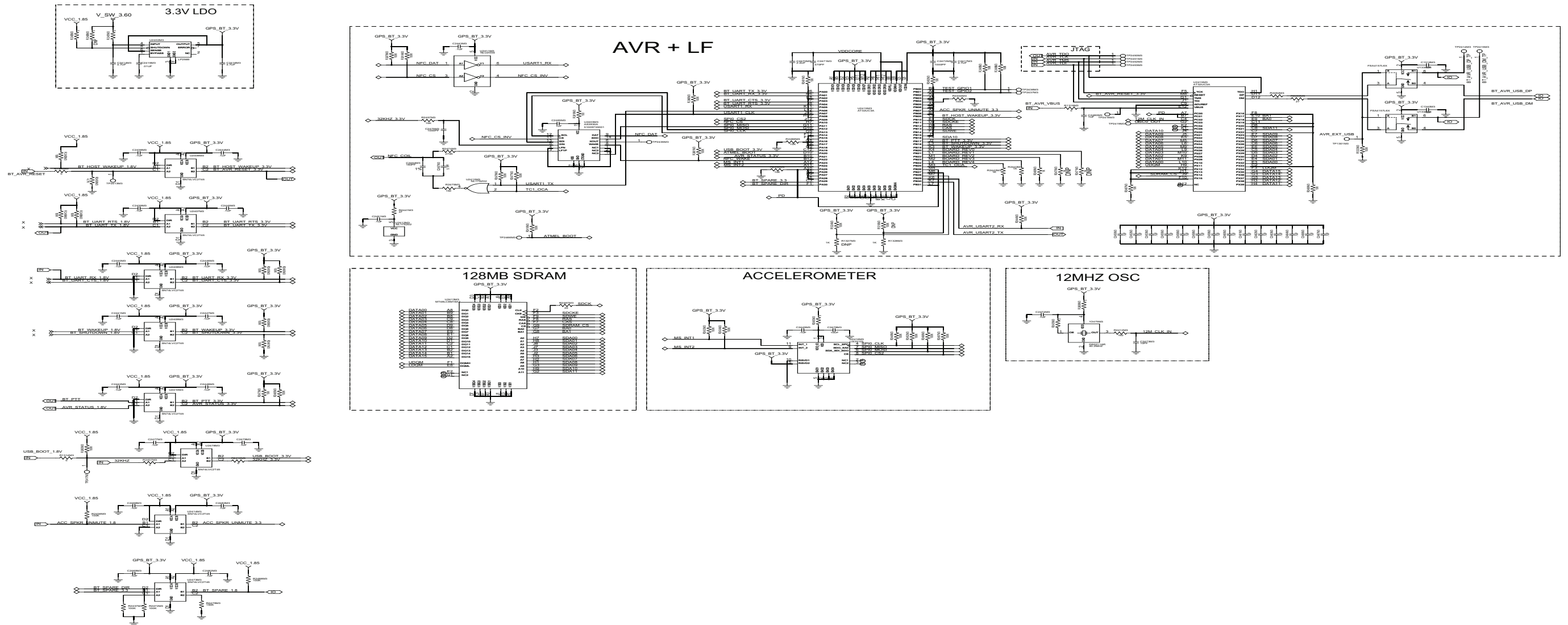


Figure 8-17. GPS Bluetooth Circuit – 2 of 2

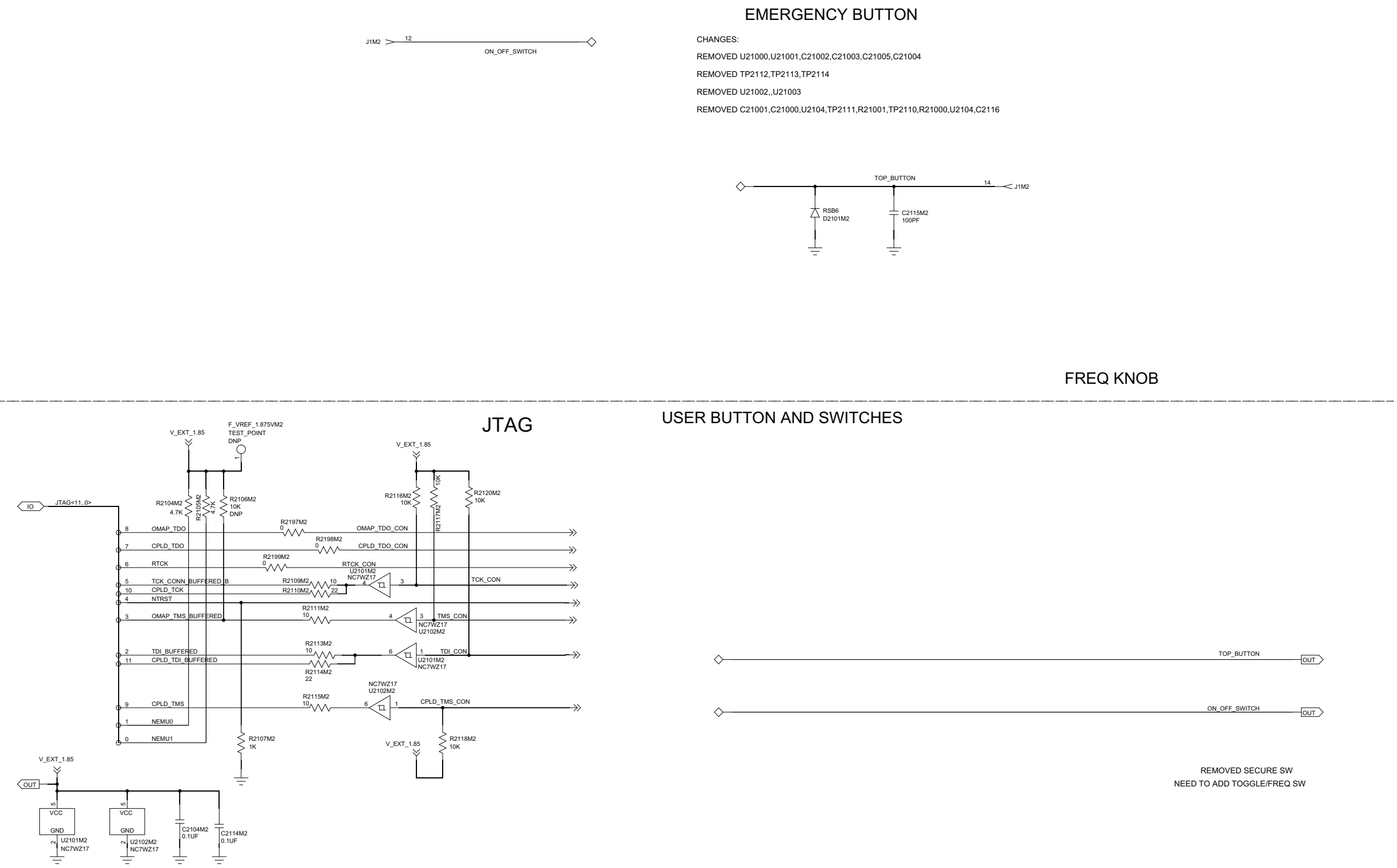


Figure 8-18. Top Control and JTAG Circuit

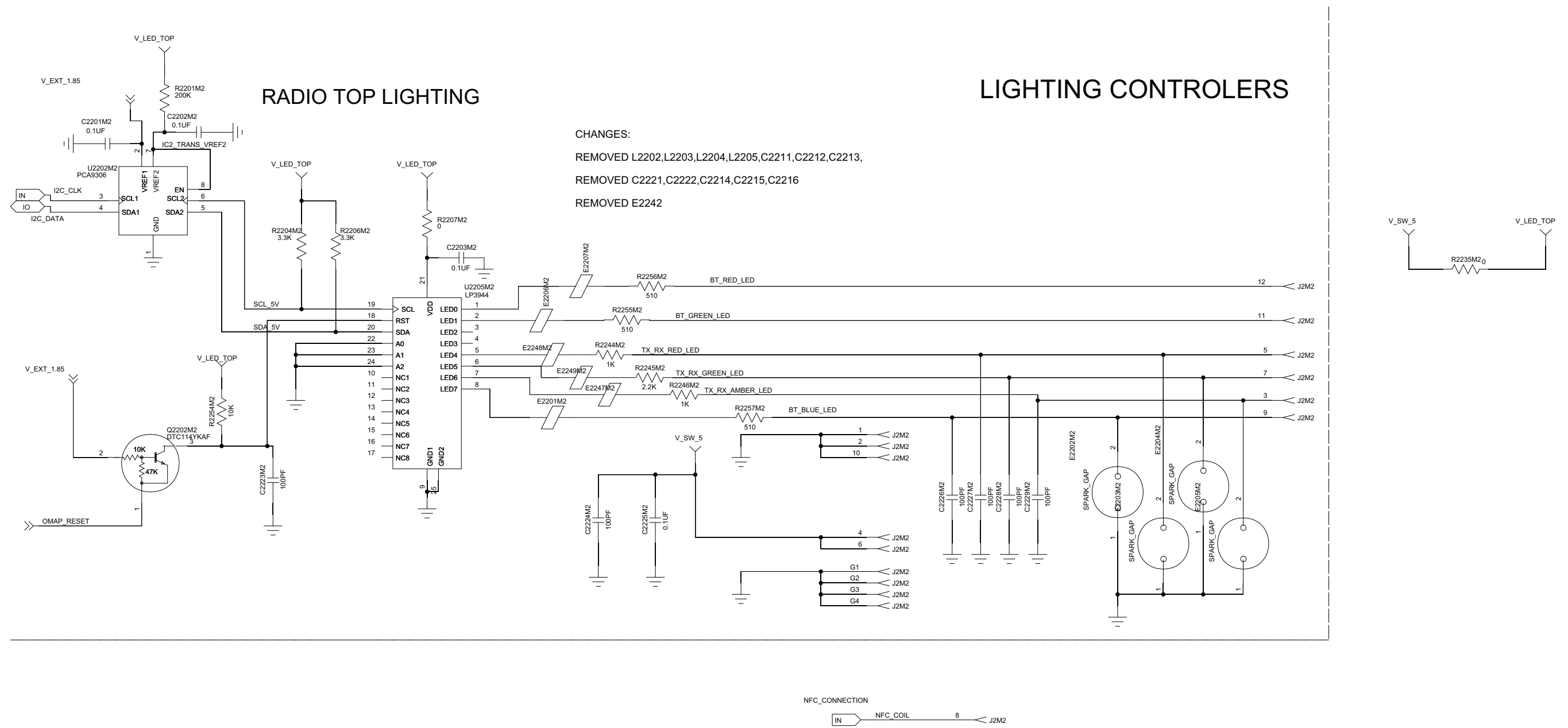


Figure 8-19. Lighting Control Circuit

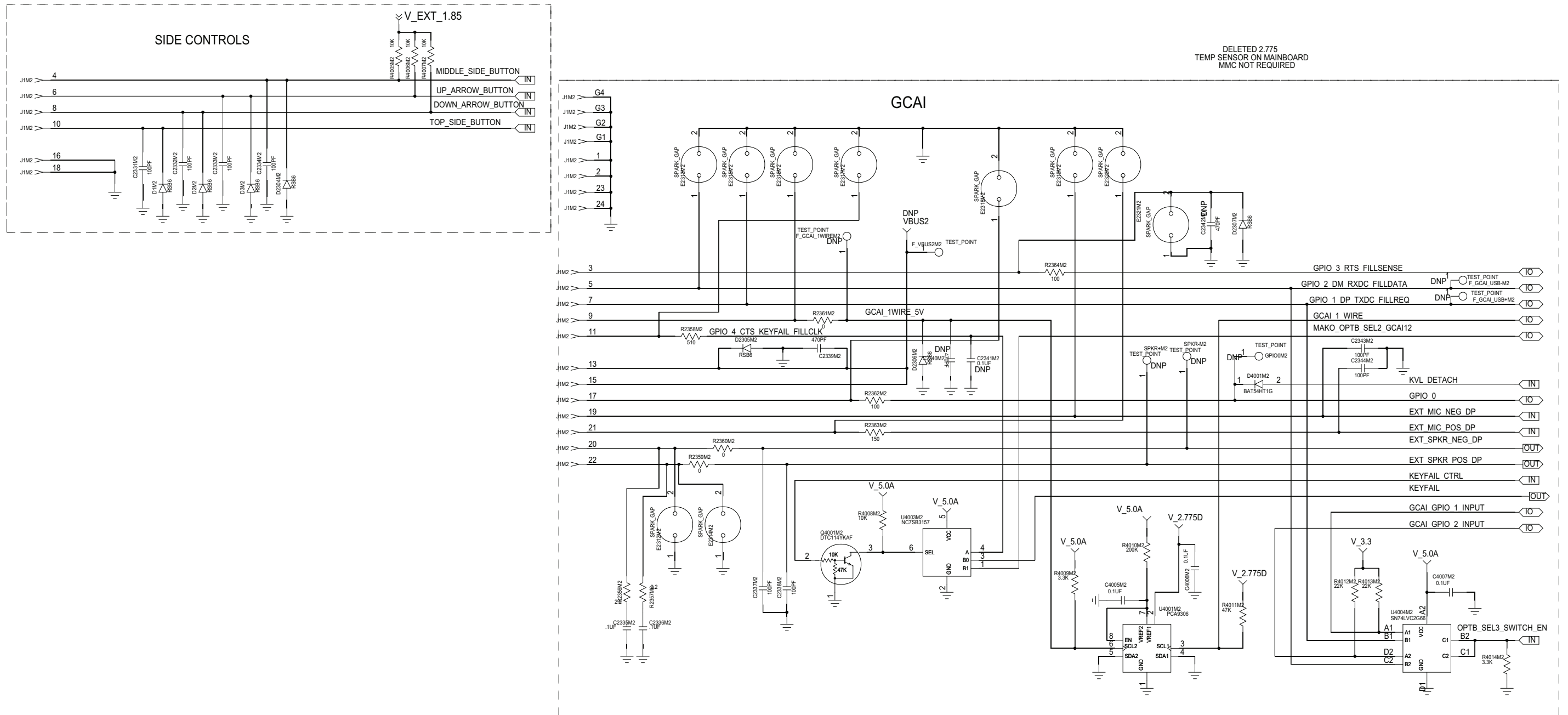


Figure 8-20. GCAI and side control

DEBUGGING AND DISPLAY CONNECTOR

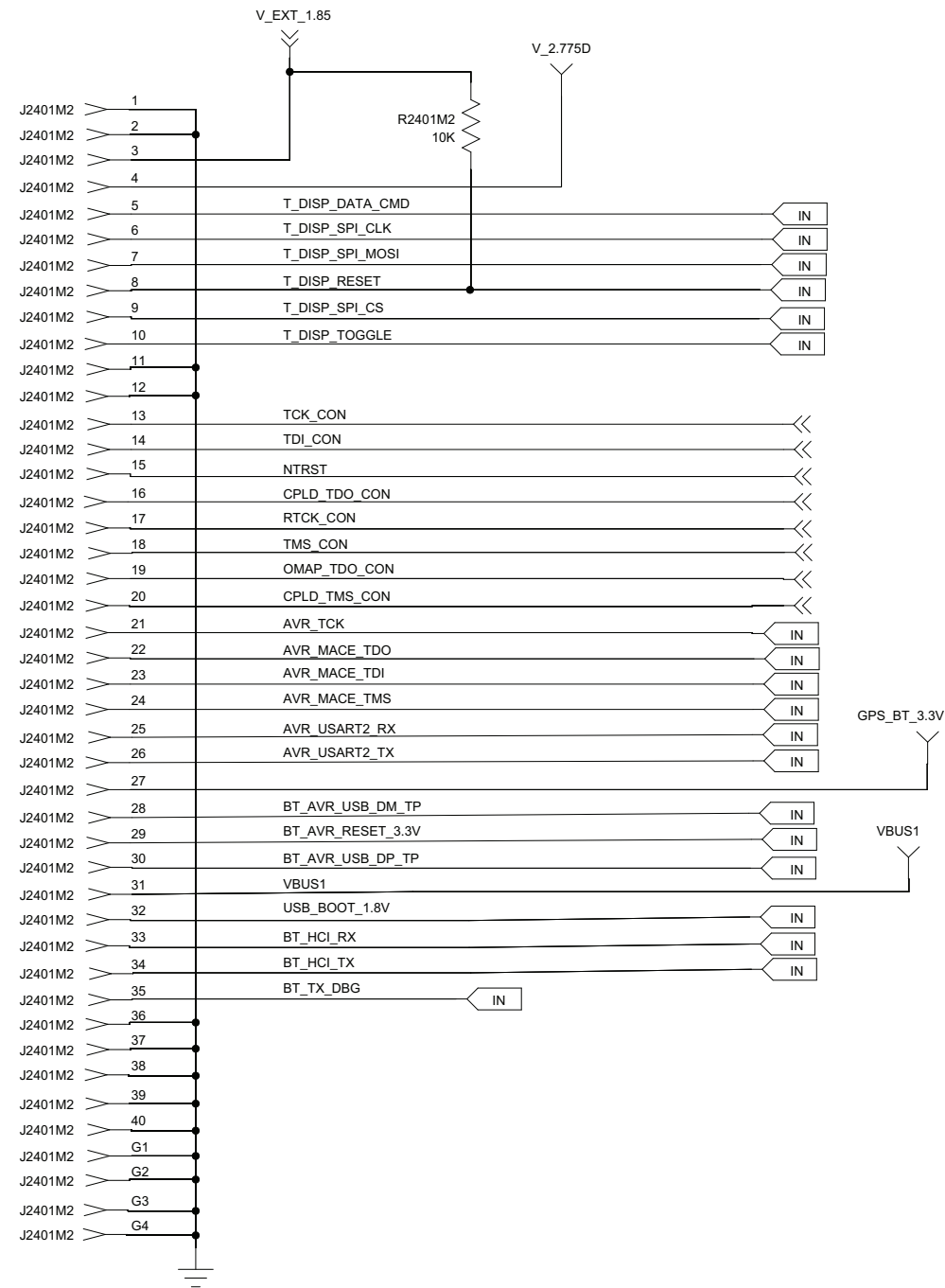


Figure 8-21. Debugging and Display Connector

CONNECTORS

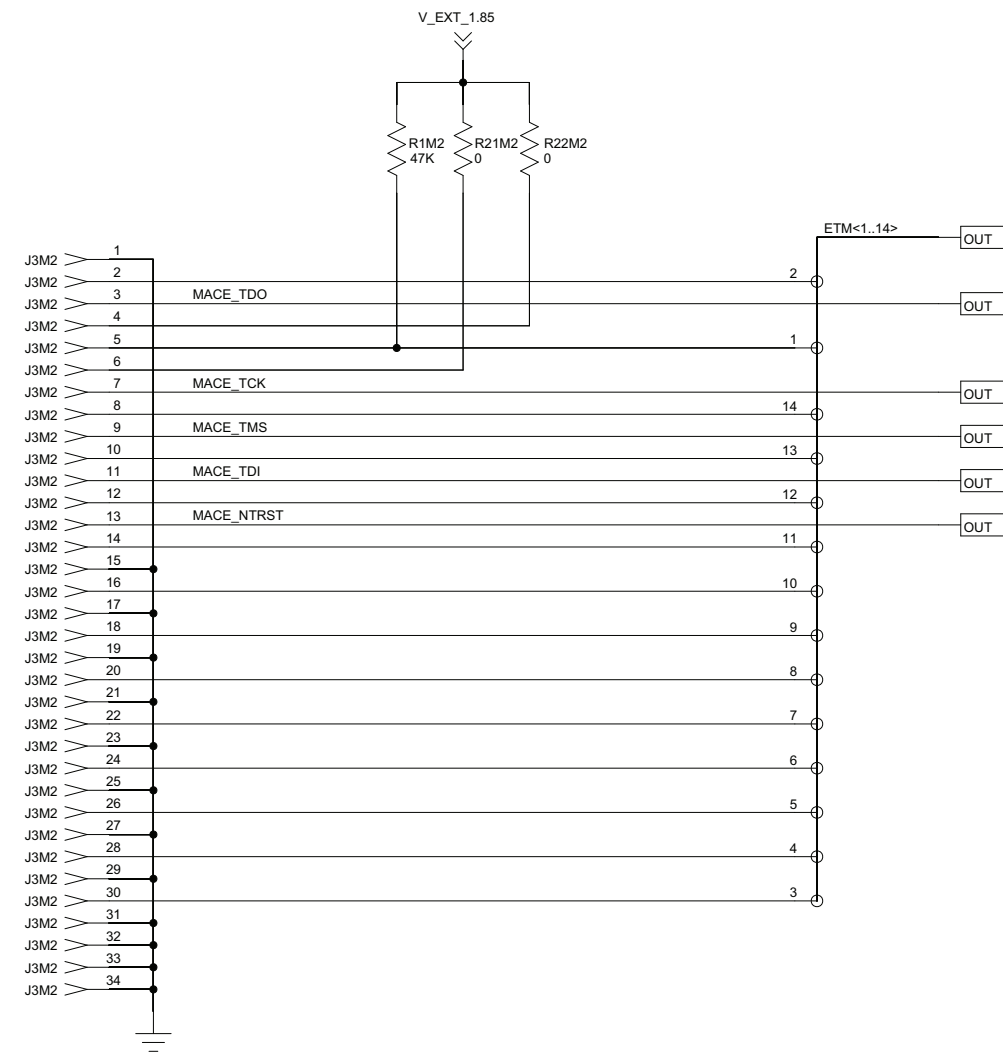


Figure 8-22. Connectors

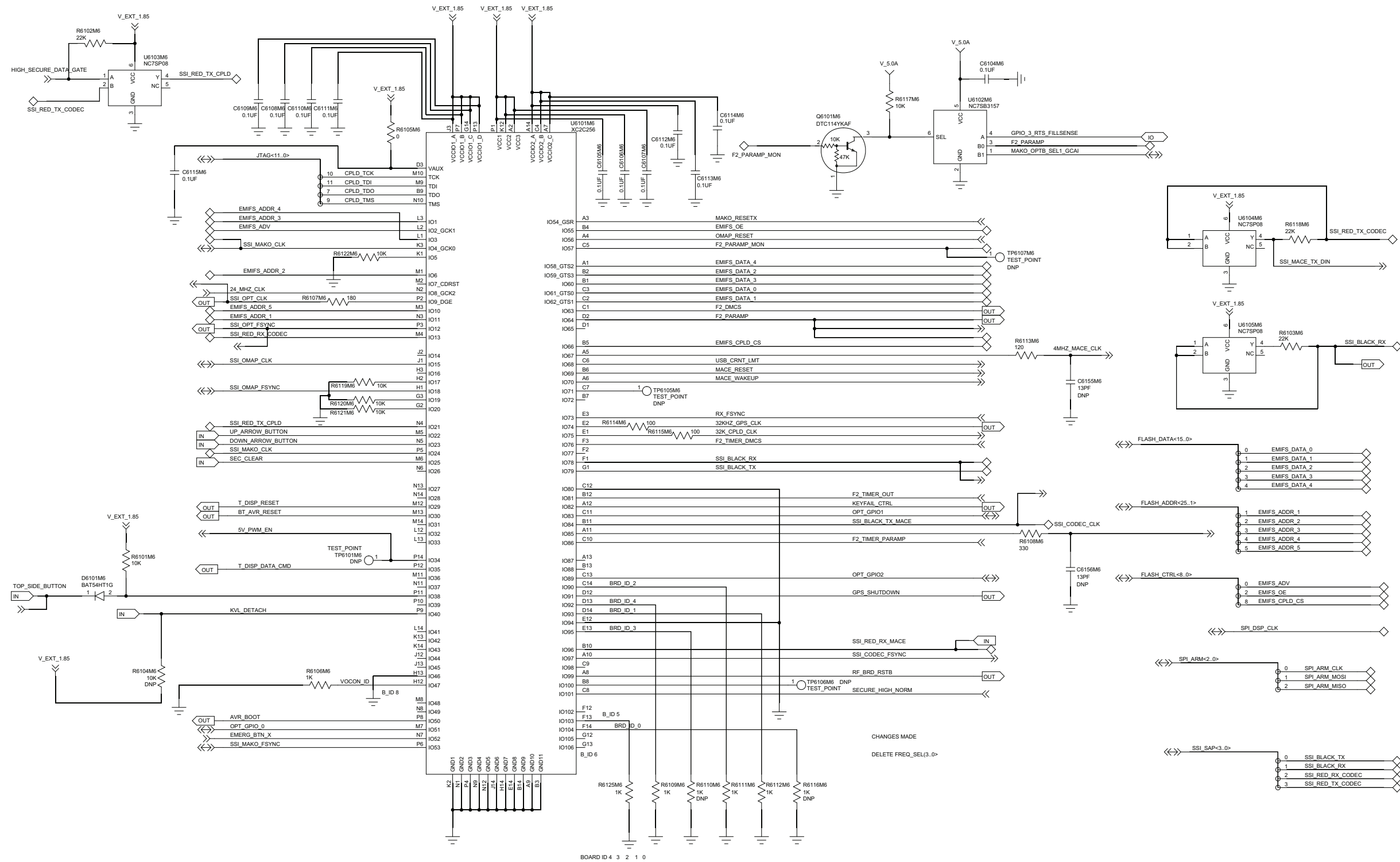
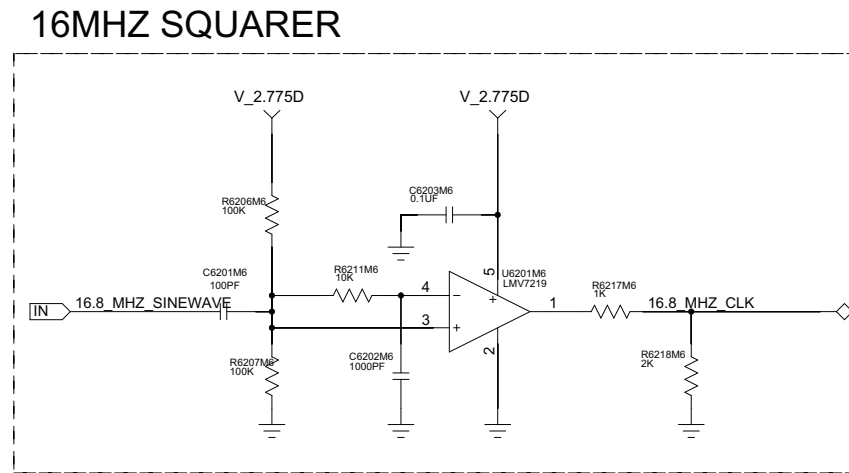
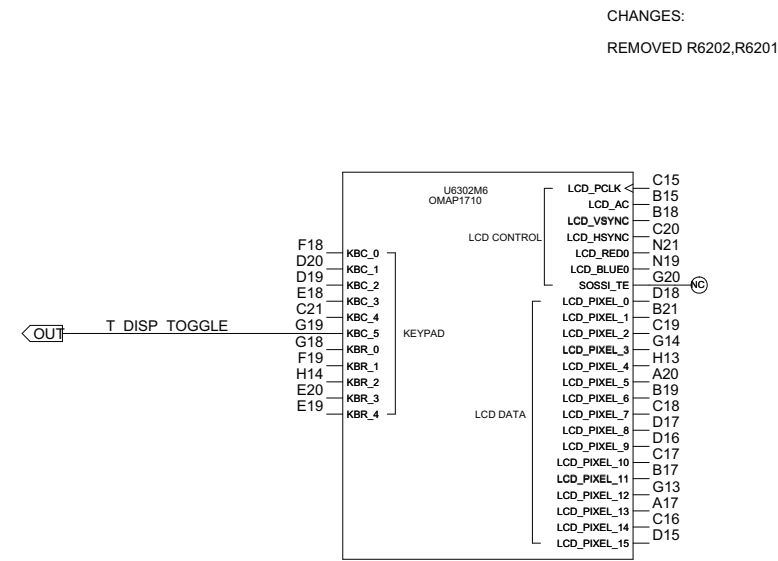


Figure 8-23. CPLD Circuit



CHANGES: REMOVE KEYPAD, DISPLAY LINES
REMOVE R6203,R6214

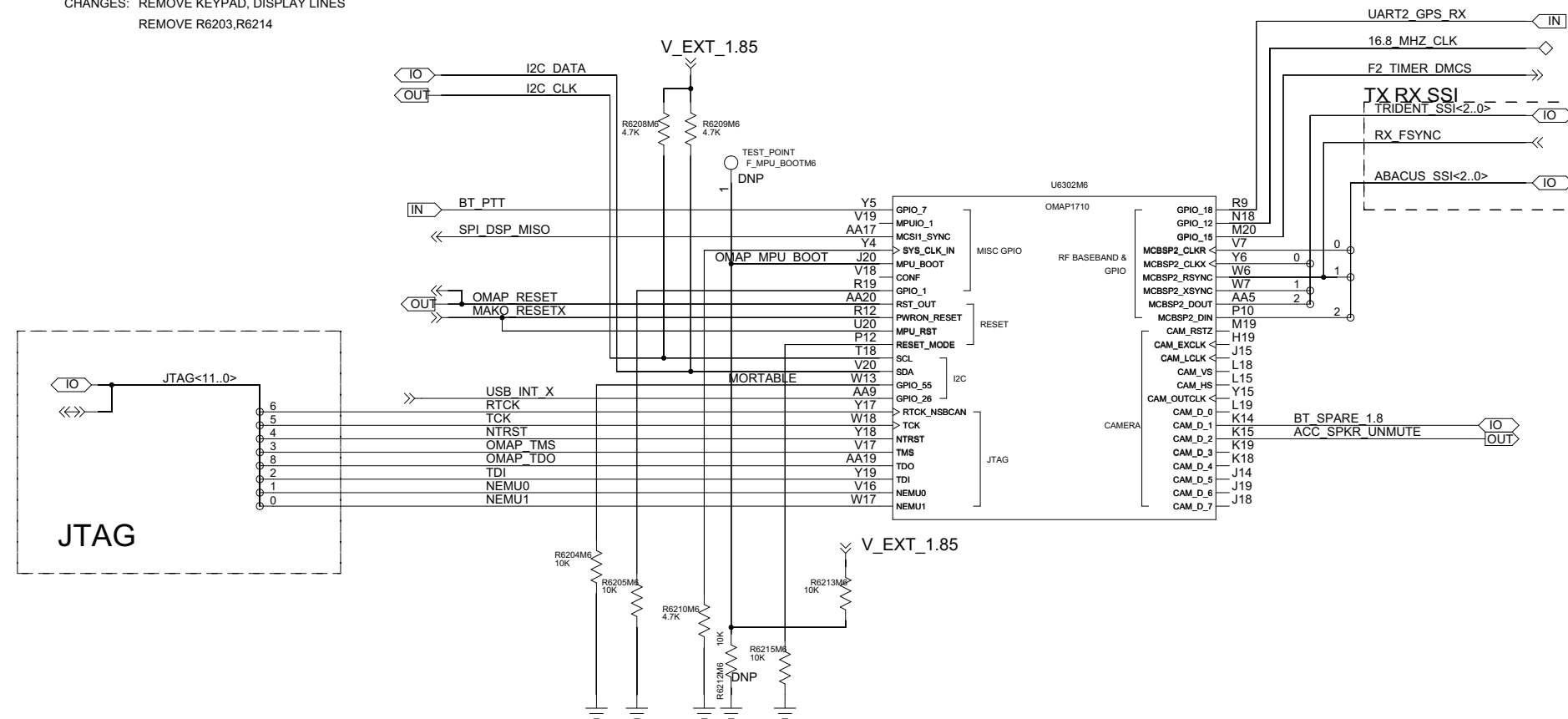


Figure 8-24. OMAP User Interface Circuit

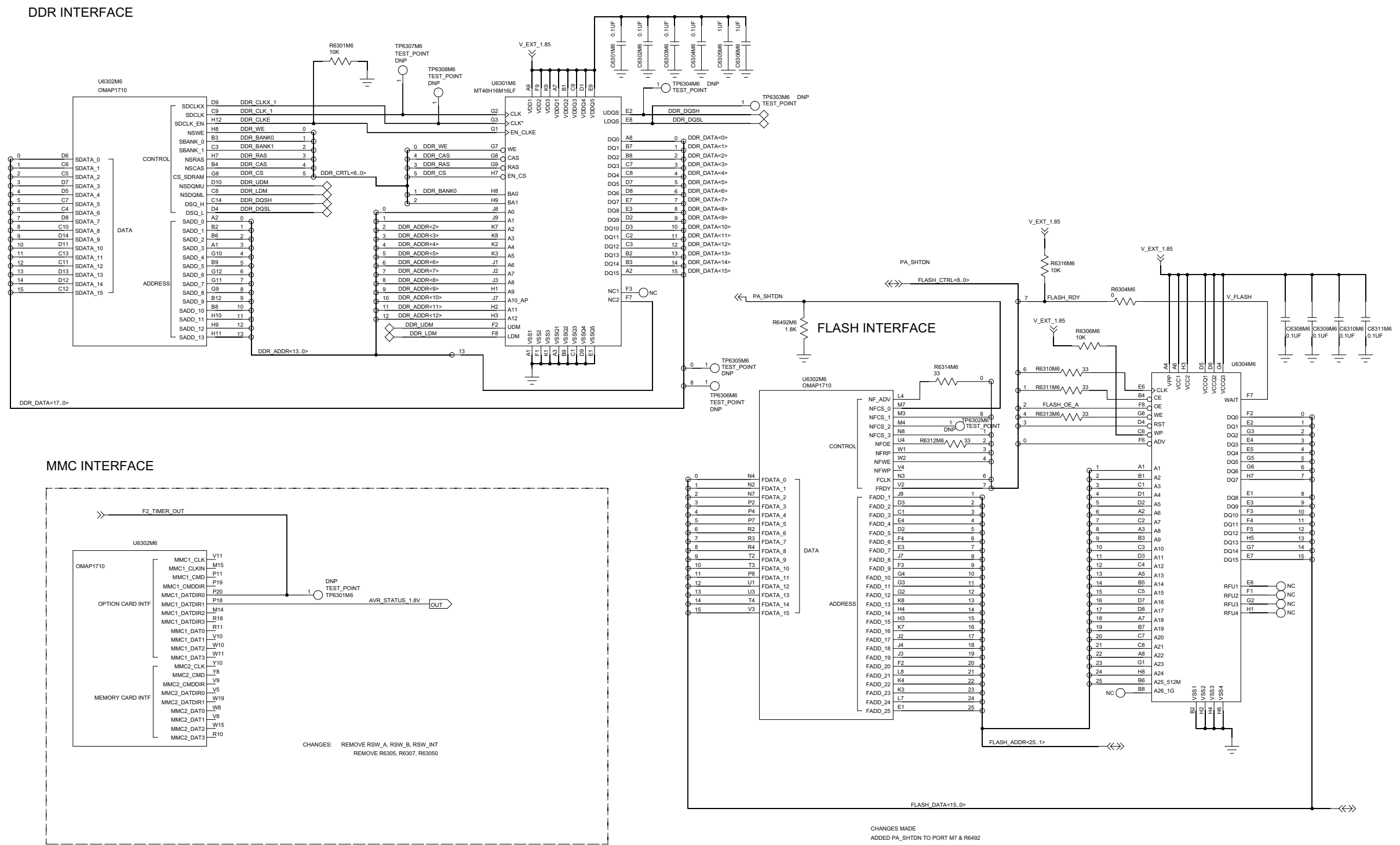


Figure 8-25. Memory Interface

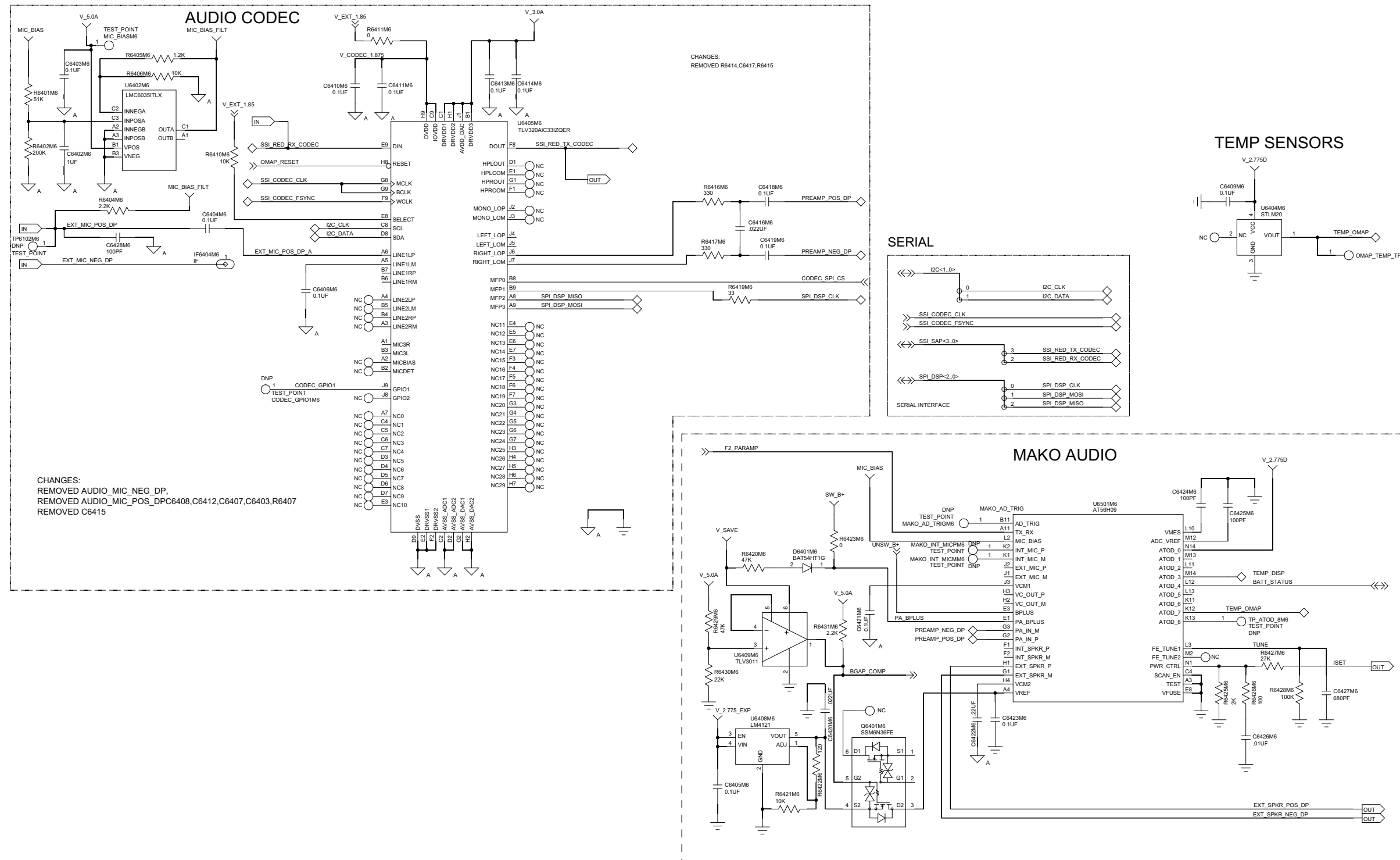


Figure 8-26. Audio Circuit

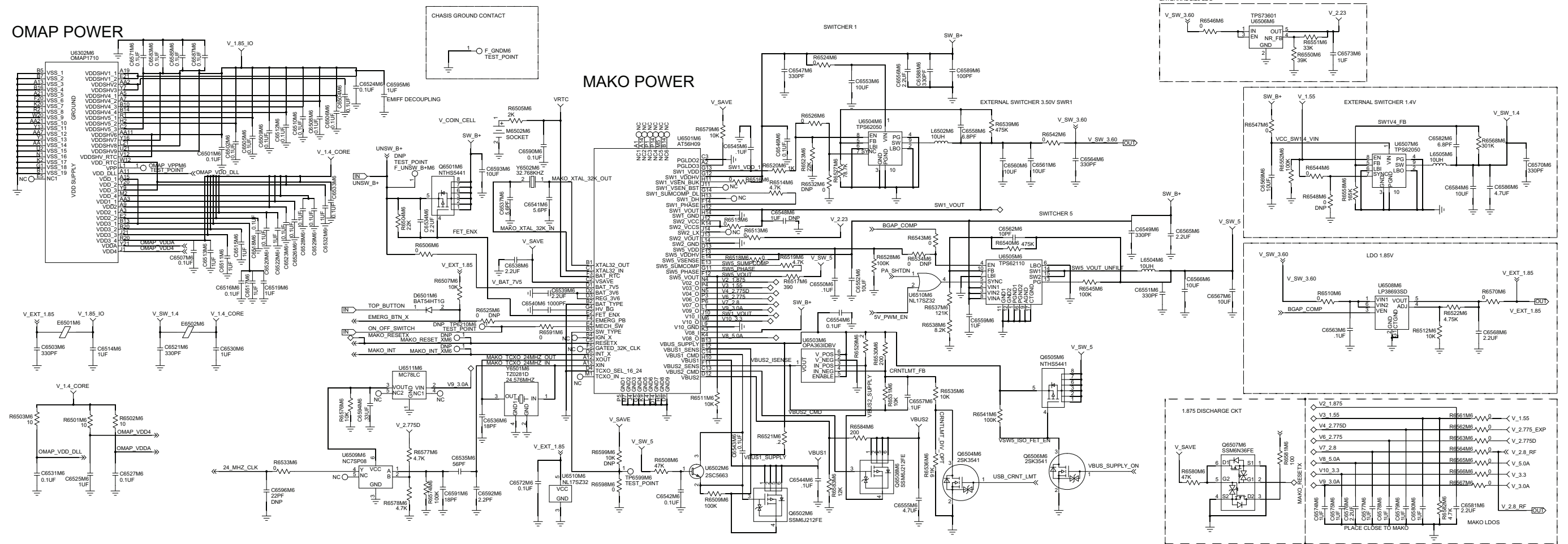


Figure 8-27. MAKO/DC Distribution Circuit

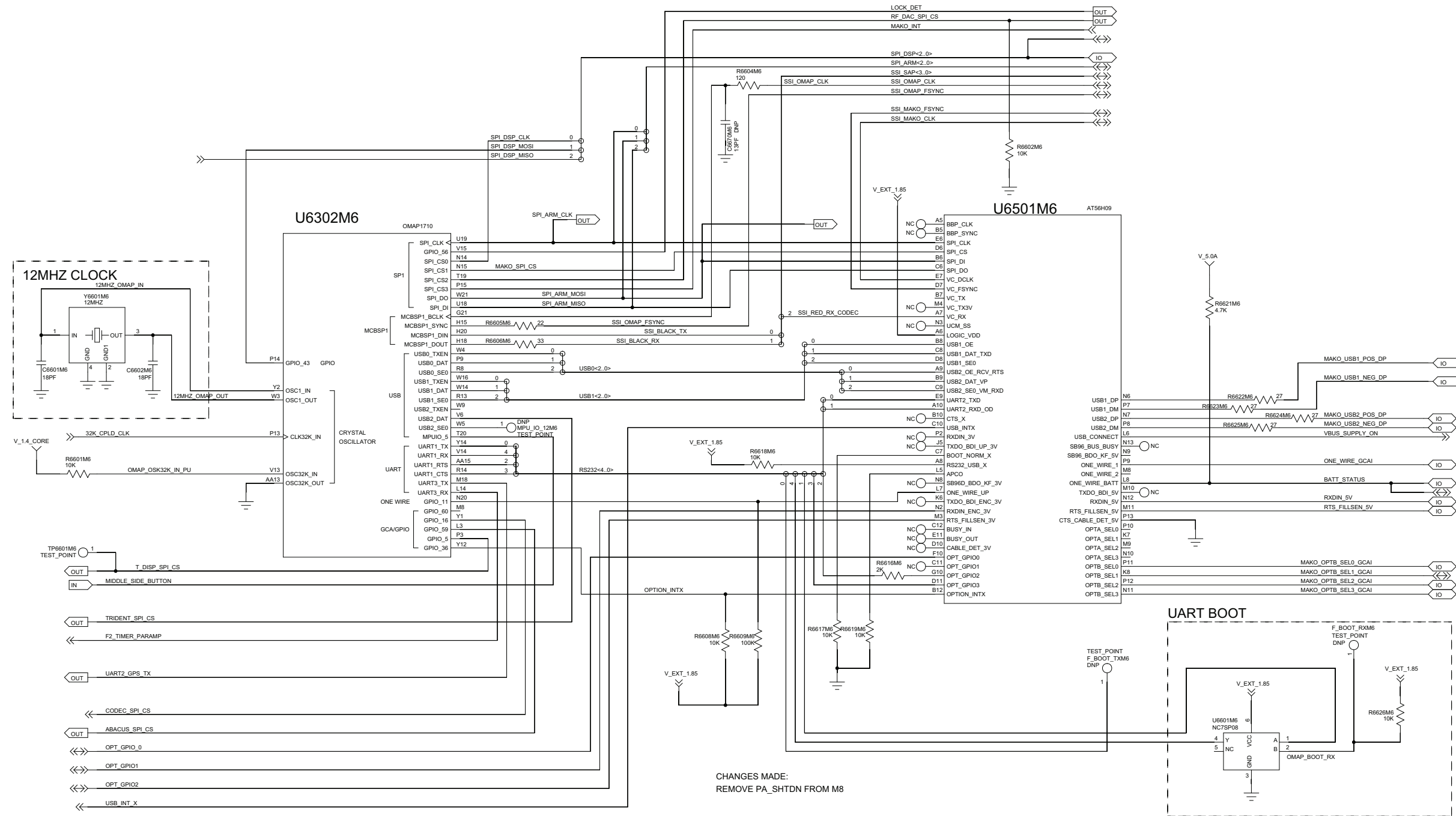


Figure 8-28. Serial Interface Circuit

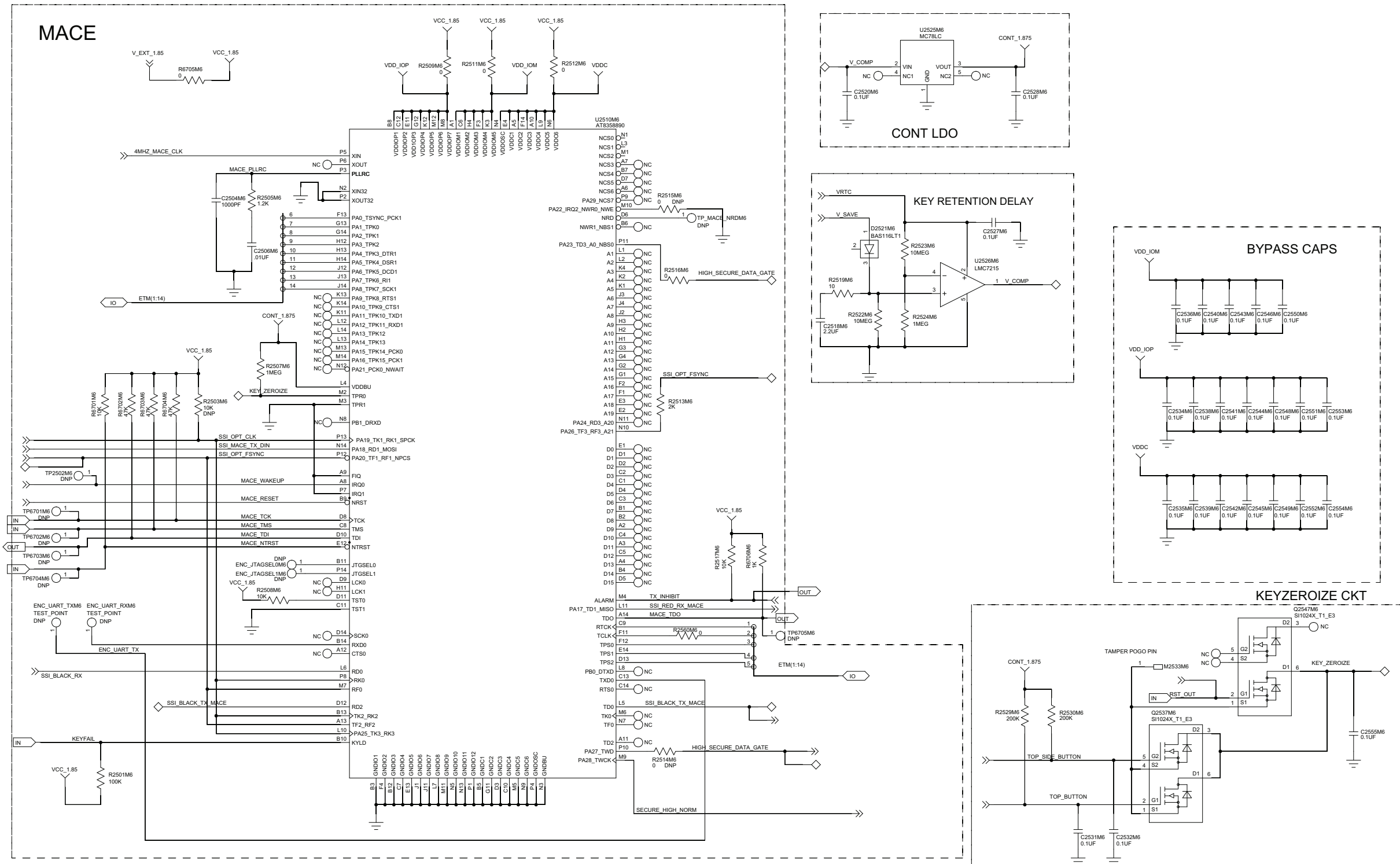


Figure 8-29. Secure Circuit

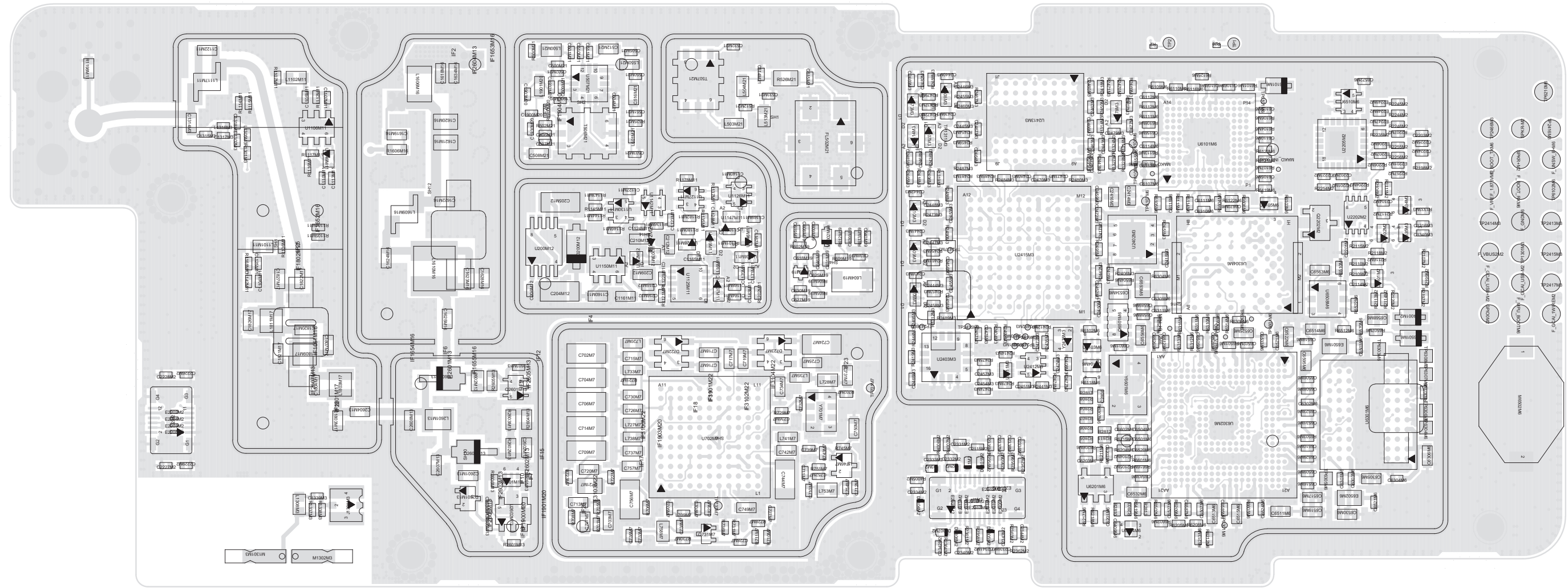


Figure 8-30. Transceiver (RF) Board Layout – Top Side

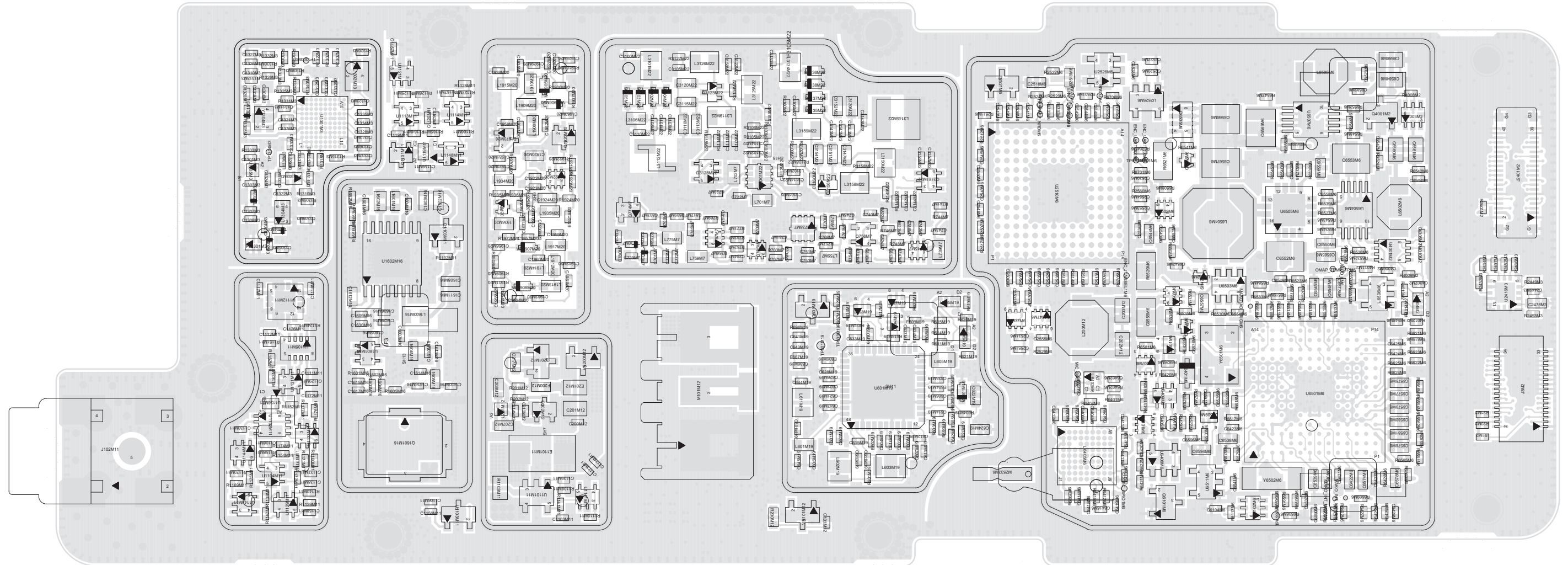


Figure 8-31. Transceiver (RF) Board Layout – Bottom Side

UHF1 Transceiver (RF) Board Parts List –
84012513001_A

Ref. Des.	Part Number	Description
C101M12	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1103M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1104M11	NOT PLACED	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1105M11	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1106M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1107M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1108M11	2113946B02	CAP,CHIP,.047UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMA
C1110M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1111M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1112M11	2113945B01	CAP,CHIP,6800PF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1113M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1116M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1117M11	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM

Ref. Des.	Part Number	Description
C1118M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1119M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1120M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1122M11	2113944M05	CAP,FXD,3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1123M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1124M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1125M11	2113944A23	CAP,CHIP,8.2PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1126M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1127M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1128M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1129M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1130M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1137M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1138M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1139M11	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1140M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1141M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1142M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1156M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1157M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1158M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1159M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1160M11	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C1161M11	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C1162M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1163M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1164M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1165M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1166M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1167M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1168M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1169M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1170M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1171M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1172M11	NOT PLACED	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1173M11	2115153H49	CAP,FXD,47PF,+1%,-1%,50V-DC,0402,C0G
C1174M11	2115153H55	CAP,CER CHIP,82PF,50V-DC,0402,C0G
C1301M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C1302M3	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1303M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C1304M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1305M3	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1306M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1307M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1308M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1309M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1310M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1311M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1312M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1313M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1314M3	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1315M3	2115153H02	CAP,CER CHIP,.75PF,.1PF+/-,+1%,-1%,50V-DC,C0G,CAP, CERAMIC
C1316M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1317M3	2188881Y12	CAP,CER CHIP,1.8PF,.1PF+/-,16V-DC,0402,NP0,-55DEG CMIN,85DEG C
C1318M3	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-1%,50V-DC,0402,C0G,CAP, CERA
C1319M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1320M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1321M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1322M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1323M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1324M3	2115153H03	CAP,CER CHIP,1PF,.1PF+/-,+1%,-1%,50V-DC,0402,C0G
C1325M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1326M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1327M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1328M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1329M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1330M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1331M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1332M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1333M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1334M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1335M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1336M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1337M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1339M3	NOT PLACED	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1340M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1376M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1601M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1602M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1603M16	2113945L49	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P
C1604M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1605M16	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1606M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1607M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1608M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1609M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1610M16	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1611M16	2113945L49	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P
C1612M16	NOT PLACED	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1613M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1614M16	2113944A36	CAP,CHIP,68PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1615M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1616M16	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1617M16	NOT PLACED	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1618M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1619M16	2113944M22	CAP,FXD,15PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1620M16	2171741M06	CAP,CER CHIP,39PF,50V-DC,HI Q CAP, 39 PF
C1621M16	2171741M07	CAP,CER CHIP,15PF,50V-DC,HI Q CAP, 15 PF
C1622M16	2113944M24	CAP,FXD,18PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1623M16	NOT PLACED	CAP,CHIP,1.2PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1624M16	2113944M23	CAP,FXD,16PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1625M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1628M16	2113944M13	CAP,FXD,6.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1629M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1630M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1633M16	NOT PLACED	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1634M16	NOT PLACED	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P
C1803M17	2113944C19	CAP,CHIP,3.6PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1804M17	2113951C05	CAP,FXD,.5PF,.05PF+/-,250V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1807M17	2113951C26	CAP,FXD,4.7PF,.05PF+/-,250V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1820M17	2113944C18	CAP,CHIP,3.3PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1821M17	2113944C27	CAP,CHIP,7.5PF,.5PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1822M17	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1826M17	2113944C14	CAP,CHIP,2.2PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1827M17	2113944C12	CAP,CHIP,1.8PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1900M20	2115153H25	CAP,CERAMIC CHIP,8.2PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,

Ref. Des.	Part Number	Description
C1901M20	2115153H57	CAP,CERAMIC CHIP,100PF,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC,
C1903M20	NOT PLACED	CAP,CER CHIP,4PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMI
C1920M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C1922M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1923M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1924M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C1925M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1926M20	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C1928M20	2115153H21	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1929M20	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1930M20	NOT PLACED	CAP,FXD,22PF,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1931M20	2115153H54	CAP,CER CHIP,75PF,50V-DC,0402,C0G
C1932M20	NOT PLACED	CAP,FXD,22PF,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG

Ref. Des.	Part Number	Description
C1935M20	2115153H13	CAP,FXD,2.7PF,.1PF+/-,+3.7%,-3.7%,50V-DC,0402,C0G,CAP,CERAMIC
C1936M20	2115153H26	CAP,CER CHIP,9.1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C1938M20	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C1939M20	2115153H13	CAP,FXD,2.7PF,.1PF+/-,+3.7%,-3.7%,50V-DC,0402,C0G,CAP,CERAMIC
C1940M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1942M20	2115153H23	CAP,CER CHIP,6.8PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C1952M20	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1953M20	2115153H21	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1954M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1955M20	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C1956M20	2115153H21	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1957M20	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C1958M20	2115153H23	CAP,CER CHIP,6.8PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C2343M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2444M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2456M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2468M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2344M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2445M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2457M3	2115153H20	CAP,FXD,5.1PF,.1PF+/-,+2%,-2%,50V-DC,0402,C0G,CAP,CERAMIC, CO	C2469M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2414M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2446M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2458M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2470M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C2415M3	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2447M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2459M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2471M3	2113945A05	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C2416M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2448M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2460M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2472M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2417M3	2171206F01	CAP,CER CHIP,4.7UF,+20%,-20%,4V-DC,0402,X5R,MONO,SMD,W18	C2449M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2461M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2473M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2438M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2450M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2462M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2474M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2439M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2451M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2463M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2475M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2440M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2452M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2464M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2477M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2441M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2453M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2465M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P	C2478M3	2113956B54	CAP,FXD,10UF,+20%,-20%,6.3V-DC,X5R,-55DEG CMIN,85DEG CMAX
C2442M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2454M3	2171051Y05	CAP,CER CHIP,180PF,+1%,-1%,50V-DC,0402,COG,-55DEG CMIN,125DEG C	C2466M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2479M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2443M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2455M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2467M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2480M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
									C2482M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

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C2483M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2541M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2602M13	2113944C41	CAP,CHIP,68PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P	C3104M22	NOT PLACED	CAP,FXD,10PF,.1PF+/-,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C2504M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C2542M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2603M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C3105M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2506M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2543M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2604M13	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX	C3106M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2518M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX	C2544M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2605M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C3107M22	2115153H23	CAP,CER CHIP,6.8PF,.1PF+/-,+1%,-1%,50V-DC,0402,C0G,CAP,CERA
C2520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2545M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2606M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C3108M22	NOT PLACED	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C2527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2546M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2607M13	2113944C19	CAP,CHIP,3.6PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA	C3109M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2548M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2608M13	2113944C21	CAP,CHIP,4.3PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA	C3110M22	2115153H16	CAP,CERAMIC CHIP,3.6PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C2531M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2549M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2609M13	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX	C3111M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2532M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2550M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2806	NOT PLACED	CAP,FXD,.1PF,.03PF+/-,25V-DC,C0G,-55DEG CMIN,125DEG CMAX,PB-F	C3112M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2534M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2551M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C3100M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C3113M22	2113944M15	CAP,FXD,7.5PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2535M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2552M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C3101M22	2115153H21	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0402,C0G,CAP,CERAMIC, COG	C3114M22	NOT PLACED	CAP,FXD,10PF,.1PF+/-,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C2536M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2553M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C3102M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C3115M22	2113944M14	CAP,FXD,6.8PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2538M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2554M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C3103M22	NOT PLACED	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA	C3116M22	2113944M14	CAP,FXD,6.8PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2539M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2555M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX						
C2540M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2601M13	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX						

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C3120M22	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C3122M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3133M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3140M22	2115153H19	CAP,FXD,4.7PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G
C3141M22	2115153H19	CAP,FXD,4.7PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G
C3142M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3143M22	2115153H14	CAP,CERAMIC CHIP,3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CE
C3144M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3147M22	2113944M09	CAP,FXD,4.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3151M22	2113944M16	CAP,FXD,8.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3152M22	2113944M12	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3154M22	2113944M35	CAP,FXD,51PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3155M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C3157M22	2113946B04	CAP,CHIP,1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3158M22	2113946B04	CAP,CHIP,1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3159M22	2113944A09	CAP,CHIP,2.2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3160M22	2113944A17	CAP,CHIP,4.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3161M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C4005M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4006M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4007M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C500M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C501M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C502M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C503M21	NOT PLACED	CAP,CER CHIP,3.3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C504M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C505M21	NOT PLACED	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

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C506M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C507M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C508M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C509M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C510M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C511M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C512M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C514M21	NOT PLACED	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C515M21	2113944A14	CAP,CHIP,3.6PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C516M21	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C532M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C533M21	2115153H52	CAP,FXD,62PF,+1%,-1%,50V-DC,0402,C0G
C550M21	NOT PLACED	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C551M21	NOT PLACED	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C601M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C602M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C603M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C604M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C605M19	2115153H23	CAP,CER CHIP,6.8PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C606M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C607M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C608M19	2113944A12	CAP,CHIP,3PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C609M19	2113944A30	CAP,CHIP,27PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6104M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6105M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6106M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6107M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6108M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6109M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C610M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6110M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6111M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6112M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6113M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6114M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6115M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C611M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C612M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C613M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C614M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6155M6	NOT PLACED	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB

Ref. Des.	Part Number	Description
C6156M6	NOT PLACED	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C615M19	2113944A42	CAP,CHIP,150PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C616M19	2113945A11	CAP,CHIP,2200PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C617M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C618M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C619M19	2113944A35	CAP,CHIP,62PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6201M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6202M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C6203M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C620M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C621M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C622M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C623M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C624M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C625M19	2115153H39	CAP,FXD,18PF,50V-DC,0402,C0G
C626M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C627M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C628M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C629M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6301M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6302M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6303M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6304M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6305M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6306M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6308M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6309M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C630M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6310M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6311M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C631M19	2115153H32	CAP,FXD,8PF,.1PF+/-+.1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C632M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C633M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C634M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C635M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C636M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C637M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C638M19	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C639M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6402M6	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C6403M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6404M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6405M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6406M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6409M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C640M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6410M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6411M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6413M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6414M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6416M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6418M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6419M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C641M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6420M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6421M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6422M6	2113946C02	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6423M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6424M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6425M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6426M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6427M6	2113944A50	CAP,CHIP,680PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6428M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C642M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C643M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C644M19	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C645M19	NOT PLACED	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C646M19	2115153H32	CAP,FXD,8PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C6501M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6502M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6503M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6504M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6505M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6506M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6507M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6508M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6509M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6510M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6511M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6512M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6513M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6514M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6515M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6516M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6517M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6518M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6519M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6521M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6522M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6523M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6524M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6525M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6526M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C6579M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P	C6592M6	2113944A09	CAP,CHIP,2.2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA	C706M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX	C718M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6580M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P	C6593M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P	C707M7	2113945C01	CAP,CHIP,6800PF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CM	C719M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6581M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX	C6594M6	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX	C708M7	2115153H34	CAP,CER CHIP,11PF,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG	C720M7	2113944C53	CAP,CHIP,1500PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C6582M6	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C6595M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P	C709M7	2171051Y11	CAP,FXD,.1UF,+5%,-5%,1206,-55DEG CMIN,125DEG CMAX,PB-FREE	C721M7	NOT PLACED	CAP,FXD,.22UF,+10%,-10%,50V-DC,0805,X7R,-55DEG CMIN,125DEG CMAX
C6583M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C6596M6	NOT PLACED	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C710M7	NOT PLACED	CAP,CHIP,560PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C722M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6584M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P	C6601M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C711M7	NOT PLACED	CAP,CHIP,56PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C723M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6585M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C6602M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C712M7	NOT PLACED	CAP,CHIP,270PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C724M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C6586M6	2113956C35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX	C6670M6	NOT PLACED	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB	C713M7	2113945C26	CAP,FXD,.039UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA	C725M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6587M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C701M7	2115153H18	CAP,CER CHIP,4.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA	C714M7	2171051Y11	CAP,FXD,.1UF,+5%,-5%,1206,-55DEG CMIN,125DEG CMAX,PB-FREE	C726M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6588M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C702M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX	C715M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C727M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6589M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C703M7	2113945C26	CAP,FXD,.039UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA	C716M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C728M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6590M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C704M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX	C717M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C729M7	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C6591M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C705M7	2115153H34	CAP,CER CHIP,11PF,+1%,-1%,50V-DC,0402,C0G,CAP,CERAMIC, COG						

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C730M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C742M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C760M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C816M7	2113944A35	CAP,CHIP,62PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C731M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C743M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C764M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C817M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C732M7	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C744M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX	C768M7	2115153H19	CAP,FXD,4.7PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G	C819M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C733M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C745M7	2115153H19	CAP,FXD,4.7PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G	C770M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C823M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C734M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C749M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C772M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C824M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C735M7	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C750M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C773M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D1970M20	NOT PLACED	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
C736M7	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C751M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C777M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D1M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C737M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C752M7	2113944A43	CAP,CHIP,180PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C780M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D200M12	4813978A19	DIODE,RECT,MBR120,SM,S OD-123,1A,20V,SHTK,PB-FREE
C738M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C753M7	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C781M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D2101M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C739M7	2113944A17	CAP,CHIP,4.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA	C754M7	2113944A34	CAP,CHIP,56PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C786M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D2304M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C740M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C756M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX	C803M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D2305M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C741M7	NOT PLACED	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C757M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C813M7	NOT PLACED	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D2306M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
									D2307M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
									D2521M6	4871785H01	DIODE,SWG,BAS116LT1G,S OT-23/SC-59,SOT-23,200MA,75V,.225W,SWG DI

Ref. Des.	Part Number	Description
D2601M13	4813974A19	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
D2602M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWERMITE
D2603M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWERMITE
D2M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D3102M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3103M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3104M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3105M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3135M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3136M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3137M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3138M22	4805656W87	DIODE,VCTR,@15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D4001M2	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18

Ref. Des.	Part Number	Description
D6101M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D6401M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D6501M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D722M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
D723M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
E1101M11	2405688Z01	IDCTR,BEAD,FERR BEAD
E1921M20	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E201M12	7686949J14	FLTR,FERRITE BEAD,2A,SM,0805,CHIP,220OHM
E2201M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2206M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2207M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2247M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2248M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2249M2	76852680E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E601M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M

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E602M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E603M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E604M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E605M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E606M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E607M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E608M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E609M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E6501M6	2480067M02	FIXED INDUCTOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE
E6502M6	2480067M02	FIXED INDUCTOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE
F200M12	6575834B01	FUSE,FST BLW,2A,32V,FUSE SUR MT
FL1301M3	9102190J23	FLTR,SAW,BANDPASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD,PB-FREE
FL1302M3	9109674L58	BAND PASS FILTER
FL1303M3	9102190J23	FLTR,SAW,BANDPASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD,PB-FREE

Ref. Des.	Part Number	Description
FL502M21	91009300001	FLTR,BANDPASS,109.65MHZ NOM,FILTER,MONOLITHIC CRYSTAL,BAND
J102M11	2880658Z08	RF CONNECTOR,SMA,M,CONN SMA
J1301M3	40012057001	RF SWITCH,SWITCH,RF
J1M2	9012130001	CONN,RCPT,24CONT,.4MM,CONNECTOR, BTB RECEPTACLE, 24-PIN,
J2401M2	0989851N01	CONN,BTB,2 ROW,RCPT,40CONT,.4MM,GLD,SMD
J2M2	0971704L01	CONN,CUST,RCPT,12CONT,CONNECTOR, 12-PIN SOCKET, 0.4MM PIT
J3M2	9012073001	CONN,BTB,RCPT,34CONT,.4MM,GLD,ST,CONNECTOR, B2B RCPT 34PINS
L1101M11	2415429H26	IDCTR,WW,33NH,5%,600MA,.22OHM,CER,SM,0603,CHIP
L1102M11	2415429H10	IDCTR,WW,6.8NH,5%,700MA,.11OHM,CER,SM,0603,CHIP
L1117M11	2415428H01	COIL,AW,1.65NH,10%,1.6A,AIR,2 TURNS,SM,AIR WOUND IDCTR
L1301M3	2414017P16	IDCTR,CHIP,18NH,5%,300MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1302M3	2475122C13	IDCTR,3.3NH,9.09%,300MA,.17OHM,CER,4 TURNS,SM,IND, MULTI-LA
L1303M3	2414017P16	IDCTR,CHIP,18NH,5%,300MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1304M3	2475122C37	IDCTR,100NH,5%,300MA,.07OHM,CER,4 TURNS,SM,IND, MULTI-LAY
L1305M3	24012011010	IDCTR,WW,4.7NH,2%,1.5A,.06OHM,CER,6.85GHZ SRF,SM,0402 HI Q

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
L1306M3	2414017P14	IDCTR,CHIP,12NH,5%,300MA,.60OHM,CER,9 Q,2GHZ SRF,SM,0402,PB-F	L1908M20	2478057A04	IDCTR,3.6NH,2%,.031OHM,CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU	L3101M22	2414032F41	IDCTR,WW,390NH,10%,200MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L503M21	2414017N24	IDCTR,CHIP,100NH,5%,300MA,2OHM,CER,15 Q,700MHZ SRF,SM,0603,P
L1308M3	NOT PLACED	IDCTR,WW,39NH,5%,600MA,CER,SM,CHIP	L1909M20	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L3102M22	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	L504M21	2478057A51	CHIP INDUCTOR,RF,270NH,2%,SM,0603 HI Q CHIP IDCTR
L1316M3	24012011018	IDCTR,WW,9NH,2%,1.4A,.07OHM,CER,5GHZ SRF,SM,0402 HI Q CHIP	L1910M20	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L3106M22	2478057A21	IDCTR,15NH,2%,.078OHM,CER,48 Q,3.6GHZ SRF,PCMT,15 NH SUR	L513M21	NOT PLACED	IDCTR,WW,22NH,5%,700MA,.19OHM,CER,SM,0603,CHIP
L1601M16	24009331029	IDCTR,WW,15NH,5%,600MA,SM,IDCTR,WW,15NH,5%,600MA,SM,060	L1912M20	2478057A04	IDCTR,3.6NH,2%,.031OHM,CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU	L3112M22	2415428H04	IDCTR,AW,5.4NH,2%,1.6A,AIR,SM,AIR WOUND IDCTR	L550M21	24009331029	IDCTR,WW,15NH,5%,600MA,SM,IDCTR,WW,15NH,5%,600MA,SM,060
L1602M16	2415429H37	IDCTR,WW,110NH,5%,300MA,.61OHM,CER,SM,0603,CHIP	L1913M20	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L3119M22	2414032F73	IDCTR,WW,820NH,5%,180MA,2.23OHM,CER,23 Q,215MHZ SRF,SM,PB-F	L601M19	2415429H43	IDCTR,WW,220NH,5%,300MA,2.1OHM,CER,SM,0603,CHIP
L1603M16	2414015B14	IDCTR,FXD,110NH,2%,400MA,.46OHM,CER,40 Q,900MHZ SRF,SM,0805	L1914M20	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L3125M22	2414032F41	IDCTR,WW,390NH,10%,200MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L602M19	2466505A01	CHIP INDUCTOR,CHIP,10UH,5%,150MA,FERR,0 AWG,SM,PB-FREE
L1604M16	24009331005	IDCTR,WW,3.9NH,INDUCTOR,3.9NH,+/-0.5NH,0603	L1915M20	2478057A12	IDCTR,7.2NH,2%,.052OHM,CER,48 Q,5.4GHZ SRF,PCMT,7.2NH SUR	L3126M22	2414032F73	IDCTR,WW,820NH,5%,180MA,2.23OHM,CER,23 Q,215MHZ SRF,SM,PB-F	L603M19	2466505A01	CHIP INDUCTOR,CHIP,10UH,5%,150MA,FERR,0 AWG,SM,PB-FREE
L1605M16	24009331005	IDCTR,WW,3.9NH,INDUCTOR,3.9NH,+/-0.5NH,0603	L1917M20	2478057A04	IDCTR,3.6NH,2%,.031OHM,CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU	L3134M22	2414032F41	IDCTR,WW,390NH,10%,200MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L604M19	2414032D16	IDCTR,WW,120NH,5%,800MA,.26OHM,CER,42 Q,1GHZ SRF,SM,PB-FREE
L1606M16	2460591E24	COIL AIR WOUND INDUC 23.75	L1934M20	2478057A35	CHIP INDUCTOR,RF,47NH,2%,SM,0603 HI Q CHIP IDCTR	L3139M22	2478057A21	IDCTR,15NH,2%,.078OHM,CER,48 Q,3.6GHZ SRF,PCMT,15 NH SUR	L605M19	2414017Q54	IDCTR,FXD,3.9UH,10%,300MA,.9OHM,FERR,45 Q,38MHZ SRF,SM,0805,P
L1609M16	2415428H02	IDCTR,AW,2.55NH,5%,1.6A,AIR,3 TURNS,SM,AIR WOUND IDCTR	L1935M20	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L3145M22	2471968L11	IDCTR,AW,13NH,2%,4A,.0039OHM,AIR,5 TURNS,100 Q,3GHZ SRF,SM,1	L611M19	2414032F39	IDCTR,WW,270NH,10%,280MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE
L1610M16	2471968L10	IDCTR,AW,9NH,2%,4A,.0034OHM,AIR,5 TURNS,120 Q,4GHZ SRF,SM,9.	L1936M20	2475994M09	IDCTR,CHIP,2.2NH,5%,2.1A,.18OHM,CER,13 Q,15GHZ SRF,PCMT,2.2	L3150M22	2414032F41	IDCTR,WW,390NH,10%,200MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L6502M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR
L1803M17	24012026006	IDCTR,AW,13.7NH,2%,2.7A,AIR,SM,ULTRA-MINIATURE AIR CORE	L200M12	2571269C01	IDCTR,COIL,1.5UH,20%,2.9A,.059OHM,FERR,SM,WW PWR W18 COMP	L3158M22	2414032F41	IDCTR,WW,390NH,10%,200MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L6504M6	24009268001	IDCTR,PWR,10UH,20%,1.3A,FERR,SM,10UH 2.1A SHLD IDCTR
L1809M17	24012026006	IDCTR,AW,13.7NH,2%,2.7A,AIR,SM,ULTRA-MINIATURE AIR CORE	L2601M13	2471912M03	IDCTR,COIL,18.9NH,5%,2.6A,.015OHM,AIR,40 Q,2.8GHZ SRF,SQ A	L3159M22	2414032F39	IDCTR,WW,270NH,10%,280MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE	L6505M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR
L1811M17	24012026006	IDCTR,AW,13.7NH,2%,2.7A,AIR,SM,ULTRA-MINIATURE AIR CORE	L2602M13	2415429H40	IDCTR,WW,180NH,5%,240MA,1.25OHM,CER,SM,0603,CHIP	L500M21	2415429H43	IDCTR,WW,220NH,5%,300MA,2.1OHM,CER,SM,0603,CHIP	L701M7	2415429H47	IDCTR,WW,390NH,5%,100MA,CER,SM,CHIP
L1900M20	NOT PLACED	IDCTR,WW,10NH,2%,1.3A,.085OHM,CER,4.7GHZ SRF,SM,0402 HI Q C	L3100M22	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	L501M21	NOT PLACED	IDCTR,WW,18NH,2%,900MA,.12OHM,CER,3.55GHZ SRF,SM,0402 HI Q	L702M7	2415429H47	IDCTR,WW,390NH,5%,100MA,CER,SM,CHIP

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L703M7	2475122C28	IDCTR,18NH,5%,300MA,.36 OHM,CER,4 TURNS,SM,IND, MULTI-LAYE
L709M7	2475122C26	IDCTR,12UH,5%,300MA,.07 OHM,CER,4 TURNS,SM,IND, MULTI-LAYE
L720M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L727M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L728M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
L730M7	2475122C25	IDCTR,10NH,5%,300MA,.26 OHM,CER,4 TURNS,SM,IND, MULTI-LAYE
L733M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L735M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L738M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L739M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
L741M7	24012100001	IDCTR,FXD,2.2UH,10%,15M A,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L753M7	2415347H06	IDCTR,WW,2.2UH,5%,320M A,1.2OHM,CER,SM,IDCTR, 2200NH
L755M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
L758M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
L759M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
L765M7	2415427H28	IDCTR,WW,18NH,5%,420MA ,CER,SM,0402,CHIP

Ref. Des.	Part Number	Description
L775M7	2415429H47	IDCTR,WW,390NH,5%,100M A,CER,SM,CHIP
M1	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR
M101M12	39012039001	CONN,CMPRSN,3CONT,ST, CONNECTOR, BAT CONTACT, WWP
M1301M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
M1302M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
M2	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR
M2533M6	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
M6502M6	0985888K02	BATTERY CONNECTOR,SKT,NI,LEAP
Q1101M11	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,P B-FREE
Q1103M11	4813970A59	XSTR,FET GP PWR,P-CH,ENHN,SM,SOT-23,20V,.4W,PB-FREE
Q1601M16	48012094001	XSTR,FET RF POWER,SM,25V,MOD,XSTR ,FET RF PWR, 135-941MH
Q1920M20	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,P B-FREE
Q1922M20	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
Q201M12	4813970A59	XSTR,FET GP PWR,P-CH,ENHN,SM,SOT-23,20V,.4W,PB-FREE
Q202M12	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,P B-FREE

Ref. Des.	Part Number	Description
Q2202M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250MH Z
Q2537M6	4888795V06	XSTR,FET GP PWR,MOSFET,SM,SMT,20V,.25W,LEAD-FREE
Q2547M6	4888795V06	XSTR,FET GP PWR,MOSFET,SM,SMT,20V,.25W,LEAD-FREE
Q2601M13	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q3123M22	4871915M01	XSTR,BIP RF SML SGNL,NPN,SC-75A,SMT,12V,.1W,100MA,4.5 GHZ,XST
Q3128M22	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q3156M22	4871915M01	XSTR,BIP RF SML SGNL,NPN,SC-75A,SMT,12V,.1W,100MA,4.5 GHZ,XST
Q3161M22	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q4001M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250MH Z
Q601M19	4813973A04	XSTR,BIP GP SS,NPN,TA13,SM,SOT-23,SMT,30V,.225W,300MA,1 25MHZ,P
Q6101M6	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250MH Z
Q6401M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W

Ref. Des.	Part Number	Description
Q6501M6	4813970A62	XSTR,FET GP PWR,MOSFET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE
Q6502M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,-20V,.5W,FET
Q6504M6	4809579E77	XSTR,FET GP SS,MOSFET,N-CH,SM,30V,1.2X1.2MM PKG W18 COMP
Q6505M6	4813970A62	XSTR,FET GP PWR,MOSFET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE
Q6506M6	4809579E77	XSTR,FET GP SS,MOSFET,N-CH,SM,30V,1.2X1.2MM PKG W18 COMP
Q6507M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W
Q6508M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,-20V,.5W,FET
Q731M7	4885061Y01	XSTR,BIP RF SMALL SIGNAL
Q745M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
Q756M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM,S OT-343,3.3V,TRANSITO
Q767M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
Q774M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM,S OT-343,3.3V,TRANSITO
Q785M7	4889394V04	XSTR,FET GEN PURPOSE SMALL SIG,MOSFET,N-CH,ENHN,SM,20V,.25W,P
R1101M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R1102M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1103M11	6009259001	RES,SHUNT,.02OHM,.33W,SM,LOW RESISTANCE THK FLM RES
R1104M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R1105M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R1106M11	0613952Q21	RES,MF,6.8OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1107M11	0613952Q45	RES,MF,68OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1108M11	0613952N81	RES,MF,68.1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1110M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1112M11	NOT PLACED	RES,MF,51OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1114M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R1115M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R1116M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1117M11	0613952R22	RES,MF,75KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1121M11	0613952N47	RES,MF,30.1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1122M11	0613952N85	RES,MF,75KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1124M11	0613952Q42	RES,MF,51OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R1125M11	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R1126M11	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1127M11	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1128M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1135M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1136M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1137M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1138M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1139M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1140M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1141M11	0613952R42	RES,MF,510KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1142M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1143M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1144M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1145M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R1146M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1151M11	0613952R05	RES,MF,15KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1152M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1154M11	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1158M11	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1160M11	0613952R03	RES,MF,12000,5,.0625,SM,0402,200,PB-FREE
R1162M11	0613952R29	RES,MF,150KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1163M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1164M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1165M11	0613952Q56	RES,MF,200OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1166M11	0613952Q56	RES,MF,200OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1167M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1168M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R1169M11	0613952P52	RES,MF,340KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1170M11	0613952N88	RES,MF,80.6KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1171M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R1172M11	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R1174M11	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1175M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1176M11	0613952M01	RES,MF,1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1177M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1178M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1180M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1182M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1198M11	0613952J01	RES,MF,10KOHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R1202M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1301M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1302M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1303M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1304M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1305M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1306M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1307M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1308M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R1309M3	NOT PLACED	RES,MF,110OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1310M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1311M3	NOT PLACED	RES,MF,110OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1312M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1313M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1314M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1315M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1316M3	NOT PLACED	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1317M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1318M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1319M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1320M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1322M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1323M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1324M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1325M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1326M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1327M3	NOT PLACED	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R1328M3	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R1329M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1330M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1331M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1332M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1333M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1337M3	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1338M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1340M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1601M16	0613952Q96	RES,MF,9.1KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1602M16	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1603M16	0613952R24	RES,MF,91KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1604M16	0613952R13	RES,MF,33KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1605M16	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R1606M16	0613952H53	RES,MF,150OHM,5%,.1W,S M,0603,200PPM/CEL,PB-FREE
R1651M16	0613952Q60	RES,MF,300OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1652M16	0613952Q60	RES,MF,300OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R1653M16	0613952Q31	RES,MF,18OHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R1900M20	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1906M20	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1907M20	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1908M20	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1909M20	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1910M20	0613952Q96	RES,MF,9.1KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1911M20	0613952Q96	RES,MF,9.1KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1921M20	0613952R22	RES,MF,75KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1922M20	0613952R27	RES,MF,120KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1923M20	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1924M20	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R1925M20	0613952Q11	RES,MF,2.7OHM,5%,.0625W ,SM,0402,200PPM/CEL,PB-FREE
R1935M20	0613952Q75	RES,MF,1.2KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R1936M20	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R1970M20	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE

Ref. Des.	Part Number	Description
R1972M20	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R1M2	0613952R17	RES,MF,47000,5,.0625,SM,0 402,200,PB-FREE
R2	NOT PLACED	RES,MF,0OHM,5%,.05W,SM, 0201,,PB-FREE
R20	NOT PLACED	RES,MF,0OHM,5%,.05W,SM, 0201,,PB-FREE
R200M12	0613952C30	RES,MF,200OHM,1%,.1W,S M,0603,100PPM/CEL,PB-FREE
R201M12	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R202M12	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R2104M2	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R2105M2	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R2106M2	NOT PLACED	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2107M2	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2109M2	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R2110M2	0613952Q33	RES,MF,22,5,.0625,SM,0402 ,200,PB-FREE
R2111M2	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R2113M2	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R2114M2	0613952Q33	RES,MF,22,5,.0625,SM,0402 ,200,PB-FREE
R2115M2	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R2116M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2117M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2118M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2120M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2197M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2198M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2199M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R21M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2201M2	0613952R32	RES,MF,200KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2204M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2206M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2207M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2235M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2244M2	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2245M2	0613952Q81	RES,MF,2200,5,.0625,SM,04 02,200,PB-FREE
R2246M2	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2254M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2255M2	0613952Q66	RES,MF,510OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2256M2	0613952Q66	RES,MF,510OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2257M2	0613952Q66	RES,MF,510OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R22M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2356M2	0613952Q09	RES,MF,2.2OHM,5%,.0625W ,SM,0402,200PPM/CEL,PB-FREE
R2357M2	0613952Q09	RES,MF,2.2OHM,5%,.0625W ,SM,0402,200PPM/CEL,PB-FREE
R2358M2	0613952Q66	RES,MF,510OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2359M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2360M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2361M2	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2362M2	0613952Q49	RES,MF,100,5,.0625,SM,040 2,200,PB-FREE
R2363M2	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2364M2	0613952Q49	RES,MF,100,5,.0625,SM,040 2,200,PB-FREE
R2401M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2404M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2405M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2406M3	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2407M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE

Ref. Des.	Part Number	Description
R2408M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2412M3	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2414M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2416M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2418M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2419M3	0613952Q49	RES,MF,100,5,.0625,SM,040 2,200,PB-FREE
R2433M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2434M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2435M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2436M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2437M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2441M3	0613952Q41	RES,MF,470OHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2442M3	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2443M3	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE
R2444M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2449M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2450M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2451M3	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R2452M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2453M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2454M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2455M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2456M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2457M3	0613952R05	RES,MF,15KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2458M3	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R2459M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2460M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2461M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2465M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2466M3	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R2467M3	0613952Q32	RES,MF,20OHM,5%,.0625W, SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R2469M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2486M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2508M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2603M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2470M3	NOT PLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2487M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2509M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2604M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2471M3	NOT PLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2488M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2511M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2605M13	0613952G67	RES,MF,0,1,.1,SM,0603,PB-FREE
R2472M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2489M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2512M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2606M13	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2473M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2490M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2513M6	0613952Q80	RES,MF,2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2803	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2474M3	0613952R35	RES,MF,270000,5,.0625,SM,0402,200,PB-FREE	R2491M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2514M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2804	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2475M3	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2492M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2515M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2805	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2476M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2493M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2516M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2806	0613952Q59	RES,MF,270OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2477M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2495M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2517M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2807	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2478M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2496M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2519M6	0613952H25	RES,MF,10OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R2808	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2479M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2497M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2522M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE	R2810	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2480M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2501M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2523M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE	R2811	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2481M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2503M6	NOT PLACED	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2524M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2812	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2484M3	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2505M6	0613952Q75	RES,MF,1.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2529M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE	R2813	NOT PLACED	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2485M3	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2507M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2530M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE	R2817	0613952Q41	RES,MF,47OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
						R2560M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R3103M22	0613952Q31	RES,MF,18OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
						R2601M13	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R3105M22	0613952Q60	RES,MF,300OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
						R2602M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE			

Ref. Des.	Part Number	Description
R3106M22	0613952Q60	RES,MF,300OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3107M22	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3108M22	0613952Q38	RES,MF,36OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3109M22	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3114M22	0613952R11	RES,MF,27KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3118M22	0613952R07	RES,MF,18KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3127M22	0613952Q47	RES,MF,82OHM,5%,.0625W,SMD,0402,200PPM/CEL,CER CHIP 82.0 OHM 5%
R3146M22	0613952Q95	RES,MF,8.2KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3149M22	0613952Q93	RES,MF,6.8KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3158M22	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R3159M22	0613952Q45	RES,MF,68OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3160M22	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4005M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4006M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4007M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R4008M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4009M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4010M2	0613952R32	RES,MF,200KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R4011M2	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R4012M2	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R4013M2	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R4014M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R500M21	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R502M21	0613952Q36	RES,MF,30OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R512M21	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R525M21	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R526M21	0613958J74	RES,MF,0OHM,5%,.125W,SM,0805,PB-FREE
R601M19	0613952Q41	RES,MF,47OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R602M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R603M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R604M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R605M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R606M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R607M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R608M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R609M19	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE
R6101M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6102M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6103M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6104M6	NOT PLACED	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6105M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6106M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6107M6	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6108M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6109M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R610M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6110M6	NOT PLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R6111M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6112M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6113M6	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE
R6114M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6115M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6116M6	NOT PLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6117M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6118M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6119M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R611M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6120M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6121M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6122M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6125M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R612M19	0613952Q94	RES,MF,7.5KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R613M19	0613952Q82	RES,MF,2.4KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R614M19	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R615M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R616M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R617M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R618M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R619M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6204M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6205M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6206M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6207M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6208M6	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R6209M6	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R620M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6210M6	0613952Q89	RES,MF,4700,5,.0625,SM,04 02,200,PB-FREE
R6211M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6212M6	NOT PLACED	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6213M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6215M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6217M6	0613952Q73	RES,MF,1KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6218M6	0613952Q80	RES,MF,2KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R621M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R623M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R624M19	NOT PLACED	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6301M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6304M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6306M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6310M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6311M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6312M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6313M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6314M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6316M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6401M6	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6402M6	0613952R32	RES,MF,200KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6404M6	0613952Q81	RES,MF,2200,5,.0625,SM,04 02,200,PB-FREE
R6405M6	0613952Q75	RES,MF,1.2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6406M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6410M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6411M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6416M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6417M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6419M6	0613952Q37	RES,MF,33OHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6420M6	0613952R17	RES,MF,47000,5,.0625,SM,0 402,200,PB-FREE
R6421M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6422M6	0613952Q51	RES,MF,120,5,.0625,SM,040 2,200,PB-FREE
R6423M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6425M6	0613952Q80	RES,MF,2KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6426M6	0613952Q49	RES,MF,100,5,.0625,SM,040 2,200,PB-FREE
R6427M6	0613952R11	RES,MF,27KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6428M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6429M6	0613952R17	RES,MF,47000,5,.0625,SM,0 402,200,PB-FREE
R6430M6	0613952R09	RES,MF,22000,5,.0625,SM,0 402,200,PB-FREE
R6431M6	0613952Q81	RES,MF,2200,5,.0625,SM,04 02,200,PB-FREE
R6492M6	0613952Q79	RES,MF,1800,5,.0625,SM,04 02,200,PB-FREE
R6501M6	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R6502M6	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R6503M6	0613952Q25	RES,MF,10,5,.0625,SM,0402 ,200,PB-FREE
R6504M6	0613952R09	RES,MF,22000,5,.0625,SM,0 402,200,PB-FREE
R6505M6	0613952Q80	RES,MF,2KOHM,5%,.0625W, SM,0402,200PPM/CEL,PB- FREE
R6506M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6507M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6508M6	0613952R17	RES,MF,47000,5,.0625,SM,0 402,200,PB-FREE
R6509M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6510M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE
R6511M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6512M6	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6513M6	0613952R66	RES,MF,0OHM,5%,.0625W,S M,0402,PB-FREE

Ref. Des.	Part Number	Description
R6514M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6515M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6516M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6517M6	0613952Q63	RES,MF,390OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6518M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6519M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6520M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6521M6	0615049H01	RES,MF,.2OHM,1%,.5W,1206,KAMAYA 0.2 OHM CHIP RES
R6522M6	0613952M66	RES,MF,4.75KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6523M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6524M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6525M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6526M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6527M6	0613952N87	RES,MF,78.7KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6528M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6529M6	0615049H01	RES,MF,.2OHM,1%,.5W,1206,KAMAYA 0.2 OHM CHIP RES
R6530M6	0613952L30	RES,MF,200OHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R6531M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6532M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6533M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6534M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6535M6	0613952N01	RES,MF,10KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6536M6	0613952Z72	RES,MF,91KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6537M6	0613952P09	RES,MF,121KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6538M6	0613952Q95	RES,MF,8.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6539M6	0613952P66	RES,MF,475KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6540M6	0613952P66	RES,MF,475KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6541M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6542M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6543M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6544M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6545M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6546M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6547M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R6548M6	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6550M6	0613952Z64	RES,MF,39KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6551M6	0613952Z62	RES,MF,33KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6552M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6558M6	0613952P22	RES,MF,165KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6561M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6562M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6563M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6564M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6565M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6566M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6567M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6568M6	0613952P47	RES,MF,301KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6570M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6574M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6576M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6577M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6578M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE

Ref. Des.	Part Number	Description
R6579M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6580M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R6581M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6582M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6583M6	0613952R03	RES,MF,12000,5,.0625,SM,0402,200,PB-FREE
R6584M6	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6591M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6598M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6599M6	NOT PLACED	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6601M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6602M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6604M6	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE
R6605M6	0613952Q33	RES,MF,22,5,.0625,SM,0402,200,PB-FREE
R6606M6	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6608M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6609M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6616M6	0613952Q80	RES,MF,2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R6617M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R701M7	0613952Q64	RES,MF,430OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R731M7	0613952Q86	RES,MF,3.6KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R766M7	0613952Q92	RES,MF,6.2KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6618M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R702M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R736M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R769M7	0613952Q31	RES,MF,18OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6619M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R703M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R741M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R771M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6621M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE	R704M7	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE	R742M7	0613952R23	RES,MF,82KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R776M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6622M6	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R705M7	0613952Q71	RES,MF,820OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R743M7	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE	R785M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6623M6	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R706M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R744M7	0613952Q91	RES,MF,5600,5,.0625,SM,0402,200,PB-FREE	R799M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6624M6	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R707M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R745M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R809M7	0613952Q46	RES,MF,75OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R6625M6	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R708M7	0613952Q45	RES,MF,68OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R746M7	0613952Q36	RES,MF,30OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R822M7	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6626M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R709M7	NOT PLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R747M7	0613952Q39	RES,MF,39OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R823M7	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6701M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R710M7	NOT PLACED	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R748M7	0613952Q47	RES,MF,82OHM,5%,.0625W,SM,0402,200PPM/CEL,CER CHIP 82.0 OHM 5%	SH1	26012246001	SHLD,STL,SN PLT,SHIELD,IF, APX CVT
R6702M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE	R711M7	NOT PLACED	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R751M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH10	26012250001	SHLD,STL,SN PLT,SHIELD,ANTSWI, APX CVT
R6703M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE	R721M7	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R754M7	NOT PLACED	RES,MF,680OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH11	26012258001	SHLD,STL,SN PLT,SHIELD,ABACUS, APX CVT
R6704M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE	R722M7	0613952Q71	RES,MF,820OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R757M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH12	26012251001	SHLD,STL,SN PLT,SHIELD,PAOP, APX CVT
R6705M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R723M7	0613952Q79	RES,MF,1800,5,.0625,SM,0402,200,PB-FREE	R761M7	0613952Q23	RES,MF,8.2OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	SH13	26012260001	SHLD,STL,SN PLT,SHIELD,DRIVER/PA, APX CVT
R6706M6	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R728M7	0613952Q69	RES,MF,680OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R762M7	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH14	26012252001	SHLD,STL,SN PLT,SHIELD,ALC/DC, APX CVT
R698M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R729M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R763M7	0613952R19	RES,MF,56KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH15	26012261001	SHLD,STL,SN PLT,SHIELD,VCO, APX CVT
R699M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R730M7	0613952Q79	RES,MF,1800,5,.0625,SM,0402,200,PB-FREE				SH16	26012254001	SHLD,STL,SN PLT,SHIELD,CONTROLLER/AVR, APX CVT
									SH17	26012262001	SHLD,STL,SN PLT,SHIELD,MACE/MAKO, APX CVT

Ref. Des.	Part Number	Description
SH2	26012253001	SHLD,STL,SN PLT,SHIELD, MIXER, APX CVT
SH3	26012259001	SHLD,STL,SN PLT,SHIELD, GPS/BT, APX CVT
SH4	26012247001	SHLD,STL,SN PLT,SHIELD, 2ND LO, APX CVT
SH5	26012255001	SHLD,STL,SN PLT,SHIELD, ALC1, APX CVT
SH6	26012248001	SHLD,STL,SN PLT,SHIELD, FGU, APX CVT
SH7	26012256001	SHLD,CAN,STL,SN PLT,SHIELD, DC, APX CVT
SH8	26012249001	SHLD,STL,SN PLT,SHIELD, TXFE, APX CVT
SH9	26012257001	SHLD,CAN,STL,SN PLT,SHIELD, RXFE, APX CVT
T506M21	2575851B01	XFMR,BALUN,RF XFMR BALUN
T507M21	2575851B02	XFMR,BALUN,25,SM,RF XFMR BALUN
U1101M11	5188032U43	IC,SENSING CIRCUIT,INA138,SM,SOT-23/5,1PER PKG,PB FREE
U1103M11	5185070Y01	IC,TEMP SENS
U1104M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1105M11	5180390L83	IC,CNTRLR,SM,1PER PKG
U1106M11	5175772B05	IC,LTC5532ES6,SOT-23,1PER PKG,PRCN RF DET
U1112M11	5175772B04	IC,HMC468LP3E,QFN,1 DB LSB GAAS MMIC ATTEN
U1113M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1114M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1119M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG

Ref. Des.	Part Number	Description
U1121M11	5114000B52	IC,XOR,LOGIC LEVEL SHIFTER,1PER PKG,SM,SOT-353,PB-FREE
U1125M11	5175206H01	IC,DAC,W/ 5 PPM/C INT REF
U1126M11	5109817F77	IC,COMPTR,LMV7275,SC70-5
U1127M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1128M11	5188085K11	IC,NAND,SINGLE 2 INPUT,SN74LVC1G00YZPR,SM,GATE, POS, 5 DSBGA,
U1129M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
U1130M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
U1131M11	5109817F77	IC,COMPTR,LMV7275,SC70-5
U1132M11	5114007M28	IC,D FLIP-FLOP,1PER PKG,17SZ74,N-I,SM,SOIC8,PB-FREE
U1133M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1136M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1137M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U1138M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U1139M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U1141M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1142M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP

Ref. Des.	Part Number	Description
U1143M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1144M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1146M11	5109522E93	GATE,OR,SN74LVC1G32YZ PR,1PER PKG,SM,2 INPUT IN NANO PKG
U1147M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1148M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1149M11	5109522E93	GATE,OR,SN74LVC1G32YZ PR,1PER PKG,SM,2 INPUT IN NANO PKG
U1150M11	51009381001	IC,MICROPOWER SOT-23 V REF
U1301M3	51007377001	IC,XCVR,NL5500,BGA,BLUE TOOTH, GPS, FM RX, FM TX
U1304M3	5105739X13	IC,AMP,SIGE,QFN,QFN,18D B,1.57GHZMIN,1.57GHZMAX,.9DB,SIGE GPS LO
U1305M3	5187344N09	IC,LNR V REGLTR,FXD,2.8V,100MA,LOW NOISE
U1334M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U1335M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U1601M16	5175143H01	IC,WIDE SPLY RANGE OP AMP
U1602M16	51012101001	IC,SM,VHF/UHF/800/900 MHZ LDMOS DRVR IC
U1932M20	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM,SM,6V,380W,80A,14MHZ,TR
U200M12	5188493T01	IC,VREG/SWG,LP2989,SM,MINI SO-8 HI PRCN REG 5V

Ref. Des.	Part Number	Description
U201M12	5175771A99	IC,LNR V REGLTR,FXD,100MA,VFBGA,LOW NOISE, 100MA LINEAR REGL
U202M12	5175772B02	IC,LNR V REGLTR,FXD,1.8V,100MA,V FBGA,LINEAR REGLTR 100MA 1.8
U203M12	5175772B01	IC,LNR V REGLTR,FXD,1.5V,350MA,V FBGA,LINEAR V REGLTR 350MA
U2101M2	5109522E84	IC,DL SCHT TRIG MICRO PAK
U2102M2	5109522E84	IC,DL SCHT TRIG MICRO PAK
U2202M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U2205M2	5188682Y01	IC,POWER DRIVER,40MA,SM,RGB LED, I2C CONTORL, LLP PKG
U2402M3	51002923001	IC,LNR V REGLTR,3.3V LP2989,NOPB
U2403M3	51009735001	IC,RCVR,QFN,IC, RCVR, ONE-CHAN, QFN, LF WAKE-UP
U2406M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2407M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2408M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2409M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2410M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2411M3	5175856M01	IC,INVTR,0MHZMAX,DL INVTR

Ref. Des.	Part Number	Description
U2412M3	5114007M45	IC,NOR,1PER PKG,SOT-353,PB-FREE
U2413M3	51010274001	IC,SDRAM,128MB,8MEG X 16,7.5NS,VFBGA,3.3V,IC,SDRAM,128MBIT,8M
U2414M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2415M3	51009372001	IC,UCNTR,IC UCNTR AT32UC3A0512
U2416M3	51009669001	IC,SENSOR,SM,IC,ACCELEROMETER, MOTION SENSOR
U2473M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2478M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U2510M6	5185912Y03	IC,MICROP,BGA,CRYPTOGRAPHIC PROCESSOR,IC,CRYPTOGRAPHIC P
U2525M6	5171339H01	IC,MC78LC18,MICROPOWER V REGLTR
U2526M6	5171988H01	IC,COMPTR,CMOS COMPTR
U2601M13	5103535B53	IC,INVTR,DL,NC7WZ04L6X, 2PER PKG,SC70
U2602M13	5185941F45	ATTEN,VAR,14.4DBMIN,15.6 DBMAX,0-2000 MHZFREQ,50OHM,PCMT,SOT-25
U3001M22	5171972L01	IC,SW,SP3T RF SW
U4001M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U4003M2	5188691V01	IC,MUX/ DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE

Ref. Des.	Part Number	Description
U4004M2	5116783H01	IC,ANLG SW,SN74LVC2G66YZPR,SM,2PER PKG,0CHANNELS,BILATERAL,DL
U507M21	5164015H81	IC,MXR,SM
U601M19	5102495J14	IC,IF,IF DIGITILIZING SUBSYSTEM IC,AD9864,QFN
U602M19	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM,SM,6V,380W,80A,14MHZ,TR
U603M19	5109522E84	IC,DL SCHT TRIG MICROPAK
U604M19	5109522E84	IC,DL SCHT TRIG MICROPAK
U605M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U606M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
U607M19	5186311J24	IC,BFR,1PER PKG,NC7SZ125,ACTIVE HIGH,BFR,3ST,SM,5.5
U6101M6	0180706J18	IC,PGM,PGM CPLD
U6102M6	5188691V01	IC,MUX/ DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE
U6103M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6104M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6105M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6201M6	5185941F26	IC,COMPTR,LMV7219,SM,SOT-23/5,IC,LM7219,COMPARATOR,NOPB
U6301M6	51012031001	IC,SDRAM,32MB,16 MEG X16,6.5NS,VFBGA,64MSRFRSH,32MB DIE SHRIN

Ref. Des.	Part Number	Description
U6302M6	5102495J13	IC,MICROP,P1710ZZGE,BGA,12MHZ,32BITS
U6304M6	0105955U25	ASSY,ASSY,ASSY,IC,BGA SPEC PROG, FLSH MEM
U6402M6	5115453H01	IC,OP AMP,2PER PKG,RAIL TO RAIL OUTPUT, 8 PIN BGA
U6404M6	5175772B38	IC,IC ANLG TEMP SENSOR
U6405M6	5188348V06	IC,AUDIO CODEC,SM,AUDIO CODEC
U6408M6	5188521T01	IC,VREF,SM,SOT23,1PER PKG,5%,1.25 TO 13.75,PRCN BANDGAP ADJUS
U6409M6	51009000001	IC,COMPTR,SC70,NANOPOWER, 1.8V, SC70 COMPTR
U6501M6	5185143E77	IC,CUST,BGA,IC, MAKO ASIC, CMOS PWR MGMT
U6502M6	4871987H01	XSTR,BIP GP POWER,12V,1A,LOW FREQ XSTR
U6503M6	5171674H01	IC,OP AMP,SO-8,OP AMP
U6504M6	5171682H01	IC,DC TO DC CONVERTER,800MA BUCK REGLTR
U6505M6	5189631P01	IC,0PER PKG,SYNC STEP-DOWN CONV
U6506M6	5184790Y04	IC,LINEAR VOLTAGE REGULATOR,400MA
U6507M6	5171682H01	IC,DC TO DC CONVERTER,800MA BUCK REGLTR
U6508M6	51009366001	IC,LNR V REGLTR,LLP6,500MA LOW DROPOUT CMOS LINEAR REG
U6509M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6510M6	5114007A47	IC,OR,17SZ32,1PER PKG,SOT-353,PB FREE
U6511M6	5171339H01	IC,MC78LC18,MICROPOWER V REGLTR

Ref. Des.	Part Number	Description
U6601M6	5175114H01	IC,SNGL AND GATE MICROPAK
U702M7	5164015H28	IC,CUST,MULTI PROTOCOL/BAND TRANSCVR IC,SM,BGA,TRIDENT, INTEG
U738M7	5171972L01	IC,SW,SP3T RF SW
U746M7	4805218N63	XSTR,GEN PURPOSE SMALL SIG,SOT-323,BROADBAND AND XSTR
VR101M12	4813977M29	DIODE,ZEN,MBZ5250,SM,SOT-23,ZEN,PB-FREE
VR1905M20	4815096H01	DIODE,VCTR,10V,1SV305G, VCTR DIODE 1SV305
VR1906M20	4815096H01	DIODE,VCTR,10V,1SV305G, VCTR DIODE 1SV305
VR1907M20	4815096H01	DIODE,VCTR,10V,1SV305G, VCTR DIODE 1SV305
VR1908M20	4815096H01	DIODE,VCTR,10V,1SV305G, VCTR DIODE 1SV305
VR200M12	4813977M29	DIODE,ZEN,MBZ5250,SM,SOT-23,ZEN,PB-FREE
VR601M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
VR602M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
Y1304M3	48014600001	OSC,TCXO,26.0
Y2475M3	48009319001	OSC,VAR,SMD XTAL OSC DS0211AR
Y6501M6	93012044001	OSC,XO,24.576MHZ,SM,XTAL U SMD 5.0X3.2 24.576MHZ
Y6502M6	4809995L05	RESON,QRTZ,32.768KHZ,SM,FUND,9PF LOAD CAP,-40DEG C MIN,85DE
Y6601M6	4802582S85	RESON,QRTZ,12MHZ,10PPM TOL,18PPM STAB,SM,FUND,AT,10PF LOAD CAP

Ref. Des.	Part Number	Description
Y701M7	4871886H01	OSC,VO,16.8 MHZ VCTXO .8PPM

Notes

8.3 Main Board Block: 700–800 MHz (84012501002)

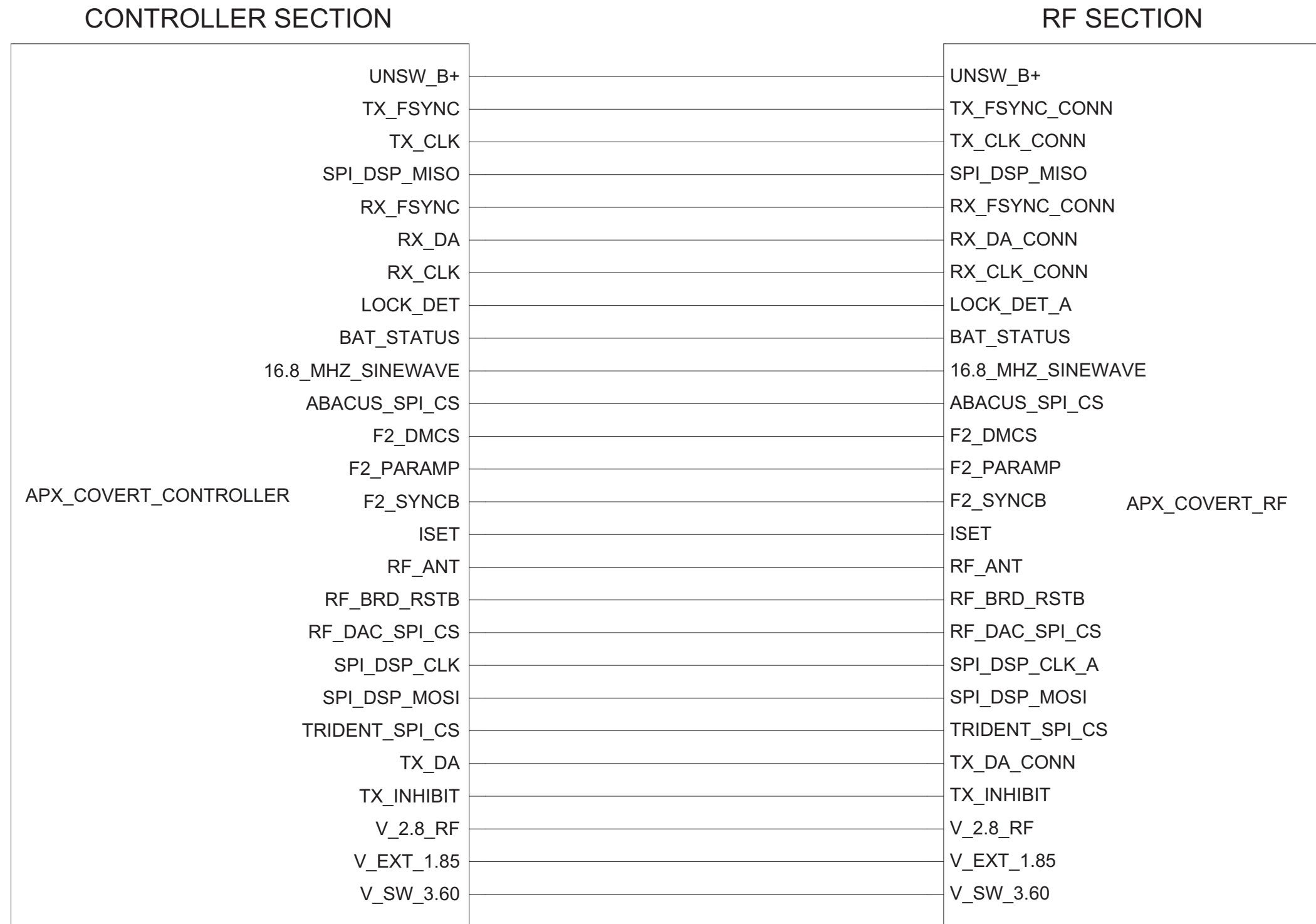


Figure 8-32. Main Board Block

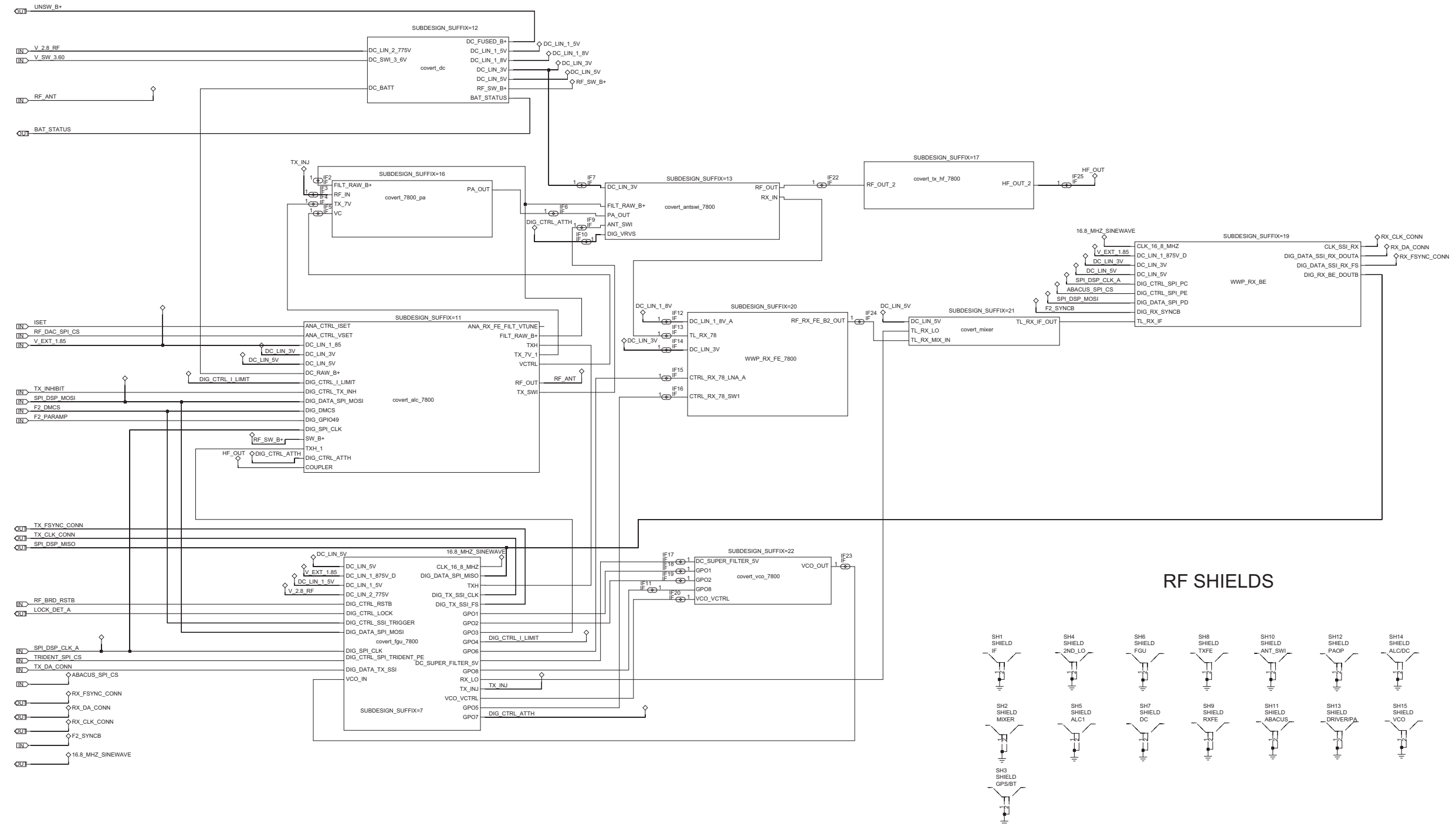


Figure 8-33. Transceiver (RF) Board Overall Schematic

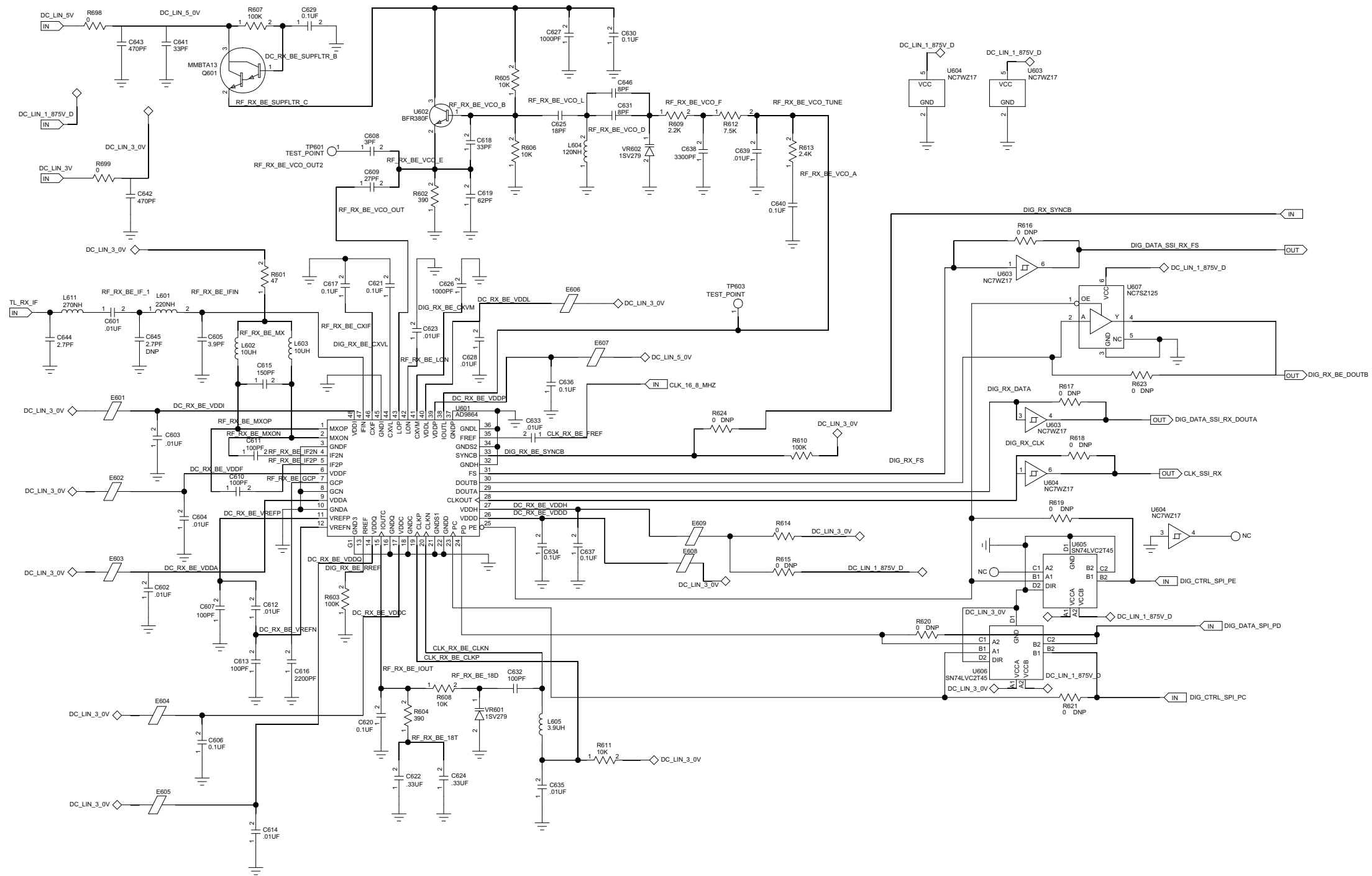


Figure 8-34. Receiver Back End

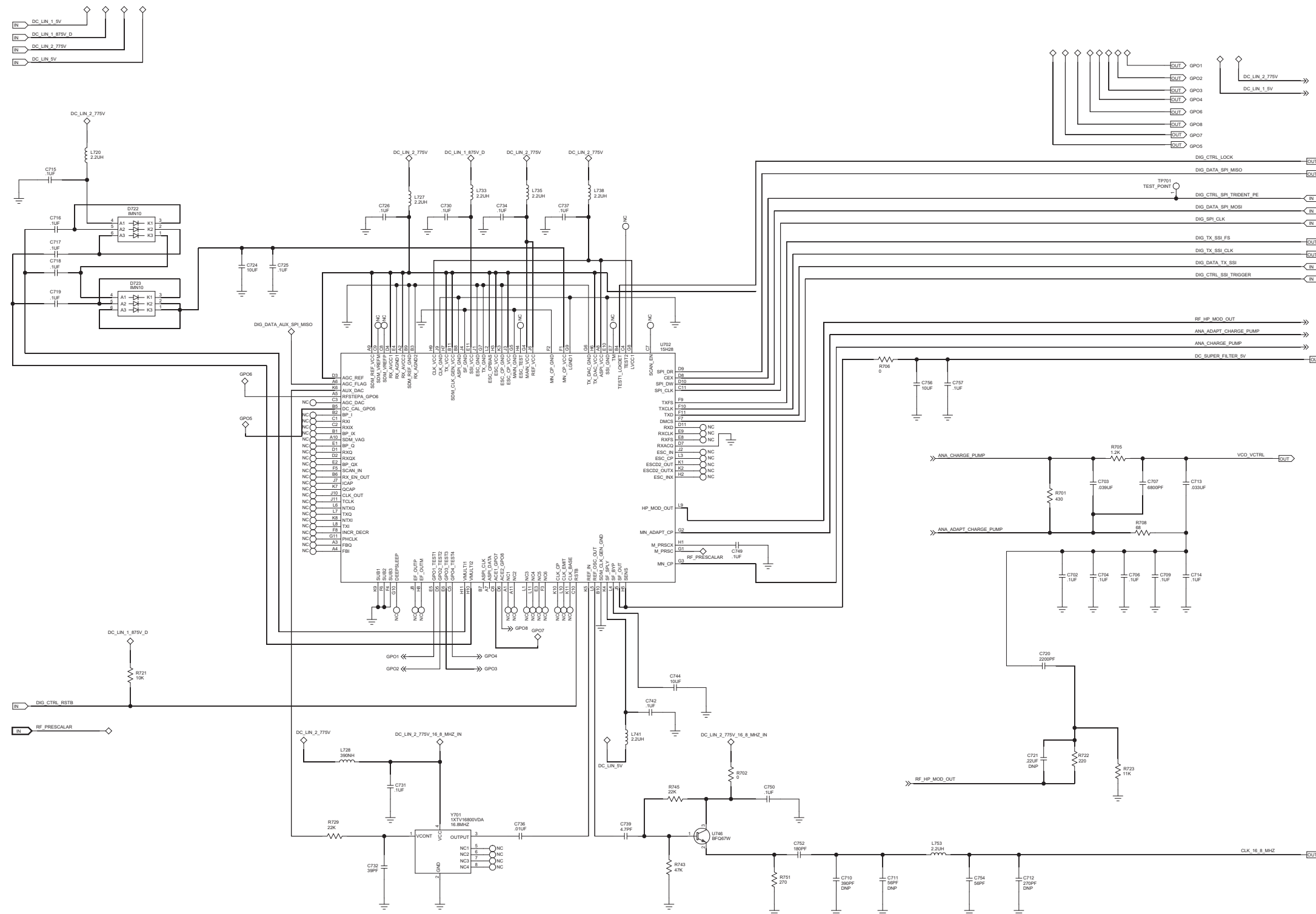


Figure 8-35. Frequency Generation Unit Circuit – 1 of 2

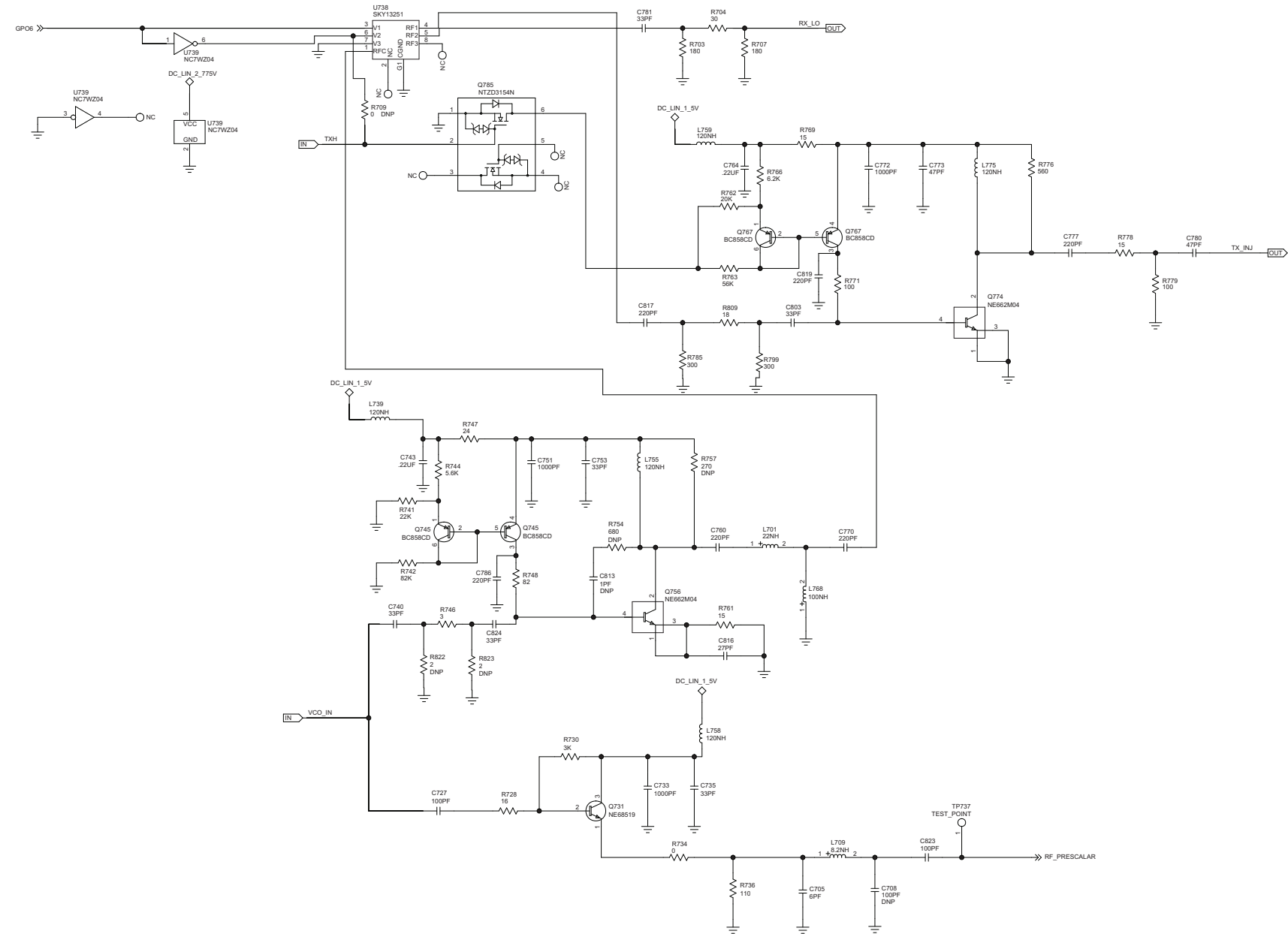
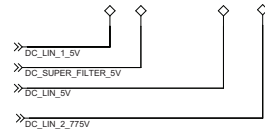


Figure 8-36. Frequency Generation Unit Circuit – 2 of 2

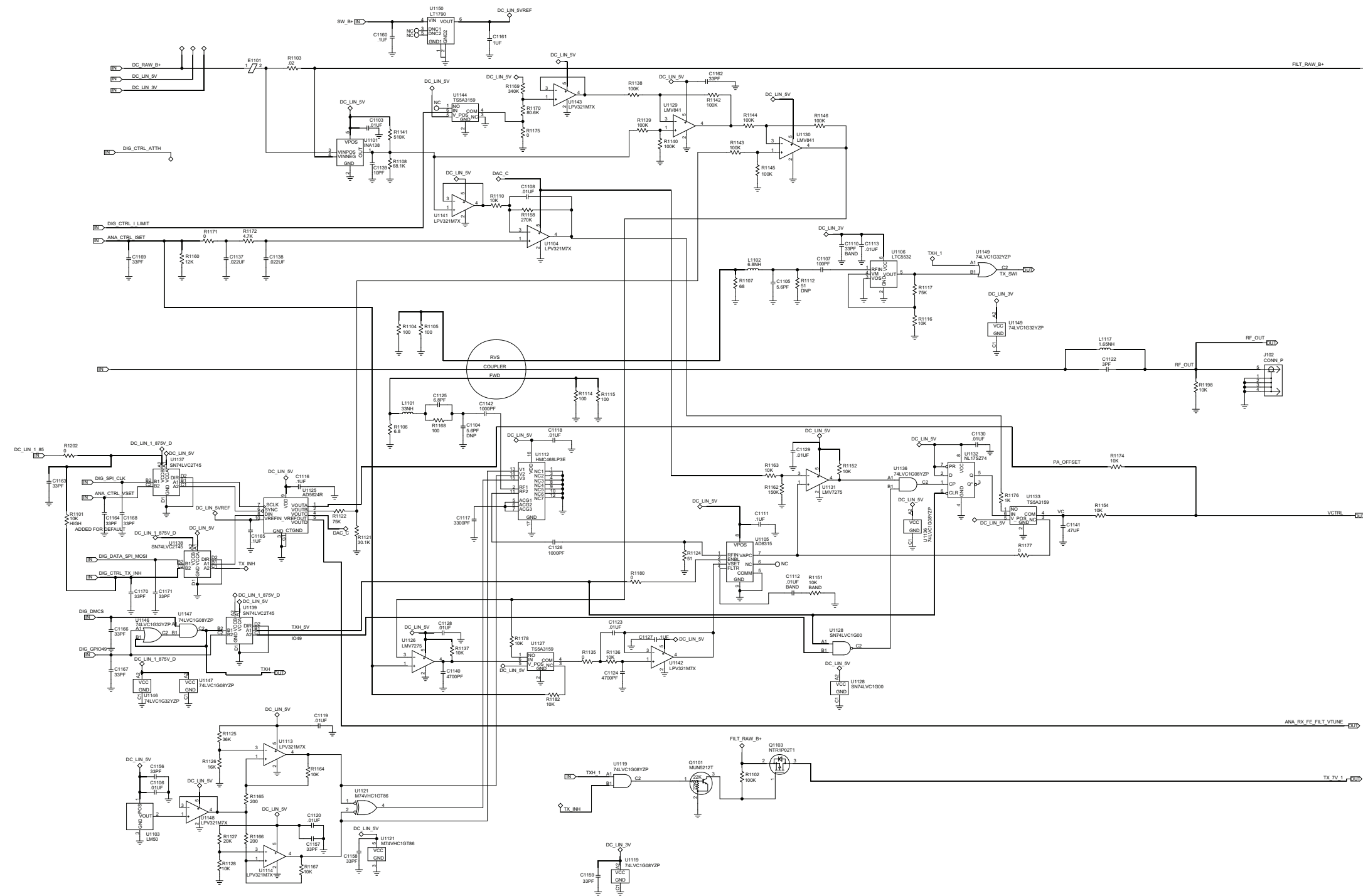


Figure 8-37. Automatic Level Control Circuit

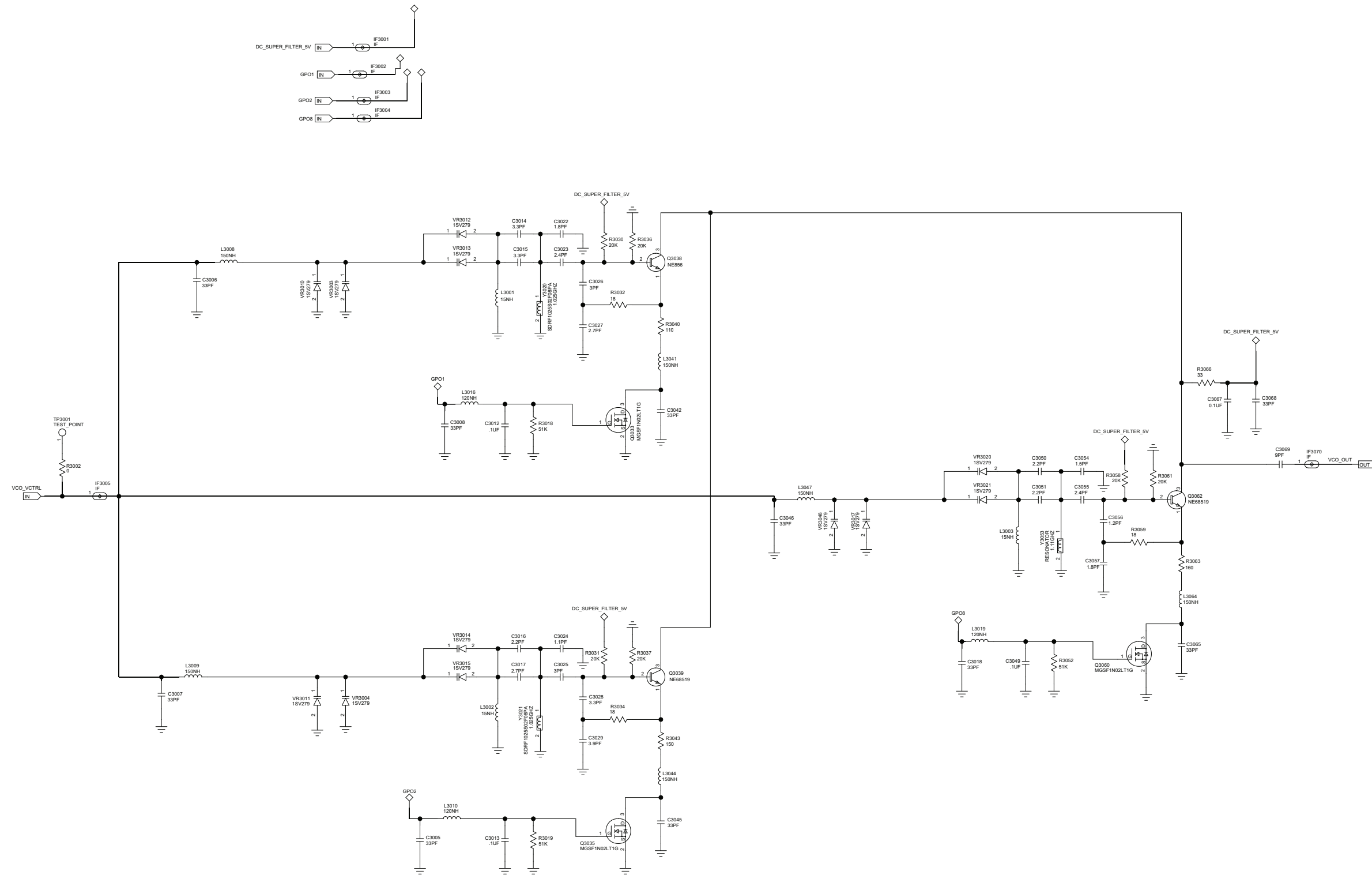


Figure 8-38. VCO Circuit

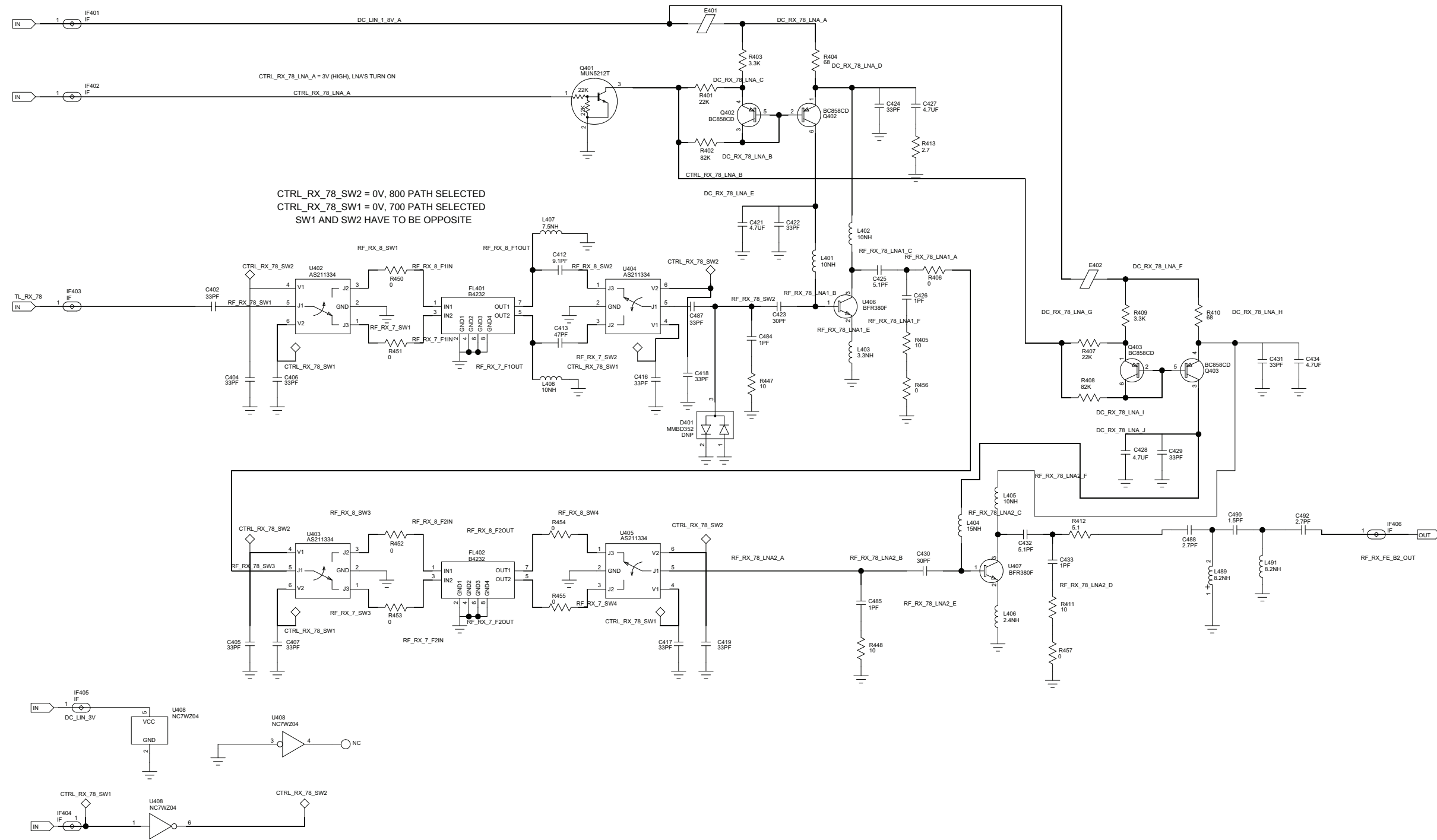


Figure 8-39. Receiver Front End Circuit

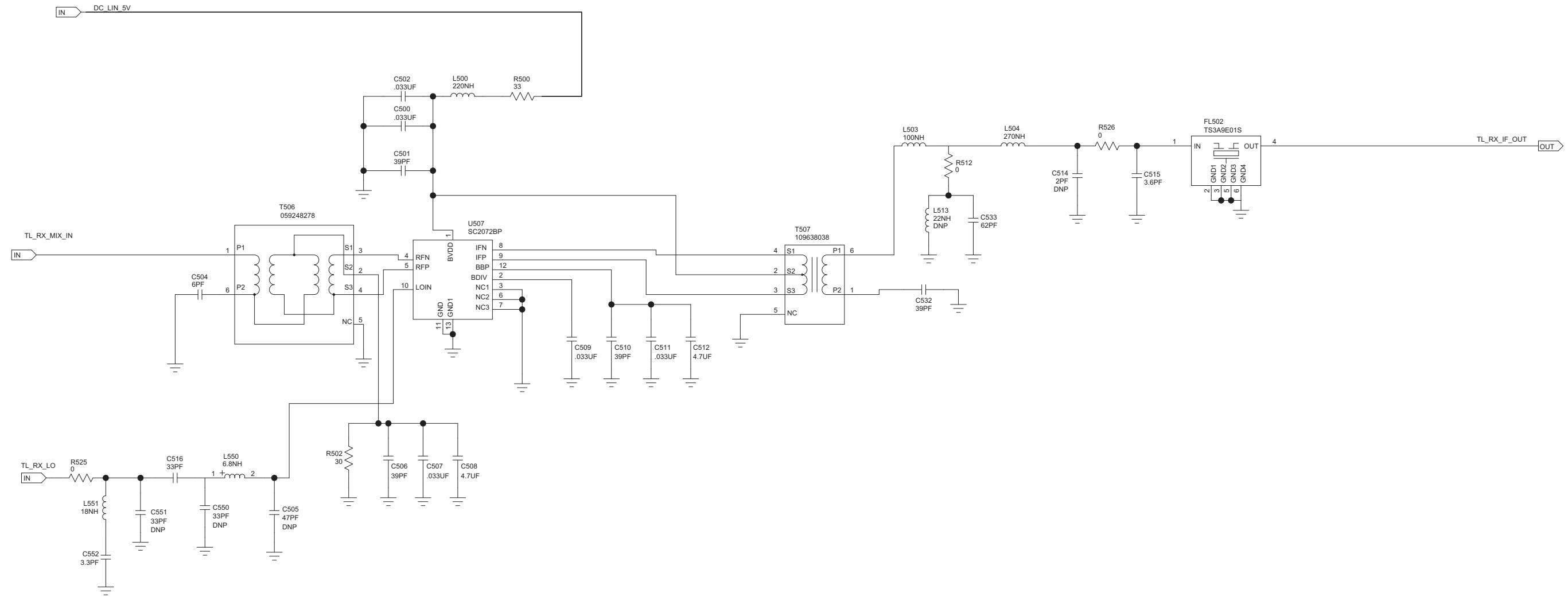


Figure 8-40. Receiver Back End Mixer

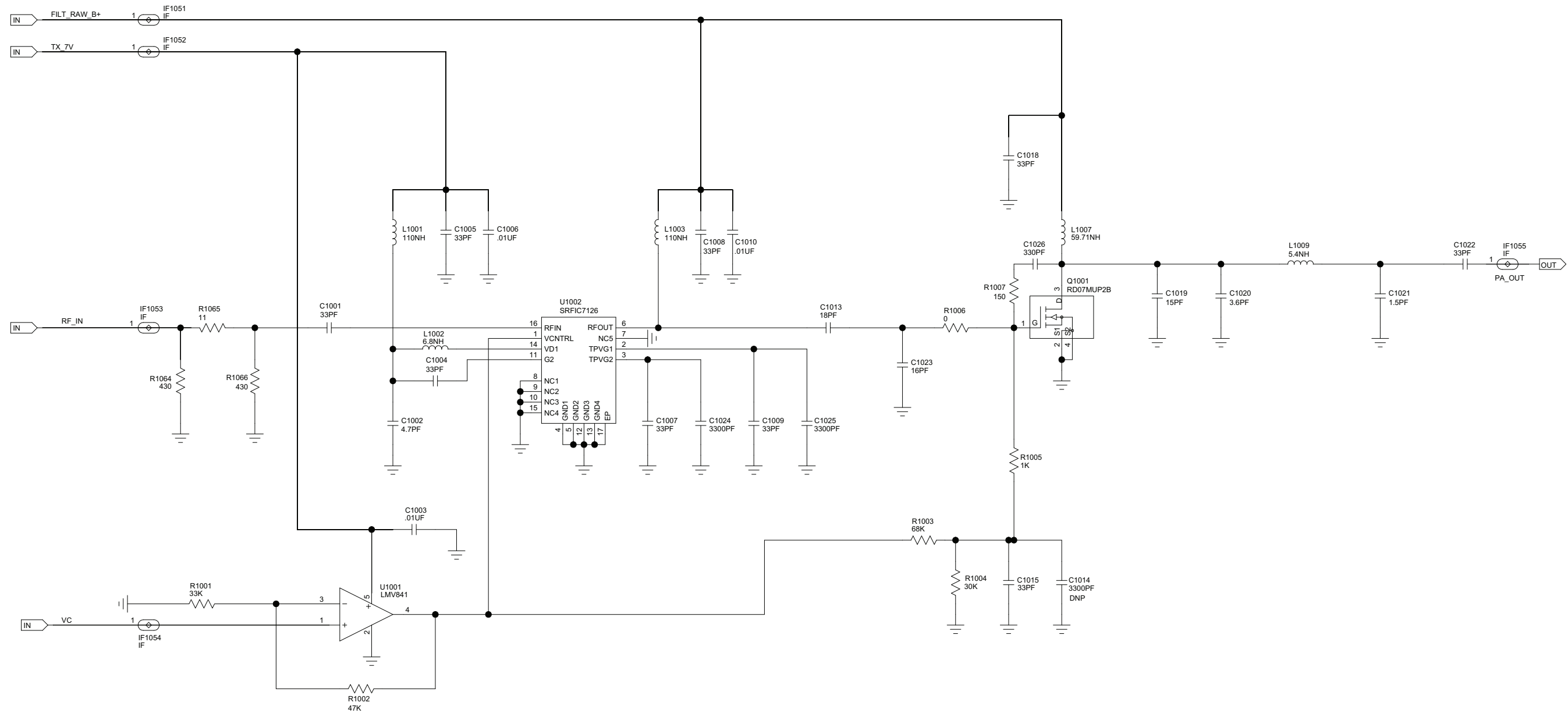


Figure 8-41. Power Amplifier Circuit

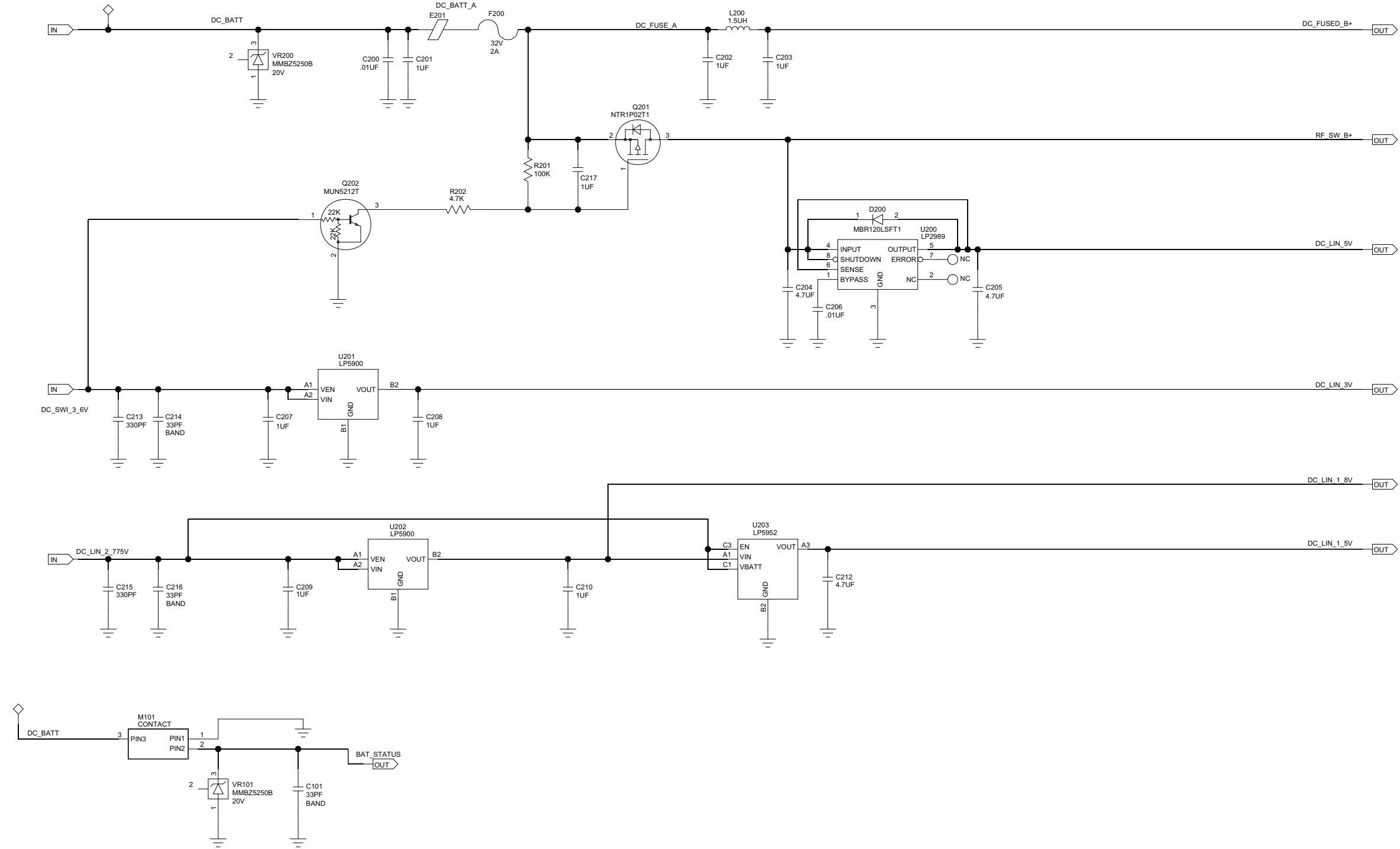


Figure 8-42. DC Circuit

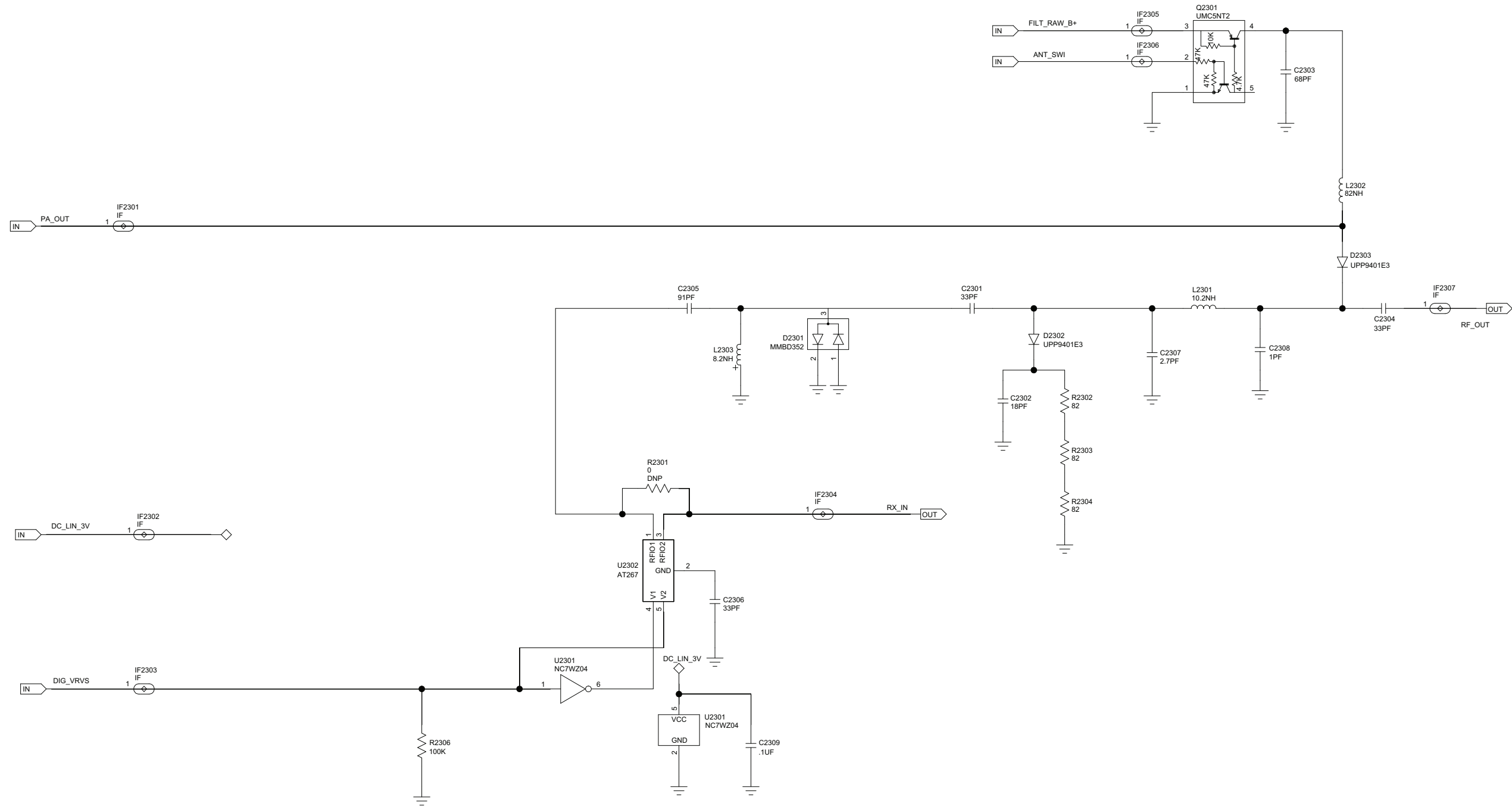


Figure 8-43. Antenna Switch Circuit

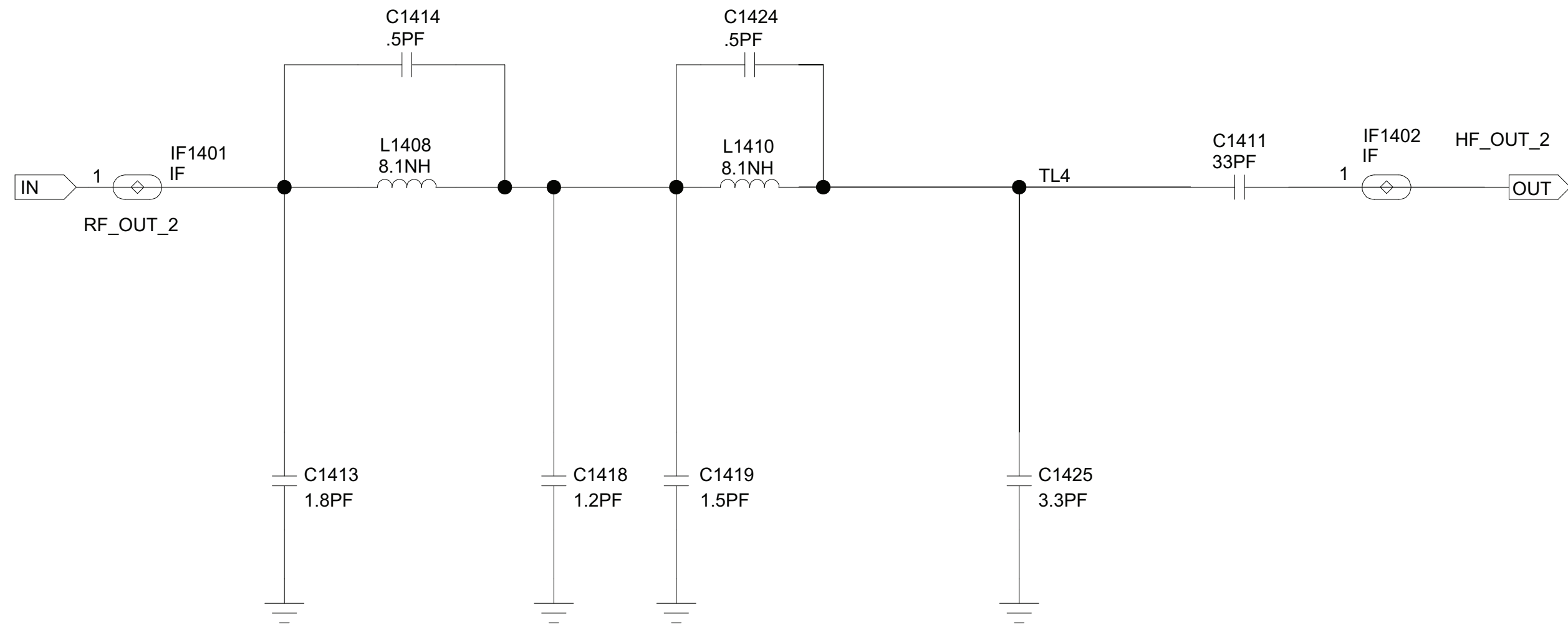


Figure 8-44. Transmitter HF Circuit

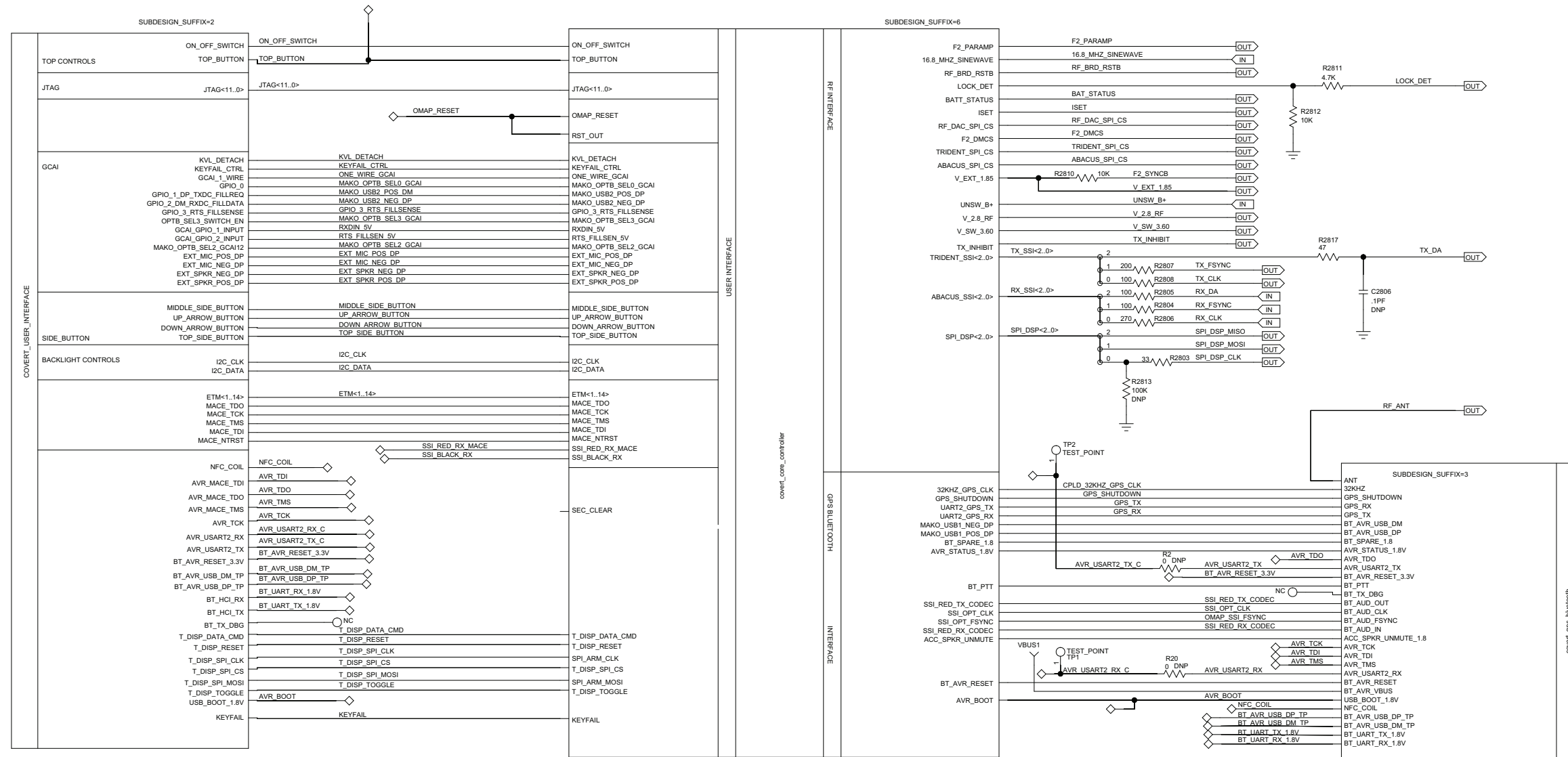


Figure 8-45. Controller Overall Schematic Blocks

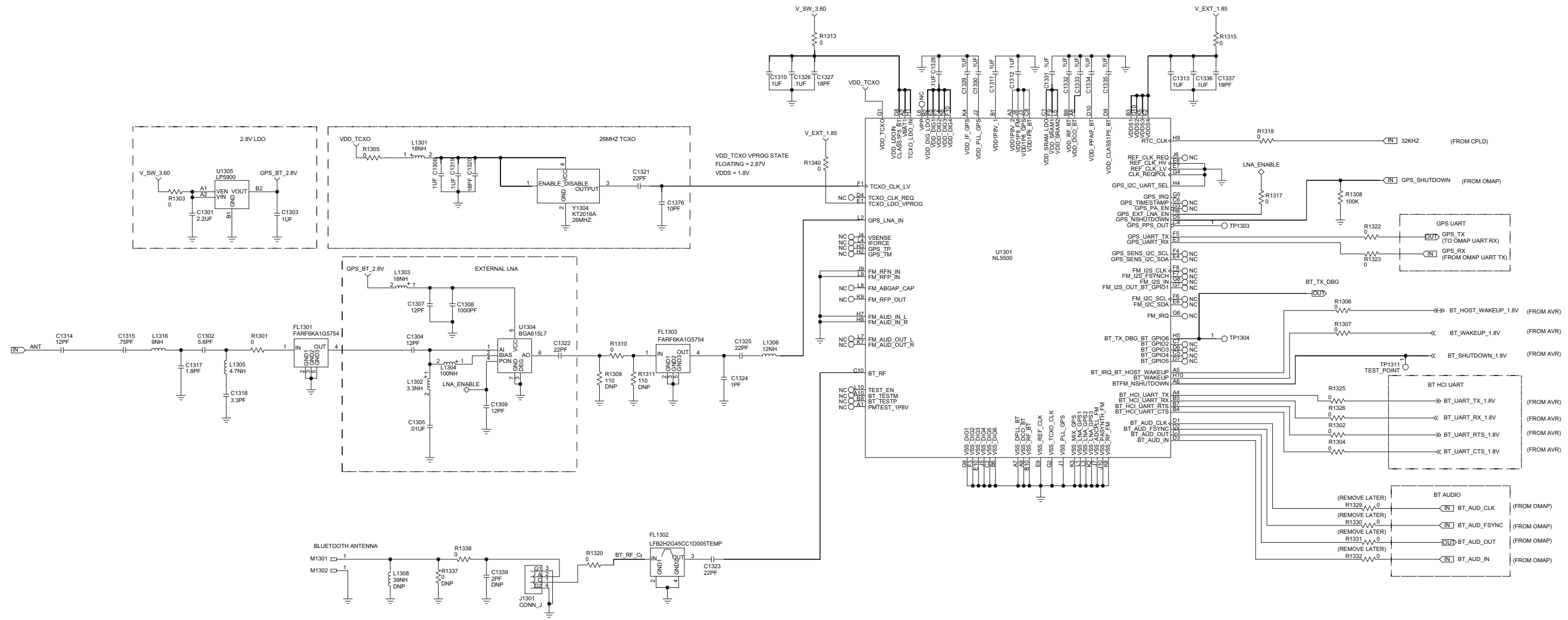


Figure 8-46. GPS Bluetooth Circuit – 1 of 2

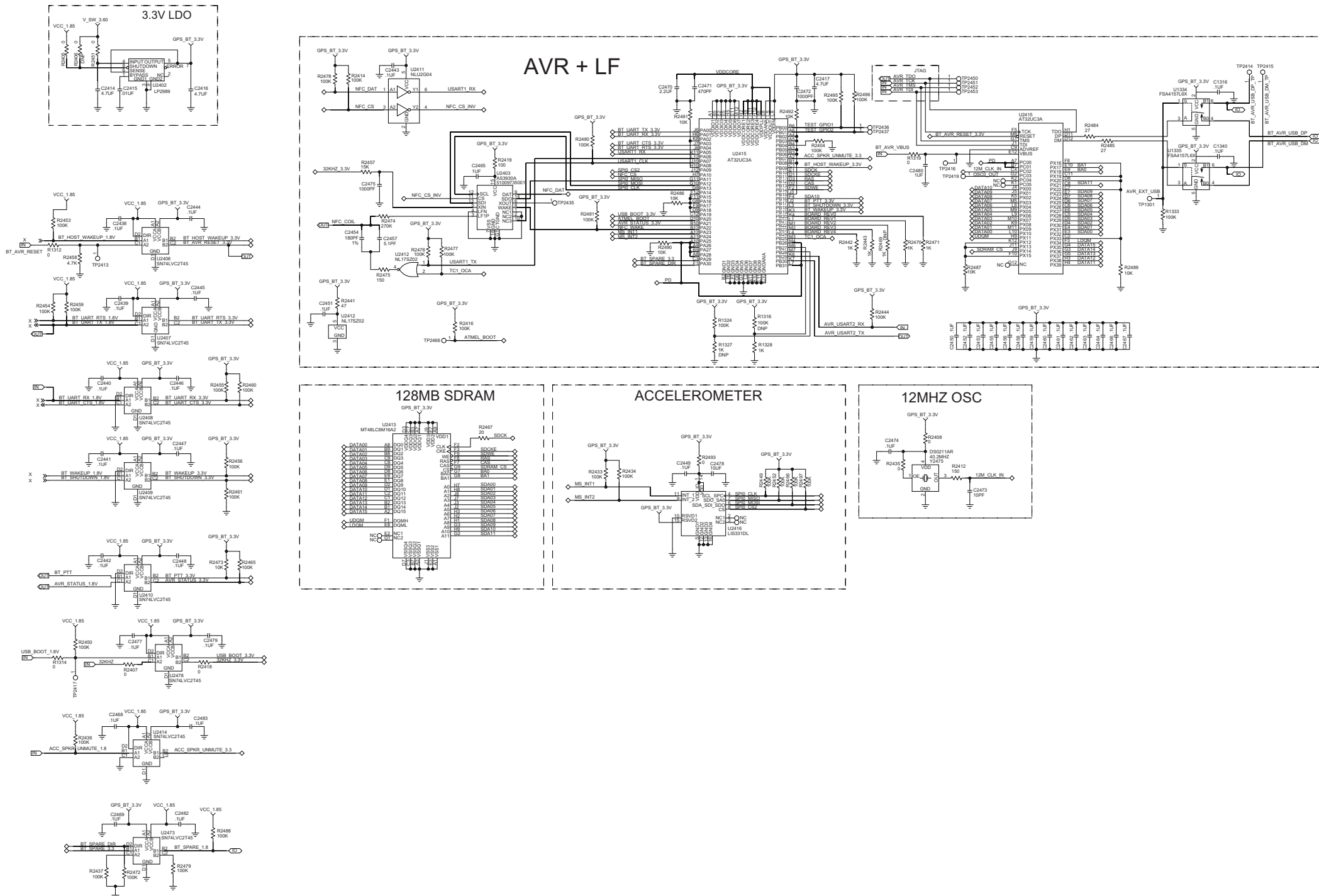


Figure 8-47. GPS Bluetooth Circuit – 2 of 2

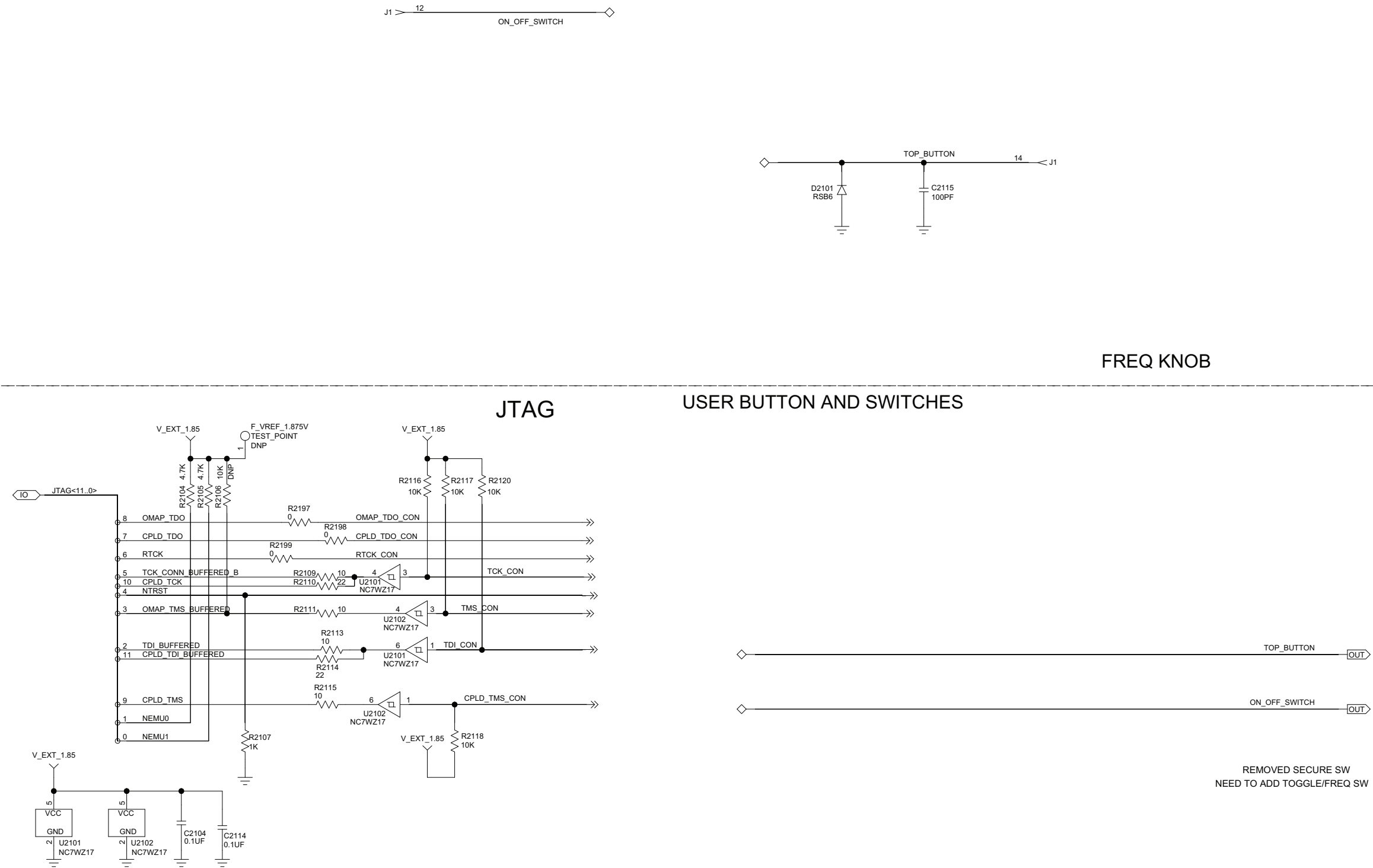


Figure 8-48. Top Control and JTAG Circuit

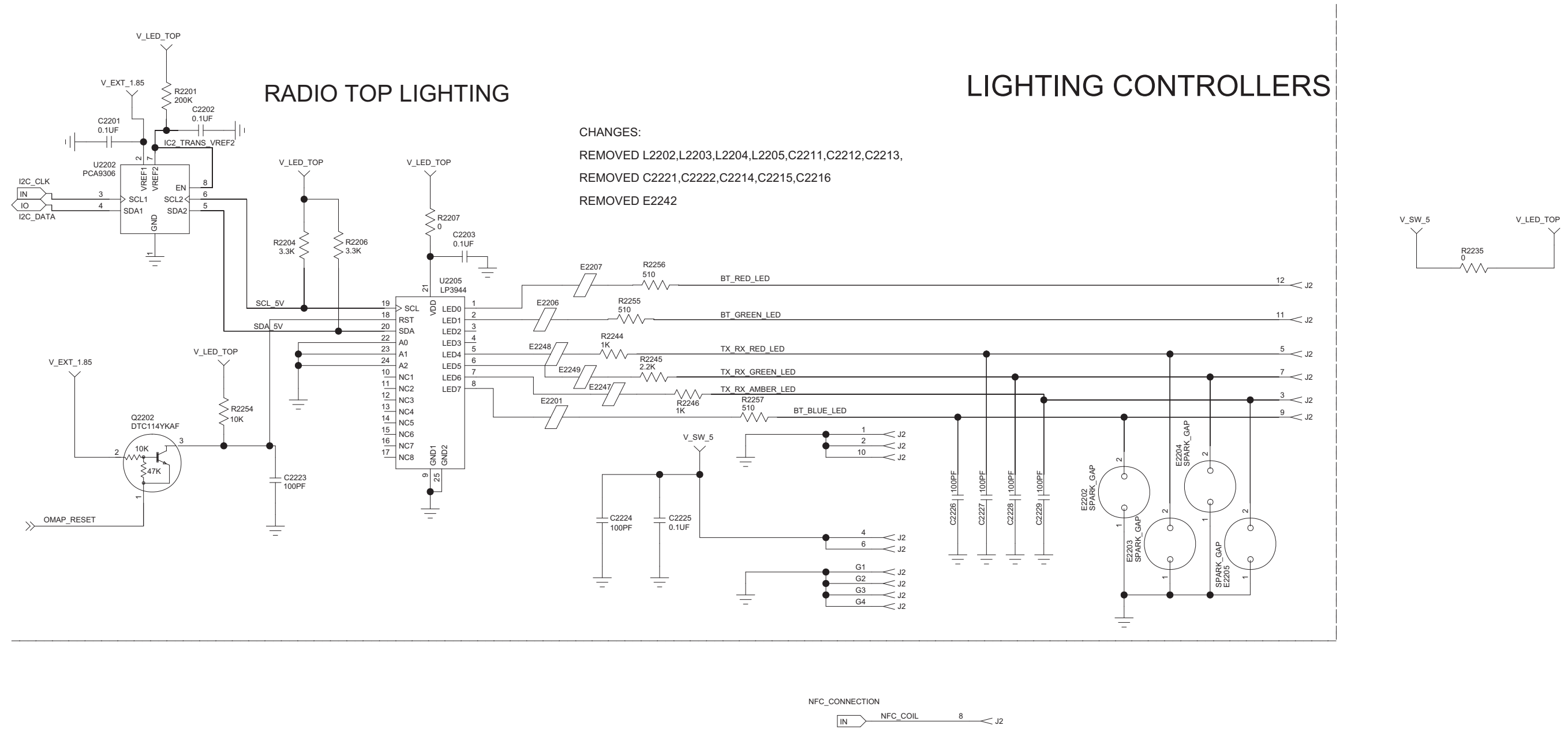


Figure 8-49. Lighting Control Circuit

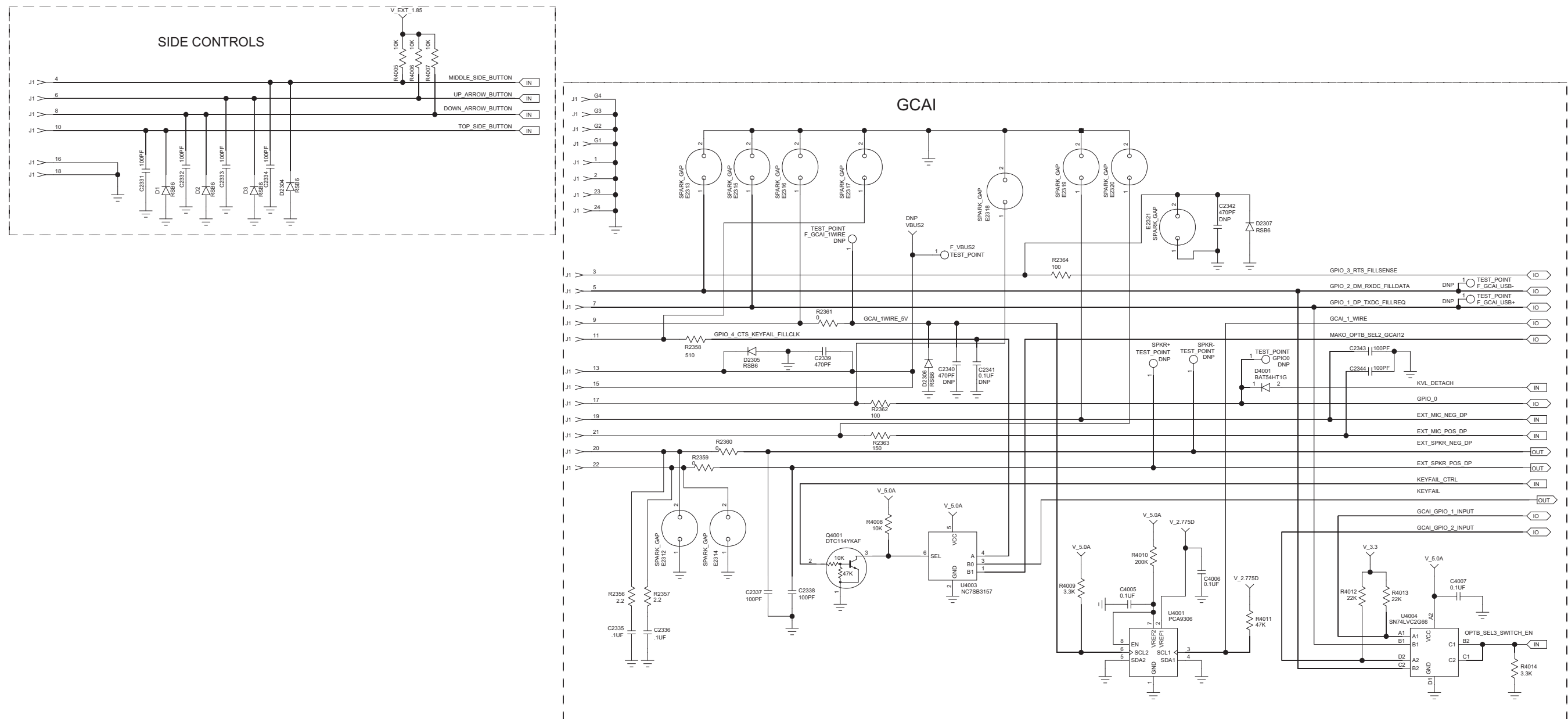


Figure 8-50. GCAI and side control

DEBUGGING AND DISPLAY CONNECTOR

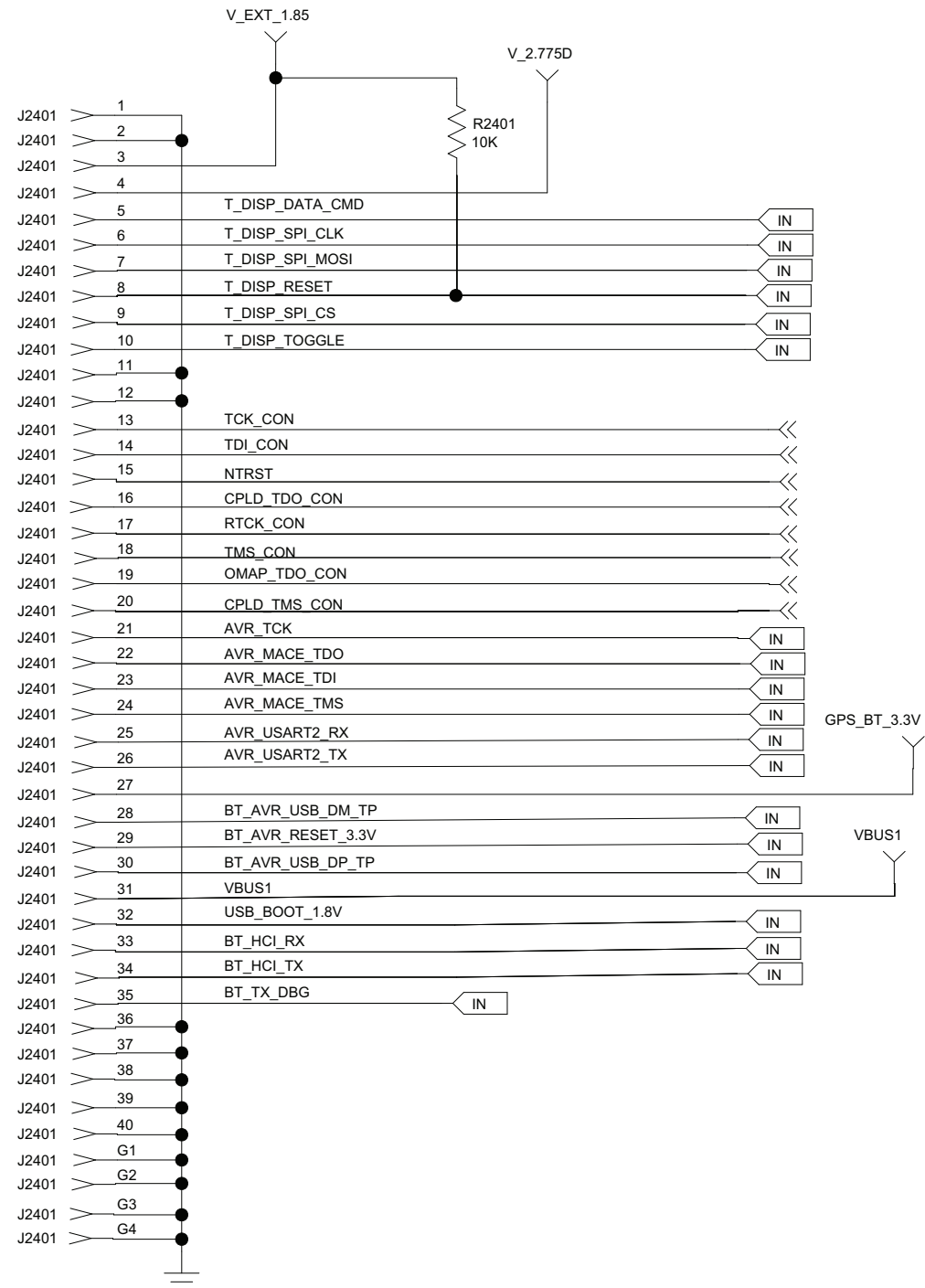


Figure 8-51. Debugging and Display Connector

CONNECTORS

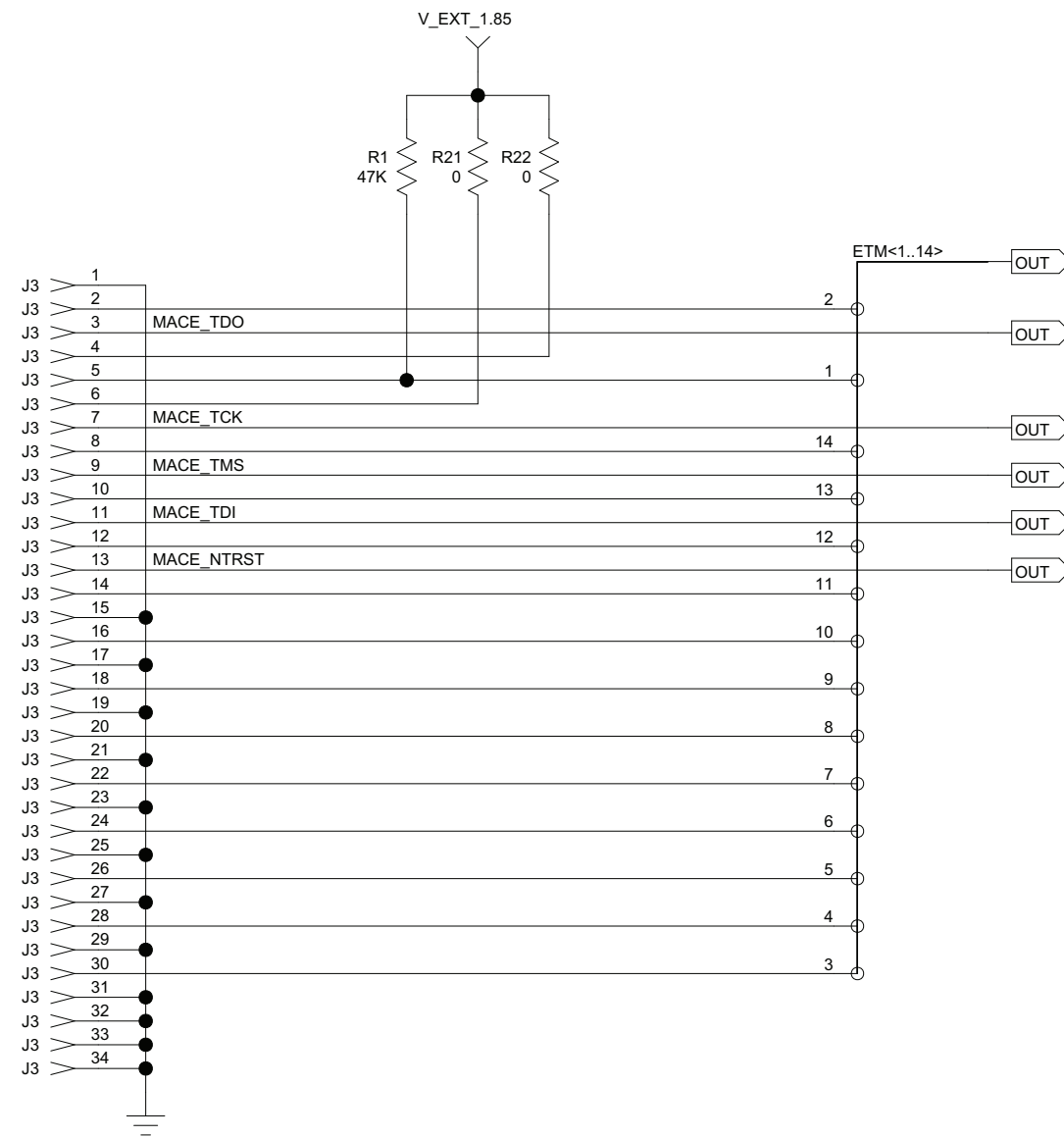


Figure 8-52. Connectors

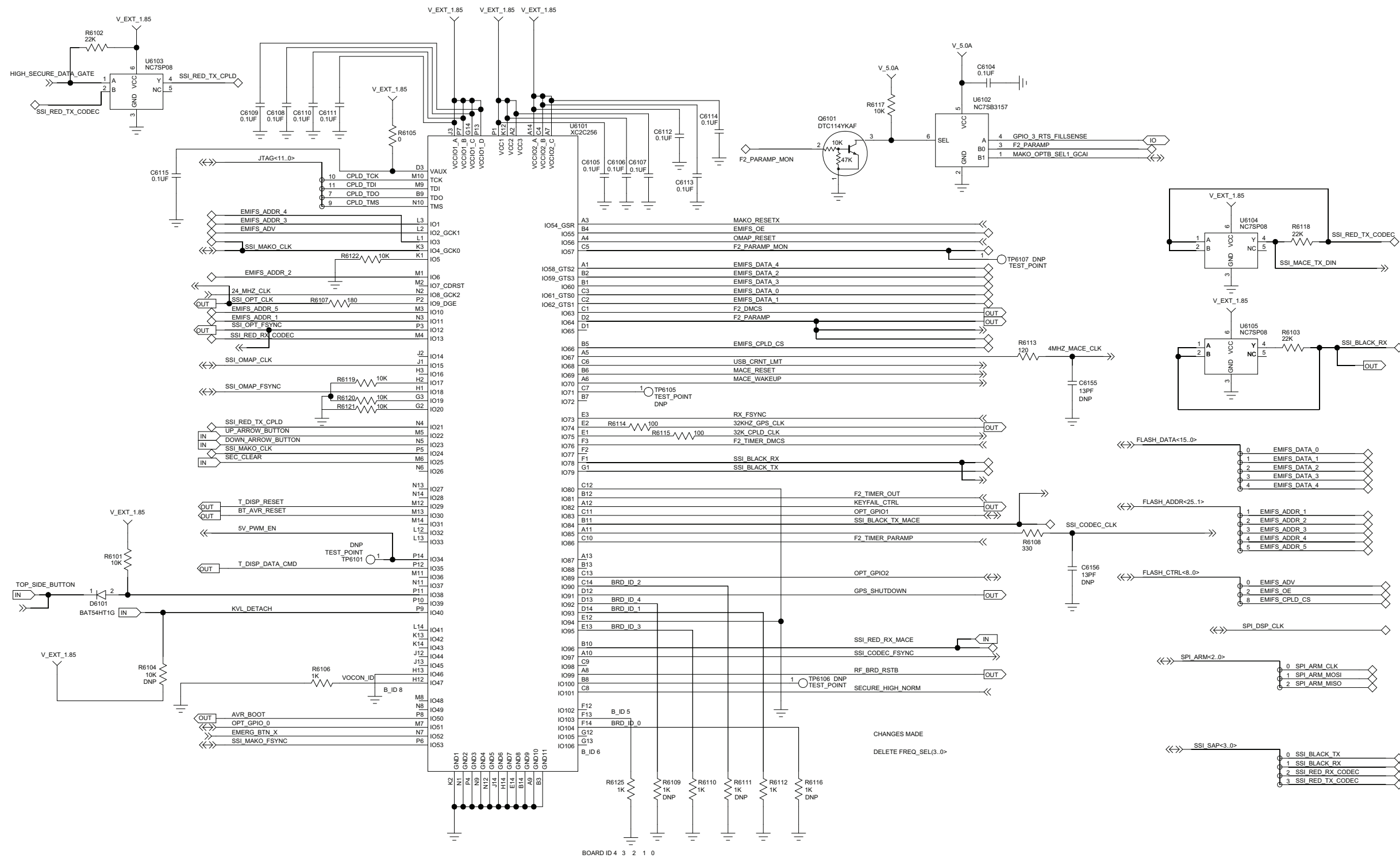
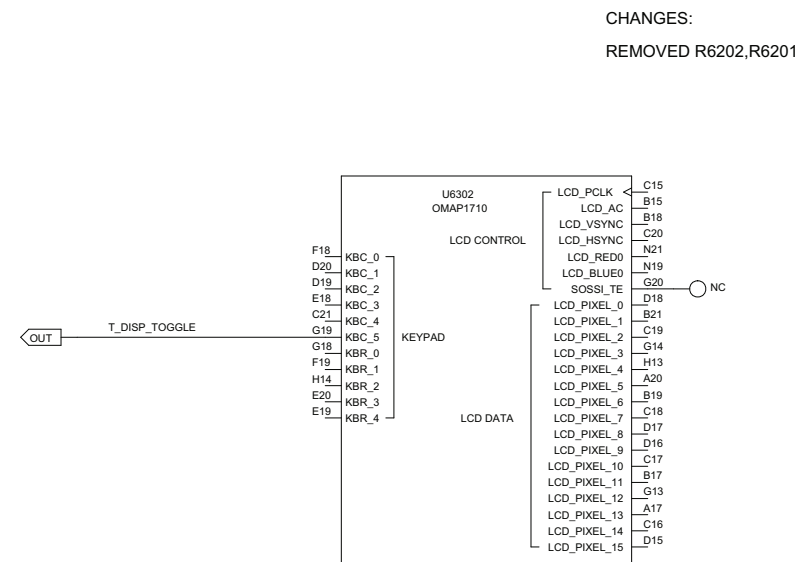
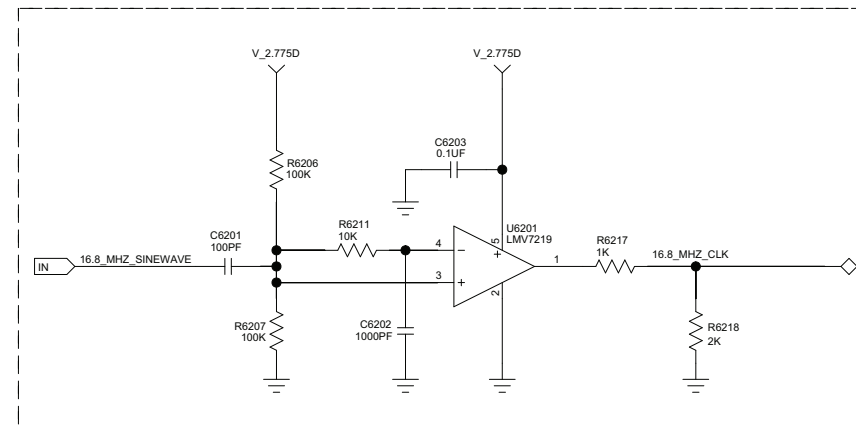


Figure 8-53. CPLD Circuit



16MHZ SQUARER



CHANGES: REMOVE KEYPAD, DISPLAY LINES
REMOVE R6203,R6214

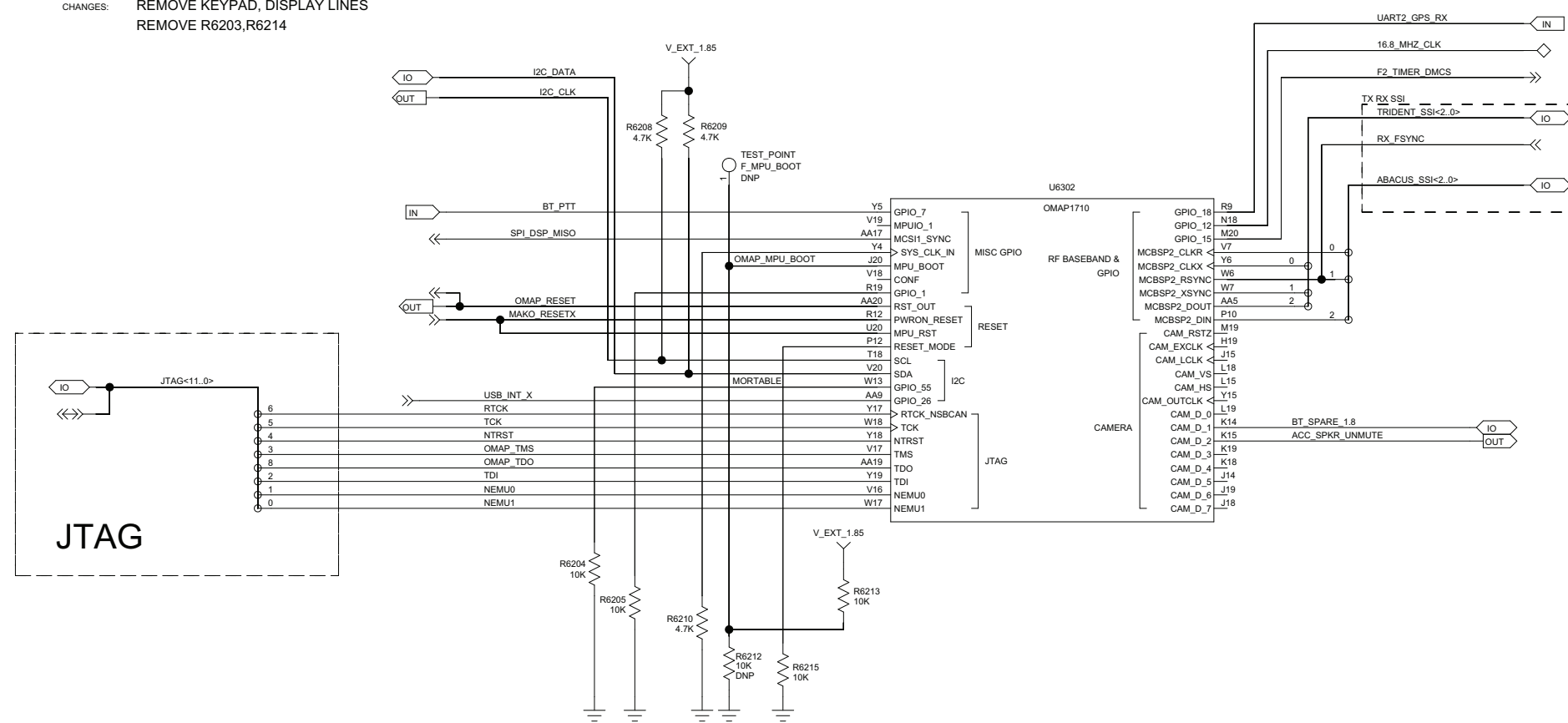


Figure 8-54. OMAP User Interface Circuit

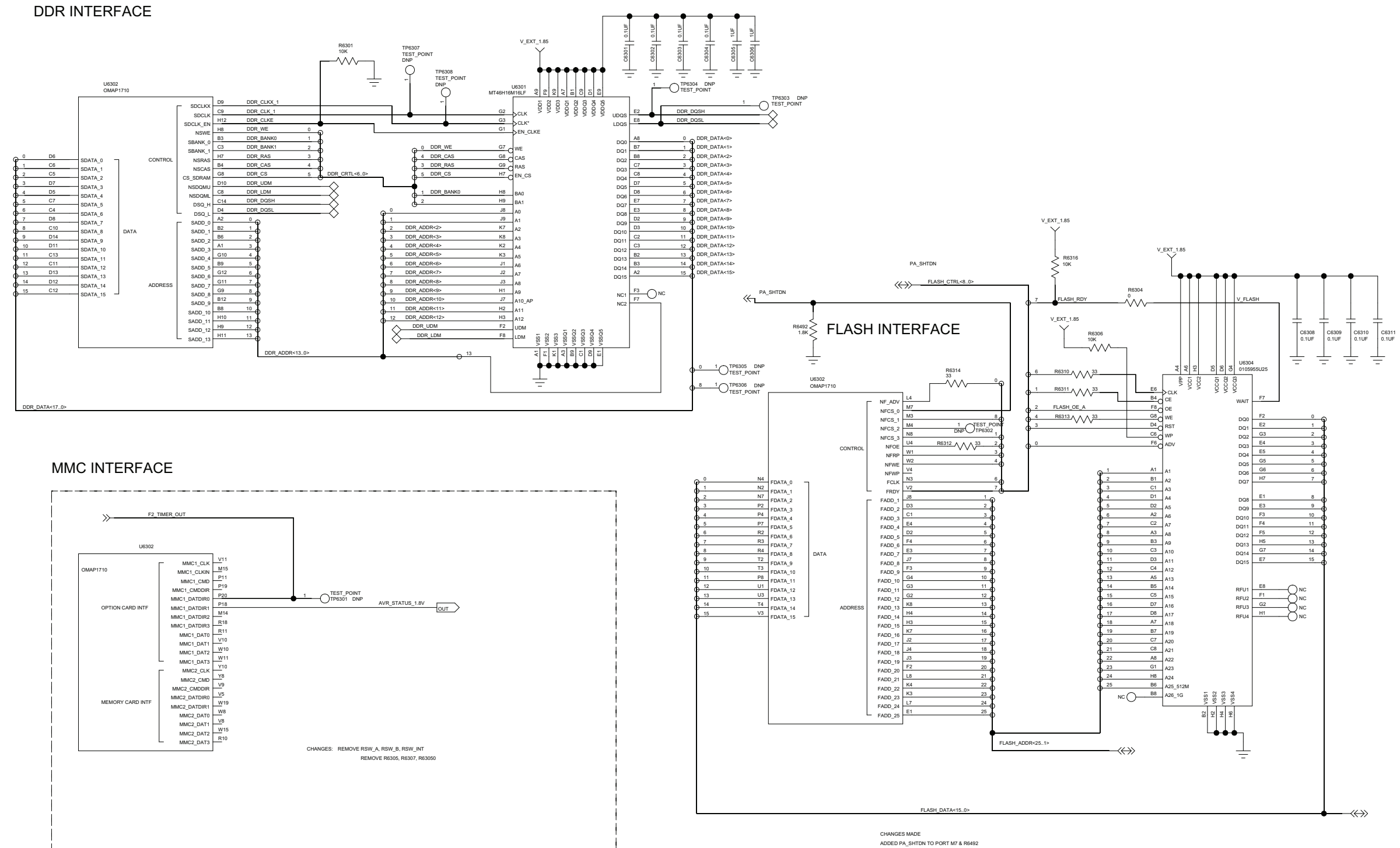


Figure 8-55. Memory Interface

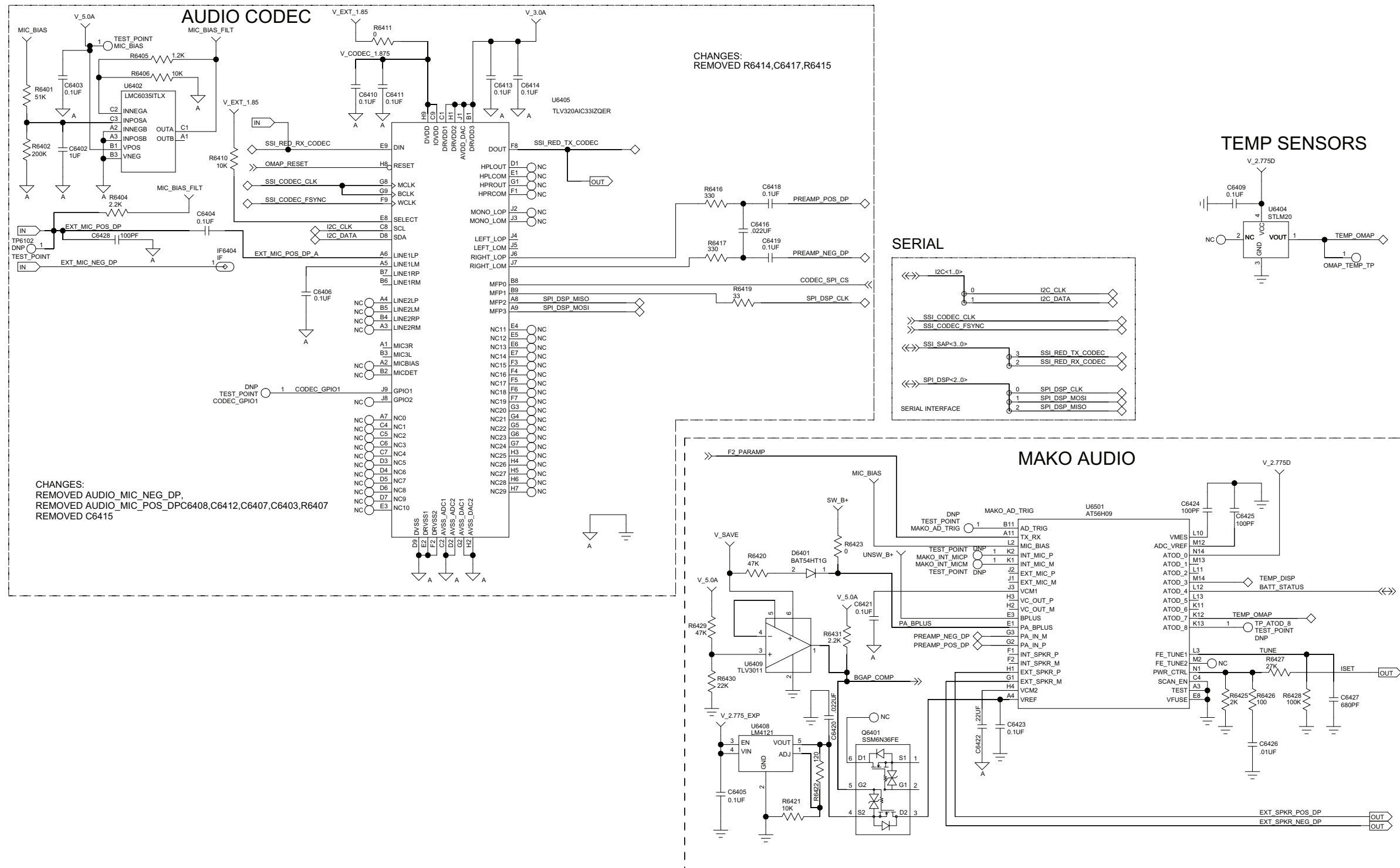


Figure 8-56. Audio Circuit

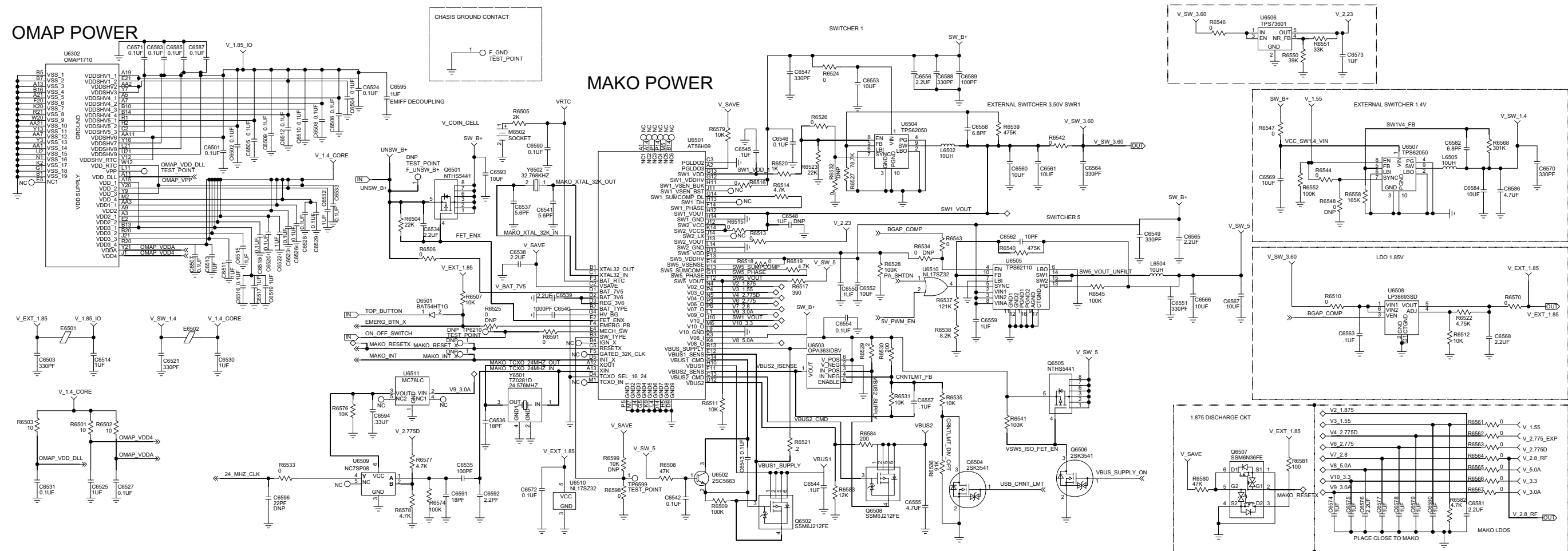


Figure 8-57. MAKO/DC Distribution Circuit

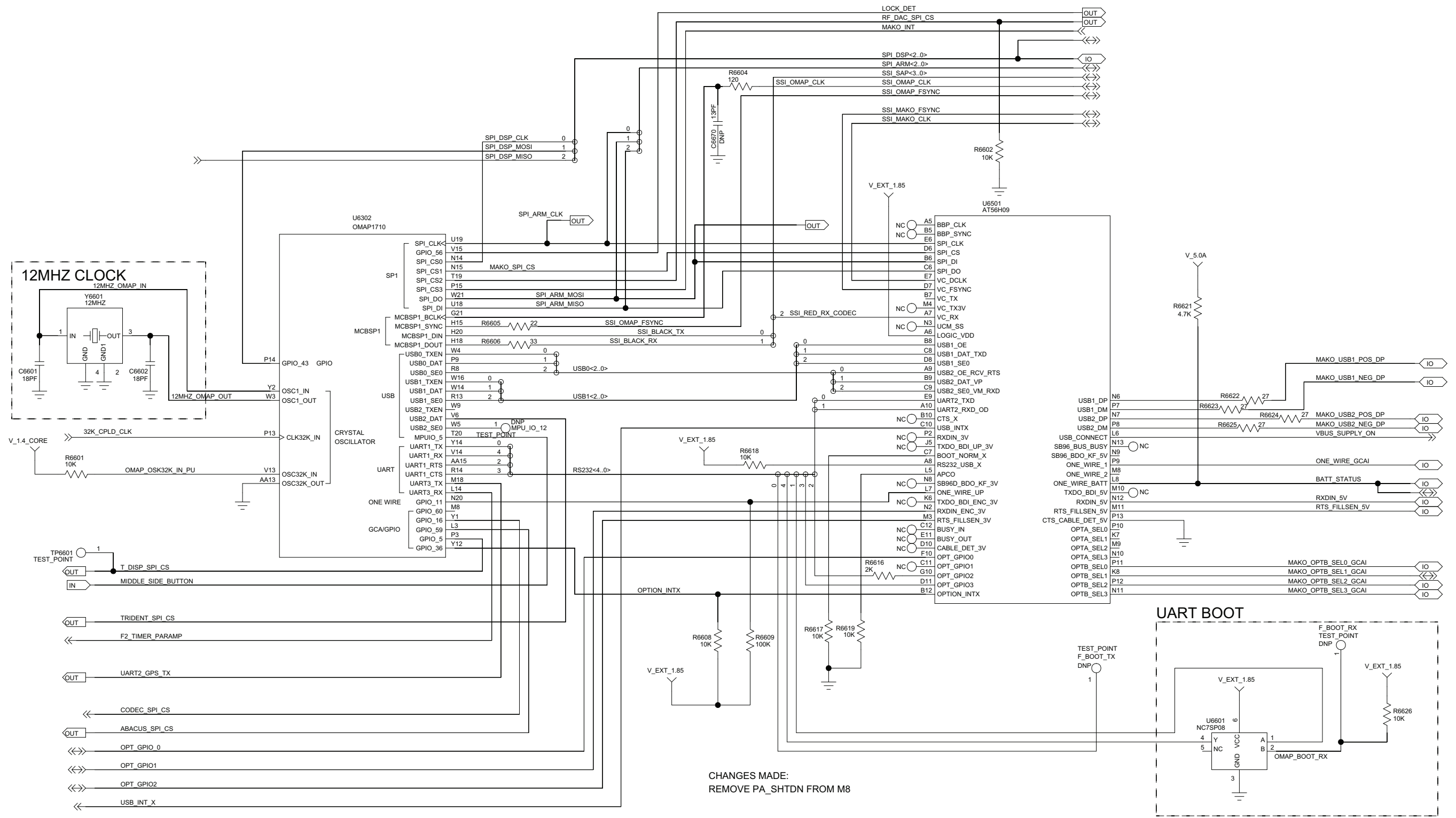


Figure 8-58. Serial Interface Circuit

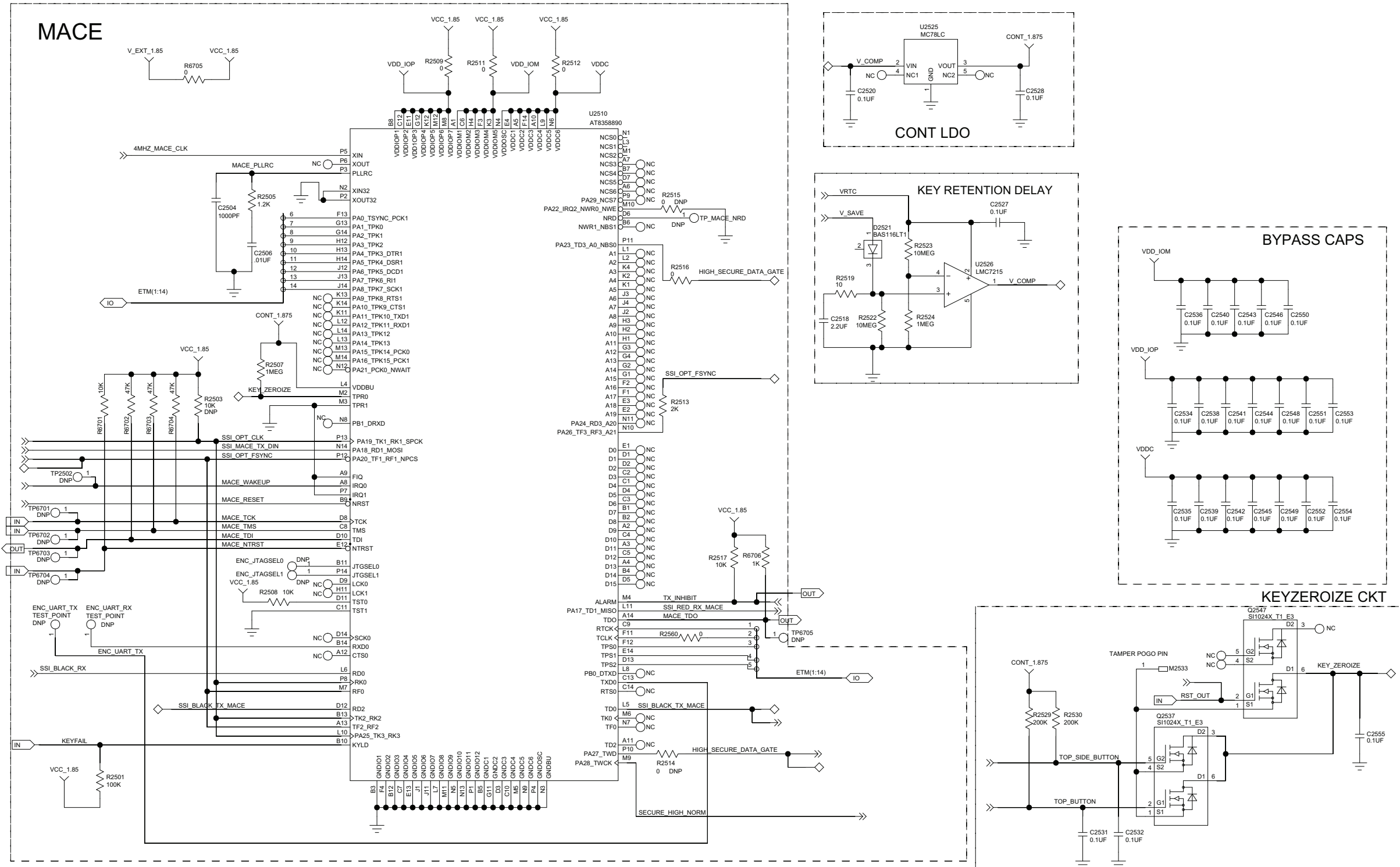


Figure 8-59. Secure Circuit

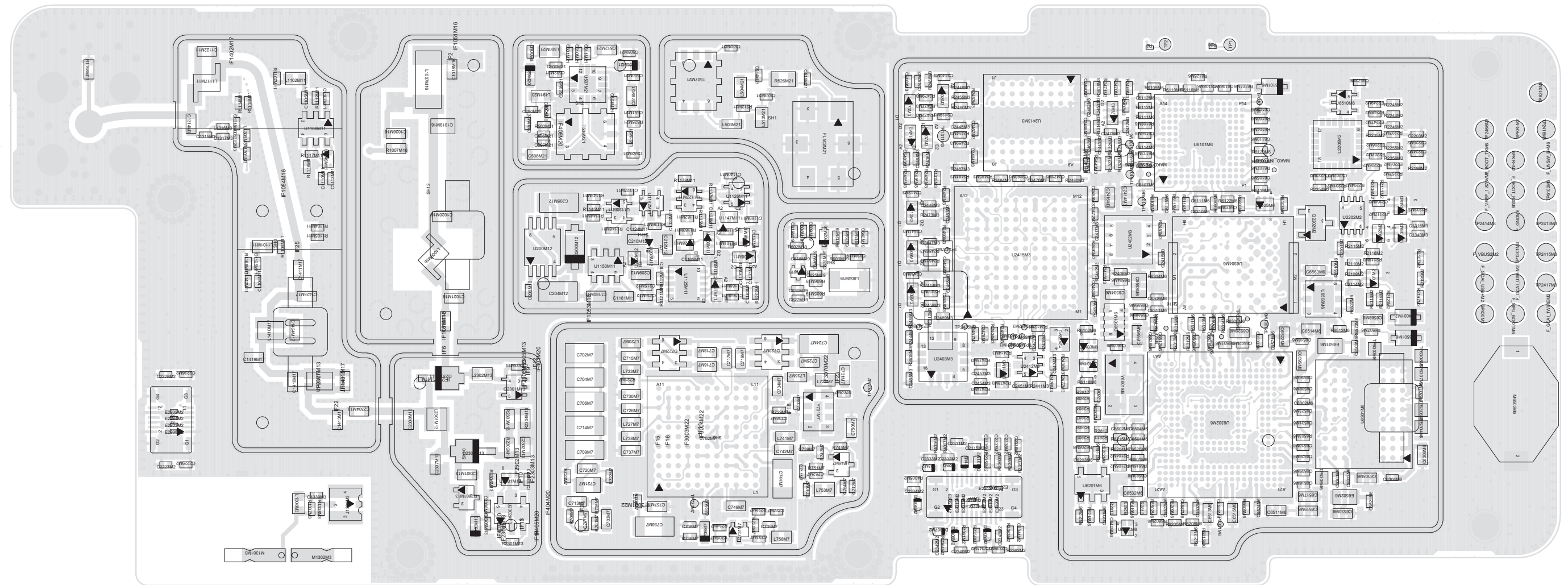


Figure 8-60. Transceiver (RF) Board Layout – Top Side

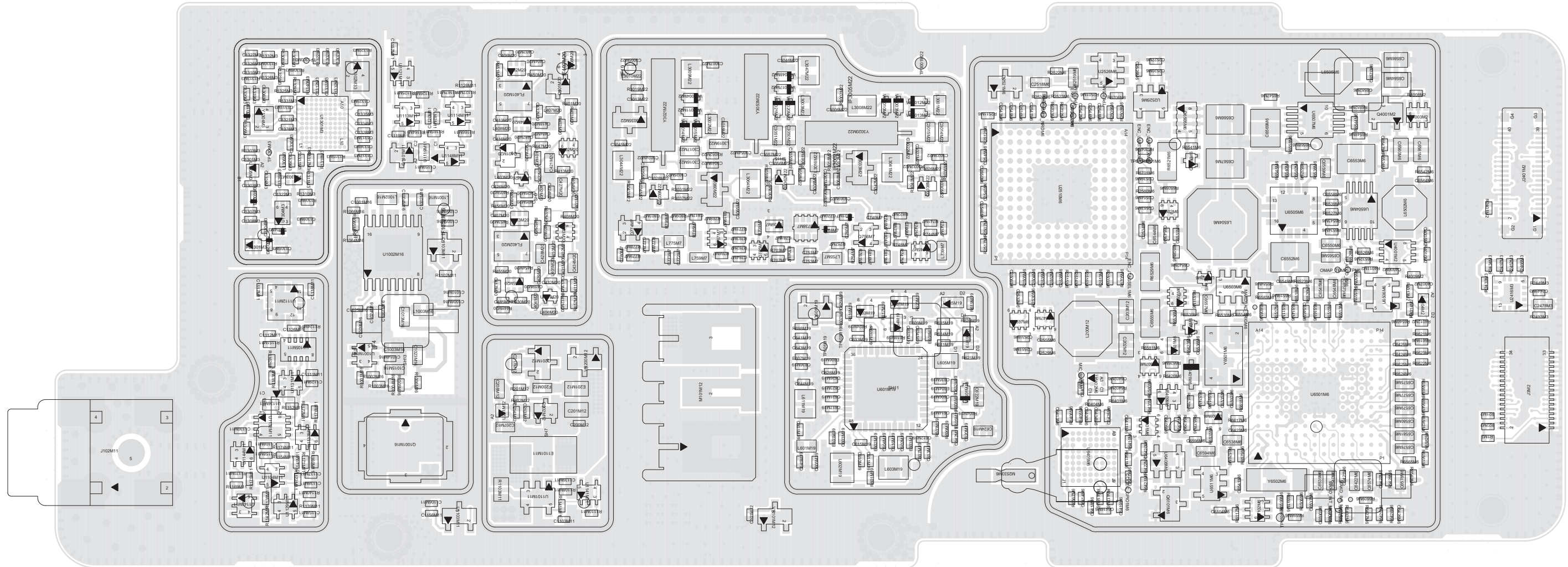


Figure 8-61. Transceiver (RF) Board Layout – Bottom Side

700–800 MHz Transceiver (RF) Board Parts List
– 84012501002

Ref. Des.	Part Number	Description
C1001M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1002M16	2113944A17	CAP,CHIP,4.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C1003M16	2113945C02	CAP,CHIP,.01UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA
C1004M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1005M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1006M16	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1007M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1008M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1009M16	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1010M16	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1013M16	2113944M24	CAP,FXD,18PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1014M16	NOTPLACED	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM

Ref. Des.	Part Number	Description
C1015M16	2113944M30	CAP,FXD,33PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1018M16	2113944M30	CAP,FXD,33PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1019M16	2171741M07	CAP,CER CHIP,15PF,50V-DC,HI Q CAP, 15 PF
C101M12	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1020M16	2113944M07	CAP,FXD,3.6PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1021M16	2113944C10	CAP,CHIP,1.5PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1022M16	2113944M30	CAP,FXD,33PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1023M16	2113944M23	CAP,FXD,16PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1024M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1025M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1026M16	2113945C07	CAP,CHIP,330PF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA
C1103M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1104M11	NOTPLACED	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1105M11	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1106M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1107M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1108M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1110M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1111M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1112M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1113M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1116M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1117M11	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1118M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1119M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1120M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1122M11	2113944M05	CAP,FXD,3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1123M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C1124M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1125M11	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1126M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1127M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1128M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1129M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1130M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1137M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1138M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1139M11	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1140M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1141M11	2175793A01	CAP,CHIP,.47UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMA
C1142M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1156M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1157M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1158M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1159M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1160M11	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C1161M11	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C1162M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1163M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1164M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1165M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1166M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1167M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1168M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1169M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1170M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1171M11	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1301M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C1302M3	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1303M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1304M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1305M3	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1306M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1307M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1308M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1309M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1310M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1311M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1312M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1313M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1314M3	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1315M3	2115153H02	CAP,CER CHIP,.75PF,.1PF+/-,+1%,-.1%,50V-DC,C0G,CAP,CERAMIC
C1316M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1317M3	2188881Y12	CAP,CER CHIP,1.8PF,.1PF+/-,16V-DC,0402,NP0,-55DEG CMIN,85DEG C
C1318M3	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C1319M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1320M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1321M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1322M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1323M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1324M3	2115153H03	CAP,CER CHIP,1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G
C1325M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1326M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1327M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1328M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1329M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1330M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1331M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1332M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1333M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1334M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1335M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1336M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1337M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1339M3	NOTPLACED	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1340M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1376M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1411M17	2113944C36	CAP,CHIP,33PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1413M17	2113944C12	CAP,CHIP,1.8PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1414M17	2113944C61	CAP,FXD,.5PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1418M17	2113944C08	CAP,CHIP,1.2PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1419M17	2113944C67	CAP,FXD,1.5PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1424M17	2113944C61	CAP,FXD,.5PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1425M17	2113944M06	CAP,FXD,3.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C200M12	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C201M12	21012118001	CAP,FXD,1UF,+10%,-10%,25V-DC,X7R,CAP,FXD,1UF,10%,25V-DC,X7R
C202M12	21012118001	CAP,FXD,1UF,+10%,-10%,25V-DC,X7R,CAP,FXD,1UF,10%,25V-DC,X7R
C203M12	21012118001	CAP,FXD,1UF,+10%,-10%,25V-DC,X7R,CAP,FXD,1UF,10%,25V-DC,X7R
C204M12	2113955D35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C205M12	2113955D35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C206M12	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C207M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C208M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C209M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2104M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C210M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2114M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2115M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C212M12	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C213M12	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C214M12	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C215M12	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C216M12	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C217M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2201M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2202M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2203M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2223M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2224M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2225M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2226M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2227M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2228M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2229M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2301M13	2113944C36	CAP,CHIP,33PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C2302M13	2113944M24	CAP,FXD,18PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C2303M13	2113944A36	CAP,CHIP,68PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C2304M13	2113944C36	CAP,CHIP,33PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C2305M13	2115153H56	CAP,CER CHIP,91PF,50V-DC,0402,C0G
C2306M13	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C2307M13	2113944C16	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA	C2341M2	NOTPLACED	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C2443M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2455M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2308M13	2113944C63	CAP,FXD,1PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB	C2342M2	NOTPLACED	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2444M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2456M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2309M13	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX	C2343M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2445M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2457M3	2115153H20	CAP,FXD,5.1PF,.1PF+/-,+2%,-2%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C2331M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2344M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2446M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2458M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2332M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2414M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2447M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2459M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2333M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2415M3	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2448M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2460M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2334M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2416M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2449M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2461M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2335M2	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2417M3	2171206F01	CAP,CER CHIP,4.7UF,+20%,-20%,4V-DC,0402,X5R,MONO,SMD,W18	C2450M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2462M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2336M2	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2438M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2451M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2463M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2337M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2439M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2452M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2464M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2338M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C2440M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2453M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2465M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C2339M2	2113945A05	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2441M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2454M3	2171051Y05	CAP,CER CHIP,180PF,+1%,-1%,50V-DC,0402,C0G,-55DEG CMIN,125DEG C	C2466M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2340M2	NOTPLACED	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2442M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX						

Ref. Des.	Part Number	Description
C2467M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2468M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2469M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2470M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C2471M3	2113945A05	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C2472M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2473M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2474M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2475M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2477M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2478M3	2113956B54	CAP,FXD,10UF,+20%,-20%,6.3V-DC,X5R,-55DEG CMIN,85DEG CMAX
C2479M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2480M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C2482M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2483M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2504M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2506M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C2518M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C2520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2531M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2532M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2534M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2535M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2536M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2538M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C2539M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2540M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2541M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2542M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2543M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2544M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2545M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2546M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2548M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2549M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2550M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2551M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2552M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2553M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2554M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C2555M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2806	NOTPLACED	CAP,FXD,.1PF,.03PF+/-,25V-DC,C0G,-55DEG CMIN,125DEG CMAX,PB-F
C3005M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3006M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3007M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3008M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3012M22	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX
C3013M22	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX
C3014M22	2113944M06	CAP,FXD,3.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3015M22	2113944M06	CAP,FXD,3.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3016M22	2113944M02	CAP,FXD,2.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3017M22	2113944M04	CAP,FXD,2.7PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3018M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C3022M22	2115153H09	CAP,FXD,1.8PF,.1PF+/-,+5.56%,-5.56%,50V-DC,0402,C0G
C3023M22	2115153H12	CAP,CERAMIC CHIP,2.4PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C3024M22	2115153H04	CAP,CERAMIC CHIP,1.1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C3025M22	2115153H14	CAP,CERAMIC CHIP,3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CE
C3026M22	2115153H14	CAP,CERAMIC CHIP,3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CE
C3027M22	2115153H13	CAP,FXD,2.7PF,.1PF+/-,+3.7%,-3.7%,50V-DC,0402,C0G,CAP, CERAMIC
C3028M22	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C3029M22	2115153H17	CAP,FXD,3.9PF,.1PF+/-,50V-DC,0402,C0G,CAP, CERAMIC, COG
C3042M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3045M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3046M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3049M22	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C3050M22	2113944M02	CAP,FXD,2.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3051M22	2113944M02	CAP,FXD,2.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3054M22	2115153H07	CAP,FXD,1.5PF,.1PF+/-,+6.67%,-6.67%,50V-DC,0402,C0G
C3055M22	2115153H12	CAP,CERAMIC CHIP,2.4PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C3056M22	2115153H05	CAP,FXD,1.2PF,.1PF+/-,50V-DC,0402,C0G
C3057M22	2188881Y12	CAP,CER CHIP,1.8PF,.1PF+/-,16V-DC,0402,NP0,-55DEG CMIN,85DEG C
C3065M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3067M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3068M22	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C3069M22	2115153H33	CAP,CER CHIP,9PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CERAMI
C4005M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4006M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4007M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C402M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C404M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C405M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C406M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C407M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C412M20	2115153H26	CAP,CER CHIP,9.1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C413M20	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C416M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C417M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C418M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C419M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C421M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA

Ref. Des.	Part Number	Description
C422M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C423M20	2115153H44	CAP,FXD,30PF,+1%,-1%,50V-DC,0402,C0G
C424M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C425M20	2115153H20	CAP,FXD,5.1PF,.1PF+/-,+2%,-2%,50V-DC,0402,C0G,CAP, CERAMIC, CO
C426M20	2113944A63	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C427M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C428M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C429M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C430M20	2115153H44	CAP,FXD,30PF,+1%,-1%,50V-DC,0402,C0G
C431M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C432M20	2115153H20	CAP,FXD,5.1PF,.1PF+/-,+2%,-2%,50V-DC,0402,C0G,CAP, CERAMIC, CO
C433M20	2113944A63	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C434M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C484M20	2115153H03	CAP,CER CHIP,1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G

Ref. Des.	Part Number	Description
C485M20	2113944A63	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C487M20	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C488M20	2113944V13	CAP,FXD,2.7PF,.1PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C490M20	2113944V07	CAP,FXD,1.5PF,.1PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C492M20	2113944V13	CAP,FXD,2.7PF,.1PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C500M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C501M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C502M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C504M21	2113944A70	CAP,FXD,6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C505M21	NOTPLACED	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C506M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C507M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C508M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C509M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C510M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C511M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C512M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C514M21	NOTPLACED	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C515M21	2113944A14	CAP,CHIP,3.6PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C516M21	2113944M30	CAP,FXD,33PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C532M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C533M21	2115153H52	CAP,FXD,62PF,+1%,-1%,50V-DC,0402,C0G
C550M21	NOTPLACED	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C551M21	NOTPLACED	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C552M21	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C601M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C602M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C603M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C604M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C605M19	2113944A15	CAP,CHIP,3.9PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C606M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C607M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C608M19	2113944A12	CAP,CHIP,3PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C609M19	2113944A30	CAP,CHIP,27PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6104M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6105M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6106M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6107M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6108M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6109M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C610M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C6110M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6111M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6112M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6113M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6114M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6115M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C611M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C612M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C613M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C614M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6155M6	NOTPLACED	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C6156M6	NOTPLACED	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C615M19	2113944A42	CAP,CHIP,150PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C616M19	2113945A11	CAP,CHIP,2200PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C617M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C618M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C619M19	2113944A35	CAP,CHIP,62PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6201M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6202M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C6203M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C620M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C621M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C622M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C623M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C624M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C625M19	2115153H39	CAP,FXD,18PF,50V-DC,0402,C0G
C626M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM

Ref. Des.	Part Number	Description
C627M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C628M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C629M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6301M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6302M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6303M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6304M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6305M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6306M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6308M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6309M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C630M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6310M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6311M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C631M19	2115153H32	CAP,FXD,8PF,.1PF+/-+.1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C632M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C633M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C634M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C635M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C636M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C637M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C638M19	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C639M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6402M6	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C6403M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6404M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6405M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6406M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6409M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C640M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6410M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6411M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6413M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6414M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6416M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6418M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6419M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C641M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6420M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6421M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6422M6	2113946C02	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6423M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6424M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6425M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6426M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6427M6	2113944A50	CAP,CHIP,680PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6428M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C642M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C643M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C644M19	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C645M19	NOTPLACED	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C646M19	2115153H32	CAP,FXD,8PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C6501M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6502M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6503M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C6504M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6505M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6506M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6507M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6508M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6509M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6510M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6511M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6512M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6513M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6514M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6515M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6516M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6517M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6518M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6519M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6521M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6522M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6523M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6524M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6525M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6526M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6529M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6530M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6531M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6532M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6533M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6534M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6535M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6536M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6537M6	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6538M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6539M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6540M6	2113945C13	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CM
C6541M6	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6542M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6543M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6544M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6545M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6546M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6547M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6548M6	NOTPLACED	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6549M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6550M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6551M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6552M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6553M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6554M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6555M6	2113955D45	CAP,FXD,4.7UF,+10%,-10%,10V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C6556M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6557M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6558M6	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6559M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6560M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6561M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6562M6	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6563M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6564M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6565M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6566M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6567M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6568M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6569M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6570M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6571M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6572M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6573M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6574M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6575M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6576M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6577M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6578M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6579M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6580M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6581M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6582M6	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6583M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6584M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6585M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6586M6	2113956C35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX
C6587M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6588M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6589M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6590M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6591M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6592M6	2113944A09	CAP,CHIP,2.2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C6593M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C756M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C757M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C760M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C764M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C770M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C772M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C773M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C777M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C780M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C781M7	2115153H45	CAP,CERAMIC CHIP,33PF,+1%,-1%,50V-DC,0402,C0G
C786M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C803M7	2115153H45	CAP,CERAMIC CHIP,33PF,+1%,-1%,50V-DC,0402,C0G
C813M7	NOTPLACED	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C816M7	2113944A30	CAP,CHIP,27PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C817M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C819M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C823M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C824M7	2115153H45	CAP,CERAMIC CHIP,33PF,+1%,-1%,50V-DC,0402,C0G
D1M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D200M12	4813978A19	DIODE,RECT,MBR120,SM,SOD-123,1A,20V,SHTK,PB-FREE
D2101M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D2301M13	4813974A19	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
D2302M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWER-MITE
D2303M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWER-MITE
D2304M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D2305M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D2306M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D2307M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360

Ref. Des.	Part Number	Description
D2521M6	4871785H01	DIODE,SWG,BAS116LT1G,SOT-23/SC-59,SOT-23,200MA,75V,.225W,SWG DI
D2M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D3M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D4001M2	4813978A25	DIODE,SWG,BAT54,SM,SOD-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D401M20	NOTPLACED	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
D6101M6	4813978A25	DIODE,SWG,BAT54,SM,SOD-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D6401M6	4813978A25	DIODE,SWG,BAT54,SM,SOD-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D6501M6	4813978A25	DIODE,SWG,BAT54,SM,SOD-323/SC-76,200MA,30V,.2W,SHTK,PB-FREE, W18
D722M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
D723M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
E1101M11	2405688Z01	IDCTR,BEAD,FERR BEAD
E201M12	7686949J14	FLTR,FERRITE BEAD,2A,SM,0805,CHIP,220OHM
E2201M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM
E2206M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM
E2207M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM

Ref. Des.	Part Number	Description
E2247M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM
E2248M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM
E2249M2	7685268E01	FLTR,FERRITE BEAD,.650MA,SM,0402,CHIP,80OHM
E401M20	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E402M20	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E601M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E602M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E603M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E604M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E605M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E606M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E607M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E608M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E609M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD,470OHM,200M
E6501M6	2480067M02	FIXED INDUC-TOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE

Ref. Des.	Part Number	Description
E6502M6	2480067M02	FIXED INDUC-TOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE
F200M12	6575834B01	FUSE,FST BLW,2A,32V,FUSE SUR MT
FL1301M3	9102190J23	FLTR,SAW,BAND-PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE
FL1302M3	9109674L58	BAND PASS FILTER
FL1303M3	9102190J23	FLTR,SAW,BAND-PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE
FL401M20	9175390A01	FLTR,DB,BAND-PASS,762MHZ MIN,870MHZ MAX,50OHM,SM,SAW FILTER, DL
FL402M20	9175390A01	FLTR,DB,BAND-PASS,762MHZ MIN,870MHZ MAX,50OHM,SM,SAW FILTER, DL
FL502M21	91009300001	FLTR,BAND-PASS,109.65MHZ NOM,FILTER,MONOLITHIC CRYSTAL,BAND
J102M11	2880658Z08	RF CONNecTOR,SMA,M,CONN SMA
J1301M3	40012057001	RF SWITCH,SWITCH,RF
J1M2	09012130001	CONN,RCPT,24CONT,.4MM ,CONNECTOR, BTB RECEPTACLE, 24-PIN,
J2401M2	0989851N01	CONN,BTB,2 ROW,RCPT,40CONT,.4MM, GLD,SMD
J2M2	0971704L01	CONN,CUST,RCPT,12CON T,CONNECTOR, 12-PIN SOCKET, 0.4MM PIT
J3M2	09012073001	CONN,BTB,RCPT,34CONT,.4MM,GLD,ST,CONNecTOR, B2B RCPT 34PINS

Ref. Des.	Part Number	Description
L1001M16	2415429H37	IDCTR,WW,110NH,5%,300 MA,.61OHM,CER,SM,0603, CHIP
L1002M16	2415429H10	IDCTR,WW,6.8NH,5%,700M A,.11OHM,CER,SM,0603,C HIP
L1003M16	2415429H37	IDCTR,WW,110NH,5%,300 MA,.61OHM,CER,SM,0603, CHIP
L1007M16	2460591K40	IDCTR,FXD,15%,12 TURNS,COUNTERCLOCK-WISE,28 AWG,SM,HI
L1009M16	2415428H04	IDCTR,AW,5.4NH,2%,1.6A, AIR,SM,AIR WOUND IDCTR
L1101M11	2415429H26	IDCTR,WW,33NH,5%,600M A,.22OHM,CER,SM,0603,C HIP
L1102M11	2415429H10	IDCTR,WW,6.8NH,5%,700M A,.11OHM,CER,SM,0603,C HIP
L1117M11	2415428H01	COIL,AW,1.65NH,10%,1.6A, AIR,2 TURNS,SM,AIR WOUND IDCTR
L1301M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1302M3	2475122C13	IDCTR,3.3NH,9.09%,300MA ,.17OHM,CER,4 TURNS,SM,IND, MULTI-LA
L1303M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1304M3	2475122C37	IDCTR,100NH,5%,300MA,.07OHM,CER,4 TURNS,SM,IND, MULTI-LAY
L1305M3	24012011010	IDCTR,WW,4.7NH,2%,1.5A,.06OHM,CER,6.85GHZ SRF,SM,0402 HI Q
L1306M3	2414017P14	IDCTR,CHIP,12NH,5%,300 MA,.6OHM,CER,9 Q,2GHZ SRF,SM,0402,PB-F
L1308M3	NOTPLACED	IDCTR,WW,39NH,5%,600M A,CER,SM,CHIP

Ref. Des.	Part Number	Description
L1316M3	24012011018	IDCTR,WW,9NH,2%,1.4A,.07OHM,CER,5GHZ SRF,SM,0402 HI Q CHIP
L1408M17	24012026009	IDCTR,AW,8.1NH,2%,4.4A, AIR,SM,ULTRA-MINIA-TURE AIR CORE I
L1410M17	24012026009	IDCTR,AW,8.1NH,2%,4.4A, AIR,SM,ULTRA-MINIA-TURE AIR CORE I
L200M12	2571269C01	IDCTR,COIL,1.5UH,20%,2.9 A,.059OHM,FERR,SM,WW PWR W18 COMP
L2301M13	24012026005	IDCTR,AW,10.2NH,2%,2.7A ,AIR,SM,ULTRA-MINIA-TURE AIR CORE
L2302M13	2415429H35	IDCTR,WW,82NH,5%,400M A,.54OHM,CER,SM,0603,C HIP
L2303M13	2414017N11	IDCTR,CHIP,8.2NH,5%,600 MA,.26OHM,CER,10 Q,2.5GHZ SRF,SM,0603
L3001M22	2415429H18	IDCTR,WW,15NH,5%,700M A,.17OHM,CER,SM,0603,C HIP
L3002M22	2415429H18	IDCTR,WW,15NH,5%,700M A,.17OHM,CER,SM,0603,C HIP
L3003M22	2415429H18	IDCTR,WW,15NH,5%,700M A,.17OHM,CER,SM,0603,C HIP
L3008M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L3009M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L3010M22	2414017N25	IDCTR,CHIP,120NH,5%,200 MA,2.4OHM,CER,12 Q,600MHZ SRF,SM,0603
L3016M22	2414017N25	IDCTR,CHIP,120NH,5%,200 MA,2.4OHM,CER,12 Q,600MHZ SRF,SM,0603
L3019M22	2414017N25	IDCTR,CHIP,120NH,5%,200 MA,2.4OHM,CER,12 Q,600MHZ SRF,SM,0603

Ref. Des.	Part Number	Description
L3041M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L3044M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L3047M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L3064M22	2414032F36	IDCTR,WW,150NH,5%,400 MA,.56OHM,CER,35 Q,780MHZ SRF,SM,PB-FR
L401M20	2415427H21	IDCTR,WW,10NH,5%,480M A,.2OHM,CER,SM,0402,CHI P
L402M20	2415427H21	IDCTR,WW,10NH,5%,480M A,.2OHM,CER,SM,0402,CHI P
L403M20	2414017P07	IDCTR,CHIP,3.3NH,300MA,.19OHM,CER,8 Q,4GHZ SRF,SM,0402,PB-F
L404M20	2415427H26	IDCTR,WW,15NH,5%,560M A,CER,SM,0402,CHIP
L405M20	2415427H21	IDCTR,WW,10NH,5%,480M A,.2OHM,CER,SM,0402,CHI P
L406M20	2415427H05	IDCTR,WW,2.4NH,5%,790M A,.068OHM,CER,SM,0402, CHIP
L407M20	2415427H16	IDCTR,WW,7.5NH,5%,680M A,.1OHM,CER,SM,0402,CHI P
L408M20	2415427H21	IDCTR,WW,10NH,5%,480M A,.2OHM,CER,SM,0402,CHI P
L489M20	2414017N11	IDCTR,CHIP,8.2NH,5%,600 MA,.26OHM,CER,10 Q,2.5GHZ SRF,SM,0603
L491M20	2478057A14	IDCTR,8.2NH,2%,.054OHM, CER,46 Q,5.9GHZ SRF,PCMT,8.2NH SUR
L500M21	2415429H43	IDCTR,WW,220NH,5%,300 MA,2.1OHM,CER,SM,0603, CHIP

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
L503M21	2414017N24	IDCTR,CHIP,100NH,5%,300 MA,20OHM,CER,15 Q,700MHZ SRF,SM,0603,P	L709M7	2414017N11	IDCTR,CHIP,8.2NH,5%,600 MA,.26OHM,CER,10 Q,2.5GHZ SRF,SM,0603	M1	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR	Q2301M13	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,1 00A
L504M21	2478057A51	CHIP INDUC-TOR,RF,270NH,2%,SM,060 3 HI Q CHIP IDCTR	L720M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M101M12	39012039001	CONN,CMPRSN,3CONT,ST ,CONNECTOR, BAT CON-TACT, WWP	Q2537M6	4888795V06	XSTR,FET GP PWR,MOS-FET,SM,SMT,20V,.25W,LEA D-FREE
L513M21	NOTPLACED	IDCTR,WW,22NH,5%,700M A,.19OHM,CER,SM,0603,C HIP	L727M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M1301M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8	Q2547M6	4888795V06	XSTR,FET GP PWR,MOS-FET,SM,SMT,20V,.25W,LEA D-FREE
L550M21	2414017N10	IDCTR,CHIP,6.8NH,5%,600 MA,.22OHM,CER,12 Q,2.7GHZ SRF,SM,0603	L728M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP	M1302M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8	Q3033M22	4813972A17	XSTR,FET GEN PURPOSE SMALL SIG,MOS-FET,N,ENHN,SM,SOT-23,-4W,P
L551M21	24012011026	IDCTR,WW,18NH,2%,900M A,.12OHM,CER,3.55GHZ SRF,SM,0402 HI Q	L733M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M2	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR	Q3035M22	4813972A17	XSTR,FET GEN PURPOSE SMALL SIG,MOS-FET,N,ENHN,SM,SOT-23,-4W,P
L601M19	2415429H43	IDCTR,WW,220NH,5%,300 MA,2.1OHM,CER,SM,0603, CHIP	L735M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M2533M6	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8	Q3038M22	4871915M01	XSTR,BIP RF SML SGNL,NPN,SC-75A,SMT,12V,.1W,100MA,4. 5GHZ,XST
L602M19	2466505A01	CHIP INDUC-TOR,CHIP,10UH,5%,150MA ,FERR,0 AWG,SM,PB-FREE	L738M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M6502M6	0985888K02	BATTERY CONNEC-TOR,SKT,NI,LEAP	Q3039M22	4885061Y01	XSTR,BIP RF SMALL SIG-NAL
L603M19	2466505A01	CHIP INDUC-TOR,CHIP,10UH,5%,150MA ,FERR,0 AWG,SM,PB-FREE	L739M7	2414017N25	IDCTR,CHIP,120NH,5%,200 MA,2.4OHM,CER,12 Q,600MHZ SRF,SM,0603	Paste	11007387003	SLDR,PASTE,500G,PLAS-TIC JAR,AIR SEAL, 8.9E LOW VOID	Q3060M22	4813972A17	XSTR,FET GEN PURPOSE SMALL SIG,MOS-FET,N,ENHN,SM,SOT-23,-4W,P
L604M19	2414032D16	IDCTR,WW,120NH,5%,800 MA,.26OHM,CER,42 Q,1GHZ SRF,SM,PB-FREE	L741M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	PCB	84012501002	PCB, BOARD, PC, 7800 MN BRD	Q3062M22	4885061Y01	XSTR,BIP RF SMALL SIG-NAL
L605M19	2414017Q54	IDCTR,FXD,3.9UH,10%,30 MA,.9OHM,FERR,45 Q,38MHZ SRF,SM,0805,P	L753M7	2415347H06	IDCTR,WW,2.2UH,5%,320M A,1.2OHM,CER,SM,IDCTR, 2200NH	Q1001M16	48012094001	XSTR,FET RF POWER,SM,25V,MOD,XST R,FET RF PWR, 135-941MH	Q4001M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250M HZ
L611M19	2414032F39	IDCTR,WW,270NH,10%,280 MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE	L755M7	2415429H38	IDCTR,WW,120NH,5%,300 MA,.65OHM,CER,SM,0603, CHIP	Q1101M11	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA, PB-FREE	Q401M20	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA, PB-FREE
L6502M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR	L758M7	2415429H38	IDCTR,WW,120NH,5%,300 MA,.65OHM,CER,SM,0603, CHIP	Q1103M11	4813970A59	XSTR,FET GP PWR,P-CH,ENHN,SM,SOT-23,20V,.4W,PB-FREE	Q402M20	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
L6504M6	24009268001	IDCTR,PWR,10UH,20%,1.3 A,FERR,SM,10UH 2.1A SHLD IDCTR	L759M7	2414017N25	IDCTR,CHIP,120NH,5%,200 MA,2.4OHM,CER,12 Q,600MHZ SRF,SM,0603	Q201M12	4813970A59	XSTR,FET GP PWR,P-CH,ENHN,SM,SOT-23,20V,.4W,PB-FREE	Q403M20	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
L6505M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR	L768M7	2488090Y25	IDCTR,CHIP,100NH,5%,90 MA,CER,SM,0402,MULAY PB FREE	Q202M12	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA, PB-FREE			
L701M7	2475122C29	IDCTR,22NH,5%,300MA,.07 OHM,CER,4 TURNS,SM,IND, MULTI-LAYE	L775M7	2415429H38	IDCTR,WW,120NH,5%,300 MA,.65OHM,CER,SM,0603, CHIP	Q2202M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250M HZ			

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
Q601M19	4813973A04	XSTR,BIP GP SS,NPN,TA13,SM,SOT-23,SMT,30V,.225W,300MA,125MHZ,P	Q774M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM,SOT-343,3.3V,TRANSITO	R1105M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R1128M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6101M6	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC-59,SC-59,SMT3,50V,100MA,250MHZ	Q785M7	4889394V04	XSTR,FET GEN PURPOSE SMALL SIG,MOSFET,N-CH,ENHN,SM,20V,.25W,P	R1106M11	0613952Q21	RES,MF,6.8OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1135M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
Q6401M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W	R1001M16	0613952R13	RES,MF,33KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1107M11	0613952Q45	RES,MF,68OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1136M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6501M6	4813970A62	XSTR,FET GP PWR,MOS-FET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE	R1002M16	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE	R1108M11	0613952N81	RES,MF,68.1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1137M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6502M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,-20V,.5W,FET	R1003M16	0613952R21	RES,MF,68KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1110M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1138M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6504M6	4809579E77	XSTR,FET GP SS,MOS-FET,N-CH,SM,30V,1.2X1.2MM PKG W18 COMP	R1004M16	0613952R12	RES,MF,30KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1112M11	NOTPLACED	RES,MF,51OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1139M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6505M6	4813970A62	XSTR,FET GP PWR,MOS-FET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE	R1005M16	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1114M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R1140M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6506M6	4809579E77	XSTR,FET GP SS,MOS-FET,N-CH,SM,30V,1.2X1.2MM PKG W18 COMP	R1006M16	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1115M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R1141M11	0613952R42	RES,MF,510KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6507M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W	R1007M16	0613952H53	RES,MF,150OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R1116M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1142M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q6508M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,-20V,.5W,FET	R1064M16	0613952Q64	RES,MF,430OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1117M11	0613952R22	RES,MF,75KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1143M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q731M7	4885061Y01	XSTR,BIP RF SMALL SIGNAL	R1065M16	0613952Q26	RES,MF,11OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1121M11	0613952N47	RES,MF,30.1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1144M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q745M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ	R1066M16	0613952Q64	RES,MF,430OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1122M11	0613952N85	RES,MF,75KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1145M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q756M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM,SOT-343,3.3V,TRANSITO	R1101M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1124M11	0613952Q42	RES,MF,51OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1146M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
Q767M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ	R1102M11	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1125M11	0613952R14	RES,MF,36KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1151M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
			R1103M11	06009259001	RES,SHUNT,.02OHM,.33W,SMD,LOW RESISTANCE THK FLM RES	R1126M11	0613952R06	RES,MF,16KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1152M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
			R1104M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R1127M11	0613952R08	RES,MF,20KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE			

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R1154M11	0613952N01	RES,MF,10KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1176M11	0613952M01	RES,MF,1KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1312M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1332M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1158M11	0613952R35	RES,MF,270000,5,.0625,SM,0402,200,PB-FREE	R1177M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1313M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1333M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1160M11	0613952R03	RES,MF,12000,5,.0625,SM,0402,200,PB-FREE	R1178M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1314M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1337M3	NOTPLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1162M11	0613952R29	RES,MF,150KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1180M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1315M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1338M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1163M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1182M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1316M3	NOTPLACED	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1340M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1164M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1198M11	0613952J01	RES,MF,10KOHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R1317M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1M2	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R1165M11	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1202M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1318M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2	NOTPLACED	RES,MF,0OHM,5%,.05W,SM,0201,,PB-FREE
R1166M11	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1301M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1319M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R20	NOTPLACED	RES,MF,0OHM,5%,.05W,SM,0201,,PB-FREE
R1167M11	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1302M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1320M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R201M12	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1168M11	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R1303M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1322M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R202M12	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R1169M11	0613952P52	RES,MF,340KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1304M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1323M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2104M2	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R1170M11	0613952N88	RES,MF,80.6KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1305M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1324M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2105M2	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R1171M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1306M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1325M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2106M2	NOTPLACED	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1172M11	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE	R1307M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1326M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2107M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1174M11	0613952N01	RES,MF,10KOHM,1%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1308M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1327M3	NOTPLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2109M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R1175M11	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1309M3	NOTPLACED	RES,MF,110OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1328M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2110M2	0613952Q33	RES,MF,22,5,.0625,SM,0402,200,PB-FREE
			R1310M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R1329M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2111M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
			R1311M3	NOTPLACED	RES,MF,110OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R1330M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2113M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
						R1331M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2114M2	0613952Q33	RES,MF,22,5,.0625,SM,0402,200,PB-FREE

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R2115M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE	R2254M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2362M2	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R2436M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2116M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2255M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2363M2	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2437M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2117M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2256M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2364M2	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R2441M3	0613952Q41	RES,MF,47OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2118M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2257M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2401M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2442M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2120M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R22M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2404M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2443M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2197M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2301M13	NOTPLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2405M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2444M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2198M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2302M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R2406M3	NOTPLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2449M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2199M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2303M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R2407M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2450M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R21M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2304M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE	R2408M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2451M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2201M2	0613952R32	RES,MF,200KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2306M13	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2412M3	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2452M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2204M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2356M2	0613952Q09	RES,MF,2.2OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2414M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2453M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2206M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2357M2	0613952Q09	RES,MF,2.2OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2416M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2454M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2207M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2358M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2418M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2455M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2235M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2359M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2419M3	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R2456M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2244M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2360M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2433M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	R2457M3	0613952R05	RES,MF,15KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2245M2	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE	R2361M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE	R2434M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE			
R2246M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE				R2435M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE			

Ref. Des.	Part Number	Description
R2458M3	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2459M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2460M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2461M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2465M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2466M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2467M3	0613952Q32	RES,MF,20OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2469M3	NOTPLACED	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2470M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2471M3	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2472M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2473M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2474M3	0613952R35	RES,MF,270000,5,.0625,SM,0402,200,PB-FREE
R2475M3	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2476M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2477M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2478M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2479M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2480M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2481M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2484M3	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2485M3	0613952Q35	RES,MF,27OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2486M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2487M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2488M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2489M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2490M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2491M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2492M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2493M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R2495M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2496M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2497M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2501M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2503M6	NOTPLACED	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2505M6	0613952Q75	RES,MF,1.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2507M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2508M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2509M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2511M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2512M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2513M6	0613952Q80	RES,MF,2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2514M6	NOTPLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2515M6	NOTPLACED	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2516M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2517M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2519M6	0613952H25	RES,MF,10OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2522M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE
R2523M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE
R2524M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2529M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE
R2530M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE
R2560M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2803	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2804	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2805	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2806	0613952Q59	RES,MF,270OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2807	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2808	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2810	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2811	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2812	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2813	NOTPLACED	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R2817	0613952Q41	RES,MF,47OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R3061M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R404M20	0613952Q45	RES,MF,68OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R456M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R3002M22	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R3063M22	0613952Q54	RES,MF,160OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R405M20	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE	R457M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R3018M22	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R3066M22	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R406M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R500M21	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3019M22	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4005M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R407M20	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE	R502M21	0613952Q36	RES,MF,30OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3030M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4006M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R408M20	0613952R23	RES,MF,82KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R512M21	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R3031M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4007M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R409M20	0613952Q85	RES,MF,3.3KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE	R525M21	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R3032M22	0613952Q31	RES,MF,18OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4008M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R410M20	0613952Q45	RES,MF,68OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R526M21	0613958J74	RES,MF,0OHM,5%,.125W,S M,0805,PB-FREE
R3034M22	0613952Q31	RES,MF,18OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4009M2	0613952Q85	RES,MF,3.3KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE	R411M20	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE	R601M19	0613952Q41	RES,MF,47OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3036M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4010M2	0613952R32	RES,MF,200KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE	R412M20	0613952Q18	RES,MF,5.1OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R602M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3037M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4011M2	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE	R413M20	0613952Q11	RES,MF,2.7OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R603M19	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R3040M22	0613952Q50	RES,MF,110OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4012M2	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE	R447M20	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE	R604M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3043M22	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4013M2	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE	R448M20	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE	R605M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3052M22	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R4014M2	0613952Q85	RES,MF,3.3KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE	R450M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R606M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R3058M22	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R401M20	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE	R451M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R607M19	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R3059M22	0613952Q31	RES,MF,18OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R402M20	0613952R23	RES,MF,82KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R452M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R608M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
			R403M20	0613952Q85	RES,MF,3.3KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE	R453M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R609M19	0613952Q81	RES,MF,2200,5,.0625,SM,0 402,200,PB-FREE
						R454M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE			
						R455M20	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE			

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R6101M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6116M6	NOTPLACED	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6204M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6301M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6102M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R6117M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6205M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6304M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6103M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R6118M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE	R6206M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6306M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6104M6	NOTPLACED	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6119M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6207M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6310M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6105M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R611M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6208M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE	R6311M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6106M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6120M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6209M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE	R6312M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6107M6	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6121M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R620M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6313M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6108M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6122M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6210M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE	R6314M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6109M6	NOTPLACED	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6125M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6211M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6316M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R610M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R612M19	0613952Q94	RES,MF,7.5KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6212M6	NOTPLACED	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6401M6	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6110M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R613M19	0613952Q82	RES,MF,2.4KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6213M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6402M6	0613952R32	RES,MF,200KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6111M6	NOTPLACED	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R614M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6215M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6404M6	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE
R6112M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R615M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6217M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6405M6	0613952Q75	RES,MF,1.2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6113M6	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE	R616M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6218M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE	R6406M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6114M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R617M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R621M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6410M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6115M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	R618M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R623M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R6411M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
			R619M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	R624M19	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE			

Ref. Des.	Part Number	Description
R6416M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6417M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6419M6	0613952Q37	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6420M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R6421M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6422M6	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE
R6423M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6425M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6426M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6427M6	0613952R11	RES,MF,27KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6428M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6429M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R6430M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6431M6	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE
R6492M6	0613952Q79	RES,MF,1800,5,.0625,SM,0402,200,PB-FREE
R6501M6	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R6502M6	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R6503M6	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE

Ref. Des.	Part Number	Description
R6504M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6505M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6506M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6507M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6508M6	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R6509M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6510M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6511M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6512M6	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6513M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6514M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6515M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6516M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6517M6	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6518M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6519M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6520M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6521M6	0615049H01	RES,MF,.2OHM,1%,.5W,120 6,KAMAYA 0.2 OHM CHIP RES
R6522M6	0613952M66	RES,MF,4.75KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6523M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6524M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6525M6	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6526M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6527M6	0613952N87	RES,MF,78.7KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6528M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6529M6	0615049H01	RES,MF,.2OHM,1%,.5W,120 6,KAMAYA 0.2 OHM CHIP RES
R6530M6	0613952L30	RES,MF,200OHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6531M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6532M6	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6533M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6534M6	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6535M6	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6536M6	0613952Z72	RES,MF,91KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6537M6	0613952P09	RES,MF,121KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6538M6	0613952Q95	RES,MF,8.2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6539M6	0613952P66	RES,MF,475KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6540M6	0613952P66	RES,MF,475KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6541M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6542M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6543M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6544M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6545M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6546M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6547M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6548M6	NOTPLACED	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6550M6	0613952Z64	RES,MF,39KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6551M6	0613952Z62	RES,MF,33KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6552M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6558M6	0613952P22	RES,MF,165KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6561M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6562M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R748M7	0613952Q47	RES,MF,82OHM,5%,.0625 W,SM,0402,200PPM/CEL,CER CHIP 82.0 OHM 5%	R809M7	0613952Q31	RES,MF,18OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH9	26012257001	SHLD,CAN,STL,SN PLT,SHIELD, RXFE, APX CVT	U1128M11	5188085K11	IC,NAND,SINGLE 2 INPUT,SN74LVC1G00YZPR,SM,GATE, POS, 5 DSBGA,
R751M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R822M7	NOTPLACED	RES,MF,20OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	T506M21	2575851B01	XFMR,BALUN,RF XFMR BALUN	U1129M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
R754M7	NOTPLACED	RES,MF,680OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	R823M7	NOTPLACED	RES,MF,20OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE	T507M21	2575851B02	XFMR,BALUN,25,SM,RF XFMR BALUN	U1130M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
R757M7	NOTPLACED	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH1	26012246001	SHLD,STL,SN PLT,SHIELD, IF, APX CVT	U1001M16	5175143H01	IC,WIDE SPLY RANGE OP AMP	U1131M11	5109817F77	IC,COMPTR,LMV7275,SC70-5
R761M7	0613952Q29	RES,MF,15OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH10	26012250001	SHLD,STL,SN PLT,SHIELD, ANTSWI, APX CVT	U1002M16	51012101001	IC,SM,VHF/UHF/800/900 MHZ LDMOS DRVR IC	U1132M11	5114007M28	IC,D FLIP-FLOP,1PER PKG,17SZ74,N-I,SM,SOIC8,PB-FREE
R762M7	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH11	26012258001	SHLD,STL,SN PLT,SHIELD, ABACUS, APX CVT	U1101M11	5188032U43	IC,SENSING CIRCUIT,INA138,SM,SOT-23/5,1PER PKG,PB FREE	U1133M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
R763M7	0613952R19	RES,MF,56KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH12	26012251001	SHLD,STL,SN PLT,SHIELD, PAOP, APX CVT	U1103M11	5185070Y01	IC,TEMP SENS	U1136M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
R766M7	0613952Q92	RES,MF,6.2KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH13	26012260001	SHLD,STL,SN PLT,SHIELD, DRIVER/PA, APX CVT	U1104M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP	U1137M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
R769M7	0613952Q29	RES,MF,15OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH14	26012252001	SHLD,STL,SN PLT,SHIELD, ALC/DC, APX CVT	U1105M11	5180390L83	IC,CNTRLR,SM,1PER PKG	U1138M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
R771M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	SH15	26012261001	SHLD,STL,SN PLT,SHIELD, VCO, APX CVT	U1106M11	5175772B05	IC,LTC5532ES6,SOT-23,1PER PKG,PRCN RF DET	U1139M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCEIVER W/VOLTAGE TRANSLATI
R776M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH16	26012254001	SHLD,STL,SN PLT,SHIELD, CONTROLLER/AVR, APX CVT	U1112M11	5175772B04	IC,HMC468LP3E,QFN,1 DB LSB GAAS MMIC ATTEN	U1141M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
R778M7	0613952Q29	RES,MF,15OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH17	26012262001	SHLD,STL,SN PLT,SHIELD, MACE/MAKO, APX CVT	U1113M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP	U1142M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
R779M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE	SH2	26012253001	SHLD,STL,SN PLT,SHIELD, MIXER, APX CVT	U1114M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP	U1143M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
R785M7	0613952Q60	RES,MF,300OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH3	26012259001	SHLD,STL,SN PLT,SHIELD, GPS/BT, APX CVT	U1119M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG	U1144M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
R799M7	0613952Q60	RES,MF,300OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE	SH4	26012247001	SHLD,STL,SN PLT,SHIELD, 2ND LO, APX CVT	U1121M11	5114000B52	IC,XOR,LOGIC LEVEL SHIFTER,1PER PKG,SM,SOT-353,PB-FREE	U1146M11	5109522E93	GATE,OR,SN74LVC1G32YZPR,1PER PKG,SM,2 INPUT IN NANO PKG
			SH5	26012255001	SHLD,STL,SN PLT,SHIELD, ALC1, APX CVT	U1125M11	5175206H01	IC,DAC,W/ 5 PPM/C INT REF			
			SH6	26012248001	SHLD,STL,SN PLT,SHIELD, FGU, APX CVT	U1126M11	5109817F77	IC,COMPTR,LMV7275,SC70-5			
			SH7	26012256001	SHLD,CAN,STL,SN PLT,SHIELD, DC, APX CVT	U1127M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW			
			SH8	26012249001	SHLD,STL,SN PLT,SHIELD, TXFE, APX CVT						

Ref. Des.	Part Number	Description
U1147M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1148M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1149M11	5109522E93	GATE,OR,SN74LVC1G32Y ZPR,1PER PKG,SM,2 INPUT IN NANO PKG
U1150M11	51009381001	IC,MICROPOWER SOT-23 V REF
U1301M3	51007377001	IC,XCVR,NL5500,BGA,BLUETOOTH, GPS, FM RX, FM TX
U1304M3	5105739X13	IC,AMP,SIGE,QFN,QFN,18 DB,1.57GHZMIN,1.57GHZMAX,-9DB,SIGE GPS LO
U1305M3	5187344N09	IC,LNR V REGLTR,FXD,2.8V,100MA,LOW NOISE
U1334M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U1335M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U200M12	5188493T01	IC,VREG/SWG,LP2989,SM,MINI SO-8 HI PRCN REG 5V
U201M12	5175771A99	IC,LNR V REGLTR,FXD,100MA,VFBGA,LOW NOISE, 100MA LINEAR REGL
U202M12	5175772B02	IC,LNR V REGLTR,FXD,1.8V,100MA,VFBGA,LINEAR REGLTR 100MA 1.8
U203M12	5175772B01	IC,LNR V REGLTR,FXD,1.5V,350MA,VFBGA,LINEAR V REGLTR 350MA
U2101M2	5109522E84	IC,DL SCHT TRIG MICRO PAK
U2102M2	5109522E84	IC,DL SCHT TRIG MICRO PAK

Ref. Des.	Part Number	Description
U2202M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U2205M2	5188682Y01	IC,POWER DRIVER,40MA,SM,RGB LED, I2C CONTORL, LLP PKG
U2301M13	5103535B53	IC,INVTR,DL,NC7WZ04L6X,2PER PKG,SC70
U2302M13	5185941F45	ATTEN,VAR,14.4DBMIN,15.6DBMAX,0-2000 MHZ-FREQ,50OHM,PCMT,SOT-25
U2402M3	51002923001	IC,LNR V REGLTR,3.3V LP2989,NOPB
U2403M3	51009735001	IC,RCVR,QFN,IC, RCVR, ONE-CHAN, QFN, LF WAKE-UP
U2406M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2407M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2408M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2409M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2410M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2411M3	5175856M01	IC,INVTR,0MHZMAX,DL INVTR
U2412M3	5114007M45	IC,NOR,1PER PKG,SOT-353,PB-FREE
U2413M3	51010274001	IC,SDRAM,128MB,8MEG X 16,7.5NS,VFBGA,3.3V,IC,SDRAM,128MBIT,8M

Ref. Des.	Part Number	Description
U2414M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2415M3	51009372001	IC,UCNTR,IC UCNTR AT32UC3A0512
U2416M3	51009669001	IC,SENSOR,SM,IC, ACCELEROMETER, MOTION SENSOR
U2473M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2478M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2510M6	5185912Y03	IC,MICROP,BGA,CRYPTOGRAPHIC PROCESOR,IC,CRYPTOGRAPHIC P
U2525M6	5171339H01	IC,MC78LC18,MICROPOWER V REGLTR
U2526M6	5171988H01	IC,COMPTR,CMOS COMPTR
U4001M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U4003M2	5188691V01	IC,MUX/DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE
U4004M2	5116783H01	IC,ANLG SW,SN74LVC2G66YZPR,SM,2PER PKG,0CHANNELS,BILATERAL,DL
U402M20	5180428L15	SW,RF SWITCH,SPDT,SMT,6W,3V
U403M20	5180428L15	SW,RF SWITCH,SPDT,SMT,6W,3V
U404M20	5180428L15	SW,RF SWITCH,SPDT,SMT,6W,3V
U405M20	5180428L15	SW,RF SWITCH,SPDT,SMT,6W,3V

Ref. Des.	Part Number	Description
U406M20	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM,SMT,6V,380W,80A,14MHZ,TR
U407M20	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM,SMT,6V,380W,80A,14MHZ,TR
U408M20	5103535B53	IC,INVTR,DL,NC7WZ04L6X,2PER PKG,SC70
U507M21	5164015H81	IC,MXR,SM
U601M19	5102495J14	IC,IF,IF DIGITILIZING SUBSYSTEM IC,AD9864,QFN
U602M19	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM,SMT,6V,380W,80A,14MHZ,TR
U603M19	5109522E84	IC,DL SCHT TRIG MICRO PAK
U604M19	5109522E84	IC,DL SCHT TRIG MICRO PAK
U605M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U606M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U607M19	5186311J24	IC,BFR,1PER PKG,NC7SZ125,ACTIVE HIGH,BFR,3ST,SM,5.5
U6101M6	0180706J18	IC,PGM,PGM CPLD
U6102M6	5188691V01	IC,MUX/DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE
U6103M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6104M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6105M6	5175114H01	IC,SNGL AND GATE MICROPAK

Ref. Des.	Part Number	Description
U6201M6	5185941F26	IC,COMPTR,LMV7219,SM,SOT-23/5,IC,LM7219,COMPARATOR,NOPB
U6301M6	51012031001	IC,SDRAM,32MB,16 MEG X16,6.5NS,VFBGA,64MSRF RSH,32MB DIE SHRIN
U6302M6	5102495J13	IC,MICROP,P1710ZZGE,BG A,12MHZ,32BITS
U6304M6	0105955U25	ASSY,ASSY,ASSY,IC,BGA SPEC PROG, FLSH MEM
U6402M6	5115453H01	IC,OP AMP,2PER PKG,RAIL TO RAIL OUTPUT, 8 PIN BGA
U6404M6	5175772B38	IC,IC ANLG TEMP SENSOR
U6405M6	5188348V06	IC,AUDIO CODEC,SM,AUDIO CODEC
U6408M6	5188521T01	IC,VREF,SM,SOT23,1PER PKG,.5%,1.25 TO 13.75,PRCN BANDGAP ADJUS
U6409M6	51009000001	IC,COMPTR,SC70,NANOP-OWER, 1.8V, SC70 COMPTR
U6501M6	5185143E77	IC,CUST,BGA,IC, MAKO ASIC, CMOS PWR MGMT
U6502M6	4871987H01	XSTR,BIP GP POWER,12V,1A,LOW FREQ XSTR
U6503M6	5171674H01	IC,OP AMP,SO-8,OP AMP
U6504M6	5171682H01	IC,DC TO DC CON-VERTER,800MA BUCK REGLTR
U6505M6	5189631P01	IC,OPER PKG,SYNC STEP-DOWN CONV
U6506M6	5184790Y04	IC,LINEAR VOLTAGE REG-ULATOR,400MA
U6507M6	5171682H01	IC,DC TO DC CON-VERTER,800MA BUCK REGLTR
U6508M6	51009366001	IC,LNR V REGLTR,LLP6,500MA LOW DROPOUT CMOS LINEAR REG

Ref. Des.	Part Number	Description
U6509M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6510M6	5114007A47	IC,OR,17SZ32,1PER PKG,SOT-353,PB FREE
U6511M6	5171339H01	IC,MC78LC18,MICROPO- WER V REGLTR
U6601M6	5175114H01	IC,SNGL AND GATE MICROPAK
U702M7	5164015H28	IC,CUST,MULTI PROTO- COL/BAND TRANSCVR IC,SM,BGA,TRIDENT, INTEG
U738M7	5171972L01	IC,SW,SP3T RF SW
U739M7	5103535B53	IC,INVTR,DL,NC7WZ04L6X ,2PER PKG,SC70
U746M7	4805218N63	XSTR,GEN PURPOSE SMALL SIG,SOT- 323,BROADBAND AND XSTR
VR101M12	4813977M29	DIODE,ZEN,MBZ5250,SM,S OT-23,ZEN,PB-FREE
VR200M12	4813977M29	DIODE,ZEN,MBZ5250,SM,S OT-23,ZEN,PB-FREE
VR3003M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3004M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3010M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3011M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3012M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3013M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3014M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79

Ref. Des.	Part Number	Description
VR3015M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3017M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3020M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3021M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR3048M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR601M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR602M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
Y1304M3	48014600001	OSC,TCXO,26.0
Y2475M3	48009319001	OSC,VAR,SMD XTAL OSC DS0211AR
Y3020M22	48012102005	RESON,NON- QUARTZ,1025MHZ,SM,RE SON CER 1025MHZ
Y3021M22	48012102005	RESON,NON- QUARTZ,1025MHZ,SM,RE SON CER 1025MHZ
Y3053M22	48012102006	RESON,NON- QUARTZ,1110MHZ,SM,RES ON CER 1110MHZ
Y6501M6	93012044001	OSC,XO,24.576MHZ,SM,XT AL U SMD 5.0X3.2 24.576MHZ
Y6502M6	4809995L05	RESON,QRTZ,32.768KHZ, SM,FUND,9PF LOAD CAP,- 40DEG C MIN,85DE
Y6601M6	4802582S85	RESON,QRTZ,12MHZ,10P PM TOL,18PPM STAB,SM,FUND,AT,10PF LOAD CAP
Y701M7	4871886H01	OSC,VO,16.8 MHZ VCTXO .8PPM

Notes

8.4 Main Board Block: VHF (84012512001_A)

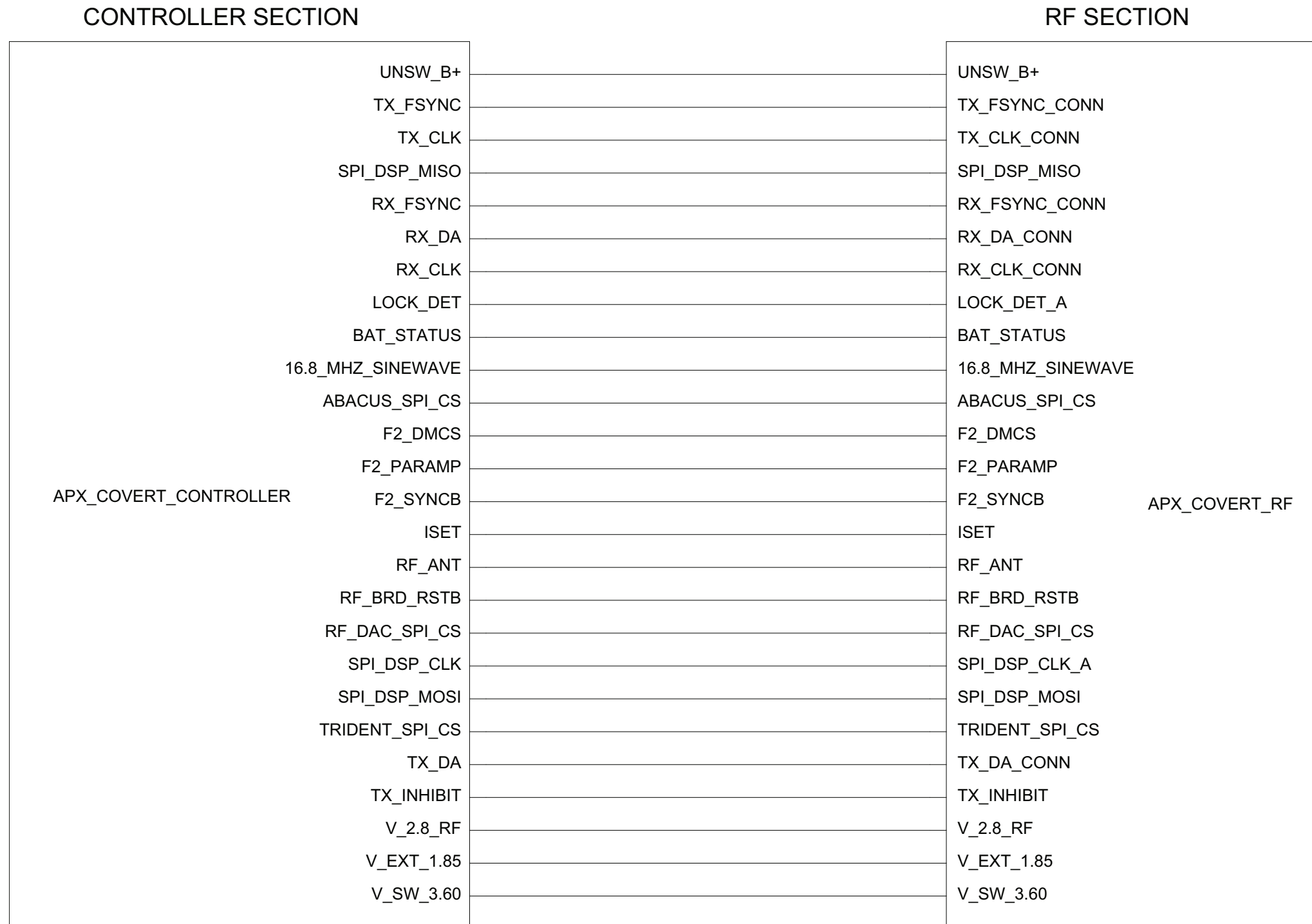


Figure 8-62. Main Board Block

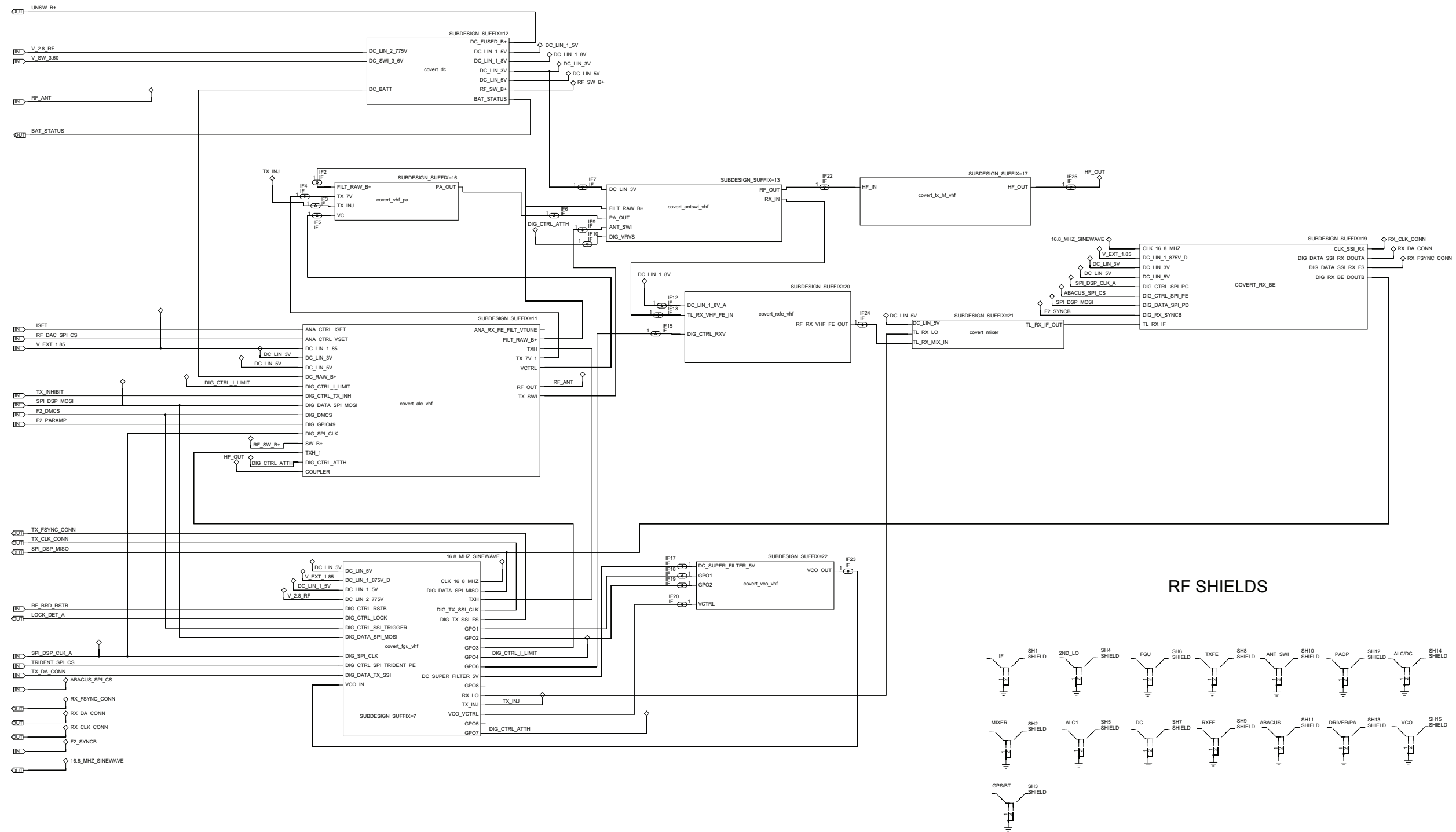


Figure 8-63. Transceiver (RF) Board Overall Schematic

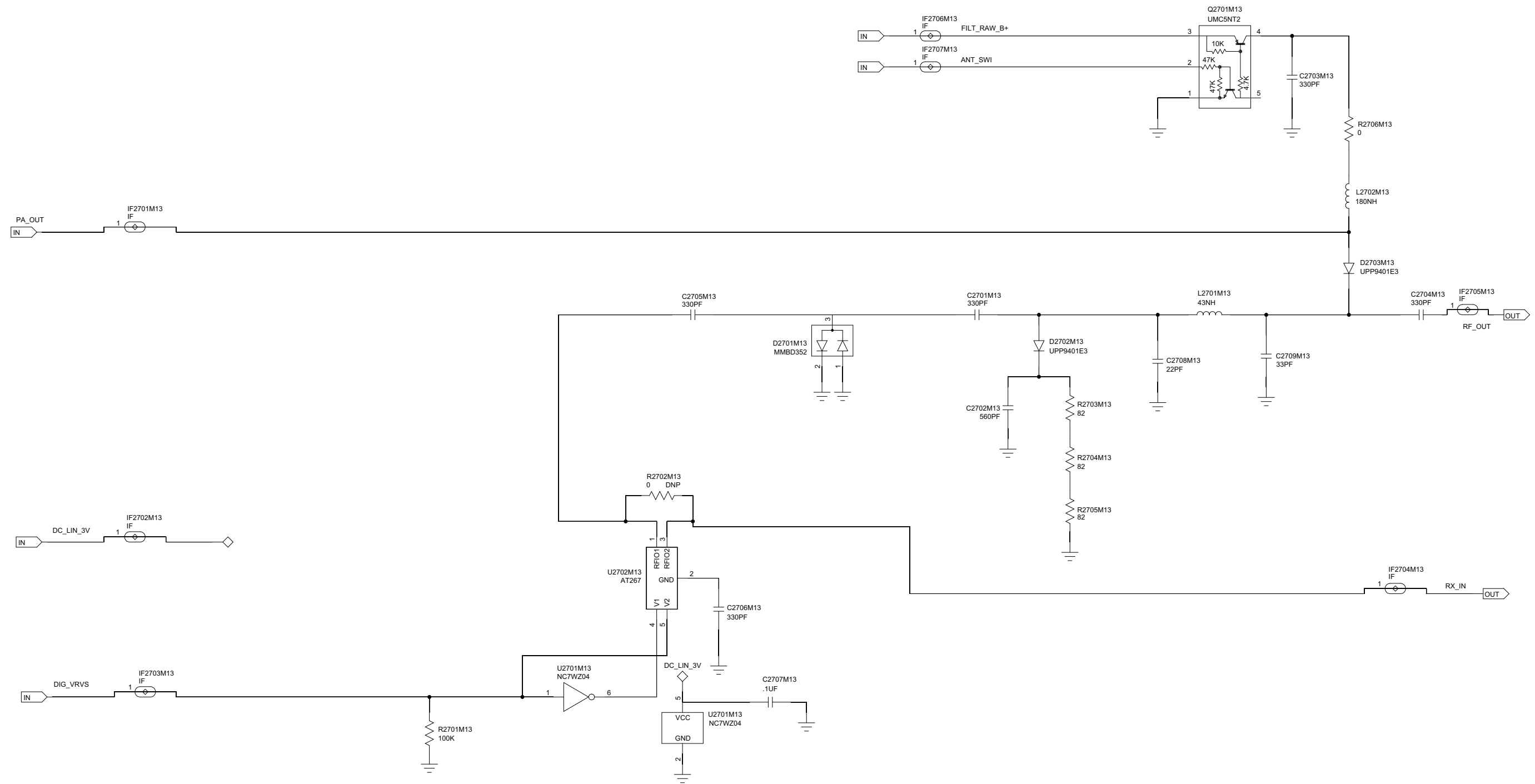


Figure 8-64. ANT SWI Circuit

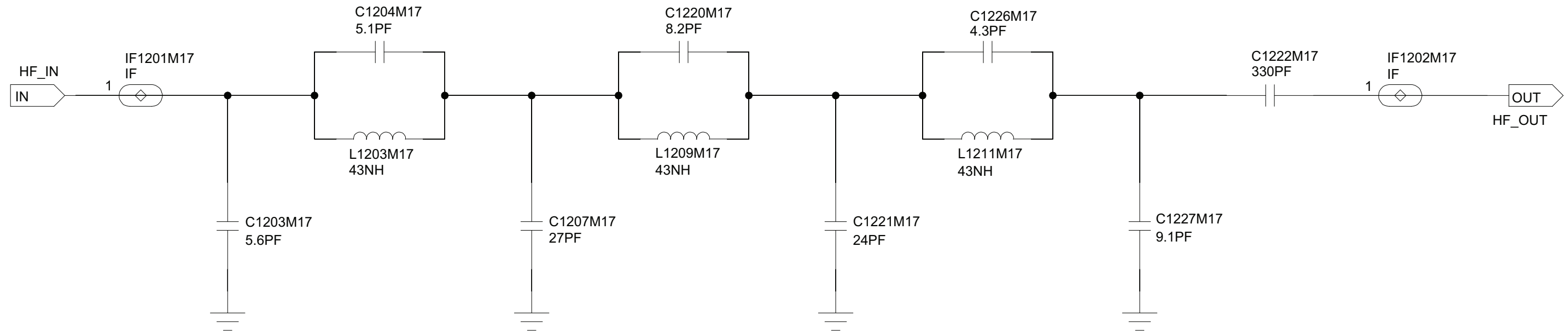


Figure 8-65. Transmitter HF Circuit

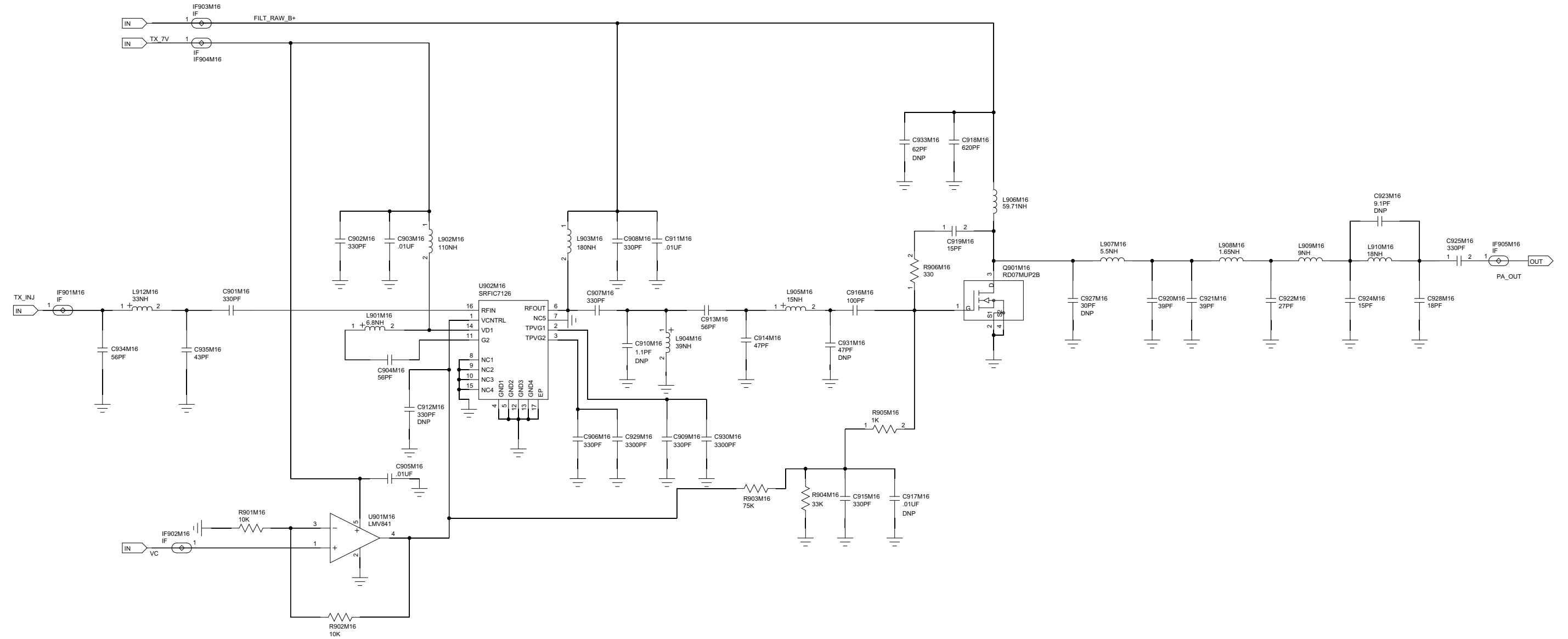


Figure 8-66. Power Amplifier Circuit

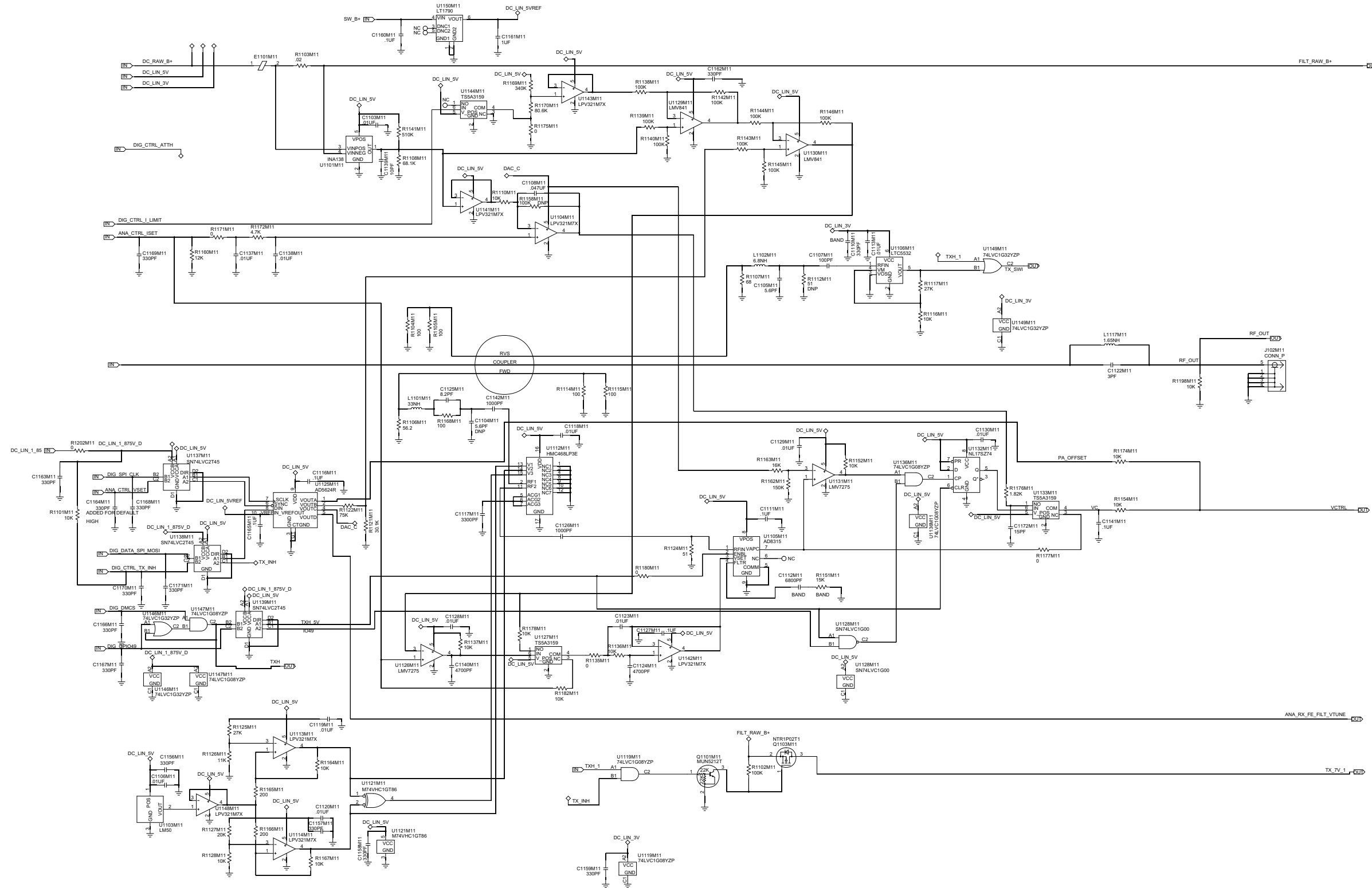


Figure 8-67. Automatic Level Control Circuit

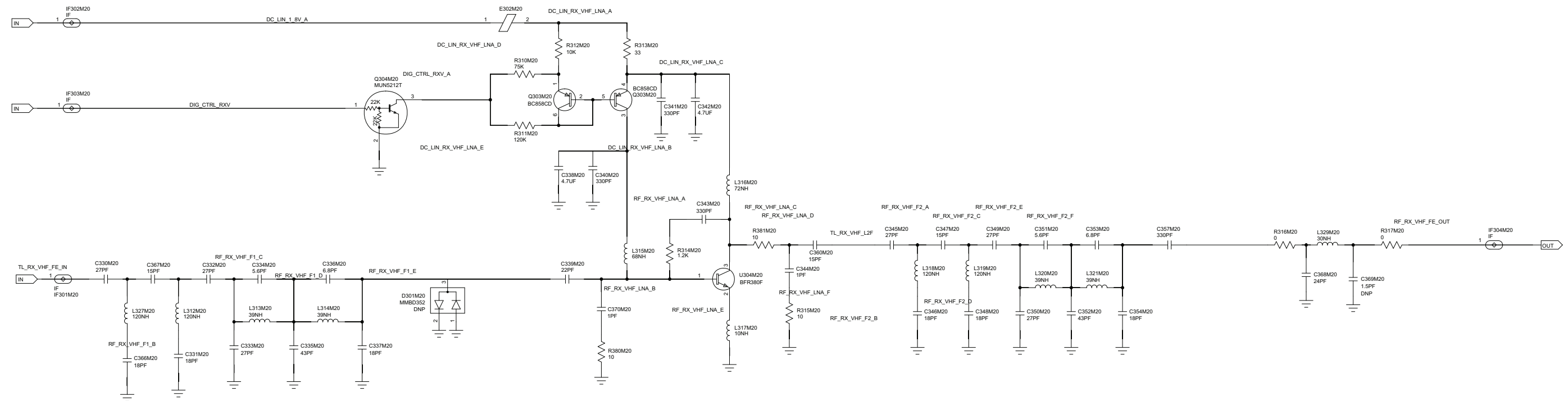


Figure 8-68. Receiver Front End Circuit

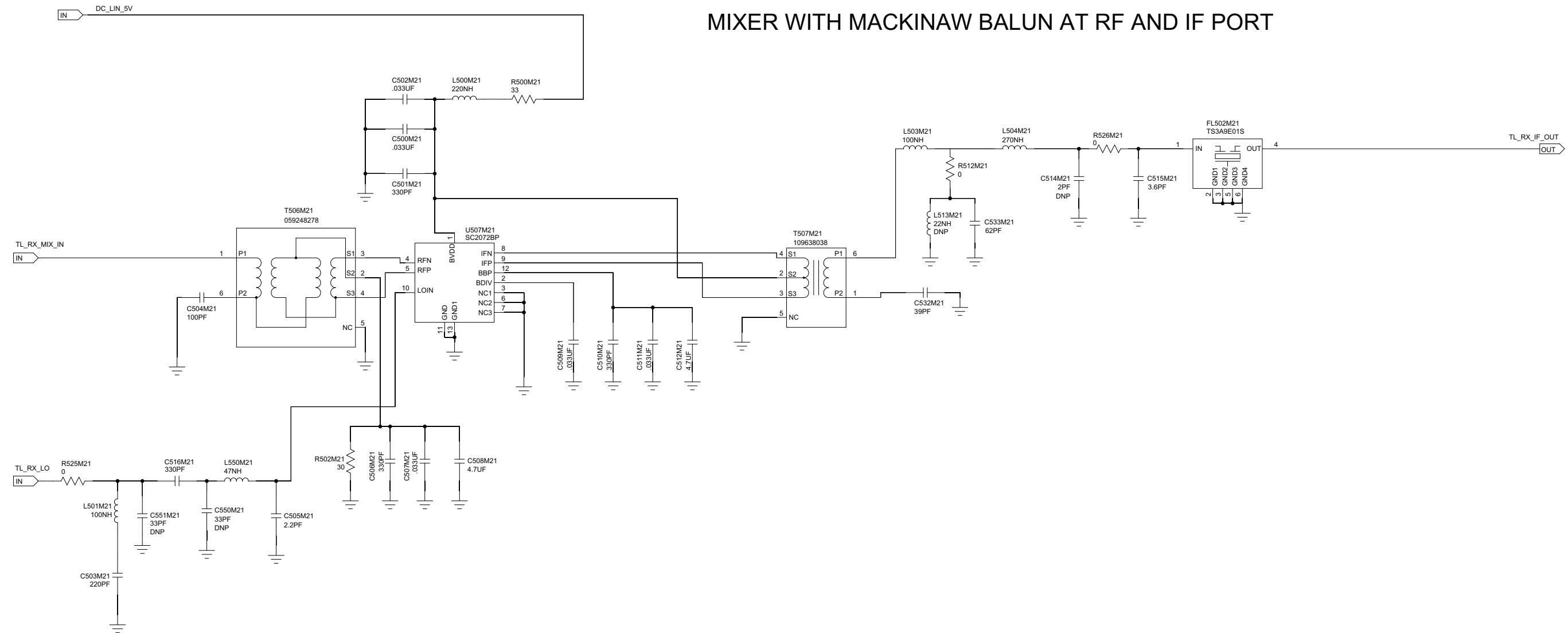


Figure 8-69. Receiver Back End Mixer

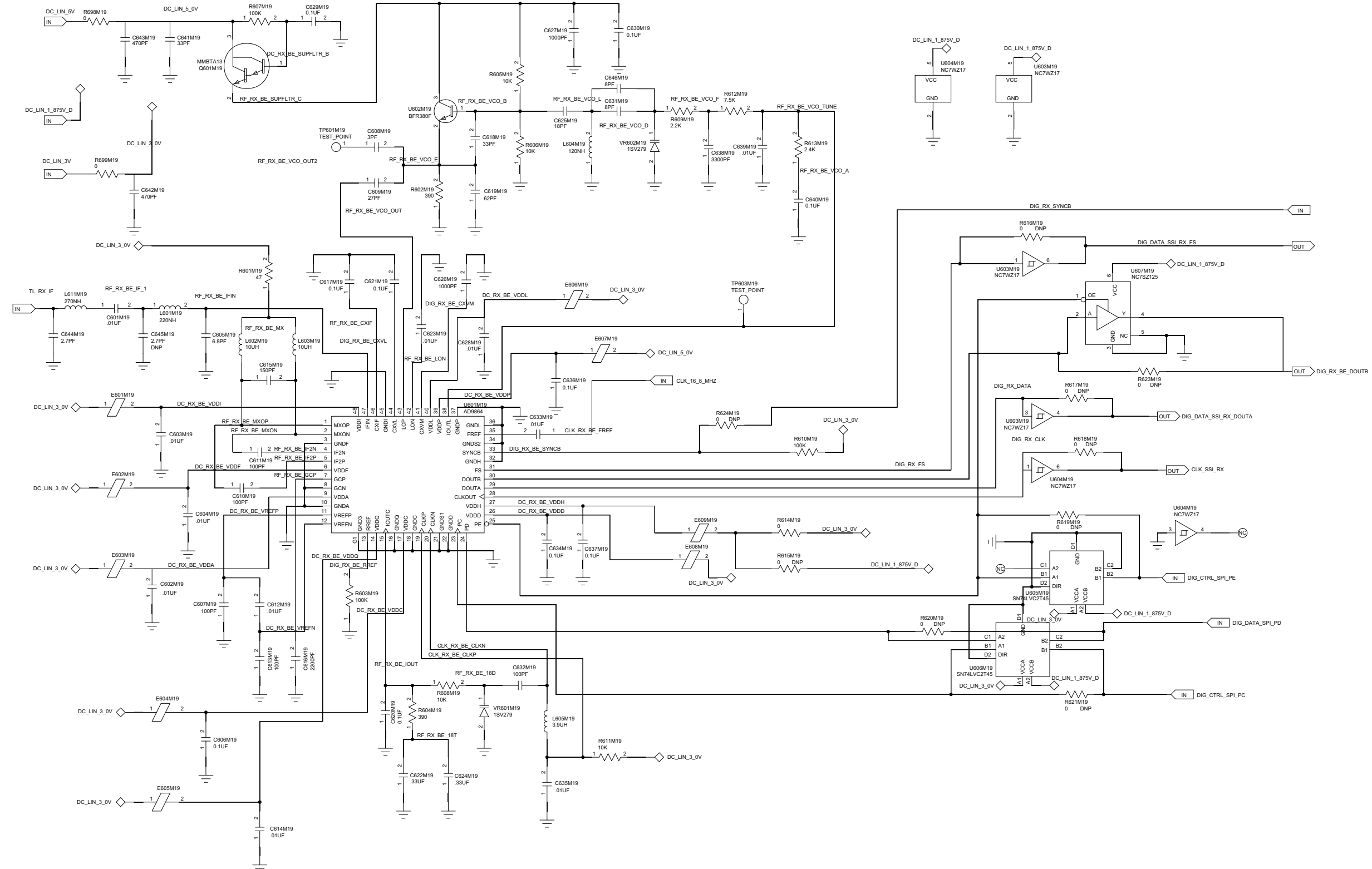


Figure 8-70. Receiver Back End

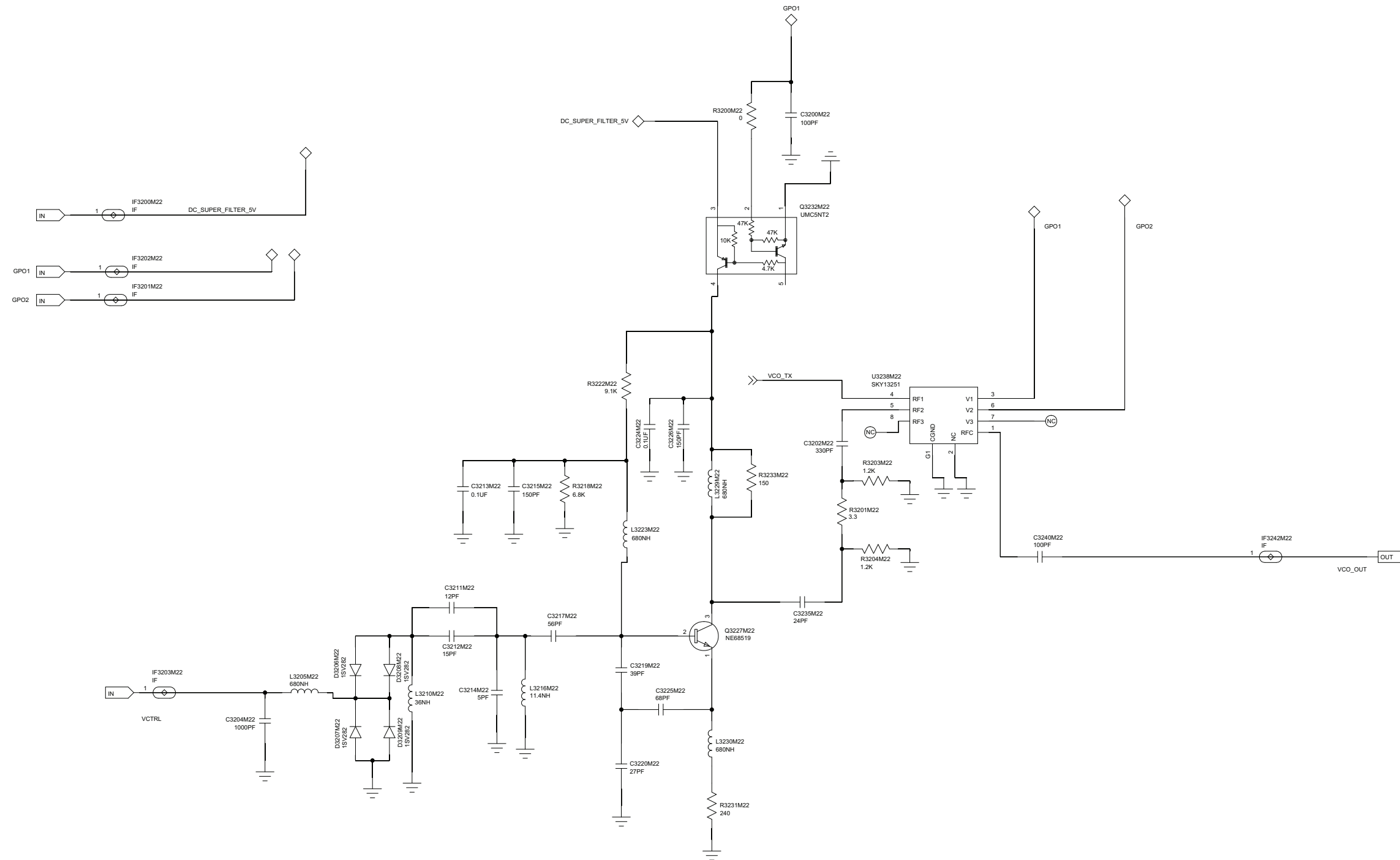


Figure 8-71. Receiver VCO Circuit

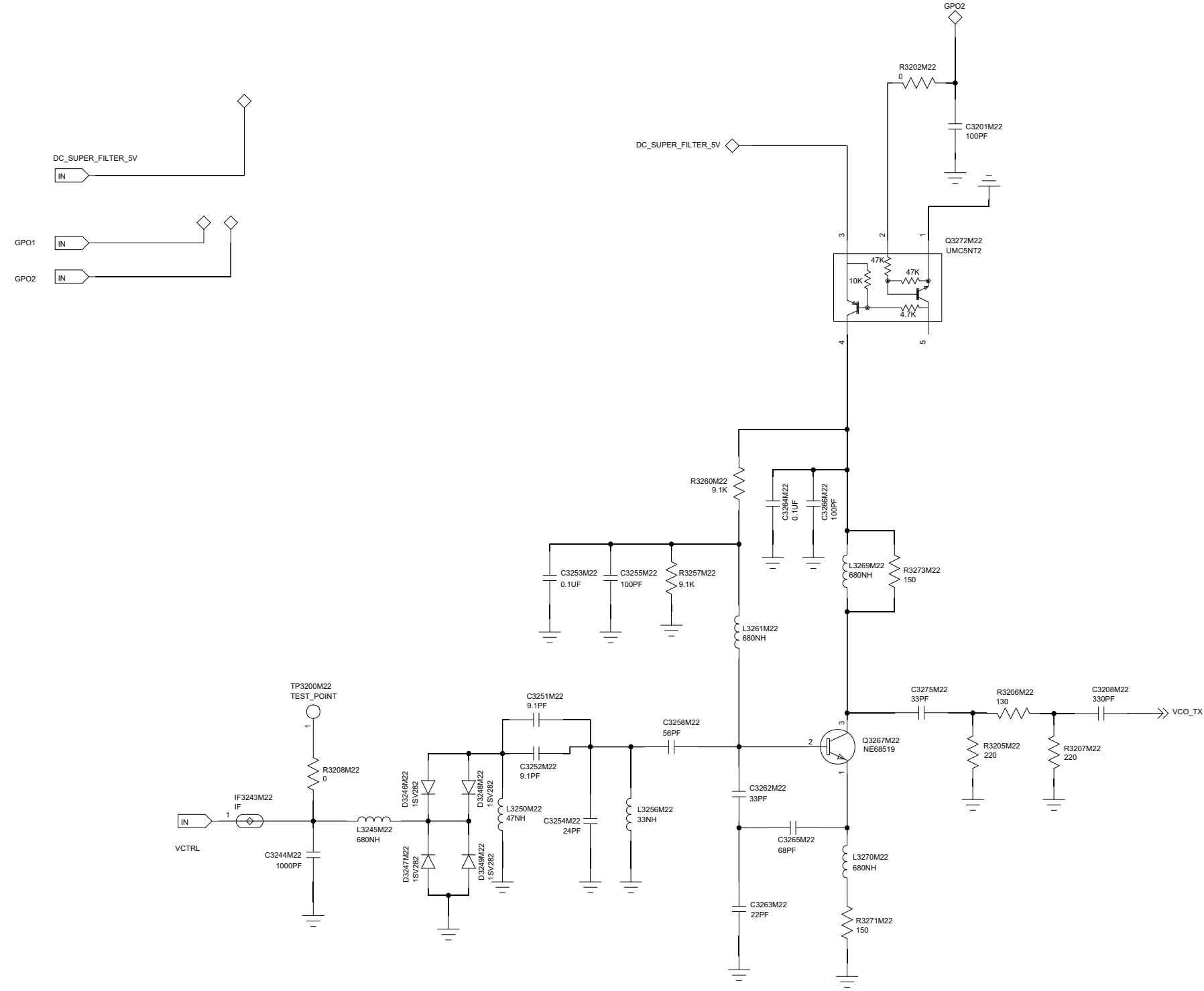


Figure 8-72. Transmitter VCO Circuit

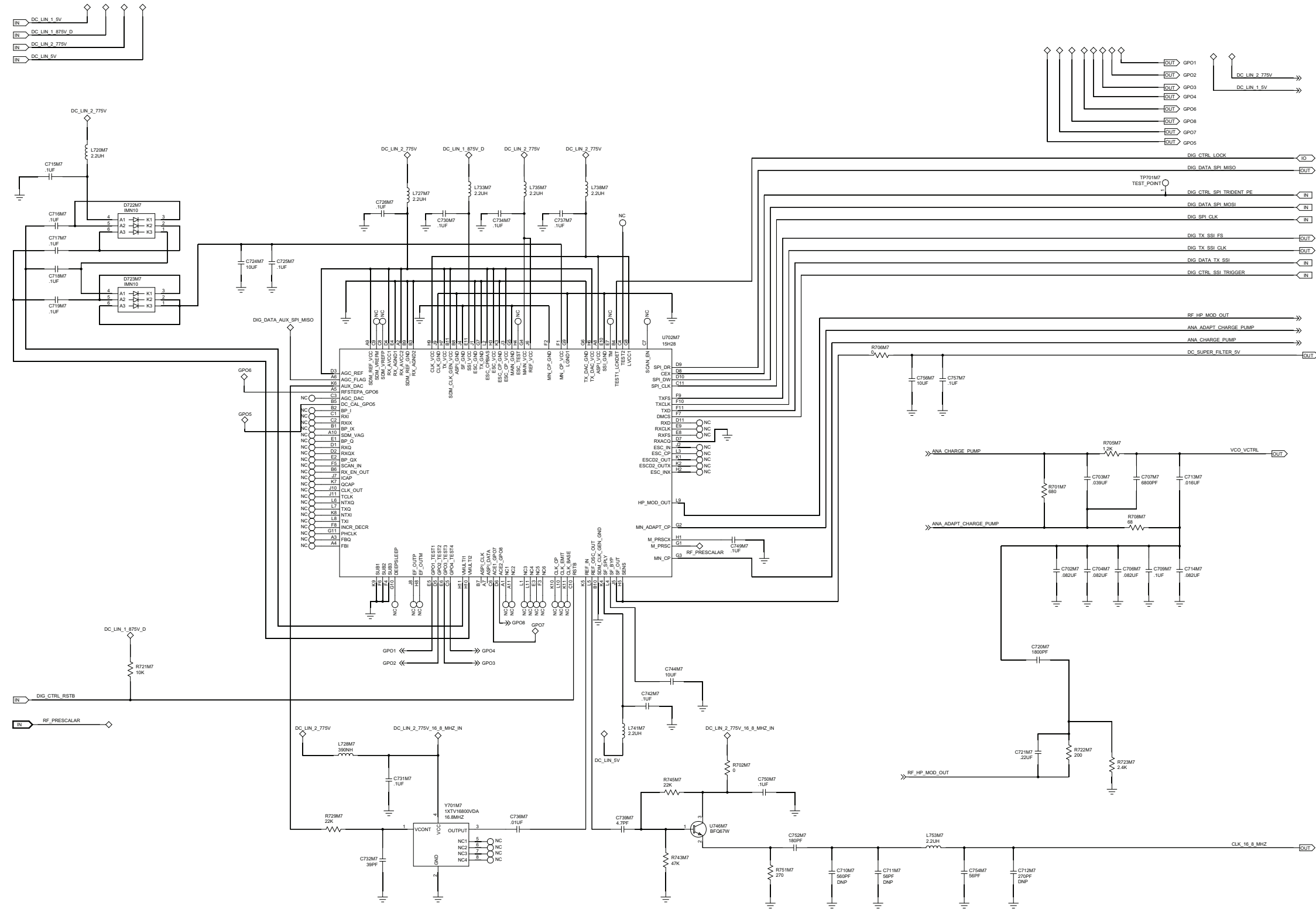


Figure 8-73. Frequency Generation Unit Circuit - 1 of 2

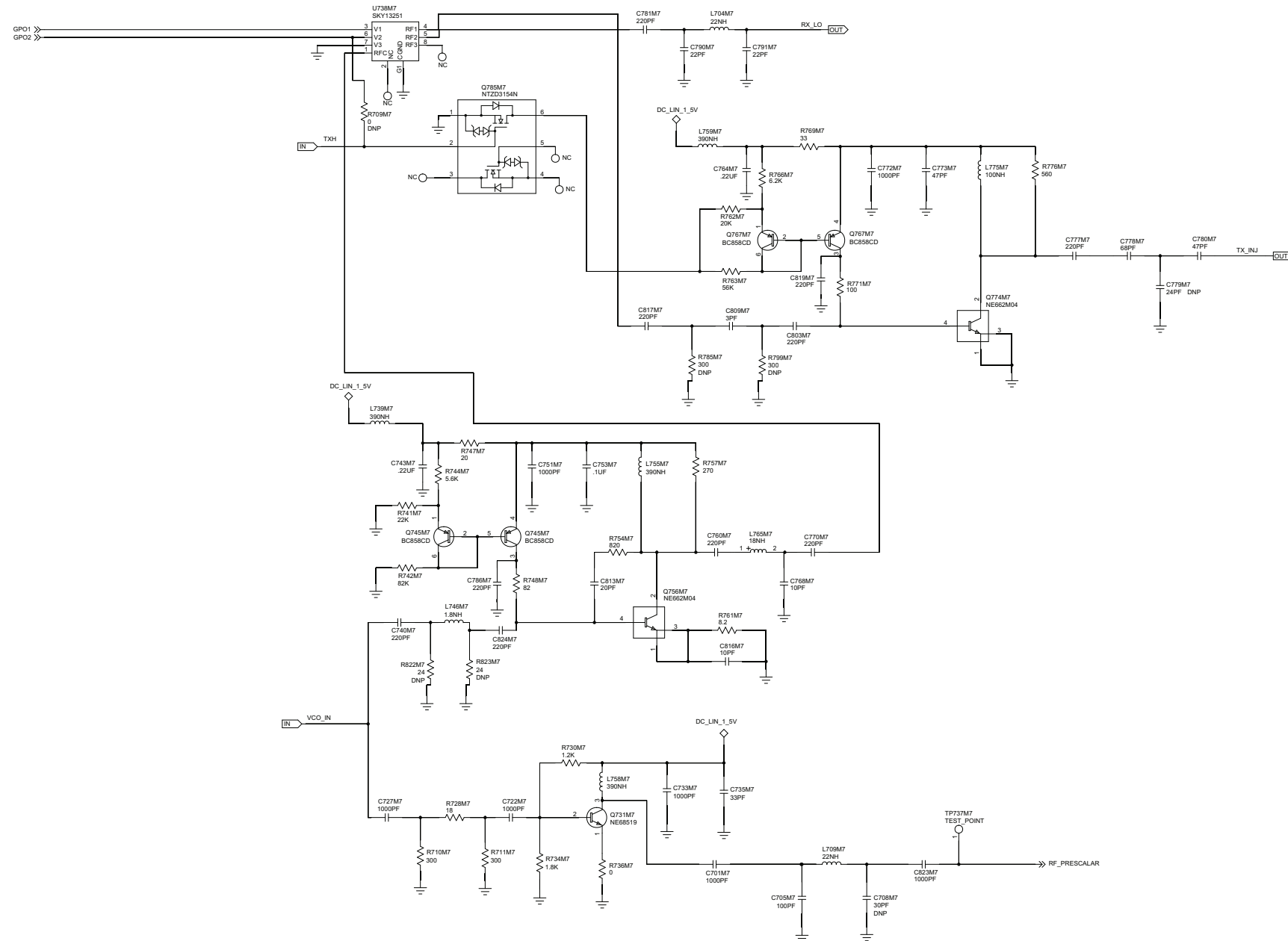
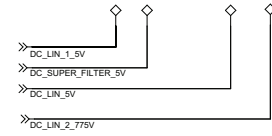


Figure 8-74. Frequency Generation Unit Circuit - 2 of 2

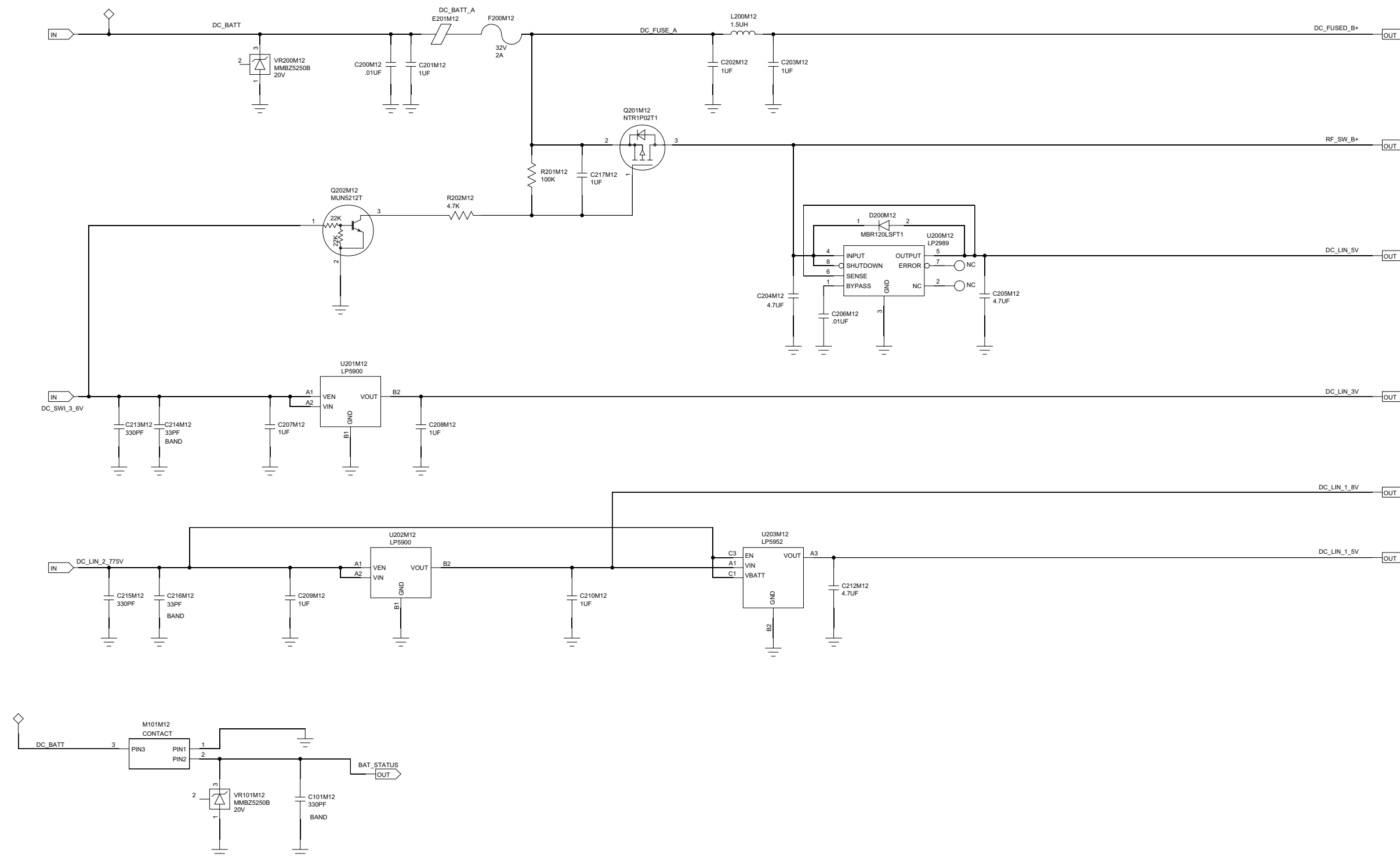


Figure 8-75. DC Circuit

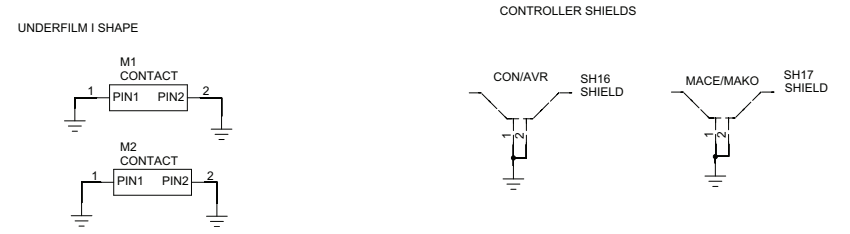
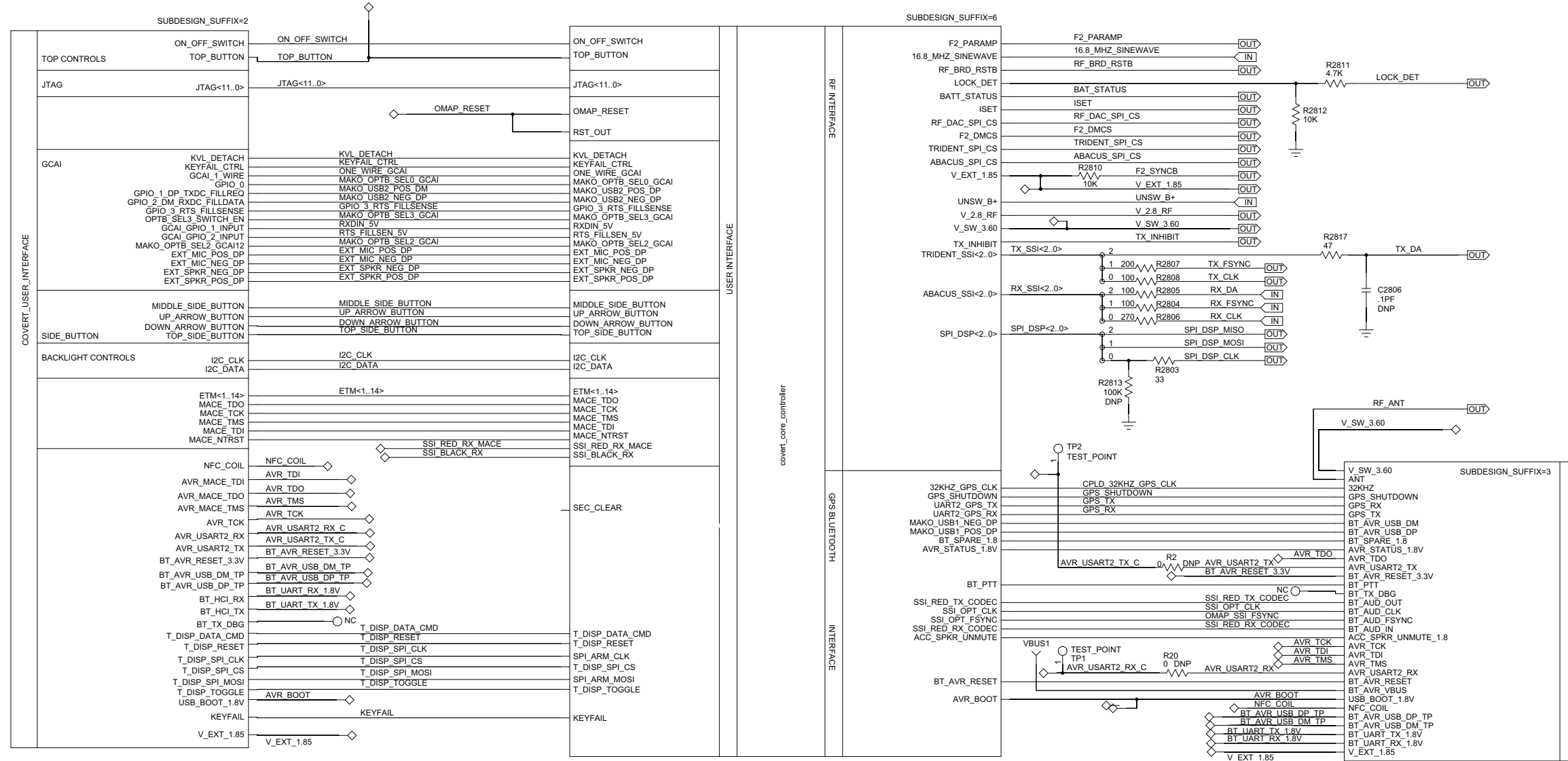


Figure 8-76. Controller Overall Schematic Blocks

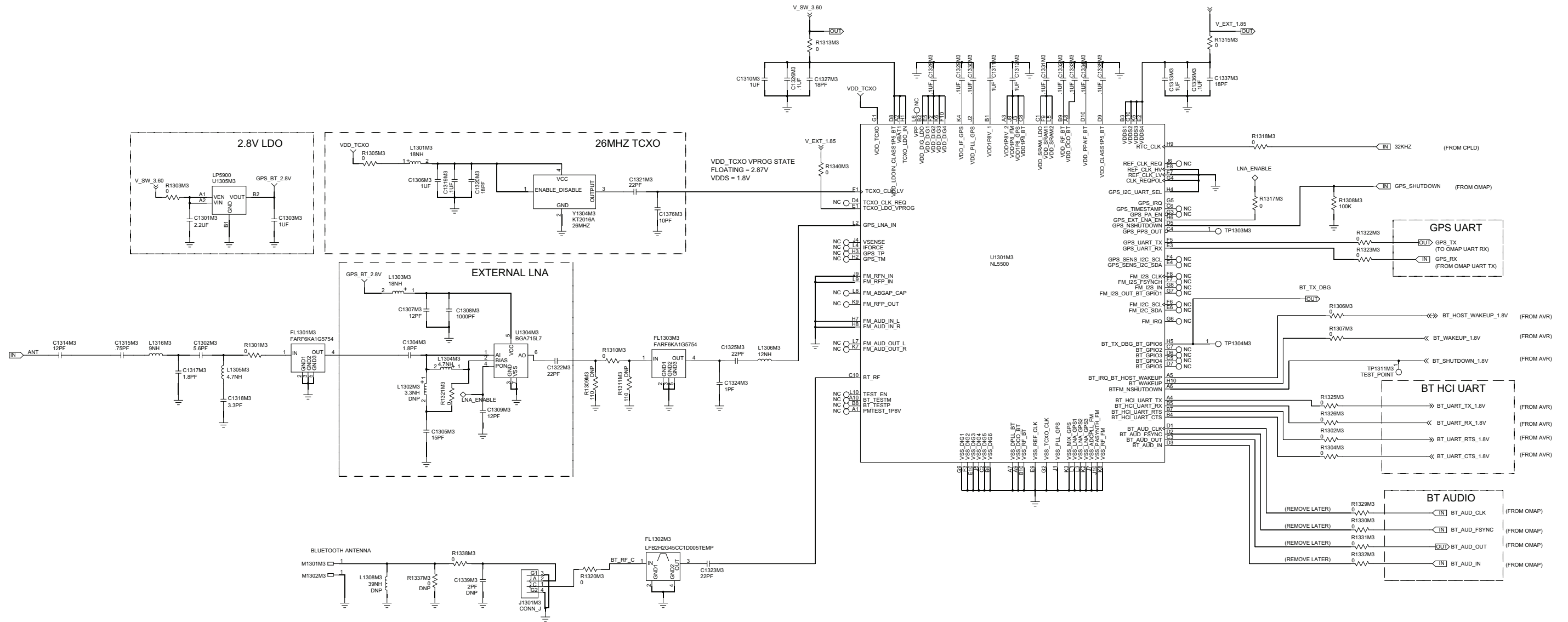


Figure 8-77. GPS Bluetooth Circuit – 1 of 2

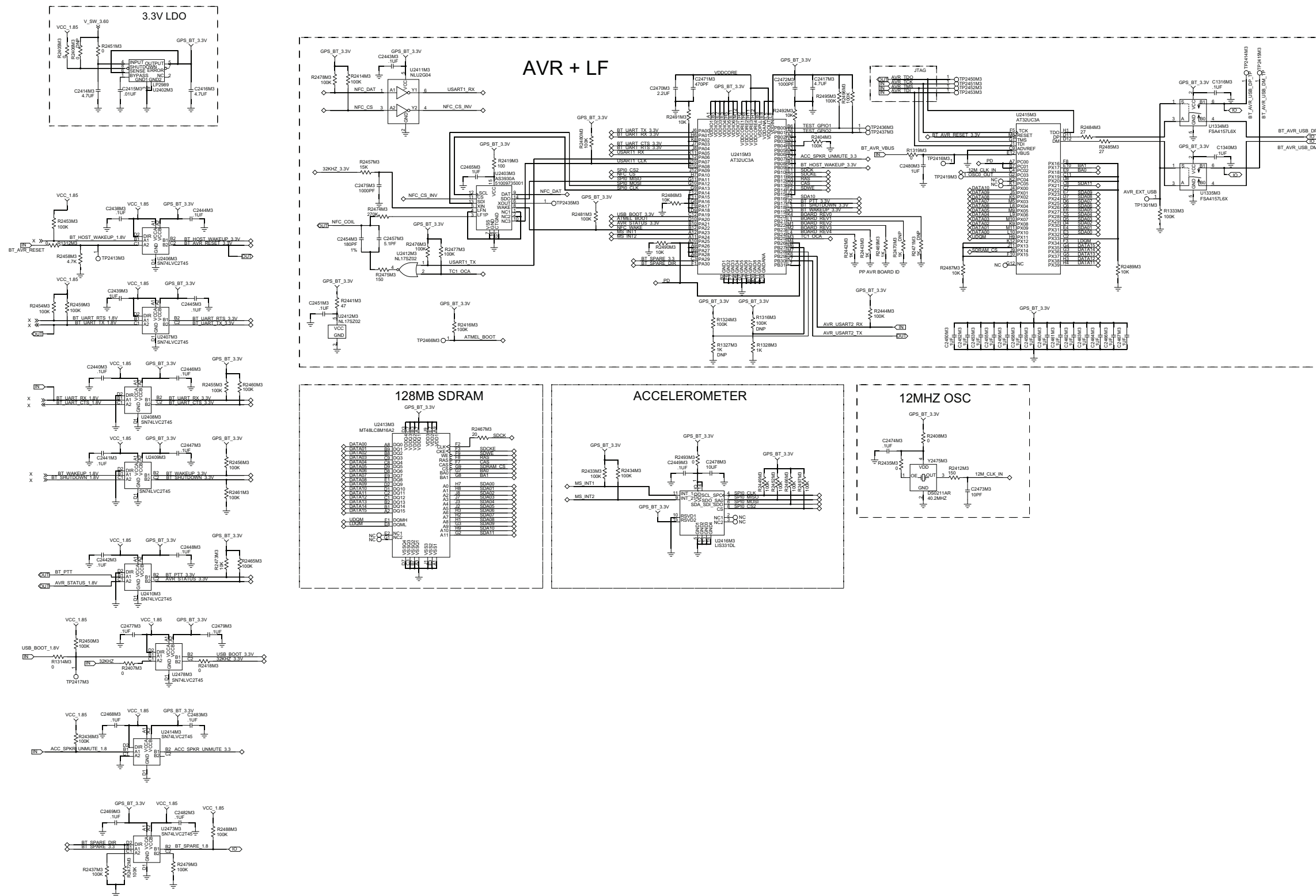
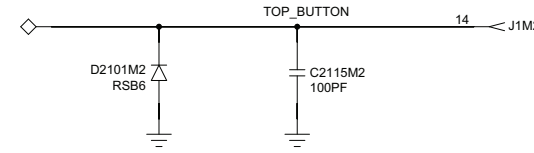


Figure 8-78. GPS Bluetooth Circuit - 2 of 2

EMERGENCY BUTTON

CHANGES:
 REMOVED U21000,U21001,C21002,C21003,C21005,C21004
 REMOVED TP2112,TP2113,TP2114
 REMOVED U21002,,U21003
 REMOVED C21001,C21000,U2104,TP2111,R21001,TP2110,R21000,U2104,C2116



FREQ KNOB

USER BUTTON AND SWITCHES

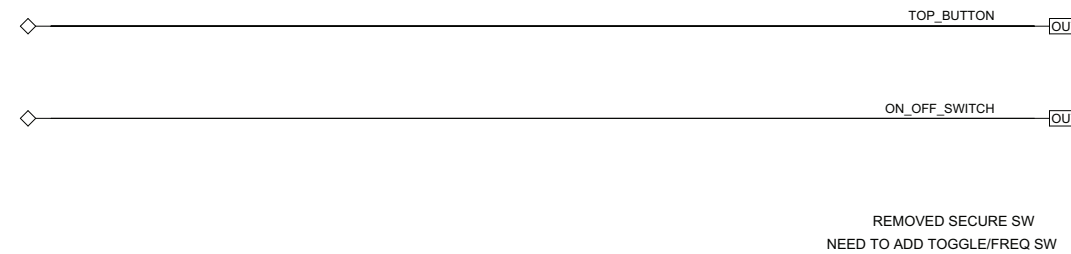
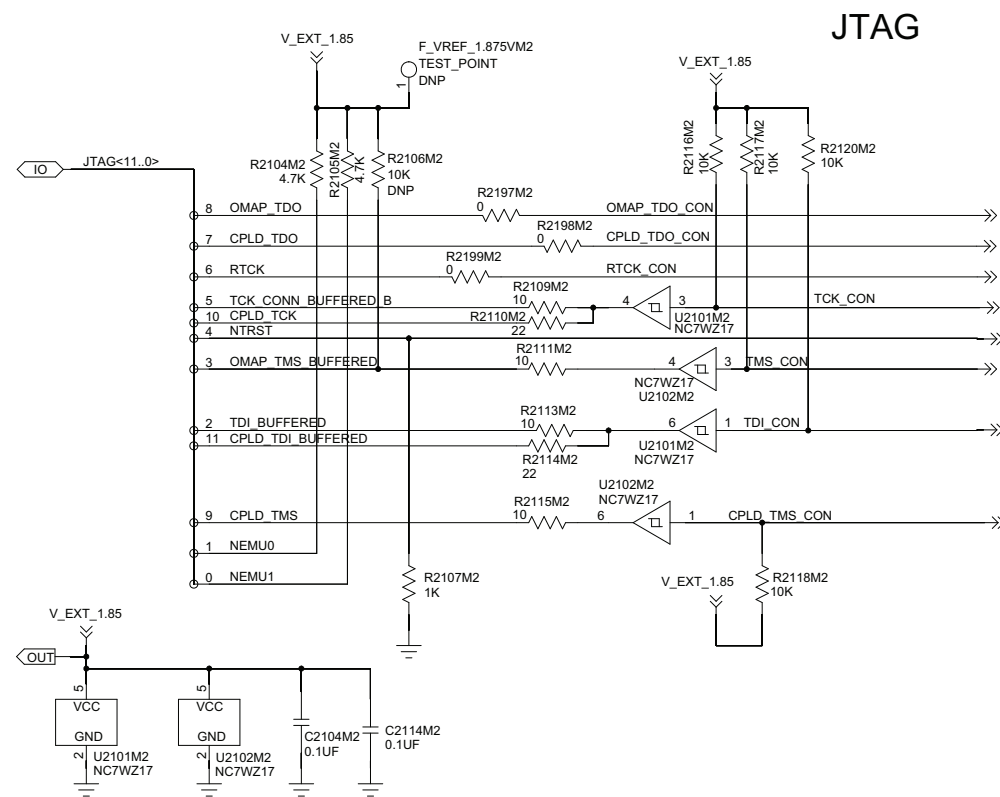


Figure 8-79. Top Control and JTAG Circuit

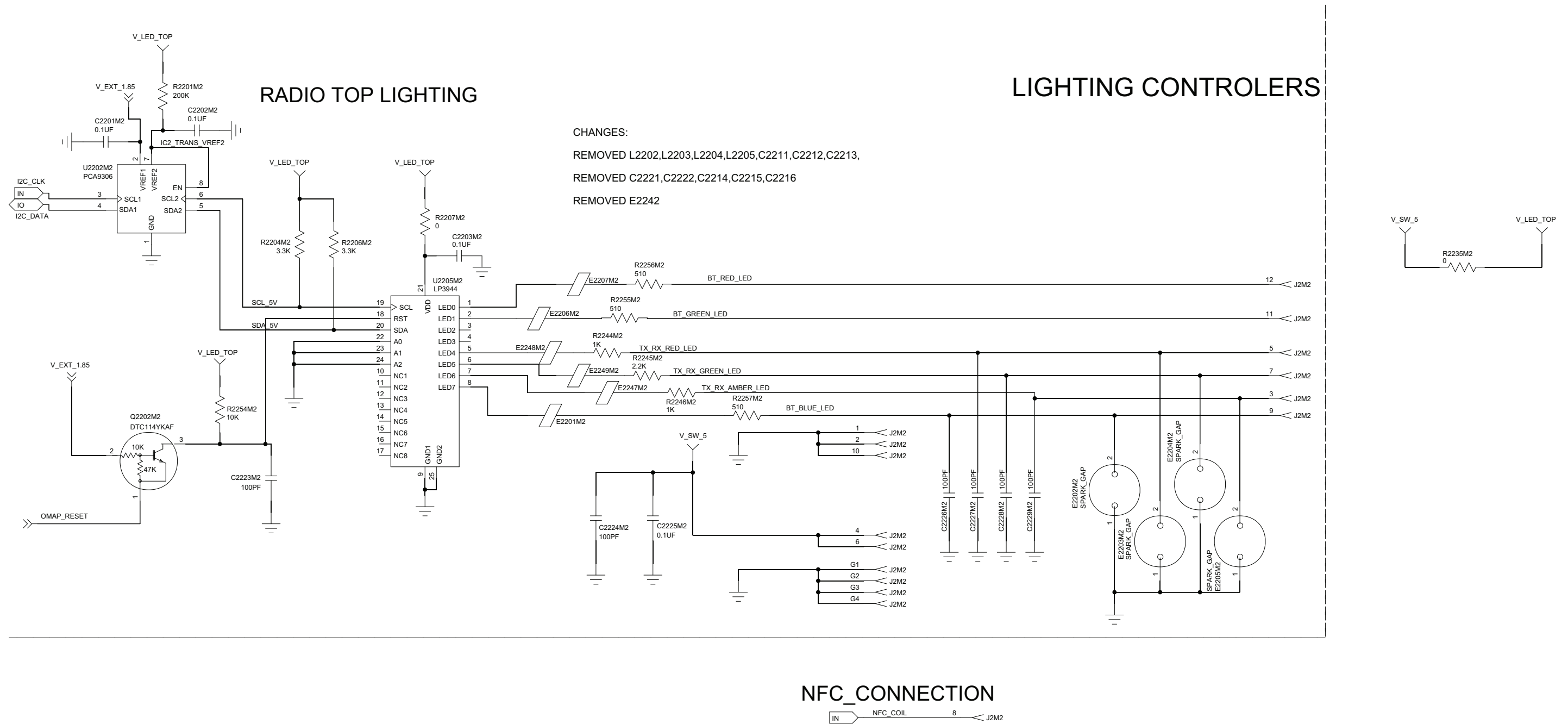


Figure 8-80. Lighting Control Circuit

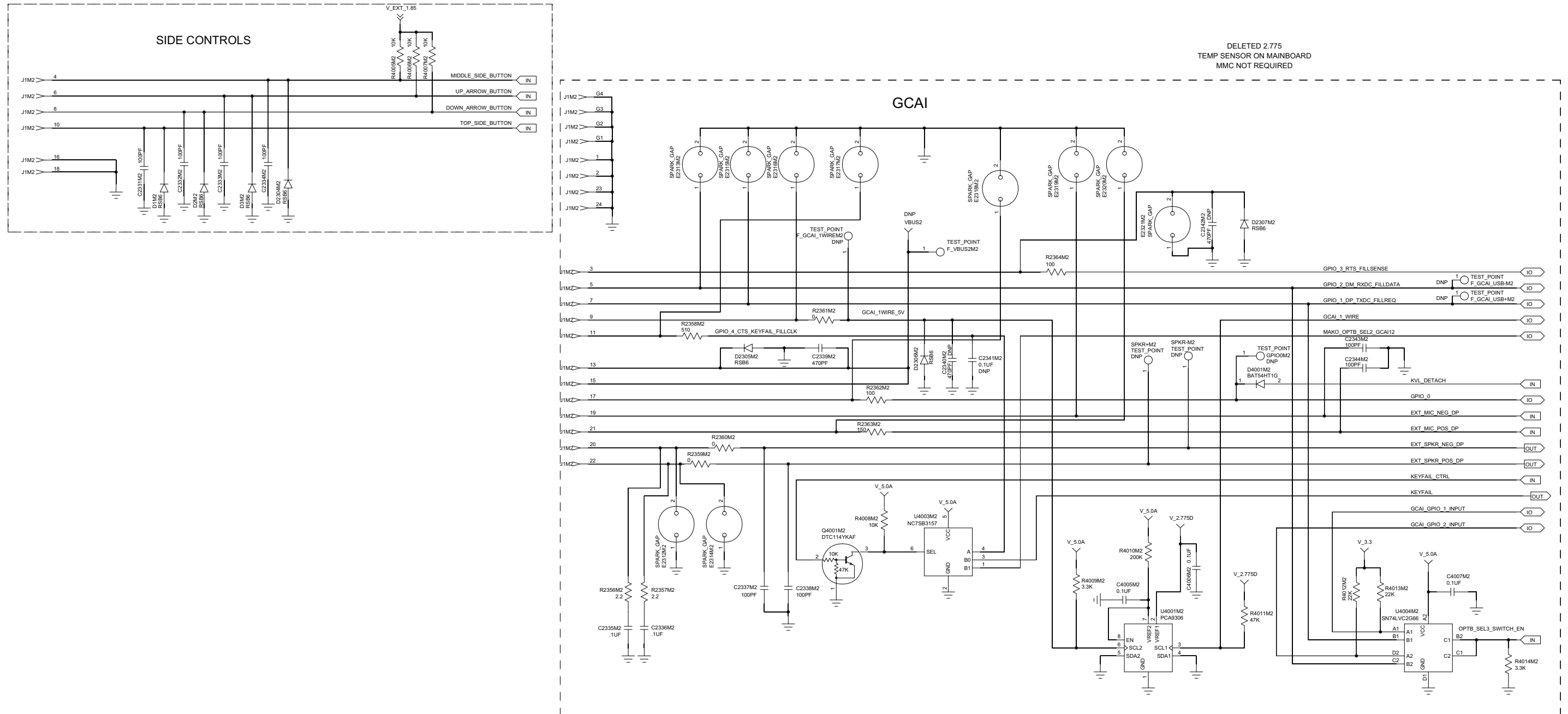


Figure 8-81. GCAI and side control

DEBUGGING AND DISPLAY CONNECTOR

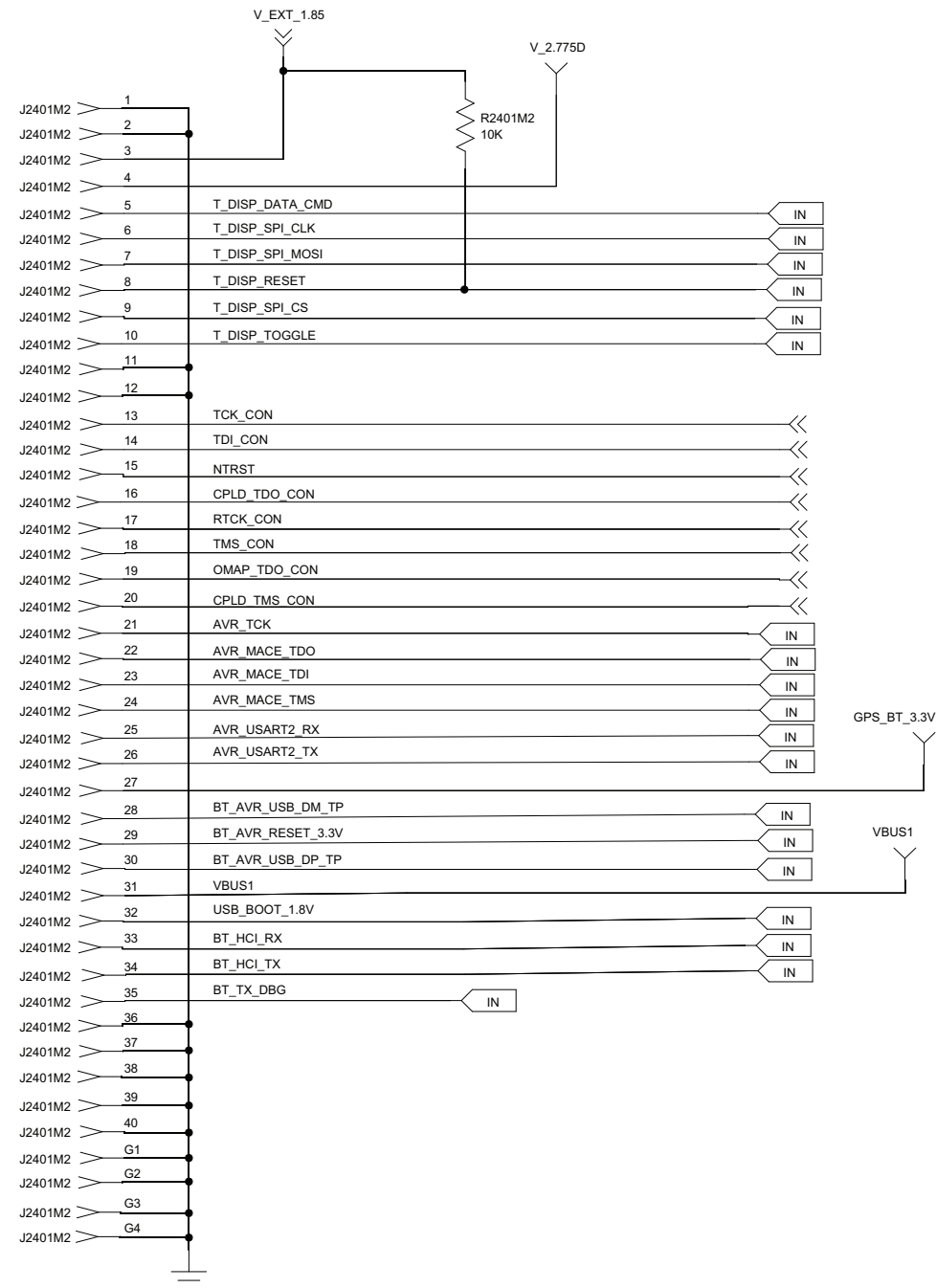


Figure 8-82. Debugging and Display Connector

CONNECTORS

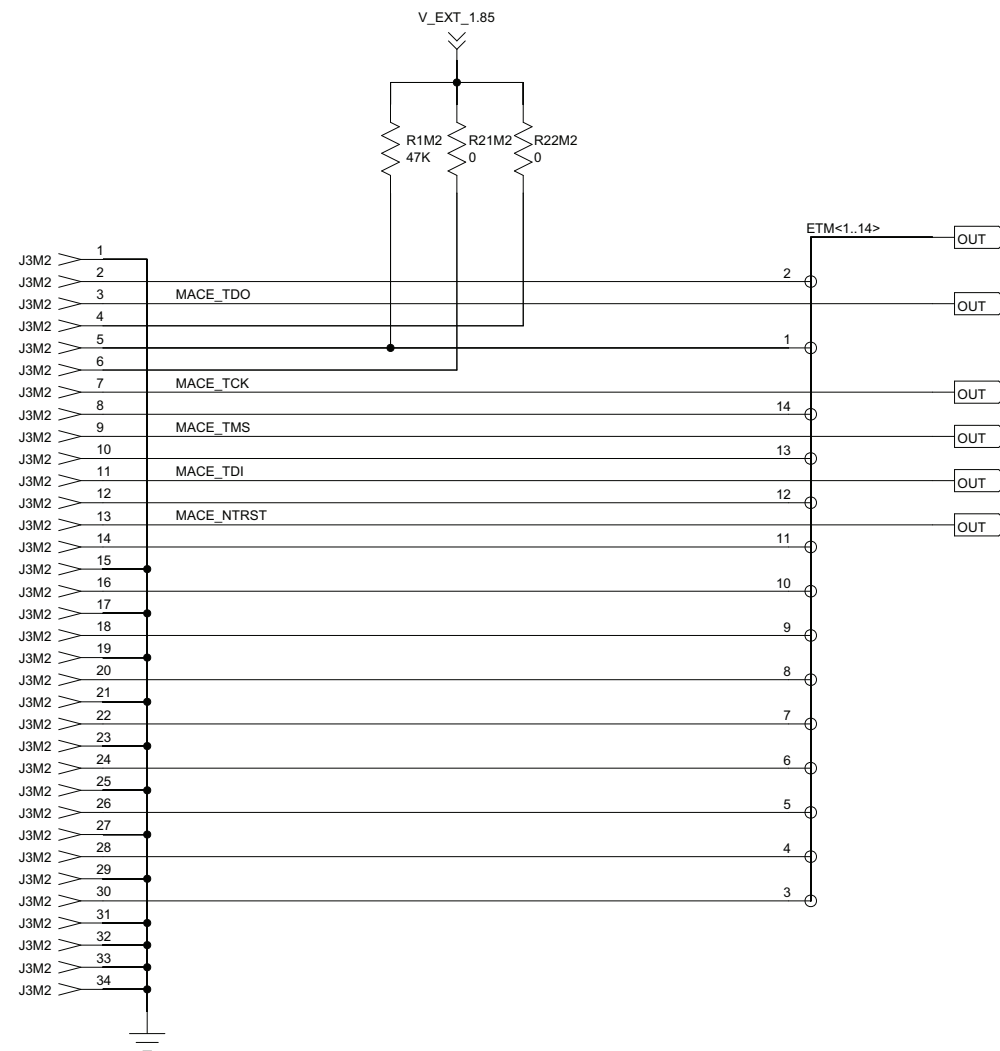
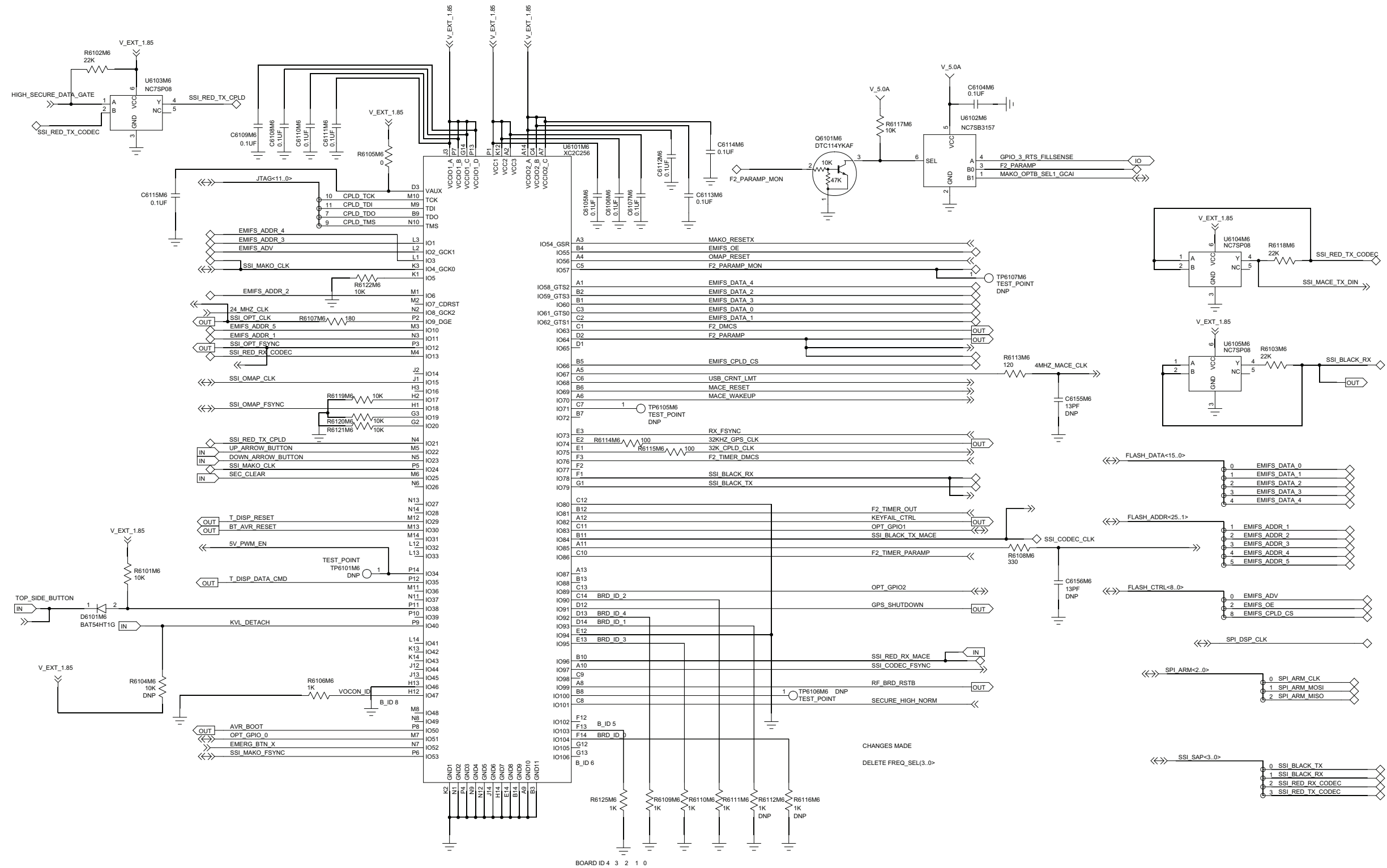


Figure 8-83. Connectors



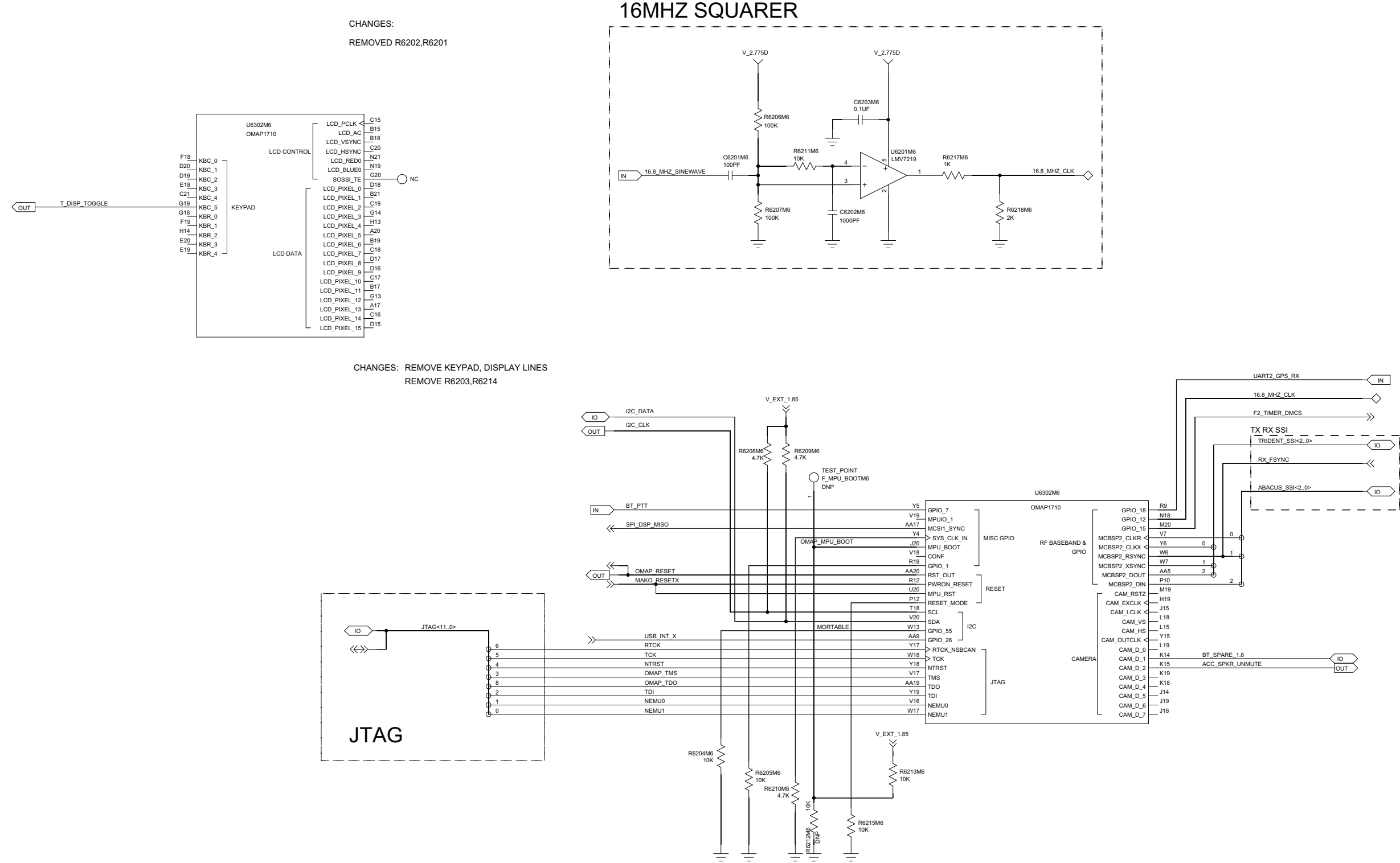


Figure 8-85. OMAP User Interface Circuit

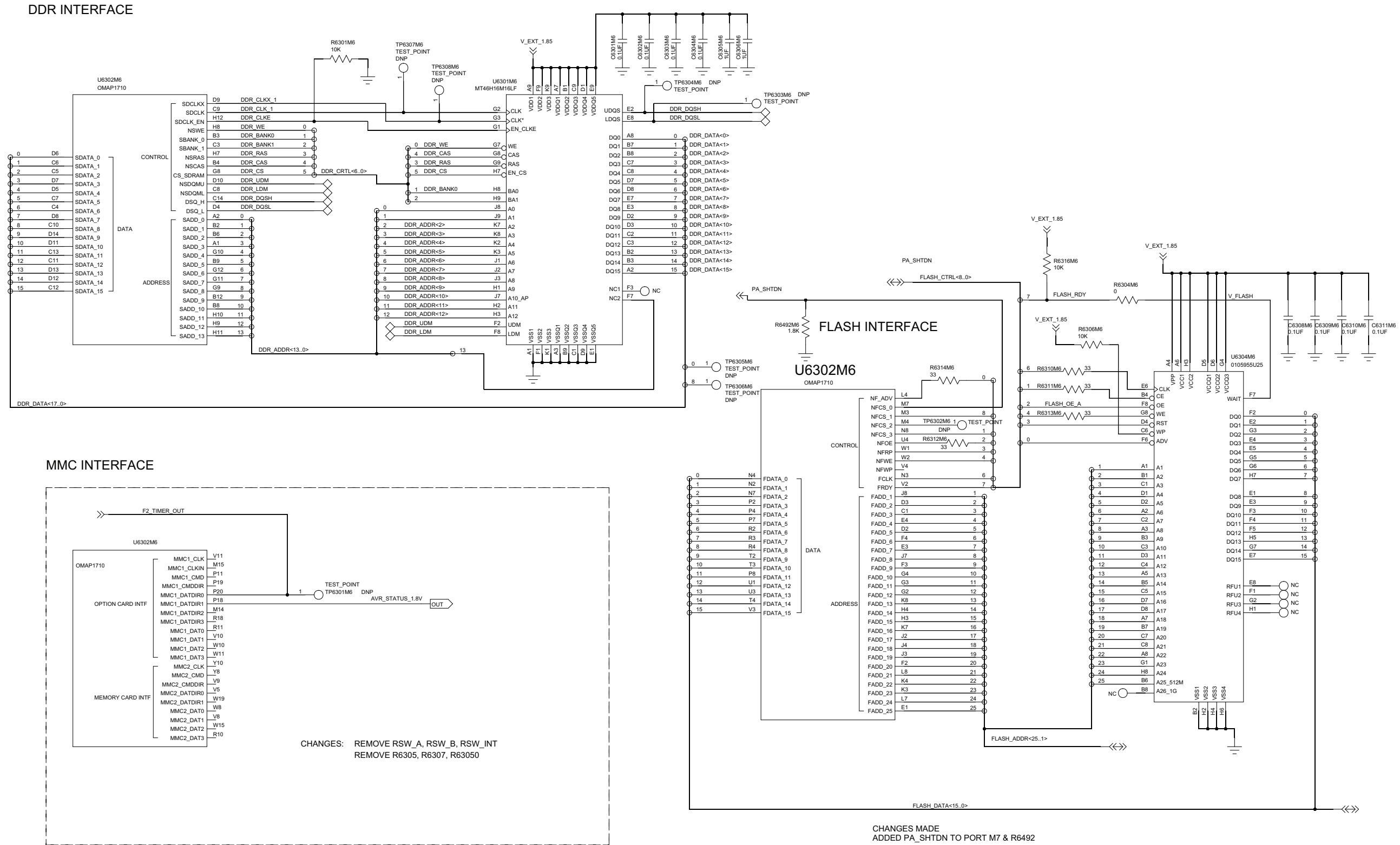


Figure 8-86. Memory Interface

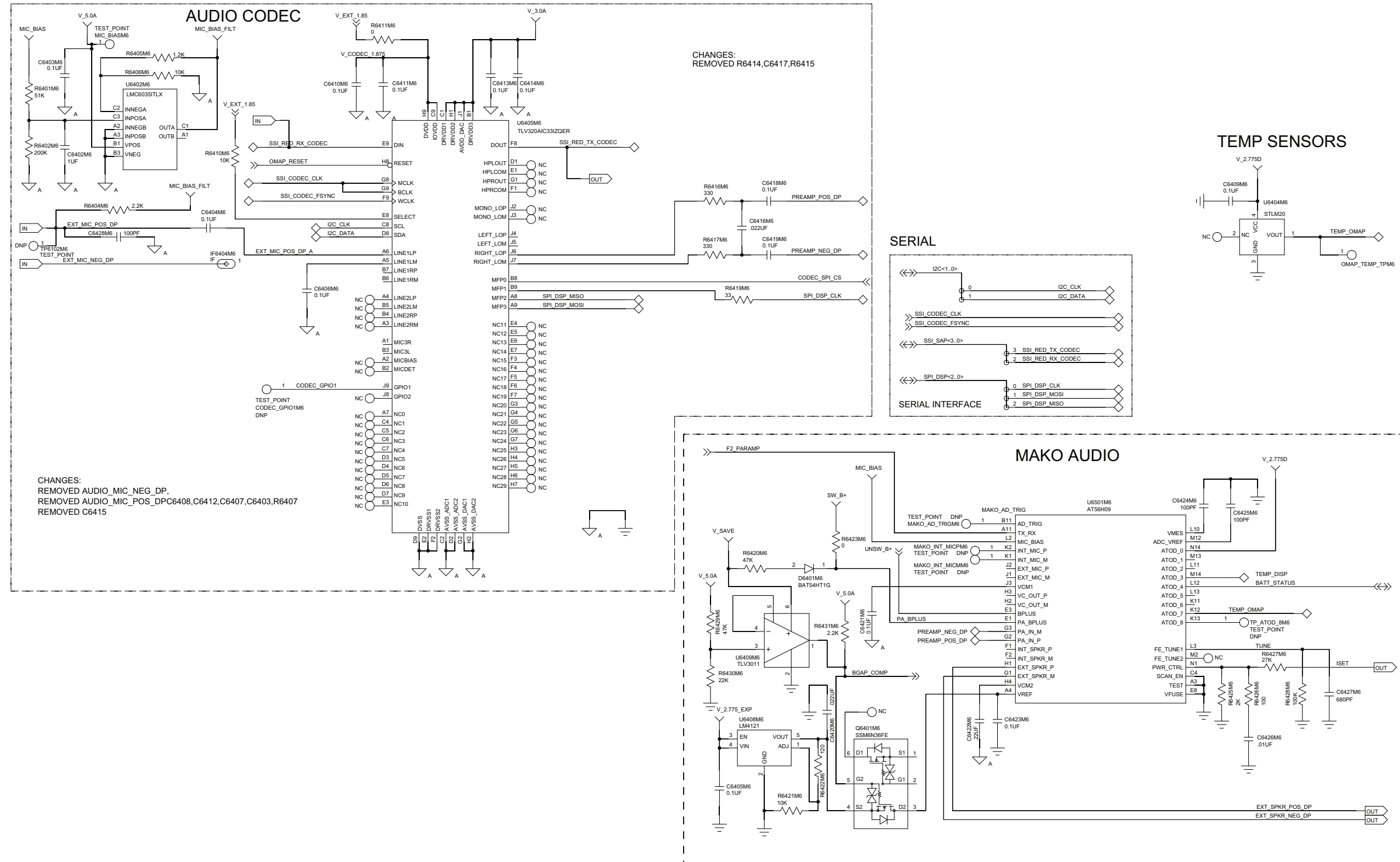


Figure 8-87. Audio Circuit

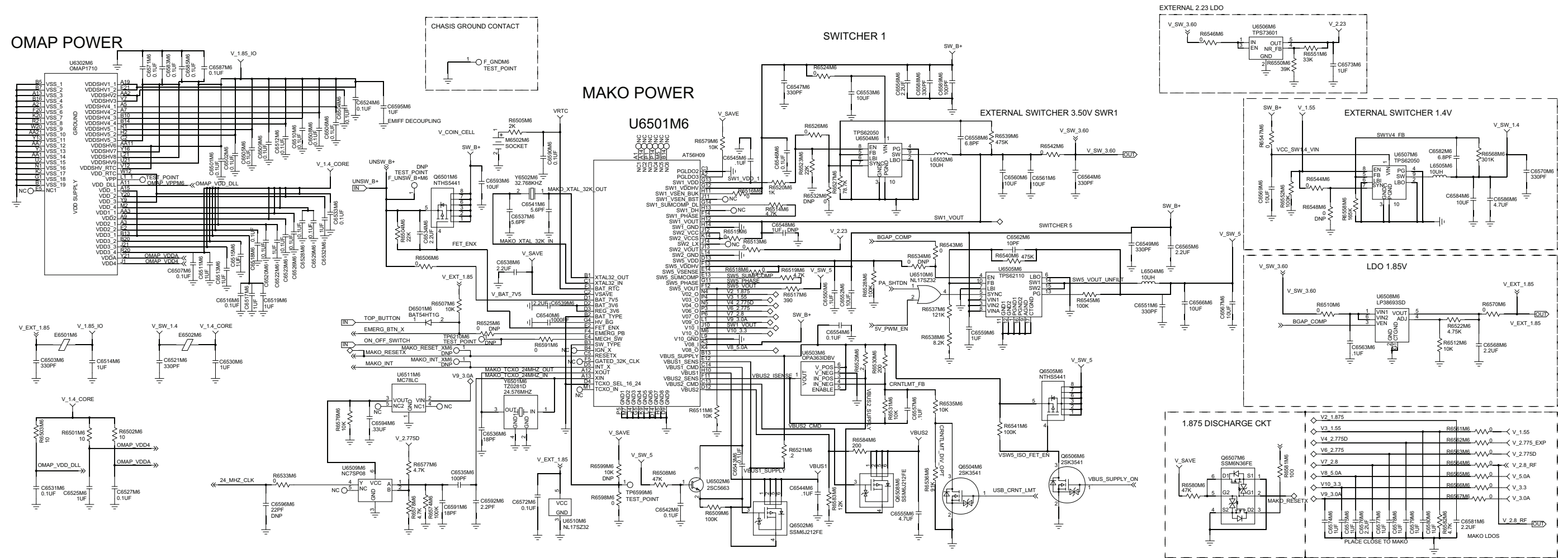


Figure 8-88. MAKO/DC Distribution Circuit

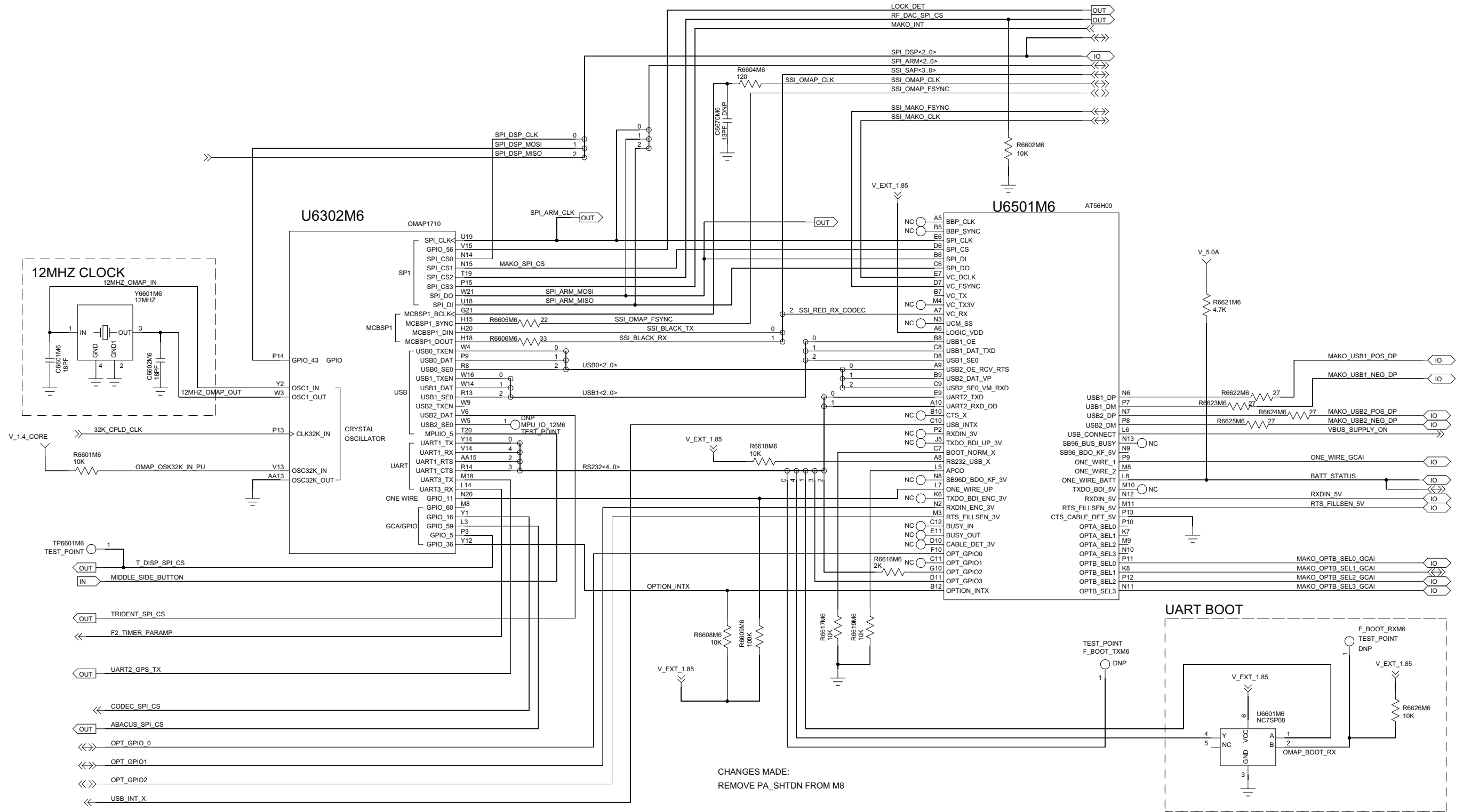


Figure 8-89. Serial Interface Circuit

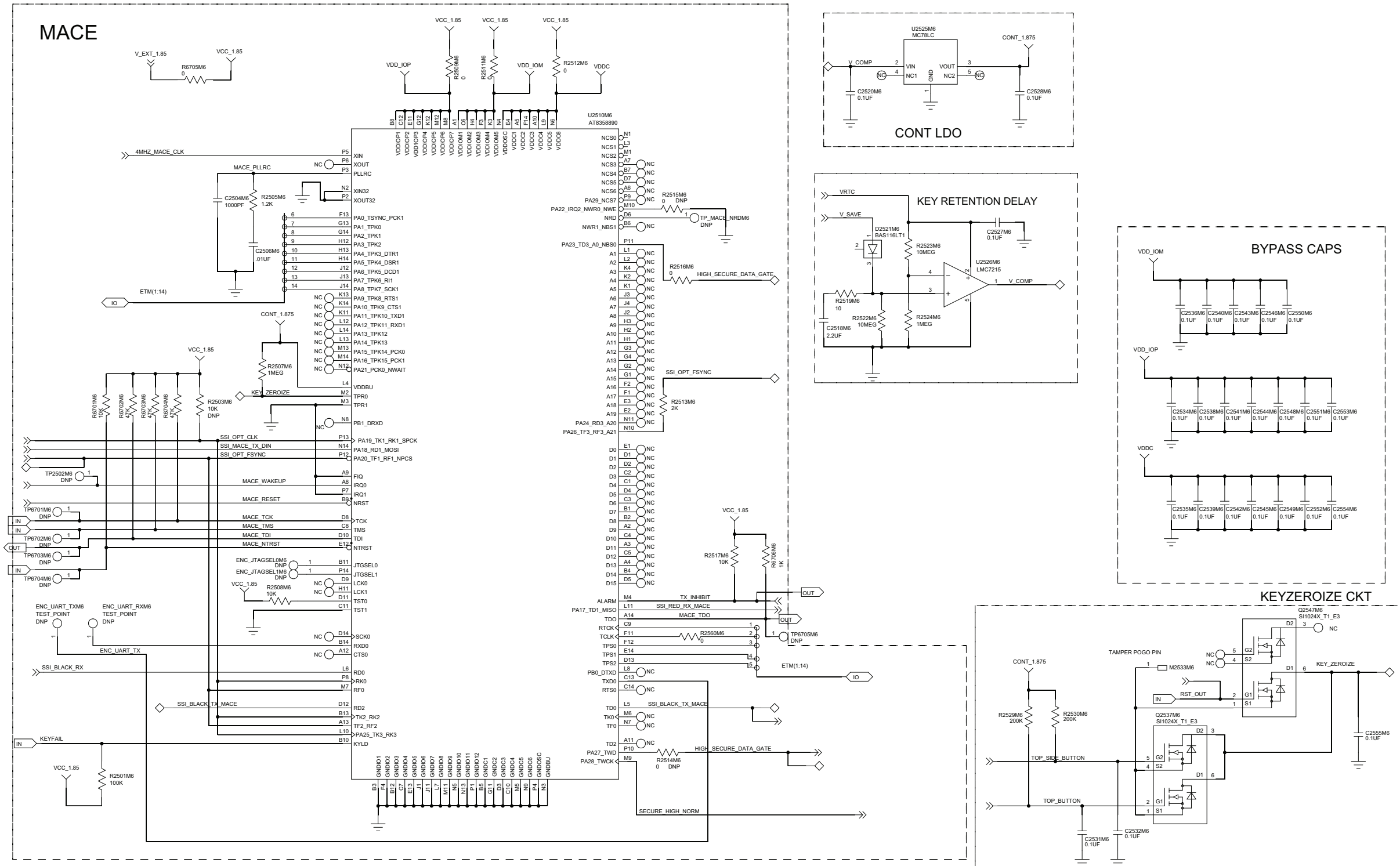


Figure 8-90. Secure Circuit

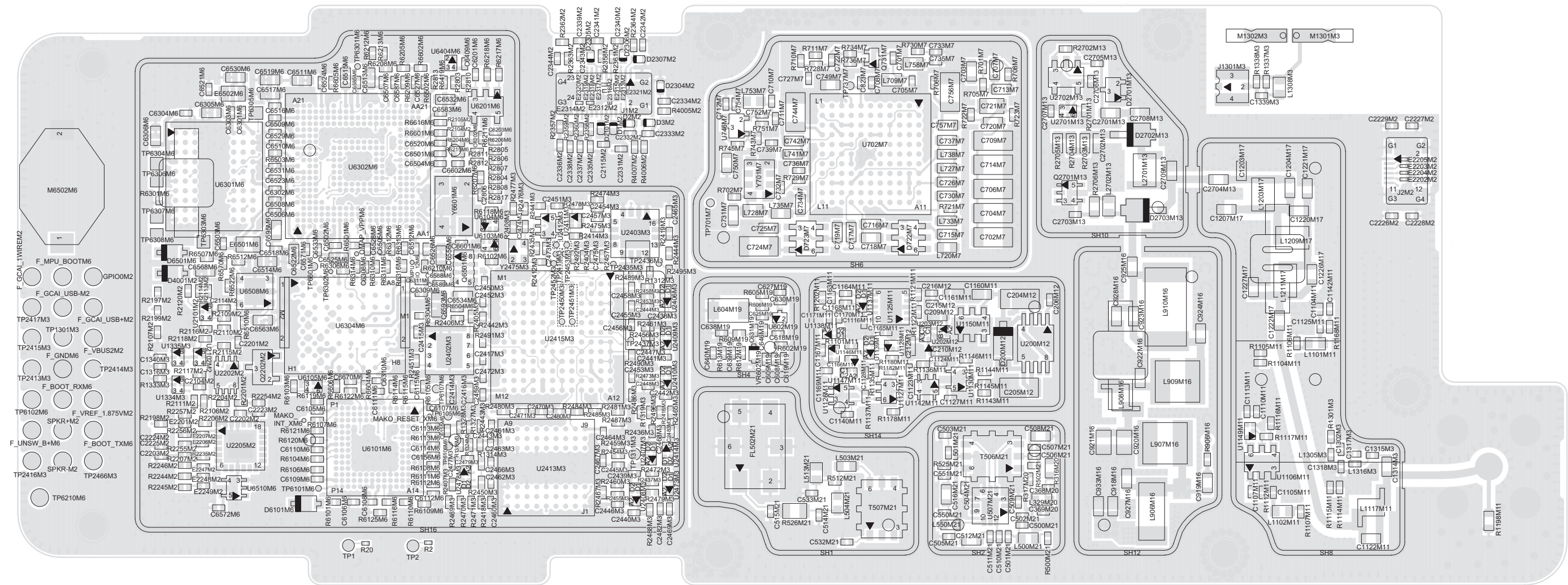


Figure 8-91. Transceiver (RF) Board Layout – Top Side

VHF Transceiver (RF) Board Parts List –
84012512001_A

Ref. Des.	Part Number	Description
C101M12	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1103M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1104M11	NOTPLACED	64AM DUMMY PART NUMBER
C1105M11	2113944A19	CAP CER CHP 5.6PF 50V +/- 0.5PF
C1106M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1107M11	2113944A40	CAP CER CHP 100.0PF 50V 5%
C1108M11	2113946B02	CAP CER CHP 0.047UF 10V 10,
C1110M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1111M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1112M11	2113945B01	CAP CER CHP 6800PF 25V 10%
C1113M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1116M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1117M11	2113945A12	CAP CER CHP 3300PF 50V 10%
C1118M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1119M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1120M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1122M11	2113944M05	CAP,FXD,3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB

Ref. Des.	Part Number	Description
C1123M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1124M11	2113945A13	CAP CER CHP 4700PF 50V 10%
C1125M11	2113944A23	CAP CER CHP 8.2PF 50V +/- 0.5PF
C1126M11	2113945A09	CAP CER CHP 1000PF 50V 10%
C1127M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1128M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1129M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1130M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1137M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1138M11	2113945B02	CAP CER CHP 10,000PF 25V 10%
C1139M11	2113944A25	CAP CER CHP 10.0PF 50V +/- 0.5PF
C1140M11	2113945A13	CAP CER CHP 4700PF 50V 10%
C1141M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1142M11	2113945A09	CAP CER CHP 1000PF 50V 10%
C1156M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1157M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1158M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1159M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%

Ref. Des.	Part Number	Description
C1160M11	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C1161M11	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C1162M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1163M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1164M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1165M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1166M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1167M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1168M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1169M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1170M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1171M11	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C1172M11	2113944A27	CAP CER CHP 15.0PF 50V 5%
C1203M17	2113944M12	CAP,FXD,5.6PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1204M17	2113944M11	CAP,FXD,5.1PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1207M17	2113944M28	CAP,FXD,27PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB

Ref. Des.	Part Number	Description
C1220M17	2113944M16	CAP,FXD,8.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1221M17	2113944M27	CAP,FXD,24PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1222M17	2113944C04	CAP CER CHP 330.0PF 50V 5%
C1226M17	2175662M26	CAPACITOR 4.3 ?0.1PF, CERAMIC, 100V
C1227M17	2113944M17	CAP,FXD,9.1PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1301M3	21012119001	CAP,FXD,2.2UF,20%,6.3V-DC,-55DEG CMIN,85DEG CM,X5R,0402
C1302M3	2113944A19	CAP CER CHP 5.6PF 50V +/- 0.5PF
C1303M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1304M3	2113944A07	CAP CER CHP 1.8PF 50V +/- 0.25PF
C1305M3	2113944A27	CAP CER CHP 15.0PF 50V 5%
C1306M3	2187893N01	CAP 1UF, 6.3V, X5R, 0402 PACKAGE
C1307M3	2113944A26	CAP CER CHP 12.0PF 50V 5%
C1308M3	2113945A09	CAP CER CHP 1000PF 50V 10%
C1309M3	2113944A26	CAP CER CHP 12.0PF 50V 5%
C1310M3	2187893N01	CAP 1UF, 6.3V, X5R, 0402 PACKAGE
C1311M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C1312M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1313M3	2187893N01	CAP 1UF, 6.3V, X5R, 0402 PACKAGE
C1314M3	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1315M3	2115153H02	CAP, CERAMIC, COG
C1316M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1317M3	2188881Y12	CAPACITOR CERAMIC NPO HIGH FREQUENCY 16 VOLT (REPLACES 2104801Z12)
C1318M3	2115153H15	CAP, CERAMIC, COG
C1319M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1320M3	2113944A28	CAP CER CHP 18.0PF 50V 5%
C1321M3	2113944A29	CAP CER CHP 22.0PF 50V 5%
C1322M3	2113944A29	CAP CER CHP 22.0PF 50V 5%
C1323M3	2113944A29	CAP CER CHP 22.0PF 50V 5%
C1324M3	2115153H03	CAP, CERAMIC, COG
C1325M3	2113944A29	CAP CER CHP 22.0PF 50V 5%
C1326M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1327M3	2113944A28	CAP CER CHP 18.0PF 50V 5%

Ref. Des.	Part Number	Description
C1328M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1329M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1330M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1331M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1332M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1333M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1334M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1335M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1336M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1337M3	2113944A28	CAP CER CHP 18.0PF 50V 5%
C1339M3	NOTPLACED	64AM DUMMY PART NUMBER
C1340M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1376M3	2113944A25	CAP CER CHP 10.0PF 50V +/- 0.5PF

Ref. Des.	Part Number	Description
C200M12	2113945B02	CAP CER CHP 10,000PF 25V 10%
C201M12	2188468Y01	CAP CER 25V X7R 0805 1UF
C202M12	2188468Y01	CAP CER 25V X7R 0805 1UF
C203M12	2188468Y01	CAP CER 25V X7R 0805 1UF
C204M12	2113955D35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C205M12	2113955D35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C206M12	2113945B02	CAP CER CHP 10,000PF 25V 10%
C207M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C208M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C209M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2104M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C210M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2114M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2115M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C212M12	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C213M12	2113944A46	CAP CER CHP 330.0 PF 50V 5%

Ref. Des.	Part Number	Description
C214M12	2113944A31	CAP CER CHP 33.0PF 50V 5%
C215M12	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C216M12	2113944A31	CAP CER CHP 33.0PF 50V 5%
C217M12	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C2201M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2202M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2203M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2223M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2224M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2225M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2226M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2227M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2228M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2229M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2331M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2332M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2333M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2334M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2335M2	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2336M2	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2337M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2338M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2339M2	2113945A05	CAP CER CHP 470PF 50V 10%
C2340M2	NOTPLACED	64AM DUMMY PART NUMBER
C2341M2	NOTPLACED	64AM DUMMY PART NUMBER
C2342M2	NOTPLACED	64AM DUMMY PART NUMBER
C2343M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2344M2	2113944A40	CAP CER CHP 100.0PF 50V 5%
C2414M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C2415M3	2113945B02	CAP CER CHP 10,000PF 25V 10%
C2416M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C2417M3	2171206F01	CAPACITOR, CHIP MONOLITHIC CERAMIC, X5R, 4.7UF, 4V, SMD, W18
C2438M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2439M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2440M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2441M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2442M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2443M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2444M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2445M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2446M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2447M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2448M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2449M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2450M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2451M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2452M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2453M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2454M3	2171051Y05	CAP,CER CHIP,180PF,+1%,-1%,50V-DC,0402,-55DEG CMIN,125DEG CM
C2455M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2456M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2457M3	2115153H20	CAP, CERAMIC, COG
C2458M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2459M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2460M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2461M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2462M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2463M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2464M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2465M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C2466M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2467M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2468M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2469M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2470M3	21012119001	CAP,FXD,2.2UF,20%,6.3V-DC,-55DEG CMIN,85DEG CM,X5R,0402
C2471M3	2113945A05	CAP CER CHP 470PF 50V 10%
C2472M3	2113945A09	CAP CER CHP 1000PF 50V 10%
C2473M3	2113944A25	CAP CER CHP 10.0PF 50V +/- 0.5PF
C2474M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2475M3	2113945A09	CAP CER CHP 1000PF 50V 10%
C2477M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2478M3	2113956B54	CAP,FXD,10UF,+20%,-20%,6.3V-DC,X5R,-55DEG CMIN,85DEG CMAX,PB-F
C2479M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2480M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C2482M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2483M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2504M6	2113945A09	CAP CER CHP 1000PF 50V 10%
C2506M6	2113945B02	CAP CER CHP 10,000PF 25V 10%
C2518M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C2520M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2527M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2528M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2531M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2532M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2534M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2535M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2536M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2538M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2539M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2540M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2541M6	2113946B04	CAP CER CHP 0.10UF 10V 10%

Ref. Des.	Part Number	Description
C2542M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2543M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2544M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2545M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2546M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2548M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2549M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2550M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2551M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2552M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2553M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2554M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2555M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C2701M13	2113944C04	CAP CER CHP 330.0PF 50V 5%
C2702M13	2113944C48	CAP CER CHP 560.OPF 50V 5%
C2703M13	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C2704M13	2113944C04	CAP CER CHP 330.0PF 50V 5%
C2705M13	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C2706M13	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C2707M13	2113946K02	CAP CER CHP 0.10UF 16V

Ref. Des.	Part Number	Description
C2708M13	2113944M26	CAP,FXD,22PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C2709M13	2113944C36	CAP CER CHP 33.0PF 50V 5%
C2806	NOTPLACED	64AM DUMMY PART NUMBER
C3200M22	2113944A40	CAP CER CHP 100.0PF 50V 5%
C3201M22	2113944A40	CAP CER CHP 100.0PF 50V 5%
C3202M22	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C3204M22	2113944A52	CAP CER CHP 1000.0 PF 50V 5%
C3208M22	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C3211M22	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3212M22	2113944M22	CAP,FXD,15PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3213M22	2113946B04	CAP CER CHP 0.10UF 10V 10%
C3214M22	2115153H29	CAP, CERAMIC, COG
C3215M22	2113944A42	CAP CER CHP 150.0PF 50V 5%
C3217M22	2113944M36	CAP,FXD,56PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3219M22	2113944M32	CAP,FXD,39PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3220M22	2113944M28	CAP,FXD,27PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB

Ref. Des.	Part Number	Description
C3224M22	2113946B04	CAP CER CHP 0.10UF 10V 10%
C3225M22	2113944M38	CAP,FXD,68PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3226M22	2113944A42	CAP CER CHP 150.0PF 50V 5%
C3235M22	2115153H42	CAP, CERAMIC, COG
C3240M22	2113944A40	CAP CER CHP 100.0PF 50V 5%
C3244M22	2113944A52	CAP CER CHP 1000.0 PF 50V 5%
C3251M22	2113944M17	CAP,FXD,9.1PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3252M22	2113944M17	CAP,FXD,9.1PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3253M22	2113946B04	CAP CER CHP 0.10UF 10V 10%
C3254M22	2115153H42	CAP, CERAMIC, COG
C3255M22	2113944A40	CAP CER CHP 100.0PF 50V 5%
C3258M22	2113944M36	CAP,FXD,56PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3262M22	2113944M30	CAP,FXD,33PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3263M22	2113944M26	CAP,FXD,22PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3264M22	2113946B04	CAP CER CHP 0.10UF 10V 10%
C3265M22	2113944M38	CAP,FXD,68PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3266M22	2113944A40	CAP CER CHP 100.0PF 50V 5%

Ref. Des.	Part Number	Description
C3275M22	2113944A31	CAP CER CHP 33.0PF 50V 5%
C330M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C331M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C332M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C333M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C334M20	2113944A19	CAP CER CHP 5.6PF 50V +/- 0.5PF
C335M20	2113944A84	CAP,FXD,43PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C336M20	2113944A21	CAP CER CHP 6.8PF 50V +/- 0.5PF
C337M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C338M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C339M20	2113944A29	CAP CER CHP 22.0PF 50V 5%
C340M20	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C341M20	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C342M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C343M20	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C344M20	21012043009	CAPACITOR,CERAMIC,1.0PF,50V-DC,C0G,
C345M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C346M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C347M20	2113944A27	CAP CER CHP 15.0PF 50V 5%

Ref. Des.	Part Number	Description
C348M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C349M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C350M20	2113944A30	CAP CER CHP 27.0PF 50V 5%
C351M20	2113944A19	CAP CER CHP 5.6PF 50V +/- 0.5PF
C352M20	2115153H48	CAP, CERAMIC, COG
C353M20	2113944A21	CAP CER CHP 6.8PF 50V +/- 0.5PF
C354M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C357M20	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C360M20	2115153H37	CAP, CERAMIC, COG
C366M20	2113944A28	CAP CER CHP 18.0PF 50V 5%
C367M20	2113944A27	CAP CER CHP 15.0PF 50V 5%
C368M20	2115153H42	CAP, CERAMIC, COG
C369M20	NOTPLACED	64AM DUMMY PART NUMBER
C370M20	21012043009	CAPACITOR,CERAMIC,1.0PF,50V-DC,C0G,
C4005M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C4006M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C4007M2	2113946B04	CAP CER CHP 0.10UF 10V 10%
C500M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C501M21	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C502M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C503M21	2171051Y01	CAP,FXD,220PF,+1%,-1%,50V-DC,C0G,-55DEG CMIN,125DEG CMAX,PB-
C504M21	2113944A40	CAP CER CHP 100.0PF 50V 5%
C505M21	2113944A09	CAP CER CHP 2.2PF 50V +/- 0.25PF
C506M21	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C507M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C508M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C509M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C510M21	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C511M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C512M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C514M21	NOTPLACED	64AM DUMMY PART NUMBER
C515M21	2115153H16	CAP, CERAMIC, COG
C516M21	2113944C04	CAP CER CHP 330.0PF 50V 5%
C532M21	2113944A32	CAP CER CHP 39.0PF 50V 5%
C533M21	2115153H52	CAP, CERAMIC, COG
C550M21	NOTPLACED	64AM DUMMY PART NUMBER
C551M21	NOTPLACED	64AM DUMMY PART NUMBER
C601M19	2113945B02	CAP CER CHP 10,000PF 25V 10%
C602M19	2113945B02	CAP CER CHP 10,000PF 25V 10%

Ref. Des.	Part Number	Description
C603M19	2113945B02	CAP CER CHP 10,000PF 25V 10%
C604M19	2113945B02	CAP CER CHP 10,000PF 25V 10%
C605M19	2115153H23	CAP, CERAMIC, COG
C606M19	2113946B04	CAP CER CHP 0.10UF 10V 10%
C607M19	2113944A40	CAP CER CHP 100.0PF 50V 5%
C608M19	2113944A12	CAP CER CHP 3.0PF 50V +/- 0.25PF
C609M19	2113944A30	CAP CER CHP 27.0PF 50V 5%
C6104M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6105M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6106M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6107M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6108M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6109M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C610M19	2113944A40	CAP CER CHP 100.0PF 50V 5%
C6110M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6111M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6112M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6113M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6114M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C6115M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C611M19	2113944A40	CAP CER CHP 100.0PF 50V 5%

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C612M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C627M19	2113945A09	CAP CER CHP 1000PF 50V 10%	C638M19	2113945A12	CAP CER CHP 3300PF 50V 10%	C6422M6	2113946C02	CAP CER CHP 0.22UF 10V 10%
C613M19	2113944A40	CAP CER CHP 100.0PF 50V 5%	C628M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C639M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C6423M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C614M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C629M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6402M6	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P	C6424M6	2113944A40	CAP CER CHP 100.0PF 50V 5%
C6155M6	NOTPLACED	64AM DUMMY PART NUMBER	C6301M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6403M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6425M6	2113944A40	CAP CER CHP 100.0PF 50V 5%
C6156M6	NOTPLACED	64AM DUMMY PART NUMBER	C6302M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6404M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6426M6	2113945B02	CAP CER CHP 10,000PF 25V 10%
C615M19	2113944A42	CAP CER CHP 150.0PF 50V 5%	C6303M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6405M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6427M6	2113944A50	CAP CER CHP 680.0 PF 50V 5%
C616M19	2113945A11	CAP CER CHP 2200PF 50V 10%	C6304M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6406M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6428M6	2113944A40	CAP CER CHP 100.0PF 50V 5%
C617M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6305M6	2113946S35	CAP CER CHP 1.0UF 16V 10%	C6409M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C642M19	2113944A48	CAP CER CHP 470.0 PF 50V 5%
C618M19	2113944A31	CAP CER CHP 33.0PF 50V 5%	C6306M6	2113946S35	CAP CER CHP 1.0UF 16V 10%	C640M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C643M19	2113944A48	CAP CER CHP 470.0 PF 50V 5%
C619M19	2113944A35	CAP CER CHP 62.0PF 50V 5%	C6308M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6410M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C644M19	2113944A11	CAP CER CHP 2.7PF 50V +/- 0.25PF
C6201M6	2113944A40	CAP CER CHP 100.0PF 50V 5%	C6309M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6411M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C645M19	NOTPLACED	64AM DUMMY PART NUMBER
C6202M6	2113945A09	CAP CER CHP 1000PF 50V 10%	C630M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6413M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C646M19	2115153H32	CAP, CERAMIC, COG
C6203M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6310M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6414M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6501M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C620M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6311M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6416M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C6502M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C621M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C631M19	2115153H32	CAP, CERAMIC, COG	C6418M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6503M6	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C622M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX	C632M19	2113944A40	CAP CER CHP 100.0PF 50V 5%	C6419M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6504M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C623M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C633M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C641M19	2113944A31	CAP CER CHP 33.0PF 50V 5%	C6505M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C624M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX	C634M19	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6420M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C6506M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C625M19	2115153H39	CAP, CERAMIC, COG	C635M19	2113945B02	CAP CER CHP 10,000PF 25V 10%	C6421M6	2113946B04	CAP CER CHP 0.10UF 10V 10%	C6507M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
C626M19	2113945A09	CAP CER CHP 1000PF 50V 10%	C636M19	2113946B04	CAP CER CHP 0.10UF 10V 10%				C6508M6	2113946B04	CAP CER CHP 0.10UF 10V 10%
			C637M19	2113946B04	CAP CER CHP 0.10UF 10V 10%				C6509M6	2113946B04	CAP CER CHP 0.10UF 10V 10%

Ref. Des.	Part Number	Description
C756M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C757M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C760M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C764M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C768M7	2113944A25	CAP CER CHP 10.0PF 50V +/- 0.5PF
C770M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C772M7	2113945A09	CAP CER CHP 1000PF 50V 10%
C773M7	2113944A33	CAP CER CHP 47.0PF 50V 5%
C777M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C778M7	2113944A36	CAP CER CHP 68.0PF 50V 5%
C779M7	NOTPLACED	64AM DUMMY PART NUMBER
C780M7	2113944A33	CAP CER CHP 47.0PF 50V 5%
C781M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C786M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C790M7	2113944A29	CAP CER CHP 22.0PF 50V 5%
C791M7	2113944A29	CAP CER CHP 22.0PF 50V 5%
C803M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C809M7	2113944A12	CAP CER CHP 3.0PF 50V +/- 0.25PF
C813M7	2115153H40	CAP, CERAMIC, COG

Ref. Des.	Part Number	Description
C816M7	2113944A25	CAP CER CHP 10.0PF 50V +/- 0.5PF
C817M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C819M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C823M7	2113944A52	CAP CER CHP 1000.0 PF 50V 5%
C824M7	2113944A44	CAP CER CHP 220.0 PF 50V 5%
C901M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C902M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C903M16	2113945B02	CAP CER CHP 10,000PF 25V 10%
C904M16	2113944A34	CAP CER CHP 56.0PF 50V 5%
C905M16	2113945B02	CAP CER CHP 10,000PF 25V 10%
C906M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C907M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C908M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C909M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C910M16	NOTPLACED	64AM DUMMY PART NUMBER
C911M16	2113945B02	CAP CER CHP 10,000PF 25V 10%
C912M16	NOTPLACED	64AM DUMMY PART NUMBER
C913M16	2115153H51	CAP, CERAMIC, COG
C914M16	2115153H49	CAP, CERAMIC, COG
C915M16	2113944A46	CAP CER CHP 330.0 PF 50V 5%
C916M16	2115153H57	CAP, CERAMIC, COG
C917M16	NOTPLACED	64AM DUMMY PART NUMBER

Ref. Des.	Part Number	Description
C918M16	522372-076-00	CAP,FXD,620PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,L
C919M16	2113944M22	CAP,FXD,15PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C920M16	2113742J10	CAP 39.0 PF 5%
C921M16	2113742J10	CAP 39.0 PF 5%
C922M16	2113944M28	CAP,FXD,27PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C923M16	NOTPLACED	64AM DUMMY PART NUMBER
C924M16	2113944M22	CAP,FXD,15PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C925M16	2113944C04	CAP CER CHP 330.0PF 50V 5%
C927M16	NOTPLACED	64AM DUMMY PART NUMBER
C928M16	2113944M24	CAP,FXD,18PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C929M16	2113945A12	CAP CER CHP 3300PF 50V 10%
C930M16	2113945A12	CAP CER CHP 3300PF 50V 10%
C931M16	NOTPLACED	64AM DUMMY PART NUMBER
C933M16	NOTPLACED	64AM DUMMY PART NUMBER
C934M16	2113944A34	CAP CER CHP 56.0PF 50V 5%
C935M16	2115153H48	CAP, CERAMIC, COG
D1M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360

Ref. Des.	Part Number	Description
D200M12	4813978A19	DIODE,RECT,MBR120,SM,SOD-123,1A,20V,SHTK,PB-FREE
D2101M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D2304M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D2305M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D2306M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D2307M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D2521M6	4871785H01	SWITCHING DIODE BAS116LT1G
D2701M13	4813974A19	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
D2702M13	4815897H01	PIN DIODE
D2703M13	4815897H01	PIN DIODE
D2M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360
D301M20	NOTPLACED	64AM DUMMY PART NUMBER
D3206M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3207M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3208M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3209M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3246M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3247M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3248M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL
D3249M22	4815002H03	DIODE,VCTR, @ 34V,SILICON EPITAXIAL

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
D3M2	4870359B01	DIODE,SUPR,SM,7.82V,.1 W,ESD PROT,V360	E606M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1203M17	2416066H02	INDUCTOR	L319M20	2414032F35	IDCTR,WW,120NH,5%,400 MA,.51OHM,CER,35 Q,860MHZ SRF,SM,PB-FR
D4001M2	4813978A25	SCHOTTKY 30V SOD-323 T&R PB FREE	E607M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1209M17	2416066H02	INDUCTOR	L3205M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
D6101M6	4813978A25	SCHOTTKY 30V SOD-323 T&R PB FREE	E608M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1211M17	2416066H02	INDUCTOR	L320M20	2415429H28	CHIP INDUCTOR
D6401M6	4813978A25	SCHOTTKY 30V SOD-323 T&R PB FREE	E609M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1301M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P	L3210M22	2415429H27	CHIP INDUCTOR
D6501M6	4813978A25	SCHOTTKY 30V SOD-323 T&R PB FREE	E6501M6	2480067M02	CHK RF CHIP BEAD INDUCTOR	L1302M3	NOTPLACED	64AM DUMMY PART NUMBER	L3216M22	2415010H04	AIRWOUND COIL
D722M7	4815011H01	DIODE TRIPLE	E6502M6	2480067M02	CHK RF CHIP BEAD INDUCTOR	L1303M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P	L321M20	2415429H28	CHIP INDUCTOR
D723M7	4815011H01	DIODE TRIPLE	F200M12	6575834B01	FUSE SURFACE MOUNT	L1304M3	2475122C17	IND, MULTI-LAY, 4.7NH ?0.3%, 0402,	L3223M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E1101M11	2405688Z01	INDUCTOR FERRITE BEAD	FL1301M3	9102190J23	FLTR,SAW,BAND- PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE	L1305M3	24012011010	0402 HIGH Q CHIP INDUC- TOR	L3229M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E201M12	7686949J14	FLTR,FERRITE BEAD,,,2A,,,,SM,0805,,CHI P,220OHM	FL1302M3	9109674L58	PASSIVE FIL- TER,CER,BAND- PASS,2.45GHZ NOM	L1306M3	2414017P14	IDCTR,CHIP,12NH,5%,300 MA,.6OHM,CER,9 Q,2GHZ SRF,SM,0402,PB-F	L3230M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E2201M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	FL1303M3	9102190J23	FLTR,SAW,BAND- PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE	L1308M3	NOTPLACED	64AM DUMMY PART NUMBER	L3245M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E2206M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	FL502M21	91009300001	FILTER,MONOLITHIC CRYSTAL,BAND- PASS,109.65MHZ NOM	L1316M3	24012011018	0402 HIGH Q CHIP INDUC- TOR	L3250M22	2415429H30	CHIP INDUCTOR
E2207M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	J102M11	2880658Z08	CONNECTOR SMA	L200M12	2571269C01	INDUCTOR WW POWER 20%	L3256M22	2414015C05	IDCTR,FXD,33NH,2%,1.3M A,.09OHM,CER,75 Q,1.7GHZ SRF,SM,1008,P
E2247M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	J1301M3	40012057001	SWITCH,RF	L2701M13	2416066H02	INDUCTOR	L3261M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E2248M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	J1M2	09012130001	CONNECTOR, BTB RECEPTACLE, 24-PIN, 0.4MM PITCH	L2702M13	2415429H40	CHIP INDUCTOR	L3269M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E2249M2	7685268E01	FERRITE BEAD 20X40 200 MA MAX CHIP	J2401M2	0989851N01	CONNECTOR, RECEPTACLE, 0.4MM PITCH, 1.5MM HEIGHT,40PIN	L312M20	2414032F35	IDCTR,WW,120NH,5%,400 MA,.51OHM,CER,35 Q,860MHZ SRF,SM,PB-FR	L3270M22	2414032F44	IDCTR,WW,680NH,10%,130 MA,4OHM,CER,30 Q,570MHZ SRF,SM,PB-FRE
E302M20	2480640Z01	SURFACE MOUNT FER- RITE BEAD	J2M2	0971704L01	CONNECTOR, 12-PIN SOCKET, 0.4MM PIT	L313M20	2415429H28	CHIP INDUCTOR	L327M20	2414032F35	IDCTR,WW,120NH,5%,400 MA,.51OHM,CER,35 Q,860MHZ SRF,SM,PB-FR
E601M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	J3M2	09012073001	CONNECTOR, B2B RECEPTACLE 34PINS	L314M20	2415429H28	CHIP INDUCTOR	L329M20	2478057A30	0306 HIGH Q CHIP INDUC- TOR
E602M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1101M11	2415429H26	CHIP INDUCTOR	L315M20	2414017N22	IDCTR,CHIP,68NH,5%,400 MA,1.2OHM,CER,14 Q,800MHZ SRF,SM,0603	L500M21	2415429H43	CHIP INDUCTOR
E603M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1102M11	2415429H10	CHIP INDUCTOR	L316M20	2415429H34	CHIP INDUCTOR			
E604M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD	L1117M11	2415428H01	AIR WOUND INDUCTOR	L317M20	2414017P13	IDCTR,CHIP,10NH,5%,300 MA,.46OHM,CER,9 Q,2.5GHZ SRF,SM,0402,P			
E605M19	2480640Z01	SURFACE MOUNT FER- RITE BEAD				L318M20	2414032F35	IDCTR,WW,120NH,5%,400 MA,.51OHM,CER,35 Q,860MHZ SRF,SM,PB-FR			

Ref. Des.	Part Number	Description
L501M21	2414017P25	IDCTR,CHIP,100NH,5%,100 MA,5.5OHM,CER,8 Q,650MHZ SRF,SM,0402
L503M21	2414017N24	IDCTR,CHIP,100NH,5%,300 MA,2OHM,CER,14 Q,700MHZ SRF,SM,0603,P
L504M21	2478057A51	0306 HIGH Q CHIP INDUC-TOR
L513M21	NOTPLACED	64AM DUMMY PART NUMBER
L550M21	2414017N20	IDCTR,CHIP,47NH,5%,500 MA,.86OHM,CER,14 Q,900MHZ SRF,SM,0603
L601M19	2415429H43	CHIP INDUCTOR
L602M19	2466505A01	COIL INDUCTOR
L603M19	2466505A01	COIL INDUCTOR
L604M19	2414032D16	IDCTR,WW,120NH,5%,800 MA,.26OHM,CER,42 Q,1GHZ SRF,SM,PB-FREE
L605M19	2414017Q54	IDCTR,FXD,3.9UH,10%,30 MA,.9OHM,FERR,45 Q,38MHZ SRF,SM,0805,P
L611M19	2414032F39	IDCTR,WW,270NH,10%,280 MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE
L6502M6	2471678H01	10UH INDCUTOR
L6504M6	24009268001	10UH 2.1A SHIELDED INDUCTOR
L6505M6	2471678H01	10UH INDCUTOR
L704M7	2414017P17	IDCTR,CHIP,22NH,5%,300 MA,.88OHM,CER,9 Q,1.8GHZ SRF,SM,0402,P
L709M7	2415429H21	CHIP INDUCTOR
L720M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)
L727M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)
L728M7	2415429H47	CHIP INDUCTOR
L733M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)

Ref. Des.	Part Number	Description
L735M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)
L738M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)
L739M7	2415429H47	CHIP INDUCTOR
L741M7	2480646Z20	COIL MULTI-LAYER CHIP(2.20UH)
L746M7	2414017P04	IDCTR,CHIP,1.8NH,300MA,.14OHM,CER,8 Q,6GHZ SRF,SM,0402,PB-F
L753M7	2415347H06	IDCTR, 2200NH
L755M7	2415429H47	CHIP INDUCTOR
L758M7	2415429H47	CHIP INDUCTOR
L759M7	2415429H47	CHIP INDUCTOR
L765M7	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L775M7	2415429H36	CHIP INDUCTOR
L901M16	2414017N10	IDCTR,CHIP,6.8NH,5%,600 MA,.22OHM,CER,10 Q,2.7GHZ SRF,SM,0603
L902M16	2415429H37	CHIP INDUCTOR
L903M16	2414015A07	IDCTR,FXD,180NH,2%,750 MA,.77OHM,CER,25 Q,700MHZ SRF,SM,1008
L904M16	2414017N19	IDCTR,CHIP,39NH,5%,500 MA,.74OHM,CER,12 Q,1GHZ SRF,SM,0603,PB
L905M16	2414017N14	IDCTR,CHIP,15NH,5%,600 MA,.4OHM,CER,12 Q,1.8GHZ SRF,SM,0603,P
L906M16	2460591K40	COIL AIR WOUND INDUC 59.71
L907M16	2471968L13	LOW PROFILE MINI SPRING INDUCTOR
L908M16	2415428H01	AIR WOUND INDUCTOR
L909M16	2471968L10	9.0NH 2% LP AIRWOUND INDUCTOR
L910M16	2471968L07	LOW PROFILE MINI SPRING INDUCTOR

Ref. Des.	Part Number	Description
L912M16	2414017P19	IDCTR,CHIP,33NH,5%,200 MA,1.5OHM,CER,8 Q,1.3GHZ SRF,SM,0402,P
M1	1171905B02	WHITE I SHAPE UNDER-FILM CORNER
M101M12	39012039001	CONNECTOR, BATTERY CONTACT
M1301M3	3987977Y04	CONT,CONN,,1CONT,,,ANT UNIV 4.5MM,UC 1.8
M1302M3	3987977Y04	CONT,CONN,,1CONT,,,ANT UNIV 4.5MM,UC 1.8
M2	1171905B02	WHITE I SHAPE UNDER-FILM CORNER
M2533M6	3987977Y04	CONT,CONN,,1CONT,,,ANT UNIV 4.5MM,UC 1.8
M6502M6	0985888K02	SKT RTC BTTY LEAP
PASTE	11007387003	SLDR,PASTE,500G,PLAS-TIC JAR,AIR SEAL, 8.9E LOW VOID
PCB	84012512001	BOARD, PC, VHF MAIN BOARD
Q1101M11	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,PB-FREE
Q1103M11	4813970A59	P-CH FET 1.0A 20V SOT-23 T&R
Q201M12	4813970A59	P-CH FET 1.0A 20V SOT-23 T&R
Q202M12	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,PB-FREE
Q2202M2	4815261H01	TRANSISTOR,BIP GEN-ERAL PURPOSE SMALL NPN
Q2537M6	4888795V06	XSTR,FET GP PWR,,MOS-FET,,SM,,,SMT,20V,.25W,LE AD-FREE
Q2547M6	4888795V06	XSTR,FET GP PWR,,MOS-FET,,SM,,,SMT,20V,.25W,LE AD-FREE

Ref. Des.	Part Number	Description
Q2701M13	4815055H01	TSTR DUAL NPN/PNP UMH 5
Q303M20	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT-563,SMT,-30V,.357W,-100MA,100MHZ
Q304M20	4813973A32	XSTR,BIP GP SS,NPN,SM,SC-70,SMT,50V,.202W,100MA,PB-FREE
Q3227M22	4885061Y01	XSTR NPN 6V 30UA 12GHZ PB-FREE
Q3232M22	4815055H01	TSTR DUAL NPN/PNP UMH 5
Q3267M22	4885061Y01	XSTR NPN 6V 30UA 12GHZ PB-FREE
Q3272M22	4815055H01	TSTR DUAL NPN/PNP UMH 5
Q4001M2	4815261H01	TRANSISTOR,BIP GEN-ERAL PURPOSE SMALL NPN
Q601M19	4813973A04	XSTR,BIP GP SS,NPN,TA13,SM,SOT-23,SMT,30V,.225W,300MA,125MHZ,P
Q6101M6	4815261H01	TRANSISTOR,BIP GEN-ERAL PURPOSE SMALL NPN
Q6401M6	48012170001	FET
Q6501M6	4813970A62	XSTR,FET GP PWR,MOS-FET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE
Q6502M6	48012154001	FET
Q6504M6	4809579E77	FET, NCH MOS FET, 1.2MM X 1.2MM PACKAGE, SMD, W18 COMPLIANT
Q6505M6	4813970A62	XSTR,FET GP PWR,MOS-FET,P-CH,ENHN,CF,-20V,1.3W,PB-FREE
Q6506M6	4809579E77	FET, NCH MOS FET, 1.2MM X 1.2MM PACKAGE, SMD, W18 COMPLIANT
Q6507M6	48012170001	FET

Ref. Des.	Part Number	Description
Q6508M6	48012154001	FET
Q731M7	4885061Y01	XSTR NPN 6V 30UA 12GHZ PB-FREE
Q745M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT- 563,SMT,-30V,.357W,- 100MA,100MHZ
Q756M7	4805585Q32	TRANSITOR, NPN RF
Q767M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT- 563,SMT,-30V,.357W,- 100MA,100MHZ
Q774M7	4805585Q32	TRANSITOR, NPN RF
Q785M7	4889394V04	XSTR,FET GEN PURPOSE SMALL SIG,MOSFET,N- CH,ENHN,SM,20V,.25W,P
Q901M16	48012094001	MOD,XSTR,FET RF PWR, 135-941MHZ
R1101M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1102M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1103M11	06009259001	LOW RESISTANCE THICK FILM RESISTOR
R1104M11	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1105M11	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1106M11	0613952K73	CER CHIP RES 56.2 OHM 1% 0402
R1107M11	0613952Q45	CER CHIP RES 68.0 OHM 5 0402
R1108M11	0613952N81	CER CHIP RES 68.1K OHM 1 0402
R1110M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1112M11	NOTPLACED	64AM DUMMY PART NUMBER
R1114M11	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1115M11	0613952Q49	CER CHIP RES 100 OHM 5 0402

Ref. Des.	Part Number	Description
R1116M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1117M11	0613952R11	CER CHIP RES 27K OHM 5% 0402
R1121M11	0613952N47	CER CHIP RES 30.1K OHM 1 0402
R1122M11	0613952N85	CER CHIP RES 75.0K OHM 1 0402
R1124M11	0613952Q42	CER CHIP RES 51.0 OHM 5 0402
R1125M11	0613952Z60	RES,MF,27KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1126M11	0613952N05	CER CHIP RES 11.0K OHM 1 0402
R1127M11	0613952R08	CER CHIP RES 20K OHM 5 0402
R1128M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1135M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1136M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1137M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1138M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1139M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1140M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1141M11	0613952R42	CER CHIP RES 510K OHM 5 0402
R1142M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1143M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1144M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1145M11	0613952R25	CER CHIP RES 100K OHM 5% 0402

Ref. Des.	Part Number	Description
R1146M11	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1151M11	0613952R05	CER CHIP RES 15K OHM 5% 0402
R1152M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1154M11	0613952N01	CER CHIP RES 10.0K OHM 1 0402
R1158M11	NOTPLACED	64AM DUMMY PART NUMBER
R1160M11	0613952R03	CER CHIP RES 12K OHM 5% 0402
R1162M11	0613952R29	CER CHIP RES 150K OHM 5% 0402
R1163M11	0613952R06	CER CHIP RES 16K OHM 5 0402
R1164M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1165M11	0613952Q56	CER CHIP RES 200 OHM 5 0402
R1166M11	0613952Q56	CER CHIP RES 200 OHM 5 0402
R1167M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1168M11	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1169M11	0613952P52	CER CHIP RES 340K OHM 1 0402
R1170M11	0613952N88	CER CHIP RES 80.6K OHM 1 0402
R1171M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1172M11	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R1174M11	0613952N01	CER CHIP RES 10.0K OHM 1 0402
R1175M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1176M11	0613952M26	CER CHIP RES 1820 OHM 1% 0402

Ref. Des.	Part Number	Description
R1177M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1178M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1180M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1182M11	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1198M11	0613952J01	CER CHIP RES 10K OHM 5% 0603
R1202M11	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1301M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1302M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1303M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1304M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1305M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1306M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1307M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1308M3	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1309M3	NOTPLACED	64AM DUMMY PART NUMBER
R1310M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1311M3	NOTPLACED	64AM DUMMY PART NUMBER
R1312M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1313M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1314M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R1315M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R1338M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2120M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2358M2	0613952Q66	CER CHIP RES 510 OHM 5 0402
R1316M3	NOTPLACED	64AM DUMMY PART NUMBER	R1340M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2197M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2359M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1317M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R1M2	0613952R17	CER CHIP RES 47K OHM 5% 0402	R2198M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2360M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1318M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2	NOTPLACED	64AM DUMMY PART NUMBER	R2199M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2361M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1319M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R20	NOTPLACED	64AM DUMMY PART NUMBER	R21M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2362M2	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1320M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R201M12	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2201M2	0613952R32	CER CHIP RES 200K OHM 5 0402	R2363M2	0613952Q53	CER CHIP RES 150 OHM 5 0402
R1321M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R202M12	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R2204M2	0613952Q85	CER CHIP RES 3300 OHM 5 0402	R2364M2	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1322M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2104M2	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R2206M2	0613952Q85	CER CHIP RES 3300 OHM 5 0402	R2401M2	0613952R01	CER CHIP RES 10K OHM 5% 0402
R1323M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2105M2	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R2207M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2404M3	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1324M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2106M2	NOTPLACED	64AM DUMMY PART NUMBER	R2235M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2405M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1325M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2107M2	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2244M2	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2406M3	NOTPLACED	64AM DUMMY PART NUMBER
R1326M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2109M2	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R2245M2	0613952Q81	CER CHIP RES 2200 OHM 5 0402	R2407M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1327M3	NOTPLACED	64AM DUMMY PART NUMBER	R2110M2	0613952Q33	CER CHIP RES 22.0 OHM 5 0402	R2246M2	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2408M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1328M3	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2111M2	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R2254M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2412M3	0613952Q53	CER CHIP RES 150 OHM 5 0402
R1329M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2113M2	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R2255M2	0613952Q66	CER CHIP RES 510 OHM 5 0402	R2414M3	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1330M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2114M2	0613952Q33	CER CHIP RES 22.0 OHM 5 0402	R2256M2	0613952Q66	CER CHIP RES 510 OHM 5 0402	R2416M3	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1331M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2115M2	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R2257M2	0613952Q66	CER CHIP RES 510 OHM 5 0402	R2418M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R1332M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2116M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R22M2	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2419M3	0613952Q49	CER CHIP RES 100 OHM 5 0402
R1333M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2117M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2356M2	0613952Q09	CER CHIP RES 2.2 OHM 5 0402	R2433M3	0613952R25	CER CHIP RES 100K OHM 5% 0402
R1337M3	NOTPLACED	64AM DUMMY PART NUMBER	R2118M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2357M2	0613952Q09	CER CHIP RES 2.2 OHM 5 0402	R2434M3	0613952R25	CER CHIP RES 100K OHM 5% 0402

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R2435M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2465M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2488M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2516M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R2436M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2466M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2489M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2517M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R2437M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2467M3	0613952Q32	CER CHIP RES 20.0 OHM 5 0402	R2490M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2519M6	0613952H25	CER CHIP RES 10.0 OHM 5% 0603
R2441M3	0613952Q41	CER CHIP RES 47.0 OHM 5 0402	R2469M3	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2491M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2522M6	0613952R74	RES,MF,10MOHM,5%,.0625 W,SM,0402,400PPM/ CEL,PB-FREE
R2442M3	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2470M3	NOTPLACED	64AM DUMMY PART NUMBER	R2492M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2523M6	0613952R74	RES,MF,10MOHM,5%,.0625 W,SM,0402,400PPM/ CEL,PB-FREE
R2443M3	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R2471M3	NOTPLACED	64AM DUMMY PART NUMBER	R2493M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2524M6	0613952R49	CER CHIP RES 1.0M OHM 5% 0402
R2444M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2472M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2495M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2529M6	0613952P30	CER CHIP RES 200K OHM 1 0402
R2449M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2473M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2496M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2530M6	0613952P30	CER CHIP RES 200K OHM 1 0402
R2450M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2474M3	0613952R35	CER CHIP RES 270K OHM 5% 0402	R2497M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2560M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R2451M3	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2475M3	0613952Q53	CER CHIP RES 150 OHM 5 0402	R2501M6	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2701M13	0613952R25	CER CHIP RES 100K OHM 5% 0402
R2452M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2476M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2503M6	NOTPLACED	64AM DUMMY PART NUMBER	R2702M13	NOTPLACED	64AM DUMMY PART NUMBER
R2453M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2477M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2505M6	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R2703M13	0613952H47	CER CHIP RES 82.0 OHM 5 0603
R2454M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2478M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2507M6	0613952R49	CER CHIP RES 1.0M OHM 5% 0402	R2704M13	0613952H47	CER CHIP RES 82.0 OHM 5 0603
R2455M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2479M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2508M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2705M13	0613952H47	CER CHIP RES 82.0 OHM 5 0603
R2456M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2480M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2509M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2706M13	0662057B47	CHIP RES 0 OHMS +/-0 50 OHMS
R2457M3	0613952R05	CER CHIP RES 15K OHM 5% 0402	R2481M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2511M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2803	0613952Q37	CER CHIP RES 33.0 OHM 5 0402
R2458M3	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R2484M3	0613952Q35	CER CHIP RES 27.0 OHM 5 0402	R2512M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R2804	0613952Q49	CER CHIP RES 100 OHM 5 0402
R2459M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2485M3	0613952Q35	CER CHIP RES 27.0 OHM 5 0402	R2513M6	0613952Q80	CER CHIP RES 2000 OHM 5 0402	R2805	0613952Q49	CER CHIP RES 100 OHM 5 0402
R2460M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2486M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2514M6	NOTPLACED	64AM DUMMY PART NUMBER	R2806	0613952Q59	CER CHIP RES 270 OHM 5 0402
R2461M3	0613952R25	CER CHIP RES 100K OHM 5% 0402	R2487M3	0613952R01	CER CHIP RES 10K OHM 5% 0402	R2515M6	NOTPLACED	64AM DUMMY PART NUMBER	R2807	0613952Q56	CER CHIP RES 200 OHM 5 0402

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R2808	0613952Q49	CER CHIP RES 100 OHM 5 0402	R3206M22	0613952Q52	CER CHIP RES 130 OHM 5 0402	R4012M2	0613952R09	CER CHIP RES 22K OHM 5% 0402	R6104M6	NOTPLACED	64AM DUMMY PART NUMBER
R2810	0613952R01	CER CHIP RES 10K OHM 5% 0402	R3207M22	0613952Q57	CER CHIP RES 220 OHM 5 0402	R4013M2	0613952R09	CER CHIP RES 22K OHM 5% 0402	R6105M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R2811	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R3208M22	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R4014M2	0613952Q85	CER CHIP RES 3300 OHM 5 0402	R6106M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R2812	0613952R01	CER CHIP RES 10K OHM 5% 0402	R3218M22	0613952Q93	CER CHIP RES 6800 OHM 5 0402	R500M21	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6107M6	0613952Q55	CER CHIP RES 180 OHM 5 0402
R2813	NOTPLACED	64AM DUMMY PART NUMBER	R3222M22	0613952Q96	CER CHIP RES 9100 OHM 5 0402	R502M21	0613952Q36	CER CHIP RES 30.0 OHM 5 0402	R6108M6	0613952Q61	CER CHIP RES 330 OHM 5 0402
R2817	0613952Q41	CER CHIP RES 47.0 OHM 5 0402	R3231M22	0613952Q58	CER CHIP RES 240 OHM 5 0402	R512M21	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R6109M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R310M20	0613952R22	CER CHIP RES 75K OHM 5 0402	R3233M22	0613952Q53	CER CHIP RES 150 OHM 5 0402	R525M21	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R610M19	0613952R25	CER CHIP RES 100K OHM 5% 0402
R311M20	0613952R27	CER CHIP RES 120K OHM 5% 0402	R3257M22	0613952Q96	CER CHIP RES 9100 OHM 5 0402	R526M21	0613958J74	CER CHIP RES 0.0 OHM JMP 0805	R6110M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R312M20	0613952R01	CER CHIP RES 10K OHM 5% 0402	R3260M22	0613952Q96	CER CHIP RES 9100 OHM 5 0402	R601M19	0613952Q41	CER CHIP RES 47.0 OHM 5 0402	R6111M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R313M20	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R3271M22	0613952Q53	CER CHIP RES 150 OHM 5 0402	R602M19	0613952Q63	CER CHIP RES 390 OHM 5 0402	R6112M6	NOTPLACED	64AM DUMMY PART NUMBER
R314M20	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R3273M22	0613952Q53	CER CHIP RES 150 OHM 5 0402	R603M19	0613952R25	CER CHIP RES 100K OHM 5% 0402	R6113M6	0613952Q51	CER CHIP RES 120 OHM 5 0402
R315M20	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R380M20	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R604M19	0613952Q63	CER CHIP RES 390 OHM 5 0402	R6114M6	0613952Q49	CER CHIP RES 100 OHM 5 0402
R316M20	0613952G67	CER CHIP RES 0.0 +/-0.050 OHM	R381M20	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R605M19	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6115M6	0613952Q49	CER CHIP RES 100 OHM 5 0402
R317M20	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R4005M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R606M19	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6116M6	NOTPLACED	64AM DUMMY PART NUMBER
R3200M22	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R4006M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R607M19	0613952R25	CER CHIP RES 100K OHM 5% 0402	R6117M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R3201M22	0613952Q13	CER CHIP RES 3.3 OHM 5 0402	R4007M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R608M19	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6118M6	0613952R09	CER CHIP RES 22K OHM 5% 0402
R3202M22	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R4008M2	0613952R01	CER CHIP RES 10K OHM 5% 0402	R609M19	0613952Q81	CER CHIP RES 2200 OHM 5 0402	R6119M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R3203M22	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R4009M2	0613952Q85	CER CHIP RES 3300 OHM 5 0402	R6101M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R611M19	0613952R01	CER CHIP RES 10K OHM 5% 0402
R3204M22	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R4010M2	0613952R32	CER CHIP RES 200K OHM 5 0402	R6102M6	0613952R09	CER CHIP RES 22K OHM 5% 0402	R6120M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R3205M22	0613952Q57	CER CHIP RES 220 OHM 5 0402	R4011M2	0613952R17	CER CHIP RES 47K OHM 5% 0402	R6103M6	0613952R09	CER CHIP RES 22K OHM 5% 0402	R6121M6	0613952R01	CER CHIP RES 10K OHM 5% 0402

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R6122M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6213M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6406M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6503M6	0613952Q25	CER CHIP RES 10.0 OHM 5 0402
R6125M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R6215M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6410M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6504M6	0613952R09	CER CHIP RES 22K OHM 5% 0402
R612M19	0613952Q94	CER CHIP RES 7500 OHM 5 0402	R6217M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402	R6411M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R6505M6	0613952Q80	CER CHIP RES 2000 OHM 5 0402
R613M19	0613952Q82	CER CHIP RES 2400 OHM 5 0402	R6218M6	0613952Q80	CER CHIP RES 2000 OHM 5 0402	R6416M6	0613952Q61	CER CHIP RES 330 OHM 5 0402	R6506M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R614M19	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R621M19	NOTPLACED	64AM DUMMY PART NUMBER	R6417M6	0613952Q61	CER CHIP RES 330 OHM 5 0402	R6507M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R615M19	NOTPLACED	64AM DUMMY PART NUMBER	R623M19	NOTPLACED	64AM DUMMY PART NUMBER	R6419M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6508M6	0613952R17	CER CHIP RES 47K OHM 5% 0402
R616M19	NOTPLACED	64AM DUMMY PART NUMBER	R624M19	NOTPLACED	64AM DUMMY PART NUMBER	R6420M6	0613952R17	CER CHIP RES 47K OHM 5% 0402	R6509M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R617M19	NOTPLACED	64AM DUMMY PART NUMBER	R6301M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6421M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6510M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R618M19	NOTPLACED	64AM DUMMY PART NUMBER	R6304M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R6422M6	0613952Q51	CER CHIP RES 120 OHM 5 0402	R6511M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R619M19	NOTPLACED	64AM DUMMY PART NUMBER	R6306M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6423M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R6512M6	0613952N01	CER CHIP RES 10.0K OHM 1 0402
R6204M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6310M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6425M6	0613952Q80	CER CHIP RES 2000 OHM 5 0402	R6513M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6205M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6311M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6426M6	0613952Q49	CER CHIP RES 100 OHM 5 0402	R6514M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6206M6	0613952R25	CER CHIP RES 100K OHM 5% 0402	R6312M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6427M6	0613952R11	CER CHIP RES 27K OHM 5% 0402	R6515M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6207M6	0613952R25	CER CHIP RES 100K OHM 5% 0402	R6313M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6428M6	0613952R25	CER CHIP RES 100K OHM 5% 0402	R6516M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6208M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R6314M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	R6429M6	0613952R17	CER CHIP RES 47K OHM 5% 0402	R6517M6	0613952Q63	CER CHIP RES 390 OHM 5 0402
R6209M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R6316M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6430M6	0613952R09	CER CHIP RES 22K OHM 5% 0402	R6518M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R620M19	NOTPLACED	64AM DUMMY PART NUMBER	R6401M6	0613952R18	CER CHIP RES 51K OHM 5 0402	R6431M6	0613952Q81	CER CHIP RES 2200 OHM 5 0402	R6519M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6210M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402	R6402M6	0613952R32	CER CHIP RES 200K OHM 5 0402	R6492M6	0613952Q79	CER CHIP RES 1800 OHM 5 0402	R6520M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R6211M6	0613952R01	CER CHIP RES 10K OHM 5% 0402	R6404M6	0613952Q81	CER CHIP RES 2200 OHM 5 0402	R6501M6	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R6521M6	0615049H01	KAMAYA 0.2 OHM CHIP RESISTOR
R6212M6	NOTPLACED	64AM DUMMY PART NUMBER	R6405M6	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R6502M6	0613952Q25	CER CHIP RES 10.0 OHM 5 0402	R6522M6	0613952M66	CER CHIP RES 4750 OHM 1% 0402

Ref. Des.	Part Number	Description
R6523M6	0613952R09	CER CHIP RES 22K OHM 5% 0402
R6524M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6525M6	NOTPLACED	64AM DUMMY PART NUMBER
R6526M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6527M6	0613952N87	CER CHIP RES 78.7K OHM 1 0402
R6528M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R6529M6	0615049H01	KAMAYA 0.2 OHM CHIP RESISTOR
R6530M6	0613952L30	CER CHIP RES 200 OHM 1 0402
R6531M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6532M6	NOTPLACED	64AM DUMMY PART NUMBER
R6533M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6534M6	NOTPLACED	64AM DUMMY PART NUMBER
R6535M6	0613952N01	CER CHIP RES 10.0K OHM 1 0402
R6536M6	0613952Z72	RES,MF,91KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6537M6	0613952P09	CER CHIP RES 121K OHM 1 0402
R6538M6	0613952Q95	CER CHIP RES 8200 OHM 5 0402
R6539M6	0613952P66	CER CHIP RES 475K OHM 1 0402
R6540M6	0613952P66	CER CHIP RES 475K OHM 1 0402
R6541M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R6542M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM

Ref. Des.	Part Number	Description
R6543M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6544M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6545M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R6546M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6547M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6548M6	NOTPLACED	64AM DUMMY PART NUMBER
R6550M6	0613952Z64	RES,MF,39KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6551M6	0613952Z62	RES,MF,33KOHM,1%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R6552M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R6558M6	0613952P22	CER CHIP RES 165K OHM 1 0402
R6561M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6562M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6563M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6564M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6565M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6566M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6567M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6568M6	0613952P47	CER CHIP RES 301K OHM 1 0402
R6570M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6574M6	0613952R25	CER CHIP RES 100K OHM 5% 0402

Ref. Des.	Part Number	Description
R6576M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6577M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6578M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6579M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6580M6	0613952R17	CER CHIP RES 47K OHM 5% 0402
R6581M6	0613952Q49	CER CHIP RES 100 OHM 5 0402
R6582M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6583M6	0613952R03	CER CHIP RES 12K OHM 5% 0402
R6584M6	0613952Q56	CER CHIP RES 200 OHM 5 0402
R6591M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6598M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6599M6	NOTPLACED	64AM DUMMY PART NUMBER
R6601M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6602M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6604M6	0613952Q51	CER CHIP RES 120 OHM 5 0402
R6605M6	0613952Q33	CER CHIP RES 22.0 OHM 5 0402
R6606M6	0613952Q37	CER CHIP RES 33.0 OHM 5 0402
R6608M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6609M6	0613952R25	CER CHIP RES 100K OHM 5% 0402
R6616M6	0613952Q80	CER CHIP RES 2000 OHM 5 0402

Ref. Des.	Part Number	Description
R6617M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6618M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6619M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6621M6	0613952Q89	CER CHIP RES 4700 OHM 5 0402
R6622M6	0613952Q35	CER CHIP RES 27.0 OHM 5 0402
R6623M6	0613952Q35	CER CHIP RES 27.0 OHM 5 0402
R6624M6	0613952Q35	CER CHIP RES 27.0 OHM 5 0402
R6625M6	0613952Q35	CER CHIP RES 27.0 OHM 5 0402
R6626M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6701M6	0613952R01	CER CHIP RES 10K OHM 5% 0402
R6702M6	0613952R17	CER CHIP RES 47K OHM 5% 0402
R6703M6	0613952R17	CER CHIP RES 47K OHM 5% 0402
R6704M6	0613952R17	CER CHIP RES 47K OHM 5% 0402
R6705M6	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R6706M6	0613952Q73	CER CHIP RES 1000 OHM 5 0402
R698M19	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R699M19	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R701M7	0613952Q69	CER CHIP RES 680 OHM 5 0402
R702M7	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM
R705M7	0613952Q75	CER CHIP RES 1200 OHM 5 0402

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
R706M7	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R751M7	0613952Q59	CER CHIP RES 270 OHM 5 0402	SH10	26012250001	SHIELD, ANTSWI	U1119M11	5109522E94	2 INPUT AND GATE IN NANO PACKAGE (C87)
R708M7	0613952Q45	CER CHIP RES 68.0 OHM 5 0402	R754M7	0613952Q71	CER CHIP RES 820 OHM 5 0402	SH11	26012258001	SHIELD, ABACUS	U1121M11	5114000B52	IC,XOR,LOGIC LEVEL SHIFTER,1PER PKG,SM,SOT-353,PB-FREE
R709M7	NOTPLACED	64AM DUMMY PART NUMBER	R757M7	0613952Q59	CER CHIP RES 270 OHM 5 0402	SH12	26012251001	SHIELD, PAOP	U1125M11	5175206H01	QUAD 12-BIT DAC IC
R710M7	0613952Q60	CER CHIP RES 300 OHM 5 0402	R761M7	0613952Q23	CER CHIP RES 8.2 OHM 5 0402	SH13	26012260001	SHIELD, DRIVER/PA	U1126M11	5109817F77	IC COMPTR LM7275 5SC70 (D54)
R711M7	0613952Q60	CER CHIP RES 300 OHM 5 0402	R762M7	0613952R08	CER CHIP RES 20K OHM 5 0402	SH14	26012252001	SHIELD, ALC/DC	U1127M11	5171779H01	SPDT ANALOG SWITCH
R721M7	0613952R01	CER CHIP RES 10K OHM 5% 0402	R763M7	0613952R19	CER CHIP RES 56K OHM 5% 0402	SH15	26012261001	SHIELD, VCO	U1128M11	5188085K11	IC, SINGLE NAND GATE, 2-INPUT, POSITIVE, 5 DSBGA, PB-FREE
R722M7	0613952Q56	CER CHIP RES 200 OHM 5 0402	R766M7	0613952Q92	CER CHIP RES 6200 OHM 5 0402	SH16	26012254001	SHIELD, CONTROLLER/AVR	U1129M11	5175143H01	WIDE SUPPLY RANGE OP AMP
R723M7	0613952Q82	CER CHIP RES 2400 OHM 5 0402	R769M7	0613952Q37	CER CHIP RES 33.0 OHM 5 0402	SH17	26012262001	SHIELD, MACE/MAKO	U1130M11	5175143H01	WIDE SUPPLY RANGE OP AMP
R728M7	0613952Q31	CER CHIP RES 18.0 OHM 5 0402	R771M7	0613952Q49	CER CHIP RES 100 OHM 5 0402	SH2	26012253001	SHIELD, MIXER	U1131M11	5109817F77	IC COMPTR LM7275 5SC70 (D54)
R729M7	0613952R09	CER CHIP RES 22K OHM 5% 0402	R776M7	0613952Q67	CER CHIP RES 560 OHM 5 0402	SH3	26012259001	SHIELD, GPS/BT	U1132M11	5114007M28	IC,F-F/D,1PER PKG,17SZ74,N-I,SM,SOIC8,PB-FREE
R730M7	0613952Q75	CER CHIP RES 1200 OHM 5 0402	R785M7	NOTPLACED	64AM DUMMY PART NUMBER	SH4	26012247001	SHIELD, 2ND LO	U1133M11	5171779H01	SPDT ANALOG SWITCH
R734M7	0613952Q79	CER CHIP RES 1800 OHM 5 0402	R799M7	NOTPLACED	64AM DUMMY PART NUMBER	SH5	26012255001	SHIELD, ALC1	U1136M11	5109522E94	2 INPUT AND GATE IN NANO PACKAGE (C87)
R736M7	0613952R66	CER CHIP RES 0.0 +/-0.050 OHM	R822M7	NOTPLACED	64AM DUMMY PART NUMBER	SH6	26012248001	SHIELD, FGU	U1137M11	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION
R741M7	0613952R09	CER CHIP RES 22K OHM 5% 0402	R823M7	NOTPLACED	64AM DUMMY PART NUMBER	SH7	26012256001	SHIELD, DC	U1138M11	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION
R742M7	0613952R23	CER CHIP RES 82K OHM 5% 0402	R901M16	0613952R01	CER CHIP RES 10K OHM 5% 0402	SH8	26012249001	SHIELD, TXFE	U1139M11	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION
R743M7	0613952R17	CER CHIP RES 47K OHM 5% 0402	R902M16	0613952R01	CER CHIP RES 10K OHM 5% 0402	SH9	26012257001	SHIELD, RXFE	U1141M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER
R744M7	0613952Q91	CER CHIP RES 5600 OHM 5 0402	R903M16	0613952N85	CER CHIP RES 75.0K OHM 1 0402	T506M21	2575851B01	RF TRANSFORMER BALUN	U1142M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER
R745M7	0613952R09	CER CHIP RES 22K OHM 5% 0402	R904M16	0613952R13	CER CHIP RES 33K OHM 5% 0402	T507M21	2575851B02	RF TRANSFORMER BALUN	U1143M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER
R747M7	0613952Q32	CER CHIP RES 20.0 OHM 5 0402	R905M16	0613952Q73	CER CHIP RES 1000 OHM 5 0402	U1101M11	5188032U43	IC,SENSING CIRCUIT,INA138,SM,SOT-23/5,1PER PKG	U1144M11	5171779H01	SPDT ANALOG SWITCH
R748M7	0613952Q47	CER CHIP RES 82.0 OHM 5% 0402	R906M16	0613952Q61	CER CHIP RES 330 OHM 5 0402	U1103M11	5185070Y01	IC TEMPERATURE SENSOR PB-FREE	U1146M11	5109522E93	2 INPUT OR GATE IN NANO PACKAGE (C87)
			SH1	26012246001	SHIELD, IF	U1104M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER	U1147M11	5109522E94	2 INPUT AND GATE IN NANO PACKAGE (C87)
						U1105M11	5180390L83	IC,CNTRLR,,SM,,1PER PKG			
						U1106M11	5175772B05	PRECISION RF DETECTOR			
						U1112M11	5175772B04	1 DB LSB GAAS MMIC ATTENUATOR			
						U1113M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER			
						U1114M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER			

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
U1148M11	5185941F56	IC SINGLE LV LP OP AMPLIFIER	U2407M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U4004M2	5116783H01	SN74LVC2G66 ANALOG SWITCH	U6405M6	5188348V06	IC,AUDIO CODEC,SM,,AUDIO CODEC
U1149M11	5109522E93	2 INPUT OR GATE IN NANO PACKAGE (C87)	U2408M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U507M21	5164015H81	IC,MXR,DBL BAL GILBERT,CELL,,SM	U6408M6	5188521T01	IC,VREF,SM,SOT23,1PER PKG,5%,1.25 TO 13.75,PRCN BANDGAP ADJUS
U1150M11	51009381001	LOW DROPOUT VOLTAGE REFERENCE	U2409M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U601M19	5102495J14	IC,IF,,IF DIGITILIZING SUB-SYSTEM IC,AD9864,QFN	U6409M6	51009000001	NANOPOWER, 1.8V, SOT23 COMPARATOR
U1301M3	51007377001	IC, XCVR, BLUETOOTH, GPS, FM RX, FM TX	U2410M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U602M19	4885316E32	TRANSISTOR, RF	U6501M6	5185143E77	IC, MAKO ASIC, CMOS PWR MGMT
U1304M3	51007599001	AMP,20.0DB,1.58GHZMIN,1.58GHZMAX,SLCN GERMANIUM GPS LOW NOISE AM	U2411M3	5175856M01	DUAL INVERTER	U603M19	5109522E84	IC DUAL SCHMITT TRIG MICRO PAK	U6502M6	4871987H01	LOW FREQUENCY TRANSISTOR
U1305M3	5187344N09	LOW NOISE, 100MA LINEAR REGULATOR 2.8V	U2412M3	5114007M45	IC,NOR,1PER PKG,SOT-353,PB-FREE	U604M19	5109522E84	IC DUAL SCHMITT TRIG MICRO PAK	U6503M6	5171674H01	OP AMP
U1334M3	5102836C11	IC,ANLG SW,,FSA4157,SM,,,,SPDT,,PB FREE	U2413M3	51007645001	IC,SDRAM,128MBIT,8MX16,7.5NS, SCRND	U605M19	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U6504M6	5171682H01	800MA BUCK REGULATOR
U1335M3	5102836C11	IC,ANLG SW,,FSA4157,SM,,,,SPDT,,PB FREE	U2414M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U606M19	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U6505M6	5189631P01	IC,SYNC STEP-DOWN CONV
U200M12	5188493T01	IC,VREG/SWG,LP2989,SM,MINI SO-8 HI PRCN REG 5V	U2415M3	51009372001	IC MICROCONTROLLER AT32UC3A0512	U607M19	5186311J24	IC,BFR,1BITS,NC7SZ125,A CTIVE HIGH,B	U6506M6	5184790Y04	IC,400MA ADJ VREG LDO,SOT23
U201M12	5175771A99	LOW NOISE, 100MA LINEAR REGULATOR	U2416M3	51009669001	IC, ACCELEROMETER, MOTION SENSOR	U6101M6	0180706J18	PROGRAMMED CPLD	U6507M6	5171682H01	800MA BUCK REGULATOR
U202M12	5175772B02	LINEAR REGULATOR 100MA 1.8V	U2473M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U6102M6	5188691V01	IC,MUX/ DEMUX,,NC7SB3157P6X,S M,SC70-6,1PER PKG,,BUS,,PB FREE	U6508M6	51009366001	500MA LOW DROPOUT CMOS LINEAR REG.
U203M12	5175772B01	LINEAR VOLTAGE REGULATOR 350MA	U2478M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U6103M6	5175114H01	SINGLE AND GATE MICROPAK	U6509M6	5175114H01	SINGLE AND GATE MICROPAK
U2101M2	5109522E84	IC DUAL SCHMITT TRIG MICRO PAK	U2510M6	5185912Y03	IC,CRYPTOGRAPHIC PROCESSOR	U6104M6	5175114H01	SINGLE AND GATE MICROPAK	U6510M6	5114007A47	IC,OR,17SZ32,1PER PKG,SOT-353,PB FREE
U2102M2	5109522E84	IC DUAL SCHMITT TRIG MICRO PAK	U2525M6	5171339H01	MICROPOWER VOLTAGE REGULATOR	U6105M6	5175114H01	SINGLE AND GATE MICROPAK	U6511M6	5171339H01	MICROPOWER VOLTAGE REGULATOR
U2202M2	5164852H47	IC, I2C LEVEL TRANSLATOR	U2526M6	5171988H01	CMOS COMPARATOR	U6201M6	5185941F26	IC,COMPTR,LMV7219,NOP B	U6601M6	5175114H01	SINGLE AND GATE MICROPAK
U2205M2	5188682Y01	IC, RGB LED DRIVER, I2C CONTORL, LLP PACKAGE	U2701M13	5103535B53	IC,INVTR,DL,NC7WZ04L6X,2PER PKG,SC70	U6301M6	51012031001	32MB DIE SHRINK DDR SDRAM IC	U702M7	5164015H28	IC,TRIDENT,INTEG SYNTH,RX/TX BSBND
U2402M3	51002923001	IC,LNR V REGLTR,3.3V LP2989,NOPB	U2702M13	5185941F45	ATTEN,VAR,14.4DBMIN,15.6DBMAX,0-2000 MHZ-FREQ,50OHM,PCMT,,SOT	U6302M6	5102495J13	IC,MICROP,P1710ZZGE,BG A,,12MHZ,32BITS	U738M7	5171972L01	SP3T RF SWITCH
U2403M3	51009735001	IC, RCVR, ONE-CHAN, QFN, LF WAKE-UP	U304M20	4885316E32	TRANSISTOR, RF	U6304M6	0105955U25	ASSY,IC,BGA SPEC PROG, FLASH MEMORY	U746M7	4805218N63	RF TRANS SOT 323 BFQ67W
U2406M3	5164852H16	IC TRANSCEIVER W/ LEVEL TRANSLATION	U3238M22	5171972L01	SP3T RF SWITCH	U6402M6	5115453H01	RAIL TO RAIL OUTPUT, 8 PIN BGA	U901M16	5175143H01	WIDE SUPPLY RANGE OP AMP
			U4001M2	5164852H47	IC, I2C LEVEL TRANSLATOR	U6404M6	5175772B38	IC ANALOG TEMPERATURE SENSOR	U902M16	51012101001	VHF/UHF/800/900 MHZ LDMOS DRIVER IC
			U4003M2	5188691V01	IC,MUX/ DEMUX,,NC7SB3157P6X,S M,SC70-6,1PER PKG,,BUS,,PB FREE				VR101M12	4813977M29	DIODE,VREF,MBZ5250,SM, SOT-23,20V,,225W,ZEN

Ref. Des.	Part Number	Description
VR200M12	4813977M29	DIODE,VREF,MBZ5250,SM, SOT-23,20V,.225W,ZEN
VR601M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,,SOD-523/SC- 79
VR602M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,,SOD-523/SC- 79
Y1304M3	48014600001	OSC,TCXO,26.0
Y2475M3	48009319001	SMD CRYSTAL OSCILLA- TOR DS0211AR
Y6501M6	93012044001	CRYSTAL UNIT SMD 5.0X3.2 24.576MHZ
Y6502M6	4809995L05	XTAL QUARTZ 32.768KHZ CC4V-T1
Y6601M6	4802582S85	RESON,QRTZ,12MHZ,TOL ERANCE10PPM,STABILITY 15PPM,,SM,,FUND,,LO
Y701M7	4871886H01	16.8 MHZ VCTXO .8PPM

Notes

8.5 Main Board Block: UHF2 (84012616001)

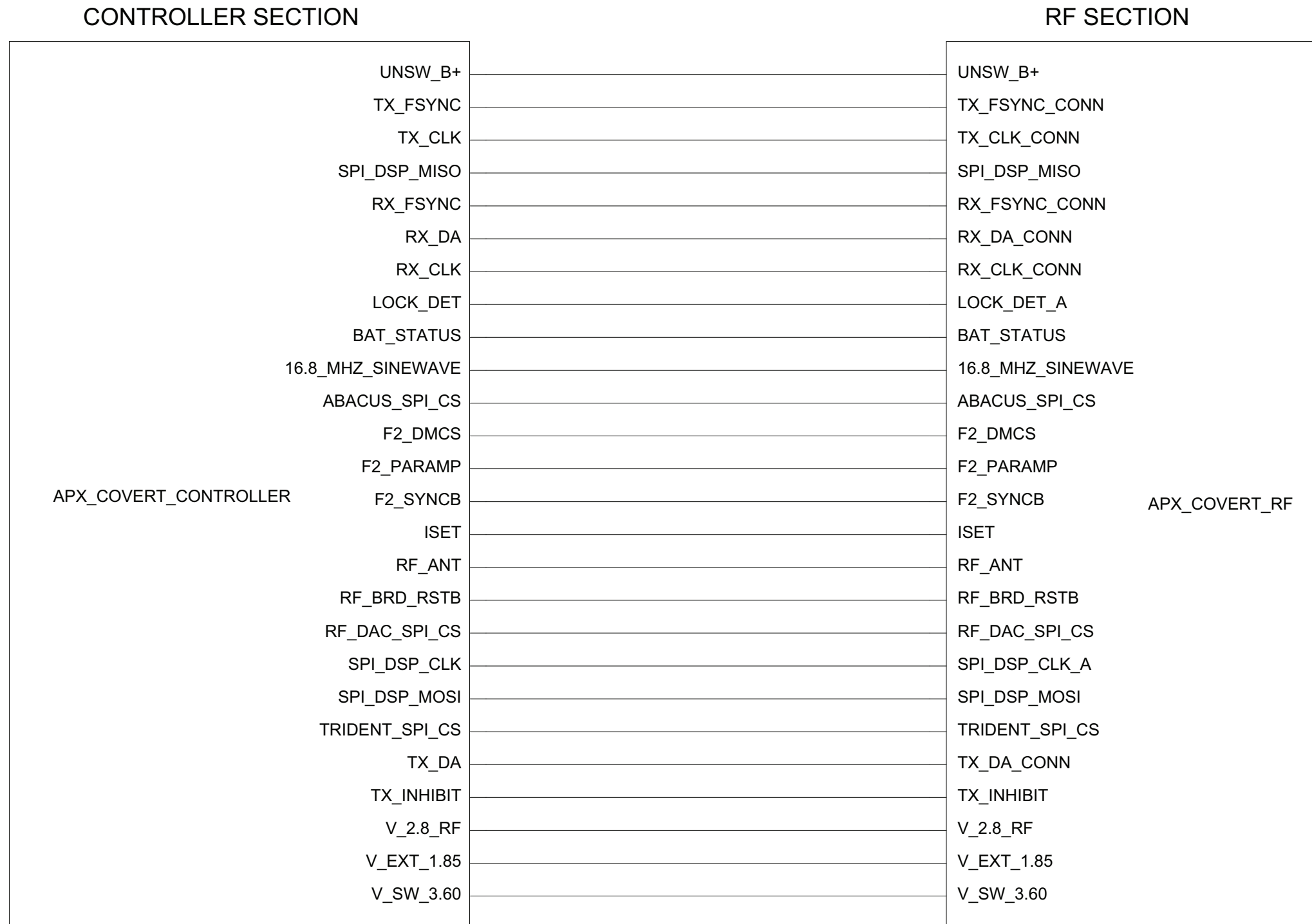


Figure 8-93. Main Board Block

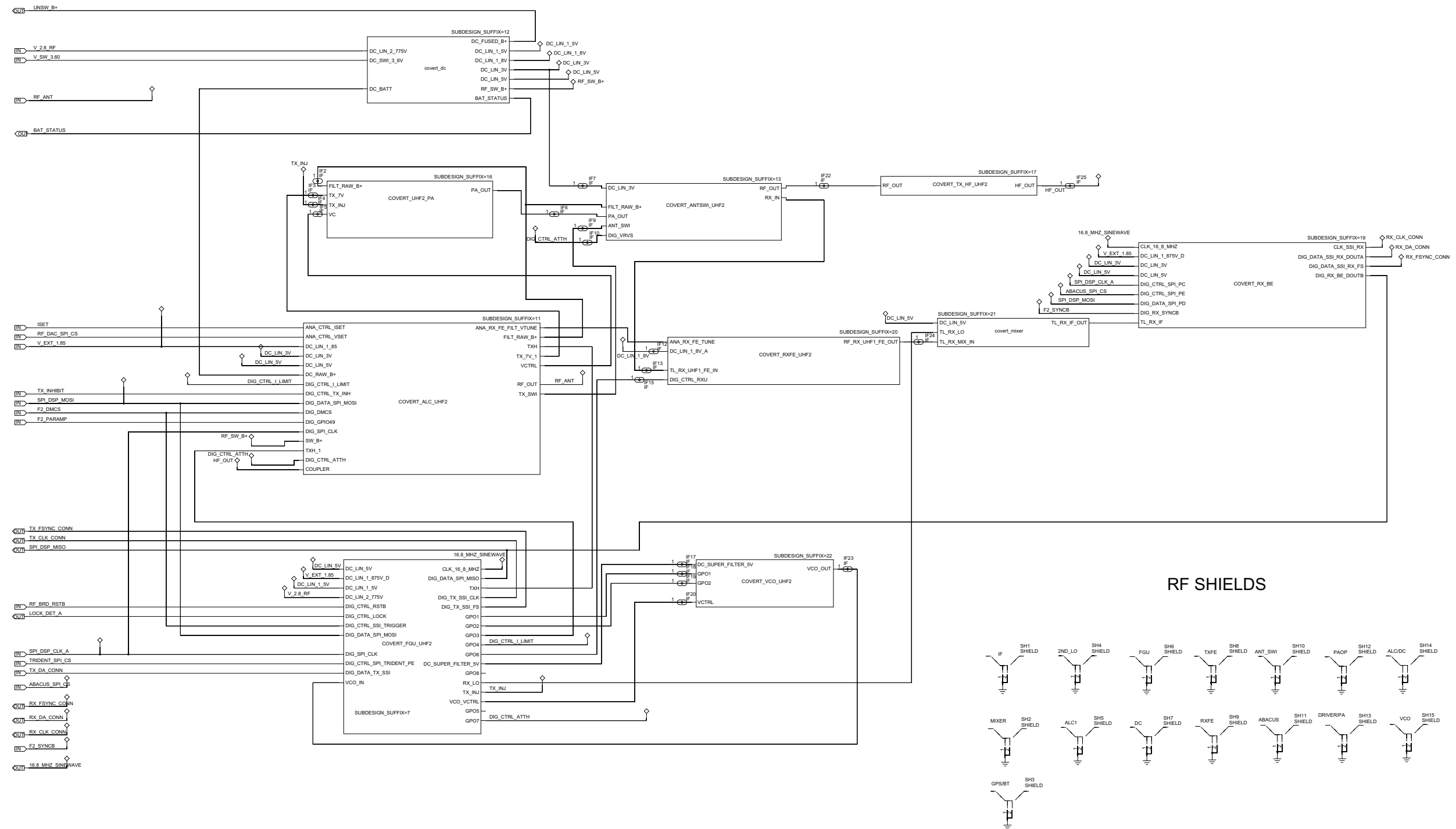


Figure 8-94. Transceiver (RF) Board Overall Schematic

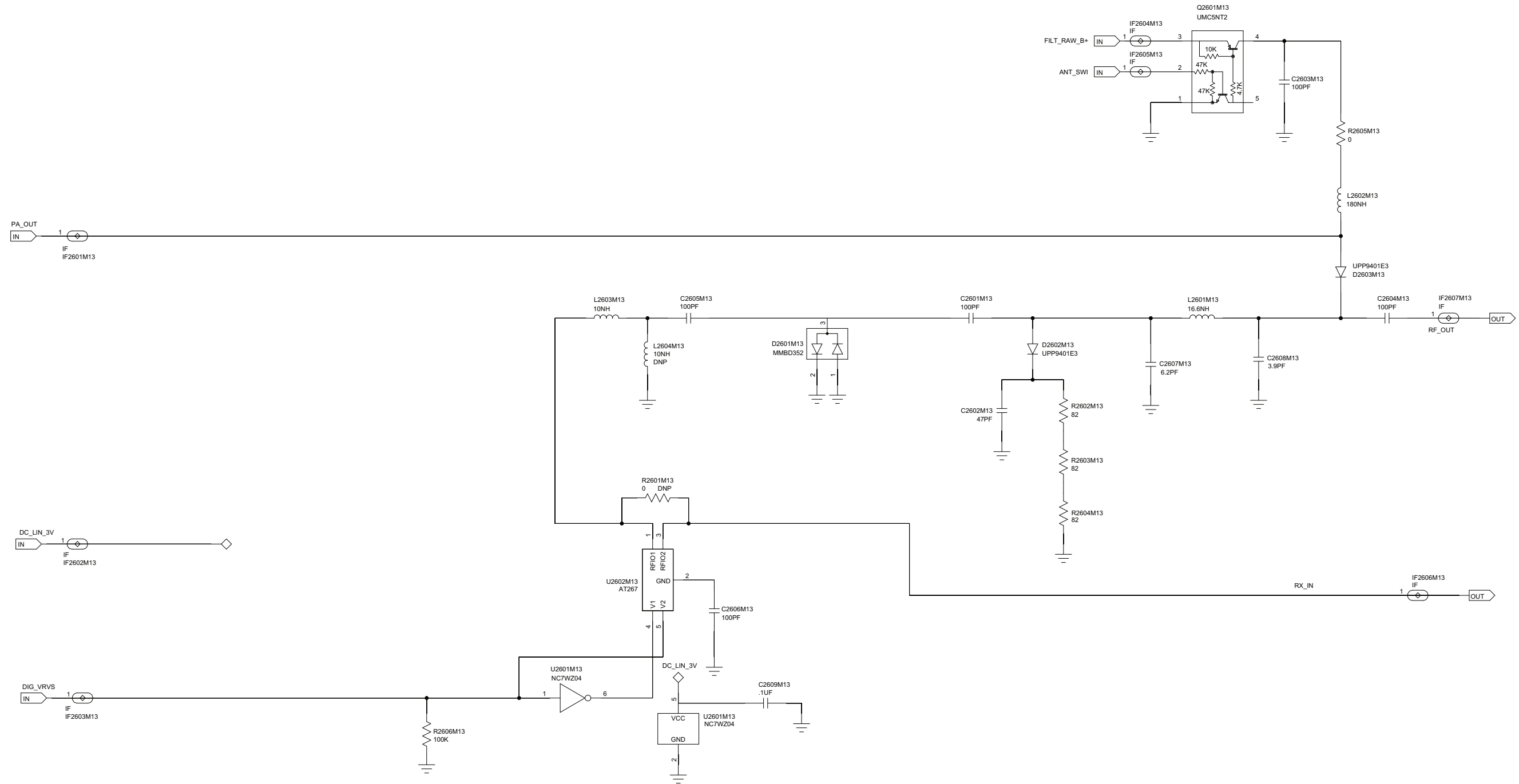


Figure 8-95. ANTSWI Circuit

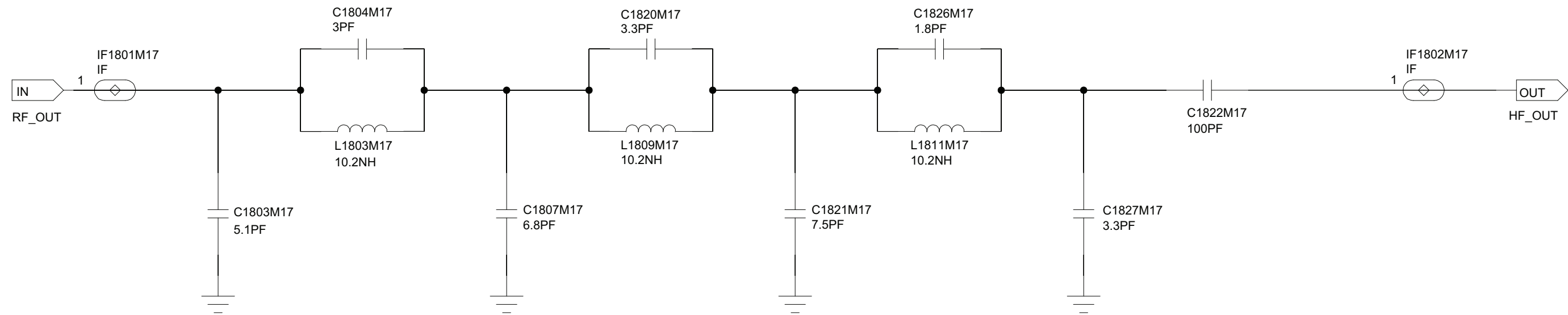


Figure 8-96. Transmitter HF Circuit

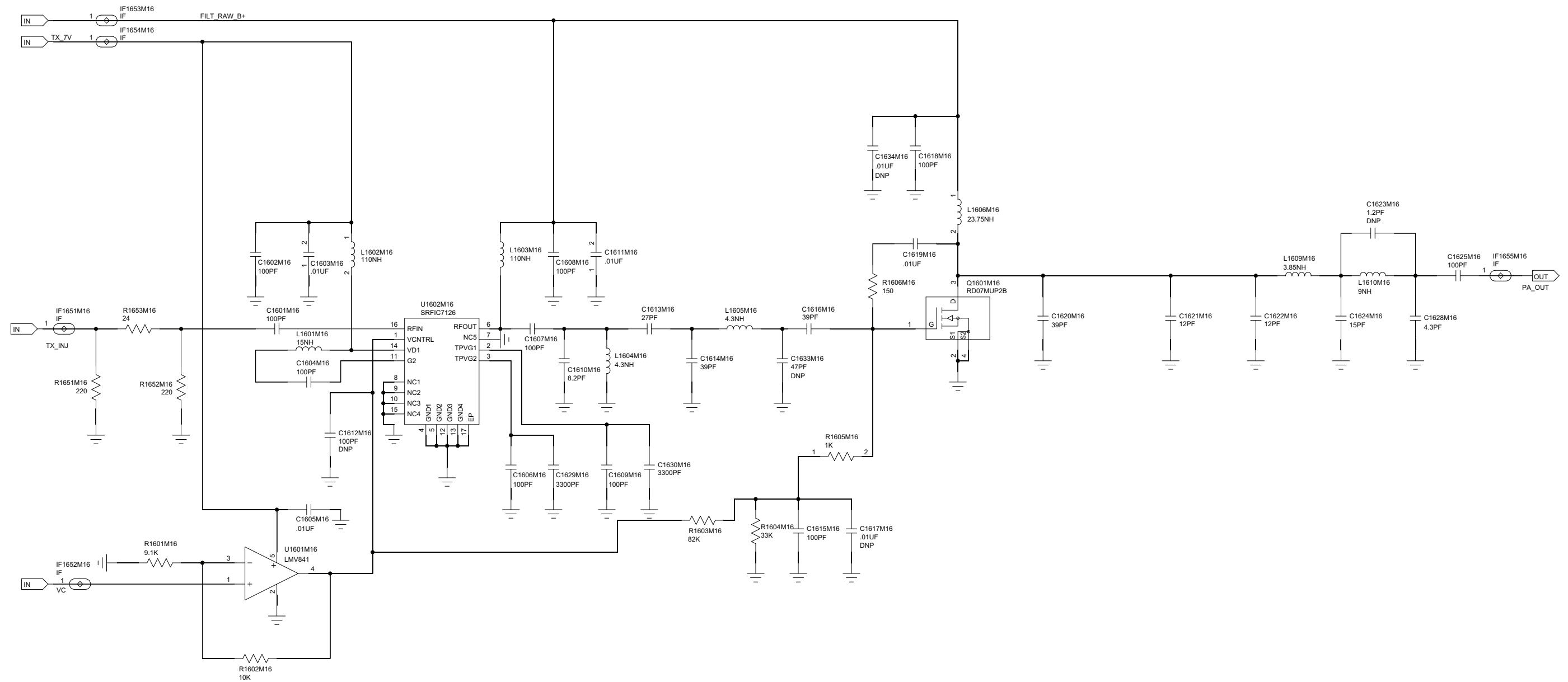


Figure 8-97. Power Amplifier Circuit

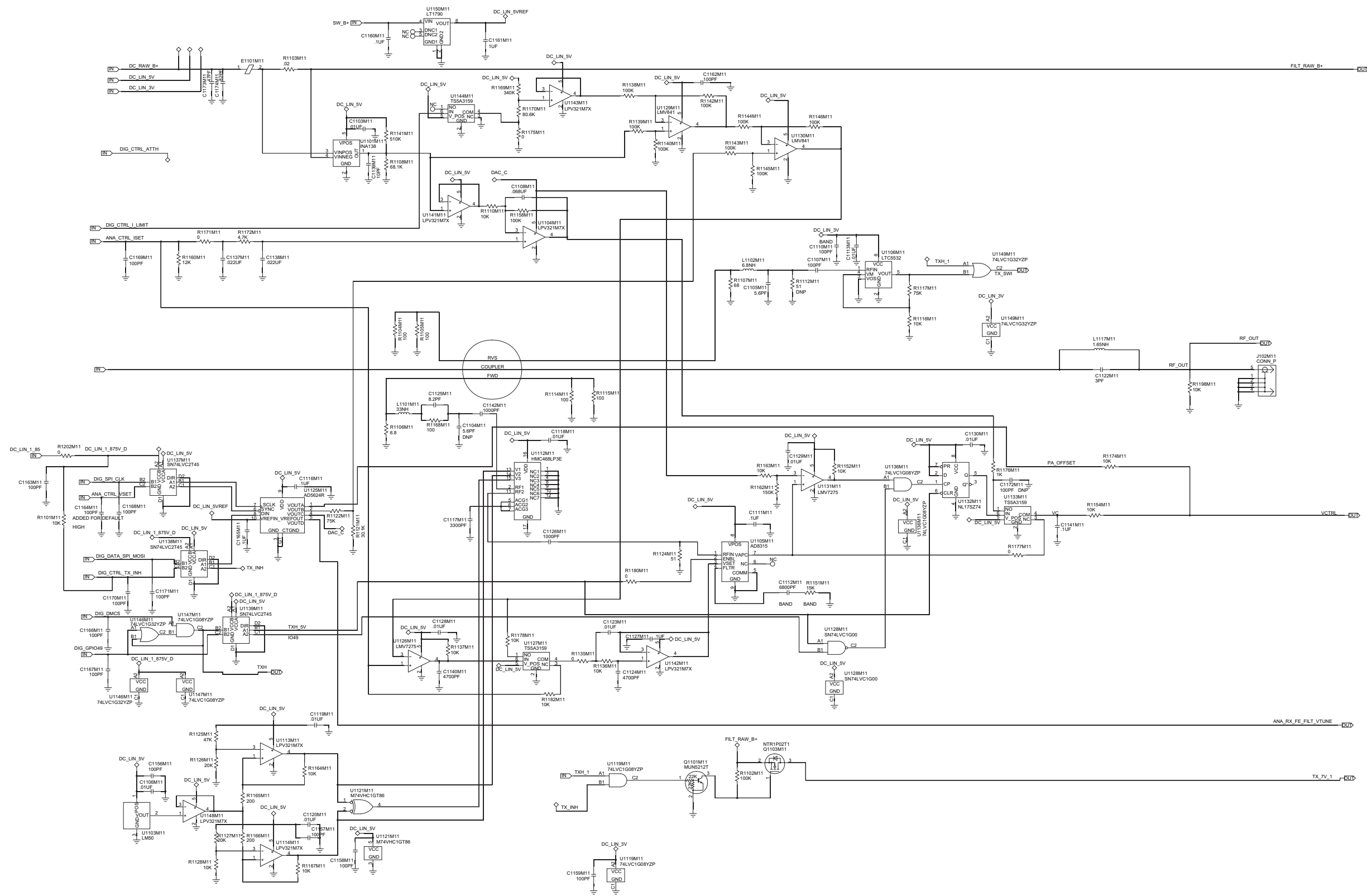


Figure 8-98. Automatic Level Control Circuit

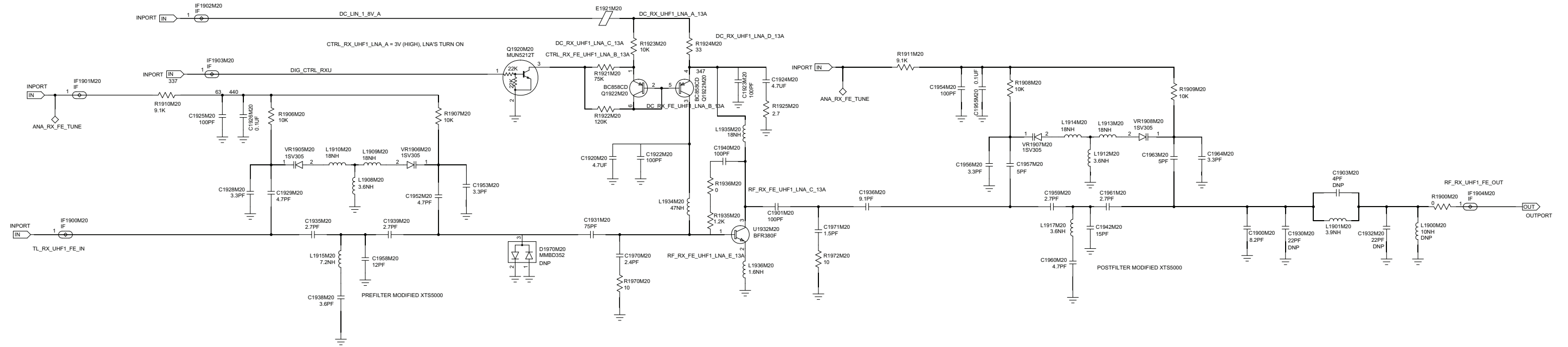


Figure 8-99. Receiver Front End Circuit

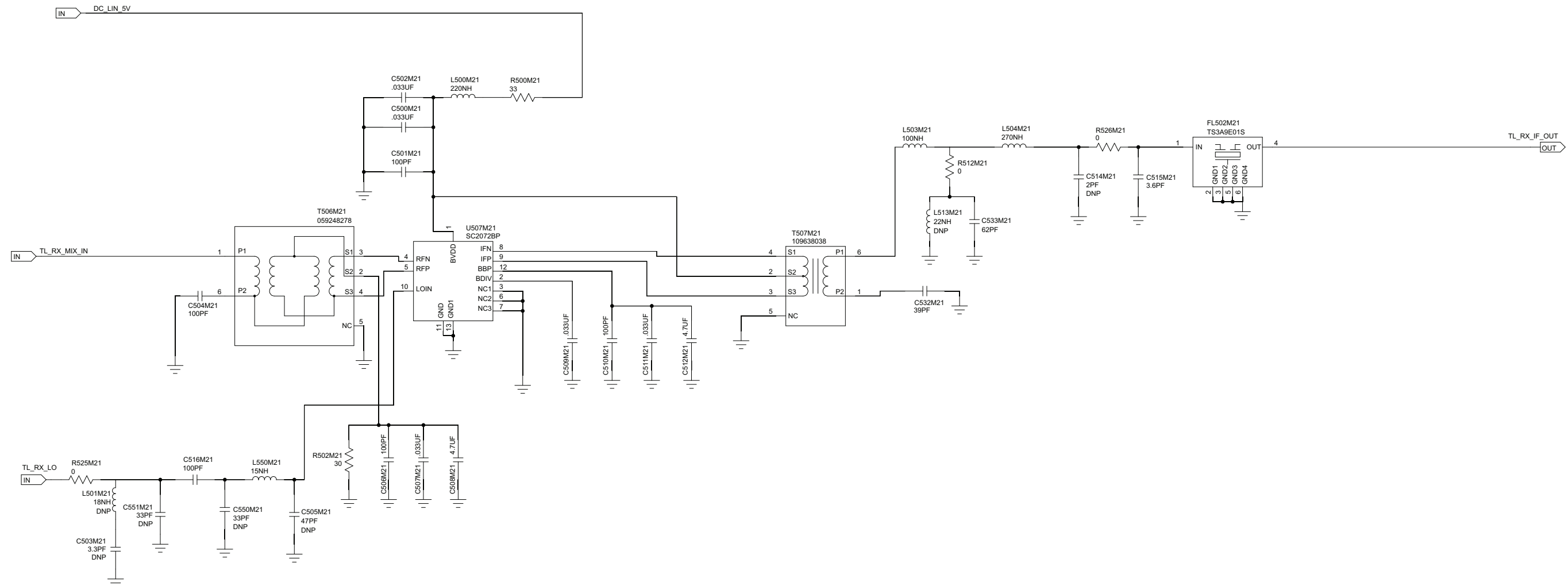


Figure 8-100. Receiver Back End Mixer

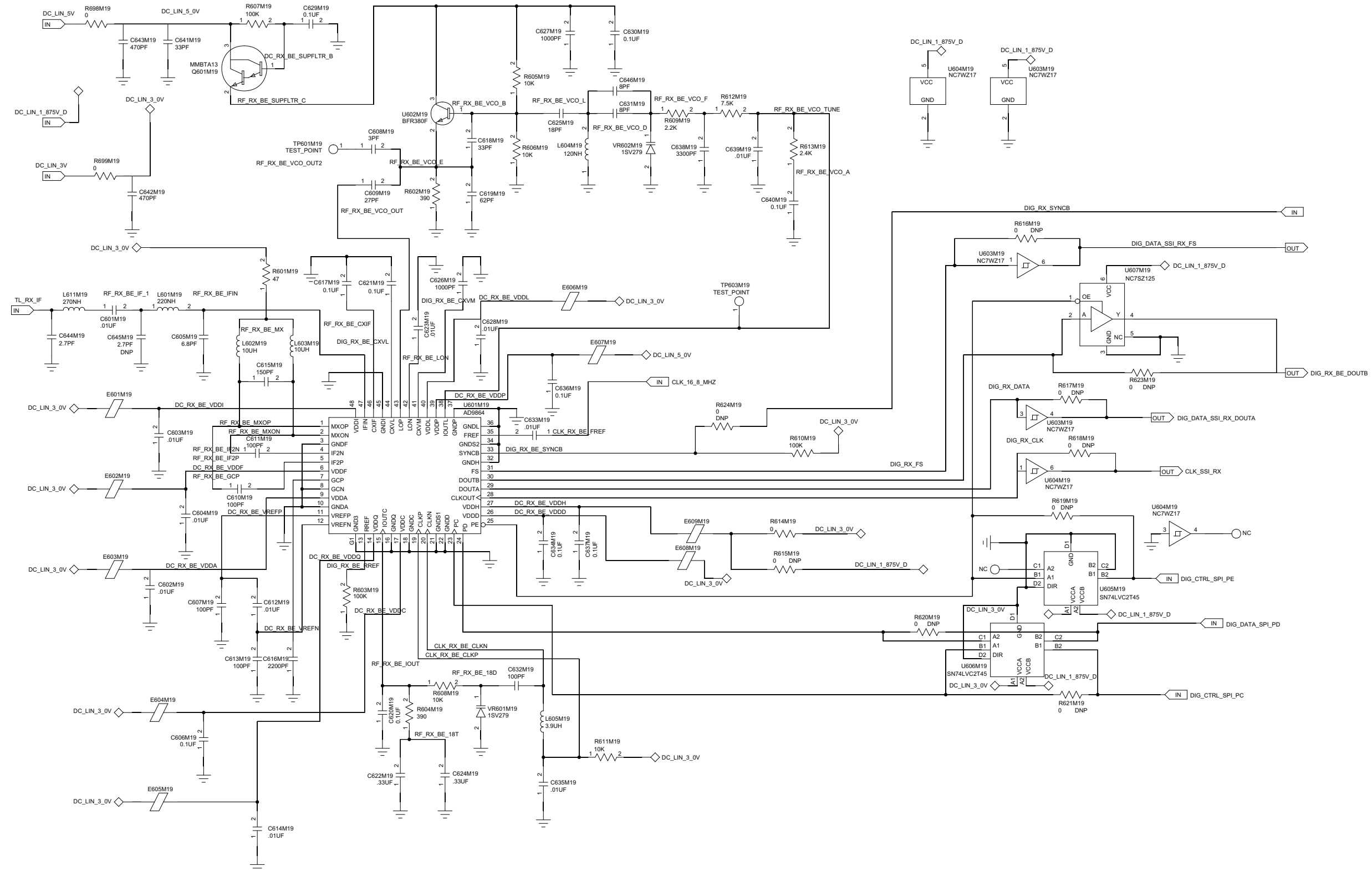


Figure 8-101. Receiver Back End

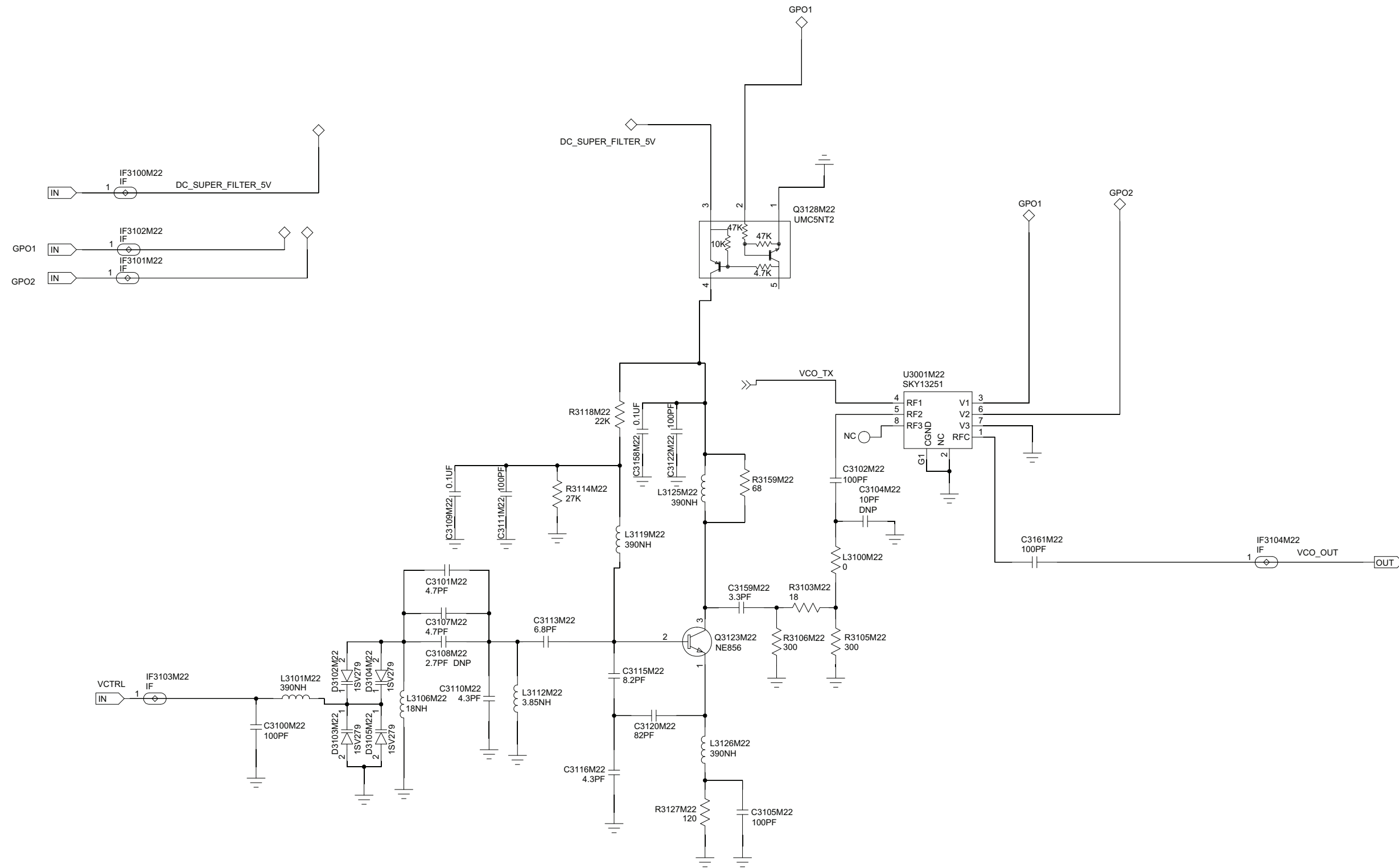


Figure 8-102. Receiver VCO Circuit

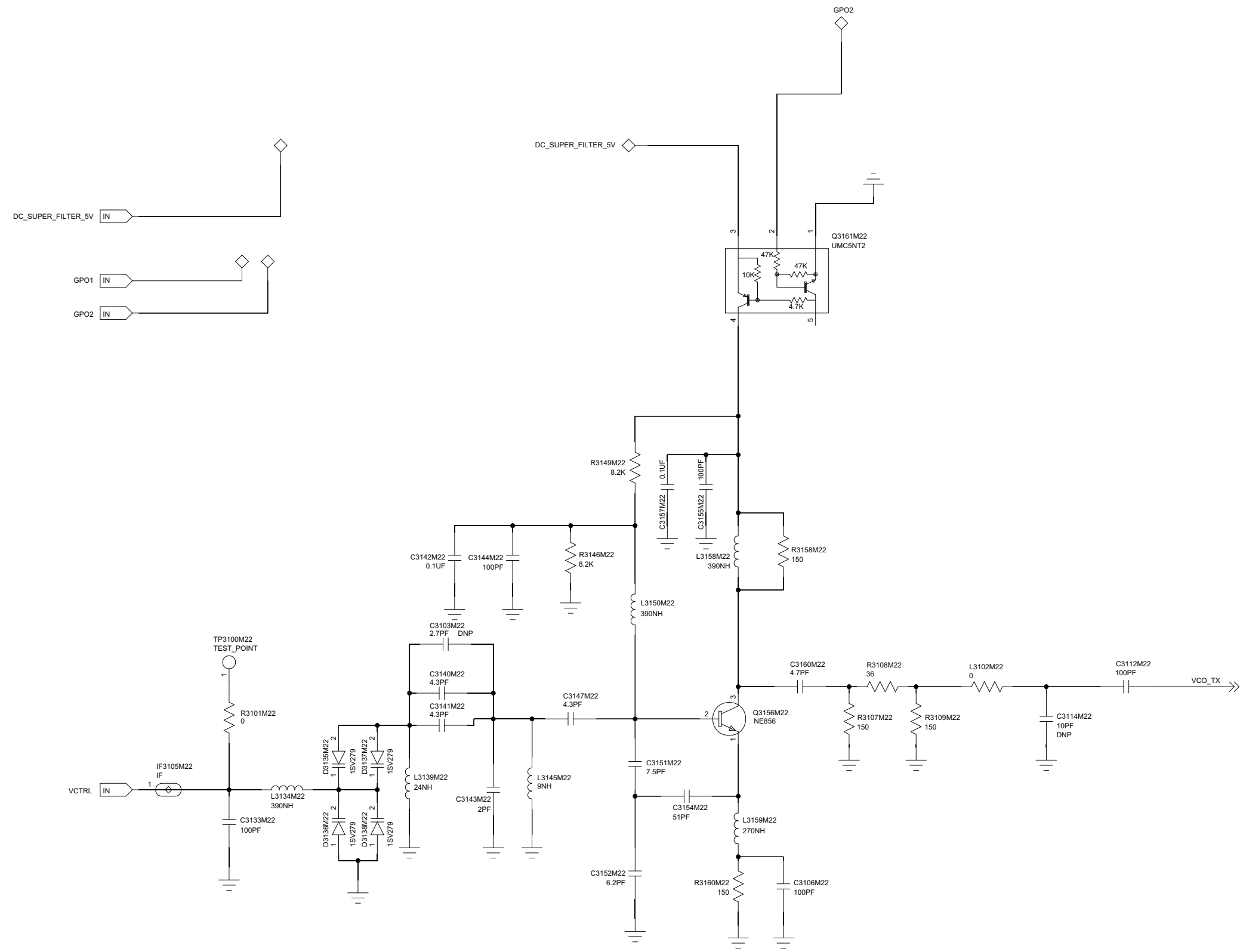


Figure 8-103. Transmitter VCO Circuit

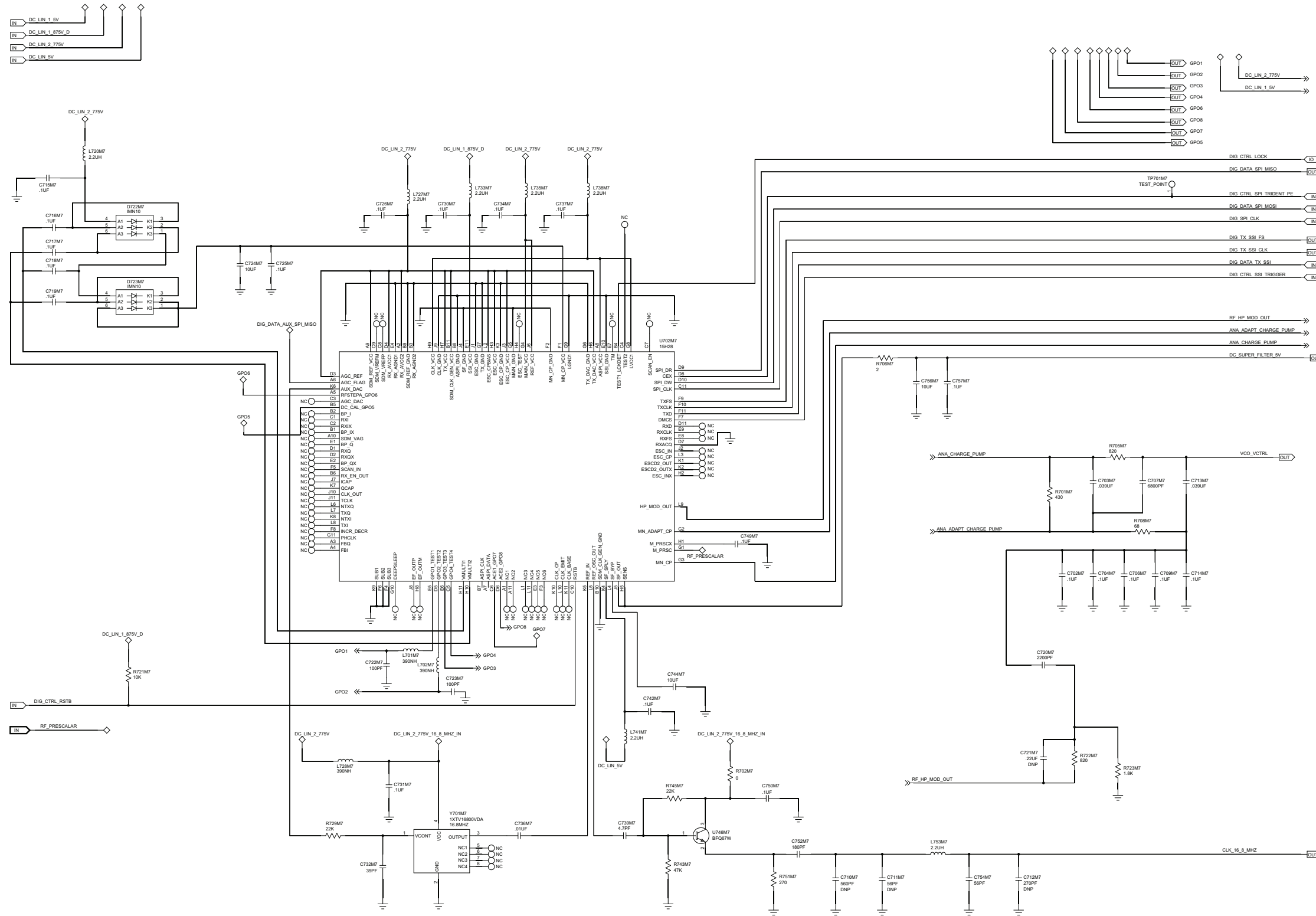


Figure 8-104. Frequency Generation Unit Circuit - 1 of 2

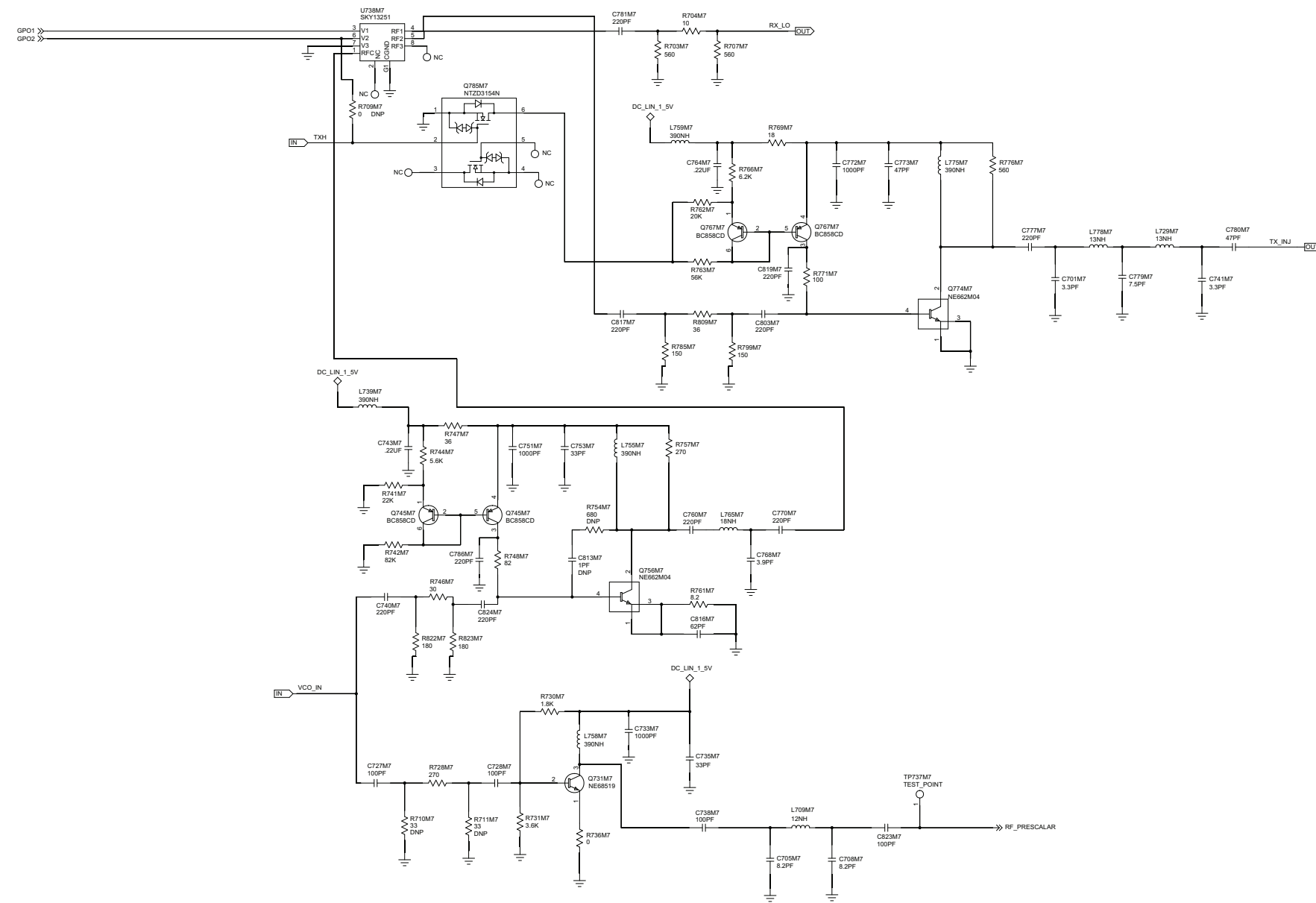
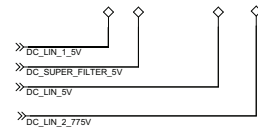


Figure 8-105. Frequency Generation Unit Circuit - 2 of 2

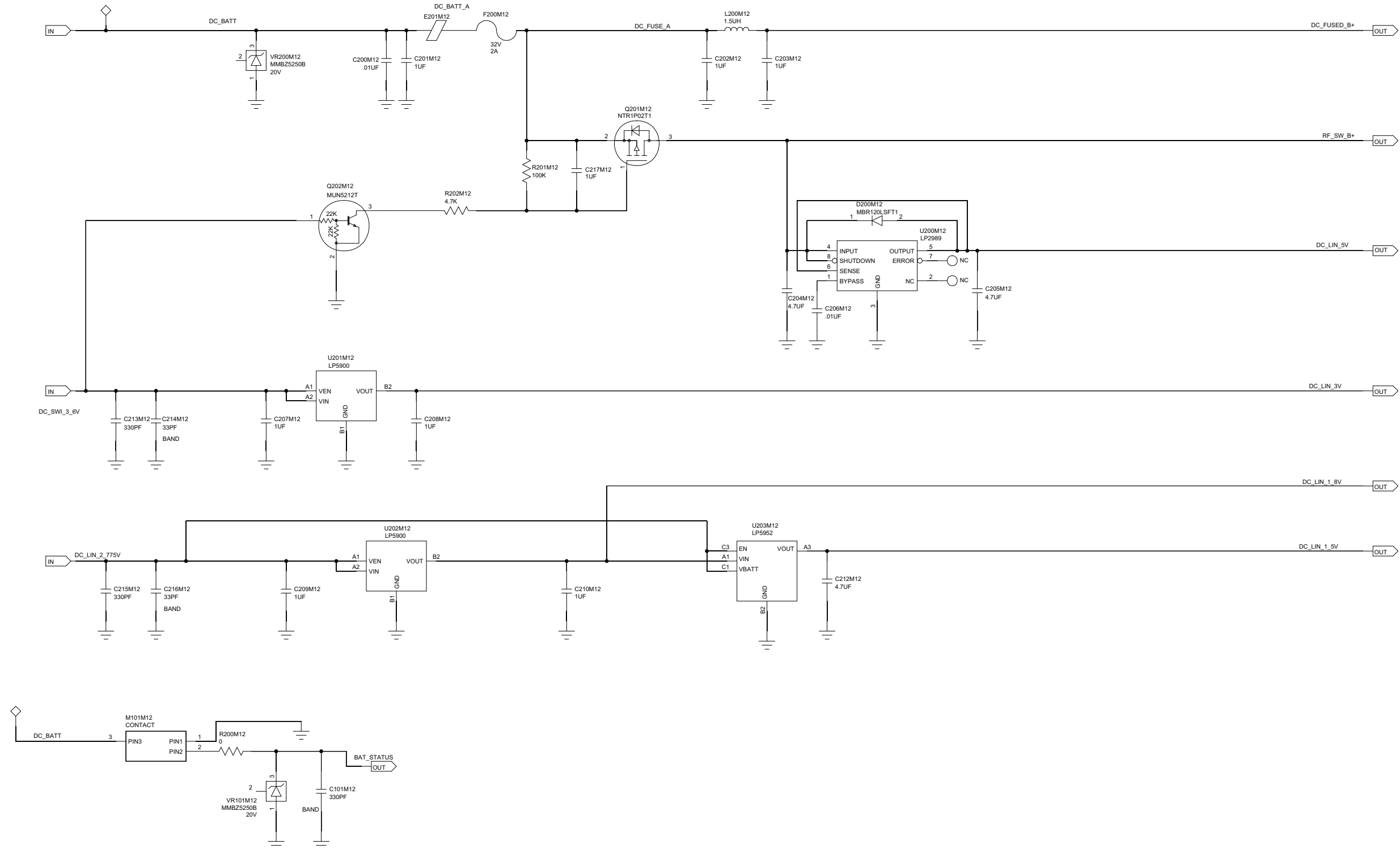


Figure 8-106. DC Circuit

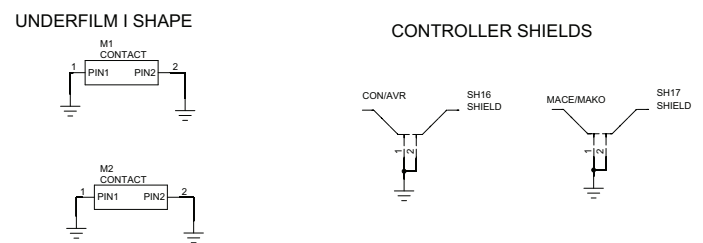
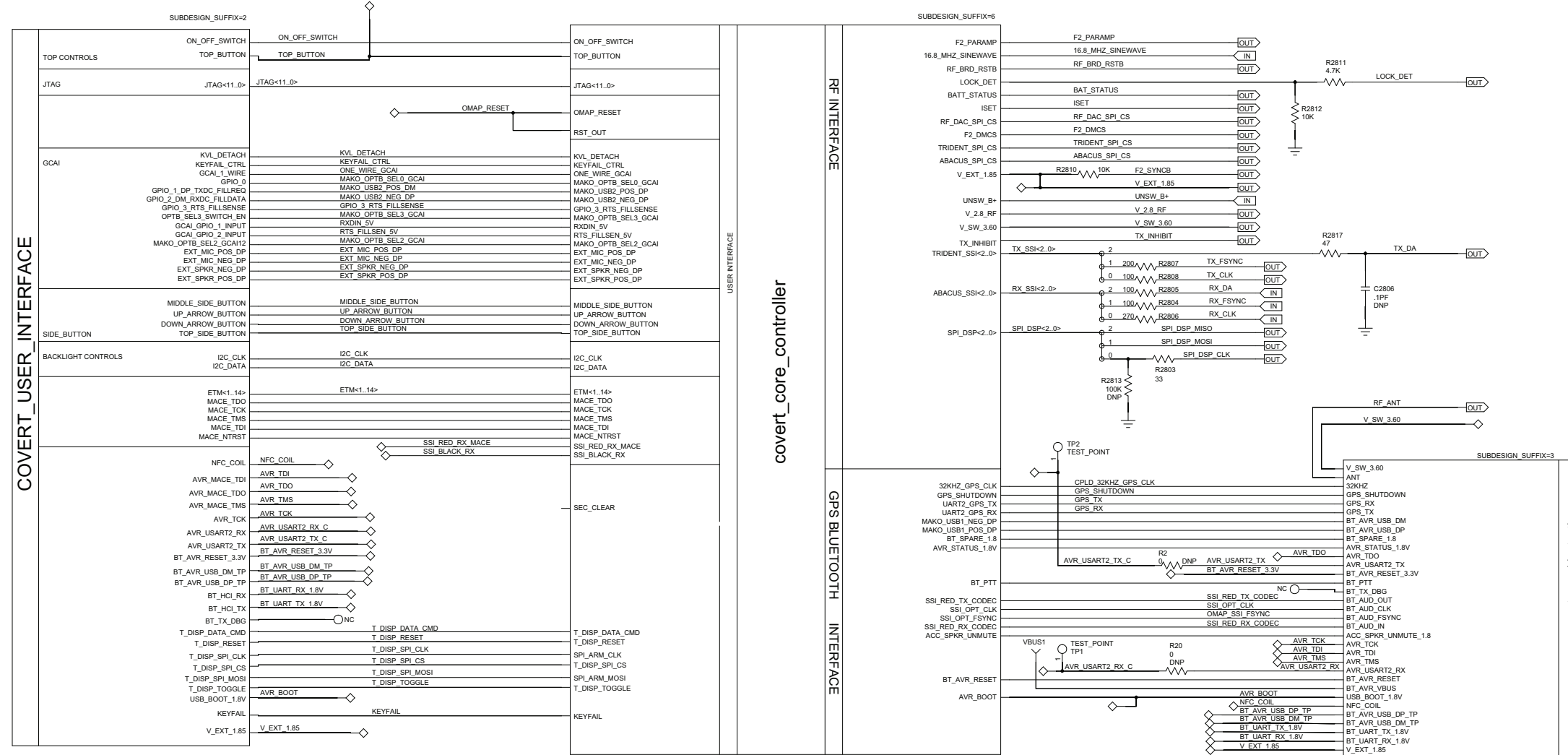


Figure 8-107. Controller Overall Schematic Blocks

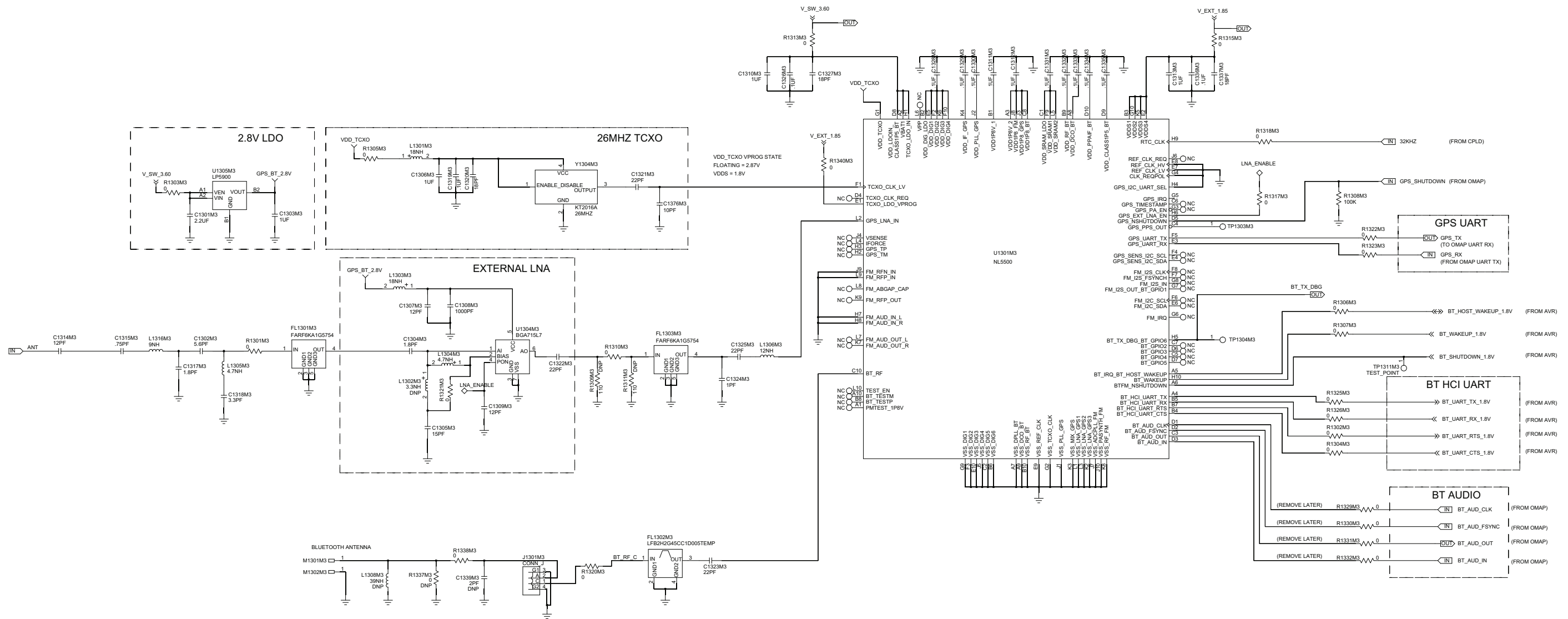


Figure 8-108. GPS Bluetooth Circuit – 1 of 2

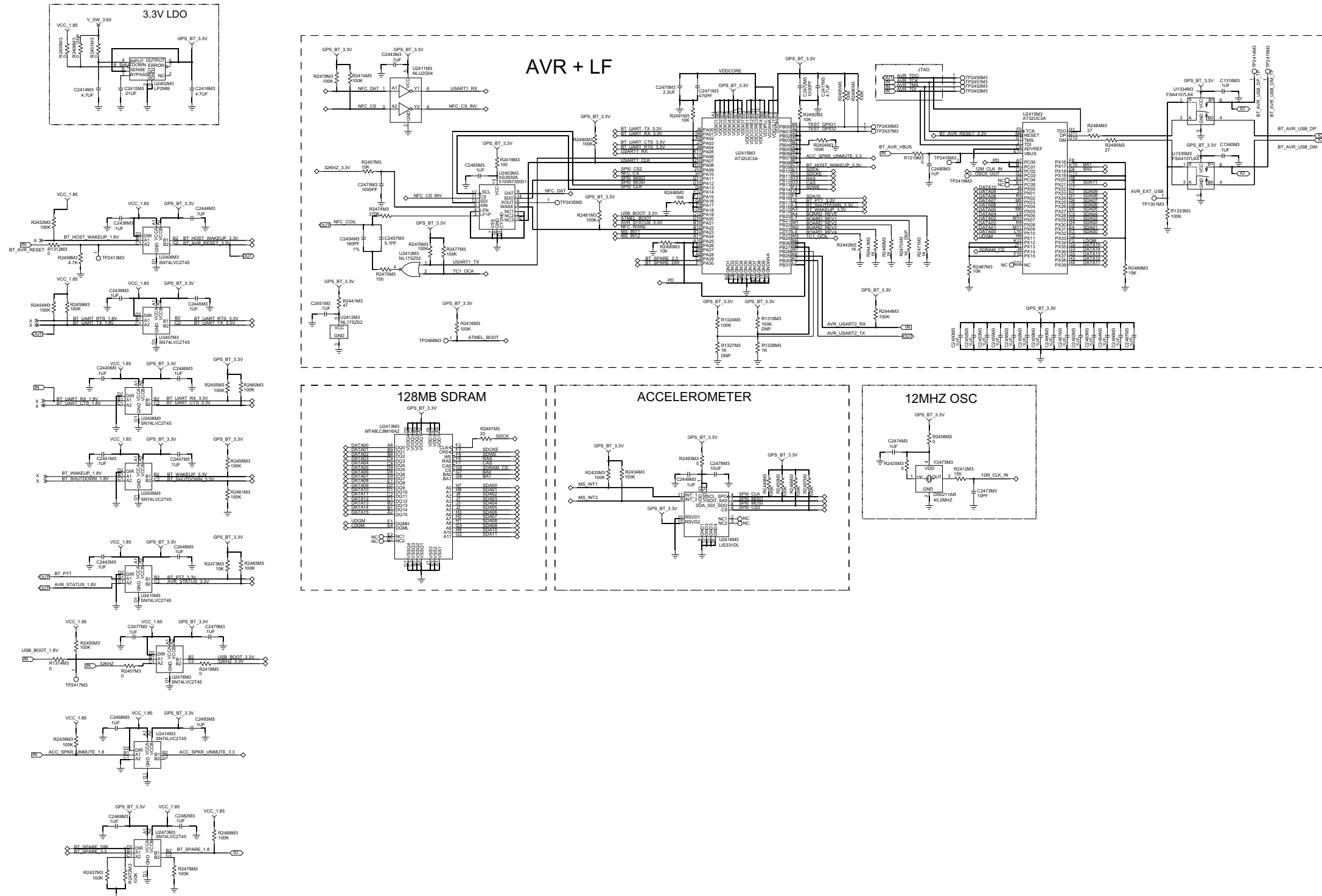
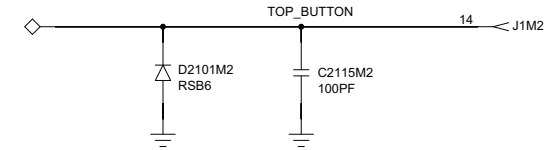


Figure 8-109. GPS Bluetooth Circuit - 2 of 2

EMERGENCY BUTTON

CHANGES:
 REMOVED U21000,U21001,C21002,C21003,C21005,C21004
 REMOVED TP2112,TP2113,TP2114
 REMOVED U21002,,U21003
 REMOVED C21001,C21000,U2104,TP2111,R21001,TP2110,R21000,U2104,C2116



FREQ KNOB

USER BUTTON AND SWITCHES

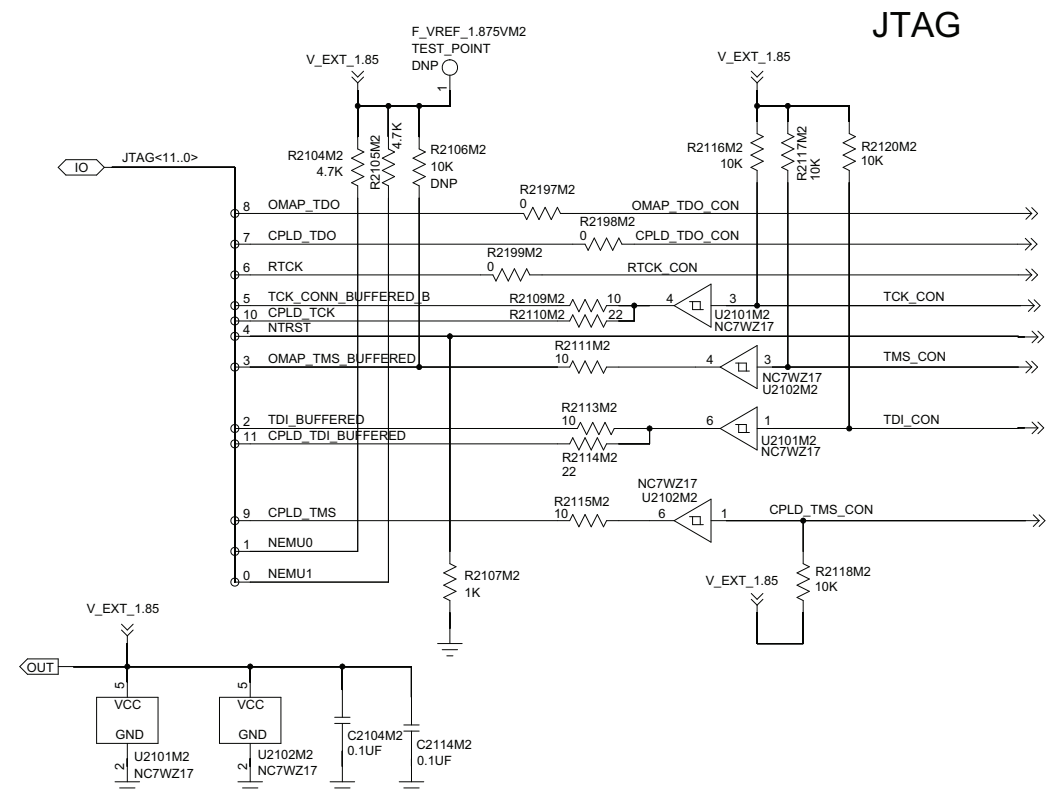
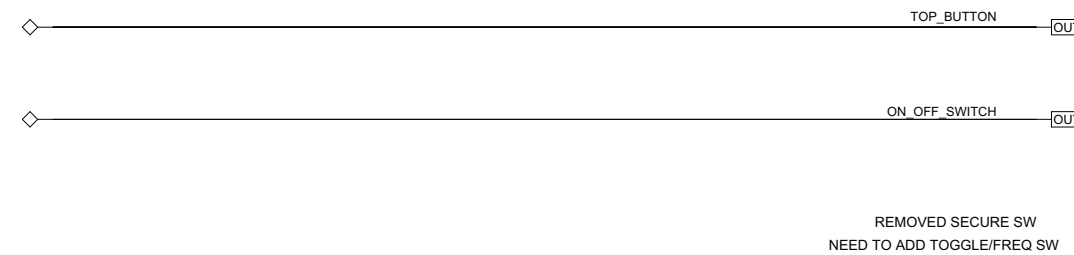


Figure 8-110. Top Control and JTAG Circuit

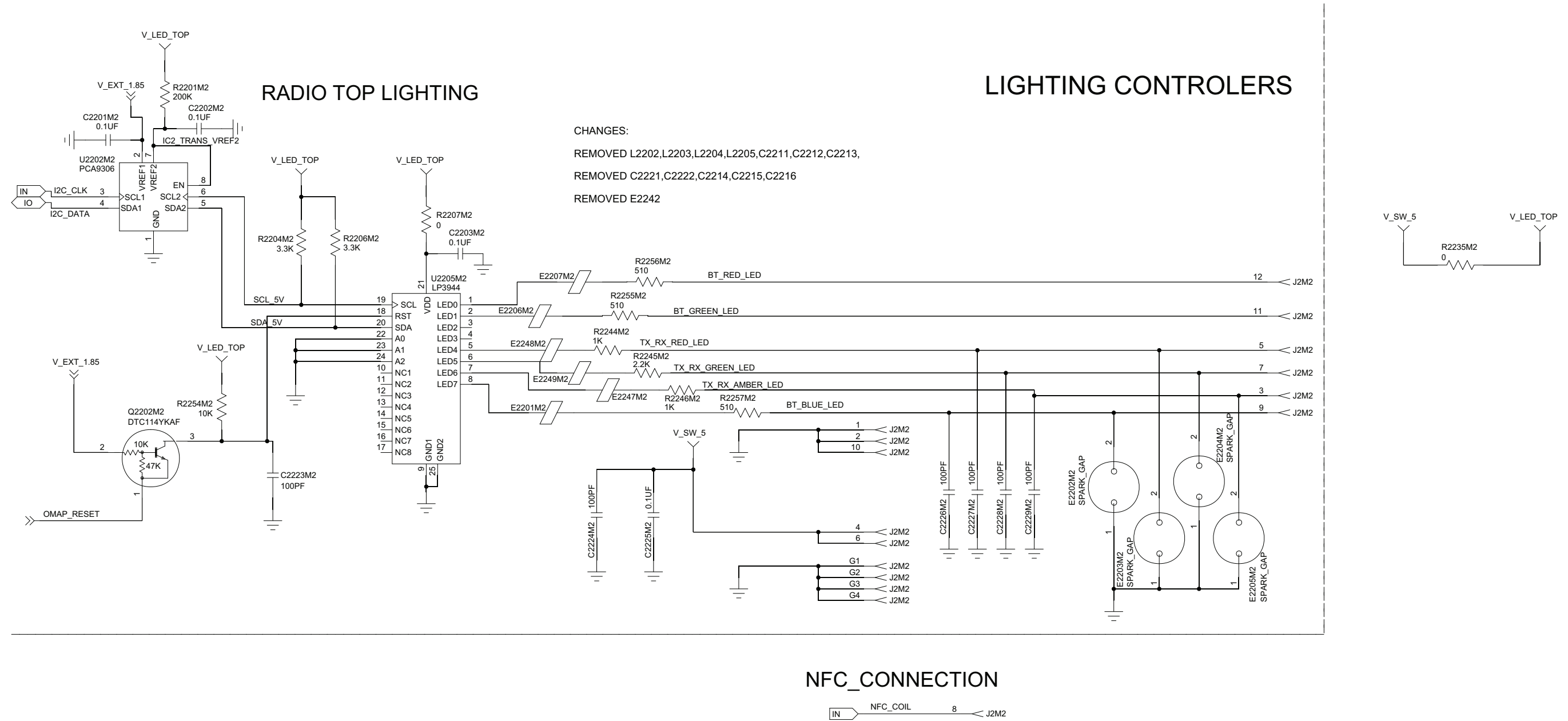


Figure 8-111. Lighting Control Circuit

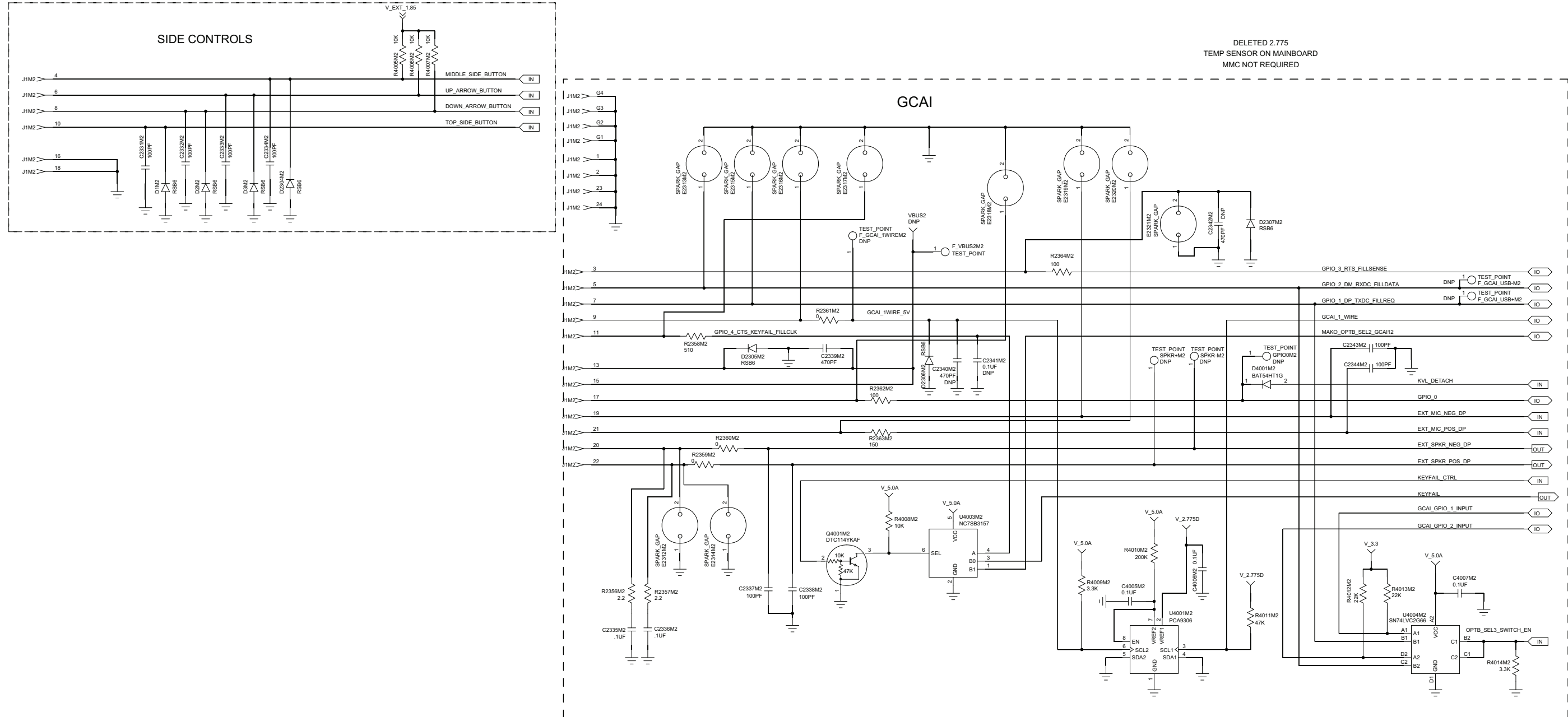


Figure 8-112. GCAI and side control

DEBUGGING AND DISPLAY CONNECTOR

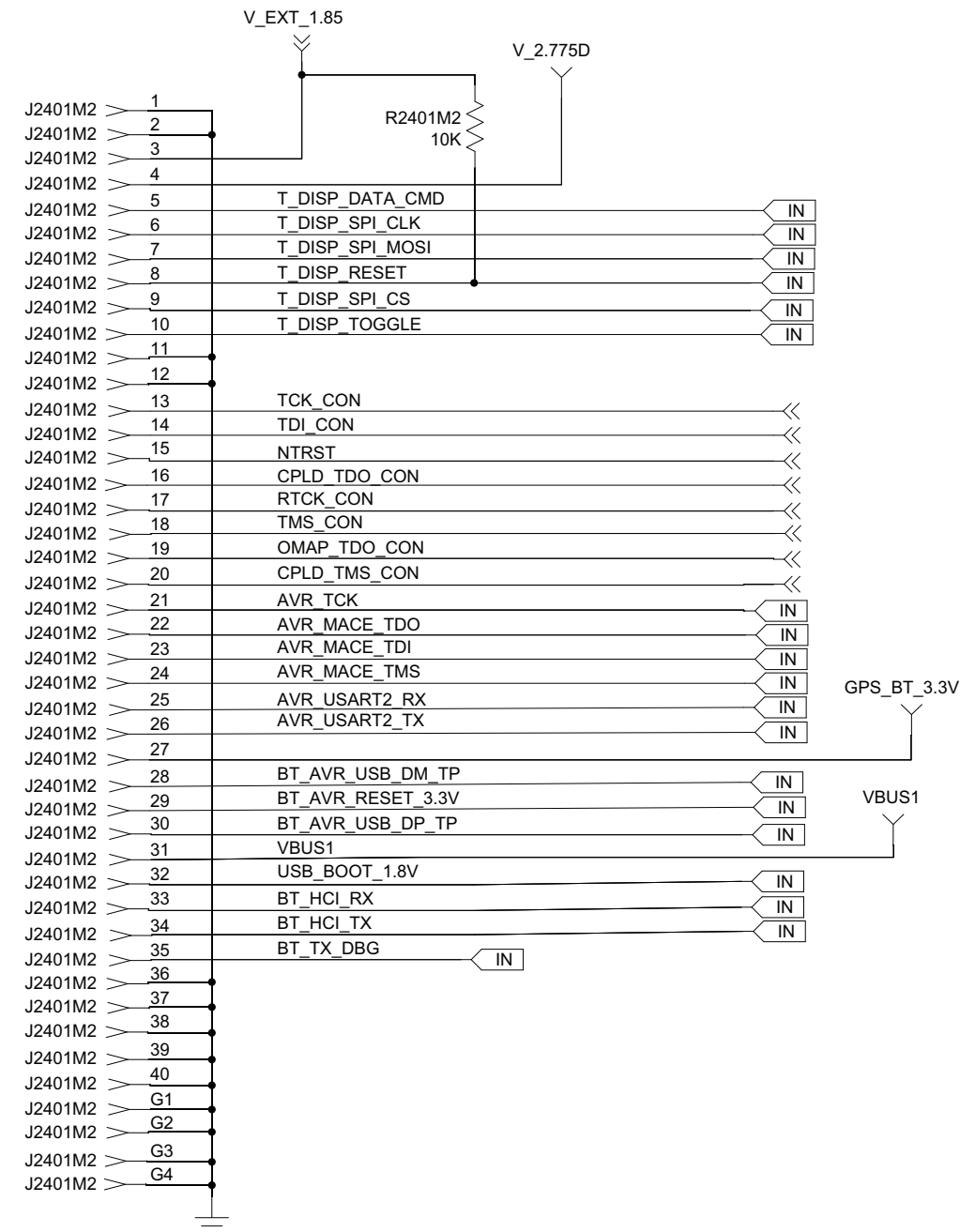


Figure 8-113. Debugging and Display Connector

CONNECTORS

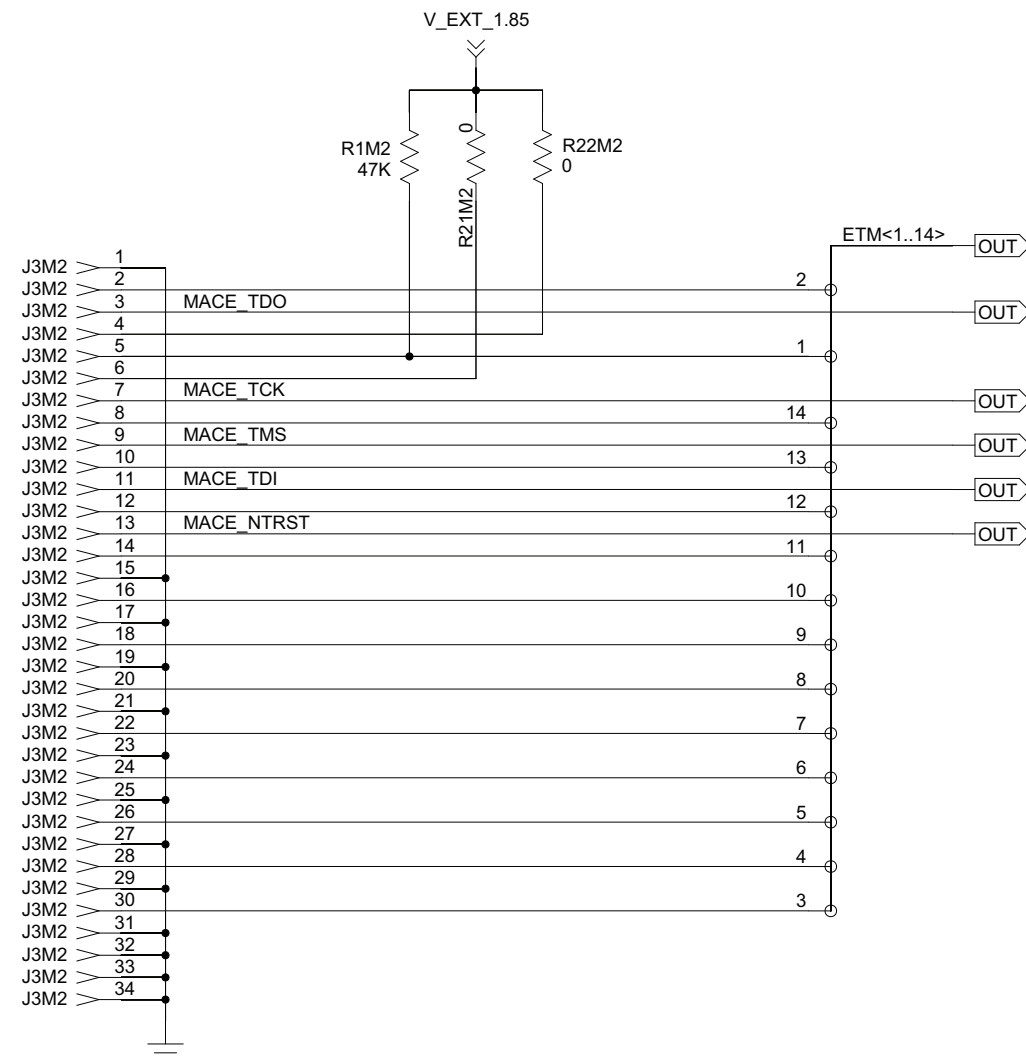


Figure 8-114. Connectors

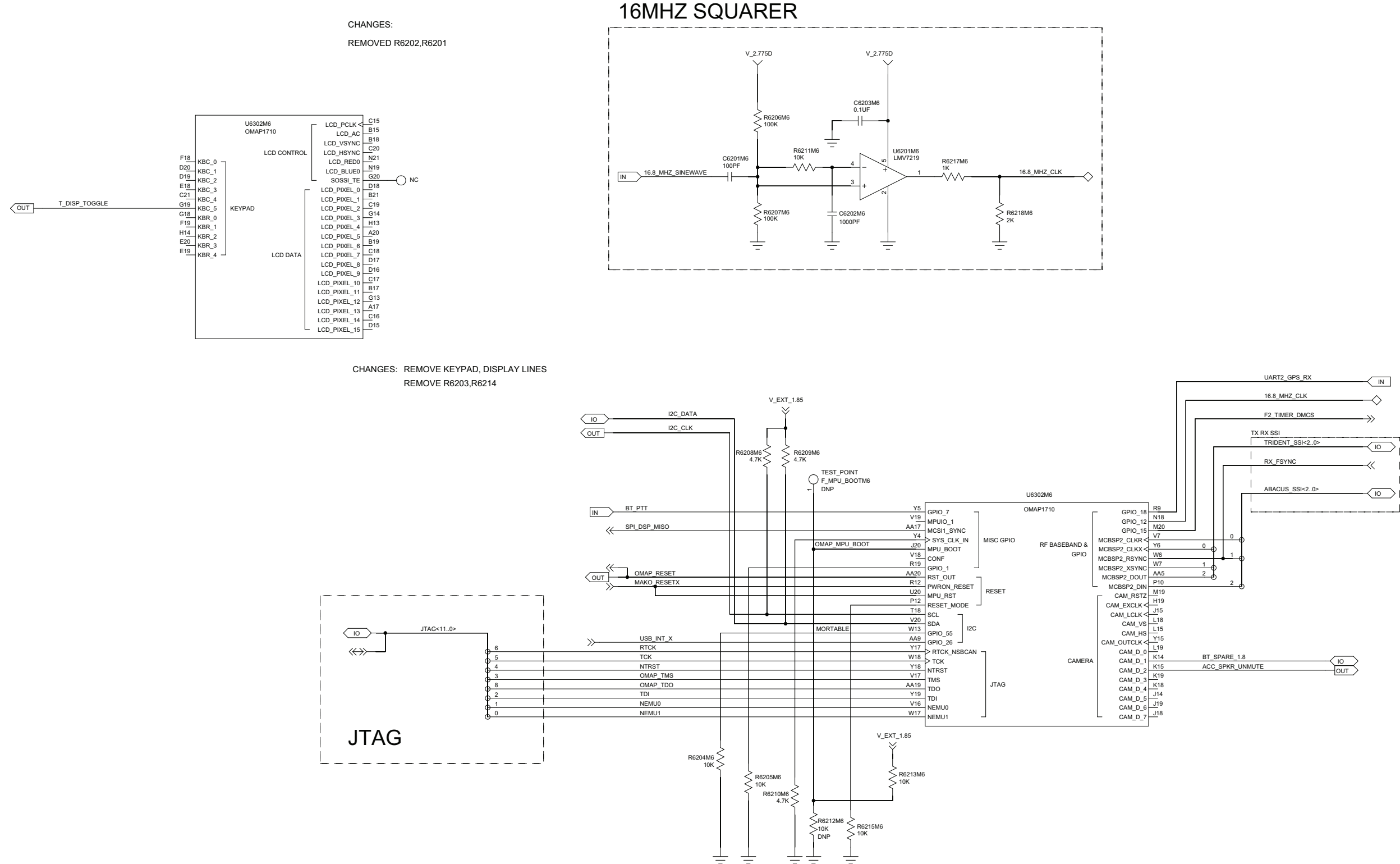


Figure 8-116. OMAP User Interface Circuit

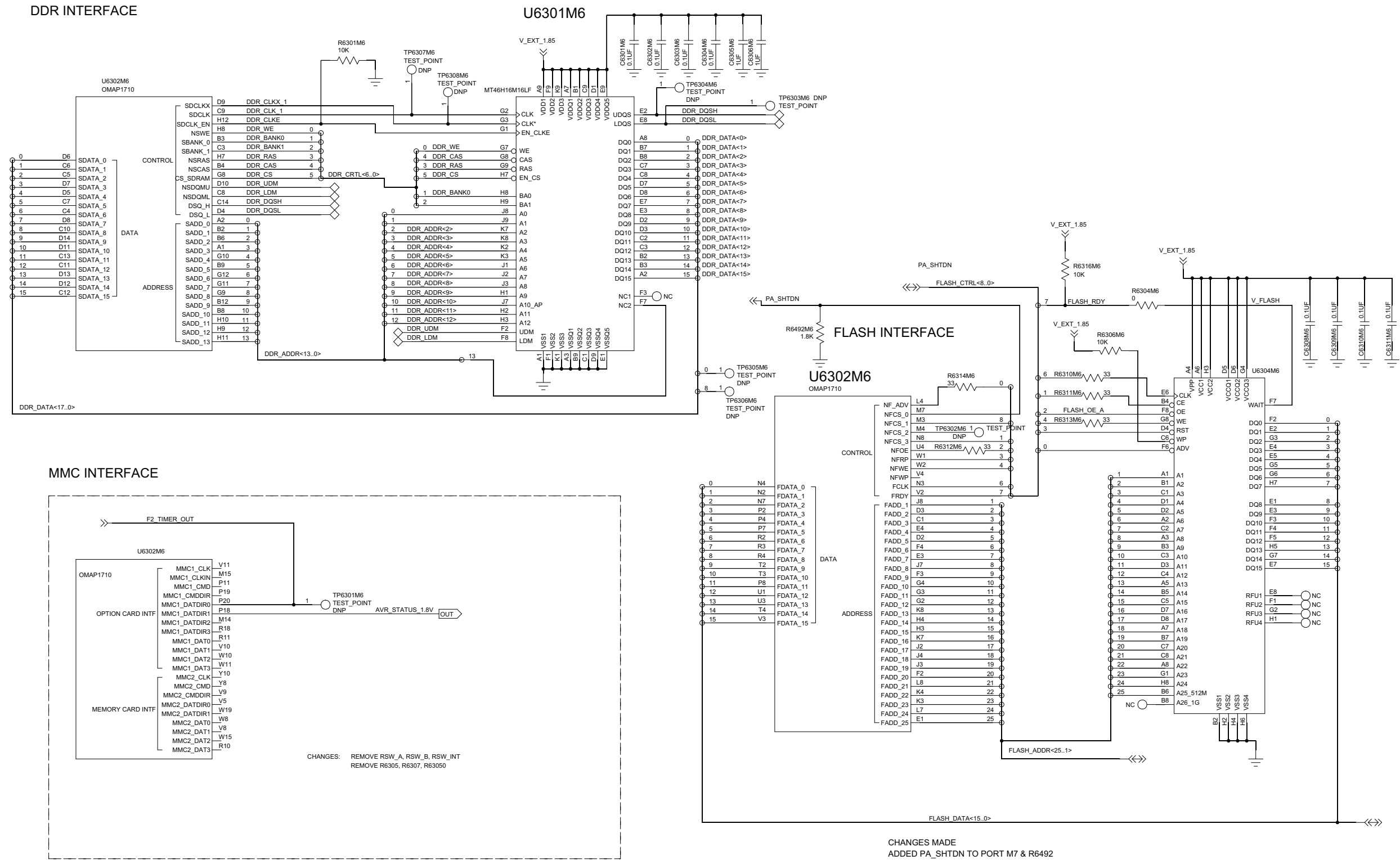


Figure 8-117. Memory Interface

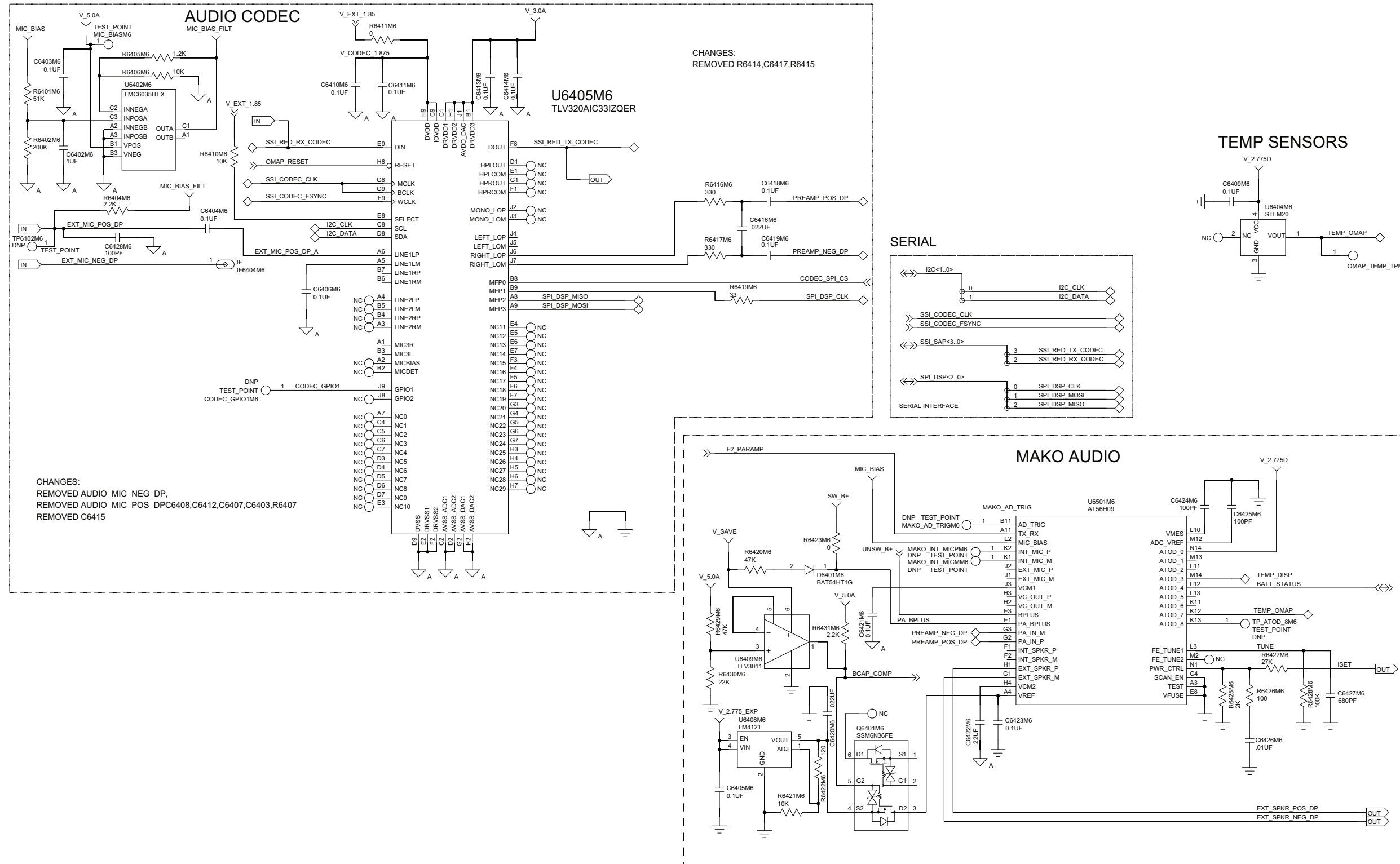


Figure 8-118. Audio Circuit

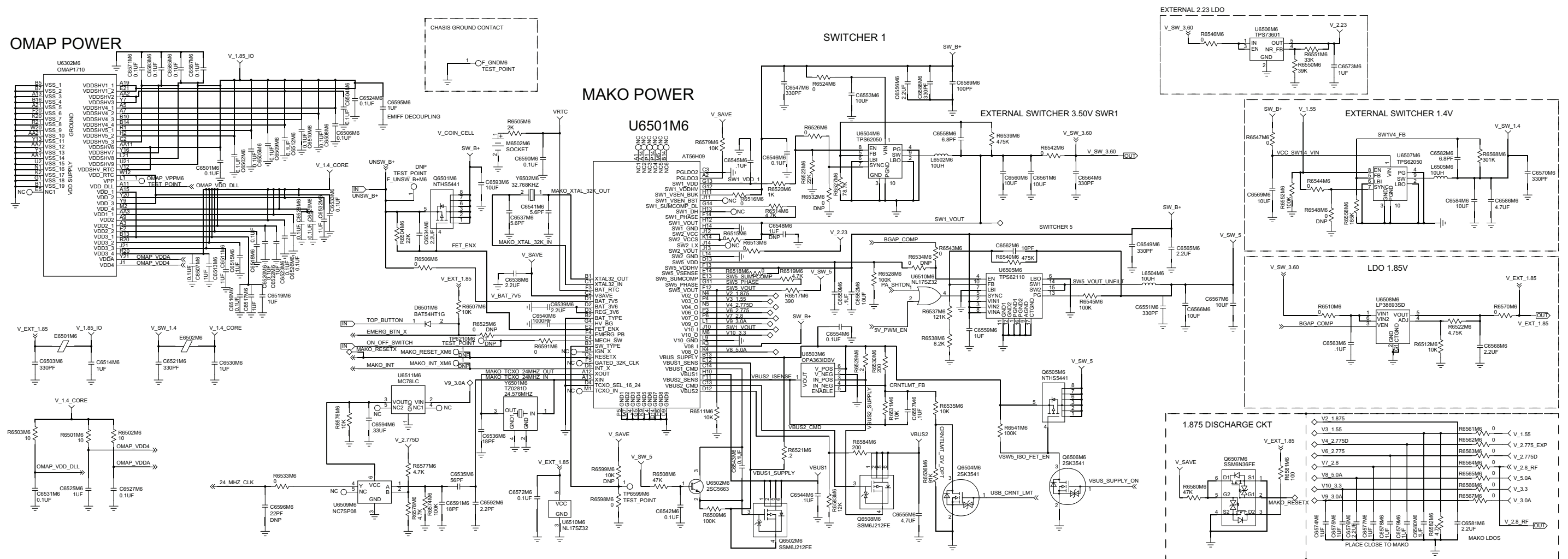


Figure 8-119. MAKO/DC Distribution Circuit

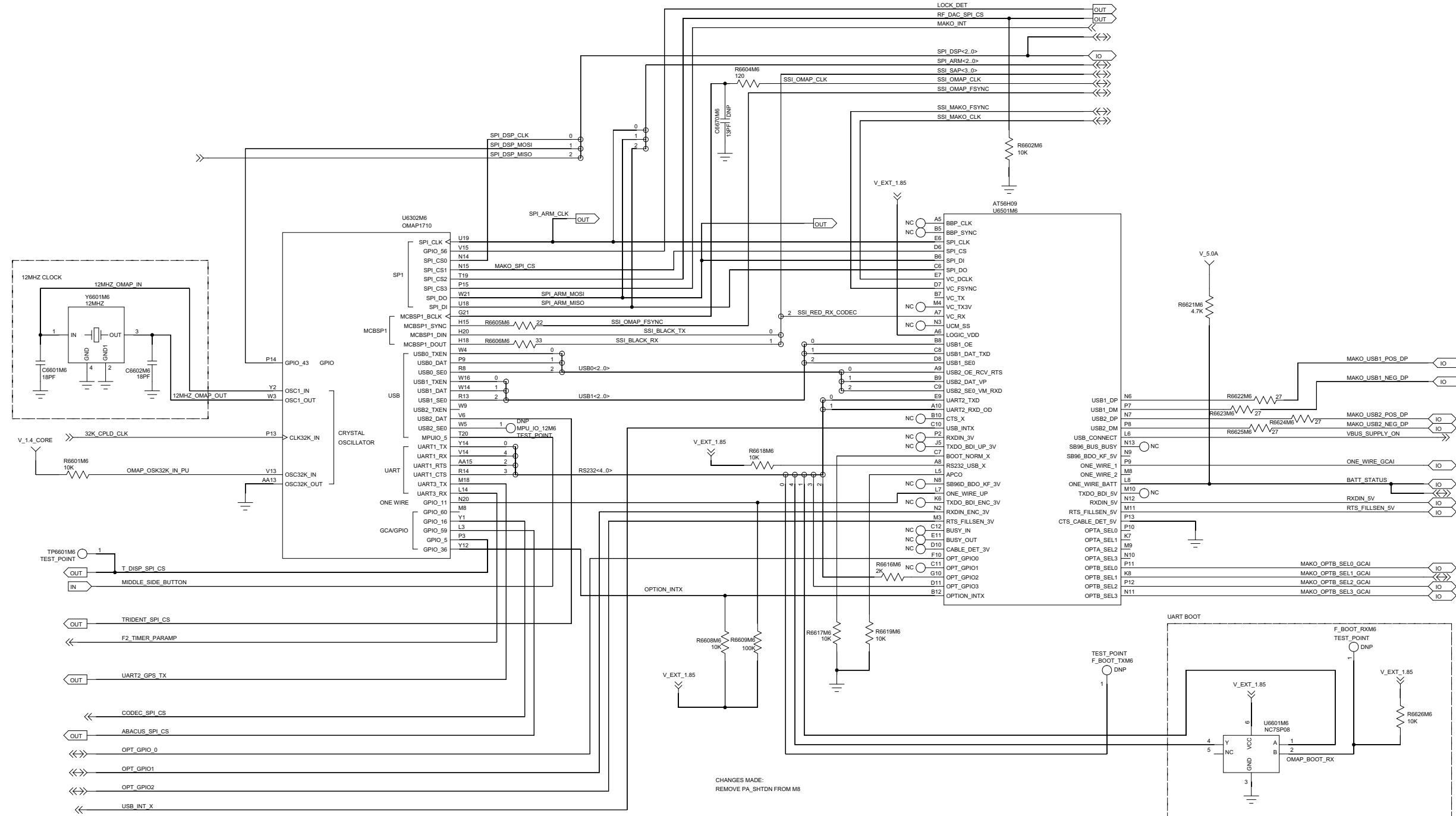


Figure 8-120. Serial Interface Circuit

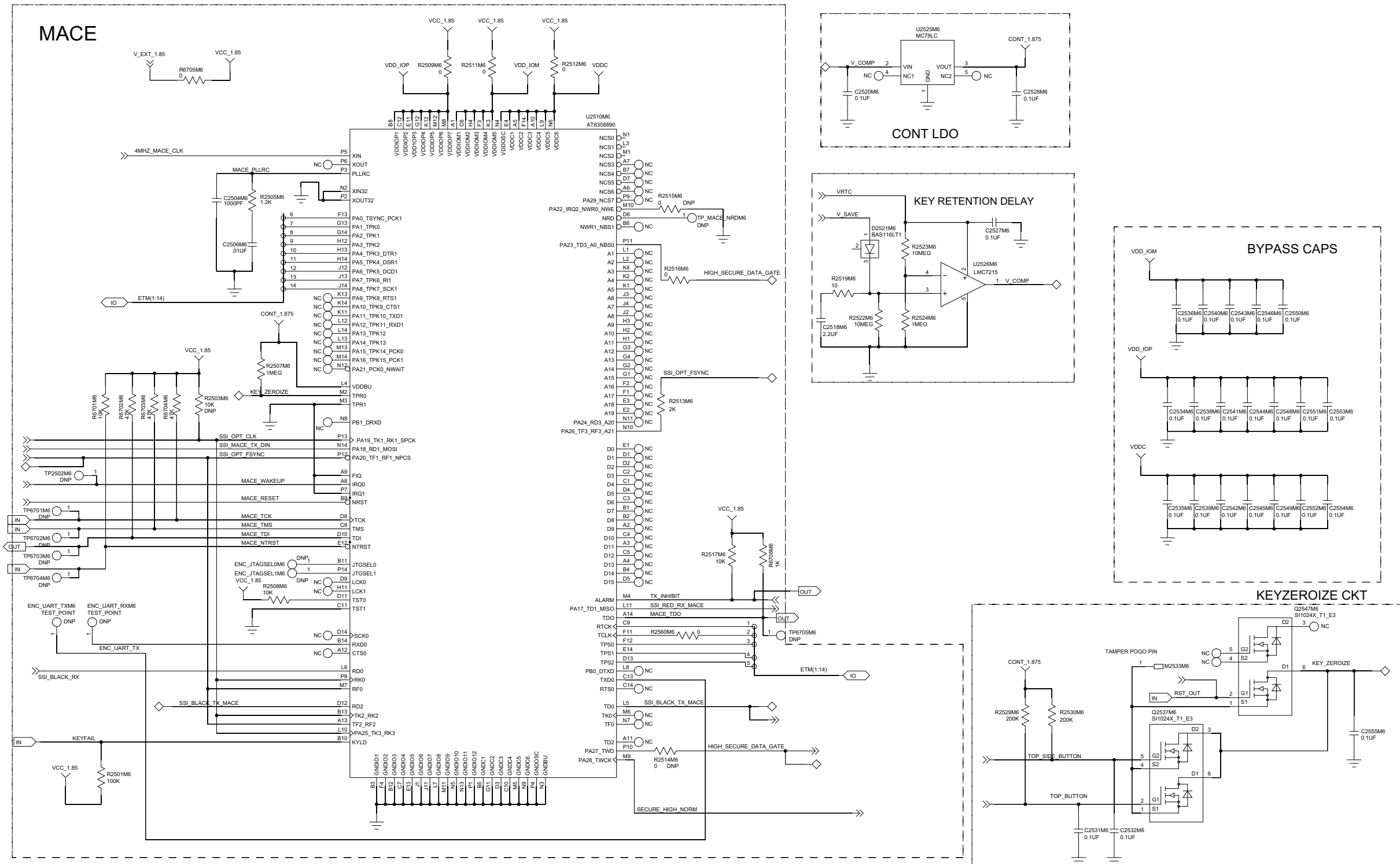


Figure 8-121. Secure Circuit

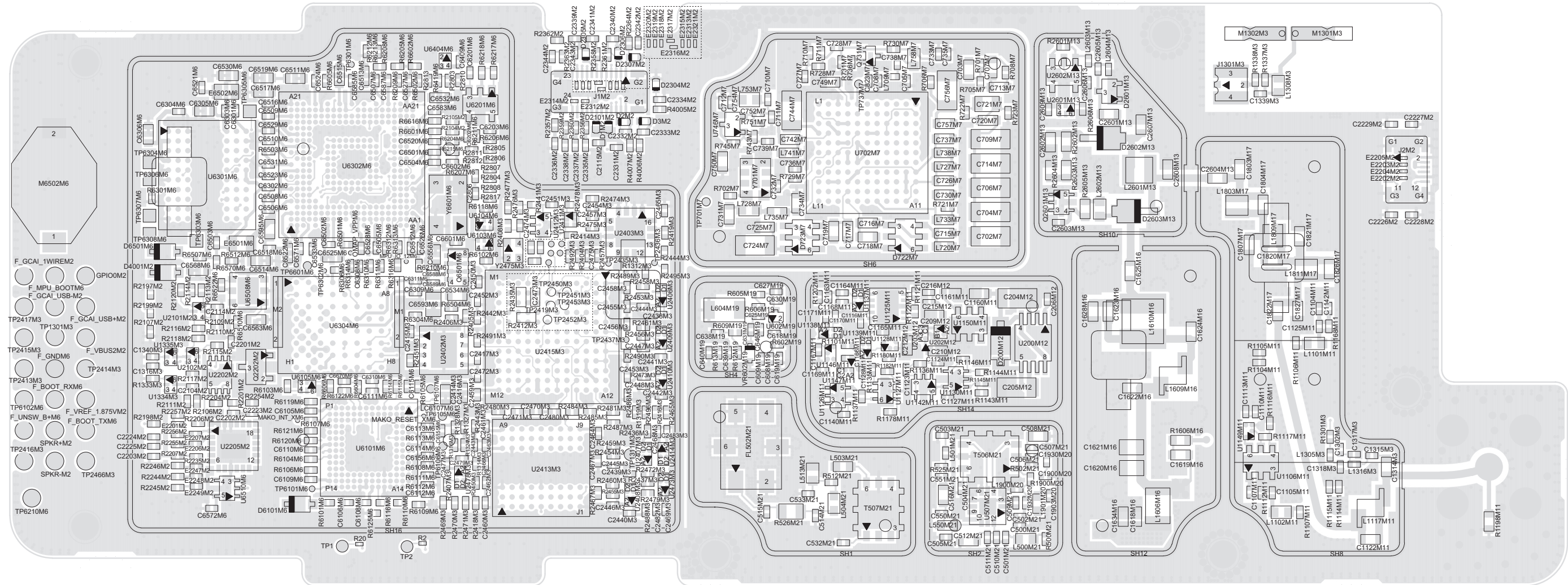


Figure 8-122. Transceiver (RF) Board Layout – Top Side

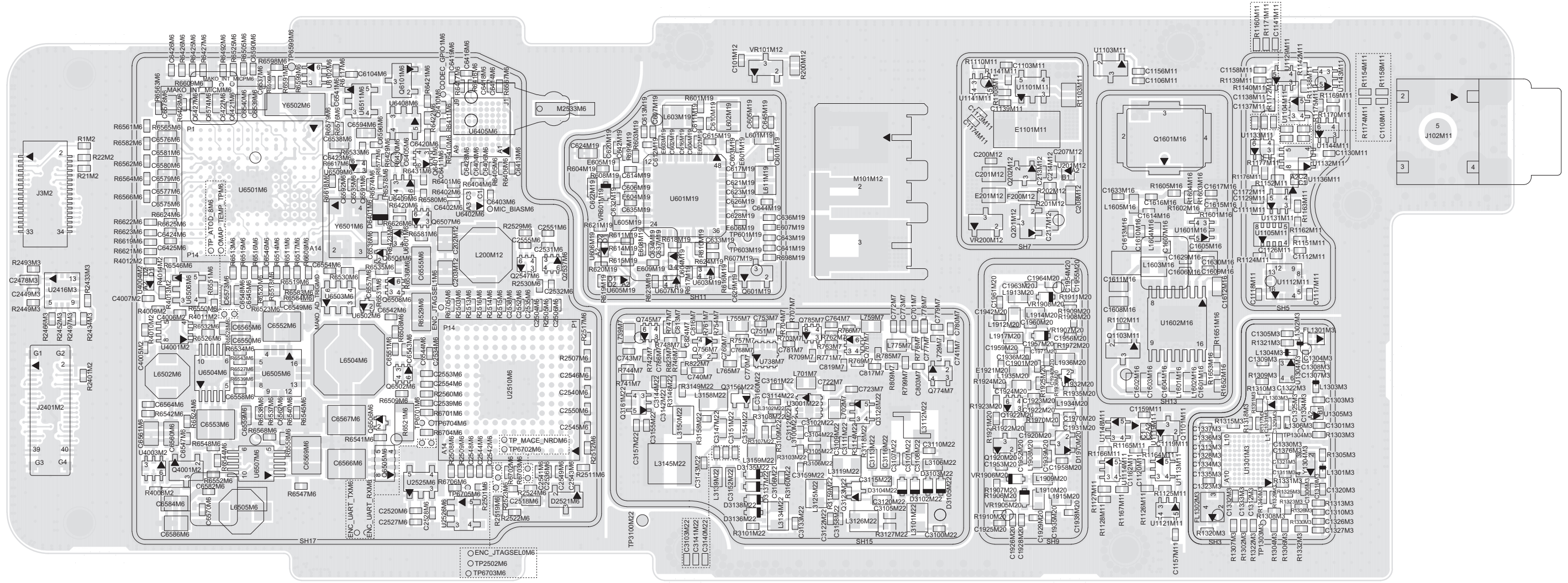


Figure 8-123. Transceiver (RF) Board Layout – Bottom Side

UHF2 Transceiver (RF) Board Parts List –
84012616001

Ref. Des.	Part Number	Description
C101M12	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1103M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1104M11	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1105M11	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1106M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1107M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1108M11	2113946B03	CAP,CHIP,.068UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMA
C1110M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1111M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1112M11	2113945B01	CAP,CHIP,6800PF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1113M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1116M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1117M11	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM

Ref. Des.	Part Number	Description
C1118M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1119M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1120M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1122M11	2113944M05	CAP,FXD,3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1123M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1124M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1125M11	2113944A23	CAP,CHIP,8.2PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1126M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1127M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1128M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1129M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1130M11	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1137M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1138M11	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1139M11	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1140M11	2113945A13	CAP,CHIP,4700PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1141M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1142M11	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1156M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1157M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1158M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1159M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1160M11	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C1161M11	2113956B91	CAP,FXD,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,PB
C1162M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1163M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1164M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1165M11	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1166M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1167M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1168M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1169M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1170M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1171M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1172M11	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1173M11	2115153H49	CAP,FXD,47PF,+1%,-1%,50V-DC,0402,C0G
C1174M11	2115153H55	CAP,CER CHIP,82PF,50V-DC,0402,C0G
C1301M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C1302M3	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1303M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C1304M3	2113944A07	CAP,CHIP,1.8PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C1305M3	2113944A27	CAP,CHIP,15PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1306M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1307M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1308M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1309M3	2113944A26	CAP,CHIP,12PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1310M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1311M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1312M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C1313M3	2187893N01	CAP,CER,1UF,20PF+/-,+20%,-20%,6.3V-DC,0402,+/-15%,-55DEG CMIN,85
C1314M3	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1315M3	2115153H02	CAP,CER CHIP,.75PF,.1PF+/-,+1%,-.1%,50V-DC,C0G,CAP,CERAMIC

Ref. Des.	Part Number	Description
C1316M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1317M3	2188881Y12	CAP,CER CHIP,1.8PF,.1PF+/-,16V-DC,0402,NP0,-55DEG CMIN,85DEG C
C1318M3	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C1319M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1320M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1321M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1322M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1323M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1324M3	2115153H03	CAP,CER CHIP,1PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G
C1325M3	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1326M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1327M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1328M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1329M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1330M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1331M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1332M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1333M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1334M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1335M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1336M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C1337M3	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1339M3	2113944A08	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1340M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C1376M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1601M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1602M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1603M16	2113945L49	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P
C1604M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1605M16	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1606M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1607M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1608M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1609M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1610M16	2113944A23	CAP,CHIP,8.2PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1611M16	2113945L49	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C1612M16	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1613M16	2113944A30	CAP,CHIP,27PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1614M16	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1615M16	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1616M16	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1617M16	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C1618M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1619M16	2113945C02	CAP,CHIP,.01UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA
C1620M16	2171741M06	CAP,CER CHIP,39PF,50V-DC,HI Q CAP, 39 PF
C1621M16	2171741M10	CAP,CER,12PF,+5%,-5%,100V-DC,CAP, CER CHIP, 12PF, 100V-DC,
C1622M16	2113944M20	CAP,FXD,12PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C1623M16	2113944C08	CAP,CHIP,1.2PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1624M16	2113944M22	CAP,FXD,15PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB

Ref. Des.	Part Number	Description
C1625M16	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C1628M16	2113944M09	CAP,FXD,4.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1629M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1630M16	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C1633M16	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C1634M16	2113945L49	CAP,FXD,.01UF,+5%,-5%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX,P
C1803M17	2113944C23	CAP,CHIP,5.1PF,.5PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1804M17	2113944C17	CAP,CHIP,3PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1807M17	2113944C26	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1820M17	2113944C18	CAP,CHIP,3.3PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1821M17	2113944C27	CAP,CHIP,7.5PF,.5PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1822M17	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C1826M17	2113944C12	CAP,CHIP,1.8PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C1827M17	2113944C18	CAP,CHIP,3.3PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C1900M20	2115153H25	CAP,CERAMIC CHIP,8.2PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,
C1901M20	2115153H57	CAP,CERAMIC CHIP,100PF,+1%,-1%,50V-DC,0402,C0G,CAP, CERAMIC,
C1903M20	2115153H28	CAP,CER CHIP,4PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERAMI
C1920M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C1922M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1923M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1924M20	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C1925M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1926M20	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C1928M20	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C1929M20	2115153H19	CAP,FXD,4.7PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G
C1930M20	2115153H41	CAP,FXD,22PF,+1%,-1%,50V-DC,0402,C0G,CAP, CERAMIC, COG
C1931M20	2115153H54	CAP,CER CHIP,75PF,50V-DC,0402,C0G

Ref. Des.	Part Number	Description
C1932M20	2115153H41	CAP,FXD,22PF,+1%,-1%,50V-DC,0402,C0G,CAP, CERAMIC, COG
C1935M20	2115153H13	CAP,FXD,2.7PF,.1PF+/-,+3.7%,-3.7%,50V-DC,0402,C0G,CAP, CERAMIC
C1936M20	2115153H26	CAP,CER CHIP,9.1PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C1938M20	2115153H16	CAP,CERAMIC CHIP,3.6PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,
C1939M20	2115153H13	CAP,FXD,2.7PF,.1PF+/-,+3.7%,-3.7%,50V-DC,0402,C0G,CAP, CERAMIC
C1940M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1942M20	2115153H37	CAP,FXD,15PF,.15PF+/-,+1%,-1%,50V-DC,0402,C0G,CAP, CERAMIC, CO
C1952M20	2115153H19	CAP,FXD,4.7PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G
C1953M20	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C1954M20	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C1955M20	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C1956M20	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP, CERA
C1957M20	2115153H29	CAP,FXD,5PF,.1PF+/-,50V-DC,0402,C0G

Ref. Des.	Part Number	Description
C1958M20	2115153H35	CAP,CERAMIC CHIP,12PF,+1%,-1%,50V- DC,0402,C0G,CAP, CERAMIC, C
C1959M20	2115153H13	CAP,FXD,2.7PF,.1PF+/- ,+3.7%,-3.7%,50V- DC,0402,C0G,CAP, CERAMIC
C1960M20	2115153H19	CAP,FXD,4.7PF,.1PF+/- ,+1%,-1%,50V- DC,0402,C0G
C1961M20	2115153H13	CAP,FXD,2.7PF,.1PF+/- ,+3.7%,-3.7%,50V- DC,0402,C0G,CAP, CERAMIC
C1963M20	2115153H29	CAP,FXD,5PF,.1PF+/-,50V- DC,0402,C0G
C1964M20	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,- .1%,50V-DC,0402,C0G,CAP, CERA
C1970M20	2115153H12	CAP,CERAMIC CHIP,2.4PF,.1PF+/-,+1%,- .1%,50V-DC,0402,C0G,CAP,
C1971M20	2115153H07	CAP,FXD,1.5PF,.1PF+/- ,+6.67%,-6.67%,50V- DC,0402,C0G
C200M12	2113945B02	CAP,CHIP,.01UF,+10%,- 10%,25V-DC,0402,X7R,- 55DEG CMIN,125DEG CMA
C201M12	21012118001	CAP,FXD,1UF,+10%,- 10%,25V- DC,X7R,CAP,FXD,1UF,10%, 25V-DC,X7R
C202M12	21012118001	CAP,FXD,1UF,+10%,- 10%,25V- DC,X7R,CAP,FXD,1UF,10%, 25V-DC,X7R
C203M12	21012118001	CAP,FXD,1UF,+10%,- 10%,25V- DC,X7R,CAP,FXD,1UF,10%, 25V-DC,X7R
C204M12	2113955D35	CAP,FXD,4.7UF,+10%,- 10%,16V-DC,1206,X7R,- 55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C205M12	2113955D35	CAP,FXD,4.7UF,+10%,- 10%,16V-DC,1206,X7R,- 55DEG CMIN,125DEG CMAX
C206M12	2113945B02	CAP,CHIP,.01UF,+10%,- 10%,25V-DC,0402,X7R,- 55DEG CMIN,125DEG CMA
C207M12	2113956B91	CAP,FXD,1UF,+10%,- 10%,16V-DC,0603,X5R,- 55DEG CMIN,85DEG CMAX,PB
C208M12	2113956B91	CAP,FXD,1UF,+10%,- 10%,16V-DC,0603,X5R,- 55DEG CMIN,85DEG CMAX,PB
C209M12	2113956B91	CAP,FXD,1UF,+10%,- 10%,16V-DC,0603,X5R,- 55DEG CMIN,85DEG CMAX,PB
C2104M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C210M12	2113956B91	CAP,FXD,1UF,+10%,- 10%,16V-DC,0603,X5R,- 55DEG CMIN,85DEG CMAX,PB
C2114M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C2115M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C212M12	2113946D07	CAP,CHIP,4.7UF,+10%,- 10%,6.3V-DC,0603,X5R,- 55DEG CMIN,85DEG CMA
C213M12	2113944A46	CAP,CHIP,330PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C214M12	2113944A31	CAP,CHIP,33PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C215M12	2113944A46	CAP,CHIP,330PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C216M12	2113944A31	CAP,CHIP,33PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX,P
C217M12	2113956B91	CAP,FXD,1UF,+10%,- 10%,16V-DC,0603,X5R,- 55DEG CMIN,85DEG CMAX,PB
C2201M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C2202M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C2203M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C2223M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2224M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2225M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX
C2226M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2227M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2228M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C2229M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2331M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2332M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2333M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2334M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2335M2	2113945Y02	CAP,FXD,.1UF,+10%,- 10%,16V-DC,0402,X7R,- 55DEG CMIN,125DEG CMAX
C2336M2	2113945Y02	CAP,FXD,.1UF,+10%,- 10%,16V-DC,0402,X7R,- 55DEG CMIN,125DEG CMAX
C2337M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2338M2	2113944A40	CAP,CHIP,100PF,+5%,- 5%,50V-DC,0402,C0G,- 55DEG CMIN,125DEG CMAX
C2339M2	2113945A05	CAP,CHIP,470PF,+10%,- 10%,50V-DC,0402,X7R,- 55DEG CMIN,125DEG CMA
C2340M2	2113945A05	CAP,CHIP,470PF,+10%,- 10%,50V-DC,0402,X7R,- 55DEG CMIN,125DEG CMA
C2341M2	2113946B04	CAP,CHIP,.1UF,+10%,- 10%,10V-DC,0402,X5R,- 55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C2342M2	2113945A05	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2443M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2455M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2467M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2343M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,COG,-55DEG CMIN,125DEG CMAX	C2444M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2456M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2468M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2344M2	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,COG,-55DEG CMIN,125DEG CMAX	C2445M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2457M3	2115153H20	CAP,FXD,5.1PF,.1PF+/-,+2%,-2%,50V-DC,0402,COG,CAP,CERAMIC, CO	C2469M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2414M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2446M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2458M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2470M3	21012119001	CAP,FXD,2.2UF,+20%,-20%,6.3V-DC,X5R,CAP,FXD,2.2UF,20%,6.3V-D
C2415M3	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C2447M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2459M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2471M3	2113945A05	CAP,CHIP,470PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C2416M3	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA	C2448M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2460M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2472M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2417M3	2171206F01	CAP,CER CHIP,4.7UF,+20%,-20%,4V-DC,0402,X5R,MONO,SMD,W18	C2449M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2461M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2473M3	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,COG,-55DEG CMIN,125DEG CMAX
C2438M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2450M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2462M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2474M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2439M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2451M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2463M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2475M3	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2440M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2452M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2464M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2477M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2441M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2453M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2465M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P	C2478M3	2113956B54	CAP,FXD,10UF,+20%,-20%,6.3V-DC,X5R,-55DEG CMIN,85DEG CMAX
C2442M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2454M3	2171051Y05	CAP,CER CHIP,180PF,+1%,-1%,50V-DC,0402,COG,-55DEG CMIN,125DEG C	C2466M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX	C2479M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
									C2480M3	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C2482M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2483M3	2113945Y02	CAP,FXD,.1UF,+10%,-10%,16V-DC,0402,X7R,-55DEG CMIN,125DEG CMAX
C2504M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C2506M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C2518M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C2520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2531M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2532M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2534M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2535M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2536M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2538M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C2539M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2540M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2541M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2542M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2543M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2544M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2545M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2546M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2548M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2549M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2550M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2551M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2552M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2553M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2554M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C2555M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C2601M13	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2602M13	2113944C38	CAP,CHIP,47PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P
C2603M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2604M13	2113944C45	CAP,CHIP,100PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2605M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2606M13	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C2607M13	2113944C25	CAP,CHIP,6.2PF,.5PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C2608M13	2113944C20	CAP,CHIP,3.9PF,.25PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMA
C2609M13	2113946K02	CAP,CHIP,.1UF,+80%,-20%,16V-DC,0402,Y5V,-30DEG CMIN,85DEG CMAX
C2806	NOTPLACED	CAP,FXD,.1PF,.03PF+/-,25V-DC,C0G,-55DEG CMIN,125DEG CMAX,PB-F
C3100M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3101M22	2115153H19	CAP,FXD,4.7PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G

Ref. Des.	Part Number	Description
C3102M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3103M22	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3104M22	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG
C3105M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3106M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3107M22	2115153H19	CAP,FXD,4.7PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G
C3108M22	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3109M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3110M22	2115153H18	CAP,CER CHIP,4.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C3111M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3112M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3113M22	2113944M14	CAP,FXD,6.8PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3114M22	2115153H27	CAP,FXD,10PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, COG

Ref. Des.	Part Number	Description
C3115M22	2113944M16	CAP,FXD,8.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3116M22	2113944M09	CAP,FXD,4.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3120M22	2113944M40	CAP,FXD,82PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3122M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3133M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3140M22	2115153H18	CAP,CER CHIP,4.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C3141M22	2115153H18	CAP,CER CHIP,4.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C3142M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3143M22	2115153H10	CAP,CER CHIP,2PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G
C3144M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3147M22	2113944M09	CAP,FXD,4.3PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3151M22	2113944M15	CAP,FXD,7.5PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C3152M22	2113944M13	CAP,FXD,6.2PF,.1PF+/-,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C3154M22	2113944M35	CAP,FXD,51PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,PB
C3155M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C3157M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3158M22	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C3159M22	2113944A13	CAP,CHIP,3.3PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3160M22	2113944A17	CAP,CHIP,4.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C3161M22	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C4005M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4006M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C4007M2	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C500M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C501M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C502M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C503M21	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C504M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C505M21	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C506M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C507M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C508M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C509M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C510M21	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C511M21	2113945B05	CAP,FXD,.033UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C512M21	2113946D07	CAP,CHIP,4.7UF,+10%,-10%,6.3V-DC,0603,X5R,-55DEG CMIN,85DEG CMA
C514M21	2113944A08	CAP,CHIP,2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C515M21	2113944A14	CAP,CHIP,3.6PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C516M21	2113944M42	CAP,FXD,100PF,+2%,-2%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C532M21	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C533M21	2115153H52	CAP,FXD,62PF,+1%,-1%,50V-DC,0402,C0G
C550M21	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C551M21	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C601M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C602M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C603M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C604M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C605M19	2115153H23	CAP,CER CHIP,6.8PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C606M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C607M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C608M19	2113944A12	CAP,CHIP,3PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C609M19	2113944A30	CAP,CHIP,27PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P

Ref. Des.	Part Number	Description
C6104M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6105M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6106M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6107M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6108M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6109M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C610M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6110M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6111M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6112M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6113M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6114M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6115M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C611M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C612M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C613M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C614M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6155M6	2113944A78	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C6156M6	2113944A78	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C615M19	2113944A42	CAP,CHIP,150PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C616M19	2113945A11	CAP,CHIP,2200PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C617M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C618M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C619M19	2113944A35	CAP,CHIP,62PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6201M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6202M6	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C6203M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C620M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C621M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C622M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C623M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C624M19	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C625M19	2115153H39	CAP,FXD,18PF,50V-DC,0402,C0G
C626M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C627M19	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM
C628M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C629M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6301M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6302M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6303M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6304M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6305M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6306M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6308M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6309M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C630M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6310M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6311M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C631M19	2115153H32	CAP,FXD,8PF,.1PF+/-+.1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C632M19	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C633M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C634M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C635M19	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C636M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C637M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C638M19	2113945A12	CAP,CHIP,3300PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM

Ref. Des.	Part Number	Description
C639M19	2113945B02	CAP,CHIP,01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6402M6	2113956A51	CAP,FXD,1UF,+10%,-10%,6.3V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX,P
C6403M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6404M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6405M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6406M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6409M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C640M19	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6410M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6411M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6413M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6414M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6416M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6418M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6419M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C641M19	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6420M6	2113945B04	CAP,FXD,.022UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6421M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6422M6	2113946C02	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6423M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6424M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6425M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6426M6	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA
C6427M6	2113944A50	CAP,CHIP,680PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6428M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C642M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C643M19	2113944A48	CAP,CHIP,470PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C644M19	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA

Ref. Des.	Part Number	Description
C645M19	2113944A11	CAP,CHIP,2.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C646M19	2115153H32	CAP,FXD,8PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,CERAMIC, CO
C6501M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6502M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6503M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6504M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6505M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6506M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6507M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6508M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6509M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6510M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6511M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6512M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6513M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6514M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6515M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6516M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6517M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6518M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6519M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6520M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6521M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6522M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6523M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6524M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6525M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6526M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6527M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6528M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6529M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6530M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6531M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6532M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6533M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6534M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6535M6	2113944A34	CAP,CHIP,56PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6536M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6537M6	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6538M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6539M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6540M6	2113945C13	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CM
C6541M6	2113944A19	CAP,CHIP,5.6PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6542M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6543M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6544M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6545M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6546M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6547M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6548M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6549M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6550M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6551M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6552M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6553M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6554M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6555M6	2113955D45	CAP,FXD,4.7UF,+10%,-10%,10V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C6556M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6557M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6558M6	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6559M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6560M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6561M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6562M6	2113944A25	CAP,CHIP,10PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6563M6	2113945D04	CAP,CHIP,.1UF,+10%,-10%,25V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C6564M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6565M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6566M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6567M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6568M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6569M6	2113956E91	CAP,FXD,10UF,+10%,-10%,16V-DC,1210,X5R,-55DEG CMIN,85DEG CMAX,P
C6570M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6571M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6572M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6573M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6574M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6575M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6576M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6577M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P

Ref. Des.	Part Number	Description
C6578M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6579M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6580M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6581M6	2113956B33	CAP,FXD,2.2UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6582M6	2113944A21	CAP,CHIP,6.8PF,.5PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6583M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6584M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6585M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6586M6	2113956C35	CAP,FXD,4.7UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX
C6587M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX
C6588M6	2113944A46	CAP,CHIP,330PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6589M6	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C6590M6	2113946B04	CAP,CHIP,.1UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX

Ref. Des.	Part Number	Description
C6591M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6592M6	2113944A09	CAP,CHIP,2.2PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA
C6593M6	2113956C37	CAP,FXD,10UF,+10%,-10%,16V-DC,0805,X5R,-55DEG CMIN,85DEG CMAX,P
C6594M6	2113946C07	CAP,FXD,.33UF,+10%,-10%,10V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX
C6595M6	2113946S35	CAP,CHIP,1UF,+10%,-10%,16V-DC,0603,X5R,-55DEG CMIN,85DEG CMAX,P
C6596M6	2113944A29	CAP,CHIP,22PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6601M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6602M6	2113944A28	CAP,CHIP,18PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C6670M6	2113944A78	CAP,FXD,13PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,PB
C701M7	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,CERA
C702M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX
C703M7	2113945C26	CAP,FXD,.039UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA
C704M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C705M7	2115153H25	CAP,CERAMIC CHIP,8.2PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C706M7	2185419D06	CAP,CHIP,.1UF,+10%,-10%,25V-DC,1206,-55DEG CMIN,125DEG CMAX
C707M7	2113945C01	CAP,CHIP,6800PF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CM
C708M7	2115153H25	CAP,CERAMIC CHIP,8.2PF,.1PF+/-,+1%,-.1%,50V-DC,0402,C0G,CAP,
C709M7	2171051Y11	CAP,FXD,.1UF,+5%,-5%,1206,-55DEG CMIN,125DEG CMAX,PB-FREE
C710M7	2113944A49	CAP,CHIP,560PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C711M7	2113944A34	CAP,CHIP,56PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P
C712M7	2113944A45	CAP,CHIP,270PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C713M7	2113945C26	CAP,FXD,.039UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMA
C714M7	2171051Y11	CAP,FXD,.1UF,+5%,-5%,1206,-55DEG CMIN,125DEG CMAX,PB-FREE
C715M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C716M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C717M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description
C718M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C719M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C720M7	2113944C55	CAP,CHIP,2200PF,+5%,-5%,50V-DC,0603,C0G,-55DEG CMIN,125DEG CMAX
C721M7	2113945G95	CAP,FXD,.22UF,+10%,-10%,50V-DC,0805,X7R,-55DEG CMIN,125DEG CMAX
C722M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C723M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C724M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX
C725M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C726M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX
C727M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C728M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C730M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
C731M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C743M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C768M7	2115153H17	CAP,FXD,3.9PF,.1PF+/-,50V-DC,0402,C0G,CAP,CERAMIC, COG	C817M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C732M7	2113944A32	CAP,CHIP,39PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C744M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX	C770M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C819M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C733M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C749M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C772M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C823M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C734M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C750M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C773M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C824M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX
C735M7	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C751M7	2113945A09	CAP,CHIP,1000PF,+10%,-10%,50V-DC,0402,X7R,-55DEG CMIN,125DEG CM	C777M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	CODEC_G PIO1M6	TPSM0_50	TEST POINT .020 DIA
C736M7	2113945B02	CAP,CHIP,.01UF,+10%,-10%,25V-DC,0402,X7R,-55DEG CMIN,125DEG CMA	C752M7	2113944A43	CAP,CHIP,180PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C779M7	2115153H24	CAP,CER CHIP,7.5PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,CERA	D1970M20	4813974A19	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE
C737M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C753M7	2113944A31	CAP,CHIP,33PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C780M7	2113944A33	CAP,CHIP,47PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D1M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C738M7	2113944A40	CAP,CHIP,100PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C754M7	2113944A34	CAP,CHIP,56PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	C781M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D200M12	4813978A19	DIODE,RECT,MBR120,SM,SOD-123,1A,20V,SHTK,PB-FREE
C739M7	2113944A17	CAP,CHIP,4.7PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMA	C756M7	2113955D37	CAP,FXD,10UF,+10%,-10%,16V-DC,1206,X7R,-55DEG CMIN,125DEG CMAX	C786M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D2101M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C740M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C757M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C803M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	D2304M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C741M7	2115153H15	CAP,CER CHIP,3.3PF,.1PF+/-,.1%,-.1%,50V-DC,0402,C0G,CAP,CERA	C760M7	2113944A44	CAP,CHIP,220PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX	C813M7	2113944A63	CAP,FXD,1PF,.25PF+/-,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D2305M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
C742M7	2113945C31	CAP,FXD,.1UF,+10%,-10%,50V-DC,0603,X7R,-55DEG CMIN,125DEG CMAX	C764M7	2113946B06	CAP,CHIP,.22UF,+10%,-10%,10V-DC,0402,X5R,-55DEG CMIN,85DEG CMAX	C816M7	2113944A35	CAP,CHIP,62PF,+5%,-5%,50V-DC,0402,C0G,-55DEG CMIN,125DEG CMAX,P	D2306M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
									D2307M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
									D2521M6	4871785H01	DIODE,SWG,BAS116LT1G,SOT-23/SC-59,SOT-23,200MA,75V,.225W,SWG DI
									D2601M13	4813974A19	DIODE ARRAY,MXR,SM,SOT-323,7V,.2W,SHTK,2,PB-FREE

Ref. Des.	Part Number	Description
D2602M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWER-MITE
D2603M13	4815897H01	DIODE,PIN,UPP9401E,SM,DO-216,50A,50V,2.5W,POWER-MITE
D2M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D3102M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3103M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3104M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3105M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3135M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3136M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3137M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3138M22	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC-79,SOD-523/SC-79
D3M2	4870359B01	DIODE,SUPR,SM,7.82V,.1W,ESD PROT,V360
D4001M2	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,P B-FREE, W18
D6101M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,P B-FREE, W18

Ref. Des.	Part Number	Description
D6401M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,P B-FREE, W18
D6501M6	4813978A25	DIODE,SWG,BAT54,SM,SO D-323/SC-76,200MA,30V,.2W,SHTK,P B-FREE, W18
D722M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
D723M7	4815011H01	DIODE,SWG,SM,300MA,80V,TRP
E1101M11	2405688Z01	IDCTR,BEAD,FERR BEAD
E1921M20	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E201M12	7686949J14	FLTR,FERRITE BEAD,2A,SM,0805,CHIP,220OHM
E2201M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2202M2	PT80LVLA03	SPARK GAP 2PIN
E2203M2	PT80LVLA03	SPARK GAP 2PIN
E2204M2	PT80LVLA03	SPARK GAP 2PIN
E2205M2	PT80LVLA03	SPARK GAP 2PIN
E2206M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2207M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2247M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2248M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2249M2	7685268E01	FLTR,FERRITE BEAD,650MA,SM,0402,CHIP,80OHM
E2312M2	PT80LVLA03	SPARK GAP 2PIN
E2313M2	PT80LVLA03	SPARK GAP 2PIN

Ref. Des.	Part Number	Description
E2314M2	PT80LVLA03	SPARK GAP 2PIN
E2315M2	PT80LVLA03	SPARK GAP 2PIN
E2316M2	PT80LVLA03	SPARK GAP 2PIN
E2317M2	PT80LVLA03	SPARK GAP 2PIN
E2318M2	PT80LVLA03	SPARK GAP 2PIN
E2319M2	PT80LVLA03	SPARK GAP 2PIN
E2320M2	PT80LVLA03	SPARK GAP 2PIN
E2321M2	PT80LVLA03	SPARK GAP 2PIN
E601M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E602M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E603M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E604M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E605M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E606M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E607M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E608M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E609M19	2471132D14	IDCTR,25%,200MA,.6OHM,FERR,SM,0402,IDCTR,FXD ,470OHM,200M
E6501M6	2480067M02	FIXED INDUCTOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE
E6502M6	2480067M02	FIXED INDUCTOR,FXD,200MA,.4OHM,FERR,0805,CHK RF CHIP BE

Ref. Des.	Part Number	Description
ENC_JTA GSEL0M6	TPSM0_50	TEST POINT .020 DIA
ENC_JTA GSEL1M6	TPSM0_50	TEST POINT .020 DIA
ENC_UAR T_RXM6	TPSM0_50	TEST POINT .020 DIA
ENC_UAR T_TXM6	TPSM0_50	TEST POINT .020 DIA
F_BOOT_RXM6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_BOOT_TXM6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_GCAI_1 WIREM2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_GCAI_U SB+M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_GCAI_U SB-M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_GNDM6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_MPU_B OOTM6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_UNSW_B+M6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_VBUS2 M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F_VREF_1 .875VM2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
F200M12	6575834B01	FUSE,FST BLW,2A,32V,FUSE SUR MT
FL1301M3	9102190J23	FLTR,SAW,BAND-PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE
FL1302M3	9109674L58	BAND PASS FILTER
FL1303M3	9102190J23	FLTR,SAW,BAND-PASS,1.57542GHZ NOM,SM,1.4X1.0MM,SMD, PB-FREE
FL502M21	91009300001	FLTR,BAND-PASS,109.65MHZ NOM,FILTER,MONOLITHIC CRYSTAL,BAND

Ref. Des.	Part Number	Description
GPI00M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
IF10	IF	IF
IF12	IF	IF
IF13	IF	IF
IF15	IF	IF
IF1651M16	IF	IF
IF1652M16	IF	IF
IF1653M16	IF	IF
IF1654M16	IF	IF
IF1655M16	IF	IF
IF17	IF	IF
IF18	IF	IF
IF1801M17	IF	IF
IF1802M17	IF	IF
IF19	IF	IF
IF1900M20	IF	IF
IF1901M20	IF	IF
IF1902M20	IF	IF
IF1903M20	IF	IF
IF1904M20	IF	IF
IF2	IF	IF
IF20	IF	IF
IF22	IF	IF
IF23	IF	IF
IF24	IF	IF
IF25	IF	IF
IF2601M13	IF	IF
IF2602M13	IF	IF
IF2603M13	IF	IF
IF2604M13	IF	IF
IF2605M13	IF	IF
IF2606M13	IF	IF

Ref. Des.	Part Number	Description
IF2607M13	IF	IF
IF3	IF	IF
IF3100M22	IF	IF
IF3101M22	IF	IF
IF3102M22	IF	IF
IF3103M22	IF	IF
IF3104M22	IF	IF
IF3105M22	IF	IF
IF4	IF	IF
IF5	IF	IF
IF6	IF	IF
IF6404M6	IF	IF
IF7	IF	IF
IF9	IF	IF
J102M11	2880658Z08	RF CONN- TOR,SMA,M,CONN SMA
J1301M3	40012057001	RF SWITCH,SWITCH,RF
J1M2	9012130001	CONN,RCPT,24CONT,.4MM ,CONNECTOR, BTB RECEPTACLE, 24-PIN,
J2401M2	0989851N01	CONN,BTB,2 ROW,RCPT,40CONT,.4MM, GLD,SMD
J2M2	0971704L01	CONN,CUST,RCPT,12CON T,CONNECTOR, 12-PIN SOCKET, 0.4MM PIT
J3M2	9012073001	CONN,BTB,RCPT,34CONT,. 4MM,GLD,ST,CONN- TOR, B2B RCPT 34PINS
L1101M11	2415429H26	IDCTR,WW,33NH,5%,600M A,.22OHM,CER,SM,0603,C HIP
L1102M11	2415429H10	IDCTR,WW,6.8NH,5%,700M A,.11OHM,CER,SM,0603,C HIP
L1117M11	2415428H01	COIL,AW,1.65NH,10%,1.6A, AIR,2 TURNS,SM,AIR WOUND IDCTR

Ref. Des.	Part Number	Description
L1301M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1302M3	2475122C13	IDCTR,3.3NH,9.09%,300MA ,.17OHM,CER,4 TURNS,SM,IND, MULTI-LA
L1303M3	2414017P16	IDCTR,CHIP,18NH,5%,300 MA,.76OHM,CER,9 Q,1.9GHZ SRF,SM,0402,P
L1304M3	2475122C17	IDCTR,4.7NH,6.38%,300MA ,.18OHM,CER,4 TURNS,SM,IND, MULTI-LA
L1305M3	24012011010	IDCTR,WW,4.7NH,2%,1.5A, .06OHM,CER,6.85GHZ SRF,SM,0402 HI Q
L1306M3	2414017P14	IDCTR,CHIP,12NH,5%,300 MA,.6OHM,CER,9 Q,2GHZ SRF,SM,0402,PB-F
L1308M3	2415429H28	IDCTR,WW,39NH,5%,600M A,CER,SM,CHIP
L1316M3	24012011018	IDCTR,WW,9NH,2%,1.4A,.0 7OHM,CER,5GHZ SRF,SM,0402 HI Q CHIP
L1601M16	24009331029	IDCTR,WW,15NH,5%,600M A,SM,IDCTR,WW,15NH,5%, 600MA,SM,060
L1602M16	2415429H37	IDCTR,WW,110NH,5%,300 MA,.61OHM,CER,SM,0603, CHIP
L1603M16	2414015B14	IDCTR,FXD,110NH,2%,400 MA,.46OHM,CER,40 Q,900MHZ SRF,SM,0805
L1604M16	24009331006	IDCTR,WW,4.3NH,SM,INDU CTOR, 4.3NH, +/-0.2NH, 0603
L1605M16	24009331006	IDCTR,WW,4.3NH,SM,INDU CTOR, 4.3NH, +/-0.2NH, 0603
L1606M16	2460591E24	COIL AIR WOUND INDUC 23.75
L1609M16	2415428H03	IDCTR,AW,3.85NH,2%,1.6A ,AIR,SM,AIR WOUND IDCTR

Ref. Des.	Part Number	Description
L1610M16	2471968L10	IDCTR,AW,9NH,2%,4A,.003 4OHM,AIR,5 TURNS,120 Q,4GHZ SRF,SM,9.
L1803M17	2471884M01	IDCTR,AW,10.2NH,5%,AIR, SM,10.2NH SQ SPR
L1809M17	2471884M01	IDCTR,AW,10.2NH,5%,AIR, SM,10.2NH SQ SPR
L1811M17	2471884M01	IDCTR,AW,10.2NH,5%,AIR, SM,10.2NH SQ SPR
L1900M20	24012011020	IDCTR,WW,10NH,2%,1.3A,. 085OHM,CER,4.7GHZ SRF,SM,0402 HI Q C
L1901M20	24009331005	IDCTR,WW,3.9NH,INDUC- TOR, 3.9NH, +/-0.5NH, 0603
L1908M20	2478057A04	IDCTR,3.6NH,2%,.031OHM, CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU
L1909M20	2478057A23	IDCTR,18NH,2%,.066OHM, CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR
L1910M20	2478057A23	IDCTR,18NH,2%,.066OHM, CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR
L1912M20	2478057A04	IDCTR,3.6NH,2%,.031OHM, CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU
L1913M20	2478057A23	IDCTR,18NH,2%,.066OHM, CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR
L1914M20	2478057A23	IDCTR,18NH,2%,.066OHM, CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR
L1915M20	2478057A12	IDCTR,7.2NH,2%,.052OHM, CER,48 Q,5.4GHZ SRF,PCMT,7.2NH SUR
L1917M20	2478057A04	IDCTR,3.6NH,2%,.031OHM, CER,40 Q,9.7GHZ SRF,PCMT,3.6 NH SU
L1934M20	2478057A35	CHIP INDUC- TOR,RF,47NH,2%,SM,0603 HI Q CHIP IDCTR
L1935M20	2478057A23	IDCTR,18NH,2%,.066OHM, CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR

Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description	Ref. Des.	Part Number	Description
L1936M20	2415429H01	IDCTR,WW,1.6NH,5%,700MA,.03OHM,CER,SM,0603,C HIP	L3139M22	2478057A26	IDCTR,24NH,2%,.074OHM,CER,42 Q,2.95GHZ SRF,PCMT,24 NH SUR	L605M19	2414017Q54	IDCTR,FXD,3.9UH,10%,30 MA,.9OHM,FERR,45 Q,38MHZ SRF,SM,0805,P	L741M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1
L200M12	2571269C01	IDCTR,COIL,1.5UH,20%,2.9 A,.059OHM,FERR,SM,WW PWR W18 COMP	L3145M22	2471968L10	IDCTR,AW,9NH,2%,4A,.003 4OHM,AIR,5 TURNS,120 Q,4GHZ SRF,SM,9.	L611M19	2414032F39	IDCTR,WW,270NH,10%,280 MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE	L753M7	2415347H06	IDCTR,WW,2.2UH,5%,320M A,1.2OHM,CER,SM,IDCTR, 2200NH
L2601M13	24012026011	IDCTR,AW,16.6NH,2%,4.4A ,AIR,SM,ULTRA-MINIA-TURE AIR CORE	L3150M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L6502M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR	L755M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP
L2602M13	2415429H40	IDCTR,WW,180NH,5%,240 MA,1.25OHM,CER,SM,0603 ,CHIP	L3158M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L6504M6	24009268001	IDCTR,PWR,10UH,20%,1.3 A,FERR,SM,10UH 2.1A SHLD IDCTR	L758M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP
L2603M13	24010062004	IDCTR,RF,10NH,2%,1.3A,.0 6OHM,CER,4.7GHZ SRF,SM,10NH, 0402	L3159M22	2414032F39	IDCTR,WW,270NH,10%,280 MA,1OHM,CER,40 Q,800MHZ SRF,SM,PB-FRE	L6505M6	2471678H01	IDCTR,10UH,20%,FERR,10 UH INDCUTOR	L759M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP
L2604M13	24010062004	IDCTR,RF,10NH,2%,1.3A,.0 6OHM,CER,4.7GHZ SRF,SM,10NH, 0402	L500M21	2415429H43	IDCTR,WW,220NH,5%,300 MA,2.1OHM,CER,SM,0603, CHIP	L701M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP	L765M7	2415427H28	IDCTR,WW,18NH,5%,420M A,CER,SM,0402,CHIP
L3100M22	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	L501M21	24012011026	IDCTR,WW,18NH,2%,900M A,.12OHM,CER,3.55GHZ SRF,SM,0402 HI Q	L702M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP	L775M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP
L3101M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L503M21	2414017N24	IDCTR,CHIP,100NH,5%,300 MA,2OHM,CER,15 Q,700MHZ SRF,SM,0603,P	L709M7	2475122C26	IDCTR,12UH,5%,300MA,.07 OHM,CER,4 TURNS,SM,IND, MULTI-LAYE	L778M7	2415427H24	IDCTR,WW,13NH,5%,440M A,CER,SM,0402,CHIP
L3102M22	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE	L504M21	2478057A51	CHIP INDUC-TOR,RF,270NH,2%,SM,060 3 HI Q CHIP IDCTR	L720M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M1	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR
L3106M22	2478057A23	IDCTR,18NH,2%,.066OHM,CER,41 Q,3.3GHZ SRF,PCMT,18 NH SUR	L513M21	2415429H21	IDCTR,WW,22NH,5%,700M A,.19OHM,CER,SM,0603,C HIP	L727M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M101M12	39012039001	CONN,CMPSRN,3CONT,ST ,CONNECTOR, BAT CON-TACT, WWP
L3112M22	2415428H03	IDCTR,AW,3.85NH,2%,1.6A ,AIR,SM,AIR WOUND IDCTR	L550M21	24009331029	IDCTR,WW,15NH,5%,600M A,SM,IDCTR,WW,15NH,5%, 600MA,SM,060	L728M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP	M1301M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
L3119M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L601M19	2415429H43	IDCTR,WW,220NH,5%,300 MA,2.1OHM,CER,SM,0603, CHIP	L729M7	2415427H24	IDCTR,WW,13NH,5%,440M A,CER,SM,0402,CHIP	M1302M3	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
L3125M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L602M19	2466505A01	CHIP INDUC-TOR,CHIP,10UH,5%,150MA ,FERR,0 AWG,SM,PB-FREE	L733M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M2	1171905B02	ADHES,WHT,WHT I SHAPE UNDERFILM COR
L3126M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L603M19	2466505A01	CHIP INDUC-TOR,CHIP,10UH,5%,150MA ,FERR,0 AWG,SM,PB-FREE	L735M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M2533M6	3987977Y04	CONT,CONN,1CONT,ANT UNIV 4.5MM,UC 1.8
L3134M22	2414032F41	IDCTR,WW,390NH,10%,200 MA,1.5OHM,CER,40 Q,730MHZ SRF,SM,PB-F	L604M19	2414032D16	IDCTR,WW,120NH,5%,800 MA,26OHM,CER,42 Q,1GHZ SRF,SM,PB-FREE	L738M7	24012100001	IDCTR,FXD,2.2UH,10%,15 MA,35 Q,50MHZ SRF,SM,IDCTR,2.2UH,1	M6502M6	0985888K02	BATTERY CONNEC-TOR,SKT,NI,LEAP
						L739M7	2415429H47	IDCTR,WW,390NH,5%,100 MA,CER,SM,CHIP	MAKO_AD _TRIGM6	TPSM0_381	TEST POINT
									MAKO_IN T_MICMM 6	TPSM0_381	TEST POINT
									MAKO_IN T_MICPM6	TPSM0_381	TEST POINT
									MAKO_IN T_XM6	TPSM0_381	TEST POINT

Ref. Des.	Part Number	Description
MAKO_RE SET_XM6	TPSM0_381	TEST POINT
MIC_BIAS M6	TPSM0_50	TEST POINT .020 DIA
MPU_IO_1 2M6	TPSM0_381	TEST POINT
OMAP_TE MP_TPM6	TPSM0_50	TEST POINT .020 DIA
OMAP_VP PM6	TPSM0_381	TEST POINT
Q1101M11	4813973A32	XSTR,BIP GP SS,NPN,SM,SC- 70,SMT,50V,.202W,100MA, PB-FREE
Q1103M11	4813970A59	XSTR,FET GP PWR,P- CH,ENHN,SM,SOT- 23,20V,.4W,PB-FREE
Q1601M16	48012094001	XSTR,FET RF POWER,SM,25V,MOD,XST R,FET RF PWR, 135- 941MH
Q1920M20	4813973A32	XSTR,BIP GP SS,NPN,SM,SC- 70,SMT,50V,.202W,100MA, PB-FREE
Q1922M20	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT- 563,SMT,-30V,.357W,- 100MA,100MHZ
Q201M12	4813970A59	XSTR,FET GP PWR,P- CH,ENHN,SM,SOT- 23,20V,.4W,PB-FREE
Q202M12	4813973A32	XSTR,BIP GP SS,NPN,SM,SC- 70,SMT,50V,.202W,100MA, PB-FREE
Q2202M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC- 59,SC- 59,SMT3,50V,100MA,250M HZ
Q2537M6	4888795V06	XSTR,FET GP PWR,MOS- FET,SM,SMT,20V,.25W,LEA D-FREE

Ref. Des.	Part Number	Description
Q2547M6	4888795V06	XSTR,FET GP PWR,MOS- FET,SM,SMT,20V,.25W,LEA D-FREE
Q2601M13	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q3123M22	4871915M01	XSTR,BIP RF SML SGNL,NPN,SC- 75A,SMT,12V,.1W,100MA,4. 5GHZ,XST
Q3128M22	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q3156M22	4871915M01	XSTR,BIP RF SML SGNL,NPN,SC- 75A,SMT,12V,.1W,100MA,4. 5GHZ,XST
Q3161M22	4815055H01	XSTR,GEN PURPOSE SMALL SIG,NPN AND PNP,UMC5NT2G,SM,50V,10 0A
Q4001M2	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC- 59,SC- 59,SMT3,50V,100MA,250M HZ
Q601M19	4813973A04	XSTR,BIP GP SS,NPN,TA13,SM,SOT- 23,SMT,30V,.225W,300MA,1 25MHZ,P
Q6101M6	4815261H01	XSTR,BIP GP SS,NPN,DTC114Y,SC- 59,SC- 59,SMT3,50V,100MA,250M HZ
Q6401M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W
Q6501M6	4813970A62	XSTR,FET GP PWR,MOS- FET,P-CH,ENHN,CF,- 20V,1.3W,PB-FREE
Q6502M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,- 20V,.5W,FET

Ref. Des.	Part Number	Description
Q6504M6	4809579E77	XSTR,FET GP SS,MOS- FET,N- CH,SM,30V,1.2X1.2MM PKG W18 COMP
Q6505M6	4813970A62	XSTR,FET GP PWR,MOS- FET,P-CH,ENHN,CF,- 20V,1.3W,PB-FREE
Q6506M6	4809579E77	XSTR,FET GP SS,MOS- FET,N- CH,SM,30V,1.2X1.2MM PKG W18 COMP
Q6507M6	48012170001	XSTR,FET GP PWR,N,SM,SMT,20V,.15W
Q6508M6	48012154001	XSTR,FET GP PWR,P,SM,SMT,- 20V,.5W,FET
Q731M7	4885061Y01	XSTR,BIP RF SMALL SIG- NAL
Q745M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT- 563,SMT,-30V,.357W,- 100MA,100MHZ
Q756M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM, SOT-343,3.3V,TRANSITO
Q767M7	4813973M75	XSTR,BIP GP SS,PNP,BC858,SOT- 563,SMT,-30V,.357W,- 100MA,100MHZ
Q774M7	4805585Q32	XSTR,BIP RF SML SGNL,NPN,NE662M04,SM, SOT-343,3.3V,TRANSITO
Q785M7	4889394V04	XSTR,FET GEN PURPOSE SMALL SIG,MOSFET,N- CH,ENHN,SM,20V,.25W,P
R1101M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1102M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1103M11	6009259001	RES,SHUNT,.02OHM,.33W, SMD,LOW RESISTANCE THK FLM RES
R1104M11	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE

Ref. Des.	Part Number	Description
R1105M11	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R1106M11	0613952Q21	RES,MF,6.8OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1107M11	0613952Q45	RES,MF,68OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1108M11	0613952N81	RES,MF,68.1KOHM,1%,.06 25W,SM,0402,200PPM/ CEL,PB-FREE
R1110M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1112M11	0613952Q42	RES,MF,51OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1114M11	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R1115M11	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R1116M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1117M11	0613952R22	RES,MF,75KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1121M11	0613952N47	RES,MF,30.1KOHM,1%,.06 25W,SM,0402,200PPM/ CEL,PB-FREE
R1122M11	0613952N85	RES,MF,75KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1124M11	0613952Q42	RES,MF,51OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1125M11	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R1126M11	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1127M11	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R1128M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1135M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1136M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1137M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1138M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1139M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1140M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1141M11	0613952R42	RES,MF,510KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1142M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1143M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1144M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1145M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1146M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1151M11	0613952R05	RES,MF,15KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1152M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R1154M11	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1158M11	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1160M11	0613952R03	RES,MF,12000,5,.0625,SM, 0402,200,PB-FREE
R1162M11	0613952R29	RES,MF,150KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1163M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1164M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1165M11	0613952Q56	RES,MF,200OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1166M11	0613952Q56	RES,MF,200OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1167M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1168M11	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R1169M11	0613952P52	RES,MF,340KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1170M11	0613952N88	RES,MF,80.6KOHM,1%,.06 25W,SM,0402,200PPM/ CEL,PB-FREE
R1171M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1172M11	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R1174M11	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1175M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R1176M11	0613952M01	RES,MF,1KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1177M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1178M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1180M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1182M11	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1198M11	0613952J01	RES,MF,10KOHM,5%,.1W,S M,0603,200PPM/CEL,PB- FREE
R1202M11	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1301M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1302M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1303M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1304M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1305M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1306M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1307M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1308M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1309M3	0613952Q50	RES,MF,110OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1310M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1311M3	0613952Q50	RES,MF,110OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R1312M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1313M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1314M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1315M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1316M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1317M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1318M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1319M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1320M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1321M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1322M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1323M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1324M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R1325M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1326M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1327M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1328M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R1329M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R1330M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R1331M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1332M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1333M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1337M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1338M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1340M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1601M16	0613952Q96	RES,MF,9.1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1602M16	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1603M16	0613952R23	RES,MF,82KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1604M16	0613952R13	RES,MF,33KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1605M16	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1606M16	0613952H53	RES,MF,150OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R1651M16	0613952Q57	RES,MF,220OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1652M16	0613952Q57	RES,MF,220OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1653M16	0613952Q34	RES,MF,24OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1900M20	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R1906M20	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1907M20	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1908M20	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1909M20	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1910M20	0613952Q96	RES,MF,9.1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1911M20	0613952Q96	RES,MF,9.1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1921M20	0613952R22	RES,MF,75KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1922M20	0613952R27	RES,MF,120KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1923M20	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1924M20	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1925M20	0613952Q11	RES,MF,2.7OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1935M20	0613952Q75	RES,MF,1.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R1936M20	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R1970M20	0613952Q25	RES,MF,10.5,.0625,SM,0402,200,PB-FREE
R1972M20	0613952Q25	RES,MF,10.5,.0625,SM,0402,200,PB-FREE
R1M2	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE

Ref. Des.	Part Number	Description
R2	0613952Y66	RES,MF,0OHM,5%,.05W,SM,0201,,PB-FREE
R20	0613952Y66	RES,MF,0OHM,5%,.05W,SM,0201,,PB-FREE
R200M12	0613952G67	RES,MF,0,1,.1,SM,0603,PB-FREE
R201M12	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R202M12	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2104M2	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2105M2	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2106M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2107M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2109M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R2110M2	0613952Q33	RES,MF,22,5,.0625,SM,0402,200,PB-FREE
R2111M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R2113M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R2114M2	0613952Q33	RES,MF,22,5,.0625,SM,0402,200,PB-FREE
R2115M2	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R2116M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2117M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2118M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2120M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2197M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2198M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2199M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R21M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2201M2	0613952R32	RES,MF,200KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2204M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2206M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2207M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2235M2	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2244M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2245M2	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE
R2246M2	0613952Q73	RES,MF,1KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2254M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2255M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2256M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2257M2	0613952Q66	RES,MF,510OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R22M2	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2356M2	0613952Q09	RES,MF,2.2OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2357M2	0613952Q09	RES,MF,2.2OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2358M2	0613952Q66	RES,MF,510OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2359M2	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2360M2	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2361M2	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2362M2	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R2363M2	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2364M2	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R2401M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2404M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2405M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2406M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2407M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2408M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2412M3	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R2414M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2416M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2418M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2419M3	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R2433M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2434M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2435M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R2436M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2437M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2441M3	0613952Q41	RES,MF,47OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2442M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2443M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2444M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2449M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2450M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2451M3	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R2452M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2453M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2454M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2455M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2456M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2457M3	0613952R05	RES,MF,15KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2458M3	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R2459M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2460M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2461M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2465M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2466M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2467M3	0613952Q32	RES,MF,20OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2469M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2470M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R2471M3	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2472M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2473M3	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2474M3	0613952R35	RES,MF,270000,5,.0625,SM ,0402,200,PB-FREE
R2475M3	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2476M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2477M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2478M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2479M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2480M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2481M3	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R2484M3	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2485M3	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2486M3	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R2487M3	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R2488M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2489M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2490M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2491M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2492M3	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2493M3	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2495M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2496M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2497M3	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2501M6	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2503M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2505M6	0613952Q75	RES,MF,1.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2507M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2508M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2509M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2511M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R2512M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2513M6	0613952Q80	RES,MF,2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2514M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2515M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2516M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2517M6	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2519M6	0613952H25	RES,MF,10OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2522M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE
R2523M6	0613952R74	RES,MF,10MOHM,5%,.0625W,SM,0402,400PPM/CEL,PB-FREE
R2524M6	0613952R49	RES,MF,1MOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2529M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE
R2530M6	0613952P30	RES,MF,200000,1,.0625,SM,0402,200,PB-FREE
R2560M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2601M13	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R2602M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2603M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE
R2604M13	0613952H47	RES,MF,82OHM,5%,.1W,SM,0603,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R2605M13	0613952G67	RES,MF,0,1,.1,SM,0603,PB-FREE
R2606M13	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2803	0613952Q37	RES,MF,33OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2804	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2805	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2806	0613952Q59	RES,MF,270OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2807	0613952Q56	RES,MF,200OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2808	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R2810	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2811	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R2812	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2813	0613952R25	RES,MF,100KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R2817	0613952Q41	RES,MF,47OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3101M22	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R3103M22	0613952Q31	RES,MF,18OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3105M22	0613952Q60	RES,MF,300OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R3106M22	0613952Q60	RES,MF,300OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3107M22	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3108M22	0613952Q38	RES,MF,36OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3109M22	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3114M22	0613952R11	RES,MF,27KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3118M22	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R3127M22	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE
R3146M22	0613952Q95	RES,MF,8.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3149M22	0613952Q95	RES,MF,8.2KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3158M22	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3159M22	0613952Q45	RES,MF,68OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R3160M22	0613952Q53	RES,MF,150OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R4005M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R4006M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R4007M2	0613952R01	RES,MF,10KOHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R4008M2	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R4009M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R4010M2	0613952R32	RES,MF,200KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R4011M2	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R4012M2	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R4013M2	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R4014M2	0613952Q85	RES,MF,3.3KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R500M21	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R502M21	0613952Q36	RES,MF,30OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R512M21	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R525M21	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R526M21	0613958J74	RES,MF,0OHM,5%,.125W,SM,0805,PB-FREE
R601M19	0613952Q41	RES,MF,47OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R602M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R603M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R604M19	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R605M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R606M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R607M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R608M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R609M19	0613952Q81	RES,MF,2200,5,.0625,SM,0402,200,PB-FREE
R6101M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6102M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6103M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6104M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6105M6	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6106M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6107M6	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6108M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6109M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R610M19	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6110M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6111M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6112M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6113M6	0613952Q51	RES,MF,120,5,.0625,SM,0402,200,PB-FREE
R6114M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6115M6	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R6116M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6117M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6118M6	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R6119M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R611M19	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6120M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6121M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6122M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6125M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R612M19	0613952Q94	RES,MF,7.5KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R613M19	0613952Q82	RES,MF,2.4KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R614M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R615M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R616M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R617M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R618M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R619M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6204M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6205M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6206M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6207M6	0613952R25	RES,MF,100KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6208M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6209M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R620M19	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R6210M6	0613952Q89	RES,MF,4700,5,.0625,SM,0402,200,PB-FREE
R6211M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6212M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6213M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6215M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6217M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6218M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R621M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R623M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R624M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6301M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6304M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6306M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6310M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6311M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6312M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6313M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6314M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6316M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6401M6	0613952R18	RES,MF,51KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6402M6	0613952R32	RES,MF,200KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6404M6	0613952Q81	RES,MF,2200,5,.0625,SM,0 402,200,PB-FREE
R6405M6	0613952Q75	RES,MF,1.2KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6406M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6410M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6411M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6416M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6417M6	0613952Q61	RES,MF,330OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6419M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6420M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6421M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6422M6	0613952Q51	RES,MF,120,5,.0625,SM,04 02,200,PB-FREE
R6423M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6425M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6426M6	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R6427M6	0613952R11	RES,MF,27KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6428M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6429M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6430M6	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE
R6431M6	0613952Q81	RES,MF,2200,5,.0625,SM,0 402,200,PB-FREE
R6492M6	0613952Q79	RES,MF,1800,5,.0625,SM,0 402,200,PB-FREE
R6501M6	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE
R6502M6	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE
R6503M6	0613952Q25	RES,MF,10,5,.0625,SM,040 2,200,PB-FREE
R6504M6	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE
R6505M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6506M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6507M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6508M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6509M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6510M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6511M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6512M6	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6513M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R6514M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R6515M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6516M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6517M6	0613952Q63	RES,MF,390OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6518M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6519M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R6520M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6521M6	0615049H01	RES,MF,.2OHM,1%,.5W,120 6,KAMAYA 0.2 OHM CHIP RES
R6522M6	0613952M66	RES,MF,4.75KOHM,1%,.06 25W,SM,0402,200PPM/ CEL,PB-FREE
R6523M6	0613952R09	RES,MF,22000,5,.0625,SM, 0402,200,PB-FREE
R6524M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6525M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6526M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6527M6	0613952N87	RES,MF,78.7KOHM,1%,.06 25W,SM,0402,200PPM/ CEL,PB-FREE
R6528M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6529M6	0615049H01	RES,MF,.2OHM,1%,.5W,120 6,KAMAYA 0.2 OHM CHIP RES
R6530M6	0613952L30	RES,MF,200OHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6531M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6532M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6533M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6534M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6535M6	0613952N01	RES,MF,10KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6536M6	0613952Z72	RES,MF,91KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6537M6	0613952P09	RES,MF,121KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6538M6	0613952Q95	RES,MF,8.2KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6539M6	0613952P66	RES,MF,475KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6540M6	0613952P66	RES,MF,475KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6541M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6542M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6543M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6544M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6545M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6546M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6547M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R6548M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6550M6	0613952Z64	RES,MF,39KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6551M6	0613952Z62	RES,MF,33KOHM,1%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6552M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6558M6	0613952P22	RES,MF,165KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6561M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6562M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6563M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6564M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6565M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6566M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6567M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6568M6	0613952P47	RES,MF,301KOHM,1%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6570M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6574M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6576M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6577M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R6578M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE

Ref. Des.	Part Number	Description
R6579M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6580M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6581M6	0613952Q49	RES,MF,100,5,.0625,SM,04 02,200,PB-FREE
R6582M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R6583M6	0613952R03	RES,MF,12000,5,.0625,SM, 0402,200,PB-FREE
R6584M6	0613952Q56	RES,MF,200OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6591M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6598M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6599M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6601M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6602M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6604M6	0613952Q51	RES,MF,120,5,.0625,SM,04 02,200,PB-FREE
R6605M6	0613952Q33	RES,MF,22,5,.0625,SM,040 2,200,PB-FREE
R6606M6	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6608M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6609M6	0613952R25	RES,MF,100KOHM,5%,.062 5W,SM,0402,200PPM/ CEL,PB-FREE
R6616M6	0613952Q80	RES,MF,2KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE

Ref. Des.	Part Number	Description
R6617M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6618M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6619M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6621M6	0613952Q89	RES,MF,4700,5,.0625,SM,0 402,200,PB-FREE
R6622M6	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6623M6	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6624M6	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6625M6	0613952Q35	RES,MF,27OHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6626M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6701M6	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R6702M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6703M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6704M6	0613952R17	RES,MF,47000,5,.0625,SM, 0402,200,PB-FREE
R6705M6	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R6706M6	0613952Q73	RES,MF,1KOHM,5%,.0625 W,SM,0402,200PPM/ CEL,PB-FREE
R698M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE
R699M19	0613952R66	RES,MF,0OHM,5%,.0625W, SM,0402,PB-FREE

Ref. Des.	Part Number	Description
R701M7	0613952Q64	RES,MF,430OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R702M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R703M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R704M7	0613952Q25	RES,MF,10,5,.0625,SM,0402,200,PB-FREE
R705M7	0613952Q71	RES,MF,820OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R706M7	0613952Q08	RES,MF,2OHM,5%,.0625W,SM,0402,200PPM/CEL,PB-FREE
R707M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R708M7	0613952Q45	RES,MF,68OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R709M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R710M7	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R711M7	0613952Q37	RES,MF,33OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R721M7	0613952R01	RES,MF,10KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R722M7	0613952Q71	RES,MF,820OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R723M7	0613952Q79	RES,MF,1800,5,.0625,SM,0402,200,PB-FREE
R728M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R729M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE

Ref. Des.	Part Number	Description
R730M7	0613952Q79	RES,MF,1800,5,.0625,SM,0402,200,PB-FREE
R731M7	0613952Q86	RES,MF,3.6KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R736M7	0613952R66	RES,MF,0OHM,5%,.0625W,SM,0402,PB-FREE
R741M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R742M7	0613952R23	RES,MF,82KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R743M7	0613952R17	RES,MF,47000,5,.0625,SM,0402,200,PB-FREE
R744M7	0613952Q91	RES,MF,5600,5,.0625,SM,0402,200,PB-FREE
R745M7	0613952R09	RES,MF,22000,5,.0625,SM,0402,200,PB-FREE
R746M7	0613952Q36	RES,MF,30OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R747M7	0613952Q38	RES,MF,36OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R748M7	0613952Q47	RES,MF,82OHM,5%,.0625 W,SMD,0402,200PPM/CEL,CER CHIP 82.0 OHM 5%
R751M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R754M7	0613952Q69	RES,MF,680OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R757M7	0613952Q59	RES,MF,270OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R761M7	0613952Q23	RES,MF,8.2OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R762M7	0613952R08	RES,MF,20KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE

Ref. Des.	Part Number	Description
R763M7	0613952R19	RES,MF,56KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R766M7	0613952Q92	RES,MF,6.2KOHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R769M7	0613952Q31	RES,MF,18OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R771M7	0613952Q49	RES,MF,100,5,.0625,SM,0402,200,PB-FREE
R776M7	0613952Q67	RES,MF,560OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R785M7	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R799M7	0613952Q53	RES,MF,150OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R809M7	0613952Q38	RES,MF,36OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R822M7	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
R823M7	0613952Q55	RES,MF,180OHM,5%,.0625 W,SM,0402,200PPM/CEL,PB-FREE
SH1	26012246001	SHLD,STL,SN PLT,SHIELD,IF, APX CVT
SH10	26012250001	SHLD,STL,SN PLT,SHIELD,ANTSWI, APX CVT
SH11	26012258001	SHLD,STL,SN PLT,SHIELD,ABACUS, APX CVT
SH12	26012251001	SHLD,STL,SN PLT,SHIELD,PAOP, APX CVT
SH13	26012260001	SHLD,STL,SN PLT,SHIELD,DRIVER/PA, APX CVT
SH14	26012252001	SHLD,STL,SN PLT,SHIELD,ALC/DC, APX CVT
SH15	26012261001	SHLD,STL,SN PLT,SHIELD,VCO, APX CVT

Ref. Des.	Part Number	Description
SH16	26012254001	SHLD,STL,SN PLT,SHIELD,CONTROLLER/AVR, APX CVT
SH17	26012262001	SHLD,STL,SN PLT,SHIELD,MACE/MAKO, APX CVT
SH2	26012253001	SHLD,STL,SN PLT,SHIELD,MIXER, APX CVT
SH3	26012259001	SHLD,STL,SN PLT,SHIELD,GPS/BT, APX CVT
SH4	26012247001	SHLD,STL,SN PLT,SHIELD,2ND LO, APX CVT
SH5	26012255001	SHLD,STL,SN PLT,SHIELD,ALC1, APX CVT
SH6	26012248001	SHLD,STL,SN PLT,SHIELD,FGU, APX CVT
SH7	26012256001	SHLD,CAN,STL,SN PLT,SHIELD,DC, APX CVT
SH8	26012249001	SHLD,STL,SN PLT,SHIELD,TXFE, APX CVT
SH9	26012257001	SHLD,CAN,STL,SN PLT,SHIELD,RXFE, APX CVT
SPKR+M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
SPKR-M2	TPSM1_50	SINGLE PIN CONTACT TEST POINT
T506M21	2575851B01	XFMR,BALUN,RF XFMR BALUN
T507M21	2575851B02	XFMR,BALUN,25,SM,RF XFMR BALUN
TP_ATOD_8M6	TPSM0_50	TEST POINT .020 DIA
TP_MACE_NRDM6	TPSM0_50	TEST POINT .020 DIA
TP1	TPSM1_01ALT	SINGLE PIN CONTACT TEST POINT, 1.01 DIA
TP1301M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP1303M3	TPSM0_50	TEST POINT .020 DIA
TP1304M3	TPSM0_50	TEST POINT .020 DIA

Ref. Des.	Part Number	Description
TP1311M3	TPSM1_01ALT	SINGLE PIN CONTACT TEST POINT, 1.01 DIA
TP2	TPSM1_01ALT	SINGLE PIN CONTACT TEST POINT, 1.01 DIA
TP2413M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2414M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2415M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2416M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2417M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2419M3	TPSM0_50	TEST POINT .020 DIA
TP2435M3	TPSM0_50	TEST POINT .020 DIA
TP2436M3	TPSM0_50	TEST POINT .020 DIA
TP2437M3	TPSM0_50	TEST POINT .020 DIA
TP2450M3	TPSM0_50	TEST POINT .020 DIA
TP2451M3	TPSM0_50	TEST POINT .020 DIA
TP2452M3	TPSM0_50	TEST POINT .020 DIA
TP2453M3	TPSM0_50	TEST POINT .020 DIA
TP2466M3	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP2502M6	TPSM0_50	TEST POINT .020 DIA
TP3100M2	TPSM1_01ALT	SINGLE PIN CONTACT TEST POINT, 1.01 DIA
TP601M19	TPSM0_70	TEST POINT
TP603M19	TPSM0_70	TEST POINT
TP6101M6	TPSM0_50	TEST POINT .020 DIA
TP6102M6	TPSM1_50	SINGLE PIN CONTACT TEST POINT
TP6105M6	TPSM0_70	TEST POINT
TP6106M6	TPSM0_70	TEST POINT
TP6107M6	TPSM0_70	TEST POINT
TP6210M6	TPSM1_50	SINGLE PIN CONTACT TEST POINT

Ref. Des.	Part Number	Description
TP6301M6	TPSM0_50	TEST POINT .020 DIA
TP6302M6	TPSM0_381	TEST POINT
TP6303M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6304M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6305M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6306M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6307M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6308M6	TPSM1_05SQ	TESTPOINT 1.05MMSQ
TP6599M6	TPSM0_70	TEST POINT
TP6601M6	TPSM0_70	TEST POINT
TP6701M6	TPSM0_50	TEST POINT .020 DIA
TP6702M6	TPSM0_50	TEST POINT .020 DIA
TP6703M6	TPSM0_50	TEST POINT .020 DIA
TP6704M6	TPSM0_50	TEST POINT .020 DIA
TP6705M6	TPSM0_50	TEST POINT .020 DIA
TP701M7	TPSM0_70	TEST POINT
TP737M7	TPSM0_70	TEST POINT
U1101M11	5188032U43	IC,SENSING CIRCUIT,INA138,SM,SOT-23/5,1PER PKG,PB FREE
U1103M11	5185070Y01	IC,TEMP SENS
U1104M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1105M11	5180390L83	IC,CNTRLR,SM,1PER PKG
U1106M11	5175772B05	IC,LTC5532ES6,SOT-23,1PER PKG,PRCN RF DET
U1112M11	5175772B04	IC,HMC468LP3E,QFN,1 DB LSB GAAS MMIC ATTEN
U1113M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1114M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP

Ref. Des.	Part Number	Description
U1119M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1121M11	5114000B52	IC,XOR,LOGIC LEVEL SHIFTER,1PER PKG,SM,SOT-353,PB-FREE
U1125M11	5175206H01	IC,DAC,W/ 5 PPM/C INT REF
U1126M11	5109817F77	IC,COMPTR,LMV7275,SC70-5
U1127M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1128M11	5188085K11	IC,NAND,SINGLE 2 INPUT,SN74LVC1G00YZPR,SM,GATE, POS, 5 DSBGA,
U1129M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
U1130M11	5175143H01	IC,WIDE SPLY RANGE OP AMP
U1131M11	5109817F77	IC,COMPTR,LMV7275,SC70-5
U1132M11	5114007M28	IC,D FLIP-FLOP,1PER PKG,17SZ74,N-I,SM,SOIC8,PB-FREE
U1133M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1136M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1137M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U1138M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U1139M11	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI

Ref. Des.	Part Number	Description
U1141M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1142M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1143M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1144M11	5171779H01	IC,ANLG SW,SC70,SC70-6,1PER PKG,SPDT ANLG SW
U1146M11	5109522E93	GATE,OR,SN74LVC1G32YZPR,1PER PKG,SM,2 INPUT IN NANO PKG
U1147M11	5109522E94	GATE,AND,1PER PKG,SM,2 INPUT IN NANO PKG
U1148M11	5185941F56	IC,OP AMP,1PER PKG,RAIL-RAIL,SOIC,IC SNGL LV LP OP AMP
U1149M11	5109522E93	GATE,OR,SN74LVC1G32YZPR,1PER PKG,SM,2 INPUT IN NANO PKG
U1150M11	51009381001	IC,MICROPOWER SOT-23 V REF
U1301M3	51007377001	IC,XCVR,NL5500,BGA,BLUETOOTH, GPS, FM RX, FM TX
U1304M3	51007599001	AMP,20.0DB,1.58GHZMIN,1.58GHZMAX,SLCN GERMANIUM GPS LOW NOISE AM
U1305M3	5187344N09	IC,LNR V REGLTR,FXD,2.8V,100MA,LOW NOISE
U1334M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U1335M3	5102836C11	IC,ANLG SW,FSA4157,SM,SPDT,PB FREE
U1601M16	5175143H01	IC,WIDE SPLY RANGE OP AMP

Ref. Des.	Part Number	Description
U1602M16	51012101001	IC,SM,VHF/UHF/800/900 MHz LDMOS DRVR IC
U1932M20	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM, SMT,6V,380W,80A,14MHZ,TR
U200M12	5188493T01	IC,VREG/SWG,LP2989,SM,MINISO-8 HI PRCN REG 5V
U201M12	5175771A99	IC,LNR V REGLTR,FXD,100MA,VFBGA,LOW NOISE, 100MA LINEAR REGL
U202M12	5175772B02	IC,LNR V REGLTR,FXD,1.8V,100MA,VFBGA,LINEAR REGLTR 100MA 1.8
U203M12	5175772B01	IC,LNR V REGLTR,FXD,1.5V,350MA,VFBGA,LINEAR V REGLTR 350MA
U2101M2	5109522E84	IC,DL SCHK TRIG MICRO PAK
U2102M2	5109522E84	IC,DL SCHK TRIG MICRO PAK
U2202M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U2205M2	5188682Y01	IC,POWER DRIVER,40MA,SM,RGB LED, I2C CONTORL, LLP PKG
U2402M3	51002923001	IC,LNR V REGLTR,3.3V LP2989,NOPB
U2403M3	51009735001	IC,RCVR,QFN,IC, RCVR, ONE-CHAN, QFN, LF WAKE-UP
U2406M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2407M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI

Ref. Des.	Part Number	Description
U2408M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2409M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2410M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2411M3	5175856M01	IC,INVTR,0MHZMAX,DL INVTR
U2412M3	5114007M45	IC,NOR,1PER PKG,SOT-353,PB-FREE
U2413M3	51007645001	IC,SDRAM,128MB,8 MEG X 16,6NS,SM,64MSRFRSH,IC,SDRAM,128MBIT,8
U2414M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2415M3	51009372001	IC,UCNTR,IC UCNTR AT32UC3A0512
U2416M3	51009669001	IC,SENSOR,SM,IC, ACCELEROMETER, MOTION SENSOR
U2473M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2478M3	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U2510M6	5185912Y03	IC,MICROP,BGA,CRYPTOGRAPHIC PROCESOR,IC,CRYPTOGRAPHIC P
U2525M6	5171339H01	IC,MC78LC18,MICROPOWER V REGLTR
U2526M6	5171988H01	IC,COMPTR,CMOS COMPTR
U2601M13	5103535B53	IC,INVTR,DL,NC7WZ04L6X,2PER PKG,SC70

Ref. Des.	Part Number	Description
U2602M13	5185941F45	ATTEN,VAR,14.4DBMIN,15.6DBMAX,0-2000 MHZ-FREQ,50OHM,PCMT,SOT-25
U3001M22	5171972L01	IC,SW,SP3T RF SW
U4001M2	5164852H47	IC,XLTR,2PER PKG,TSSOP8,IC, I2C LEV XLTR
U4003M2	5188691V01	IC,MUX/DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE
U4004M2	5116783H01	IC,ANLG SW,SN74LVC2G66YZPR,SM,2PER PKG,0CHANNELS,BILATERAL,DL
U507M21	5164015H81	IC,MXR,SM
U601M19	5102495J14	IC,IF,IF DIGITILIZING SUBSYSTEM IC,AD9864,QFN
U602M19	4885316E32	XSTR,BIP RF SML SGNL,SLCN,BFR380F,SM, SMT,6V,380W,80A,14MHZ,TR
U603M19	5109522E84	IC,DL SCHK TRIG MICRO PAK
U604M19	5109522E84	IC,DL SCHK TRIG MICRO PAK
U605M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U606M19	5164852H16	IC,TRANSLATING,2PER PKG,LVC2T45,TRANSCIEVER W/VOLTAGE TRANSLATI
U607M19	5186311J24	IC,BFR,1PER PKG,NC7SZ125,ACTIVE HIGH,BFR,3ST,SM,5.5
U6101M6	0180706J18	IC,PGM,PGM CPLD
U6102M6	5188691V01	IC,MUX/DEMUX,NC7SB3157P6X,SM,SC70-6,1PER PKG,BUS,PB FREE

Ref. Des.	Part Number	Description
U6103M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6104M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6105M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6201M6	5185941F26	IC,COMPTR,LMV7219,SM, SOT-23/5,IC,LM7219,COMPATOR,NOPB
U6301M6	51012031001	IC,SDRAM,32MB,16 MEG X16,6.5NS,VFBGA,64MSRFRSH,32MB DIE SHRIN
U6302M6	5102495J13	IC,MICROP,P1710ZZGE,BGA,12MHZ,32BITS
U6304M6	0105955U25	ASSY,ASSY,ASSY,IC,BGA SPEC PROG, FLSH MEM
U6402M6	5115453H01	IC,OP AMP,2PER PKG,RAIL TO RAIL OUTPUT, 8 PIN BGA
U6404M6	5175772B38	IC,IC ANLG TEMP SENSOR
U6405M6	5188348V06	IC,AUDIO CODEC,SM,AUDIO CODEC
U6408M6	5188521T01	IC,VREF,SM,SOT23,1PER PKG,.5%,1.25 TO 13.75,PRCN BANDGAP ADJUS
U6409M6	51009000001	IC,COMPTR,SC70,NANOPOWER, 1.8V, SC70 COMPTR
U6501M6	5185143E77	IC,CUST,BGA,IC, MAKO ASIC, CMOS PWR MGMT
U6502M6	4871987H01	XSTR,BIP GP POWER,12V,1A,LOW FREQ XSTR
U6503M6	5171674H01	IC,OP AMP,SO-8,OP AMP
U6504M6	5171682H01	IC,DC TO DC CONVERTER,800MA BUCK REGLTR
U6505M6	5189631P01	IC,0PER PKG,SYNC STEP-DOWN CONV
U6506M6	5184790Y04	IC,LINEAR VOLTAGE REGULATOR,400MA

Ref. Des.	Part Number	Description
U6507M6	5171682H01	IC,DC TO DC CON- VERTER,800MA BUCK REGLTR
U6508M6	51009366001	IC,LNR V REGLTR,LLP6,500MA LOW DROPOUT CMOS LINEAR REG
U6509M6	5175114H01	IC,SNGL AND GATE MICROPAK
U6510M6	5114007A47	IC,OR,17SZ32,1PER PKG,SOT-353,PB FREE
U6511M6	5171339H01	IC,MC78LC18,MICROPO- WER V REGLTR
U6601M6	5175114H01	IC,SNGL AND GATE MICROPAK
U702M7	5164015H28	IC,CUST,MULTI PROTO- COL/BAND TRANSCVR IC,SM,BGA,TRIDENT, INTEG
U738M7	5171972L01	IC,SW,SP3T RF SW
U746M7	4805218N63	XSTR,GEN PURPOSE SMALL SIG,SOT- 323,BROADBAND AND XSTR
VR101M12	4813977M29	DIODE,ZEN,MBZ5250,SM,S OT-23,ZEN,PB-FREE
VR1905M2 0	4815096H01	DIODE,VCTR,10V,1SV305G ,VCTR DIODE 1SV305
VR1906M2 0	4815096H01	DIODE,VCTR,10V,1SV305G ,VCTR DIODE 1SV305
VR1907M2 0	4815096H01	DIODE,VCTR,10V,1SV305G ,VCTR DIODE 1SV305
VR1908M2 0	4815096H01	DIODE,VCTR,10V,1SV305G ,VCTR DIODE 1SV305
VR200M12	4813977M29	DIODE,ZEN,MBZ5250,SM,S OT-23,ZEN,PB-FREE
VR601M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
VR602M19	4805656W87	DIODE,VCTR, @ 15V,1SV279,SOD-523/SC- 79,SOD-523/SC-79
Y1304M3	48014600001	OSC,TCXO,26.0

Ref. Des.	Part Number	Description
Y2475M3	48009319001	OSC,VAR,SMD XTAL OSC DS0211AR
Y6501M6	93012044001	OSC,XO,24.576MHZ,SM,XT AL U SMD 5.0X3.2 24.576MHZ
Y6502M6	4809995L05	RESON,QRTZ,32.768KHZ, SM,FUND,9PF LOAD CAP,- 40DEG C MIN,85DE
Y6601M6	4802582S85	RESON,QRTZ,12MHZ,10P PM TOL,18PPM STAB,SM,FUND,AT,10PF LOAD CAP
Y701M7	4871886H01	OSC,VO,16.8 MHZ VCTXO .8PPM

Chapter 9 Debugging Fixture

This chapter contains images of APX 3000 Covert Board Debugging Fixture (P/N: 66012036001) used to debug the board.

The fixture needs to be assembled with flexes (P/N: 0104055J17, 0104055J18 and 0104052J74), front housing kit (P/N: 0104052J79) and FSTN Display with Bezel (P/N: 72012008001) for the fixture to function correctly.

9.1 Covert Board Debugging Fixture (Front)

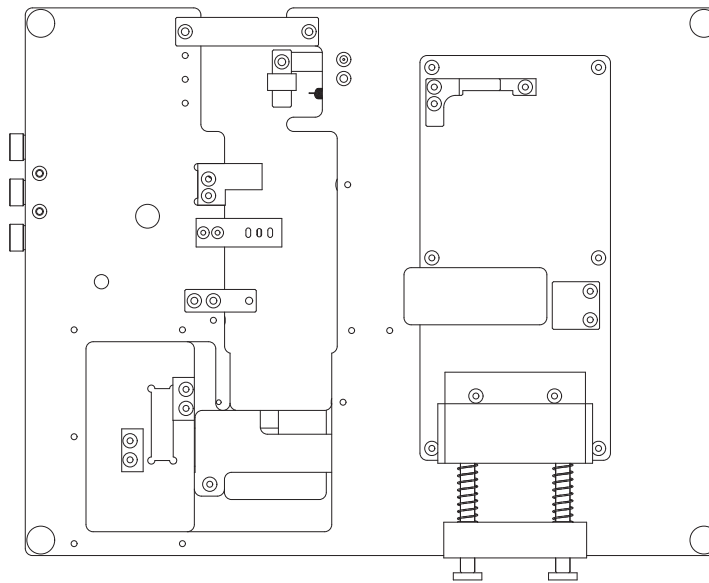


Figure 9-1. Covert Board Debugging Fixture (Front)

9.2 Covert Board Debugging Fixture (Back)

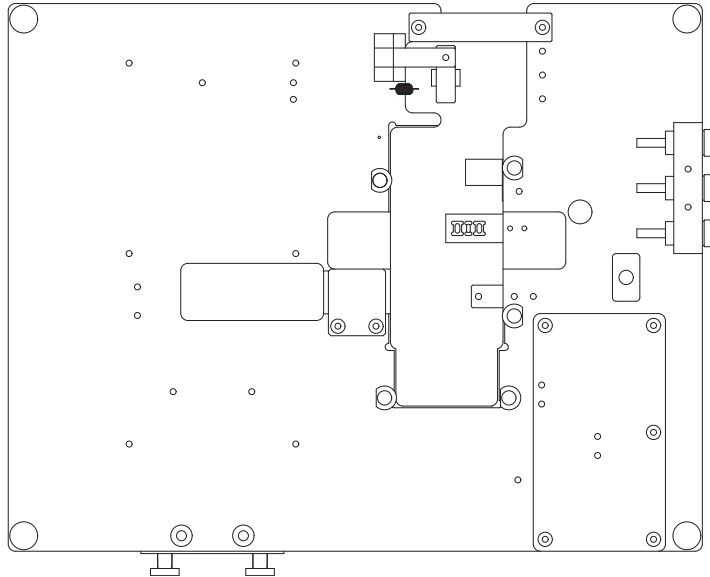


Figure 9-2. Covert Board Debugging Fixture (Back)

9.3 Covert Board Debugging Fixture with Flexes, Housing and Display (Front)

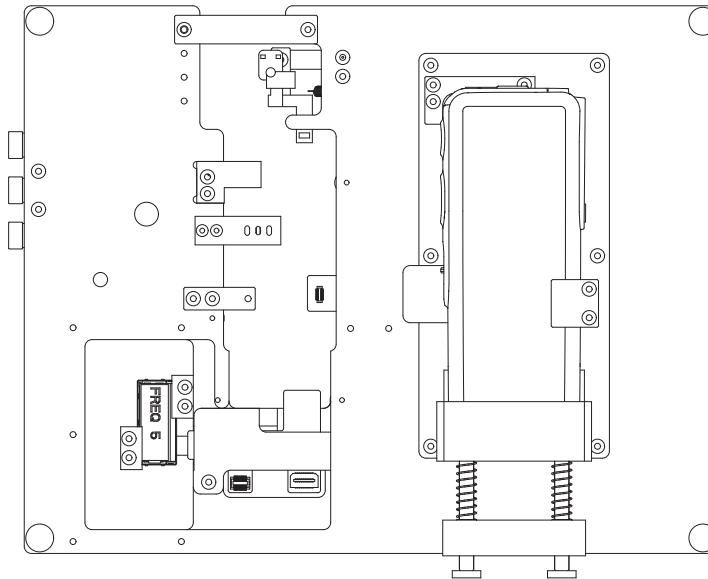


Figure 9-3. Covert Board Debugging Fixtures with Flexes, Housing and Display (Front)

9.4 Covert Board Debugging Fixture with Flexes, Housing and Display (Back)

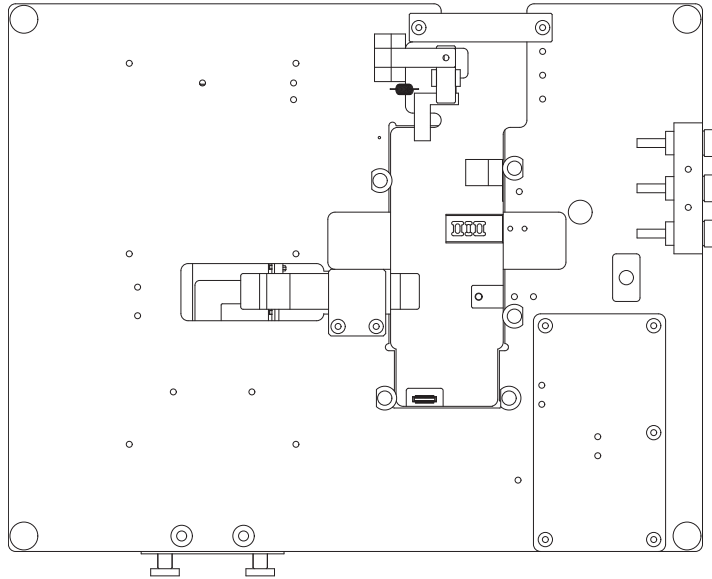


Figure 9-4. Covert Board Debugging Fixture with Flexes, Housing and Display (Back)

9.5 Debugging Fixture Set up

1. Remove the housing clamp and push down the slide clamp to assemble the front housing kit (P/N: 0104052J79) on the fixture. Once the front housing kit is on the fixture, screw back the housing clamp.

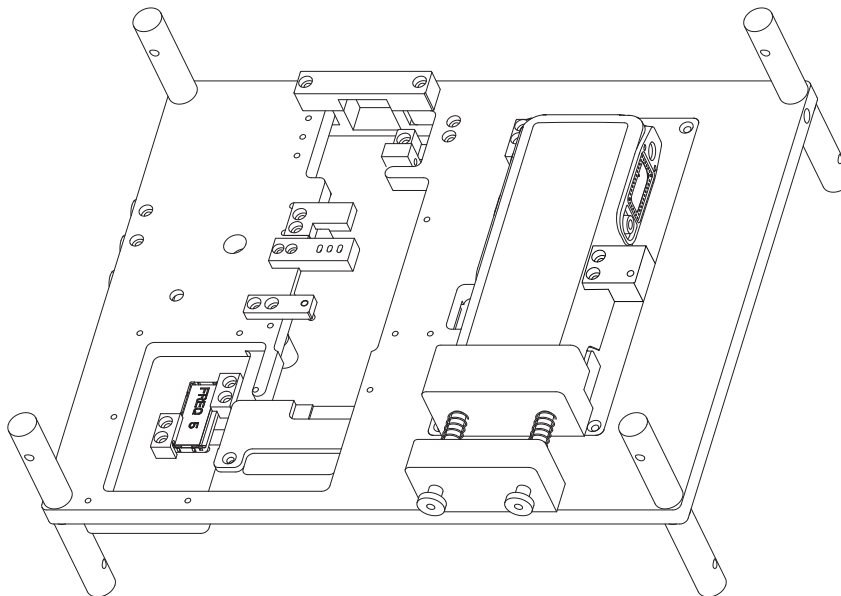


Figure 9-5. Remove the Housing Clamp

2. Remove the display clamp and then assemble the FSTN Display with Bezel (P/N: 72012008001) on the fixture. Once the FSTN Display with Bezel is on the fixture, screw back the display clamp.

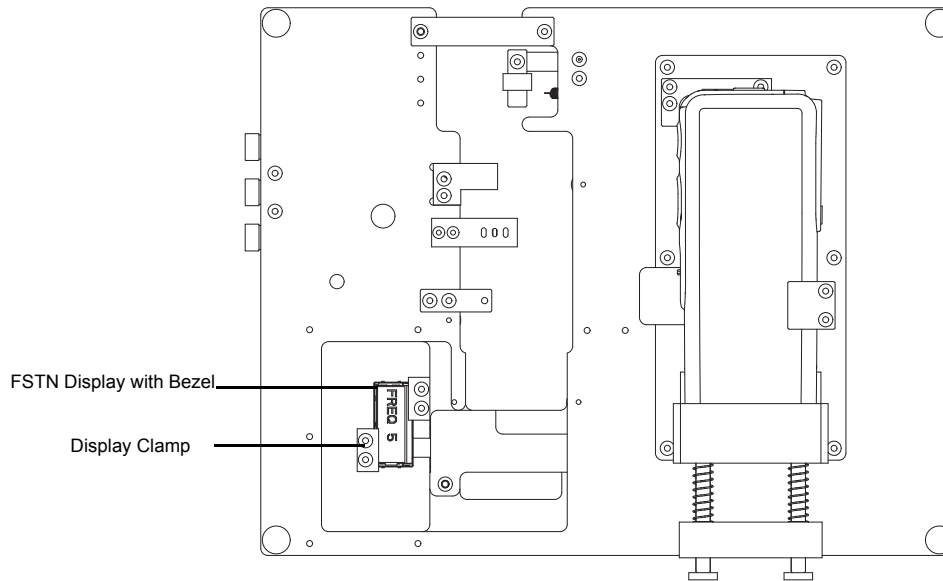


Figure 9-6. Remove the Display Clamp

3. Remove the transparent cover (1) and then assemble the Debugging Flex (P/N: 0104055J17) on the fixture. Connect the flex with the mating connector on the FSTN Display. Once the flex is connected to the FSTN Display, screw back the transparent cover (1).

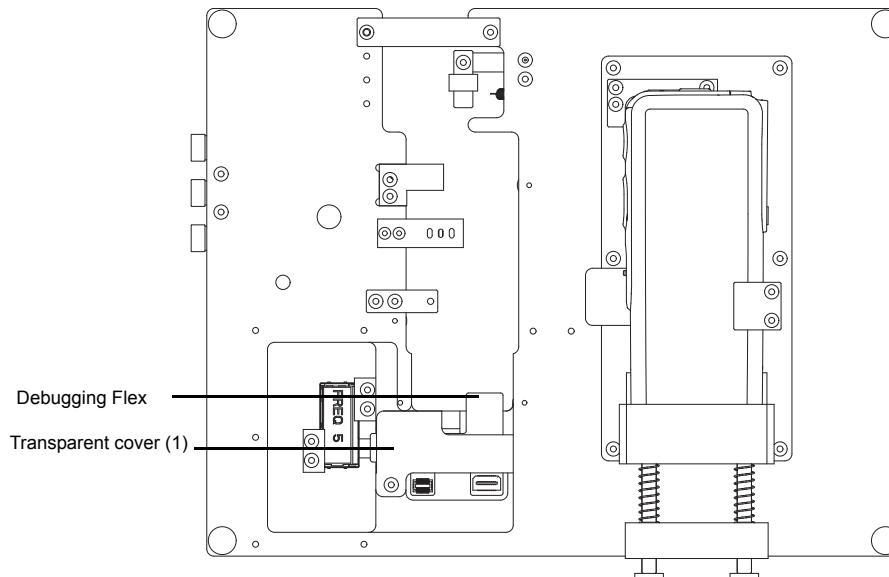


Figure 9-7. Remove transparent cover (1)

- Turn to the bottom plane of the fixture, remove the transparent cover (2) and then assemble the Extended Main flex (P/N: 0104055J18) on the fixture. Connect the connector that is on the extended flex with the mating connector on the main flex in the front housing kit . Once the flex is connected, screw back the transparent cover (2).

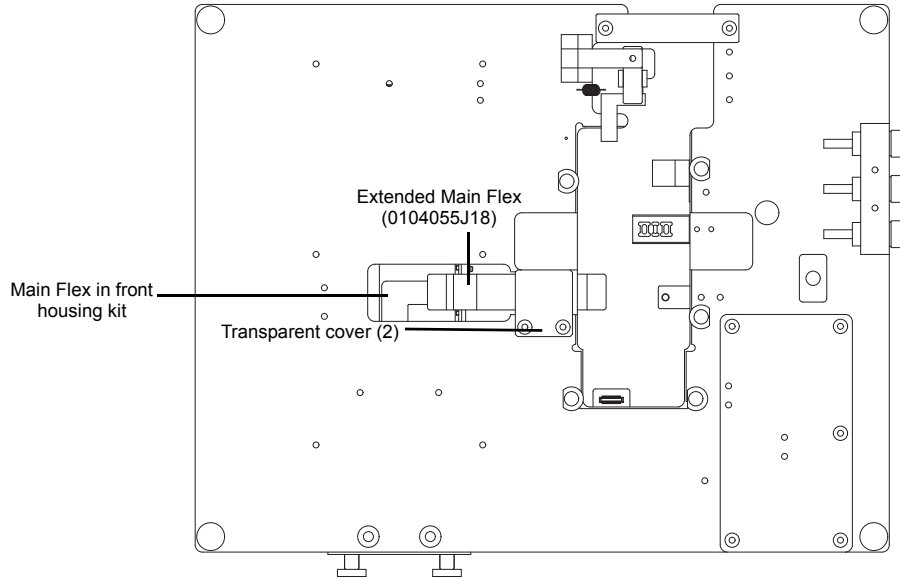


Figure 9-8. Remove transparent cover (2)

- Fold the NFC Flex (P/N: 0104052J74) according to figure below. Assemble the NFC Flex on the LED stick Module and secure the flex with a clip. Once the NFC Flex is assembled, the fixture is ready to troubleshoot the board.

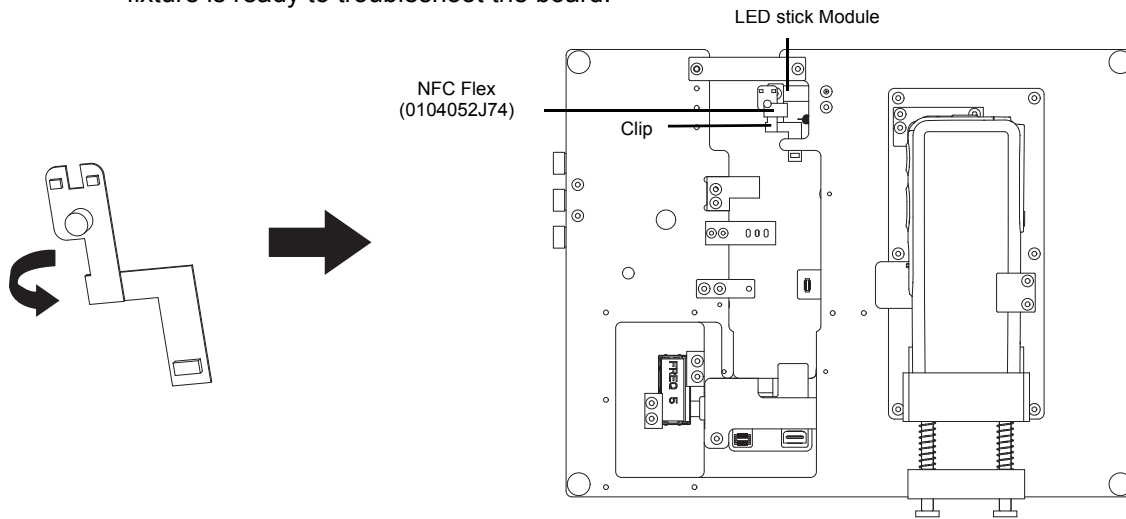


Figure 9-9. Assemble NFC Flex

9.6 Board Assembly on Debugging Fixture

1. Turn the fixture to the bottom plane and assemble the RF board on the fixture, then secure it by turning the PCB clamp. Connect the NFC flex connector and the extended flex connector to the RF board.
2. Turn the fixture to the front side and connect the connector on the debugging flex to the RF board connector. Ensure that the heat sink press plate is touching the thermal pad. Ensure the power connection bracket is pressing the battery contact and ensure the press pin is pressing on the temper switch.

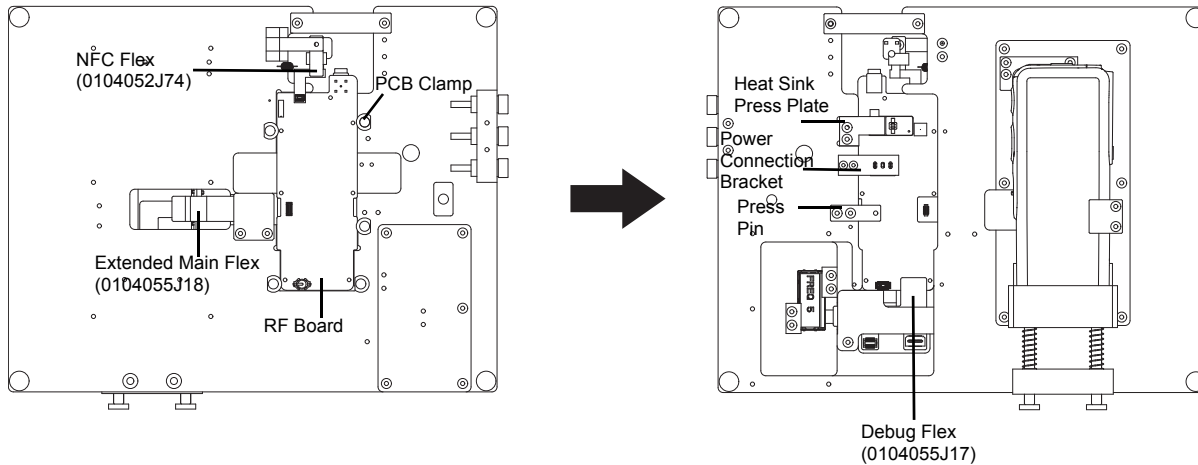


Figure 9-10. Board assembly

9.7 Powering up Covert Board

1. Connect the positive terminal to the positive side of the power supply and connect the negative terminal to the negative side. Set the power supply voltage level to 7.5V and current to 4Amps.
2. Switch on the board by using the On/Off switch.
3. A green LED will light up once the board is switched on. Use the display to observe any error message.

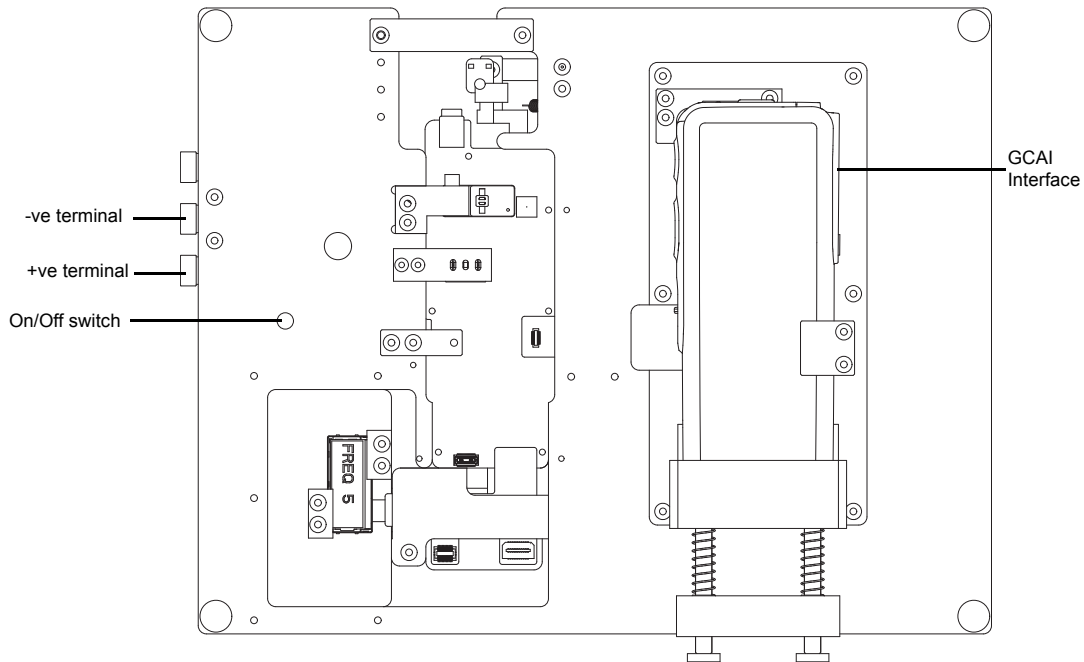


Figure 9-11. Power up Covert board

Notes

Appendix A Replacement Parts Ordering

A.1 Basic Ordering Information

When ordering replacement parts or equipment information, the complete identification number should be included. This applies to all components, kits, and chassis. If the component part number is not known, the order should include the number of the chassis or kit of which it is a part, and sufficient description of the desired component to identify it.

A.2 Transceiver Board, Controller Board and Expander Board Ordering Information

When ordering a replacement Transceiver Board, Controller Board or Expander Board, refer to the applicable Model Chart in the front of this manual. Read the Transceiver Board, Controller Board, or Expander Board note, and include the proper information with your order.

A.3 Motorola Online

Motorola Online users can access our online catalog at <http://www.motorolasolutions.com>

To register for online access, please call 1-800-422-4210 (for U.S. and Canada Service Centers only). International customers can obtain assistance at <http://www.motorolasolutions.com>

A.4 Mail Orders

Mail orders are only accepted by the US Federal Government Markets Division (USFGMD).

Motorola Solutions
7031 Columbia Gateway Drive
3rd Floor – Order Processing
Columbia, MD 21046
U.S.A.

A.5 Telephone Orders

Radio Products and Solutions Organization*
(United States and Canada)
7:00 AM to 7:00 PM (Central Standard Time)
Monday through Friday (Chicago, U.S.A.)
1-800-422-4210
1-847-538-8023 (United States and Canada)

U.S. Federal Government Markets Division (USFGMD)
1-877-873-4668
8:30 AM to 5:00 PM (Eastern Standard Time)

A.6 Fax Orders

Radio Products and Solutions Organization*
(United States and Canada)
1-800-622-6210
1-847-576-3023 (United States and Canada)

USFGMD
(Federal Government Orders)
1-800-526-8641 (For Parts and Equipment Purchase Orders)

A.7 Parts Identification

Radio Products and Solutions Organization*
(United States and Canada)
1-800-422-4210

A.8 Product Customer Service

Radio Products and Solutions Organization (United States and Canada)
1-800-927-2744

* The Radio Products and Solutions Organization (RPSO) was formerly known as the Radio Products Services Division (RPSD) and/or the Accessories and Aftermarket Division (AAD).

Glossary

This glossary contains an alphabetical listing of terms and their definitions that are applicable to ASTRO portable and mobile subscriber radio products. All terms do not necessarily apply to all radios, and some terms are merely generic in nature.

Term	Definition
A/D	<i>See analog-to-digital conversion.</i>
Abacus IC	A custom integrated circuit providing a digital receiver intermediate frequency (IF) backend.
ADC	<i>See analog-to-digital converter.</i>
ADDAG	<i>See Analog-to-Digital, Digital-to-Analog and Glue.</i>
ALC	<i>See automatic level control.</i>
analog	Refers to a continuously variable signal or a circuit or device designed to handle such signals. <i>See also digital.</i>
Analog-to-Digital, Digital-to-Analog and Glue	An integrated circuit designed to be an interface between the radio's DSP, which is digital, and the analog transmitter and receiver ICs.
analog-to-digital conversion	Conversion of an instantaneous dc voltage level to a corresponding digital value. <i>See also D/A.</i>
analog-to-digital converter	A device that converts analog signals into digital data. <i>See also DAC.</i>
automatic level control	A circuit in the transmit RF path that controls RF power amplifier output, provides leveling over frequency and voltage, and protects against high VSWR.
band	Frequencies allowed for a specific purpose.
BBP	<i>See baseband interface port.</i>
baseband interface port	Synchronous serial interface to the transceiver board used to transfer transmit and receive audio data.
BGA	<i>See ball grid array.</i>
ball grid array	A type of IC package characterized by solder balls arranged in a grid that are located on the underside of the package.
CODEC	<i>See coder/decoder.</i>

Term	Definition
codeplug	Firmware that contains the unique personality for a system or device. A codeplug is programmable and allows changes to system and unit parameters. <i>See also firmware.</i>
coder/decoder	A device that encodes or decodes a signal.
CPS	<i>See Customer Programming Software.</i>
Customer Programming Software	Software with a graphical user interface containing the feature set of an ASTRO radio.
D/A	<i>See digital-to-analog conversion.</i>
DAC	<i>See digital-to-analog converter.</i>
Data terminal equipment	Data terminal equipment; for example, a computer.
default	A pre-defined set of parameters.
digital	Refers to data that is stored or transmitted as a sequence of discrete symbols from a finite set; most commonly this means binary data represented using electronic or electromagnetic signals. <i>See also analog.</i>
digital-to-analog conversion	Conversion of a digital signal to a voltage that is proportional to the input value. <i>See also A/D.</i>
digital-to-analog converter	A device that converts digital data into analog signals. <i>See also ADC.</i>
Digital Private-Line	A type of digital communication that utilizes privacy call, as well as memory channel and busy channel lock-out to enhance communication efficiency.
digital signal processor	A microcontroller specifically designed for performing the mathematics involved in manipulating analog information, such as sound, that has been converted into a digital form. DSP also implies the use of a data compression technique.
digital signal processor code	Object code executed by the Digital Signal Processor in an ASTRO subscriber radio. The DSP is responsible for computation-intensive tasks, such as decoding ASTRO signaling.
DPL	<i>See Digital Private-Line. See also PL.</i>
DSP	<i>See digital signal processor.</i>
DSP code	<i>See digital signal processor code.</i>
DTE	<i>See Data terminal equipment.</i>
EEPOT	Electrically Programmable Digital Potentiometer.

Term	Definition
EEPROM	<i>See Electrically Erasable Programmable Read-Only Memory.</i>
Electrically Erasable Programmable Read-Only Memory	A special type of PROM that can be erased by exposing it to an electrical charge. An EEPROM retains its contents even when the power is turned off.
Embedded Multi Media Card	Type of memory used.
eMMC	<i>See Embedded Multi Media Card.</i>
FCC	Federal Communications Commission.
firmware	Code executed by an embedded processor such as the Host or DSP in a subscriber radio. This type of code is typically resident in non-volatile memory and as such is more difficult to change than code executed from RAM.
FGU	<i>See frequency generation unit.</i>
flash	A non-volatile memory device similar to an EEPROM. Flash memory can be erased and reprogrammed in blocks instead of one byte at a time.
FLASHcode	A 13-digit code which uniquely identifies the System Software Package and Software Revenue Options that are enabled in a particular subscriber radio. FLASHcodes are only applicable for radios which are upgradeable through the FLASHport process.
FLASHport	A Motorola term that describes the ability of a radio to change memory. Every FLASHport radio contains a FLASHport EEPROM memory chip that can be software written and rewritten to, again and again.
FMR	<i>See Florida Manual Revision.</i>
Florida Manual Revision	A document that provides interim updates to a publication until the entire publication can be updated and reissued.
FracN	A Motorola-proprietary, CMOS fractional-N frequency synthesizer with built-in, dual-port modulation.
frequency	Number of times a complete electromagnetic-wave cycle occurs in a fixed unit of time (usually one second).
frequency generation unit	This unit generates ultra-stable, low-phase noise master clock and other derived synchronization clocks that are distributed throughout the communication network.
GCAI	Global Connector Accessory Interface.
General-Purpose Input/Output	Pins whose function is programmable.

Term	Definition
Global Control Audio and Power IC	A mixed-signal (analog and digital) integrated circuit that provides control, audio, and voltage regulation functionality for the Controller board.
GPIO	<i>See General-Purpose Input/Output.</i>
host code	Object code executed by the host processor in an ASTRO subscriber radio. The host is responsible for control-oriented tasks such as decoding and responding to user inputs.
IC	<i>See integrated circuit.</i>
IF	Intermediate Frequency.
IMBE	A sub-band, voice-encoding algorithm used in ASTRO digital voice.
inbound signaling word	Data transmitted on the control channel from a subscriber unit to the central control unit.
integrated circuit	An assembly of interconnected components on a small semiconductor chip, usually made of silicon. One chip can contain millions of microscopic components and perform many functions.
ISW	<i>See inbound signaling word.</i>
key-variable loader	A device used to load encryption keys into a radio.
kHz	<i>See kilohertz.</i>
kilohertz	One thousand cycles per second. Used especially as a radio-frequency unit.
KVL	<i>See key-variable loader.</i>
LCD	<i>See liquid-crystal display.</i>
LED	<i>See light emitting diode.</i>
light emitting diode	An electronic device that lights up when electricity is passed through it.
liquid-crystal display	An LCD uses two sheets of polarizing material with a liquid-crystal solution between them. An electric current passed through the liquid causes the crystals to align so that light cannot pass through them.
LO	Local oscillator.
low-speed handshake	150-baud digital data sent to the radio during trunked operation while receiving audio.
LSH	<i>See low-speed handshake.</i>
Master In Slave Out	SPI data line from a peripheral to the MCU.
Master Out Slave In	SPI data line from the MCU to a peripheral.

Term	Definition
MCU	<i>See microcontroller unit.</i>
MDC	Motorola Digital Communications.
MDI	MCU/DSP Interface internal to the Patriot IC.
MHz	<i>See Megahertz.</i>
Megahertz	One million cycles per second. Used especially as a radio-frequency unit.
microcontroller unit	Also written as μC . A microprocessor that contains RAM and ROM components, as well as communications and programming components and peripherals.
MISO	<i>See Master In Slave Out.</i>
MOSI	<i>See Master Out Slave In.</i>
multiplexer	An electronic device that combines several signals for transmission on some shared medium (e.g., a telephone wire).
MUX	<i>See multiplexer.</i>
NiMH	Nickel-metal-hydride.
OMPAC	<i>See over-molded pad-array carrier.</i>
open architecture	A controller configuration that utilizes a microprocessor with extended ROM, RAM, and EEPROM.
oscillator	An electronic device that produces alternating electric current and commonly employs tuned circuits and amplifying components.
OSW	<i>See outbound signaling word.</i>
OTAR	<i>See over-the-air rekeying.</i>
outbound signaling word	Data transmitted on the control channel from the central controller to the subscriber unit.
over-molded pad-array carrier	A Motorola custom IC package, distinguished by the presence of solder balls on the bottom pads.
over-the-air rekeying	Allows the dispatcher to remotely reprogram the encryption keys in the radio.
PA	Power amplifier.
paging	One-way communication that alerts the receiver to retrieve a message.
PC Board	Printed Circuit Board. Also referred to as a PCB.
PCIC	<i>See Power Control IC.</i>

Term	Definition
phase-locked loop	A circuit in which an oscillator is kept in phase with a reference, usually after passing through a frequency divider.
PL	<i>See private-line tone squelch.</i>
PLL	<i>See phase-locked loop.</i>
Power Control IC	The power control IC is intended for closed-loop bias control of power amplifiers. The device facilitates accurate control of the current delivered to the power amplifier (PA) via a control voltage.
private-line tone squelch	A continuous sub-audible tone that is transmitted along with the carrier. <i>See also DPL.</i>
Programmable Read-Only Memory	A memory chip on which data can be written only once. Once data has been written onto a PROM, it remains there forever.
PROM	<i>See Programmable Read-Only Memory.</i>
PTT	<i>See Push-to-Talk.</i>
Push-to-Talk	The switch or button usually located on the left side of the radio which, when pressed, causes the radio to transmit. When the PTT is released, the unit returns to receive operation.
radio frequency	The portion of the electromagnetic spectrum between audio sound and infrared light (approximately 10 kHz to 10 GHz).
radio frequency power amplifier	Amplifier having one or more active devices to amplify radio signals.
RAM	<i>See random access memory.</i>
random access memory	A type of computer memory that can be accessed randomly; that is, any byte of memory can be accessed without touching the preceding bytes.
read-only memory	A type of computer memory on which data has been prerecorded. Once data has been written onto a ROM chip, it cannot be removed and can only be read.
real-time clock	A module that keeps track of elapsed time even when a computer is turned off.
receiver	Electronic device that amplifies RF signals. A receiver separates the audio signal from the RF carrier, amplifies it, and converts it back to the original sound waves.
registers	Short-term data-storage circuits within the microcontroller unit or programmable logic IC.
repeater	Remote transmit/receive facility that re-transmits received signals in order to improve communications range and coverage (conventional operation).

Term	Definition
repeater/talkaround	A conventional radio feature that permits communication through a receive/transmit facility, which re-transmits received signals in order to improve communication range and coverage.
RESET	Reset line: an input to the microcontroller that restarts execution.
RF	<i>See radio frequency.</i>
RF PA	<i>See radio frequency power amplifier.</i>
ROM	<i>See read-only memory.</i>
RPCIC	Regulator/power control IC.
RTC	<i>See real-time clock.</i>
RX	Receive.
RX DATA	Recovered digital data line.
SAP	<i>See Serial Audio CODEC Port.</i>
SCI IN	<i>See Serial Communication Interface Input Line.</i>
Serial Audio CODEC Port	SSI to and from the GCAP II IC CODEC used to transfer transmit and receive audio data.
Serial Communication Interface Input Line	A full-duplex (receiver/transmitter) asynchronous serial interface.
Serial Peripheral Interface	How the microcontroller communicates to modules and ICs through the CLOCK and DATA lines.
signal	An electrically transmitted electromagnetic wave.
Signal Qualifier mode	An operating mode in which the radio is muted, but still continues to analyze receive data to determine RX signal type.
softpot	<i>See software potentiometer.</i>
software	Computer programs, procedures, rules, documentation, and data pertaining to the operation of a system.
software potentiometer	A computer-adjustable electronic attenuator.
spectrum	Frequency range within which radiation has specific characteristics.
SPI	<i>See Serial Peripheral Interface.</i>
squelch	Muting of audio circuits when received signal levels fall below a pre-determined value. With carrier squelch, all channel activity that exceeds the radio's preset squelch level can be heard.

Term	Definition
SRAM	<i>See static RAM.</i>
SSI	<i>See Synchronous Serial Interface.</i>
Standby mode	An operating mode in which the radio is muted but still continues to monitor data.
static RAM	A type of memory used for volatile, program/data memory that does not need to be refreshed.
Synchronous Serial Interface	DSP interface to peripherals that consists of a clock signal line, a frame synchronization signal line, and a data line.
system central controllers	Main control unit of the trunked dispatch system; handles ISW and OSW messages to and from subscriber units (<i>See ISW and OSW</i>).
system select	The act of selecting the desired operating system with the system-select switch (also, the name given to this switch).
thin small-outline package	A type of dynamic random-access memory (DRAM) package that is commonly used in memory applications.
time-out timer	A timer that limits the length of a transmission.
TOT	<i>See time-out timer.</i>
transceiver	Transmitter-receiver. A device that both transmits and receives analog or digital signals. Also abbreviated as XCVR.
transmitter	Electronic equipment that generates and amplifies an RF carrier signal, modulates the signal, and then radiates it into space.
TSOP	<i>See thin small-outline package.</i>
TX	Transmit.
UART	<i>See also Universal Asynchronous Receiver Transmitter.</i>
UHF	Ultra-High Frequency.
Universal Asynchronous Receiver Transmitter	A microchip with programming that controls a computer's interface to its attached serial devices.
Universal Connector	Interface point for all accessories to the radio.
Universal Serial Bus	An external bus standard that supports data transfer rates of 12 Mbps.
USB	<i>See Universal Serial Bus.</i>
VCO	<i>See voltage-controlled oscillator.</i>
VC0B IC	Voltage-Controlled Oscillator Buffer IC.

Term	Definition
vector sum excited linear predictive coding	A voice-encoding technique used in ASTRO digital voice.
VHF	Very-High Frequency.
VIP	Vehicle Interface Port.
vocoder	An electronic device for synthesizing speech by implementing a compression algorithm particular to voice. <i>See also voice encoder.</i>
vocoder/controller	A PC board that contains an ASTRO radio's microcontroller, DSP, memory, audio and power functions, and interface support circuitry.
voice encoder	The DSP-based system for digitally processing analog signals, and includes the capabilities of performing voice compression algorithms or voice encoding. <i>See also vocoder.</i>
voltage-controlled oscillator	An oscillator in which the frequency of oscillation can be varied by changing a control voltage.
VSELP	<i>See vector sum excited linear predictive coding.</i>

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Notes



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