MM-E 2072-09333-00

SERVICE MANUAL

FOR

MICOM-Z
HF-SSB TRANSCEIVERS

Revision A

JULY 2011

WARNINGS, CAUTIONS AND NOTES

The following notations are used to place special emphasis on procedures, or to call attention to precautionary measures.

WARNING

An operating procedure, practice and so forth, which if not followed correctly, could result in personal injury, or loss of life.

CAUTION

An operating procedure, practice and so forth, which if not followed correctly, could result in damage to, or destruction of equipment.

NOTE

An operating procedure, condition and so forth, to which special attention should be paid.

GENERAL SAFETY PRECAUTIONS

WARNING - HIGH VOLTAGE

Review Micom-Z Operator Manual with respect to safety precautions, and installation and operation instructions. In particular, remember that during transmission, high RF voltages may appear at internal points of the printed circuit board, at the radio set and test station RF connectors, the antenna cable, and on the dummy load or antenna connected to the radio. *Avoid touching the antenna and the RF connectors of a radio set while it operates.*

Operating and maintenance personnel must be familiar with the applicable safety requirements before attempting to install, operate or maintain the radio set.

WARNING

The backup battery is a Lithium battery that contains dangerous chemicals. Handle and dispose of batteries according to the prescribed safety regulations. In particular, observe the following precautions:

1. Do not short-circuit the battery.
2. Do not damage battery case and do not tamper with battery in any way.
3. Do not expose to heat or flame.
4. Do not dispose of used batteries by burning.

SAFETY SUMMARY

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during various phases of operation and maintenance.

KEEP AWAY FROM LIVE CIRCUITS. Operating personnel must at all times observe all safety regulations. Do not replace components or make adjustments inside the equipment with the high voltage supply turned on. Under certain conditions, dangerous potentials may exist even when the power control is in the OFF position, due to charges retained by capacitors. To avoid casualties, always remove power and discharge and ground a circuit before touching it.

DO NOT SERVICE OR ADJUST ALONE. Under no circumstances should any person reach into the equipment enclosure for the purpose of servicing or adjusting the equipment except in the presence of someone who is capable of rendering aid.

RESUSCITATION. Personnel working with or near high voltages should be familiar with modern methods of resuscitation.

USE SAFETY APPROVED EQUIPMENT. When cleaners and primers are being applied, approved explosion-proof lights, blowers, and other equipment shall be used. Insure that firefighting equipment is readily available and in working order.

GIVE CLEANERS SPECIAL CARE. Keep cleaners in special polyethylene bottles or in safety cans and in minimum quantities. Discard soiled cleaning cloths into safety cans.

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Chapter 1

INTRODUCTION

1-1. SCOPE

This Service Manual provides the information needed to maintain Micom-Z HF-SSB radio sets in accordance with manufacturer's recommendations.

For a description of Micom-Z characteristics and capabilities, and for installation and operation procedures, refer to the Micom-Z Operator Manual, Publication OM-E 2072-09689-00. The Micom-Z Operator Manual also describes the cooling tray, available as an accessory for Micom-Z transceivers.

This Service Manual is organized as follows:

Chapter 1 **Introduction:** describes the scope and organization of the manual.

Chapter 2 **Theory of Operation:** presents the theory of operation of Micom-Z transceivers.

Chapter 3 **Maintenance:** provides test, troubleshooting and repair instructions for Micom-Z transceivers and cooling tray.

Appendix A **Schematic Circuit Diagrams:** presents the schematic circuit diagrams of the Micom-Z transceivers and the cooling tray.

Appendix B **Parts Lists**: lists and identifies the parts needed to maintain Micom-Z transceivers and the cooling tray.

To facilitate equipment maintenance, the manufacturer offers two spare parts kits:

- Recommended spare boards kit for Micom-Z dash mount version, Mfg. Cat. No. 2072-09246-00
- Recommended spare boards kit for Micom-Z trunk mount version, Mfg. Cat. No. 2072-09247-00.

It is also possible to order 4-year extended warranties, in accordance with the options installed in each transceiver:

- 4-year extended warranty for basic Micom-Z, Mfg. Cat. No. 2000-17777-90
- 4-year extended warranty for FRN8525 vocoder (FRN8529), Mfg. Cat. No. 2072-00235-00
- 4-year extended warranty for FRN8526 modem (FRN8530), Mfg. Cat. No. 2072-00236-00
- 4-year extended warranty for FRN8527 vocoder/modem (FRN8534), Mfg. Cat. No. 2072-00237-00.

Contact the manufacturer, or your local distributor, for any additional information you may need.

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Chapter 2

THEORY OF OPERATION

Section I. GENERAL DESCRIPTION

2-1. MICOM-Z DESCRIPTION

2-1.1 Micom-Z Dash-Mount Version

2-1.1.1 Structure

Figure 2-1 shows the structure of the Micom-Z dash-mount version. Micom-Z dash-mount version consists of two main assemblies, attached by means of four screws:

- Body assembly. The body assembly includes two main modules, LORD and HI POWER, interconnected by a few cables. The LORD module is actually an assembly protected by a shield that also carries the optional GPS receiver and a backup battery for protecting the operational parameters. The external connectors are located on the two modules, but are attached to the rear panel, for physical support. The LORD and HI POWER modules can be accessed after opening the top cover (not shown in Figure 2-1), and separating the front panel assembly (it is not necessary to remove the rear panel, but connectors must be released from the panel before it is possible to extract the modules).
- Front panel assembly. This assembly includes the operator interface (controls, keypad, LCD), a microphone connector, an internal speaker, and the CONTROL HEAD module. The front panel assembly is connected to the LORD module by a single flat cable.

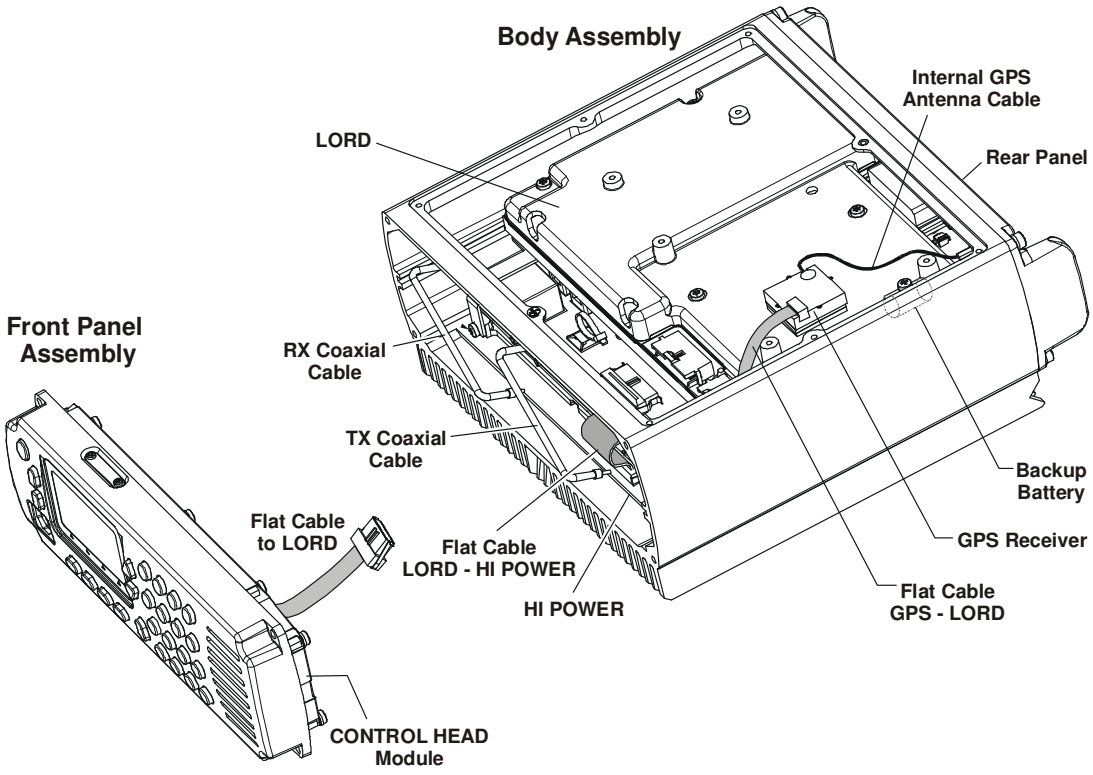


Figure 2-1. Micom-Z Dash-Mount Version Structure

2-1.1.2 Wiring Diagram

Figure 2-2 shows the wiring diagram of the Micom-Z dash-mount version. Micom-Z dash-mount version comprises the following main modules:

a. LORD module, includes the following main circuits:

(1) Audio signal processing circuits for the receive and transmit paths.

(2) Digital signal processor (DSP) and its auxiliary circuits.

(3) RF and IF modulation/demodulation and signal processing circuits for the receive and transmit paths.

(4) Synthesizer and local oscillator circuits, and the Micom-Z frequency reference.

(5) Main microcomputer subsystem used to control the operation of the Micom-Z circuits. It is part of the Micom-Z management subsystem, which also includes a microcomputer subsystem located in the CONTROL HEAD module.

The module also includes the optional GPS receiver, and its interface.

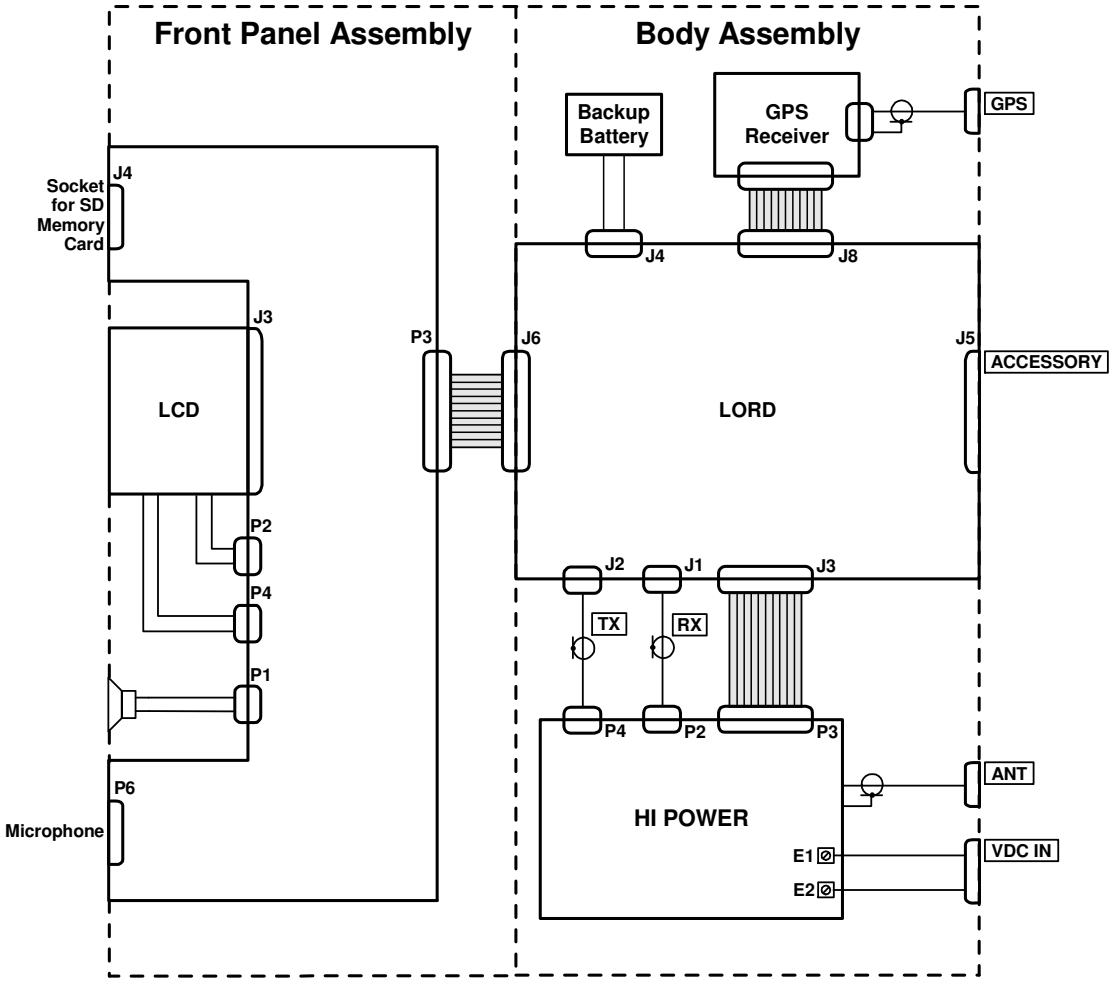


Figure 2-2. Micom-Z Dash-Mount Wiring Diagram

b. HI POWER module, includes the following main circuits:

(1) Main power supply, provides the regulated voltages needed by the Micom-Z circuits, and provides power for an external antenna tuner unit (ATU), connected to Micom-Z.

(2) Receiver front end circuits, connected via a coaxial cable to the LORD RF receive path.

(3) RF power amplifier for the transmit path, and its power supply, control and protection circuits. The drive signal for the RF power amplifier is provided via a coaxial cable by the LORD RF transmit path.

c. CONTROL HEAD module, includes the following main circuits:

(1) Microcomputer subsystem, built around a microcontroller, used to manage the operator interface, transfers the operator commands to the main microcomputer subsystem located on the LORD module, and controls the LCD and its operational conditions.

(2) Serial RS-232 port for communication with the Micom-Z management subsystem.

(3) Audio subsystem, including the microphone amplifier, the audio power amplifier for the internal speaker, and the volume control/ON-OFF switch.

2-1.1.3 Functional Block Diagram

The functional block diagram of Micom-Z dash-mount version is shown in Figure 2-3.

2-1.1.3.1 Transmit Path

a. Selection of Signal Source. The transmit path can receive modulation signals from a microphone connected to the front panel audio connector or signals from equipment connected to the rear panel ACCESSORY connector (audio from an accessory device, a modem, or telegraphy). Each source provides a different PTT signal, and therefore the selection of the signal to be transmitted is made in accordance with the active PTT signal:

- MIC PTT – PTT from the microphone connected to the front panel connector, transmits the voice signal provided by the microphone.
- Voice PTT – PTT from an accessory connected to Micom-Z through the ACCESSORY connector, transmits the voice signal from the accessory device.
- Data PTT – PTT from a data device, for example, a modem, connected to Micom-Z through the ACCESSORY connector, causes Micom-Z to switch to the data mode and transmit the modem signal.
- CW PTT – PTT from a Morse key connected to Micom-Z through the ACCESSORY connector, causes the radio to switch to the CW (Morse) transmission mode.

In parallel, the radio operating mode is automatically adapted for best performance with the signal expected for the detected PTT type.

b. Processing of Transmit Signal. The selected audio modulation signal is converted to a digital data stream by the A/D converter section of a codec, for processing by the DSP subsystem. The DSP outputs a digital representation of the signal, in accordance with the modulation mode selected by the operator (LSB, USB, AME or PILOT). This digital representation is converted to the actual IF modulated signal, on a carrier frequency of 1.05 MHz, by a digital sideband modulator (DSM).

c. ISB Option. When the ISB option is installed, the master sideband signal is processed as explained above. In addition, the transmit signal received through the TX_AUDIO_ISB line of the ACCESSORY connector is converted to a digital data stream by an additional codec. The codec supplies the data stream to the DSP, which processes the signal in parallel with the other (master sideband) data stream, and generates the representation of an ISB signal for the DSM.

d. Generation of RF Transmit Signal.

(1) The 1.05 MHz transmit IF signal generated by the DSM is converted by the second mixer to 45.1 MHz, by mixing it with a 46.15 MHz local oscillator signal provided by synthesizer 2 (para. 2-1.1.3.3).

The 45.1 MHz is filtered and amplified by the first IF processor.

(2) The 45.1 MHz IF transmit signal is down-converted to the desired RF frequency by the first mixer. The conversion is performed by mixing the IF signal with the variable local oscillator signal provided by synthesizer 1 (para. 2-1.1.3.3).

The resulting low-level RF signal is amplified by the exciter amplifier, and supplied to the RF power amplifier in the HI POWER module.

(3) The RF power amplifier in the HI POWER module generates an RF signal at the power level selected by the operator (LOW, MED, HIGH, or MAX). The transmit signal is connected by the TX/RX switch to the harmonic filter, which attenuates harmonics and unwanted spurious signals. The filtered signal then passes to the ANT connector through a power sensor, which generates DC voltages, VFWD and VREV, proportional to the forward and reflected power.

The ANT connector can be connected either directly to a broadband antenna, or to an external ATU unit. DC power for the ATU unit is provided from the internal protected DC power line, through a switch controlled by the LORD module.

An automatic level control (ALC) loop maintains the transmit output power close to the selected transmit power. The automatic level control loop compares the VFWD sample with the transmit power control signal provided by the microcomputer subsystem in the LORD module, and adjusts the input RF signal power reaching the amplifier.

The VREV sample is used for mismatch protection: if the VSWR (Voltage Standing Wave Ratio) exceeds 2:1, the transmit power is proportionally reduced, to prevent damage.

The RF power amplifier also includes thermal protection: when the internal temperature exceeds the maximum permitted, the transmit power is automatically reduced until the temperature returns to normal. If nevertheless the temperature continues to increase even when operating at the LOW level, the transmission is stopped until the temperature returns to normal.

2-1.1.3.2 Receive Path

a. Processing of Received RF Signal.

(1) The received RF signal is filtered by the harmonic filter, and is then connected by the TX/RX switch to the preselector in the LORD module.

(2) The preselector provides further filtering of the RF signal, to improve the rejection of out-of-band signals. The resulting signal is supplied to the first mixer, which converts the signal to the first IF frequency, 45.1 MHz, by mixing it with the local oscillator 1 signal provided by synthesizer 1 (para. 2-1.1.3.3).

b. IF Signal Path.

(1) The first IF processor filters and amplifies the 45.1 MHz provided by the first IF mixer. The filtered signal is then converted to the second IF frequency, 450 kHz, by the second mixer, which mixes the 45.1 MHz signal with the local oscillator signal provided by the synthesizer 2.

(2) The second IF signal is filtered and amplified by the second IF processor, and is then converted to the third IF frequency, 20 kHz, by the third mixer. The local oscillator signal for the third mixer, 430.77 kHz, is obtained by dividing the 16.8 MHz reference frequency.

(3) The third IF signal is converted to a digital data stream, which is supplied to the DSP subsystem. The DSP demodulates the IF signal, and extracts the original modulation signal.

c. Audio Signal Paths.

(1) The data stream demodulated signal, provided by the DSP, is converted by the D/A converter section of the codec to an audio signal. The audio signal is amplified and supplied to the speaker located on the front panel, and to the other audio and data outputs in the ACCESSORY connector.

(2) When the ISB option is installed, the DSP provides an additional data stream which represents the slave sideband. This data stream is converted by a codec to an audio signal, RX_AUDIO_ISB, which is available in the ACCESSORY connector.

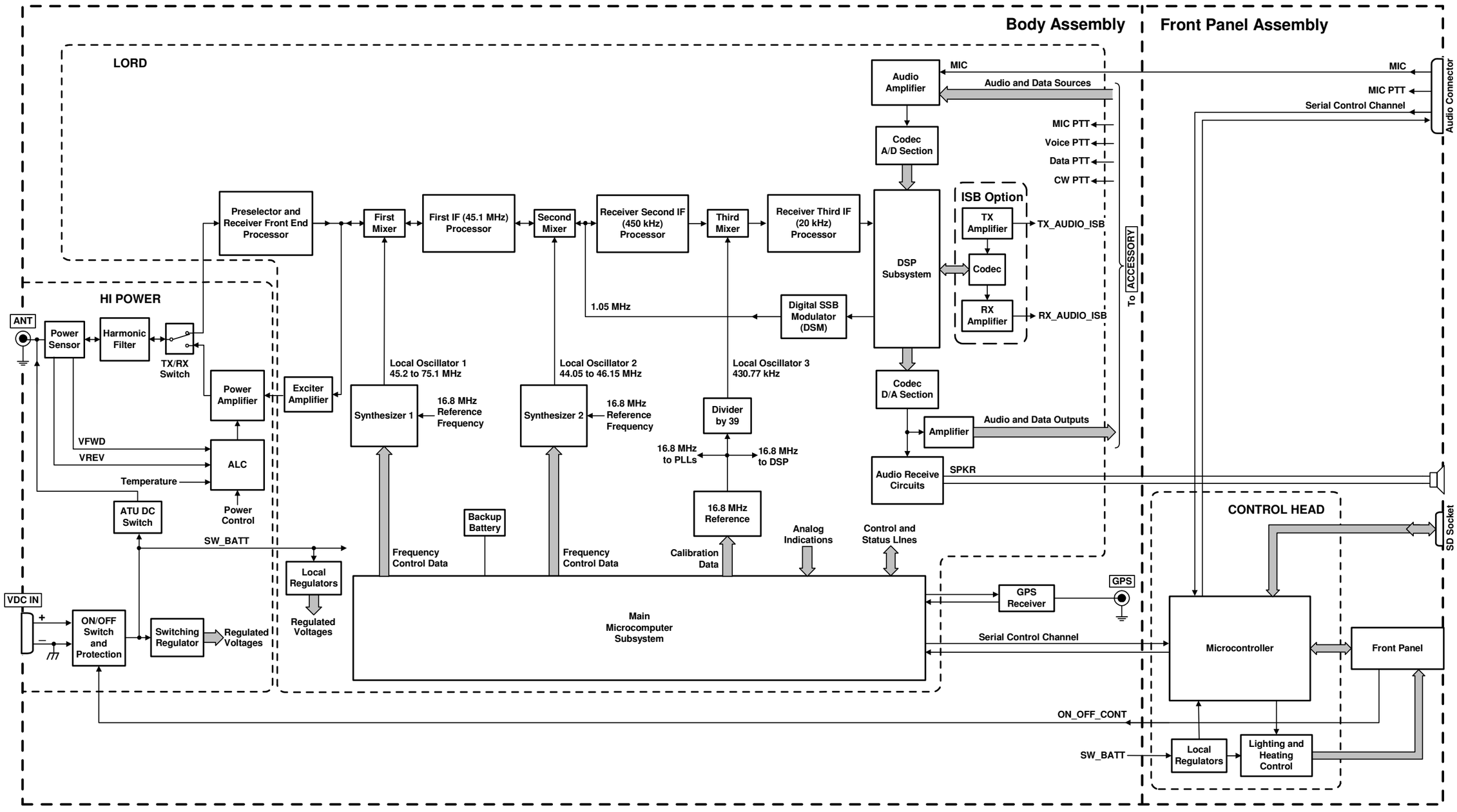
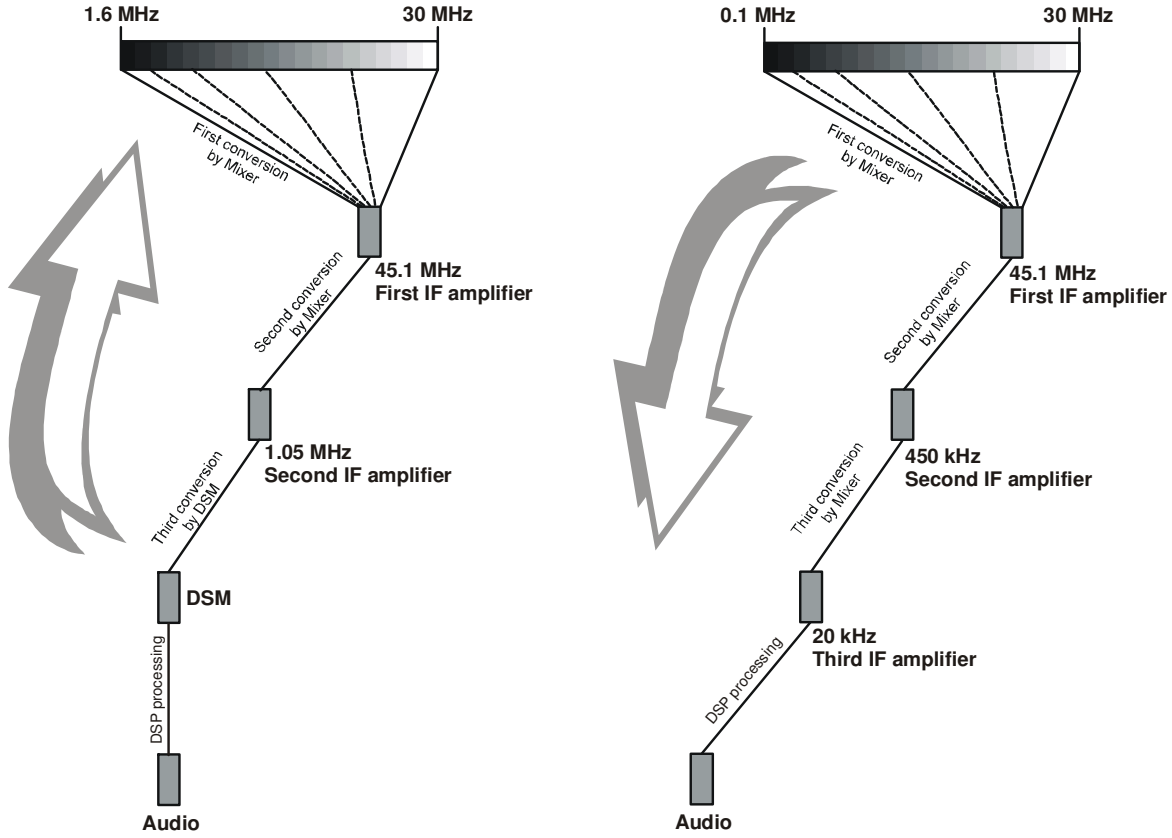


Figure 2-3. Micom-Z Dash-Mount Version, Functional Block Diagram

2-1.1.3.3 Frequency Conversion Subsystem

The Micom-Z frequency conversion scheme is described in Figure 2-4.



A. Transmit Path *B. Receive Path*

Figure 2-4. Frequency Conversion Scheme

The conversion is implemented as follows:

- Transmit path: the analog section performs double frequency conversion, as shown in Figure 2-4.
- Receive path: the analog section performs triple frequency conversion, as shown in Figure 2-4.

Two synthesizers provide two local oscillator (LO) signals for the transmit and receive paths:

- The first LO signal covers the 45.2 to 75.1 MHz range in three subranges, and is generated by a PLL (phase locked loop) using three VCOs (voltage controlled oscillators). Refer to Figure 2-5.
- The second LO signal is generated by a PLL covering the 44 to 46 MHz range with one VCO. Refer to Figure 2-6.

In both synthesizers, the VCO frequencies are higher than the LO frequencies: to achieve the final frequencies, the first synthesizer divides its output frequency by 2, and the second synthesizer divides its output frequency by 8. Using frequency division decreases spurious levels without degrading the lock-in time of the PLL, and also improves the frequency resolution.

Thus, the first synthesizer provides a resolution of 8.75 kHz, and the second synthesizer provides a resolution of 1.25 kHz. The additional processing needed to achieve an overall frequency resolution of 10 Hz is performed by the DSP.

Both synthesizers use a single reference frequency, generated by a 16.8 MHz oscillator. As a result, the overall radio frequency stability and accuracy are determined by the accuracy and stability of this single reference oscillator.

The standard reference oscillator is a digitally temperature-compensated crystal oscillator (DTCXO). An optional ovenized crystal oscillator (OCXO) with higher accuracy and stability can be ordered, for enhanced frequency accuracy.

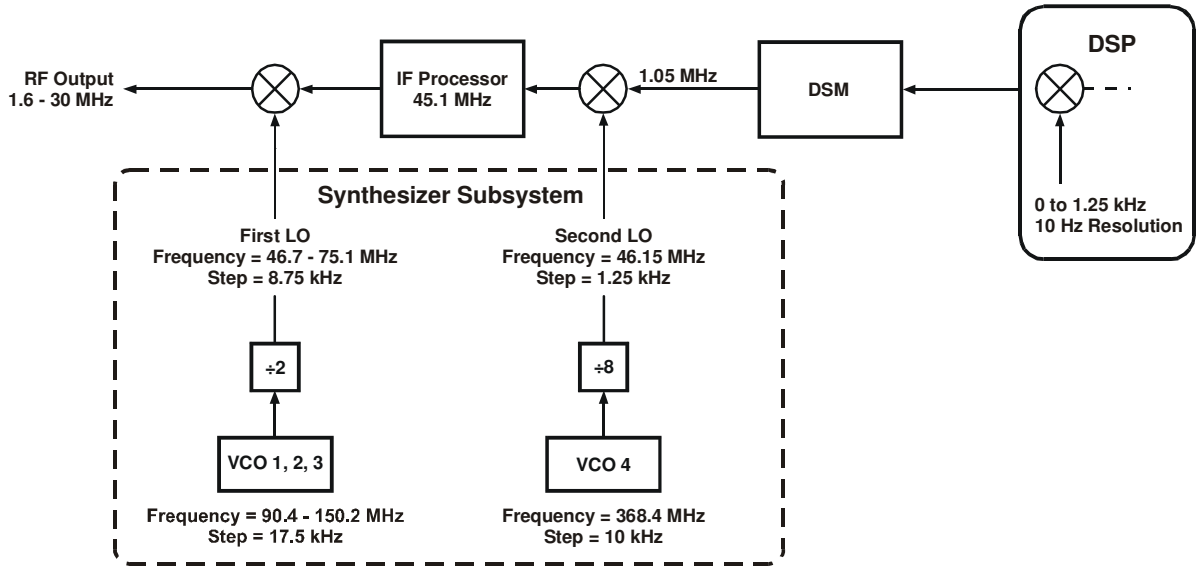


Figure 2-5. Transmit Path Frequency Conversion Scheme

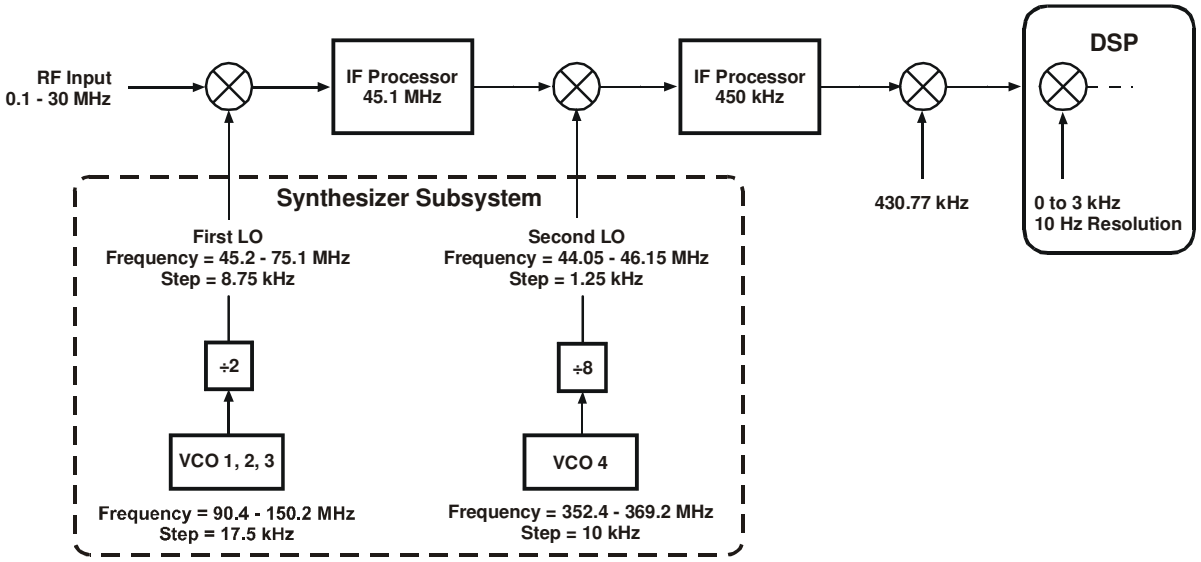


Figure 2-6. Receive Path Frequency Conversion Scheme

2-1.1.3.4 Control Subsystem

The Micom-Z control subsystem includes the main microcomputer subsystem located on the LORD module, and a microcontroller located on the CONTROL HEAD module.

a. The CONTROL HEAD microcontroller provides the interface to the front panel keypad and LCD, which enables the operator to control Micom-Z operation and monitor its status. In addition, the microcontroller can also communicate with external equipment, for example, a PC running the RSS or MRC utility, via an additional serial asynchronous control channel terminated in the front panel audio connector.

   The microcontroller communicates with the main microcomputer subsystem via a serial asynchronous control channel. This serial channel is used to transfer the commands entered by the operator using the front panel keypad, and data received via the serial control channel from RSS or MRC (this data includes operational parameters, and radio set calibration data for the transmit power and frequency accuracy).

   In addition to the functions described above, the microcontroller also controls the LCD heating, and the LCD and keypad backlighting.

   The microcontroller supports the connection of an external memory card using the SD format, which can be plugged into the SD socket at the top of the front panel.

b. The main microcomputer subsystem in the LORD module controls the operation of all the Micom-Z circuits, monitors their status, measures the various analog voltages that represent power levels, temperatures, supply voltages, etc., and manages self-test.

   The microcomputer subsystem uses the information received from the front panel microcontroller and the PTT commands to select the desired operating mode, and stores the operational parameters in a battery-protected memory. The calibration data is written into an EEPROM, and therefore it is always preserved, even when backup battery is replaced.

   The main microcomputer subsystem sends to the front panel microcontroller the data regarding the current operational parameters and indications, for display on the front panel LCD.

   The microcomputer subsystem also includes several UARTs, which can be used to communicate with other equipment connected via the ACCESSORY connector, and via the optional GPS receiver.

2-1.1.3.5 Power Supply Subsystem

The Micom-Z power source is connected via the VDC IN connector to the HI POWER module, which includes the ON/OFF electronic switch and the input voltage protection circuits.

The ON/OFF switch, integrated with the protection circuits, is controlled by the ON_OFF_CONT line from the front panel. It connects the supply voltage to the internal supply voltage line, SW_BATT, when the operator turns the Micom-Z on, provided the polarity of the supply voltage is correct, and within the allowed limits.

The SW_BATT line provides power to the local regulators on the various modules. The supply voltage is also connected via current limiting devices to the ACCESSORY connector.

2-1.2 Micom-Z Trunk-Mount Version

2-1.2.1 Structure

The Micom-Z trunk-mount version consists of two main assemblies:

- Body assembly, shown in Figure 2-7. The Micom-Z trunk-mount version body assembly is identical to the Micom-Z dash-mount version body assembly, but its front side has a cover that carries the INTERCONNECTION module.

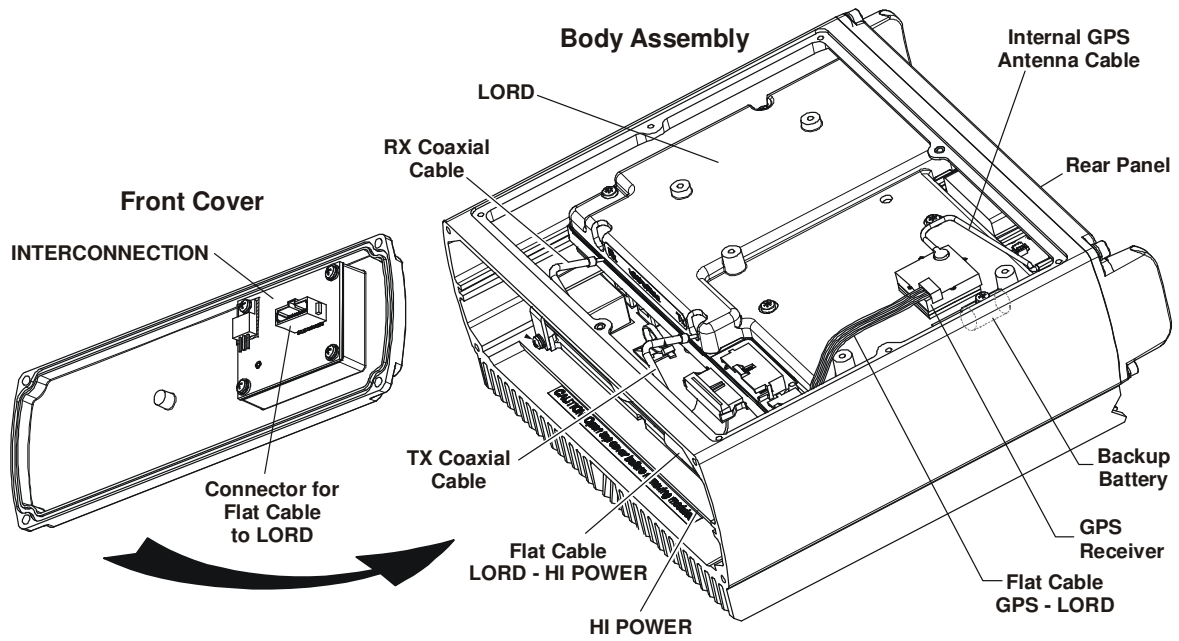


Figure 2-7. Micom-Z Trunk-Mount Version, Structure of Body Assembly

The INTERCONNECTION module, which connects to the LORD module by a single flat cable, provides the functions needed to enable connecting to the control head via a long cable.

- Control head, shown in Figure 2-8. This is a separate unit that includes the operator interface and CONTROL HEAD module, which are similar to the front panel of the Micom-Z dash-mount version, except that the speaker is external. The access to the CONTROL HEAD module is through a rear cover fastened by four screws to the front panel.

  The control head is connected to the body assembly by a cable, which also includes a branch for connecting an external speaker.

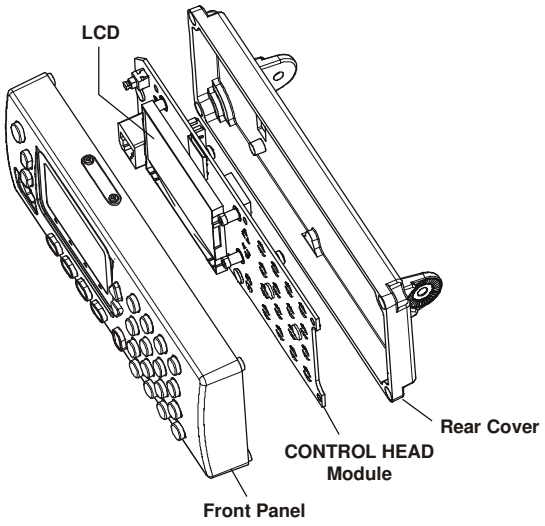


Figure 2-8. Micom-Z Trunk-Mount Version, Structure of Control Head

2-1.2.2 Wiring Diagram

Figure 2-9 shows the wiring diagram of the Micom-Z trunk-mount version.

a. Body Assembly. This assembly comprises the following main modules:

   (1) LORD module: same as the Micom-Z dash-mount version module.

   (2) HI POWER module: same as the Micom-Z dash-mount version module.

   (3) INTERCONNECTION module: contains interface circuits that enable the microcomputer system in the LORD module to communicate with that in the CONTROL HEAD module via the interconnecting cable, an interface for the microphone signal, and a supply voltage switch for the control head.

b. Control Head. This assembly comprises the CONTROL HEAD module, similar to the CONTROL HEAD module in the dash-mount version, except that it includes interface circuits that enable the module to communicate with the LORD module via the interconnecting cable.

   The cable also provides the connection to an external speaker.

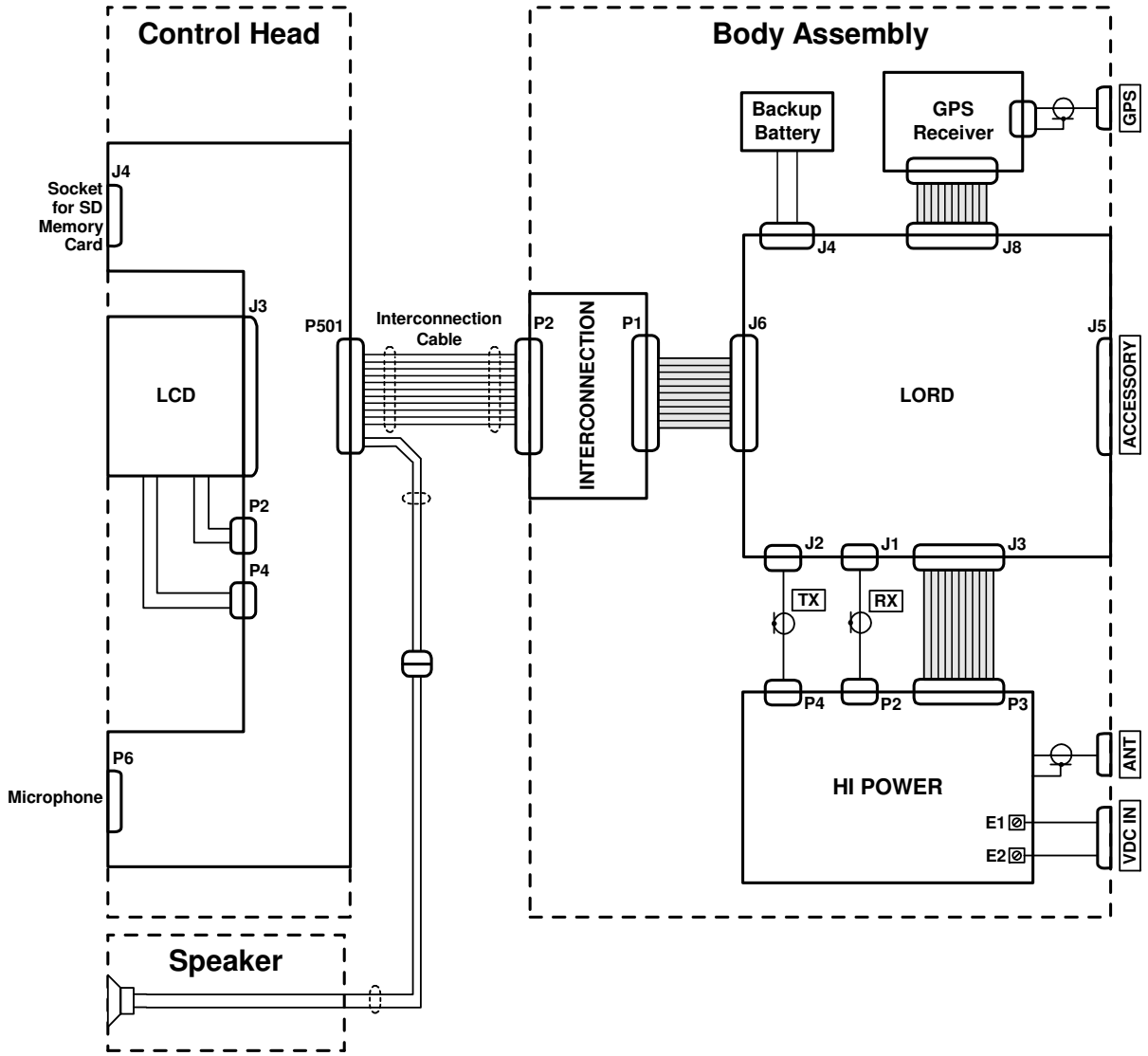


Figure 2-9. Micom-Z Trunk-Mount Wiring Diagram

2-1.2.3 Functional Block Diagram

The functional block diagram of Micom-Z trunk-mount version is shown in Figure 2-10.

2-1.2.3.1 Transmit Path

a. Selection of Signal Source. The transmit path can receive modulation signals from a microphone connected to the audio connector of the control head, or signals from equipment connected to the rear panel ACCESSORY connector (audio from an accessory device, a modem, or telegraphy). Each source provides a different PTT signal, and therefore the selection of the signal to be transmitted is made in accordance with the active PTT signal:

- MIC PTT – PTT from the microphone connected to the control head connector, transmits the voice signal provided by the microphone. The microphone signal passes through a buffer, which converts the signal to a balanced signal, for transmission to the body assembly through the interconnection cable. Another buffer located on the INTERCONNECTION module converts the balanced signal to a single-ended signal, which is supplied to the audio amplifier.

  The PTT signal also passes through an RS-485 line driver, for transmission to the body assembly through the interconnection cable. An RS-485 line receiver located on the INTERCONNECTION module converts the balanced RS-485 signal to the internal logic levels.

- Voice PTT – PTT from an accessory connected to Micom-Z through the ACCESSORY connector, transmits the voice signal from the accessory device.
- Data PTT – PTT from a data device, for example, a modem, connected to Micom-Z through the ACCESSORY connector, causes Micom-Z to switch to the data mode and transmit the modem signal.
- CW PTT – PTT from a Morse key connected to Micom-Z through the ACCESSORY connector, causes the radio to switch to the CW (Morse) transmission mode.

In parallel, the radio operating mode is automatically adapted for best performance with the signal expected for the detected PTT type.

b. Processing of Transmit Signal. See para. 2-1.1.3.1.b.

c. ISB Option. See para. 2-1.1.3.1.c.

d. Generation of RF Transmit Signal. See para. 2-1.1.3.1.d.

2-1.2.3.2 Receive Path

a. Processing of Received RF Signal. See para. 2-1.1.3.2.a.

b. IF Signal Path. See para. 2-1.1.3.2.b.

c. Audio Signal Paths. See para. 2-1.1.3.2.c. The only difference is that an external speaker is used (this speaker is connected via a branch of the interconnection cable).

2-1.2.3.3 Frequency Conversion Subsystem

The Micom-Z frequency conversion scheme is described in para. 2-1.1.3.3.

2-1.2.3.4 Control Subsystem

The Micom-Z control subsystem includes the main microcomputer subsystem located on the LORD module, and a microcontroller subsystem located on the CONTROL HEAD module, which are similar to these described in para. 2-1.1.3.4. The only difference is the use of RS-485 transceivers that transfer the control channel via the interconnection cable.

2-1.2.3.5 Power Supply Subsystem

The Micom-Z power source is connected via the VDC IN connector to the HI POWER module, which includes the ON/OFF electronic switch and the input voltage protection circuits.

The ON/OFF switch, integrated with the protection circuits, is controlled by the ON_OFF_CONT line from the control head. It connects the supply voltage to the internal supply voltage line, SW_BATT, when the operator turns the Micom-Z on, provided the polarity of the supply voltage is correct, and within the allowed limits. The SW_BATT line provides power to the local regulators on the other modules. The supply voltage is also connected via current limiting devices to the ACCESSORY connector.

The connection of the SW_BATT line to the control head passes through a supply voltage control circuit, also controlled by the ON_OFF_CONT line: this circuit connects the supply voltage only when the operator passes through control head ON/OFF button to turn the Micom-Z on. Therefore, if the interconnection cable, or the control head, is disconnected from the body assembly, Micom-Z is automatically turned off.

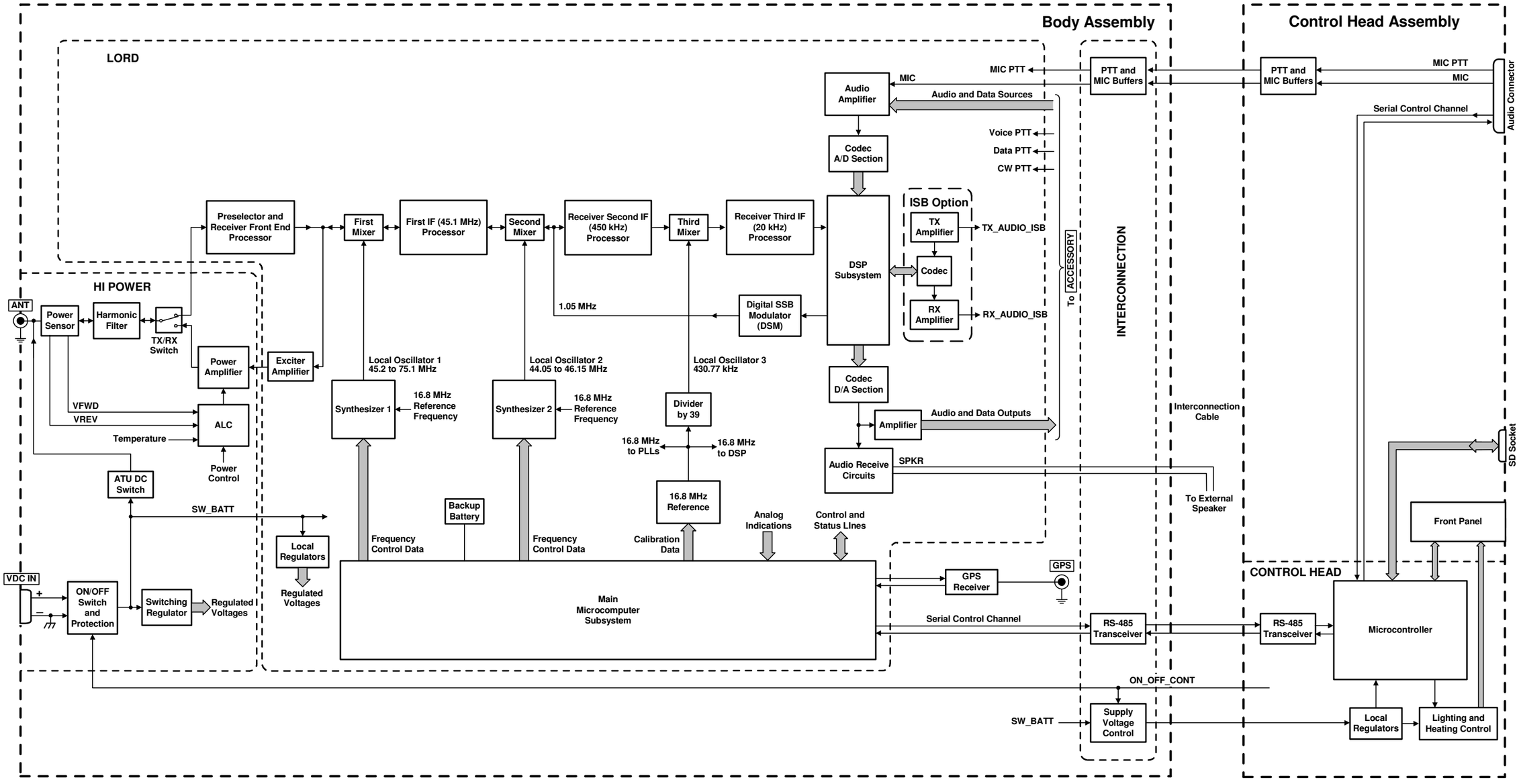


Figure 2-10. Micom-Z Trunk-Mount Version, Functional Block Diagram

2-1.3 Micom-Z Cooling Tray

Figure 2-11 shows the structure of the Micom-Z cooling tray.

The cooling tray includes one module, the FAN CONTROL module, which provides point-to-point connections between the two 25-pin connectors of the cooling tray. The module also includes the fan control circuit, which enables to turn the supply voltage to the fan ON or OFF in accordance with the control signal provided by the Micom-Z installed on the tray.

The connections between the radio side connector, the front panel jacks, and the fan are made by a harness, which connects to the 9-pin D-type connector on the module.

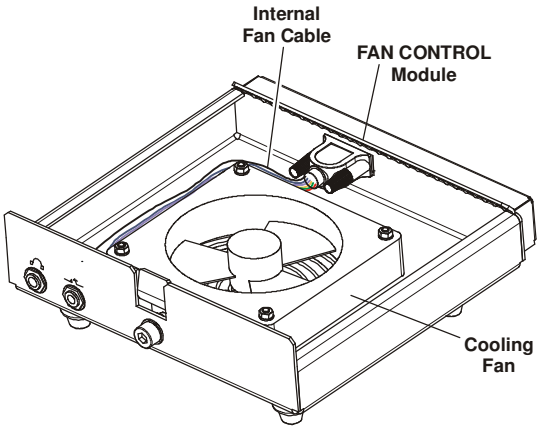


Figure 2-11. Micom-Z Cooling Tray Structure

2-2. OPTIONS AND ACCESSORIES

The following tables list the options and accessories that can be ordered for Micom-Z. Contact the manufacturer or your local representative if you need an option or accessory not listed below.

Table 2-1. Available Options

Option	Mfg. Cat. No.	Description
G434	2072-09870-30	PC-based control and programming software package
S809	2072-09048-00	Interface cable kit for CW key and headphones
G431	2072-09197-10	Internal GPS receiver with polling application
FRN8525	2072-09460-00	Vocoder with digital audio quality enhancer (subject to export license), includes interface cable and operator manual
FVN5228	2072-09780-00	Digital Advanced Encryption Standard option for FRN8525 (subject to export license)
FRN8526	2072-09720-00	4800bps single-tone high speed data modem (MDM4800) with Micom-Net E-mail Gateway software package
FVN5229	2072-09790-00	Digital Advanced Encryption Standard option for FRN8526 (subject to export license)
FRN8527	2072-09820-00	4800bps single-tone high speed data modem (MDM4800) with Micom-Net E-mail Gateway software package integrated with vocoder and digital voice quality enhancer
FVN5230	2072-09800-00	Digital Advanced Encryption Standard option for FRN8527 (subject to export license)

Table 2-2. Accessories

Option	Mfg. Cat. No.	Description
Mobile Station Accessories		
FAD1410	2072-09010-20	Automatic tuning whip antenna
F2265	2072-09030-10	Automatic antenna tuner
FAD1400	2072-92270-10	12 ft whip antenna (not required for FAD1410)
FLN3660	2072-90174-00	Cooling tray
FLN2818	2072-09676-00	1.6 – 30MHz, 125W PEP/average heavy duty automatic antenna tuner for fixed and mobile installations, for use in data system applications. Includes 30m RF coaxial cable and operator manual (requires long wire or whip antenna)
HSN1600	2072-90410-00	External speaker
Fixed Station Accessories		
FMN5542	2072-09803-00	Desk microphone
–	2072-09031-10	Kit for continuous duty data transmission, includes junction box
FPN5600	2072-09736-00	110/220VAC AC power supply

2-3. CONNECTOR DATA

2-3.1 Micom-Z Connector Data

Table 2-3. Micom-Z Microphone Connector, Pin Functions

Pin	Designation	Description
1	SWA+	Power output to the microphone
2	RXD	Serial communication line (input)
3	TXD	Serial communication line (output)
4	GND	Ground line
5	MIC AUDIO	Input audio signals generated by the microphone (600 Ω impedance; 300 mV tone is required for full output power).
6	PTT MIC	Activates transmission by short to ground.
7	MONITOR	Mutes the speaker before transmission is enabled (short momentary to ground to open speaker).
8	AUDIO OUT	Receive audio output to earphone (600 Ω, 300 mVRMS)

Table 2-4. ACCESSORY Connector Pin Functions

Pin	Designation	Description
1	SPKR-	Differential output to external 8Ω, 5W speaker
2	STOP SCAN	Digital control input for stop scan function (optional function)
3	SPKR+	Differential output to external 8Ω, 5W speaker
4	EXT RX AUDIO+	Differential received audio output (0 dBm/600Ω; not controlled by volume)
5	EXT RX AUDIO-	
6	EXT TX AUDIO+	Differential transmit audio input (600Ω input impedance, 0 dBm is required for full power)
7	EXT TX AUDIO-	
8	PTT IN VOICE	Transmission command (short to ground) for voice signals
9	PTT IN DATA	Transmission command (short to ground) for data signals
10	PTT IN CW	Transmission command (short to ground) for CW (Morse) signals
11	SW A+	Primary DC voltage current limited output (max 1A)
12	DSI/KW CC	BDM – Data serial in/optional external amplifier channel change
13	KW ON/OFF	Optional external amplifier power on/off output
14	REV CLOSE LOOP	Close the radio ALC loop (input from optional external amplifier)
15	RXA	Receive input (point-to-point protocol to host/HLC)
16	TXA	Transmit output (point-to-point protocol to host/HLC)
17	EX RESET	External RESET input (for BDM)
18	GND	Ground
19	KW PTT	PTT output to optional external amplifier (active low)
20	EXT ALARM	External alarm output (open collector, pulled to ground when external alarm is activated)
21	VPP	Flash programming voltage, input to BDM

Table 2-4. ACCESSORY Connector Pin Functions (Cont'd)

Pin	Designation	Description
22	DSC/KW_ALC	BDM – Data serial clock/optional external amplifier ALC
23	SQ GATE	Squelch open/closed indication output
24	DSO/FAN_ON_OFF	BDM – Data serial out/Fan control
25	FREEZE/KW TUNE	BDM – Freeze/optional external RF power amplifier tune
26	GND	Ground
27	FWD CLOSE LOOP	ALC radio loop closure input (from optional external amplifier)
28	RXC	Receive input (point-to-point protocol to host/HLC)
29	TXB	RS-232 transmit output to "smart" external accessories
30	AMP REV	Maintain constant power at transceiver output (optional function)
31	RXD	Receive input (point-to-point protocol to host/HLC)
32	TX AUDIO OUT	Input to LORD baseband TX path from external device (for example, modem)
33	RXB	RS-232 protocol receive input to "smart" external accessories
34	RX AUDIO OUT	Input to LORD baseband RX path from external device (for example, modem)
35	RX AUDIO IN	Output from LORD baseband RX path to external device (for example, modem)
36	AMP FWD	Maintain constant power at transceiver output (from optional external amplifier)
37	VP PTT	PTT output (active low) (optional function)
38	TXD	Transmit output (point-to-point protocol to host/HLC)
39	TXC	Transmit output (point-to-point protocol to host/HLC)
40	TX AUDIO IN	Output from LORD baseband TX path to external device (for example, modem)
41	EXT RX AUDIO(2)+	Audio output from the optional ISB processor (secondary sideband)
42	EXT TX AUDIO(2)-	
43	EXT RX DATA-	Baseband output (0 dBm, 600 Ω), unsquelched
44	EXT RX DATA+	

Table 2-5. Micom-Z VDC IN Power Connector, Pin Functions

Pin	Designation	Description
1	Power	Positive input line
2	Ground	Return (negative) line

2-3.2 Cooling Tray Connectors

Table 2-6. Micom-Z 44-Pin/25-Pin Adapter Cable Wiring Diagram

44-Pin Connector	25-Pin Connector	44-Pin Connector	25-Pin Connector
1	1	43	14
44	2	15	15
3	3	16	16
4	4	17	17
5	5	18	18
6	6	19	19
7	7	20	20
8	8	21	21
9	9	22	22
10	10	23	23
11	11	24	24
12	12	25	25
13	13		

Table 2-7. Cooling Tray 25-Pin ACCESSORY Connector Pin Functions

Pin	Designation	Description
1	SPKR-	Differential output to the external 8Ω, 5W speaker
2	EXT RX DATA+	Baseband output (0 dBm, 600Ω) to external device, unsquelched
3	SPKR+	Differential output to the external 8Ω, 5W speaker
4	EXT RX AUDIO+	Differential receive audio output (0 dBm, 600Ω; not affected by the volume control, but controlled by the squelch)
5	EXT RX AUDIO-	
6	EXT TX AUDIO+	Differential transmit input (600Ω input impedance; 0 dBm is required for full power)
7	EXT TX AUDIO-	
8	PTT IN VOICE	Transmission command (short to ground) for voice signals
9	PTT IN DATA	Transmission command (short to ground) for data signals
10	PTT IN CW	Transmission command (short to ground) for CW (Morse) signals
11	SW A+	Primary DC voltage current limited output (max. 1A)
12	DSI/KW CC	BDM – Data serial in/optional RF power amplifier channel change
13	KW ON/OFF	Optional RF power amplifier power on/off output
14	EXT RX DATA-	Baseband output (0 dBm, 600Ω) to external device, unsquelched
15	RXA	Receive input (point-to-point protocol to host/HLC)
16	TXA	Transmit output (point-to-point protocol to host/HLC)
17	EX RESET	External RESET input (for BDM)
18	GND	Ground
19	KW PTT OUT	PTT output to optional RF power amplifier (active low)

Table 2-7. Cooling Tray 25-Pin ACCESSORY Connector Pin Functions (Cont'd)

Pin	Designation	Description
20	EXT ALARM	External alarm output (open collector, pulled to ground when external alarm is activated
21	VPP	Flash programming voltage, input to BDM
22	DSC/KW_ALC	BDM – Data serial clock/optional RF power amplifier ALC
23	SQ GATE	Squelch open/closed indication output
24	DSO/FAN ON/OFF	BDM – Data serial out/fan control
25	FREEZE/KW TUNE	BDM – Freeze/kW amplifier tune

Section II. CIRCUIT ANALYSIS

2-4. LORD MODULE

The schematic circuit diagram of the LORD module is shown in Figure A-1, and the module block diagram is shown in Figure 2-12.

2-4.1 Audio Subsystem

Refer to Figure A-1.C. The audio subsystem uses the 8V_AUDID_ISB voltage, provided by the linear voltage regulator U6098, and a bias voltage, 4V_AUDID_BIAS, generated by part of U4000.

2-4.1.1 Audio Transmit Path

a. Microphone Signal Path. The MIC_IN signal from the front panel passes through the analog switch in U6085 to an amplifier, followed by a voiceband bandpass filter in U4003. The resulting signal is sent to the codec U6040 via the MIC line.

b. EXT_TX_AUDIO Signal Path. The EXT_TX_AUDIO signal from the ACCESSORY connector is converted to a single-ended signal by an amplifier in U4000, and then is connected through the analog switches in U6085 to the microphone signal path.

2-4.1.2 Audio Receive Path

a. SPKR Signal Path. The RX_AUDIO signal received from the codec U6040 is converted to a single-ended signal by an amplifier in U4003, passes through an analog switch in U6084 to the digitally-controlled potentiometer U6081, which serves as a volume control.

   U6081 output is connected by another section of U6084 to an amplifier in U4000, which drives the audio power amplifier U4002. U4002 balanced output signal, SPKR, is sent to the front panel assembly.

b. Baseband and Modem Signal Outputs. The single-ended RX_AUDIO output signal is directly connected to a driver built around U6082, which drives the balanced EXT_RX_DATA lines in the ACCESSORY connector.

   In addition, the signal can also be connected via analog switches in U6084 to another driver built around U6082, which drives the balanced EXT_RX_AUDIO lines in the ACCESSORY connector.

2-4.2 DSP Subsystem

Refer to Figure A-1.D.

The main supply voltage for the DSP subsystem, +3.3V, is provided by a linear voltage regulator, U6097.

2-4.2.1 Transmit Path

a. The modulation signal, MIC, is applied to the input, INP, of the analog/digital conversion section of the coder, U6040. This section includes an anti-aliasing filter, followed by a programmable gain amplifier. The resulting signal is converted to a digital data stream, DOUT, at a rate determined by the MCLK (main clock) signal received from a timer, TI02, in the DSP U6042. The codec operates in the pulse mode, that is, it generates a continuous stream of bits that represent the modulation signal.

   The codec data stream, DOUT, and the associated clock, SCLK, are supplied to the enhanced synchronous serial interface (ESSI 1) of the DSP.

b. DSP Functions. The DSP, U6042, is a digital signal processor with a 24-bit core. Its clock signal is 16.8 MHz, received from the frequency reference generator via the DSP_16.8MHz. It is controlled by the microcontroller, U5008, via the data and address buses, which connect to

the DSP host port interface, and by a few discrete control lines. The RAM U6038 connected to the DSP, address and data buses, is used by the DSP to store temporary variables and data.

The DSP has two ESSIs: ESSI 1 is used to connect to the codec U6040, and ESSI 0 is used to connect to the DSM, U6000.

The operations performed by the DSP are determined by the program data loaded from the microcontroller through the HPI. After processing the data stream received from the codec, the DSP sends the resulting data stream, through ESSI 0, to the DSM, U6000.

c. DSM Functions. The DSM is a special-purpose digital processing component that converts the incoming serial data stream to an analog signal, DSM_OUT. U6000 uses the same clock frequency as U6042, 16.8 MHz.

The DSM_OUT signal is generated by an A/D converter, comprising a weighted network of resistors connected to DSM FIR outputs.

The resulting signal is the transmit IF, an SSB (or AME) signal (in accordance with the modulation mode selected by the user), on a 1.05 MHz virtual carrier.

2-4.2.2 Receive Path

a. The receive path of the DSP subsystem receives the digital stream representing the third IF signal, generated by the serial output A/D converter, U1115. This stream, A_D_DATA, is connected to the receive input, SRD0, of ESSI 0. U1115 conversion rate and timing are synchronized by the clock and strobe signals, SR_CLK and CONVST, provided by the DSP.

The DSP can also control the operation mode of U1115, via the serial data stream SR_DATA.

b. The DSP processes the received data streams, and converts it to a data stream that represents the demodulated IF signal. This stream is sent via ESSI 1 to the input, DIN, of the digital/analog conversion section of the codec U6040.

The resulting analog signal is provided as a balanced signal at the OUTP and OUTM outputs. These outputs are connected via the RX_AUDIO line to the audio receive path (para. 2-4.1.2).

2-4.3 ISB Option

Refer to Figure A-1.E.

The ISB option includes a codec, U6088, similar to U6040.

a. The A/D conversion path of U6088 processes the slave sideband signal, received from the ACCESSORY connector via EXT_TX_AUDIO_ISB line. This signal is amplified and filtered by U6089. The resulting data stream is sent to the DSP via the HYB_ESSI_STD line.

b. The D/A conversion path of U6088 receives the serial HYB_ESSI_SRD data stream from the DSP, and converts it to a balanced audio signal. This signal is amplified by U6089, and sent to the ACCESSORY connector via the EXT_RX_AUDIO_ISB line.

2-4.4 IF and RF Transmit Path

Refer to Figure A-1.M, Figure A-1.N, Figure A-1.P.

a. The 1.05 MHz signal generated by the DSM passes through a bandpass filter to the IF RX/TX switch. In the transmit mode, CR1905 is forward biased and connects the signal to the second mixer, U1108.

b. U1108 mixes the signal with the local oscillator signal, TX_SEC_INJ, provided by synthesizer 2 (para. 2-4.7.3). The resulting signal, TRANS_IF, at 45.1 MHz, is applied to the transmit section of the bidirectional IF amplifier, Q1006.

c. The amplified signal passes through the crystal filters FL2, FL1. The filtered signal bypasses the first IF amplifier, Q1001, via the PIN diode switch CR1011, CR1012, and reaches the first mixer, U1000.

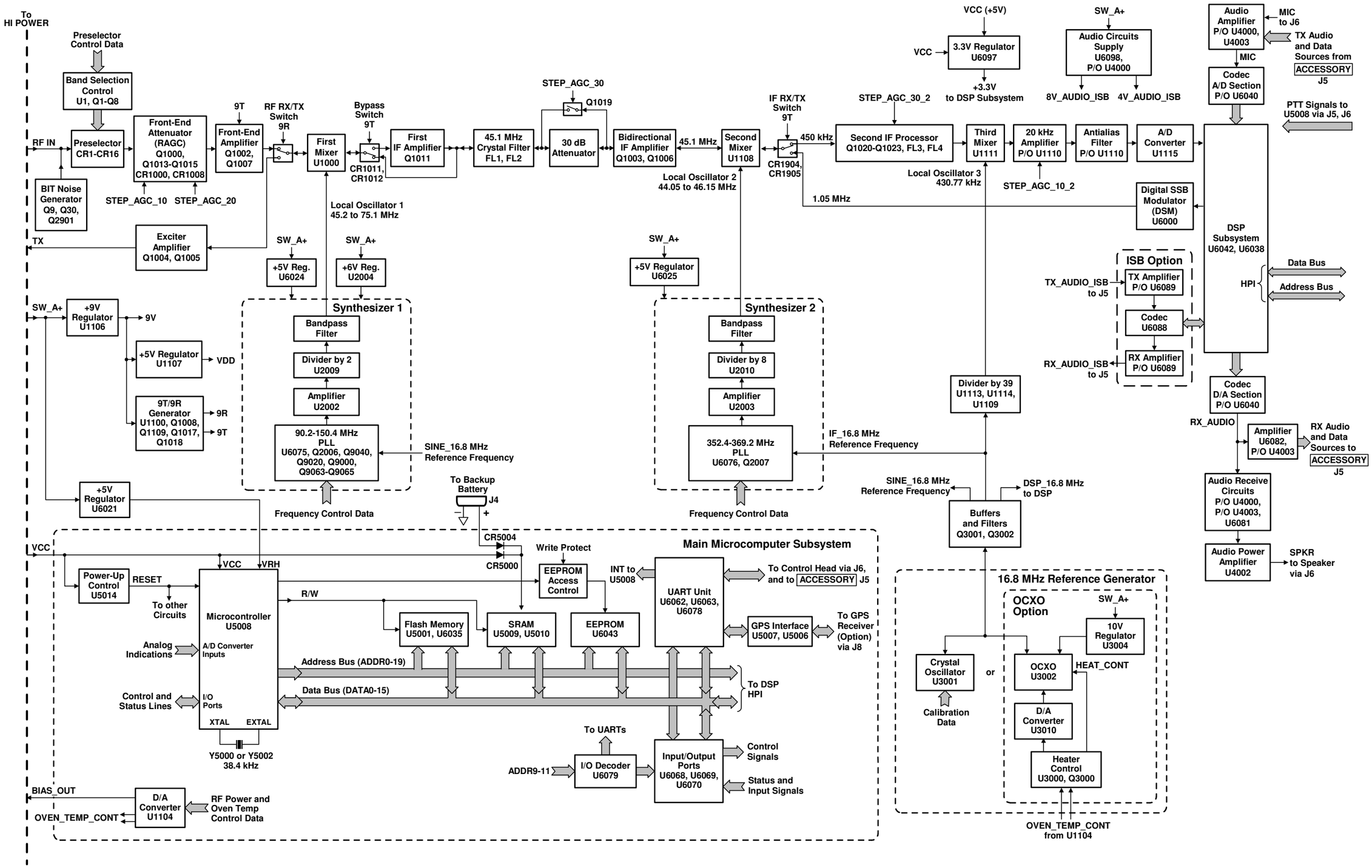


Figure 2-12. LORD Module, Block Diagram

d. The first mixer converts the 45.1 MHz transmit IF signal to the final RF transmit frequency, by mixing with the local oscillator signal, FIRST_INJ, provided by synthesizer 1 (para. 2-4.7.2).

e. In the transmit mode, the mixer output signal passes through the PIN diode CR1010 to the exciter amplifier (CR1009 is reverse-biased).

f. The mixer output signal is filtered by a low-pass filter, and is then amplified by Q1004, Q1005. Q1012 and Q1010 provide the bias current for Q1004, Q1005 (bias current is provided only in the transmit mode, under the control of the 9R line).

g. The amplified RF drive signal, at the collector of Q1005, is coupled to the HI POWER module via the TX line.

   CR1001 provides a DC voltage proportional to the drive signal peak level, PWR_LEVEL, which is monitored by U5008 via the PAD6/AN6 input of its internal A/D converter.

2-4.5 RF Front End

Refer to Figure A-1.H, Figure A-1.I, Figure A-1.N.

2-4.5.1 Preselector

a. The preselector receives the RF IN signal from the HI POWER module via J1. CR2008, CR2009, VR4 and VR5 protect against excessive signal levels.

b. During receive path self-test, the BIT noise generator can be activated by a low level on the NOISE_CONTROL line; to add noise to the signal appearing on the RF IN line.

c. The RF IN signal passes through a low-pass filter to the preselector. The preselector consists of seven high-pass filters, and an additional non-selective branch. The desired filter is inserted in the received signal path by two sets of PIN diode switches: CR1 to CR8 at the input, and CR9 to CR16 at the output.

   The pair of PIN diodes corresponding to the operating frequency band is turned on by control signal received via the SPI interface, U1: U1 is a serial/parallel converter, which converts the serial preselector control word received via the SPI_DATA_OUT line to discrete control signals for the PIN diode drivers, Q1 to Q8 (a pair of PIN diodes is turned on when the corresponding driver is turned on by a high level at the corresponding U1 output).

d. The preselector output signal, PS_OUT, is connected to the RAGC attenuator. The RAGC attenuator consists of two sections: a 10-dB attenuator (series resistors R1016, R1017) and a 20-dB attenuator (the series resistors and the shunt resistor R1023), which can be inserted in the signal path by the PIN diode switches CR1000 and CR1008. These PIN diode switches are controlled by the STEP_AGC_10 and STEP_AGC_20 lines, via the drivers Q1000, Q1013 to Q1015.

   The lines used to control the AGC step attenuators are generated by a serial/parallel converter, U1112, using the data received via the SR_DATA line (the data updates the control lines status when the CONVST line assumes a low level).

e. The RF signal is applied to the front-end amplifier, Q1002, which operates only in the receive mode (its bias voltage is connected by Q1007 only in the receive mode, under the control of the 9T line).

f. The amplified signal passes through a low pass filter, a 9-dB attenuator pad and the PIN diode CR1009 to the first mixer, U1000 (CR1010 is reverse-biased via the 9R line).

   U1000 converts the RF signal to the first IF, 45.1 MHz, by mixing with the FIRST_INJ signal provided by synthesizer 1 (para. 2-4.7.2).

2-4.6 Receive IF Path

Refer to Figure A-1.M, Figure A-1.N.

2-4.6.1 First IF Processor

a. The 45.1 MHz IF signal generated by U1000 is amplified by Q1001 (the PIN diodes CR1011 and CR1012 are reverse-biased). The bias voltage for Q1001 is provided by Q1011, which is turned on in the receive mode by the low level on the 9T line).

b. The amplified signal at the drain of Q1001 passes through an attenuator pad to the 45.1 MHz bandpass crystal filters FL1 and FL2.

c. The filtered signal is amplified by the receive section, Q1003, of the IF bidirectional amplifier. The resulting signal is applied to the second mixer, U1108, via the TRANS_IF line.

   The STEP_AGC_30 control line is used to add an attenuation of 30 dB (when a high level is provided by U1112) in the receive signal path, by reducing the input impedance and gain of the amplifier stage built around Q1003.

2-4.6.2 Second IF Processor

a. The second mixer, U1108, converts the 45.1 MHz IF signal to the second receive IF frequency, 450 kHz, by mixing it with the TX_SEC_INJ signal provided by synthesizer 2 (para. 2-4.7.3).

b. In the receive mode, the PIN diode CR1904 is forward-biased, and CR1905 is reverse-biased.

   This connects the 450 kHz IF signal to the second IF processor, comprising Q1021, the 450 kHz bandpass crystal filter FL4, Q1022, the 450 kHz bandpass crystal filter FL3, and the output amplifier Q1021.

   R1832 is used to adjust the gain of the receive path to the prescribed value.

c. The gain of Q1021 can be reduced, as part of the operation of the 30-dB step attenuator, by applying a low level on the STEP_AGC_30_2 line provided by U1112 (this turns off Q1020).

2-4.6.3 20 kHz IF Processor

a. The 450 kHz IF signal provided by Q1021 is applied to the third mixer, built around the quad analog switch, U1111. U1111 operates as a balanced mixer, which converts the 450 kHz signal to 20 kHz (nominal) by mixing it with 430.77 kHz. The 430.77 kHz signal is provided by the divider by 39, U1113, U1114, via the duty cycle equalizer comprising the Schmitt trigger inverters in U1109.

b. The two complementary waveforms generated by the two branches of the mixer U1111 are combined by an amplifier in U1110, and then amplified by a variable-gain amplifier, also part of U1110. The gain is controlled by the STEP_AGC_10_2 line provided by U1112 (a high level reduces the gain).

c. The amplified 20 kHz passes through an antialiasing filter, part of U1110, and then it is converted to a digital data stream by the A/D converter U1115 (para. 2-4.2.2.a).

2-4.7 Synthesizer Subsystem

Refer to Figure A-1.J, Figure A-1.K.d, Figure A-1.L.

2-4.7.1 Frequency Reference

Depending on the installed option, the reference frequency, 16.8 MHz, is generated either by the DTCXO, U3001, or by the OCXO, U3002.

2-4.7.1.1 DTCXO Option

U3001 is a 16.8 MHz digitally temperature compensated crystal oscillator. Its frequency is controlled via the SPI port: the temperature compensation data is received via the SPI_DATA_OUT line, and it is latched into U3001 on the rising edge of the PENDULLUM_SEL line.

U5008 can measure the voltage proportional to the ambient temperature near the oscillator (provided by the thermistor R3023) by means of its internal A/D converter, through the AMB_TEMP line connected to the AN5/PDA5 input.

2-4.7.1.2 OCXO Option

U3002 is an ovenized crystal oscillator, which includes circuits that enable to maintain the oscillator at a constant temperature, higher than the ambient. The power for the OCXO is provided by a +10V linear voltage regulator, U3004.

a. Temperature Control Loop. When U3002 is installed, its temperature indication output, TEMP_SENSE, is compared by a differential amplifier built around U3000 with the OVEN_TEMP_CNTL voltages provided by D/A converter U1104. The resulting error voltage is amplified, and used to drive, via Q3000, the HEAT_CONT input of the OCXO. The current flowing through Q3000 is monitored by the OCXO using R3024, R3025, via the CUR_SENSE input.

b. Frequency Adjustment. The microcontroller U5008 adjusts the OCXO frequency in accordance with the stored calibration data. The required information is sent via the SPI_DATA_OUT, and it is latched in the D/A converter U3010 on the rising edge of the PENDULLUM_SEL line. The resulting DC voltage is applied to the D2A_FREQ input of U3002.

2-4.7.1.3 Distribution of 16.8 MHz Reference Frequency

The squarewave provided by U3001 or U3002 is connected to two amplifiers, Q3001 and Q3002:

a. The signal developing at the collector of Q3001 is filtered by a bandpass filter and applied on the IF_16.8MHz line. The IF_16.8MHz line is converted to a squarewave by the Schmitt trigger in U1109, for use as the frequency reference for synthesizer 2; in addition, the signal passes through an additional Schmitt trigger in U1109 to the DSP_16.8MHz line, for the DSP subsystem.

   The output signal of the Schmitt trigger is also applied to the clock inputs of the 4-bit programmable counters U1113, U1114, which operate as a divider by 39 (para. 2-4.6.3).

b. Q3002 receives the signal through a bandpass filter, and provides the SINE_16.8MHz reference signal for synthesizer 1.

2-4.7.2 Synthesizer 1

The functional block diagram of synthesizer 1 is shown in Figure 2-13.

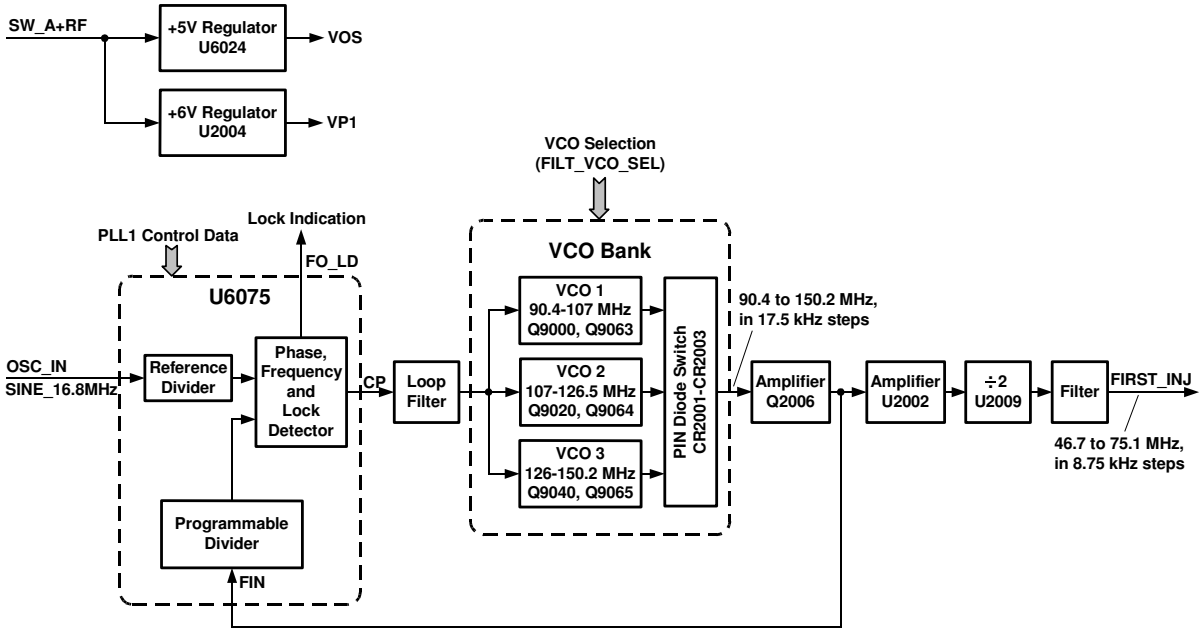


Figure 2-13. Synthesizer 1, Functional Block Diagram

a. PLL Control. Synthesizer 1 is a PLL using the frequency synthesizer control subsystem U6075 to generate a control voltage for one of the three VCOs used to cover the required frequency range.

   The control voltage is derived by the loop filter C2142, C2117, R2047, R2045, C2118, which integrates the pulses appearing at the phase/frequency detector output, CP. These pulses are generated by comparing the reference frequency connected to the OSC_IN input with a sample of the selected VCO output, connected to the FIN input. Both signals undergo frequency division inside U6075: the division ratio is determined by the data carried by the SR_DATA line, when the PLL_1_SEL line rises to a high level.

b. VCO Selection. The VCO corresponding to the current operating frequency range is enabled by a high level applied on the corresponding FILT_VCO_SEL line. A high level also turns on the corresponding PIN diode, CR2001 to CR2003, thereby connecting the VCO output signal to the amplifier, Q2006. A sample of the Q2006 output signal is connected to the FIN input of U6075, to close the PLL loop.

c. Output Circuits. The output signal of Q2006 is also applied to the amplifier U2002. U2002 output signal drives the clock input of the divider by 2, U2009. U2009 output is filtered by a bandpass filter, and connected via the FIRST_INJ line to the first mixer.

d. The regulated supply voltages needed by the synthesizer 1 are provided by two linear regulators, built around U2004 and U6024.

e. The FO_LD lock indication provided by U6075 is combined by CR2000 with the lock indication of U6076, to obtain the SYNTH_LOCK synthesizer status line (high level indicates loss of lock).

2-4.7.3 Synthesizer 2

Figure 2-14 shows the functional block diagram of the synthesizer 2.

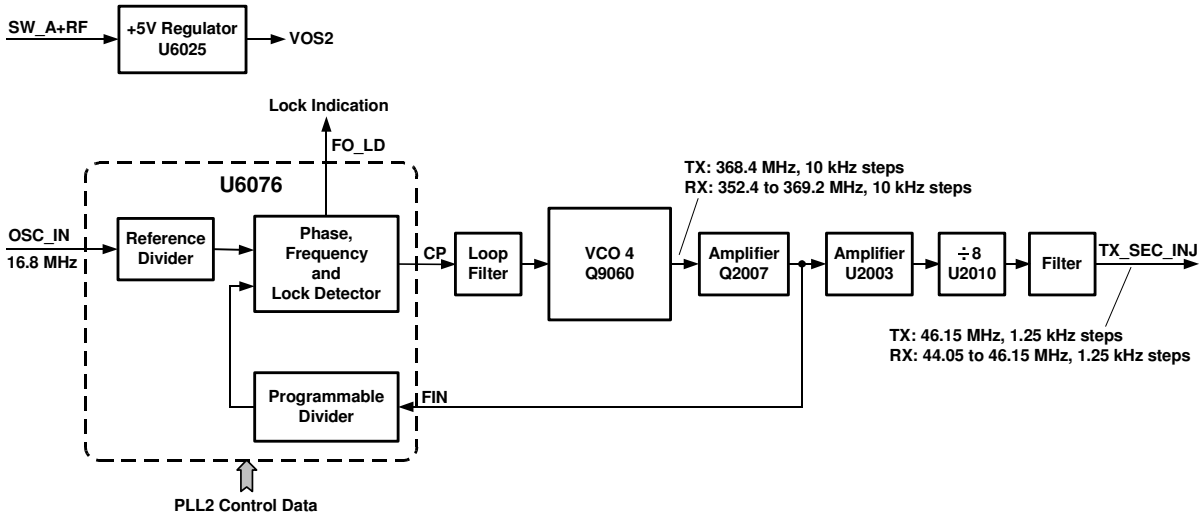


Figure 2-14. Synthesizer 2, Functional Block Diagram

a. PLL Control. Synthesizer uses a PLL control built around U6076, which is similar to U6075 (see para. 2-4.7.2.a). The control voltage generated by the loop filter is applied to the frequency control input of VCO 4.

b. VCO 4 output signal is amplified by Q2007. A sample of the Q2007 output signal is connected to the FIN input of U6076, to close the PLL loop.

c. Output Circuits. The output signal of Q2007 is also applied to the amplifier U2003. U2003 output signal drives the clock input of the divider by 8, U2010. U2010 output is filtered by a bandpass filter, and connected via the TX_SEC_INJ line to the second mixer.

d. The regulated supply voltage needed by the synthesizer 2 is provided by a linear regulator built around U6025.

2-4.8 Main Microcomputer Subsystem

Refer to Figure A-1.F, Figure A-1.G.

2-4.8.1 Microcontroller U5008

The main microcomputer subsystem is built around U5008, a 16-bit microcontroller with a 2K internal RAM, and 48KB masked ROM. U5008 has a large number of I/O ports, a serial peripheral interface (SPI), and two serial communication interfaces (UARTs), and an internal 8/10-bit A/D converter with 8 multiplexed analog inputs.

U5008 includes an internal clock synthesizer, which uses the 38.4 kHz crystal, Y5000 or Y5002, as its frequency reference. The internal clock frequency is 16.8 MHz (nominal).

U5008 addresses the other circuits via a 19-bit address bus, ADDR0 to ADDR18. Data is transferred via a 16-bit bidirectional data bus, DATA0 to DATA15. The direction of data flow over the bus is controlled by the R/W_ line, and the components that can access the data bus are selected by chip-select (CS) lines generated by U5008.

U508 is powered by +5V from the VCC line, and by +5V provided by the regulator U6021. A power-up controller, U5014, monitors the VCC line and provides a reset signal to restart the microcontroller and other LORD circuits when the voltage on the VCC line rises to the normal level.

2-4.8.2 Memory Subsystem

a. Flash Memory. The flash memory, used to store the application software, comprises two 256K units with 16-bit words, U5001 and U6035. Each unit can be separately accessed, under the control of the FLASH1 and FLASH2 lines provided by U5008.

   The VPP write protect line (inverted by Q5005) prevents accidental write access to the flash memory.

b. RAM. The RAM includes two 512K units, U5009 and U5010. In addition to the storage of temporary variables during program execution, the RAM is also used to store operational parameters, and therefore its supply voltage line, VBAT, can receive +5V from the VCC supply line, or the voltage provided by the backup battery via connector J4.

   The RESET line provided by U5014 is used to prevent accidental access to the RAM during power-up, or whenever the VCC supply voltage is not within the allowed limits.

c. EEPROM. The EEPROM, U6043, is a 32K unit used to store calibration data. Access to the EEPROM is controlled by U5008, via an access control circuit built around U6099.

2-4.8.3 Input/Output Ports

The general-purpose I/O ports of U5008 are used to generate discrete control signals, and to monitor various status lines provided by other circuits.

In addition to its own ports, U5008 uses a set of output ports, implemented by means of the external latches U6068, U6069, U6070, to generate control signals that change only when the operating mode or conditions change. The access to these ports is controlled by an I/O decoder, implemented by the latch U6079.

2-4.8.4 Handling of Analog Signals

a. U5008 has an internal A/D converter that is used to measure analog voltages. The voltages to measured are connected to the AN0/PADA0 to AN7/PADA7 ports, and an internal multiplexer selects the signal to be digitized at each instant.

b. The D/A converter U1104 is used to generate the BIAS OUT power control reference for the HI POWER module, and the oven temperature control signal for the OCXO option.

2-4.8.5 SPI

The SPI comprises a serial data line, SPI_DATA, and an associated clock line, SPI_CLK. These lines are used to communicate with other circuits, via serial/parallel converters.

Each converter also receives a load (strobe) command, which indicates when to update its outputs. The functions of the various serial/parallel converters are described next to the circuits which are controlled by them.

2-4.8.6 UARTs

a. U5008 includes two internal UARTs: one of them is used to communicate with the CONTROL HEAD module, via the CH_RXD and CH_TXD lines.

b. In addition, U5008 also uses the four UARTs in U6078 to add four additional asynchronous communication channels, identified as A, B, C, and D, which are available in the ACCESSORY connector, J5. These channels pass through the RS-232 transceivers, U6062 and U6063.

   U5008 ECLK output provides the clock signal to the UARTs, and selects the appropriate UART in U6078 by means of chip-select lines provided by the I/O decoder U6079.

   Each UART connects to the data bus lines DATA8 to DATA15, and signals U5008 that it needs access to the bus via interrupt lines, INTA to INTB.

c. When the optional GPS receiver is installed, the B channel (RXB, TXB) is routed by the switches U5007, U5008 to connector J8, for connection to the GPS receiver UART lines.

2-4.9 Power Supply Subsystem

LORD module uses the +5V supply voltage provided by the HI POWER module via the VCC line. In addition, the LORD module includes a set of local regulators, which are powered from the protected raw supply voltage line, SW_A+, also received from the HI POWER module.

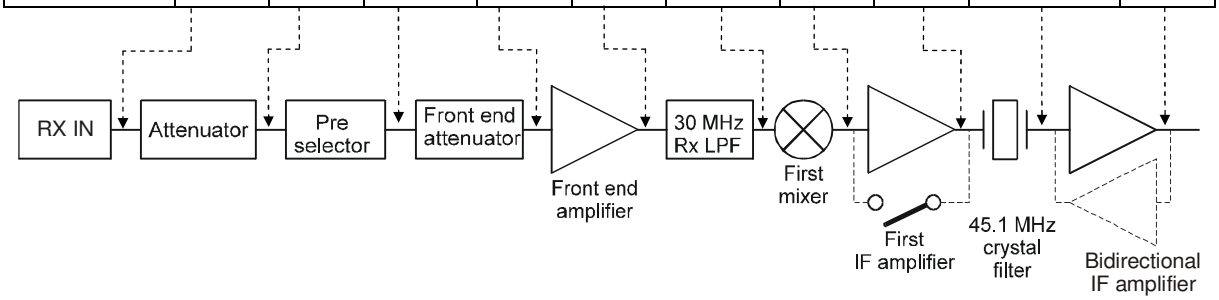
These local voltage regulators are used to provide the regulated supply voltages needed by the microcontroller (U6021), the DSP subsystem (U6097), the audio subsystem (U6098), the synthesizers (U6024, U6025, U2004), and the IF and RF subsystem (U1106, U1107).

The 9V supply voltage generated by U1106 is used by circuits in the common parts of the IF and RF subsystem: a separate circuit is used to generate the 9R voltage used only by the receive path circuits, and the 9T voltage used only by the transmit path circuits.

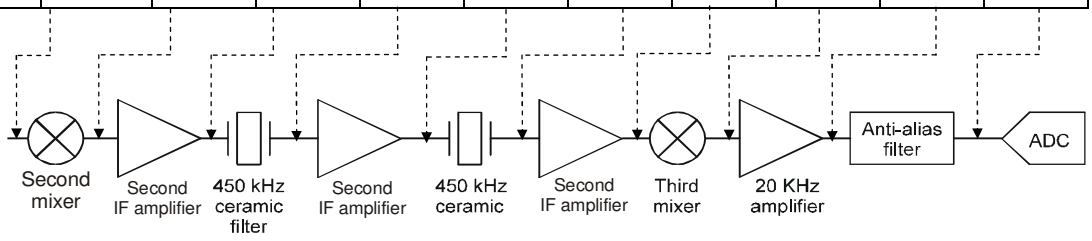
2-4.10 LORD Module Test Point Data

The LORD module has several test points, which enable measurement of signal levels and frequencies using a spectrum analyzer. Figure 2-16 provides a map of the available test points, and Figure 2-15 provides typical signal levels and frequencies at critical points (these test points are identified by a larger type in Figure 2-16). These test points can be used for troubleshooting purposes.

Gain (dB)	-3	-2.5	0	13	10	-6	12	-4	15	-
P (dBm)	-95	-98	-100	-100	-86	-98	-104	-88±4	-97	-82
F (MHz)	FIN	FIN	FIN	FIN	FIN	FIN	45.1	45.1	45.1	45.1
Designation	*1	*2	PS_OUT	AMP_1	AMP_2	Second Mixer	AMP_4	AMP_3	XTAL_OUT	IF2_3



Gain (dB)	-6	22	-1.5	8	-1.5	13	0	28	0	-
P (dBm)	-82	-88	-66	-67.5	-59.5	-61	-48	-48	-20	-20
F (MHz)	45.1	0.45	0.45	0.45	0.45	0.45	0.45	0.02	0.02	0.02
Designation	IF2_3	IF3_1	IF3_2	IF3_3	IF3_4	IF3_5	IF3_6	AF_2	AF_3	ADC_IN



Gain (dB)	-6	15	-4	0	-6	-6	25	-6	
P (dBm)	-25	-31	-15±4	-21	-27	-33	-6	-6	-12
F (MHz)	1.05	45.1	45.1	45.1	45.1	FOUT	FOUT	FOUT	FOUT
Designation	DSM_N	IF2_3	XTAL_OUT	AMP_3	AMP_4	Second Mixer	EX_AMP_LPF	*3	EX_AMP_OUT

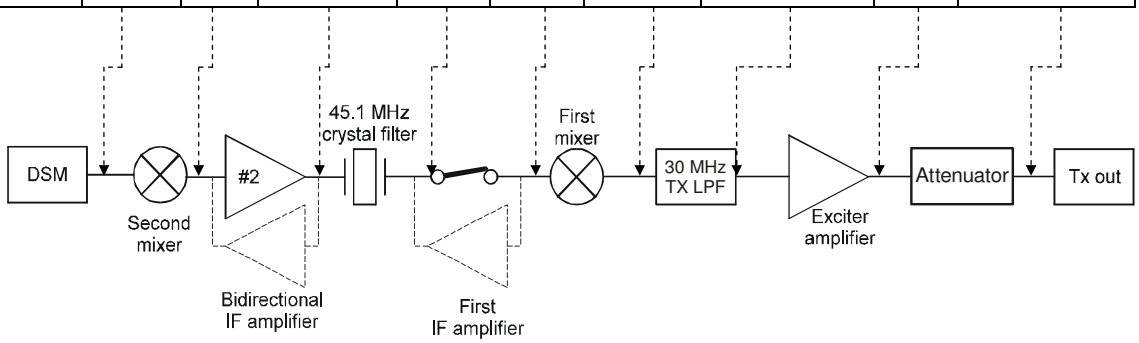


Figure 2-15. LORD Module, Typical Test Point Signal Frequencies and Levels

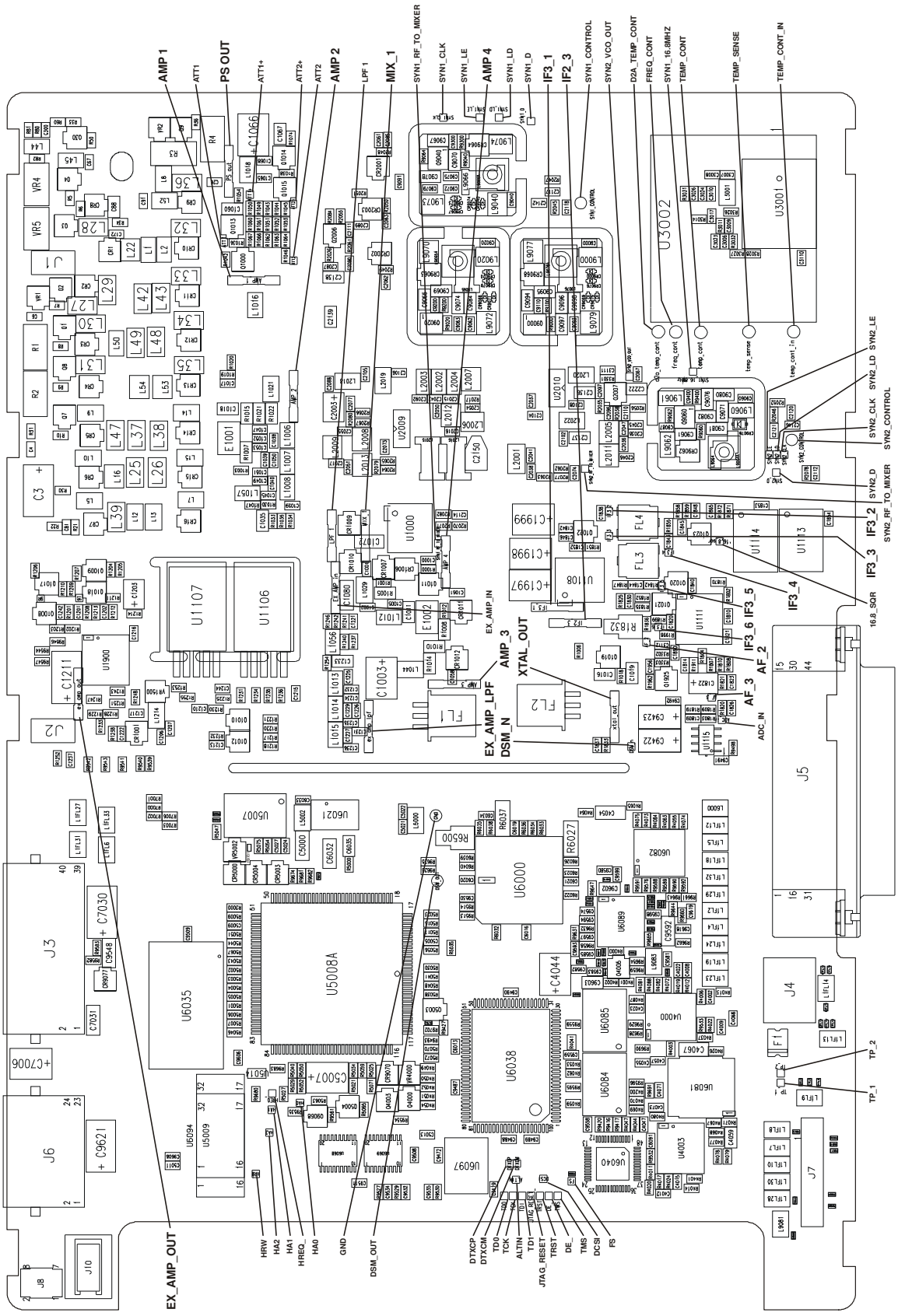


Figure 2-16. LORD Test Points Map

2-5. HI POWER MODULE

The functional block diagram of the HI POWER module is shown in Figure 2-17. The HI POWER module comprises the power amplifier subsystem, the harmonic filter circuits and their control circuits, and the Micom-Z power supply subsystem.

2-5.1 Power Amplifier (PA)

2-5.1.1 ALC Attenuator

Refer to Figure A-2.B.

The RF_INPUT_TX signal received via connector P4 from the LORD module is connected to the ALC attenuator, comprising R77 and the PIN diodes CR8, CR9.

The attenuation is controlled by the V_ALC voltage: a higher voltage increases the attenuation.

2-5.1.2 Power Amplification Chain

Refer to Figure A-2.B.

a. Predriver. The ALC attenuator output signal is amplified by the predriver stages Q5 and Q7. The supply voltage to Q5 and Q7, VDD_PREAMP, is connected only in the transmit mode, by a switch comprising Q10, Q12: the switch connects the SW_BATT line only when 9V appear on the 9T line.

   The bias voltage for Q5 and Q7 (3V nominal) is provided by the +3.3V linear regulator, U1, via voltage dividers connected to their gates.

   The bias voltage is present only when the PA_INHIBIT line is at a high level.

b. Driver. The predriver output, PRE_DRIVER, is amplified by a push-pull stage comprising Q3 and Q4. The bias voltages are provided by the +5V linear voltage regulator U6, via the potentiometers R67, R73.

   The bias voltage is present only when the BIAS_EN line is at a high level.

c. Power Amplifier. The driver output signal is amplified by a push-pull stage comprising Q6 and Q11. The bias voltage is derived from the +3.3V provided by the linear regulator U11, via the source follower stage, Q8: Q8 source voltage is determined by the collector voltage of Q2, which can be adjusted by means of potentiometer R22.

   The bias voltage is present only when the BIAS_EN line is at a high level, and both the +5V and +10V voltages are present.

2-5.2 TX/RX Switch

Refer to Figure A-2.C.

The RF output of the power amplifier, PA_OUT, is connected to the TX/RX switch, the relay K1.

a. In the receive mode, K1 is not energized and connects the harmonic filter output to the RX_TO_LORD line.

b. In the transmit mode, and also in the BIT mode, K1 is energized by the 9T and/or BIT lines, and connects the PA_OUT line to the harmonic filter bank.

2-5.3 Harmonic Filter Bank

Refer to Figure A-2.C, Figure A-2.D.

The harmonic filter is used to attenuate the unwanted spurious and harmonics of the transmitted and received signals. The direction of flow through the harmonic filter is determined by the TX/RX switch, K1, as explained in para. 2-5.2.

The harmonic filter contains seven low pass filters. The filter corresponding to the operating frequency

is inserted in the signal path by a pair of relays, controlled by the LORD module via the serial data line SPI_DATA.

The relay control data is loaded into the serial/parallel converter U4 at the rate of the SPI_CLK clock signal, and updates the U4 outputs when the SPI_SEL line rises to a high level. Each U4 output drives one pair of relays, via Darlington stages in U3: at any time, only one U4 output assumes a high level, causing the corresponding pair of relays to energize and insert a filter in the RF signal path.

The filter ranges and the corresponding relays are listed in Table 2-8.

Table 2-8. Harmonic Filter Frequency Ranges and Controlling Relays

Filter	Frequency Range	Relays
1	1.6 to 2.43 MHz	K101, K102
2	2.43 to 3.7 MHz	K201, K202
3	3.7 to 5.6 MHz	K301, K302
4	5.6 to 8.5 MHz	K401, K402
5	8.5 to 13 MHz	K501, K502
6	13 to 19.8 MHz	K601, K602
7	19.8 to 30 MHz	K701, K702

2-5.4 Power Sensor

Refer to Figure A-2.C.

The forward/reflected power sensor, comprising T4 and the rectifiers CR6 and CR7, is inserted between the filters and the antenna connector, J2.

During transmission, it generates two DC signals:

a. V_FWD_RADIO, proportional to the forward RF power delivered to the antenna

b. V_REV_RADIO, proportional to the RF power reflected from the antenna.

The signals are sent to both the ALC control circuits, and to the microcomputer system in the LORD module, for controlling the transmit power as a function of the following parameters (see para. 2-5.5):

- VSWR value: if the VSWR increases above 2:1, the output power is gradually decreased, to protect the radio from high reflected power.
- Harmonic filter insertion losses: if the harmonic filter insertion loss is too high, the output power level is decreased.

2-5.5 ALC Circuits

Refer to Figure A-2.E.

a. Internal/External Power Amplifier Selector. Normally, Micom-Z uses its internal RF power amplifier, and a low level is applied to Q807 via the EXT_AMP_EN line. The analog switches in U12 then connect the V_FWD_RADIO and V_REV_RADIO lines to the ALC circuits.

b. Forward Power Control. The V_FWD_RADIO voltage passes through the peak detector (U5, CR809) to the ALC error amplifier, U13. U13 compares the level with the ALC_REF_DAC power reference received from the LORD module via the non-inverting buffer U15: a higher V_FWD_RADIO level causes the output (pin 4) of U13 to assume a lower voltage, resulting in a higher voltage at the emitter of Q23, which drives the V_ALC line.

   This increases the attenuation of the ALC attenuator, tending to return the transmit power to its normal level. The reverse action occurs when V_FWD_RADIO is less than normal.

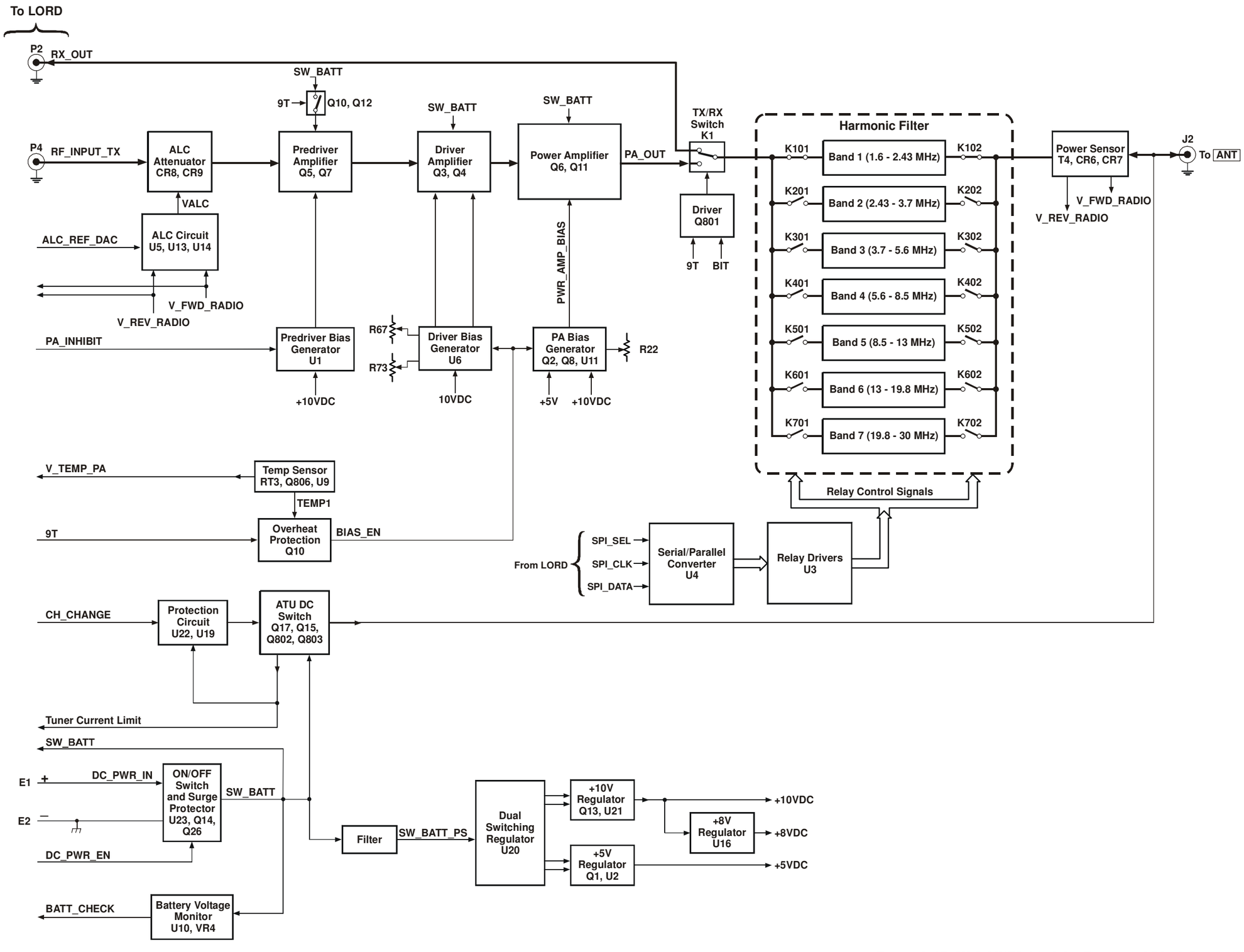


Figure 2-17. HI POWER Module, Functional Block Diagram

c. Reverse Power Protection. The V_REV_RADIO voltage passes through the peak detector (U14, CR811) to the reverse power comparator, U13: when the reverse power increases, the output (pin 5) voltage decreases, resulting in a higher voltage at the emitter of Q23, which drives the V_ALC line.

d. Overheat Protection. The thermistor RT3 causes the voltage on the V_TEMP_PA line (monitored by U5008, located on the LORD module), to be proportional to the internal temperature.

When the temperature is too high, the voltage on the V_TEMP_PA line exceeds the threshold of the comparator U9, and the TEMP1 lines assumes a high level. This turns Q19 on, and turns off the bias voltages via the BIAS_EN line.

2-5.6 Power Supply Subsystem

Refer to Figure A-2.F.

a. ON/OFF Switch and Surge Protector. The ON/OFF switch comprising the MOSFETs Q14, Q26, connects the DC input voltage to the internal power supply line, SW BAT, only if the GATE output of the surge stopper U23 provides a sufficiently high gate drive voltage. This occurs only when the Micom-Z is turned on (provided the polarity of the input voltage is correct: otherwise, U23 shut down input is pulled to ground even if the DC_PWR_EN line is connected to ground by switching the Micom-Z ON).

Moreover, Q14 and Q26 will be turned off by U23 if the input voltage line, DC_PWR_IN, is not within the allowed range.

When Q14 and Q26 are both ON, the input voltage is connected to the internal protected supply voltage line, SW_BATT.

The SW_BATT line is monitored by U5008, located on the LORD module, via the battery voltage monitor, U10.

b. Micom-Z Power Supply. The SW_BATT line is used to power the dual switching regulator, U20.

One section of U20 drives the step-down converter that powers the +10V linear regulator, U21. The linear regulator U16 uses the +10 VDC voltage to provide +8 VDC.

The other section of U20 drives the step-down converter that powers the +5 VDC linear regulator, U2.

c. ATU DC Power Switch. The SW_BATT line can be connected to the DC_ANT_CPLR line by the switch Q15.

To turn Q15 on, the LORD module provides a high level on the CH_CHANGE line.

The current flowing through Q15 is monitored by Q802: if the current is too high, Q803 saturates, and resets the latch U22. The resulting low level on the LATCH line turns Q15 off.

The TUNER_CURR_LIM line is also monitored by the LORD module.

2-6. CONTROL HEAD MODULE

Figure A-3 shows the schematic circuit diagram of the CONTROL HEAD module for both the dash-mount and trunk-mount versions.

2-6.1 CONTROL HEAD Module for Dash-Mount Version

Figure 2-18 shows the functional block diagram of the CONTROL HEAD module used in the Micom-Z dash-mount version.

2-6.1.1 Microcontroller

Refer to Figure A-3.B.

a. Microcontroller. The microcontroller, U1, is a 16-bit microcontroller with a 8 kB data RAM, a 128 kB flash memory that stores the application program, two A/D converters with 8 multiplexed inputs, two D/A converters, two UARTs and a large number of input and output ports. Its internal clock oscillator uses the 7.3728 MHz crystal Y1 as a frequency reference.

b. Keypad Interface. The keypad (Figure A-3.C) is a 5×5 matrix of switches, with the row lines connected to the 3V3_IF line via series resistors. The row and the column lines are connected to ten of the I/O ports of U1, which can thus detect the pressing of each key, including the volume control keys.

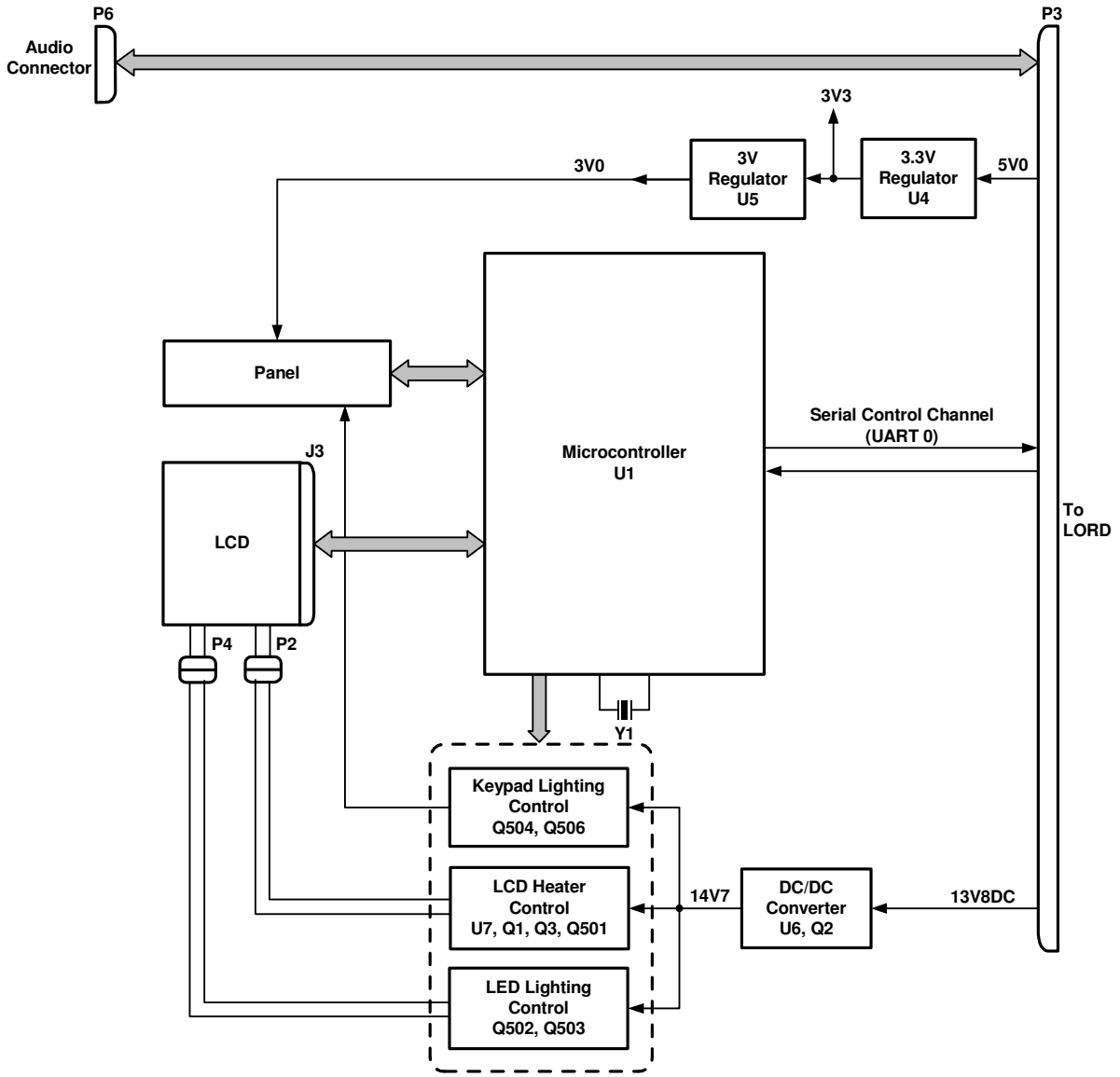


Figure 2-18. CONTROL HEAD Module for Dash-Mount Version, Functional Block Diagram

c. ON/OFF Control. The ON/OFF push-button, SW26, is normally open: when pressed to turn the Micom-Z on, it connects ground to the ON_OFF_CONT line, which turns the power supply subsystem on the HI POWER module on.

   When Micom-Z operates, the microcontroller U1 can read the status of the switch via an inverter in U3: when the switch is pressed again, the microcontroller is alerted to the turn-off request, and keeps the ON_OFF_CONT line at a low level by turning Q507 on via the POW_OFF_CPU line, until it completes its shut-down routine.

d. LCD Interface. The LCD interfaces with U1 via the CPU_D0 to CPU_D7 data bus.

e. Communication with LORD module. U1 communicates with the microcomputer subsystem on the LORD module via a serial control channel, connected to the internal UART 0.

2-6.1.2 Auxiliary Power Supply

Refer to Figure A-3.E.

The 13V8DC supply line received via the LORD module is converted to 14.7V by the DC/DC converter comprising the pulse-width modulation (PWM) controller U6, which drives the switching MOSFET Q2.

The resulting pulses at the secondary of T1 are rectified by CR2, and filtered by C72, C79, C83 to obtain the 14V7 auxiliary supply voltage line.

U6 starts operating only when a high level is applied by U1 on the VLED_HEAT_EN line, to turn Q7 on.

2-6.1.3 LCD Heater and Backlighting Control

a. LCD Backlighting. The 14V7 line can be connected by Q503 to the VLED_BL_LCD line by applying a high level on the LCD_BL_EN line, thereby turning Q505 on.

b. LCD Heating. The 14V7 line can be connected by Q1 to the VHEAT_LCD line by applying a high level on the LCD_HEAT_EN line. This causes Q3 to cut off. U7 output falls to a low level to turn Q1 on, thereby connecting power to the VHEAT_LCD line.

   The voltage on the VHEAT_LED line is regulated by U1, using feedback from the voltage R158, R581, R159, R167, R536: by applying a high level on the LCD_HEAT_LEVEL line, which turns Q501 on, the voltage can be reduced, thereby reducing the heating power to the LCD.

2-6.1.4 Keypad Lighting

The 14V7 line can be connected by Q504 to the VLED_BL_KB line by applying a high level on the KB_BL_EN line, thereby turning Q506 on.

2-6.1.5 MIC Connector Interface

The MIC connector, P6, includes the following interface lines:

a. Serial control channel (RXD, TXD), connected directly to the LORD side connector, P3.

b. PTT_MIC line, inverted by U3 and connected to connector P3.

c. MIC_IN line, connected to connector P3.

2-6.1.6 Power Supply Subsystem

The power for the CONTROL HEAD module is provided by the 5V0 line. The +5V supply voltage is converted by the linear regulator U4 to +3.3V on the 3V3 line.

The linear regulator U3 provides +3V to the VDD_LCD_3V0 line.

2-6.2 CONTROL HEAD Module for Trunk-Mount Version

Figure 2-19 shows the functional block diagram of the CONTROL HEAD module used in the Micom-Z trunk-mount version.

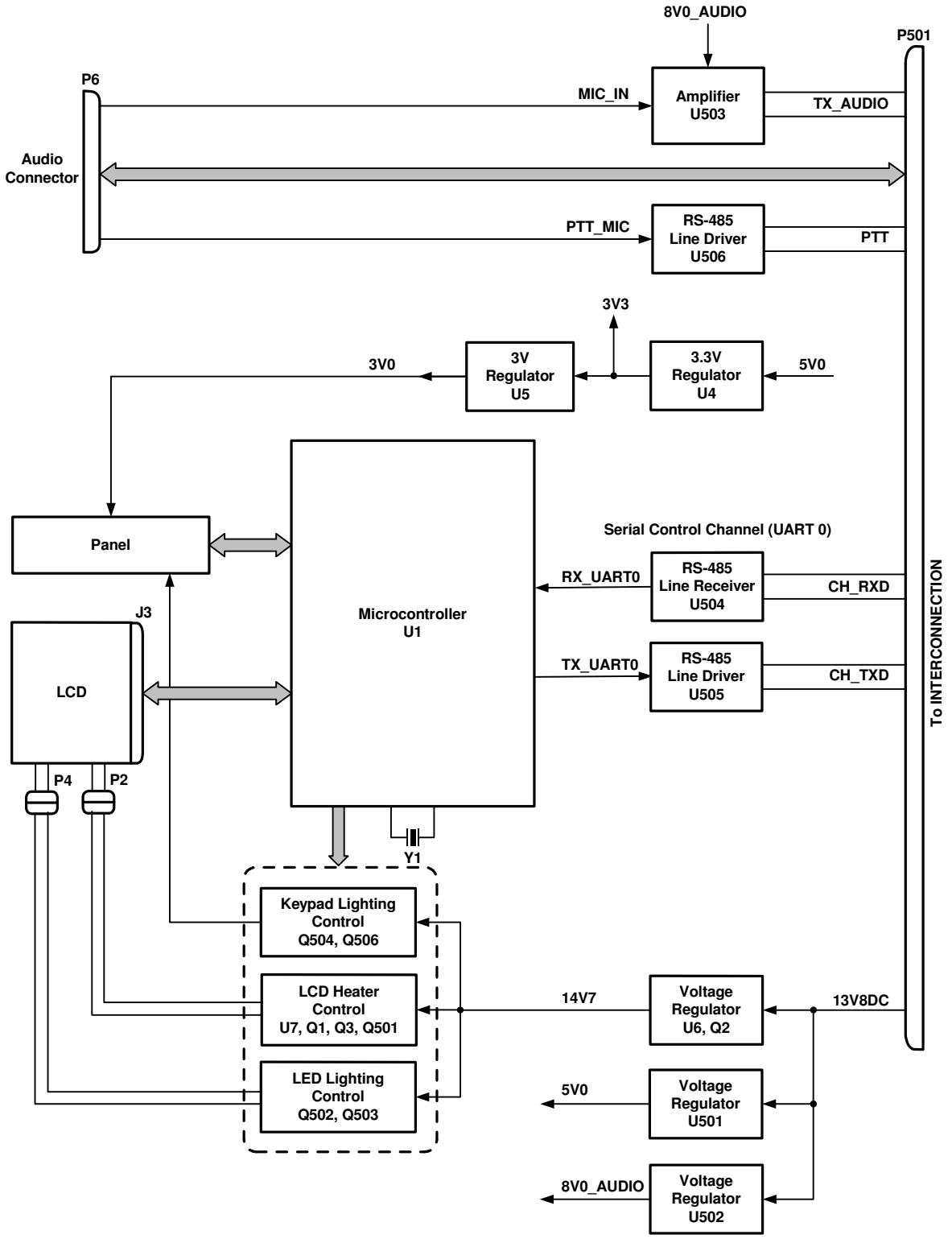


Figure 2-19. CONTROL HEAD Module for Trunk-Mount Version, Functional Block Diagram

2-6.2.1 Microcontroller

Refer to Figure A-3.B, Figure A-3.C.

The microcontroller subsystem is similar to that used in the dash-mount version (para. 2-6.1.1). The connection of the serial control channel to the LORD module (via the INTERCONNECTION module)

is made via an RS-485 transceiver, comprising the line receiver U504 and the line driver U505 (refer to Figure A-3.E).

2-6.2.2 Auxiliary Power Supply

Refer to Figure A-3.E.

The auxiliary power supply is similar to that of the dash-mount version (para. 2-6.1.2).

2-6.2.3 LCD Heater and Backlighting Control

The LCD heater and backlighting control circuits are similar to the dash-mount version (para. 2-6.1.3).

2-6.2.4 Keypad Lighting

The keypad lighting control circuits are similar to the dash-mount version (para. 2-6.1.4).

2-6.2.5 MIC Connector Interface

Refer to Figure A-3.F.

a. The MIC_IN signal is amplified and converted to a balanced signal (TX_AUDIO_P, TX_AUDIO_N) by the amplifiers in U503, for transmission over the interconnection cable.

b. The PTT_MIC signal is converted to a RS-485 balanced signal by the RS-485 line driver U506.

2-6.2.6 Power Supply Subsystem

Refer to Figure A-3.D.

The power for the CONTROL HEAD module is provided via the 13V8DC line:

a. The linear regulator U501 converts the 13V8DC line to +5V on the 5V0_INT line.

b. The linear regulator U502 converts the 13V8DC line to +8V on the 8V0_AUDIO line. U503 derives a +4V voltage, AUDIO_BIOS, for the MIC IN audio amplifier.

c. The +5V supply voltage is converted by the linear regulator U4 to +3.3V on the 3V3 line.

d. The linear regulator U3 provides +3V to the VDD_LCD_3V0 line.

2-7. INTERCONNECTION MODULE

Refer to Figure A-4.

Figure 2-20 shows the functional block diagram of the INTERCONNECTION module.

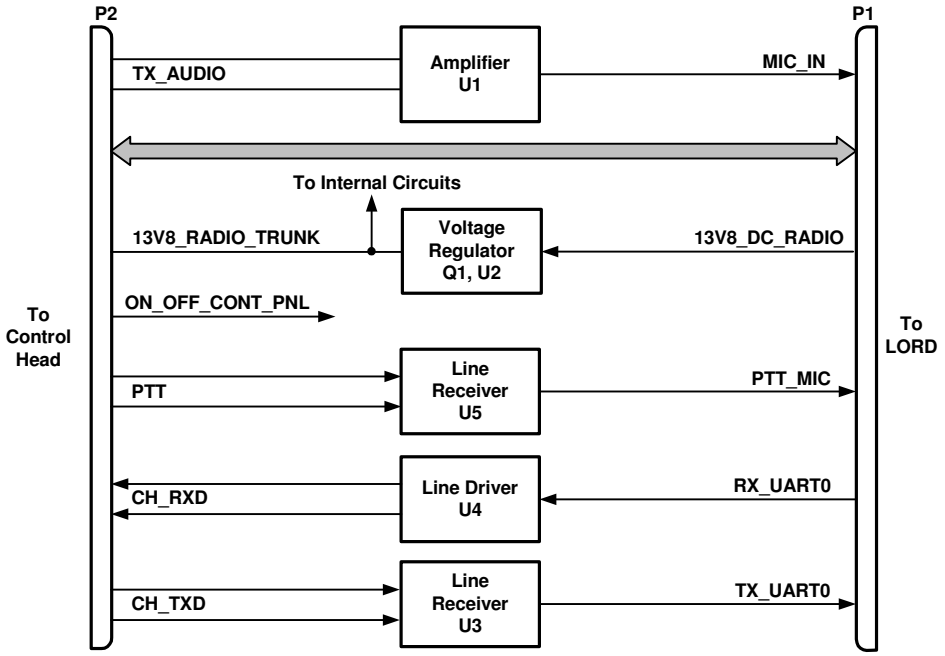


Figure 2-20. INTERCONNECTION Module, Functional Block Diagram

a. The TX_AUDIO_P, TX_AUDIO_N balanced signal is converted to a single-ended signal, MIC_IN, by the audio amplifier U1.

b. The RS-485 balanced PTT signal is converted to a single-ended signal, PTT_MIC, by the RS-485 line receiver U5.

c. The RS-485 balanced CH_TXD signal is converted to a single-ended signal, TX_UART0, by the RS-485 line receiver U3.

d. The RX_UART0 signal is converted to a RS-485 balanced signal, CH_TXD, by the RS-485 line driver U4.

e. The 13V8_DC_RADIO supply voltage received from the LORD module is connected to the voltage regulator built around U2 and Q1.

   Q1 connects the supply voltage to the 13V8_RADIO_TRUNK line supply voltage, which powers the control head assembly through the interconnection cable.

   In addition, the 13V8_RADIO_TRUNK line supply voltage is used to provide power to the amplifier U1. Another amplifier in U1 provides the AUDIO_BIAS reference voltage for the audio amplifier.

2-8. FAN CONTROL MODULE

Refer to Figure A-5.

The cooling tray includes the FAN CONTROL module. This module provides the connections between the radio side connector, J2, and the user's side connector, J3. In addition, it includes a voltage regulator comprising U1 and Q2, which provides +12VDC to the fan installed in the tray. The voltage regulator starts providing the voltage when a high level is applied on the DSO/FAN_ON_OFF line: this turns Q1 on, and enables U1.

Chapter 3

MAINTENANCE

3-1. SCOPE

This Chapter provides maintenance instructions for Micom-Z.

The information presented in this Chapter covers testing, troubleshooting procedures, and repair instructions. Use Appendix B to identify components and find other data needed for troubleshooting and repair.

3-2. HANDLING PRECAUTIONS DURING MAINTENANCE

Equipment maintenance is performed in accordance with standard practice. During equipment maintenance, observe the following precautions:

a. To preserve equipment reliability, the equipment should be serviced only in a protected, clean environment.

b. Electronic components, in particular CMOS and RF devices, are susceptible to damage by electrostatic discharge (ESD). Electrostatic charge is created by friction between different bodies, including the human body, especially under dry conditions. 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. To prevent damage, use the following precautions:

- Eliminate static generators (plastics, styrofoam, etc.) in the work area.
- Remove nylon or double-knit polyester jackets, roll up long sleeves, and remove or tie back loose hanging neckties.
- Disconnect all power from the unit before starting repair activities.
- Use a static safeguarded workstation, which can be accomplished through the use of an anti-static kit, which typically includes a wrist strap, two ground cords, a static-control table mat, and a static-control floor mat.

  When these items are not readily available, observing the following techniques will minimize chance of damage:

  - If a static-sensitive device is to be temporarily set down, use a conductive surface for placement of the device.
  - Make skin contact with a conductive work surface first and maintain this contact when the device is set down or picked up.

c. Keep any module (good or defective) in the original packaging, even when the module is placed on the workbench.

d. Handle modules carefully; do not drop modules, and avoid piling them up, because the exposed components may be damaged by physical stress and shock. Always use the original packaging of the module and do not use alternative packaging, unless the original one is damaged or lost.

   The original packaging is designed to absorb mechanical shocks and to protect the equipment against electrostatic discharge.

e. Hold a module by its sides, and avoid touching its connectors or electronic components installed on the module. This practice will prevent mechanical damage, oily deposits on contacts and damage due to electrostatic discharge.

f. Micom-Z modules make extensive use of surface-mounted (SMT) components and miniaturization, therefore personnel involved in troubleshooting and repair must be thoroughly familiar with the applicable workmanship procedures. No special tools are needed for repair, except for a standard technician's toolbox and a soldering/desoldering station with an appropriate set of tips, considering the component types used in the module (in particular multi-lead and SMT components). Use standard workmanship practice for repair and component replacement procedures:

- Pay special attention to avoid overheating or damage to adjacent components. Use only a soldering tool with a temperature-controlled tip, and minimize heating time.
- Pay attention to the orientation of polarized components.
- During soldering of RF transistors, use minimum solder and make sure that the solder does not flow to other areas.

Clean the module after any repair, and thoroughly remove any remaining foreign matter, in particular solder remnants. Inspect visually after repairs are completed.

g. Whenever a cover or a PCB is fastened by multiple screws, first insert all the screws and tighten them by hand, and then use a screwdriver, to tighten completely the screws. Tighten the screws alternately, starting with the screws at the opposite ends of one diagonal, then those at the ends of the other diagonal. Do not tighten one screw completely and then the others: take up one turn at a time for each screw, sequentially, in the order described.

Avoid exerting excessive torque when tightening screws. Table 3-1 provides standard tightening torques for screws (the allowed torque tolerance is ±10%).

Table 3-1. Tightening Torques for Screws

Screw Size	Thread Forming Metallic Surface	Threaded Metallic Surface	Plastic Surface
Metric System Screws			
M3	10 kgf/cm	10 kgf/cm	6 kgf/cm
M4	15 kgf/cm	15 kgf/cm	7 kgf/cm
M5, M6	22 kgf/cm	18 kgf/cm	8 kgf/cm
American System Screws			
4-40	10 kgf/cm	7 kgf/cm	6 kgf/cm
6-32	15 kgf/cm	15 kgf/cm	7 kgf/cm
8-32, 10-32	22 kgf/cm	18 kgf/cm	8 kgf/cm

3-3. CLEANING

WARNING

Prolonged breathing of cleaning compounds may be dangerous; make certain that adequate ventilation is provided. Do not use near a flame. Avoid contact with the skin. If contact with skin is made, immediately wash off with water.

Before performing any maintenance actions, clean the equipment in accordance with the following procedure:

a. Inspect the exterior of the unit. The surfaces should be clean and free of dirt, grease and other contaminants.

b. Remove dust and other loose dirt with a soft clean cloth. If dirt is difficult to remove, dampen the cloth with water; mild soap may be used for more effective cleaning.

c. Remove grease, fungus and ground-in dirt from the cases: use a lightly dampened cloth (not wet) with an approved cleaning compound.

d. Remove dirt from connectors with a brush.

3-4. TESTING

3-4.1 Micom-Z Testing

a. Full Performance Tests. The Micom-Z radio sets are tested by means of an automatic test station, Mfg. Cat. No. 2089-08892-00. Refer to the test station documentation for detailed procedures.

b. Periodic Alignment and Calibration. The transmit power and frequency accuracy of Micom-Z radio can be calibrated using the PC-based Radio Service Software (RSS), option G424 (FVN4841). Refer to the RSS User Guide, Publication 6886867J01, for detailed instructions.

3-4.2 Module Testing and Alignment

The following automatic test stations are used to test and align Micom-Z modules:

- LORD module – use test station Mfg. Cat. No. 2072-08001-00.
- HI POWER module - use test station Mfg. Cat. No. 2072-08503-00.

Refer to the test station documentation for detailed procedures.

3-5. TROUBLESHOOTING

The purpose of the troubleshooting procedures is to return a defective Micom-Z unit to normal service as soon as possible, by isolating the malfunction to a replaceable subassembly or module, and then repairing the subassembly or module.

3-5.1 Overview of Troubleshooting Procedures

In case a malfunction is detected (either during field operation, or during testing), perform the following steps in the order presented below, until the problem is isolated and corrected:

1. Refer to the troubleshooting instructions given in para. 3-7.2 of the Micom-Z Operator Manual, which provides instructions for isolating the fault to a replaceable subassembly or module.

   These instructions include preliminary troubleshooting, followed by the use of the BITE function in accordance with para. 3-7.2 of the Micom-Z Operator Manual. After collecting the error codes, refer to para. 3-5.2 for their interpretation.

2. If the problem is detected during testing, collect and analyze the results of the electrical test procedures, and then refer to para. 3-5.4 for quick troubleshooting instructions. If the problem cannot be corrected using the instructions in para. 3-5.4, refer to para. 3-5.5 for systematic troubleshooting procedures.

   Refer to para. 3-6 for Micom-Z disassembly, module replacement, and assembly procedures.

3. After identifying the defective subassembly or module, refer to para. 3-5.5 for module troubleshooting instructions.

Remember that visual inspection may often detect faults without testing or making measurements. Therefore, after opening the Micom-Z case, perform a thorough visual inspection and inspect its wiring and module assemblies for physical damage. In particular, check for any external signs of damaged components and/or damaged printed circuit boards. The possibility of intermittent faults should not be overlooked. To reveal such defects, check the wiring, the coaxial cables, and the various plugs and jacks of the modules. If the inspection reveals damage, replace the suspected part in accordance with the applicable procedure of para. 3-6 before starting any other troubleshooting procedures.

After completing the troubleshooting procedure and the associated repair tasks, repeat the full set of performance checks listed in para. 3-4 to verify that the equipment has been returned to fully operational condition.

NOTE

After replacing the LORD and/or the HI POWER module, it is necessary to calibrate the RF transmit power using the RSS.

3-5.2 BIT Error Codes

Table 3-2 explains the meaning of the error codes generated by the BIT function, and lists their most probable cause.

Table 3-2. BIT Error Codes

Error Code	Meaning	Probable Cause
00	O.K. – no errors	
01	DSP boot checksum fail (during download)	LORD board problem
02	DSP PLL unlock	LORD board problem
03	DSP external RAM memory	LORD board problem
04	Not applicable	
05	DSP internal RAM memory	LORD board problem

Table 3-2. BIT Error Codes (Cont'd)

Error Code	Meaning	Probable Cause
06	Not applicable	
07	Not applicable	
08	HC16 flash memory checksum	LORD board problem
09	HC16 RAM memory	LORD board problem
10	No 16.8 MHz clock	Check for good power cable connection. Possible LORD board problem
11	Battery low	Weak internal battery: replace battery to correct problem
12	Control head wake-up	Control head problems
13	Control head is not responding	Control head problems
14	Radio not programmed	Problem experienced during programming. Program radio (connect MRC or RSS at 1200 bps)
15	Database fail	ALE scanned channels do not match the channels programmed by means of the MRC or RSS
16	VCO 1 first injection	LORD board problem
17	VCO 2 first injection	LORD board problem
18	VCO 3 first injection	LORD board problem
19	VCO second injection	LORD board problem
20	Synthesizer unlock	LORD board problem
21	Receiver failure	LORD board problem
22	Preselector range 1	LORD board problem
23	Preselector range 2	LORD board problem
24	Preselector range 3	LORD board problem
25	Preselector range 4	LORD board problem
26	Preselector range 5	LORD board problem
27	Preselector range 6	LORD board problem
28	Preselector range 7	LORD board problem
29	Preselector range 8	LORD board problem
30	Exciter test	HI POWER board problem
31	Antenna mismatch	Problem with antenna: check antenna and its connections. If problem persists, it is a HI POWER board problem
32	Harmonic filter range 1	HI POWER board problem
33	Harmonic filter range 2	HI POWER board problem
34	Harmonic filter range 3	HI POWER board problem
35	Harmonic filter range 4	HI POWER board problem
36	Harmonic filter range 5	HI POWER board problem
37	Harmonic filter range 6	HI POWER board problem
38	Harmonic filter range 7	HI POWER board problem
39	Power amplifier fail	HI POWER board problem

3-5.3 Troubleshooting Procedure

The purpose of the troubleshooting procedure presented in this Section is to rapidly return a defective Micom-Z to service by replacing suspected modules:

a. Identify the closest description of the problem under "Problem Symptom" in Table 3-3.

b. Perform the required corrective actions listed under "Corrective Actions" in the table in the order of appearance, until the problem is corrected.

   If the replacement of an item (module, PCB, assembly) during the troubleshooting procedure does not correct the problem, reinstall the original item before continuing to the next step.

c. After a trouble is isolated, follow the repair instructions given in para. 3-6.

d. After correcting the trouble and repairing the unit, repeat the performance checks in accordance with para. 3-4.

Table 3-3. Troubleshooting Procedure

No.	Problem Symptom	Suspected Module(s)
1	Transceiver cannot be turned on	• LORD module • HI POWER module • CONTROL HEAD module • INTERCONNECTION module (trunk version only)
2	No receive audio	• LORD module • CONTROL HEAD module • INTERCONNECTION module (trunk version only) Check also the flat cables and the coaxial cables connections
3	No RF transmit power but transceiver switches to the transmit mode	• LORD module • HI POWER module • CONTROL HEAD module • INTERCONNECTION module (trunk version only)
4	Low RF transmit power	First try to calibrate the RF transmit power using the RSS. • LORD module • HI POWER module • TUNER module
5	Transceiver cannot be switched to transmit mode by pressing the microphone PTT	• LORD module • CONTROL HEAD module • INTERCONNECTION module (trunk version only) • Microphone
6	No LCD backlight	CONTROL HEAD module
7	Blank LCD screen	• LORD module • CONTROL HEAD module
8	LCD displays jumbled characters	• CONTROL HEAD module • LCD
9	POWER LATCH message appears	• HI POWER module (harmonic filter) • LORD module

Table 3-3. Troubleshooting Procedure (Cont'd)

No.	Problem Symptom	Suspected Module(s)
10	Distorted audio receive signal	• LORD module • CONTROL HEAD module • Speaker
11	Excessive current consumption in receive, or standby mode	• LORD module • HI POWER module • INTERCONNECTION module (trunk version only)
12	Excessive current consumption in transmit mode	• HI POWER module • Transmitter calibration
13	Low audio receive signal	• LORD module • HI POWER module
14	Low modulation of transmit signal	• Microphone problem • LORD module • HI POWER module
15	Excessive distortion of audio receive signal	LORD module
16	Transceiver enters the transmit mode, and cannot be returned to the receive mode	• LORD module • CONTROL HEAD module
17	NO CLOCK message appears	LORD module
18	Transceiver cannot be switched to transmit mode by the voice PTT line in the ACCESSORY connector	LORD module
19	Transceiver cannot be switched to transmit mode by the data PTT line in the ACCESSORY connector	LORD module
20	Transceiver cannot be switched to transmit mode by the CW PTT (Morse) line in the ACCESSORY connector	LORD module
21	LORD flash memory cannot be updated	LORD module
22	The icons related to the installed options are not displayed	LORD module
23	SYNT FAIL message appears	LORD module
24	Keypad does not operate normally, or no response to key pressing	• CONTROL HEAD module • Keypad • INTERCONNECTION module (trunk version only)
25	GPS receiver cannot provide position fix	• LORD module • GPS receiver • Defective GPS antenna • GPS antenna cable
26	No fan control command (cooling tray OK)	LORD module
27	No output supply voltage for external devices in the ACCESSORY connector	LORD module

Table 3-3. Troubleshooting Procedure (Cont'd)

No.	Problem Symptom	Suspected Module(s)
28	No receive output signals for external devices in the ACCESSORY connector	LORD module
29	No 13.8 VDC output for ATU in ANT connector	• HI POWER module • Tuner option not selected
30	MRC or RSS cannot communicate with the transceiver via the ACCESSORY connector	• LORD module • CONTROL HEAD module
31	MRC or RSS cannot communicate with the transceiver via the front panel MIC connector	• LORD module • CONTROL HEAD module • INTERCONNECTION module (trunk version only)
32	No front and rear RSS communication	LORD module
33	Excessive harmonic levels	• HI POWER module • LORD module
34	Transceiver does not return to last operating state after being turned off	• Internal battery • LORD module
35	Transceiver remains in the power-up self-test state	LORD module

3-5.4 Micom-Z Troubleshooting Charts

1. Perform the checks presented in Figure 3-1.
2. If a problem is detected at a checkout step of Figure 3-1, refer to the troubleshooting chart identified next to the corresponding step, and then perform the troubleshooting activities listed in the chart until the problem is corrected.
3. After correcting the problem, repeat the checkout procedure in accordance with Figure 3-1.

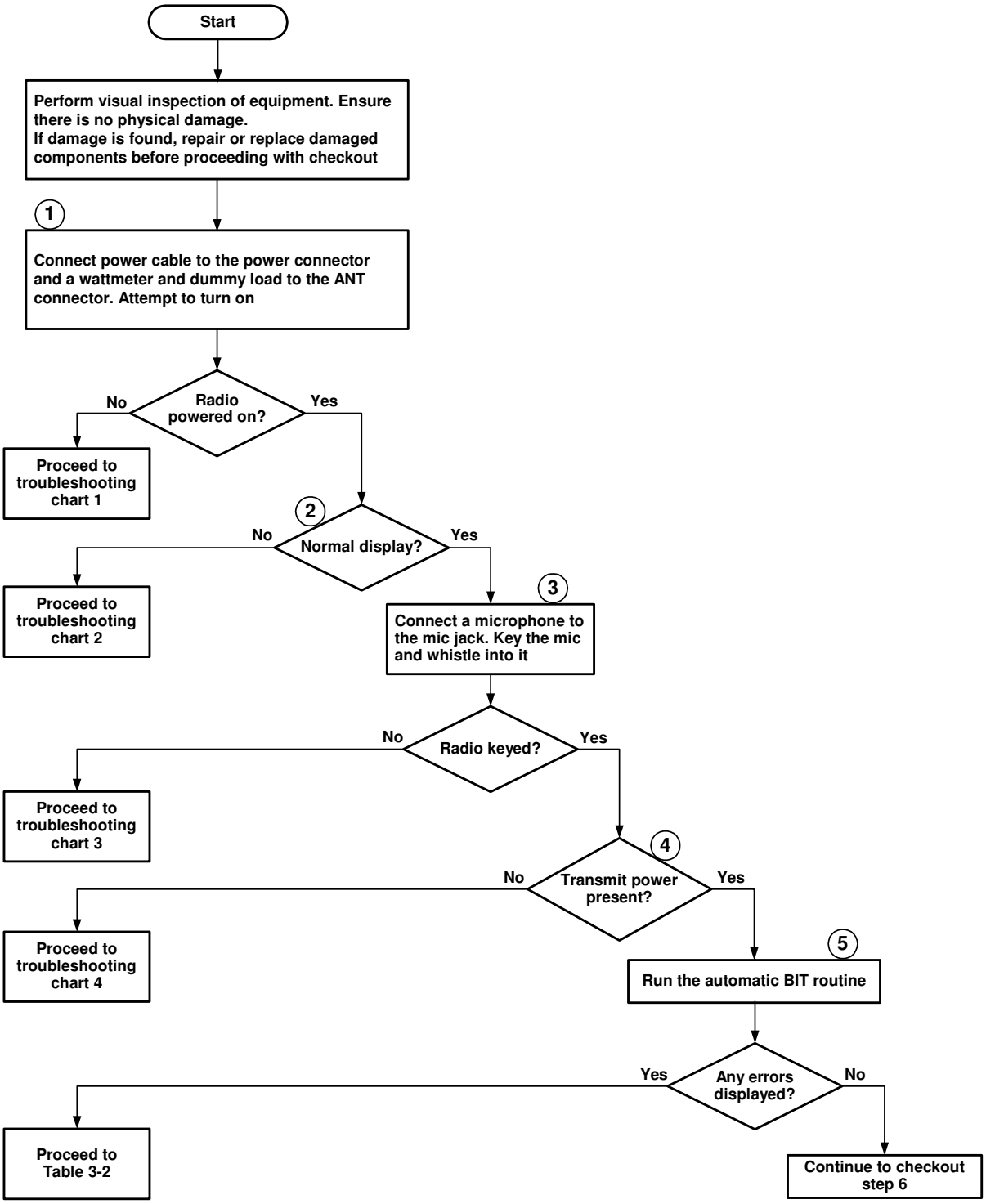


Figure 3-1.A. MICOM-Z Checkout Chart (Sheet 1 of 2)

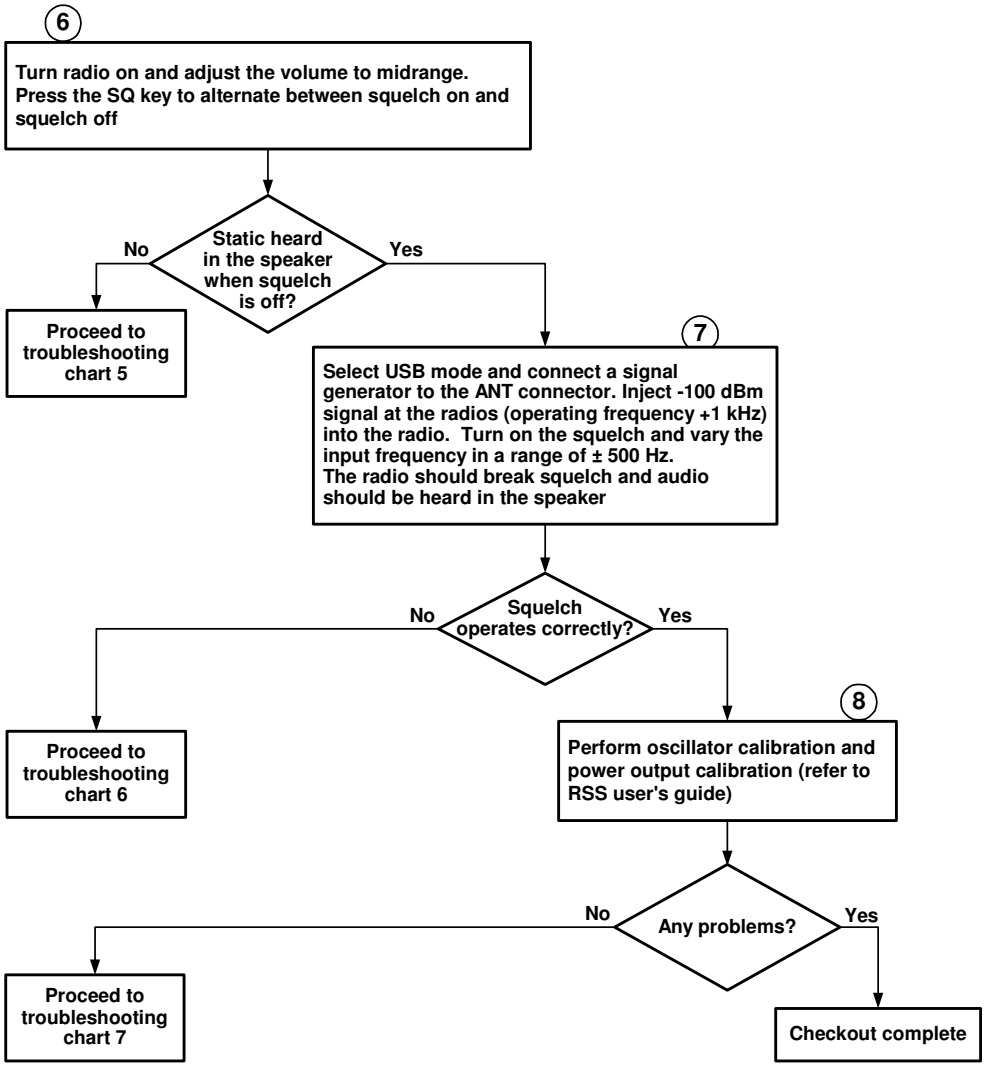


Figure 3-1.B. MICOM-Z Checkout Chart (Sheet 2 of 2)

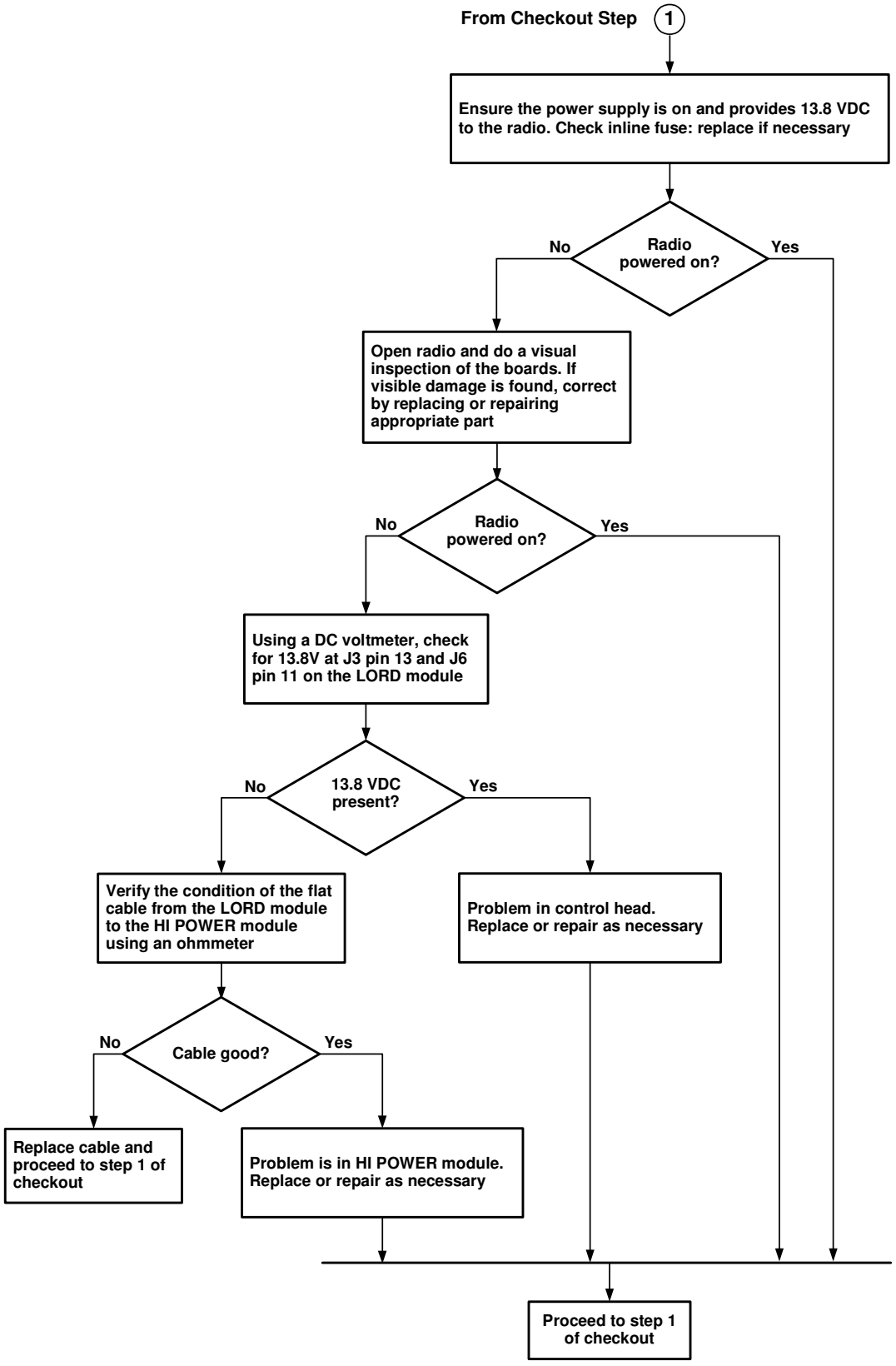


Figure 3-2. MICOM-Z Troubleshooting Chart 1

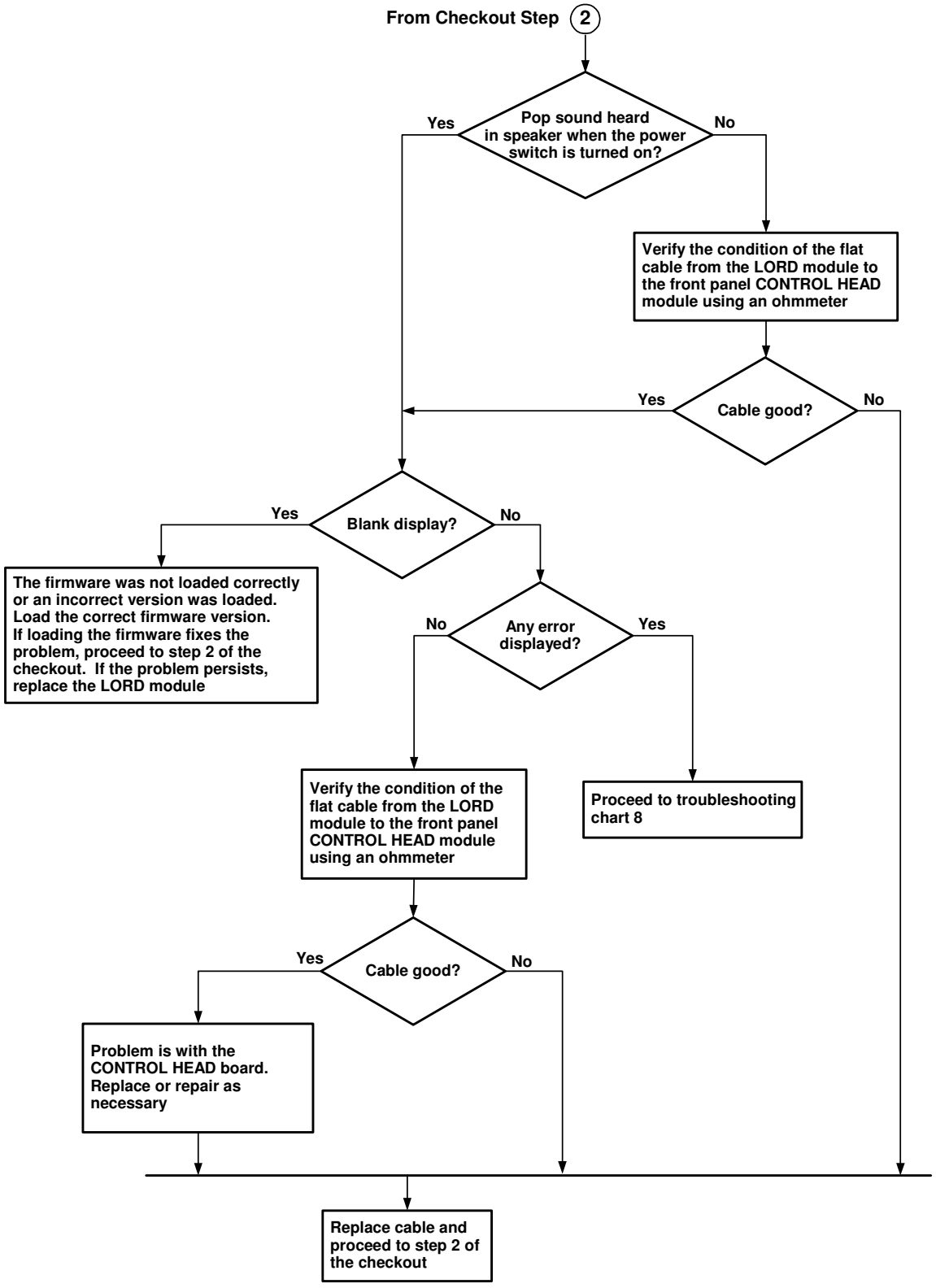


Figure 3-3. MICOM-Z Troubleshooting Chart 2

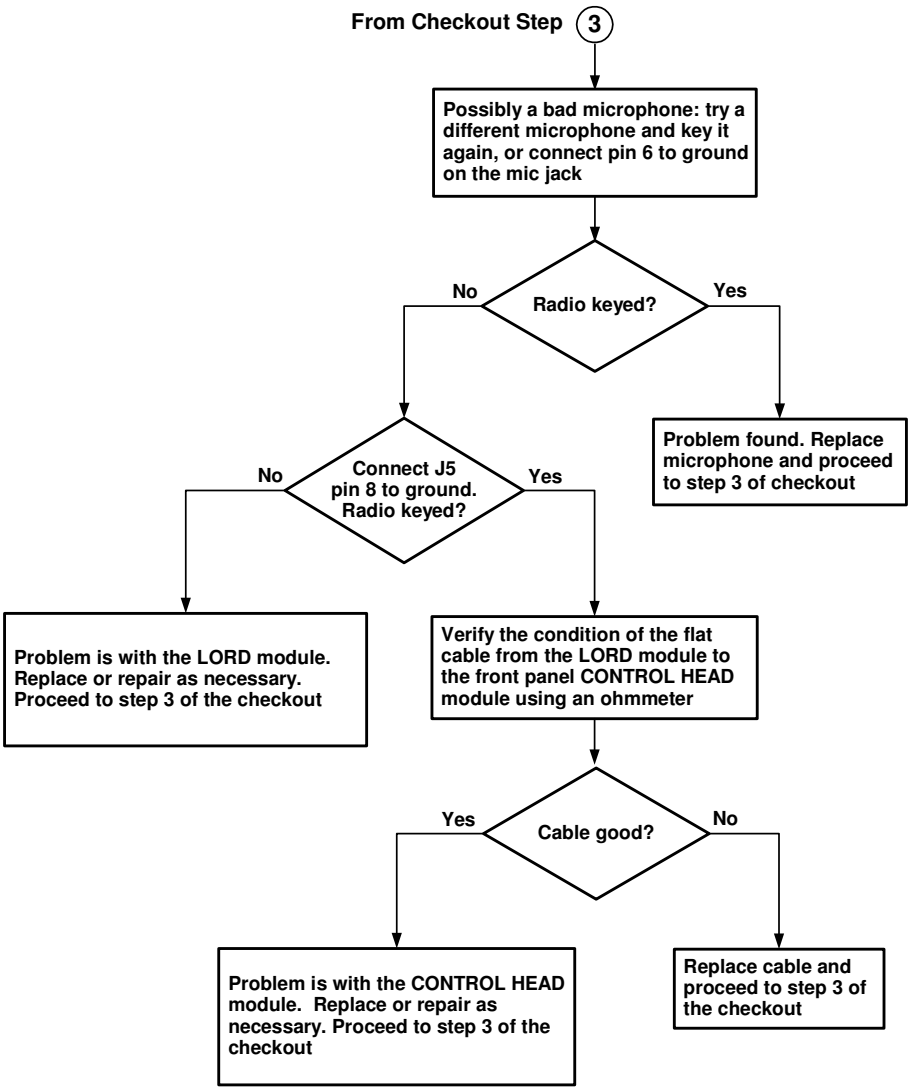


Figure 3-4. MICOM-Z Troubleshooting Chart 3

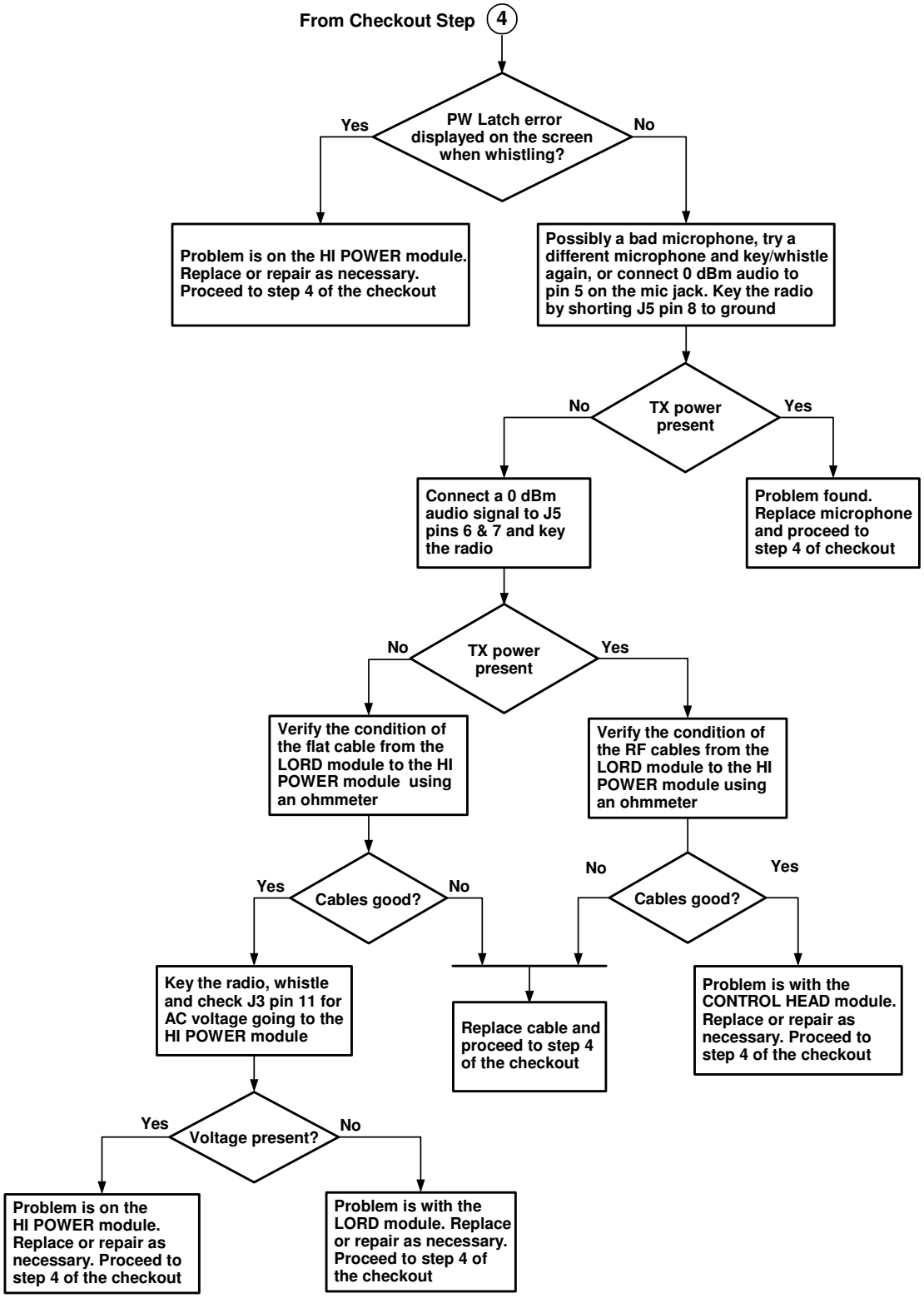


Figure 3-5. MICOM-Z Troubleshooting Chart 4

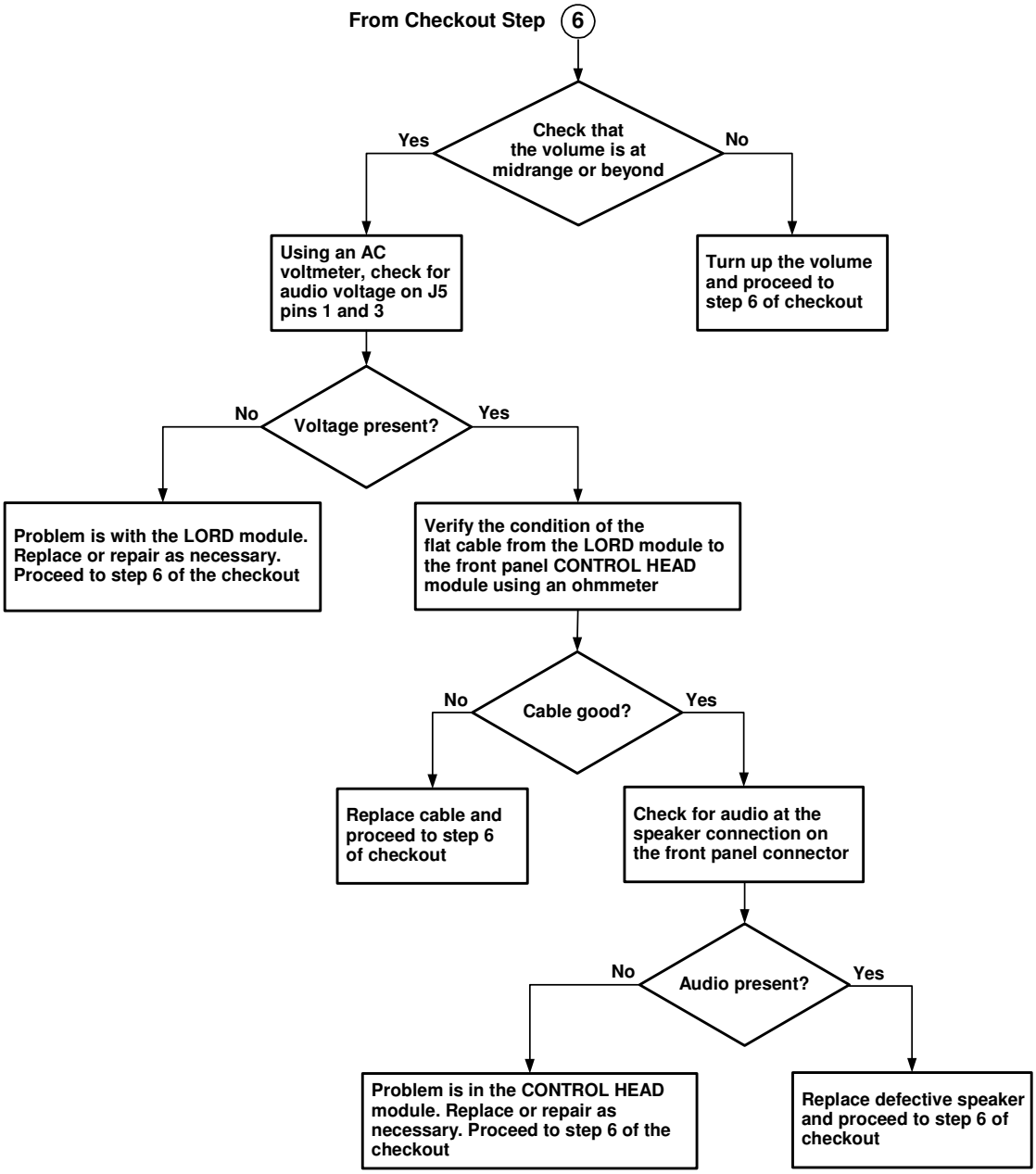


Figure 3-6. MICOM-Z Troubleshooting Chart 5

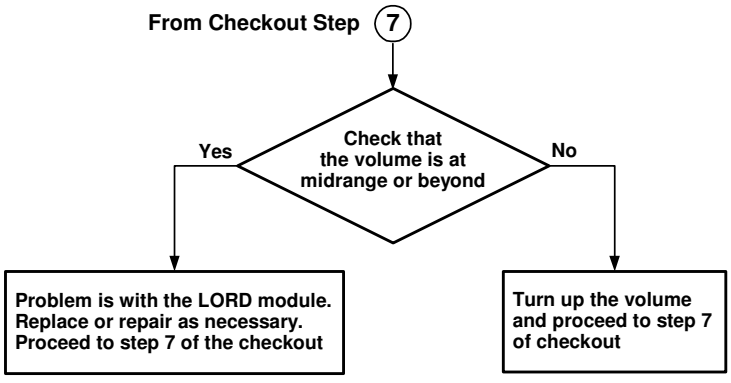


Figure 3-7. MICOM-Z Troubleshooting Chart 6

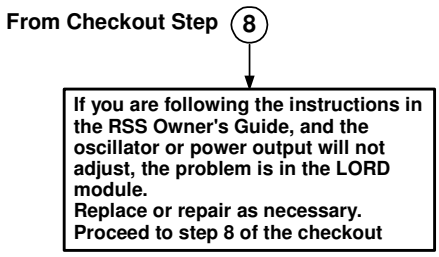


Figure 3-8. MICOM-Z Troubleshooting Chart 7

3-5.5 Module Troubleshooting Procedures

WARNING

To prevent permanent damage to printed circuit boards, the following troubleshooting procedures must be performed only by qualified, authorized personnel, familiar with the theory of operation of the Micom-Z circuits, and trained in the maintenance of electronic circuits.

Refer to para. 3-2 for safety precautions and component and module handling and repair procedures.

Use the following charts, in conjunction with the relevant schematic circuit diagrams given in Appendix A, to troubleshoot a module down to the component level.

- Refer to Figure 3-9 for systematic troubleshooting of the receive path circuits.
- Refer to Figure 3-10 for systematic troubleshooting of the transmit path circuits.

Use Appendix B for logistic data on individual components.

NOTE

After replacing the LORD and/or the HI POWER module, it is necessary to calibrate the RF transmit power using the RSS.

The required RF power values are as follows:

1. TUNE – 7W
2. LOW – 25W
3. MED – 60W
4. HIGH – 100W
5. MAX – 125W.

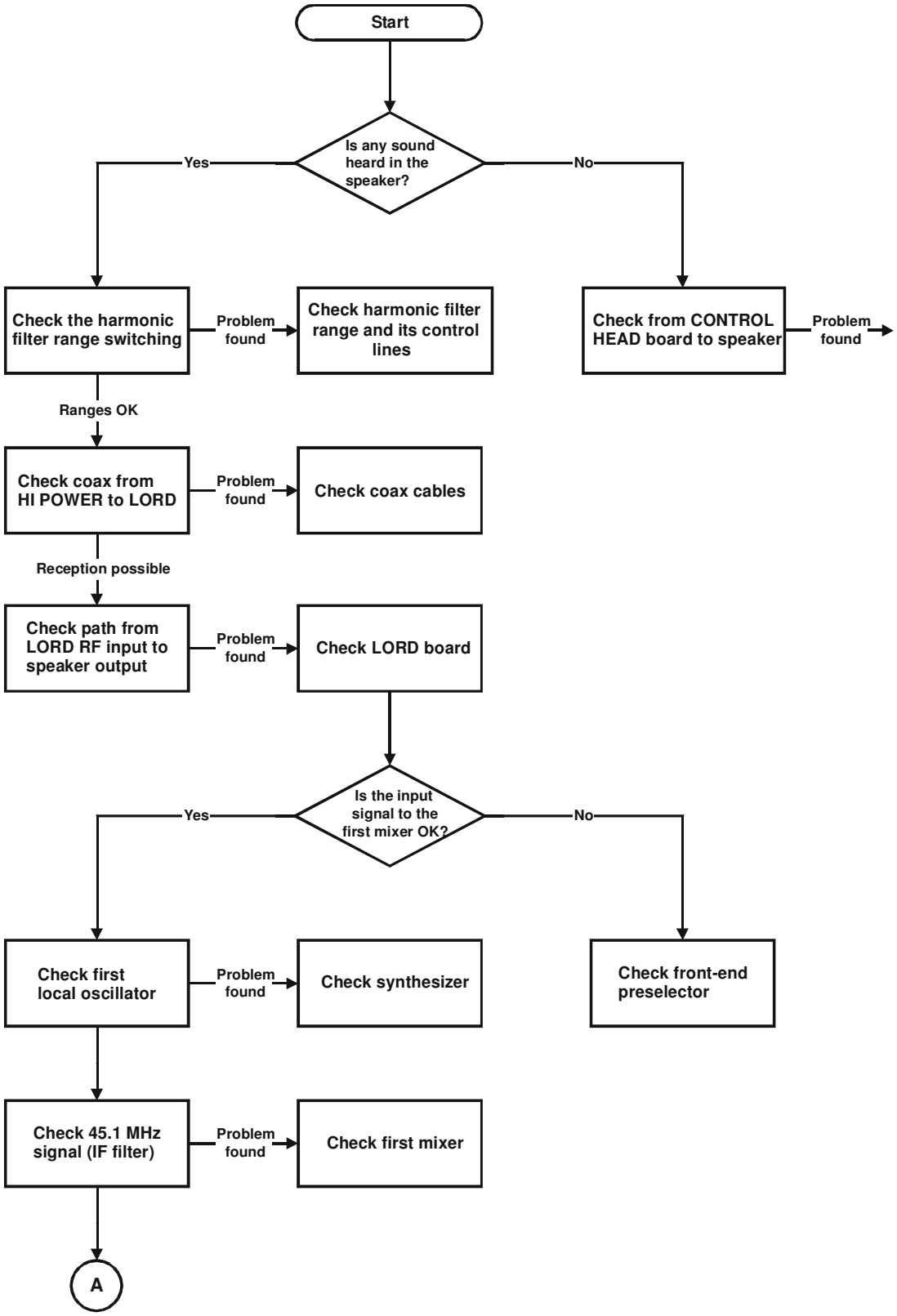


Figure 3-9.A. Receiver Troubleshooting Flowchart (Sheet 1 of 2)

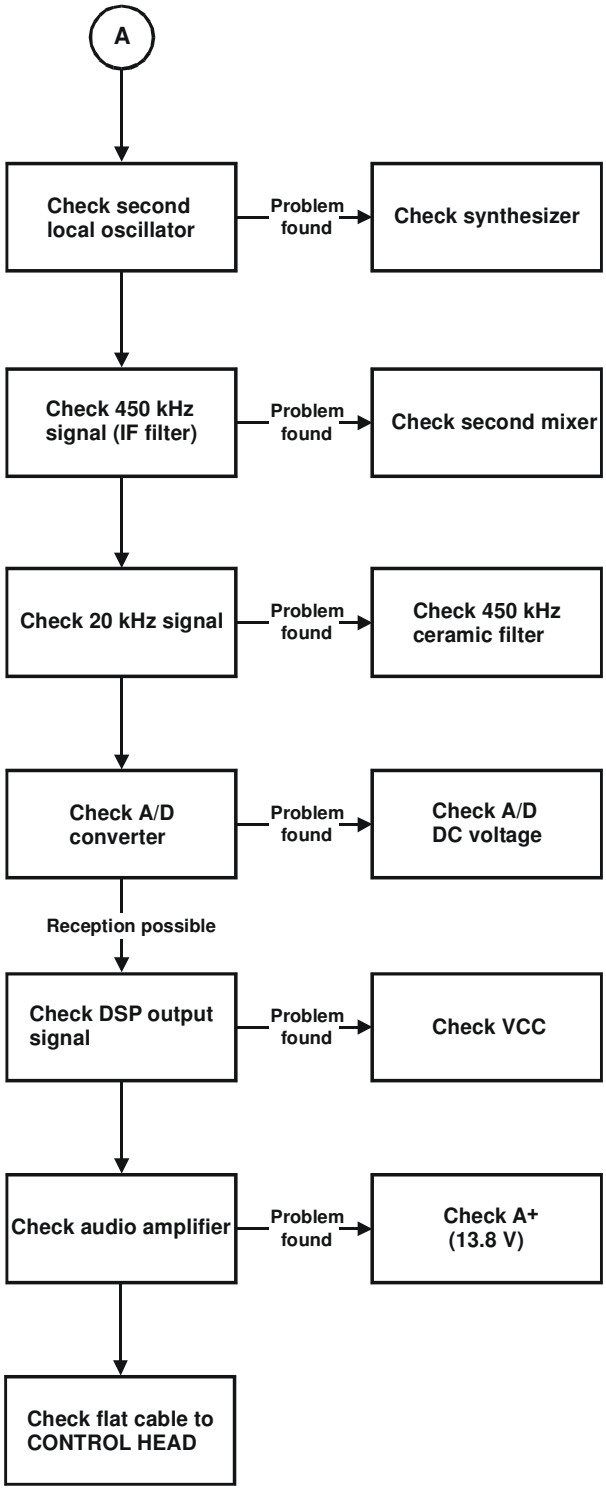


Figure 3-9.B. Receiver Troubleshooting Flowchart (Sheet 2 of 2)

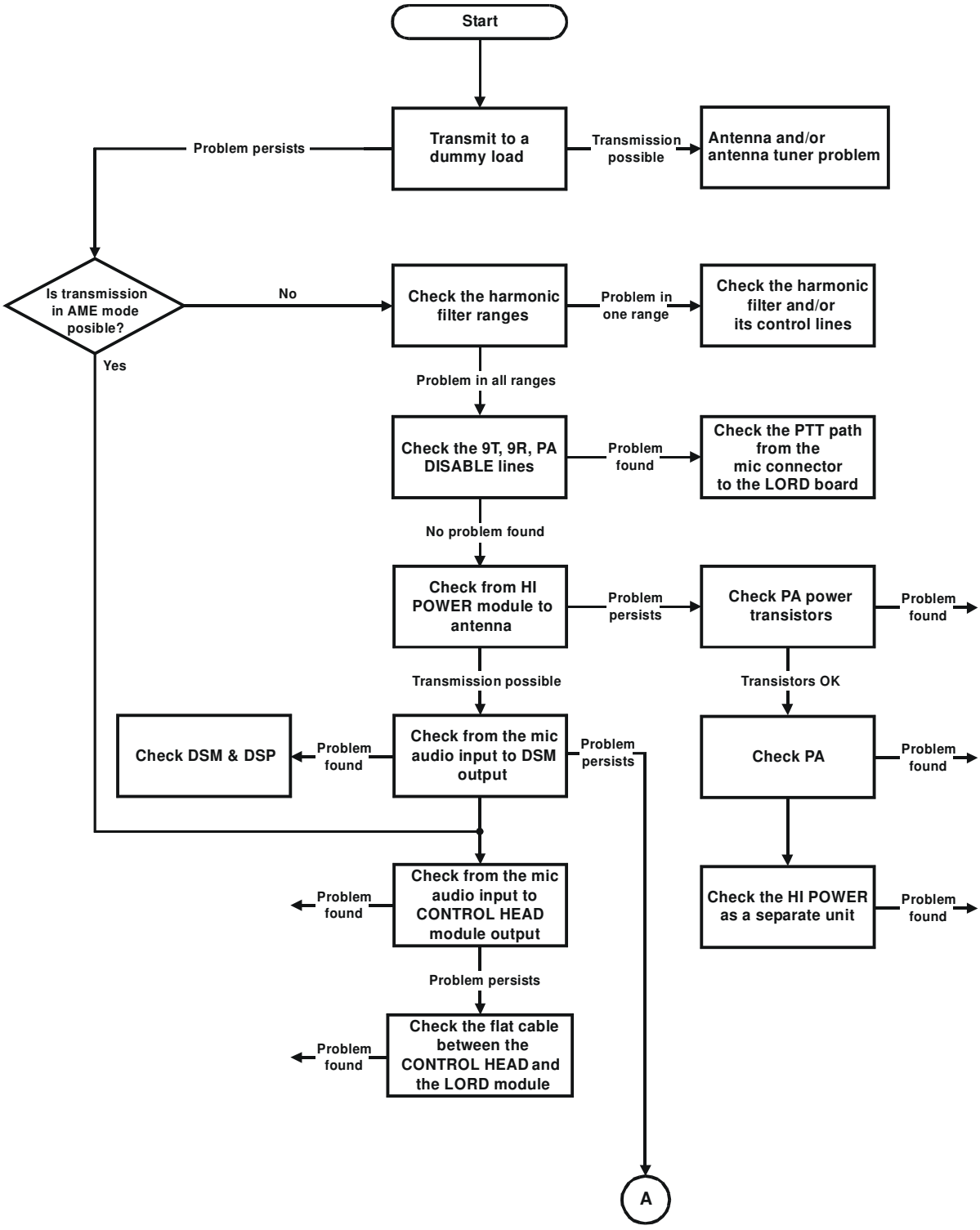


Figure 3-10.A. Transmitter Troubleshooting Flowchart (Sheet 1 of 2)

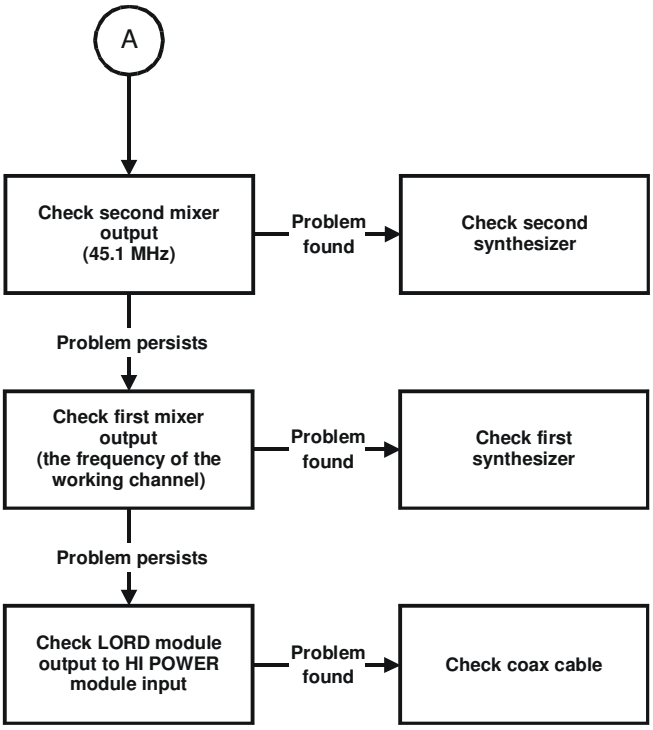


Figure 3-10.B. Transmitter Troubleshooting Flowchart (Sheet 2 of 2)

3-6. MICOM-Z REPAIR PROCEDURES

3-6.1 Micom-Z Dash-Mount Version Repair

3-6.1.1 Gaining Access to Modules

1. Refer to Figure 3-11: release the 8 screws fastening the top cover, and then remove the top cover.

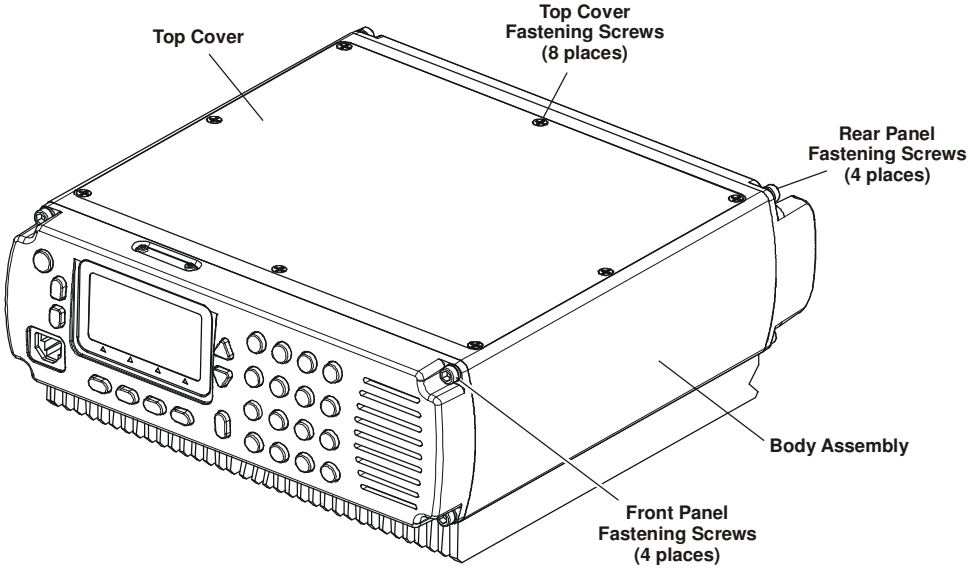


Figure 3-11. Gaining Access to Modules

2. Release the four screws fastening the front panel to the body assembly. Keep screws and washers for reuse.
3. Carefully separate the front panel, and then disconnect the flat cable connecting the front panel to the LORD connector. Figure 3-12 shows the front panel after being removed.

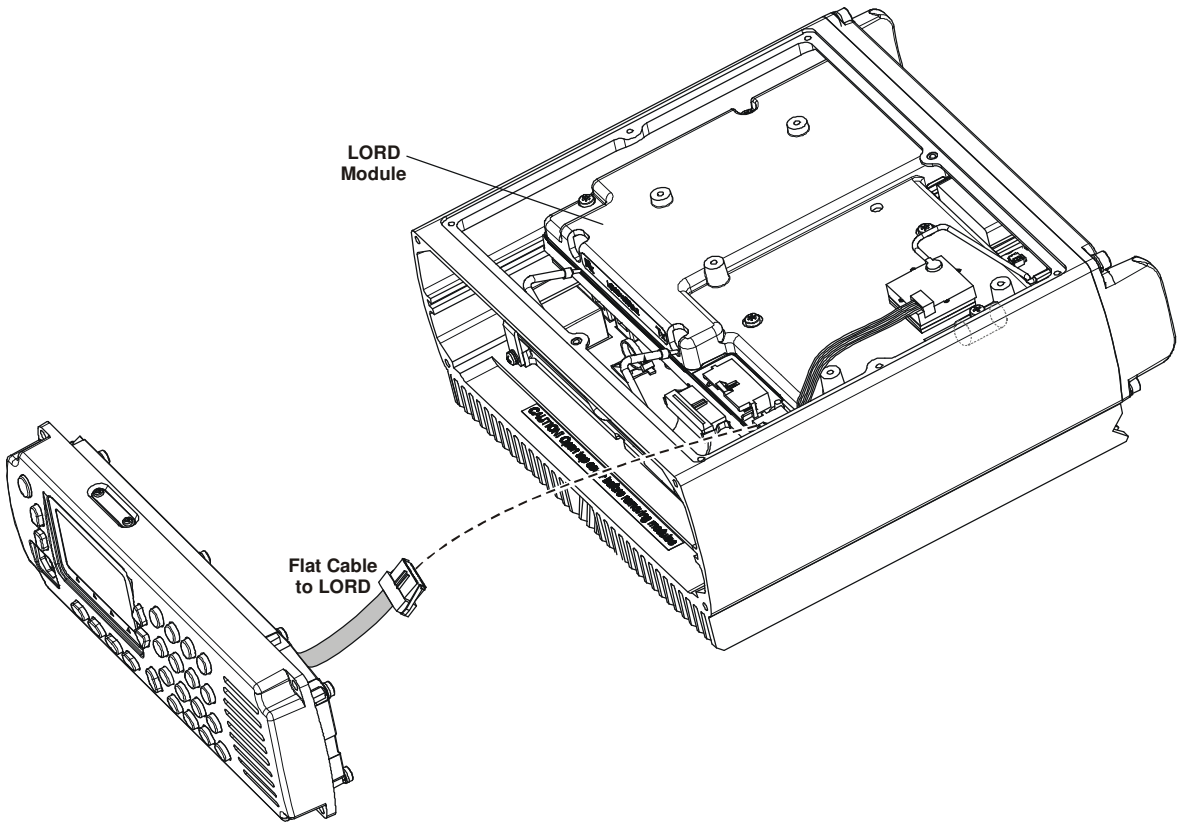


Figure 3-12. Micom-Z with Front Panel Removed

CAUTION

The rear panel need not be removed to gain access to the modules. Do not attempt to remove the rear panel before removing the LORD and HI POWER modules as explained below.

4. To reassemble the front panel, reverse the procedure described above.

3-6.1.2 Replacing Components of LORD Assembly

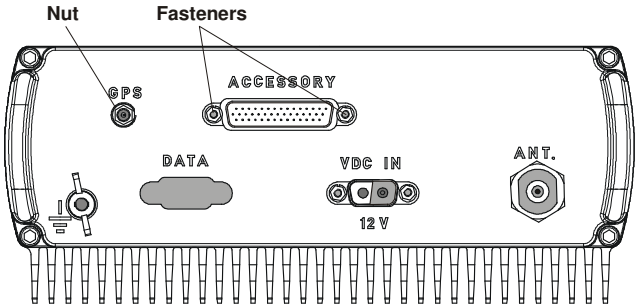
The LORD assembly includes the LORD module (covered by a shield), the backup battery, and the GPS receiver. All these components can be replaced after removing the LORD assembly from the Micom-Z body.

CAUTION

The ACCESSORY and GPS connectors of the LORD module are attached to the rear panel.

3-6.1.2.1 Removal of LORD Assembly

1. If necessary, open the Micom-Z case in accordance with para 3-6.1.1.
2. Release the two fasteners of the ACCESSORY connector.
3. Release the nut of the GPS connector. The recommended tool is Mfg. Cat. No. 2072-08013-00.



4. Refer to Figure 3-13: disconnect the coaxial RX and TX cables from the LORD module connectors.
5. Disconnect the flat cable connected to the HI POWER module.
6. Release the two screws fastening the LORD handles to the chassis. Keep screws and washers for reuse.
7. Carefully pull the handles to remove the LORD assembly. After moving the assembly by 2 to 3 centimeters (one inch), push the GPS connector in, and then continue to pull out the LORD module. Make sure that the GPS connector is pulled out together with the assembly as the LORD assembly is retracted.

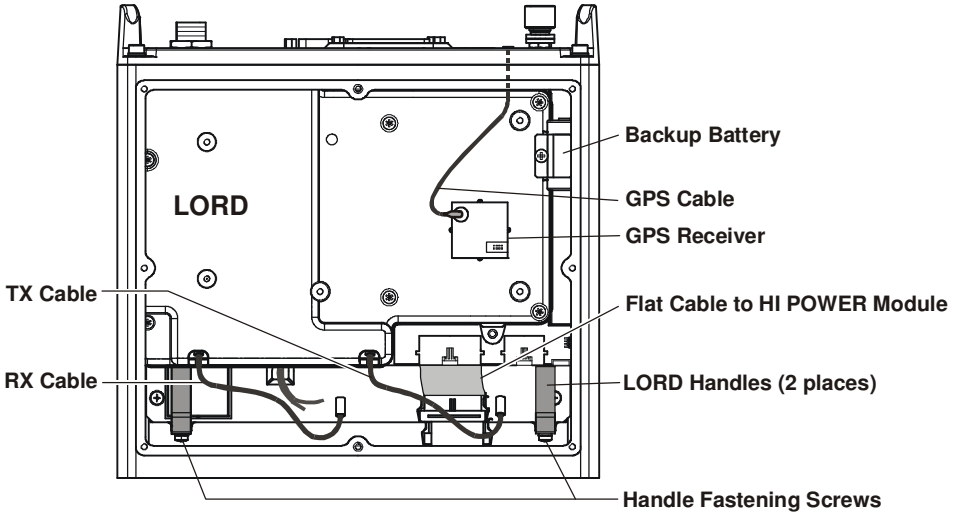


Figure 3-13. Removal of LORD Assembly

3-6.1.2.2 Replacing the Backup Battery

The backup battery is fastened by a clamp to the top of the LORD module, and its harness connects to connector J4 on the module. Before starting, pay attention to the orientation of the battery.

1. Disconnect the battery harness from connector J4 of the LORD module.
2. Release the screw fastening the battery clamp, and then remove the battery.
3. Place the replacement battery in position, in accordance with its original orientation, and then fasten it with the clamp removed in step 2 above.
4. Reconnect the battery harness to connector J4 on the LORD module.

3-6.1.2.3 Replacing the GPS Receiver

The GPS receiver is attached to the LORD shield by a pad, and connects by a flat cable to connector J8 on the LORD module. Before starting, pay attention to the orientation of the GPS receiver on the LORD shield.

1. Release the flat cable connected to the GPS receiver.
2. Pull the GPS receiver case, to separate it from the attachment pad on the LORD shield.
3. Place the replacement GPS receiver in the correct position on the shield, and press its case to attach it to the shield.
4. Reconnect the flat cable from the LORD module to the GPS receiver.

3-6.1.2.4 Replacing the LORD Module

Refer to Figure 3-14.

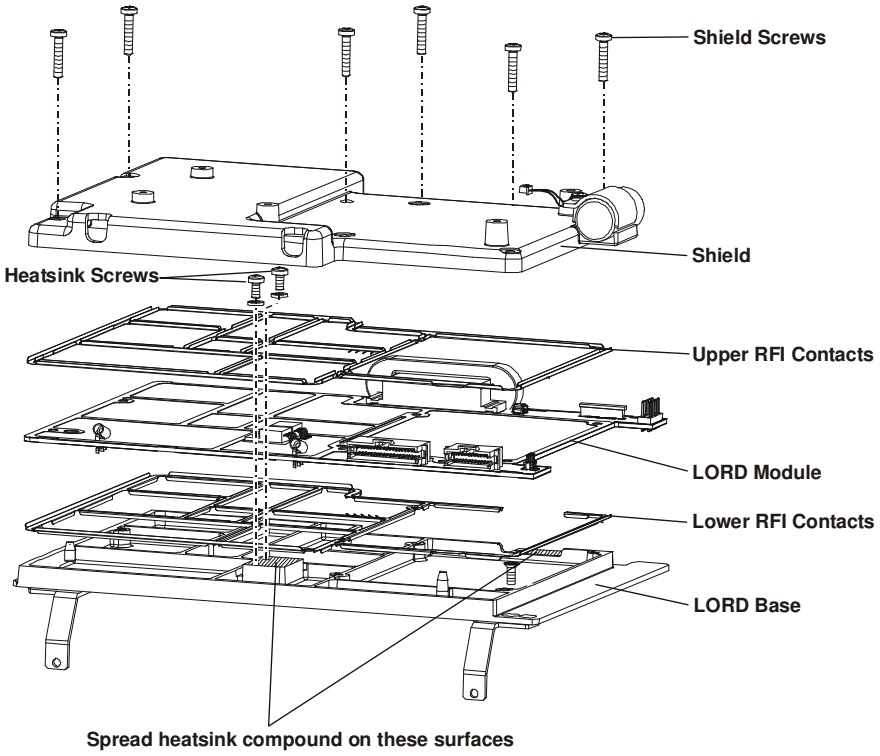


Figure 3-14. Removal of LORD Module

1. Disconnect the battery harness from connector J4 of the LORD module.
2. Release the eight screws that fasten the shield. Keep screws and washers for reuse.
3. Remove the shield and upper RFI contacts.
4. Release the two heatsink screws. Keep screws and washers for reuse.
5. Pull the LORD module straight up, and remove it.

6. Clean the remnants of heatsink compound from the areas identified in Figure 3-14, and then spread a thin layer of fresh compound.
7. Position the replacement LORD module over the lower RFI contacts, place them together in their original positions on the LORD base, and then fasten the LORD module with the two heatsink screws removed in Step 4 above.
8. Position the upper RFI contacts over the LORD module, place the shield over the assembly, and then fasten the shield with the eight screws removed in Step 2 above.
9. Reconnect the battery harness to connector J4 on the LORD module.

3-6.1.2.5 Reinstalling the LORD Assembly

1. Insert the LORD assembly in the corresponding slot of the body assembly, slide it halfway, and then insert the GPS connector in its hole in the rear panel.
2. Fasten the GPS connector with its nut. The recommended tool is Mfg. Cat. No. 2072-08013-00.
3. Push the LORD assembly fully into the body assembly, and then fasten the ACCESSORY connector to the rear panel with its two fasteners.
4. Fasten the two LORD handles to the body assembly with the two original screws.
5. Reconnect the coaxial RX and TX cables to the LORD module connectors.
6. Reconnect the flat cable connected to the HI POWER module.
7. You may now close the Micom-Z case in accordance with para. 3-6.1.1.

3-6.1.3 Replacing the HI POWER Module

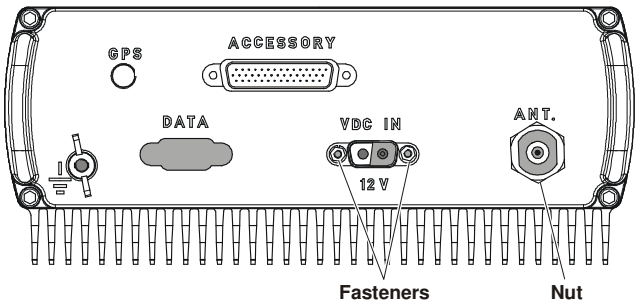
The HI POWER module is installed on a heatsink, fastened to the body assembly by nine screws. The module is also attached to the VDC IN connector, and is connected by a coaxial cable to the ANT connector.

CAUTION

The ANT and VDC IN connectors are attached to the rear panel.

3-6.1.3.1 Removing the HI POWER Module

1. Remove the LORD module in accordance with para. 3-6.1.1.
2. Release the two fasteners of the VDC IN connector.
3. Release the nut of the ANT connector.
4. Disconnect the cables connected to the front side of the HI POWER module.



5. Refer to Figure 3-15, and release the nine screws fastening the module to the body. Keep screws and washers for reuse.
6. Insert the tip of a narrow blade screwdriver in the slot located under the HI POWER module heatsink, and press lightly to raise the module.
7. You can now pull the HI POWER module out: after moving the assembly by 2 to 3 centimeters (one inch), push the ANT connector in, and then continue to pull out the HI POWER module. Make sure that the ANT connector is pulled out together with the assembly as the HI POWER assembly is retracted.

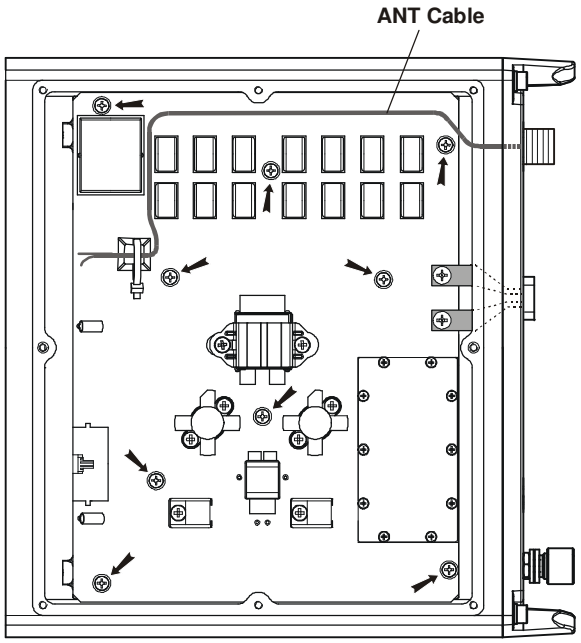


Figure 3-15. Removal of HI POWER Module

3-6.1.3.2 Installing the Replacement HI POWER Module

1. Clean the remnants of heatsink compound from the body assembly and the HI POWER module.
2. Spread a thin layer of fresh compound on the bottom area of the HI POWER module.
3. Route the coaxial cable with the ANT connector over the HI POWER module as shown in Figure 3-15.
4. Insert the HI POWER module in the corresponding slot of body assembly, slide it halfway, and then insert the ANT connector in its hole in the rear panel.
5. Fasten the ANT connector with its nut.
6. Push the HI POWER module fully into the body assembly, and then fasten the VDC IN connector to the rear panel with its two fasteners.
7. Fasten the HI POWER module to the body with the nine original screws.
8. Reconnect the coaxial cables between the LORD and HI POWER modules in accordance with Figure 3-13.
9. Reconnect the flat cable between the LORD and HI POWER modules in accordance with Figure 3-13.
10. You may close now the Micom-Z case in accordance with para. 3-6.1.1.

3-6.1.4 Replacement of Components on Front Panel Assembly

3-6.1.4.1 Replacement of CONTROL HEAD Module

Refer to Figure 3-16.

1. Release the 13 screws fastening the RF shield. Keep screws and washers for reuse.
2. Remove the RF shield.
3. Disconnect the speaker cable from the CONTROL HEAD module.
4. Remove the CONTROL HEAD module. Make sure that the keypad and the inserts remain in their place, on the front panel.

NOTE

To remove the LCD, release its four fastening screws, and then disconnect it from the module. Also disconnect the two harnesses connected to connectors P2 and P4 on the module.

5. If necessary, move the LCD to the replacement module.
6. Orient the replacement module in accordance with Figure 3-16, and place it on the spacers.
7. Reconnect the speaker cable to the corresponding module connector.
8. Reinstall the RF shield.

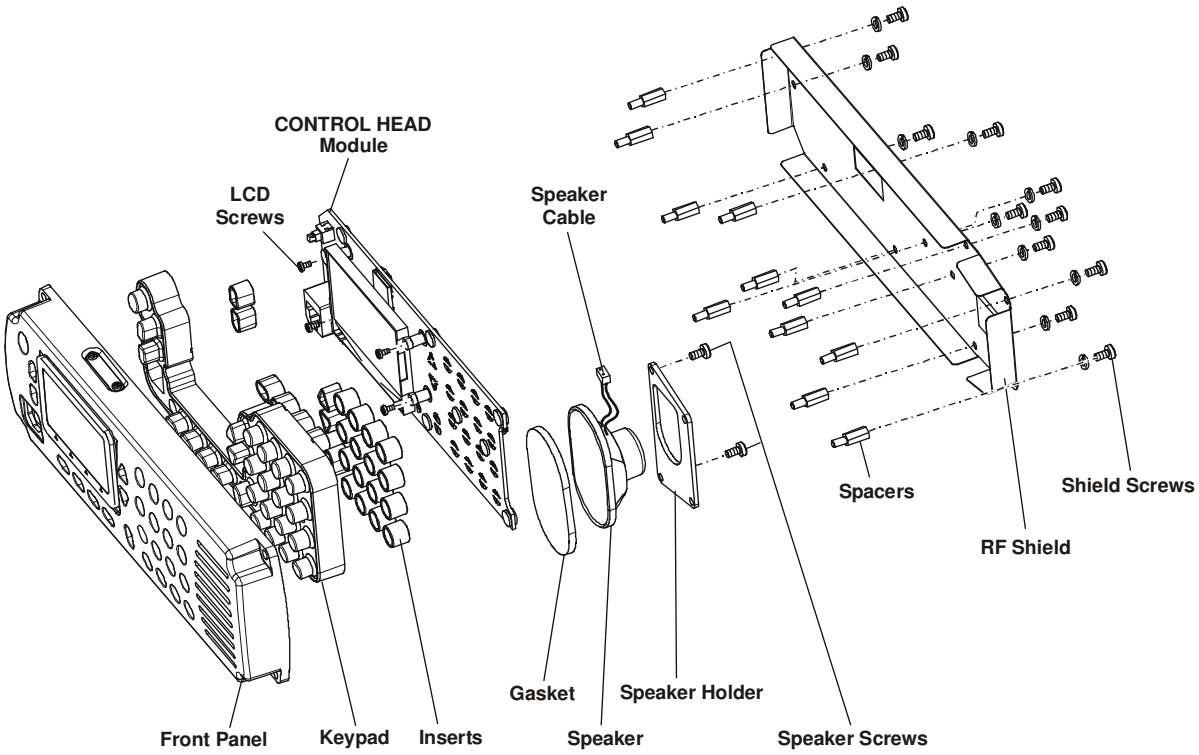


Figure 3-16. Replacement of CONTROL HEAD Module

3-6.1.4.2 Replacement of Speaker

1. Release the 13 screws fastening the RF shield. Keep screws and washers for reuse.
2. Remove the RF shield.
3. Disconnect the speaker cable from the CONTROL HEAD module.
4. Release the screws fastening the speaker holder, and then remove the speaker. Keep the gasket and holder for reuse.
5. Install the replacement speaker by reversing the procedure given above.

3-6.2 Repair of Micom-Z Trunk-Mount Version

3-6.2.1 Gaining Access to Modules

1. Refer to Figure 3-17: release the 8 screws fastening the top cover, and then remove the top cover.

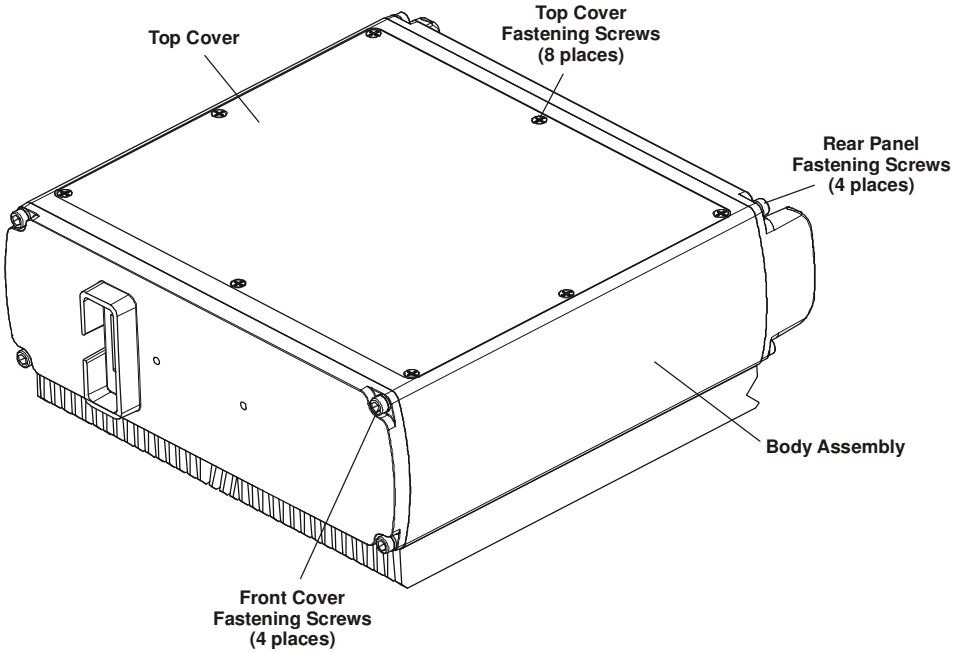


Figure 3-17. Gaining Access to Micom-Z Trunk-Mount Version Modules

2. Release the four screws fastening the front cover to the body assembly. Keep screws and washers for reuse.
3. Carefully separate the front cover, and then disconnect the flat cable connecting the front cover to the LORD connector. Figure 3-18 shows the front cover after being removed.

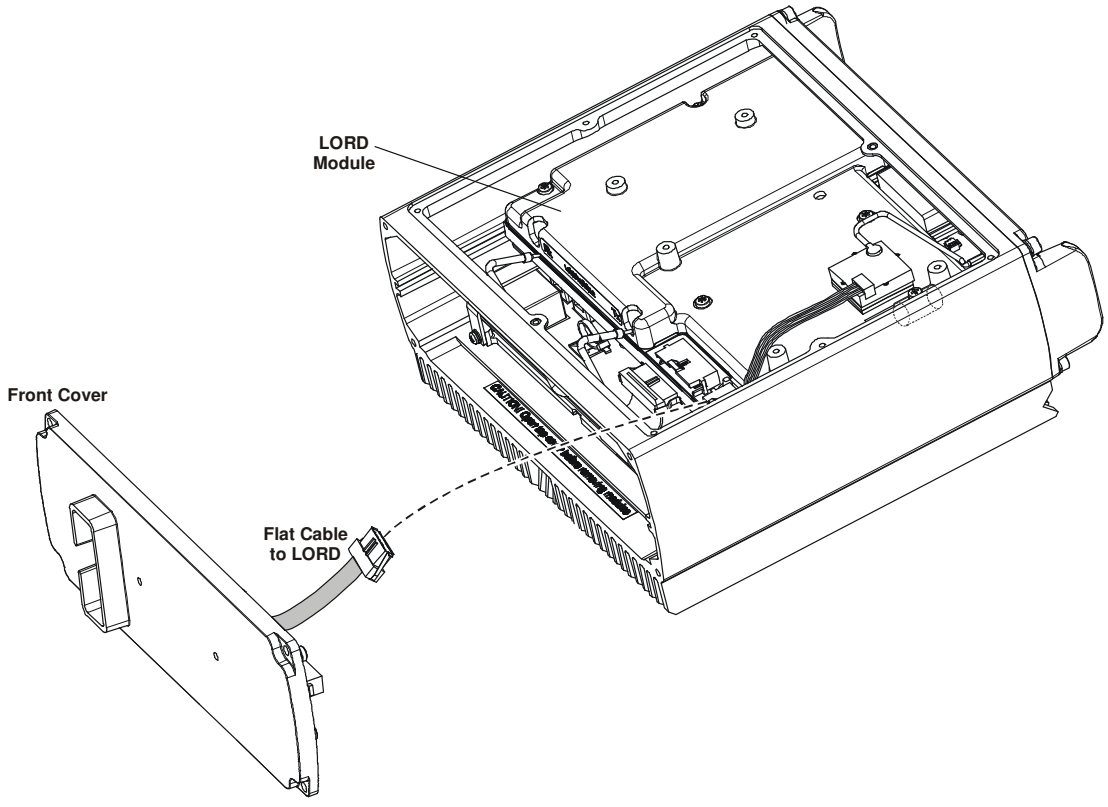


Figure 3-18. Micom-Z Trunk-Mount Version with Front Cover Removed

CAUTION

The rear panel need not be removed to gain access to the modules. Do not attempt to remove the rear panel before removing the LORD and HI POWER modules as explained below.

4. To reassemble the front cover, reverse the procedure described above.

3-6.2.2 Replacing Components of LORD Assembly

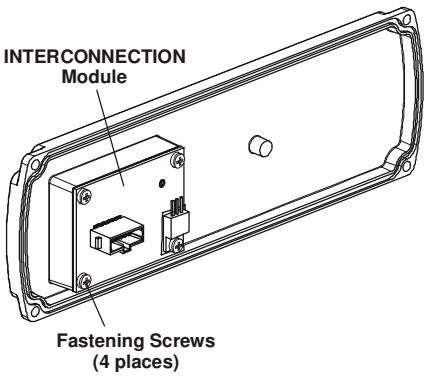
Refer to para. 3-6.1.2.

3-6.2.3 Replacing the HI POWER Module

Refer to para. 3-6.1.3.

3-6.2.4 Replacement of INTERCONNECTION Module

1. Remove the front cover in accordance with para. 3-6.2.1.
2. Release the four screws fastening the INTERCONNECTION module to the front cover. Keep screws and washers for reuse.
3. Remove the INTERCONNECTION module.
4. Position the replacement module, oriented as seen in the figure, on the front cover, and then fasten it with the four original screws.



3-6.2.5 Replacement of CONTROL HEAD Module on Control Head Assembly

Refer to Figure 3-19.

1. Release the 13 screws fastening the rear panel of the control head. Keep screws and washers for reuse.
2. Remove the rear panel.
3. Release the nine screws fastening the CONTROL HEAD module to the front panel. Keep screws and washers for reuse.
4. Remove the CONTROL HEAD module. Make sure that the keypad and the inserts remain in their place, on the front panel.

NOTE

To remove the LCD, release its four fastening screws, and then disconnect it from the module. Also disconnect the two harnesses connected to connectors P2 and P4 on the module.

5. If necessary, move the LCD to the replacement module.
6. Orient the replacement module in accordance with Figure 3-19.
7. Fasten the replacement module with the nine original screws removed in Step 3.
8. Reinstall the rear panel on the control head.

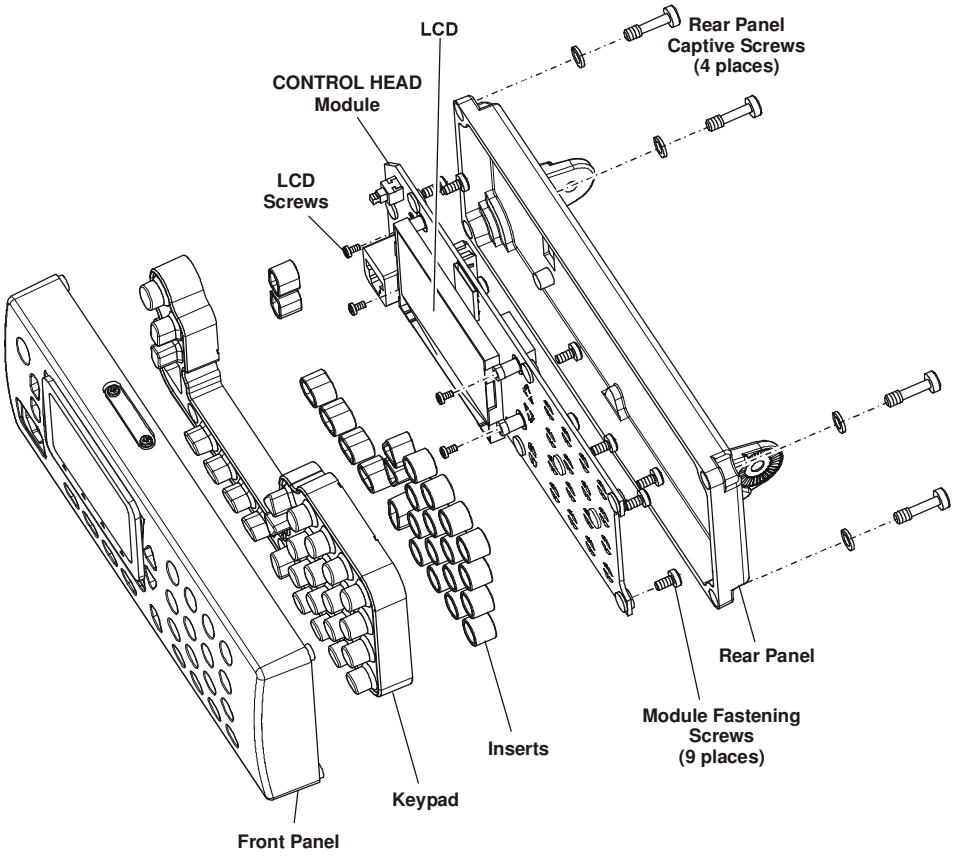


Figure 3-19. Replacement of CONTROL HEAD Module

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Appendix A

SCHEMATIC CIRCUIT DIAGRAMS

NOTE

Components designated as OPTION or LAB in the schematic circuit diagrams are optional, and are not installed on the PCBs. Therefore, ignore such components.

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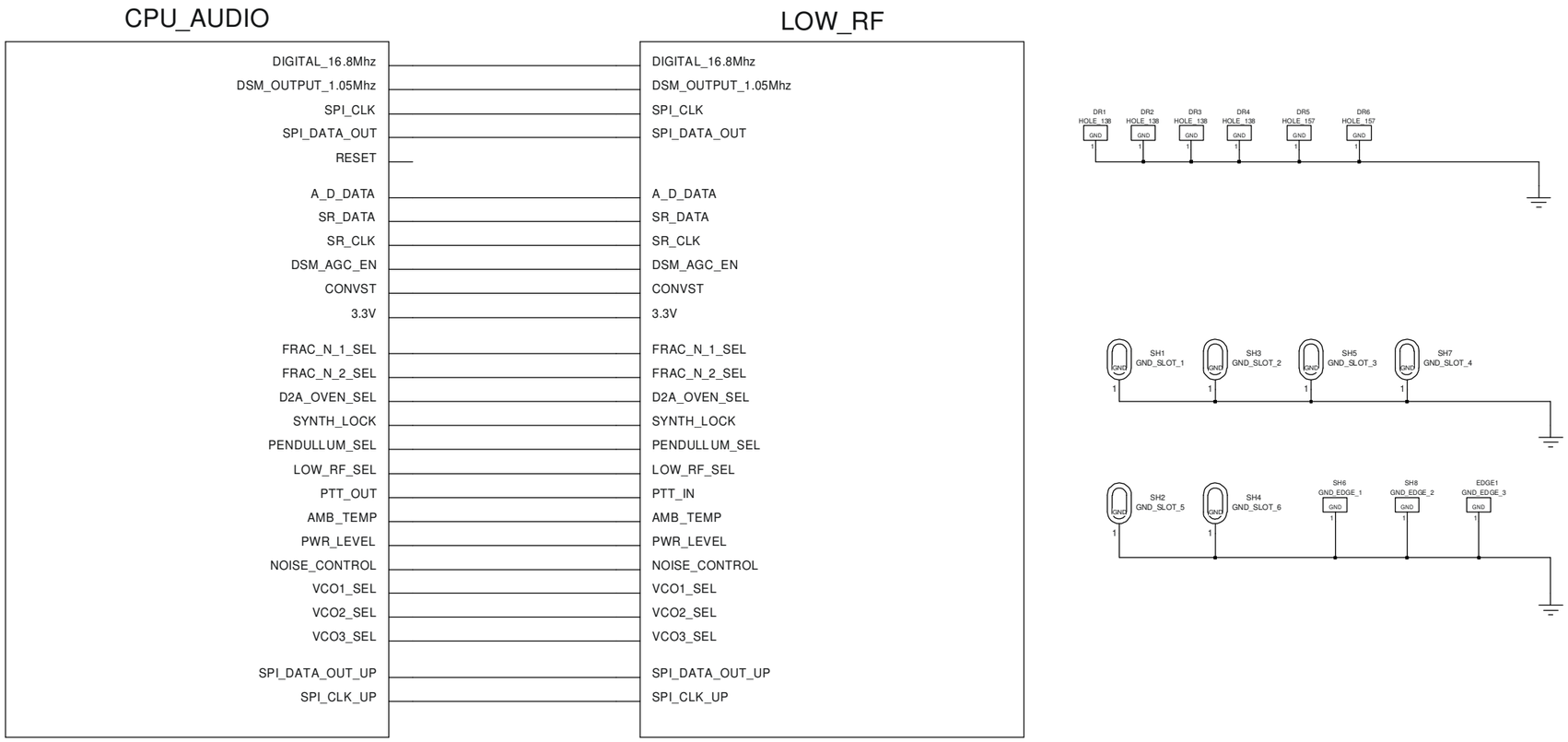


Figure A-1.A. LORD Module, Schematic Circuit Diagram (Sheet 1 of 15 – Module Interconnection Diagram)

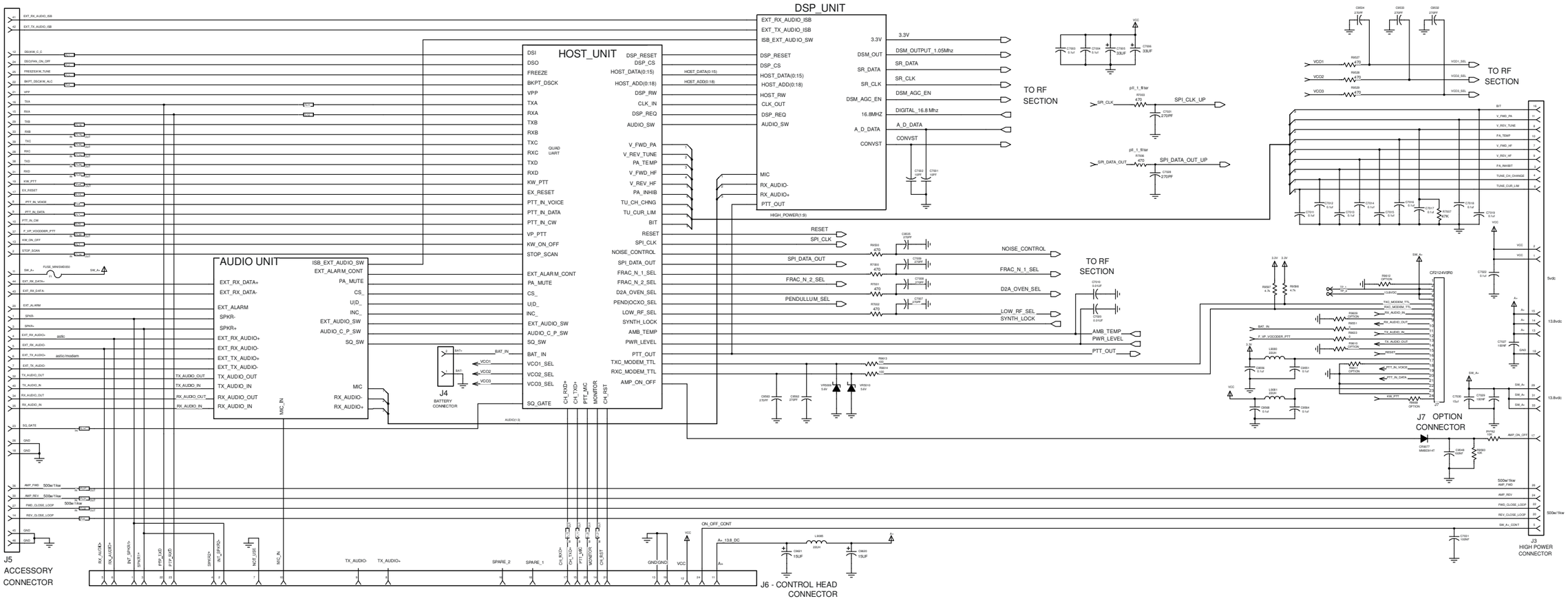


Figure A-1.B. LORD Module, Schematic Circuit Diagram (Sheet 2 of 15 – DSP Subsystem Organization)

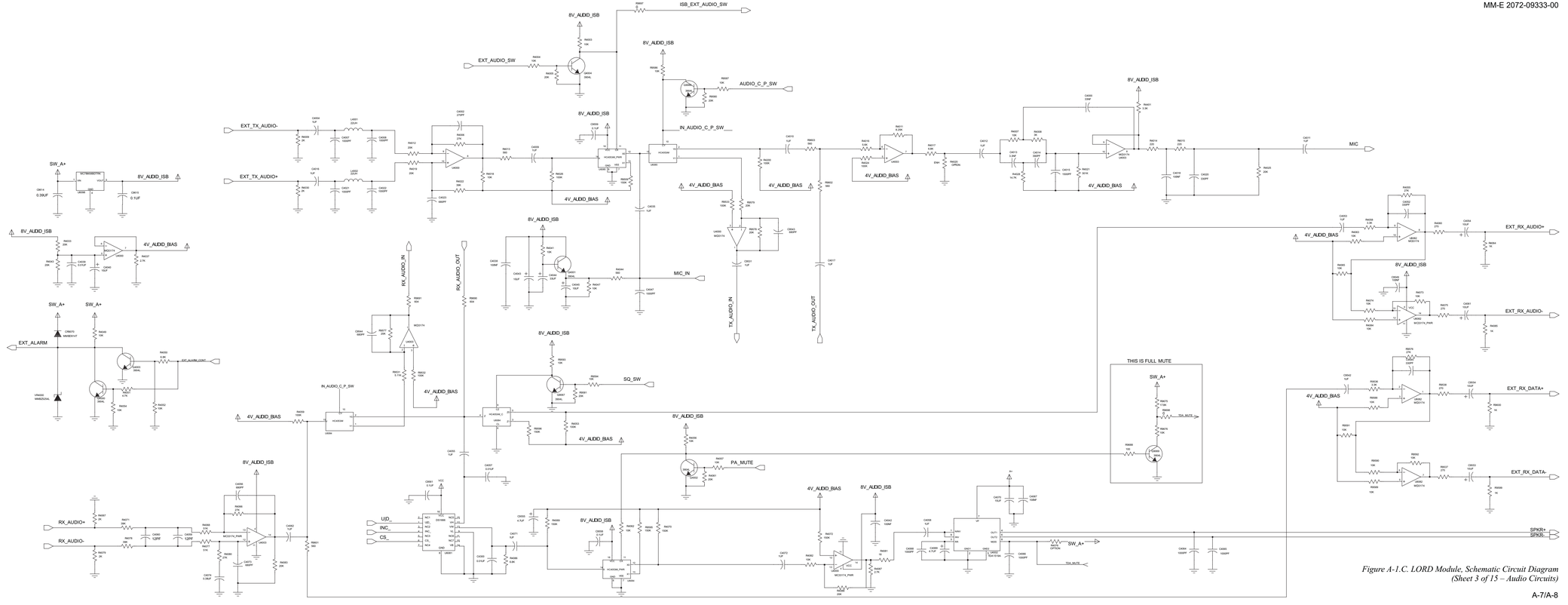


Figure A-1.C. LORD Module, Schematic Circuit Diagram (Sheet 3 of 15 – Audio Circuits)

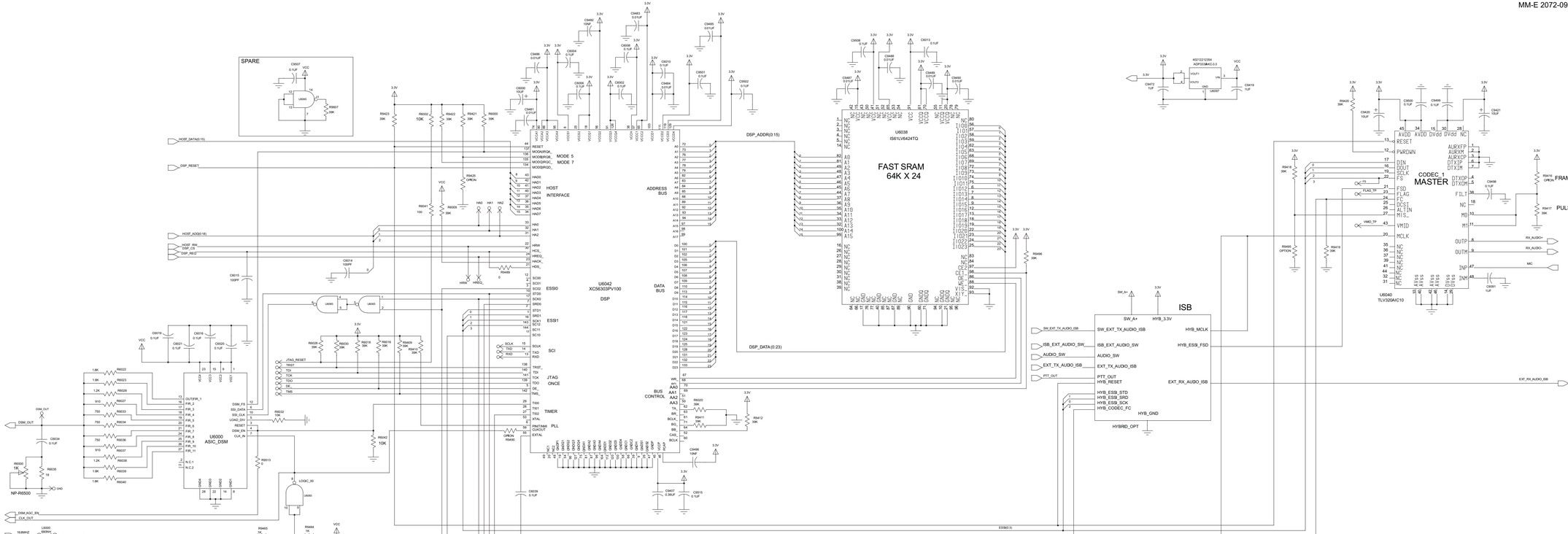


Figure A-1.D. LORD Module, Schematic Circuit Diagram (Sheet 4 of 15 – DSP Subsystem Circuits)

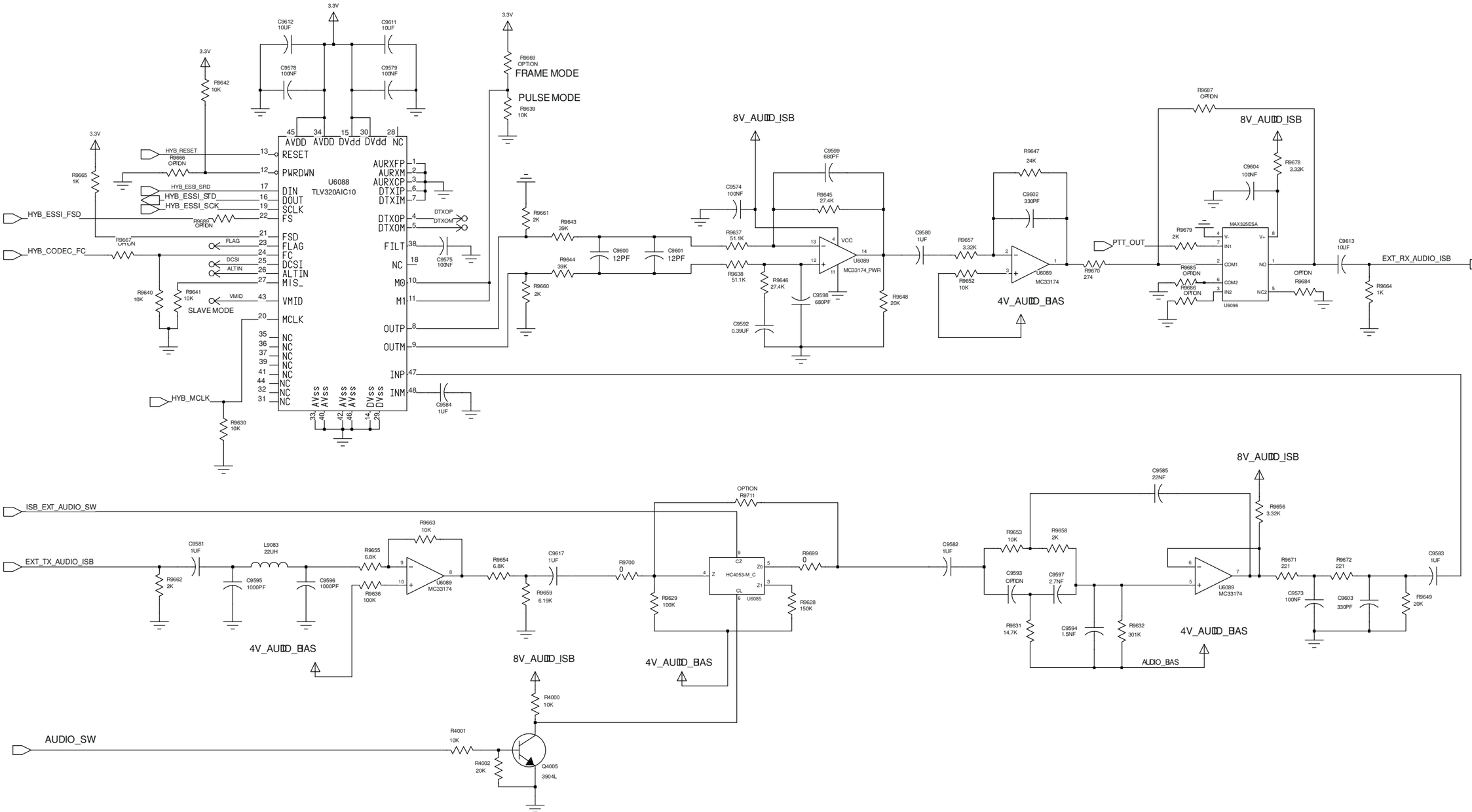


Figure A-1.E. LORD Module, Schematic Circuit Diagram (Sheet 5 of 15 – ISB Processor Circuits)

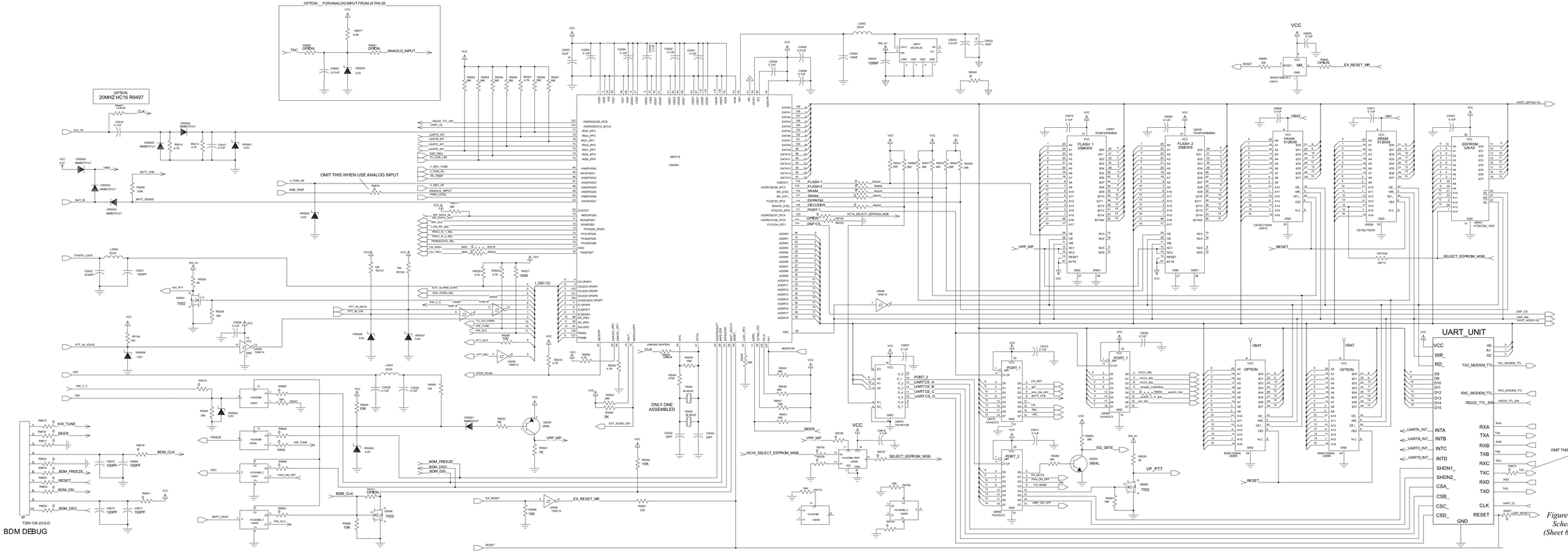


Figure A-1.F. LORD Module, Schematic Circuit Diagram (Sheet 6 of 15 – Host Circuits)

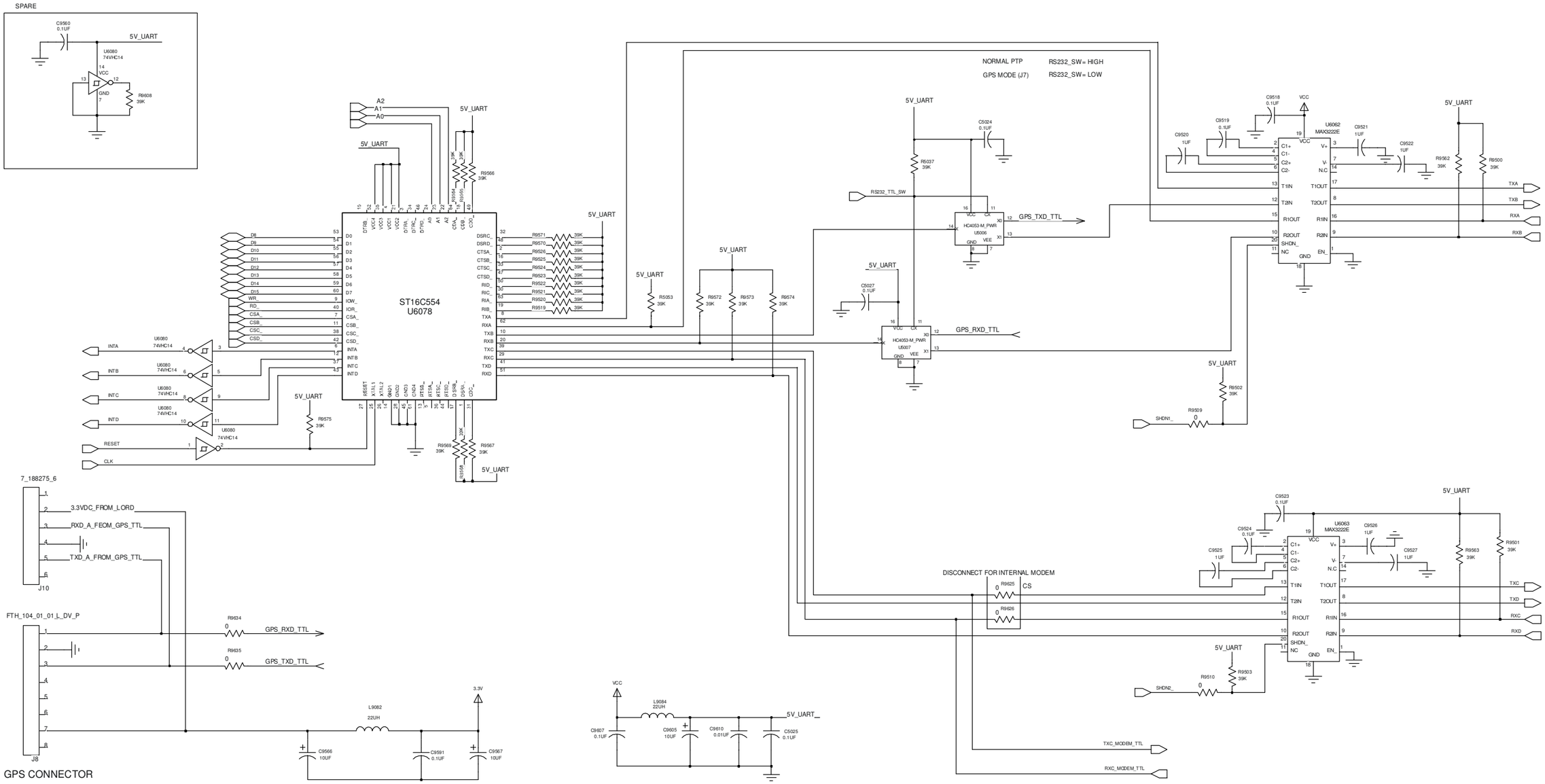


Figure A-1.G. LORD Module, Schematic Circuit Diagram (Sheet 7 of 15 – UARTs)

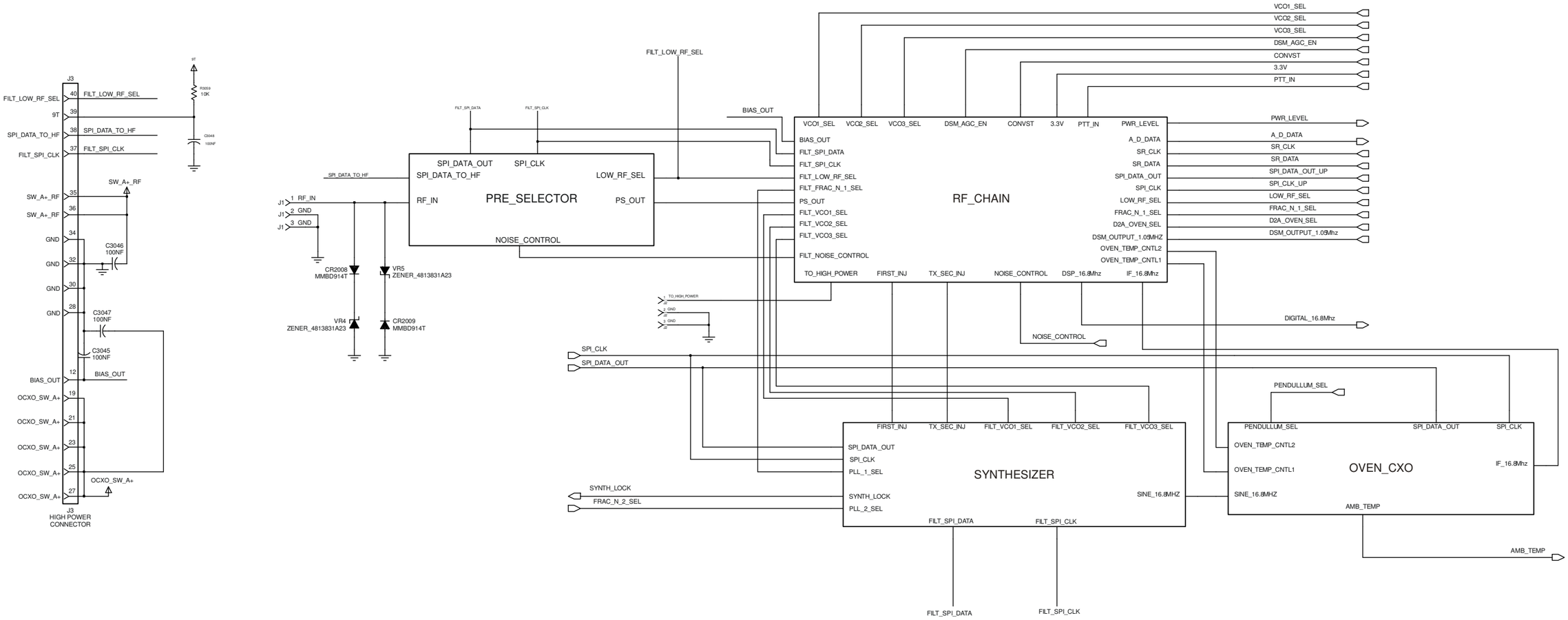


Figure A-1.H. LORD Module, Schematic Circuit Diagram (Sheet 8 of 15 – RF Section Organization)

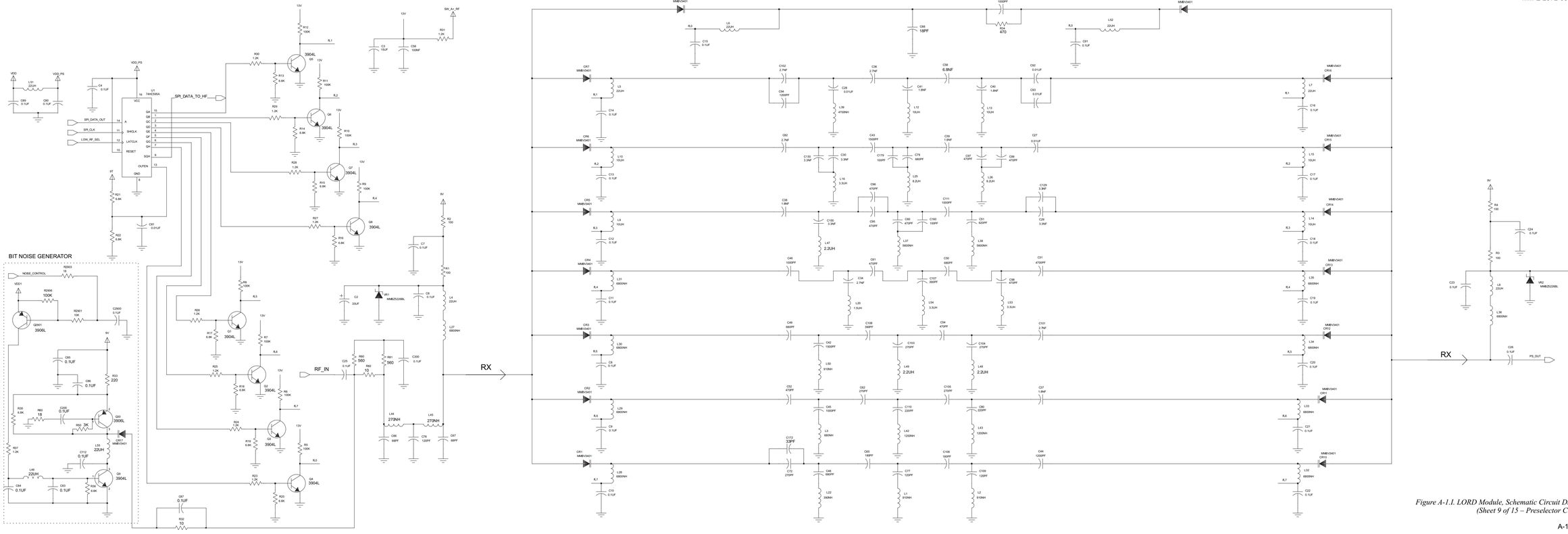


Figure A-1.I. LORD Module, Schematic Circuit Diagram (Sheet 9 of 15 – Preselector Circuits)

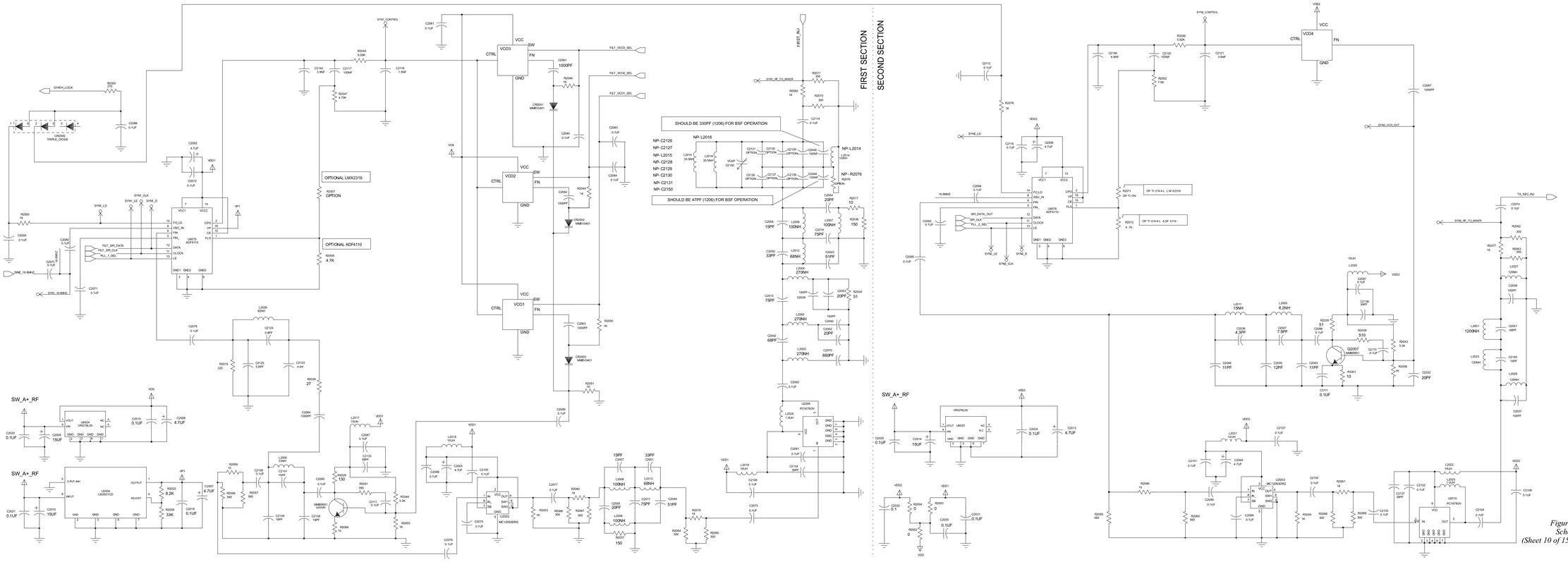
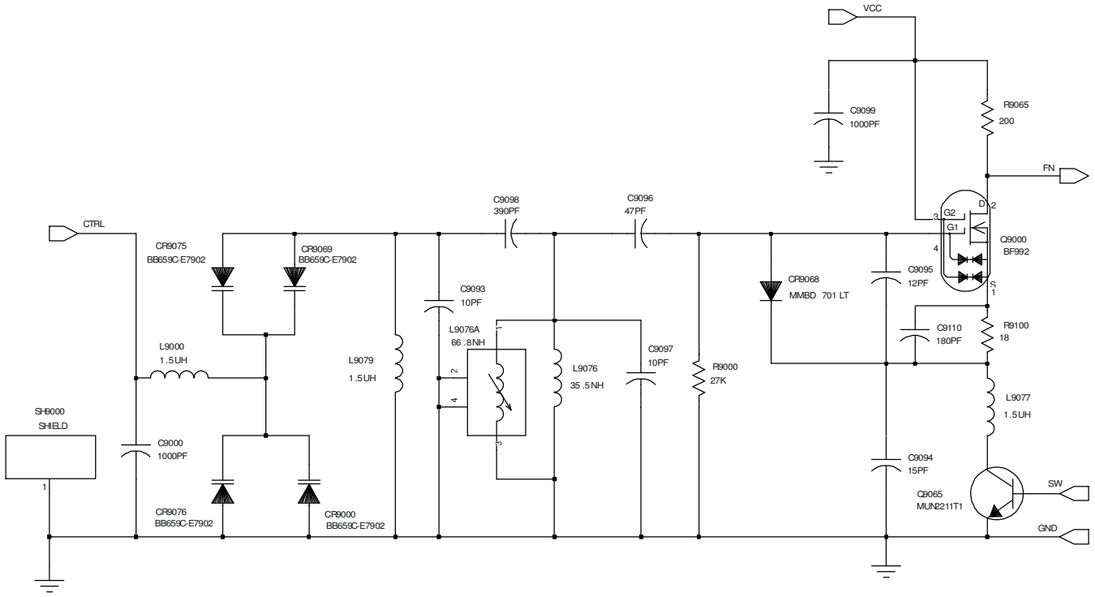
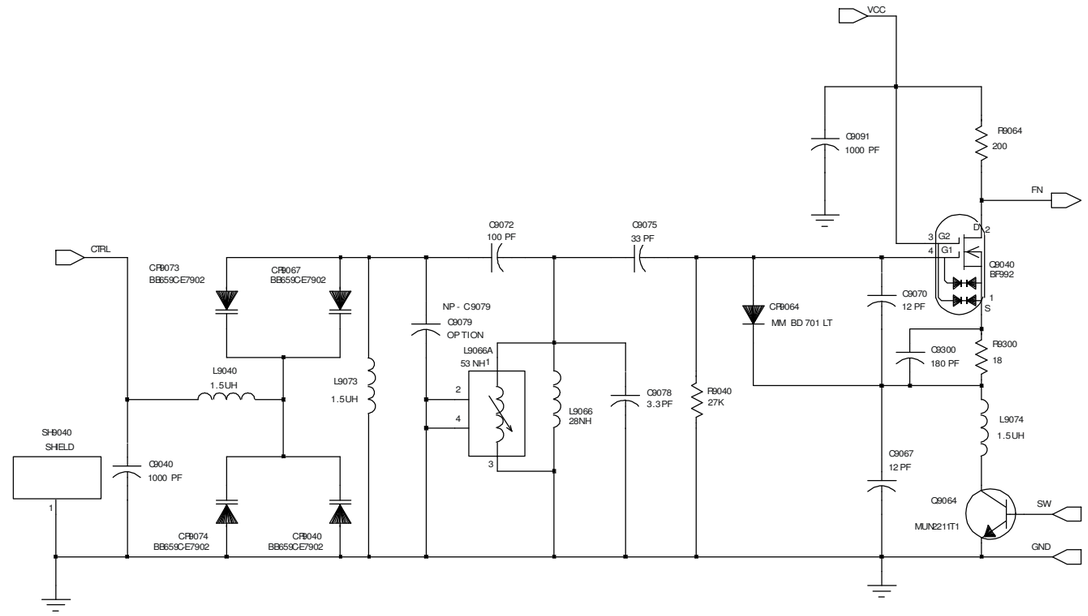


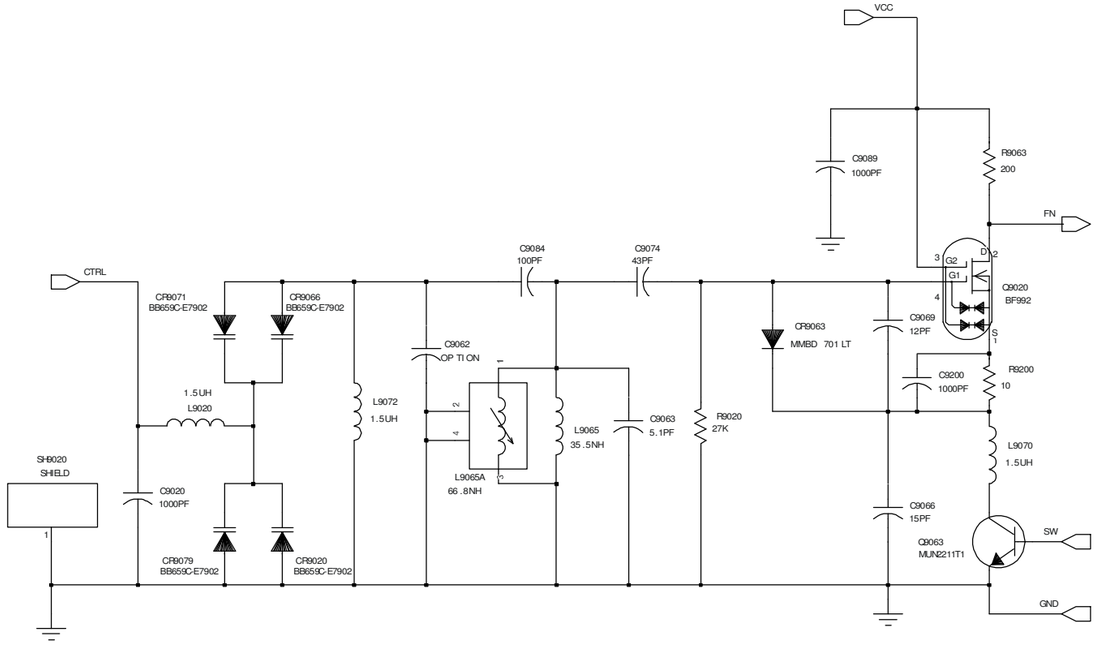
Figure A-1.J. LORD Module, Schematic Circuit Diagram (Sheet 10 of 15 – Synthesizer Circuits)



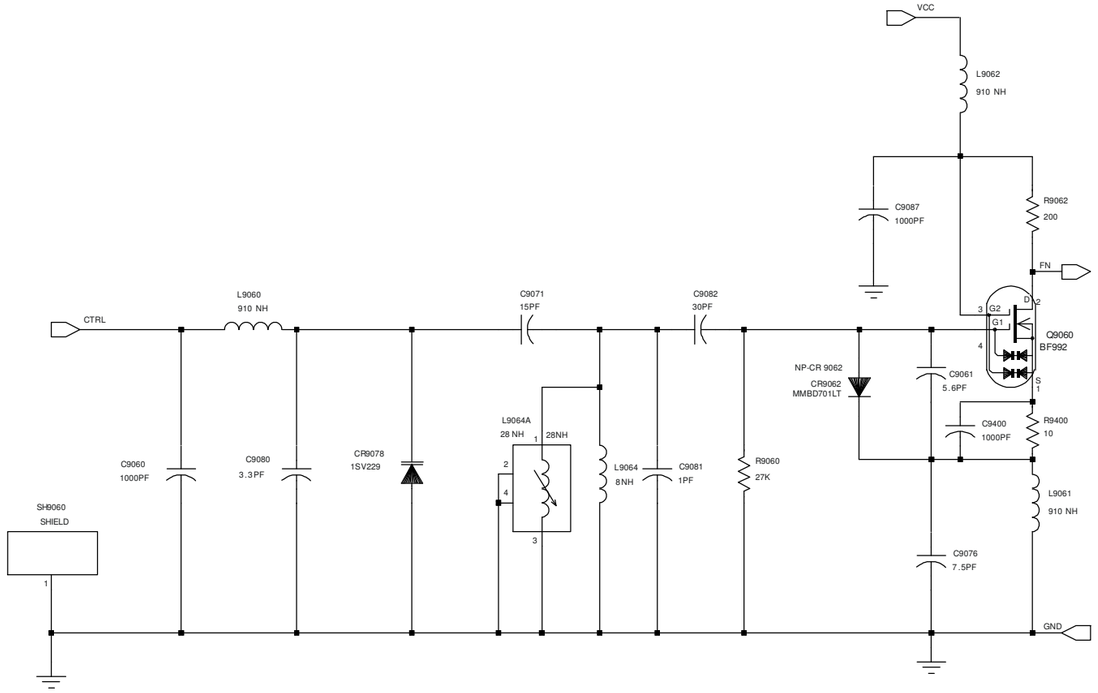
a. VCO 1



c. VCO 3



b. VCO 2



d. VCO 4

Figure A-1.K. LORD Module, Schematic Circuit Diagram (Sheet 11 of 15 – VCO Circuits)

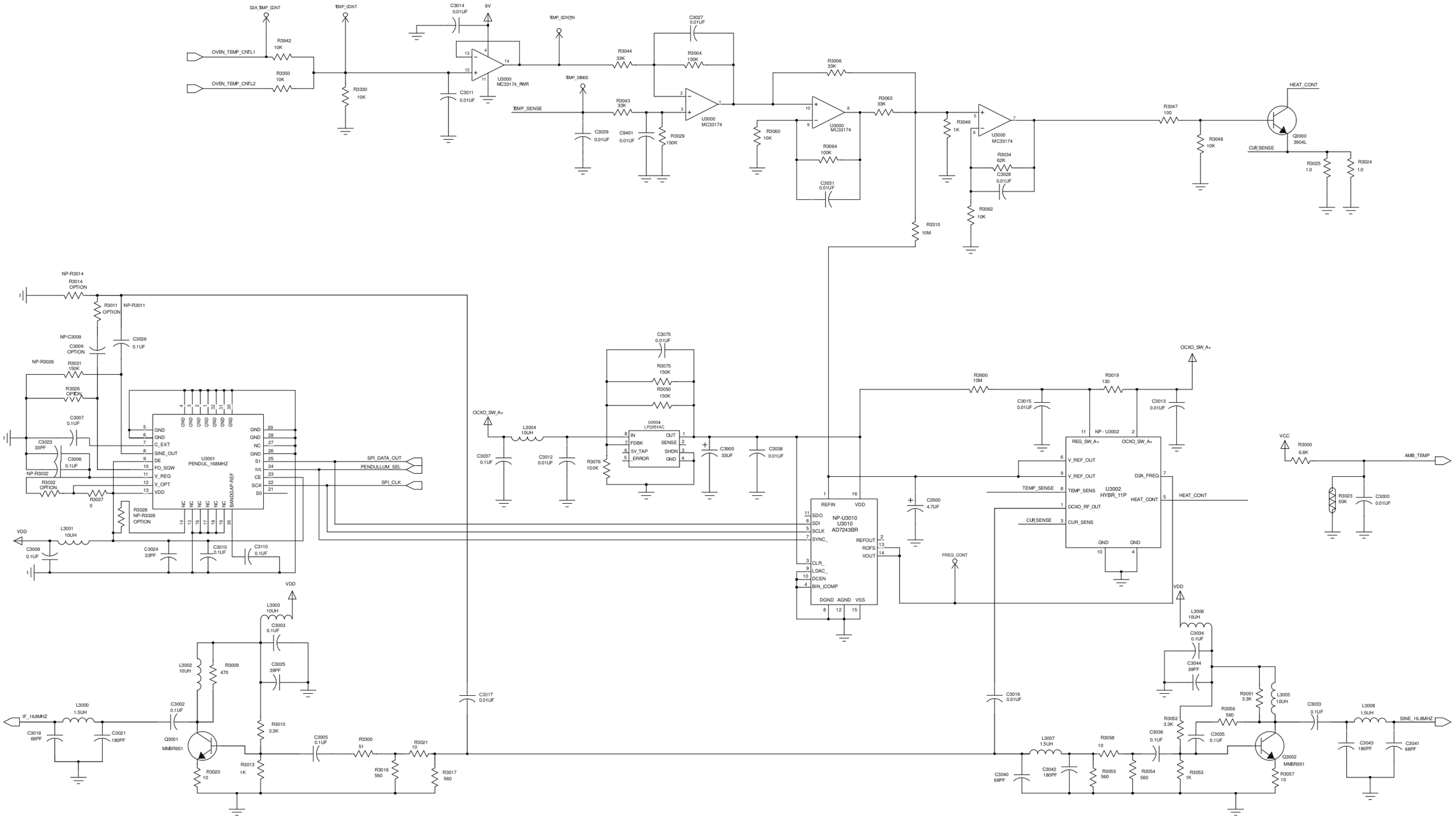


Figure A-1.L. LORD Module, Schematic Circuit Diagram (Sheet 12 of 15 – Frequency Reference Circuits)

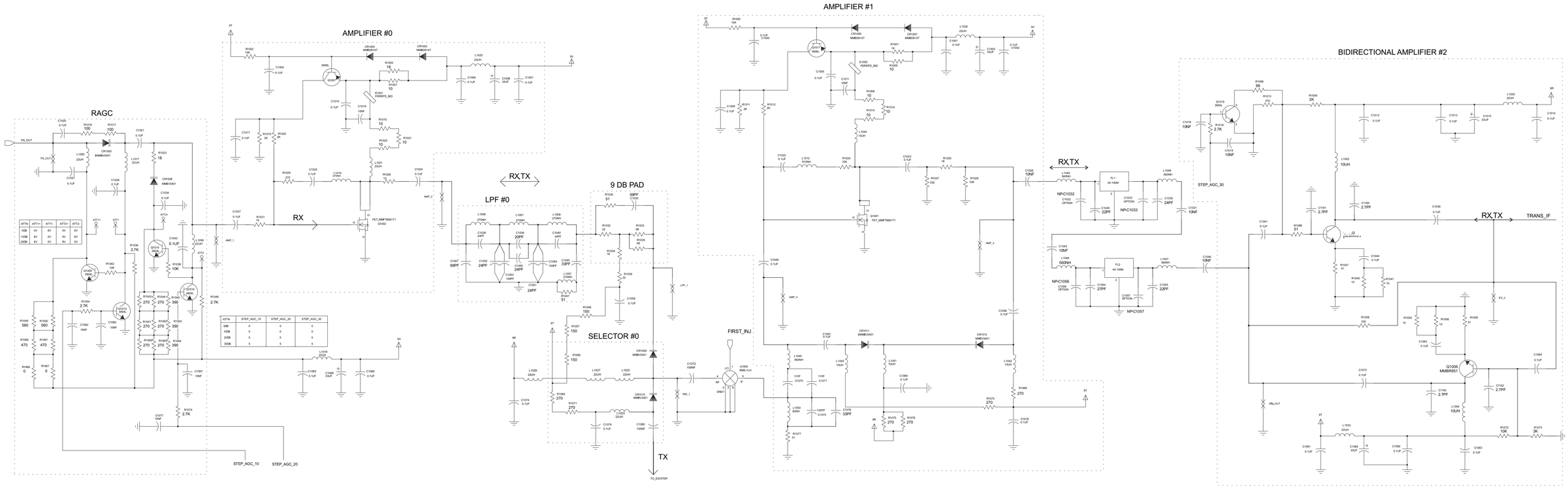


Figure A-1.M. LORD Module, Schematic Circuit Diagram (Sheet 13 of 15 – Front End Circuits)

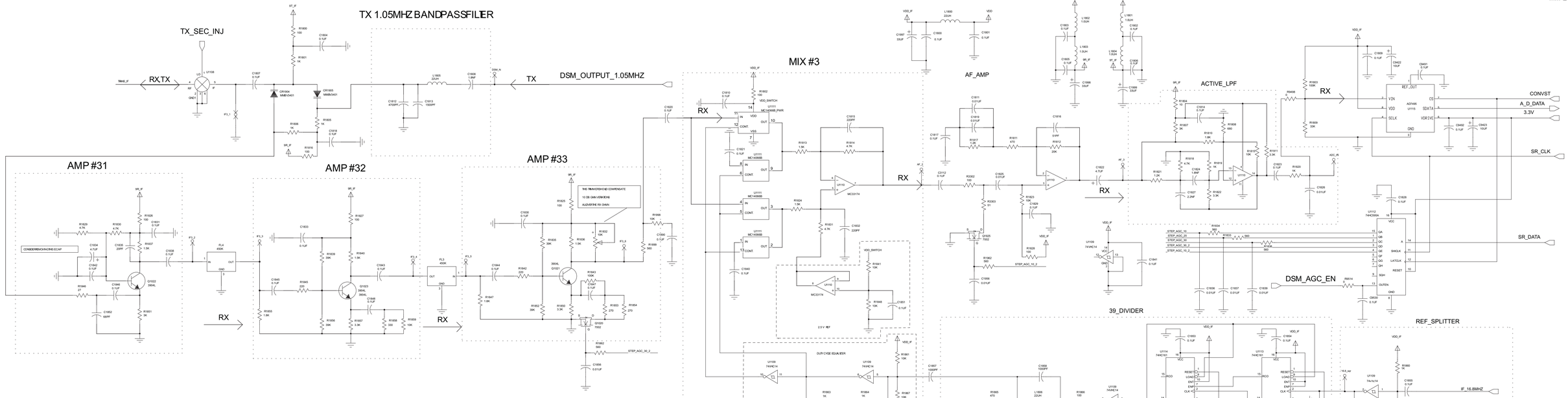


Figure A-1.N. LORD Module, Schematic Circuit Diagram (Sheet 14 of 15 – IF Circuits)

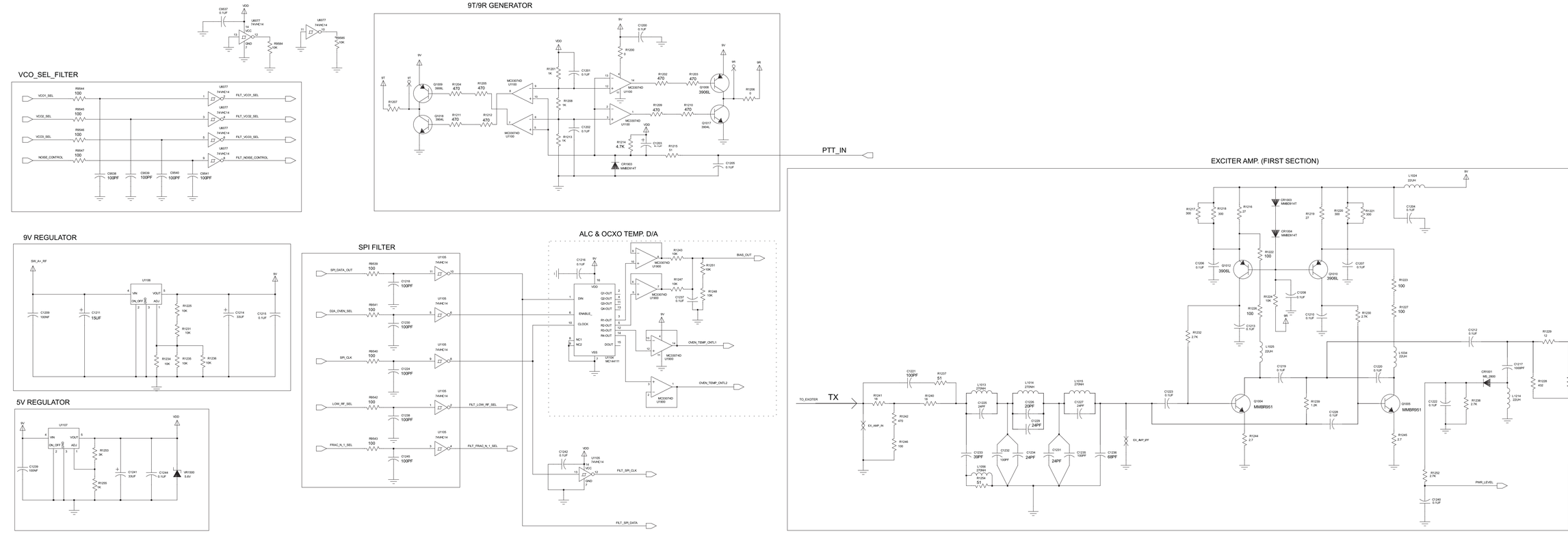


Figure A-1.P. LORD Module, Schematic Circuit Diagram (Sheet 15 of 15 – Exciter and Regulators)

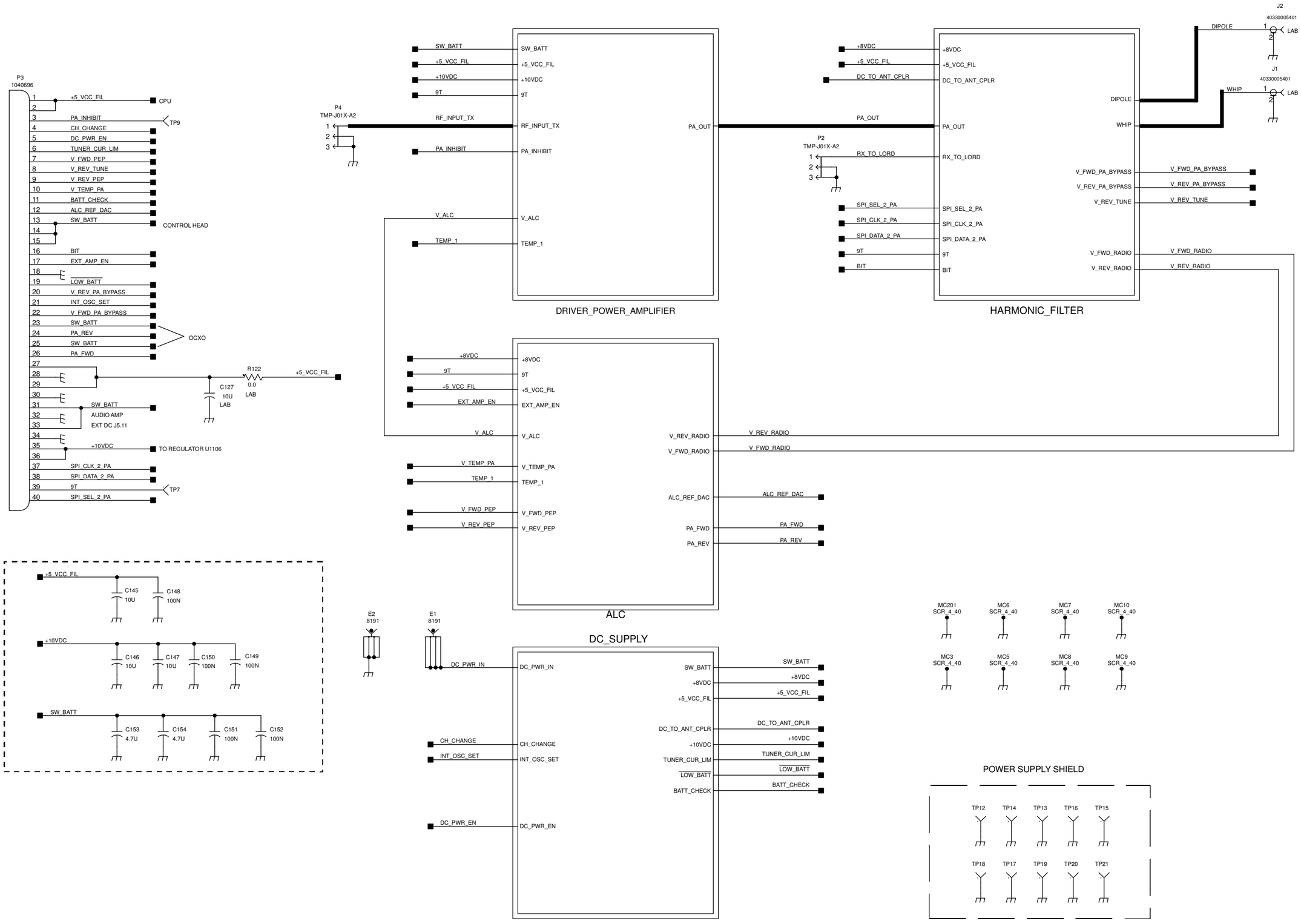


Figure A-2.A. HI POWER Module, Schematic Circuit Diagram (Sheet 1 of 6 – Module Interconnection Diagram)

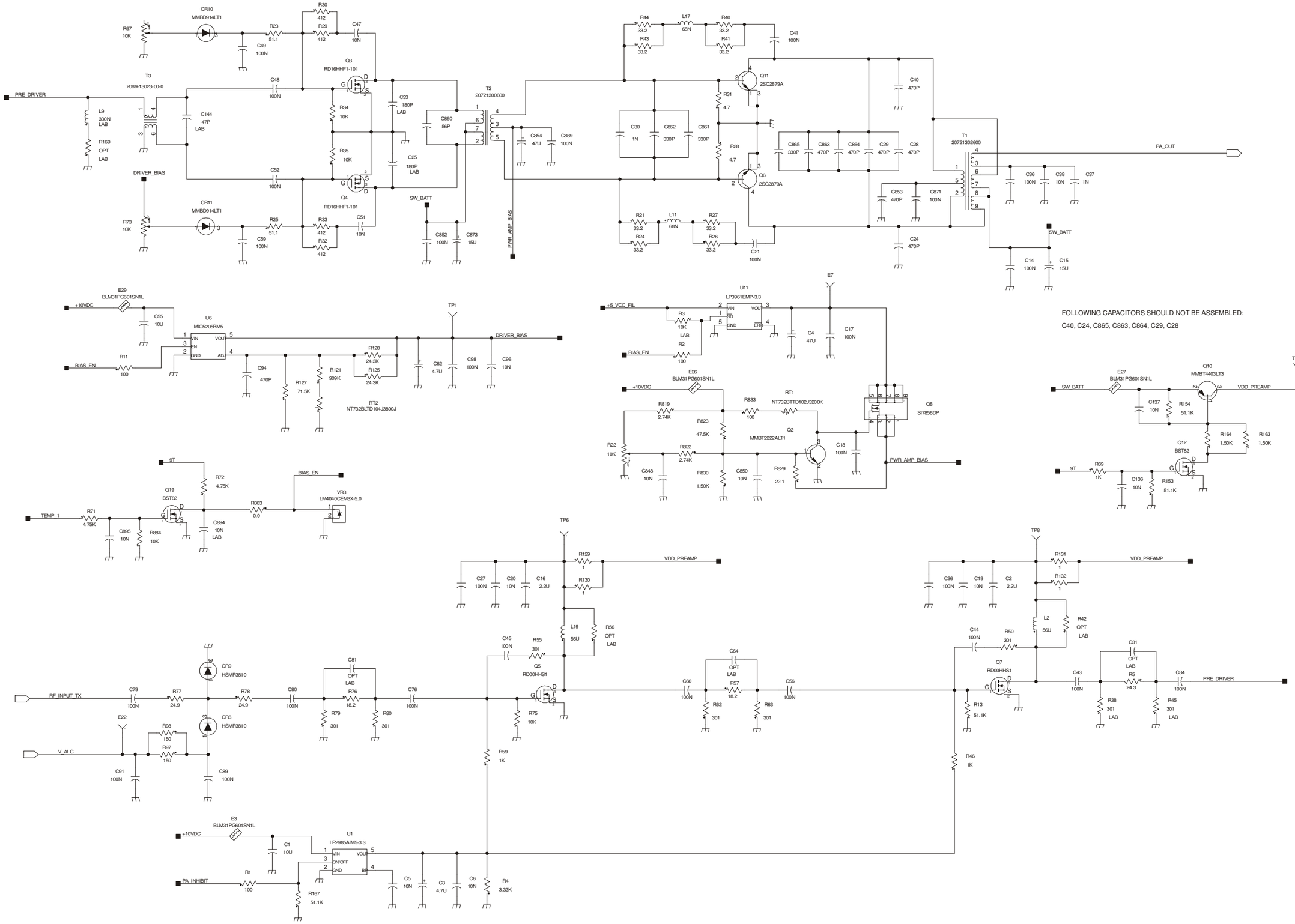


Figure A-2.B. HI POWER Module, Schematic Circuit Diagram (Sheet 2 of 6 – Driver & Power Amplifier)

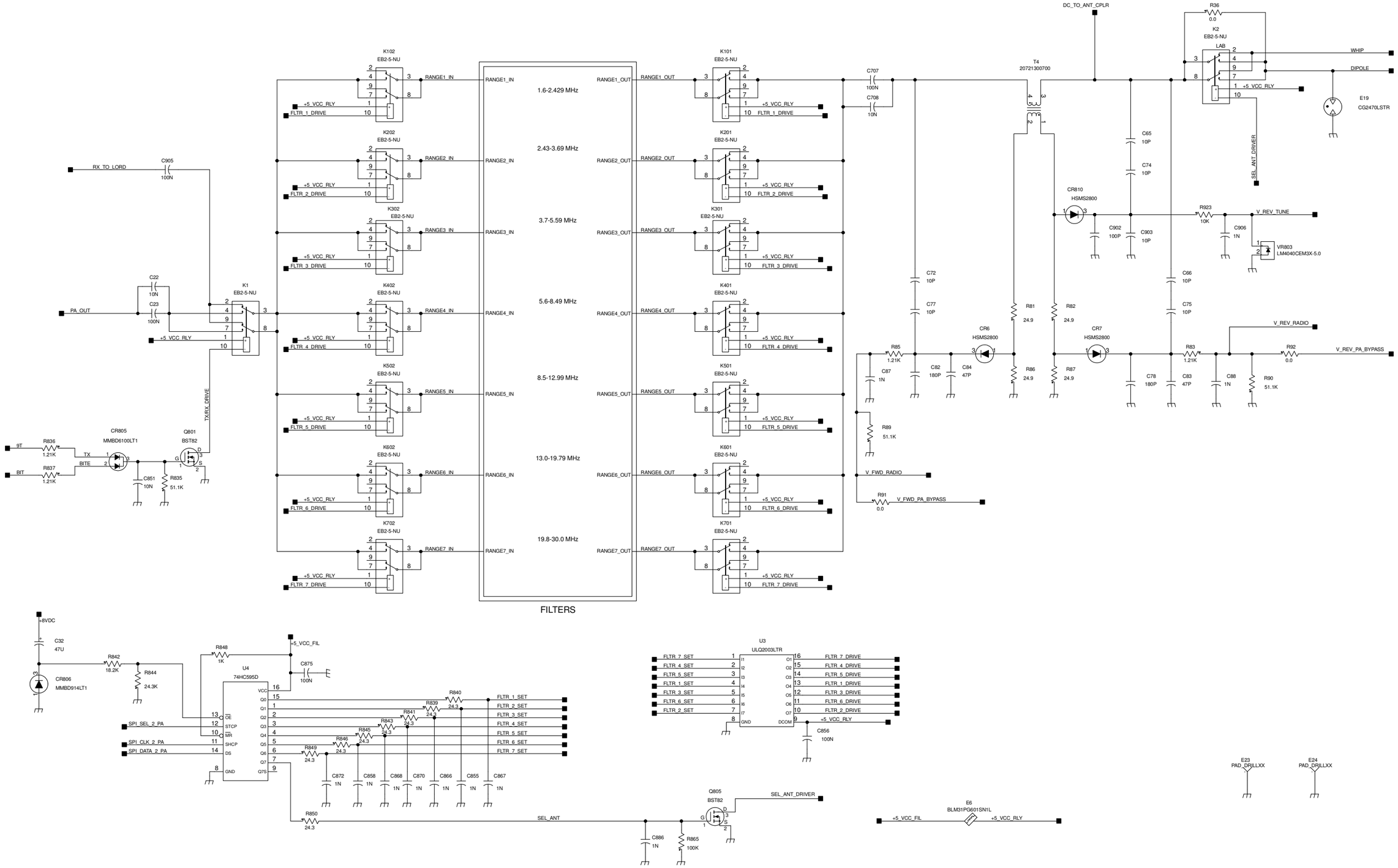
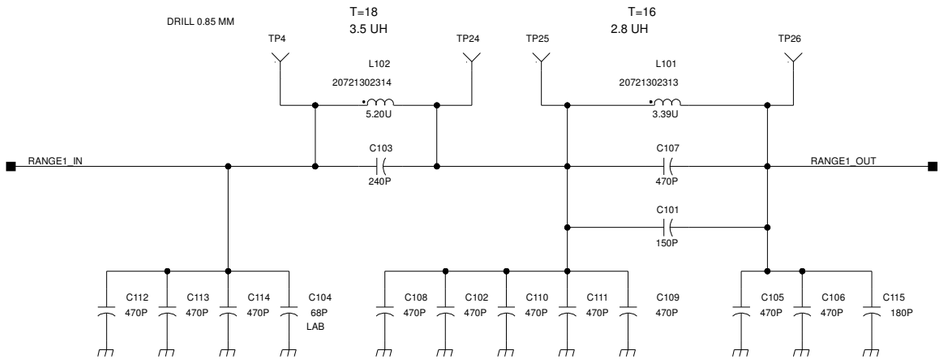
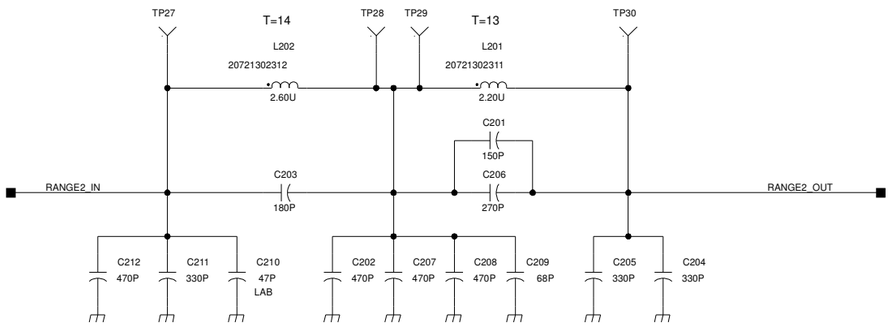


Figure A-2.C. HI POWER Module, Schematic Circuit Diagram (Sheet 3 of 6 – Harmonic Filter, Part I)

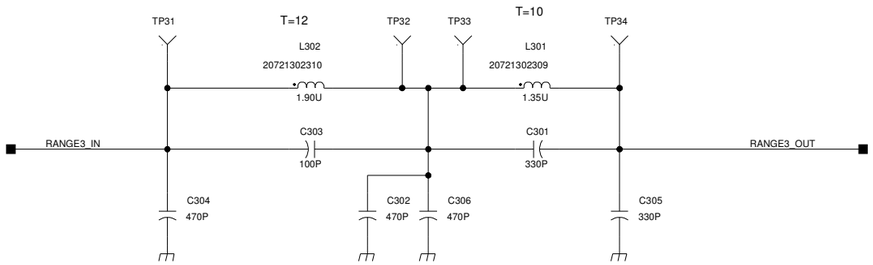
FILTER#1 1.6-2.43 MHZ



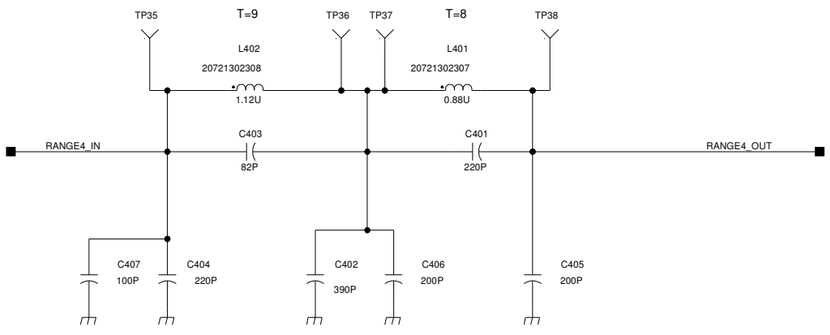
FILTER#2 2.43-3.7 MHZ



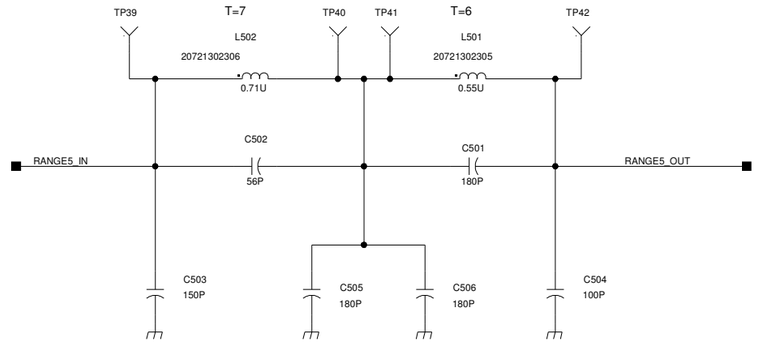
FILTER#3 3.7-5.6 MHZ



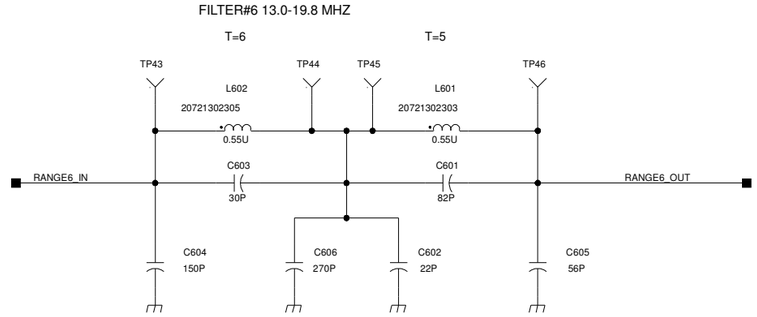
FILTER#4 5.6-8.5 MHZ



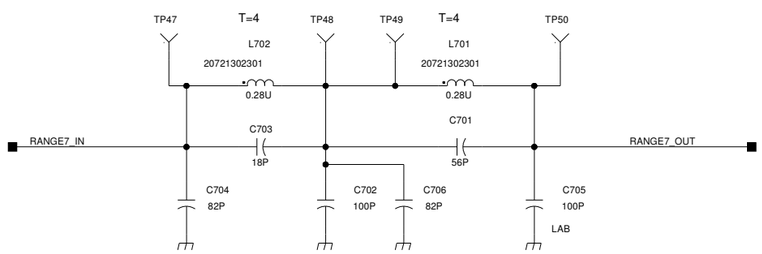
FILTER#5 8.5-13.0 MHZ



FILTER#6 13.0-19.8 MHZ



FILTER#7 19.8-30.0 MHZ



NOT ASSEMBLED: C104, C210,C705

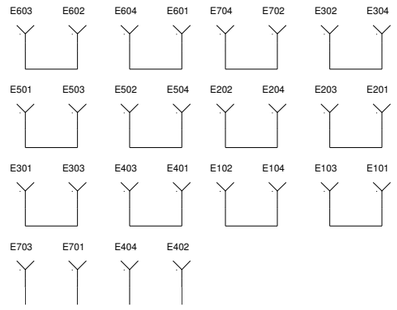


Figure A-2.D. HI POWER Module, Schematic Circuit Diagram (Sheet 4 of 6 – Harmonic Filter, Part II)

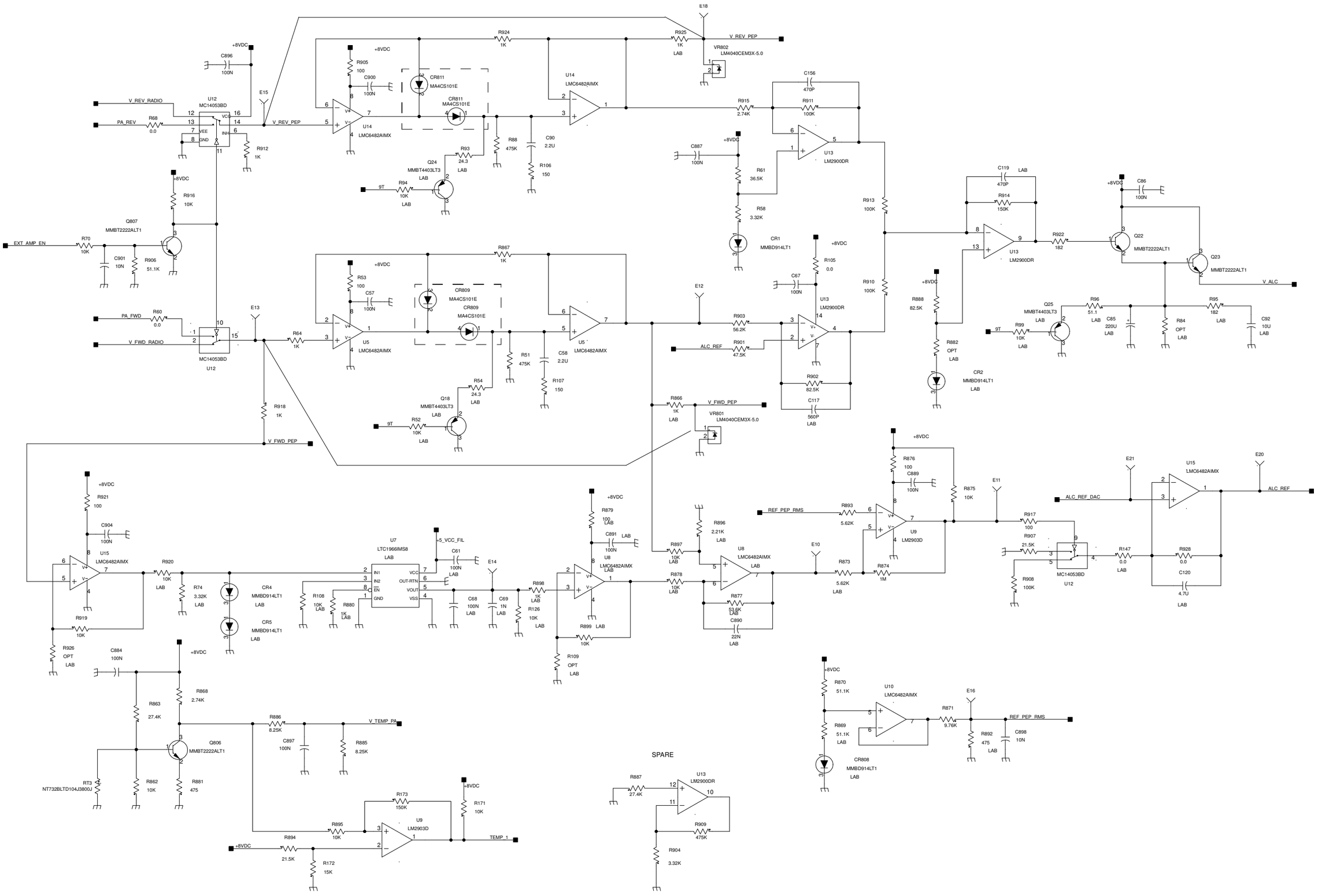


Figure A-2.E. HI POWER Module, Schematic Circuit Diagram (Sheet 5 of 6 – ALC Circuits)

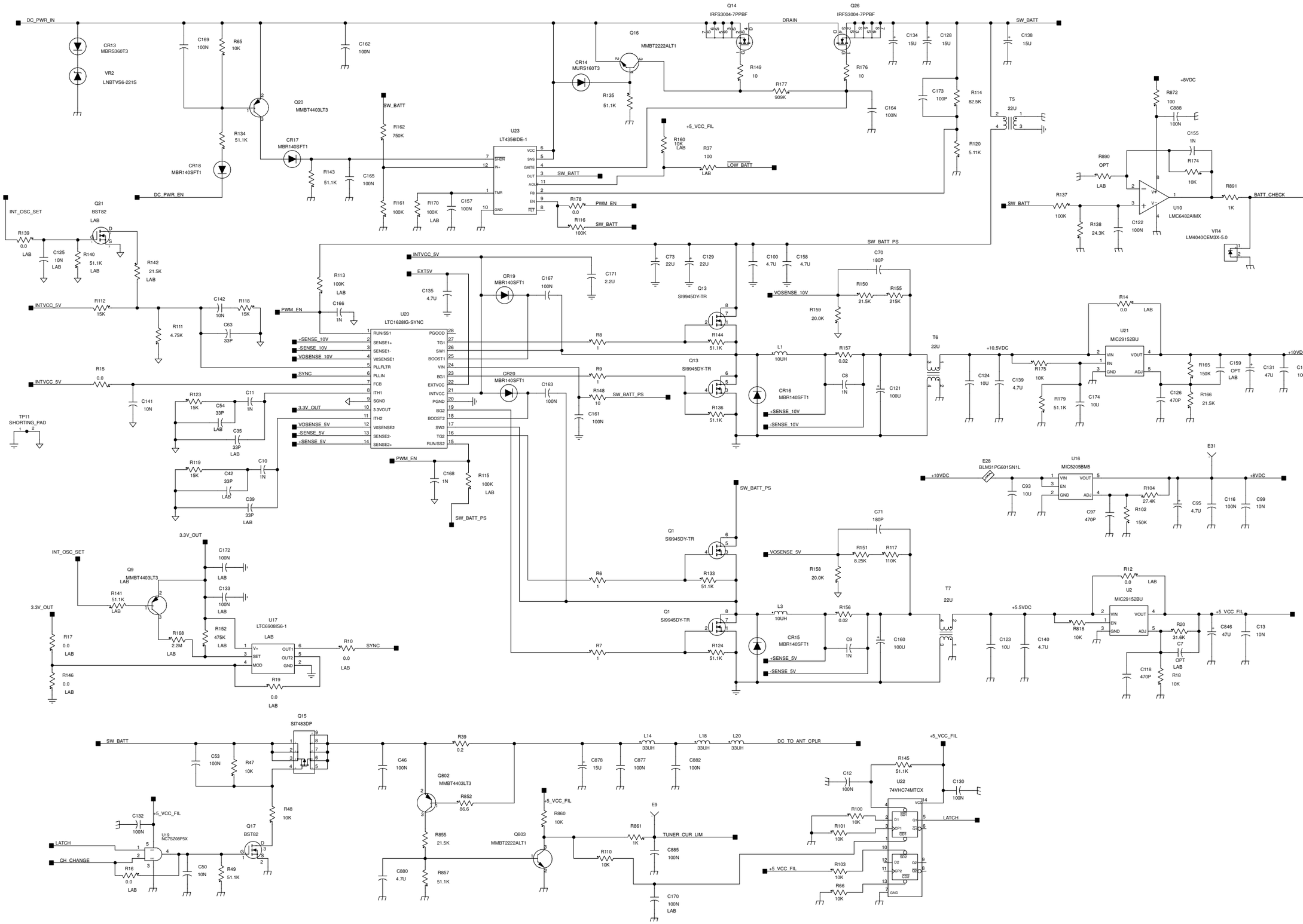


Figure A-2.F. HI POWER Module, Schematic Circuit Diagram (Sheet 6 of 6 – Power Supply)

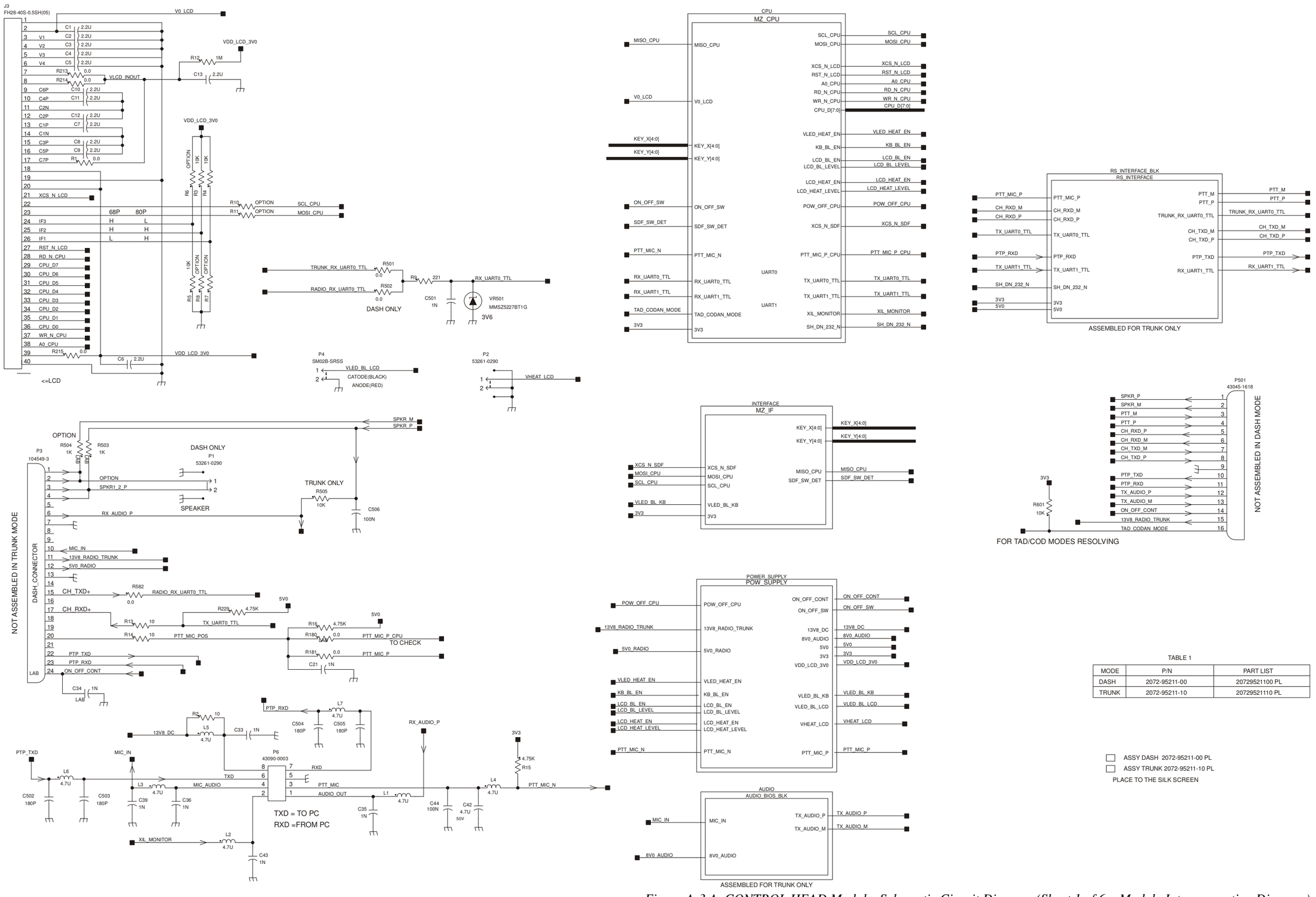


TABLE 1

MODE	P/N	PART LIST
DASH	2072-95211-00	20729521100 PL
TRUNK	2072-95211-10	20729521110 PL

☐ ASSY DASH 2072-95211-00 PL
☐ ASSY TRUNK 2072-95211-10 PL
PLACE TO THE SILK SCREEN

Figure A-3.A. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 1 of 6 – Module Interconnection Diagram)

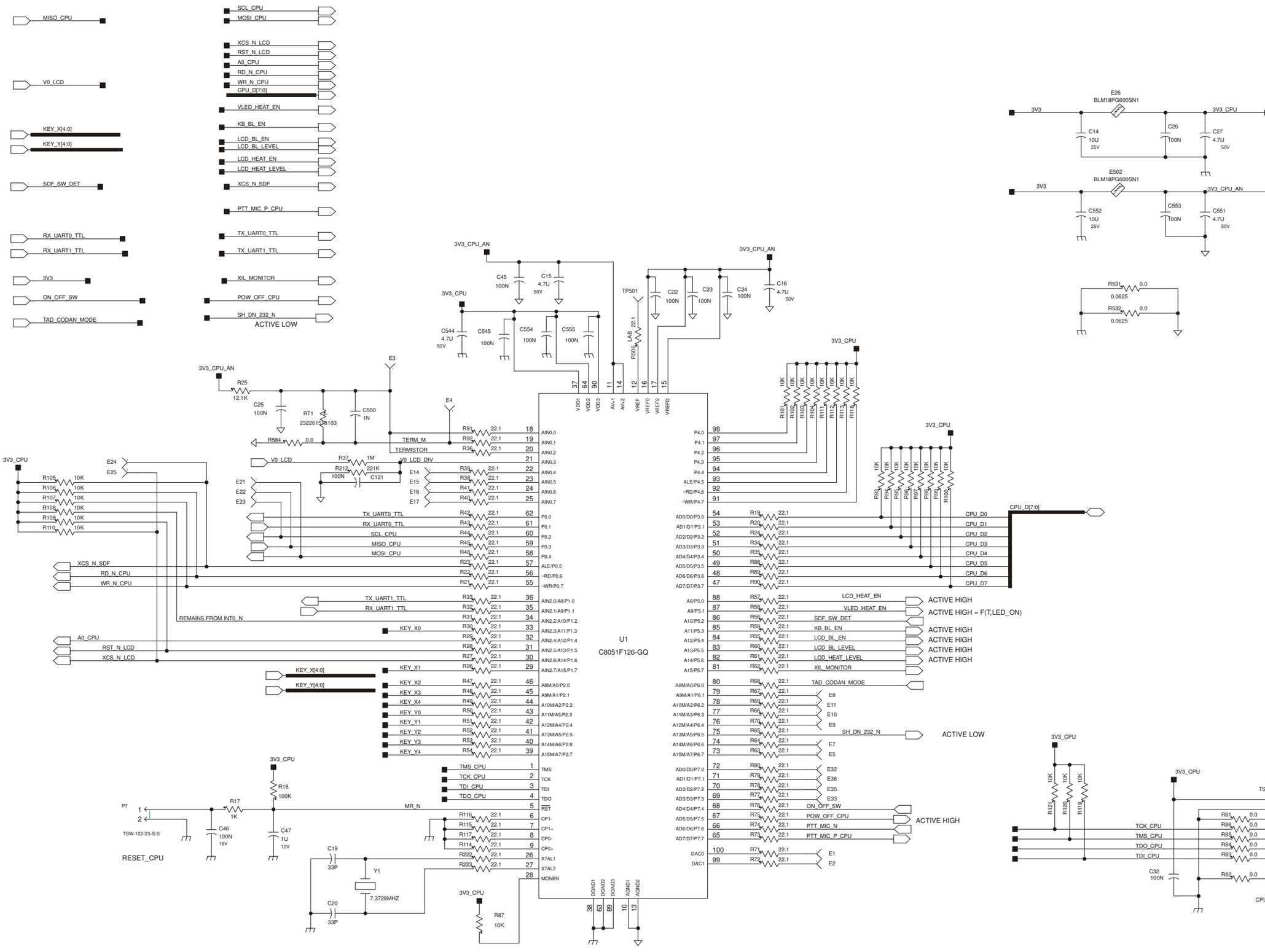
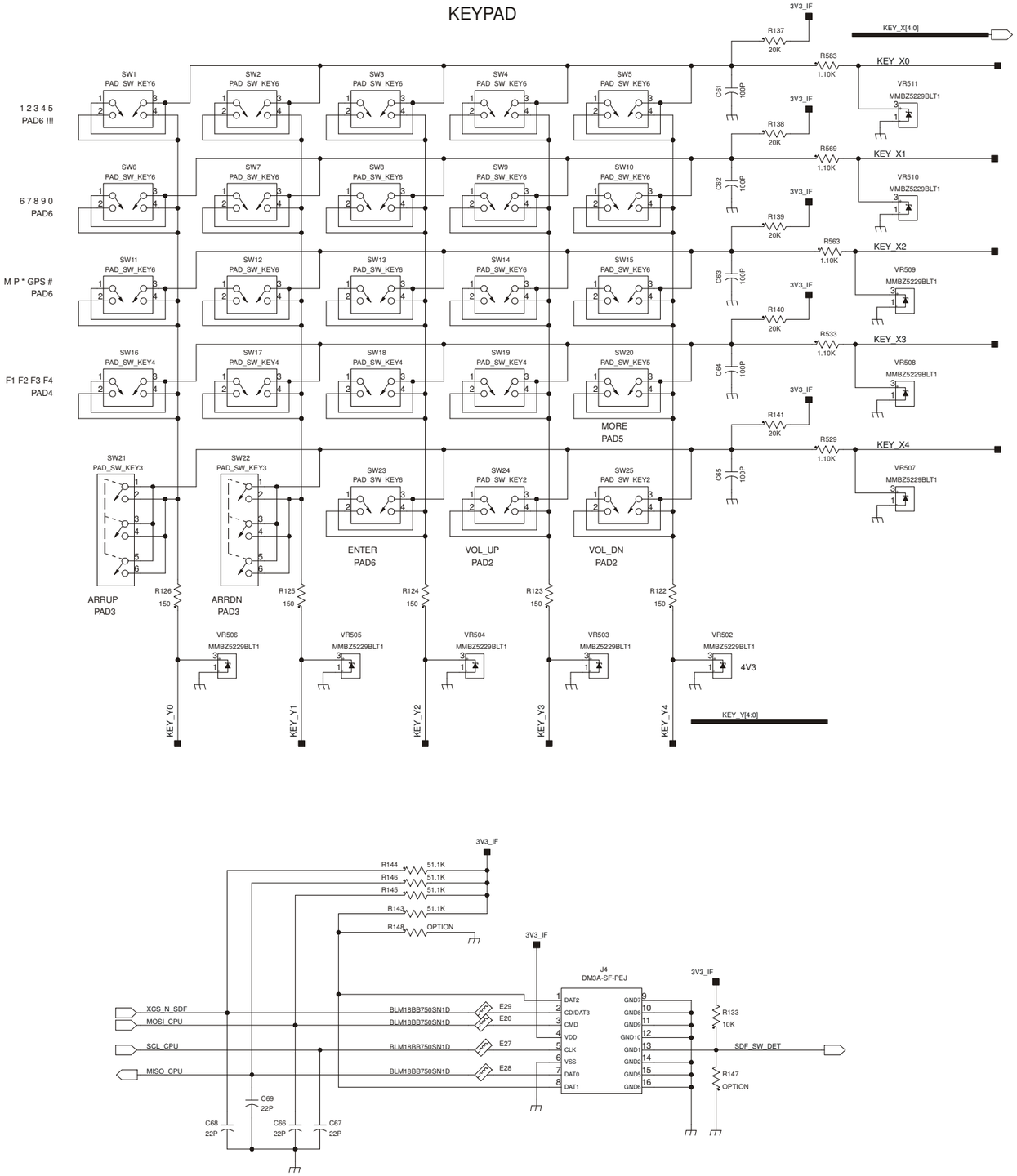
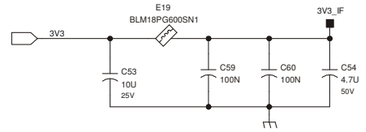


Figure A-3.B. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 2 of 6 – Microcontroller)





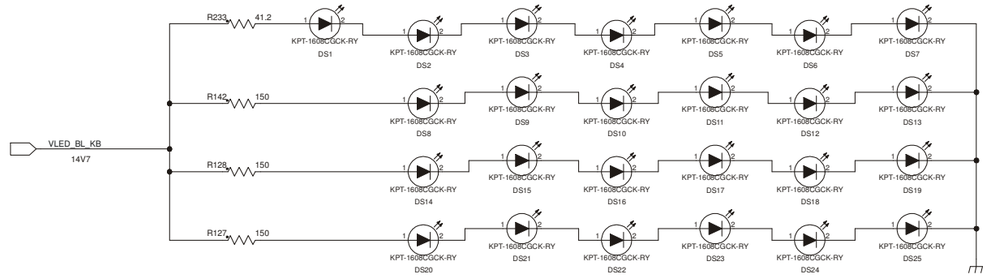


Figure A-3.C. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 3 of 6 – Keypad)

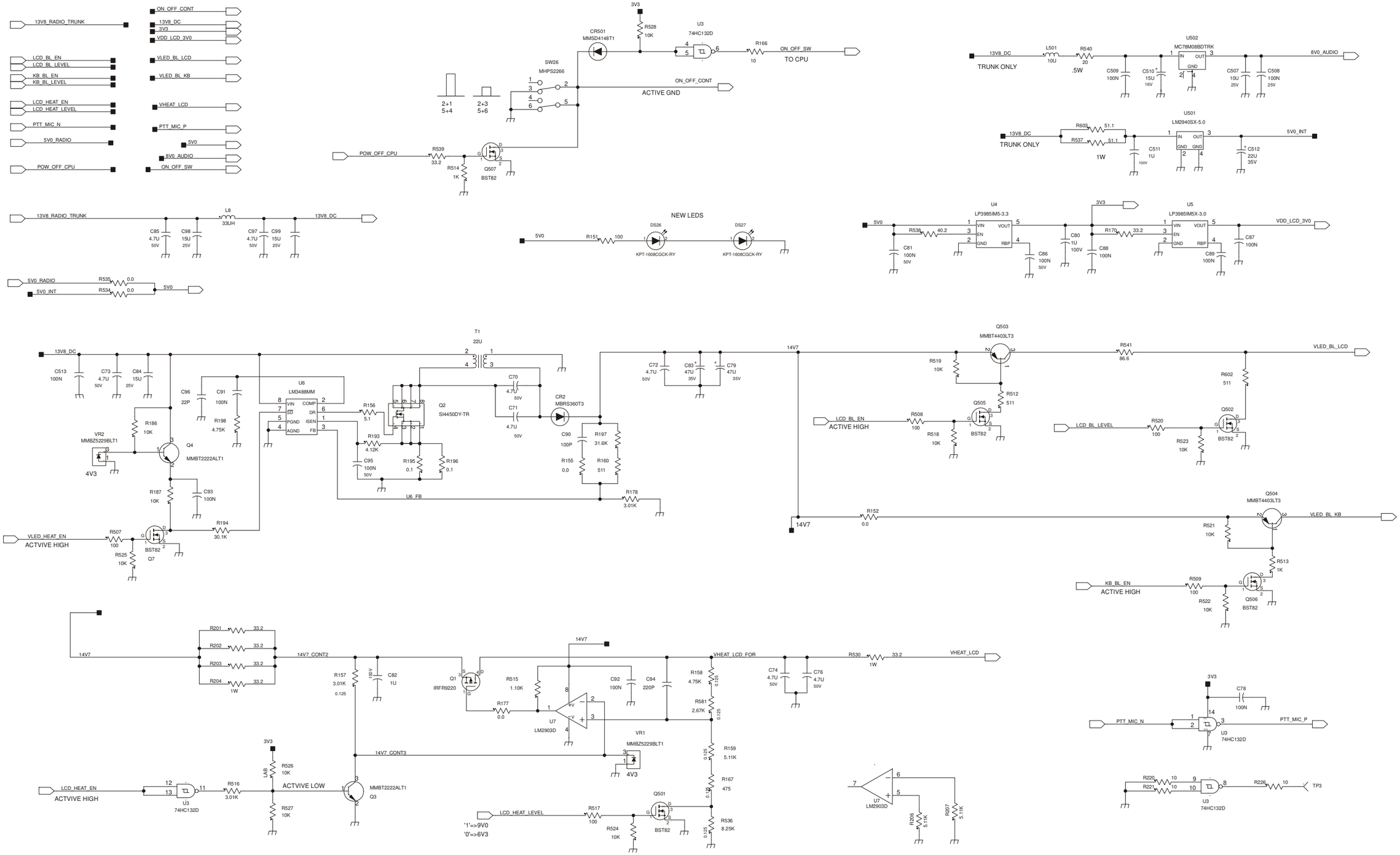


Figure A-3.D. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 4 of 6 – Power Supply Circuits)

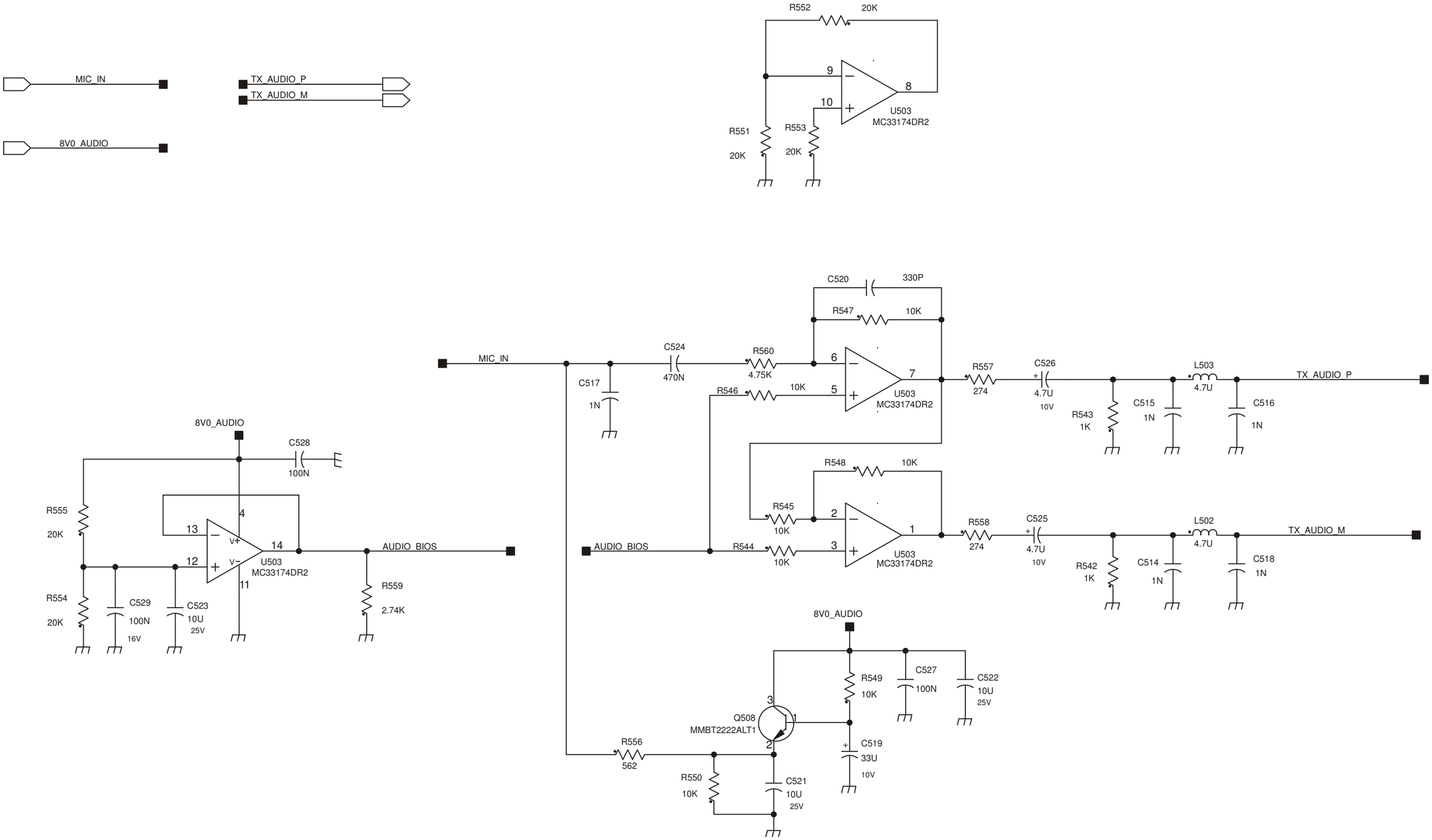
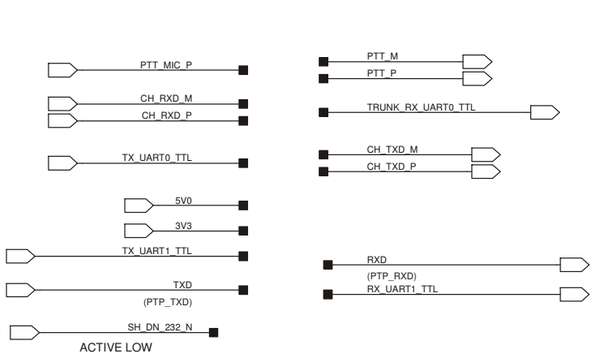
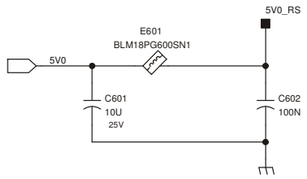
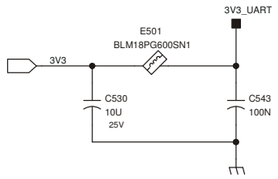
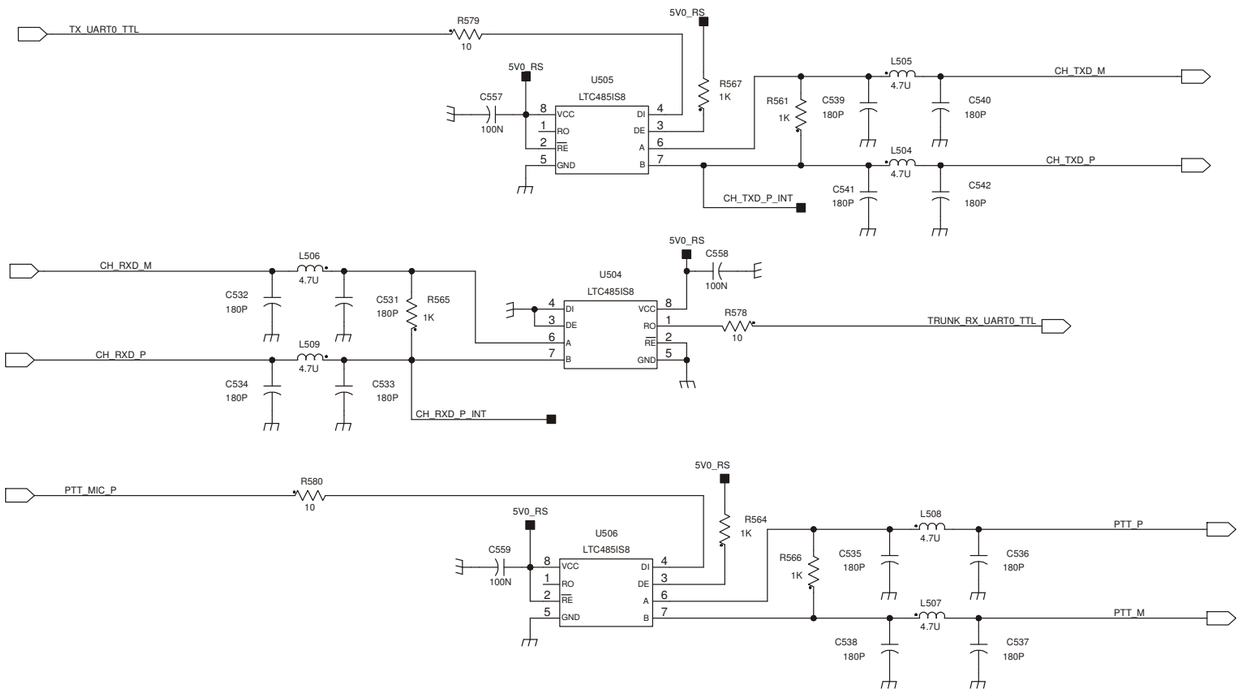


Figure A-3.E. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 5 of 6 – Audio Amplifier, Trunk Mount Version Only)

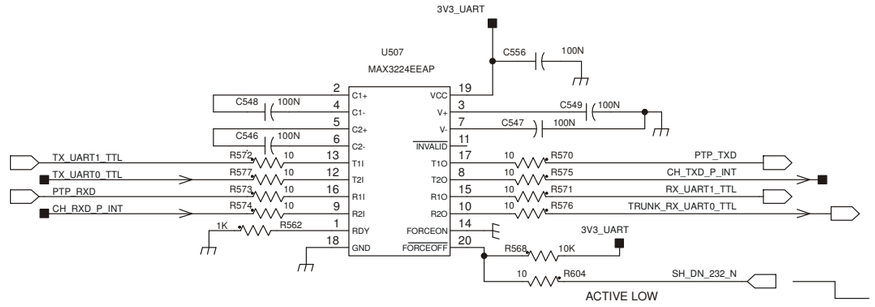








OPSTATUS	FORCEON	F_OFF_N	EN_N	T_OUT	R_OUT	VALID
SHDN	X	0	0	HIGH_Z	ACTIVE	X
NORMAL (AUTOSHDN)	0	1	0	ACTIVE	ACTIVE	YES
AUTOSHDN	0	1	0	HIGH_Z	HIGH_Z	NO



R570-573-OPTION FOR TRUNK/CDN/UART1-UART0 MODE

Figure A-3.F. CONTROL HEAD Module, Schematic Circuit Diagram (Sheet 6 of 6 – Interface Circuits, Trunk Mount Version Only)

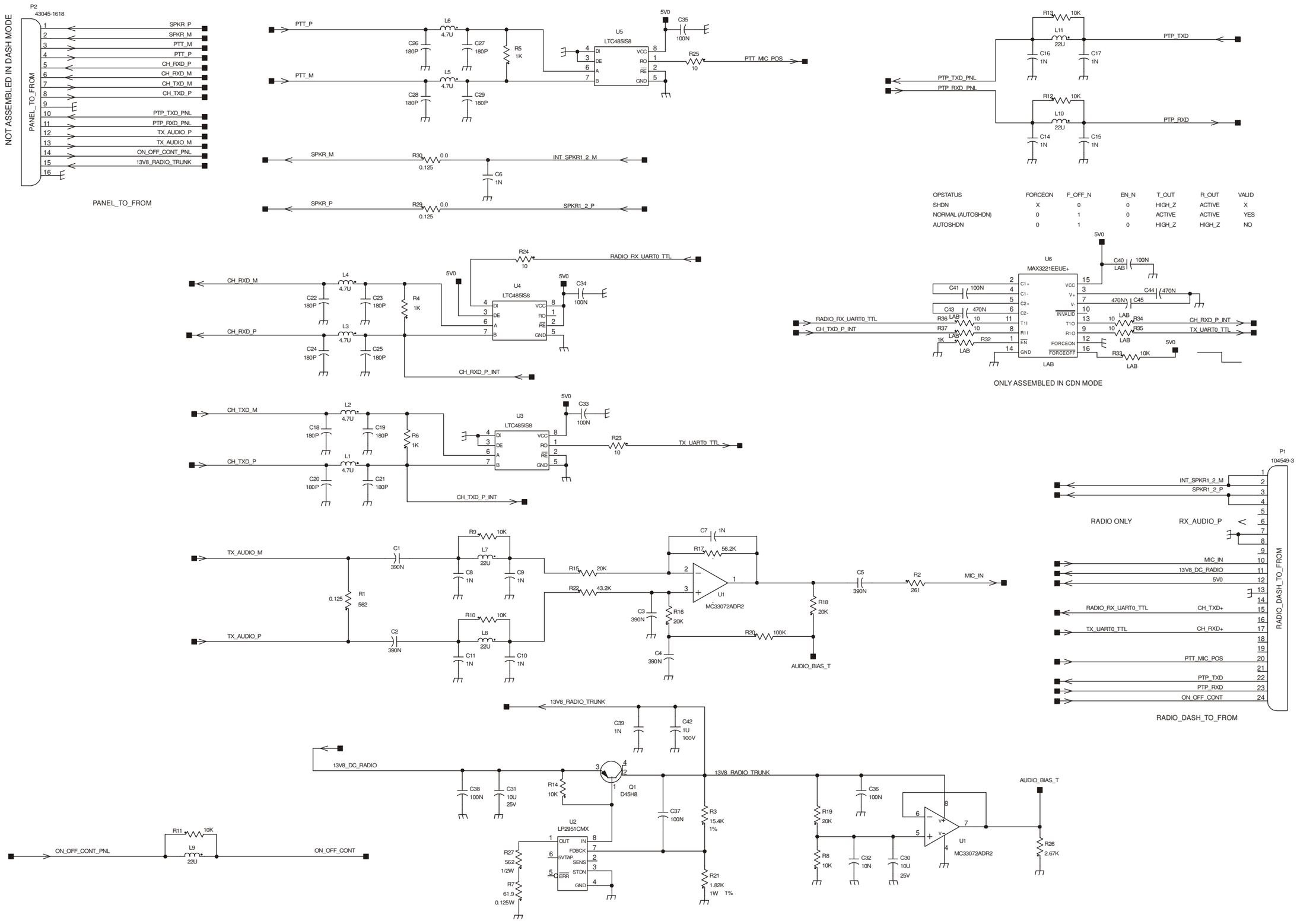


Figure A-4. INTERCONNECTION Module, Schematic Circuit Diagram

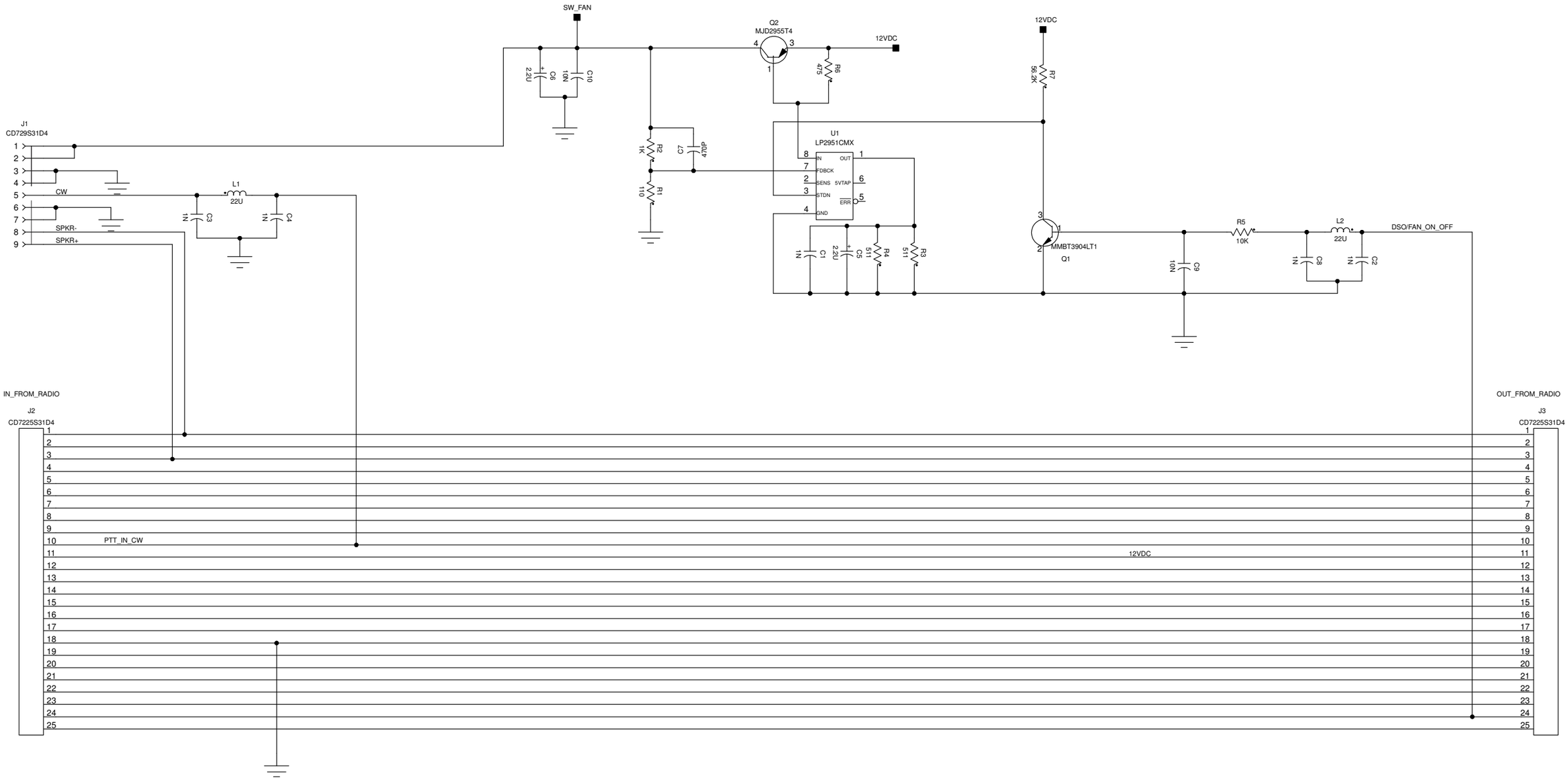


Figure A-5. FAN CONTROL Module, Schematic Circuit Diagram

Appendix B

PARTS LISTS

Section I. MICOM-Z DASH-MOUNT VERSION

Table B-1. Micom-Z Assembly Dash Version, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-90715-00	MICOM-Z ASSEMBLY, DASH	Figure B-1
BL1	2072-95170-10	HI POWER MODULE	1.0
BL2	2072-90833-00	FRONT PANEL DASH ASSY	1.0
BL3	2072-90832-00	LORD ASSY	1.0
BL5	4053-10013-16	WASHER, SPRING, CRS, PASSIVATED, #10	1.0
BL6	4053-00037-16	WASHER, FLAT, CRS, PASSIVATED, .219	2.0
BL7	4051-00011-16	NUT, HEX, CRS, PASSIVATED, #10-32	1.0
BL8	2089-41660-00	KNOB	1.0
BL10	4053-10012-15	WASHER, SPRING, CRS, BLACK, #8	8.0
BL12	4053-16001-00	SPRING LOCK WASHERS, M3	11.0
BL13	2072-45002-10	REAR PANEL	1.0
BL16	2072-09296-00	CABLE COAX, LORD-H.P PA	2.0
BL17	2072-09295-00	CABLE, FLAT, LORD-H.P PA	1.0
BL18	2072-90160-00	CABLE, FLAT, TO CHASSIS	1.0
BL19	2072-90890-00	GPS ANTENNA TRANSITION	1.0
BL20	2072-34007-00	CABLE, FLAT, STRIP GPS	1.0
BL21	2072-90900-00	GPS CARD	1.0
BL22	4052-12019-88	SCREW, PH PHIL CRES, M 3X	9.0
BL23	2072-45011-00	BOX, MICOM-Z	1.0
BL24	4053-15002-00	WASHER, FLAT	9.0
BL25	2201-63202-03	HEATSINK COMPOUND, DC340	.200
BL26	2072-45041-00	LOCK PAD	2.0
BL27	4052-15003-00	SCREW, CROSS RECESSED, PAN HEAD	2.0
BL28	2072-90838-00	CONNECTOR ASSY, POWER	1.0
BL30	2072-45032-00	SCREW, M4X10, HEXAGON	8.0
BL31	2072-56022-00	SPACER FOR CONNECTOR SUB-D	4.0
BL32	4052-30011-16	SCREW, #10-32X3/4	1.0
BL33	2072-45042-00	PLUG COVER, D-TYPE, 9 PIN	1.0
BL34	2072-45031-00	SCREW, M3X4, FH, BLACK	8.0
BL35	2072-45013-00	COVER	1.0
BL37	2072-72707-00	PACKAGE BOX, DASH	1.0

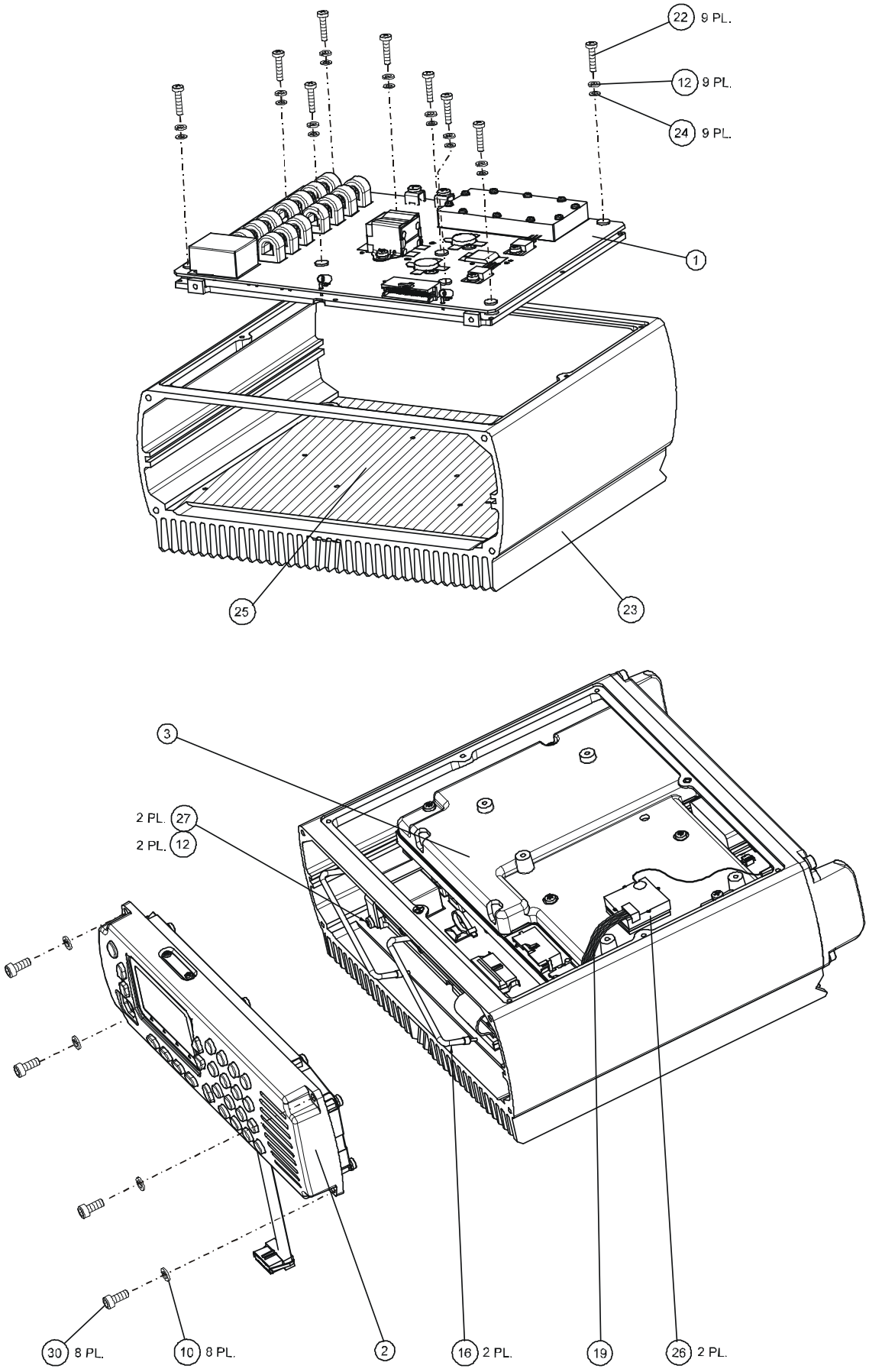


Figure B-1.A. Micom-Z Assembly Dash Version (Sheet 1 of 2)

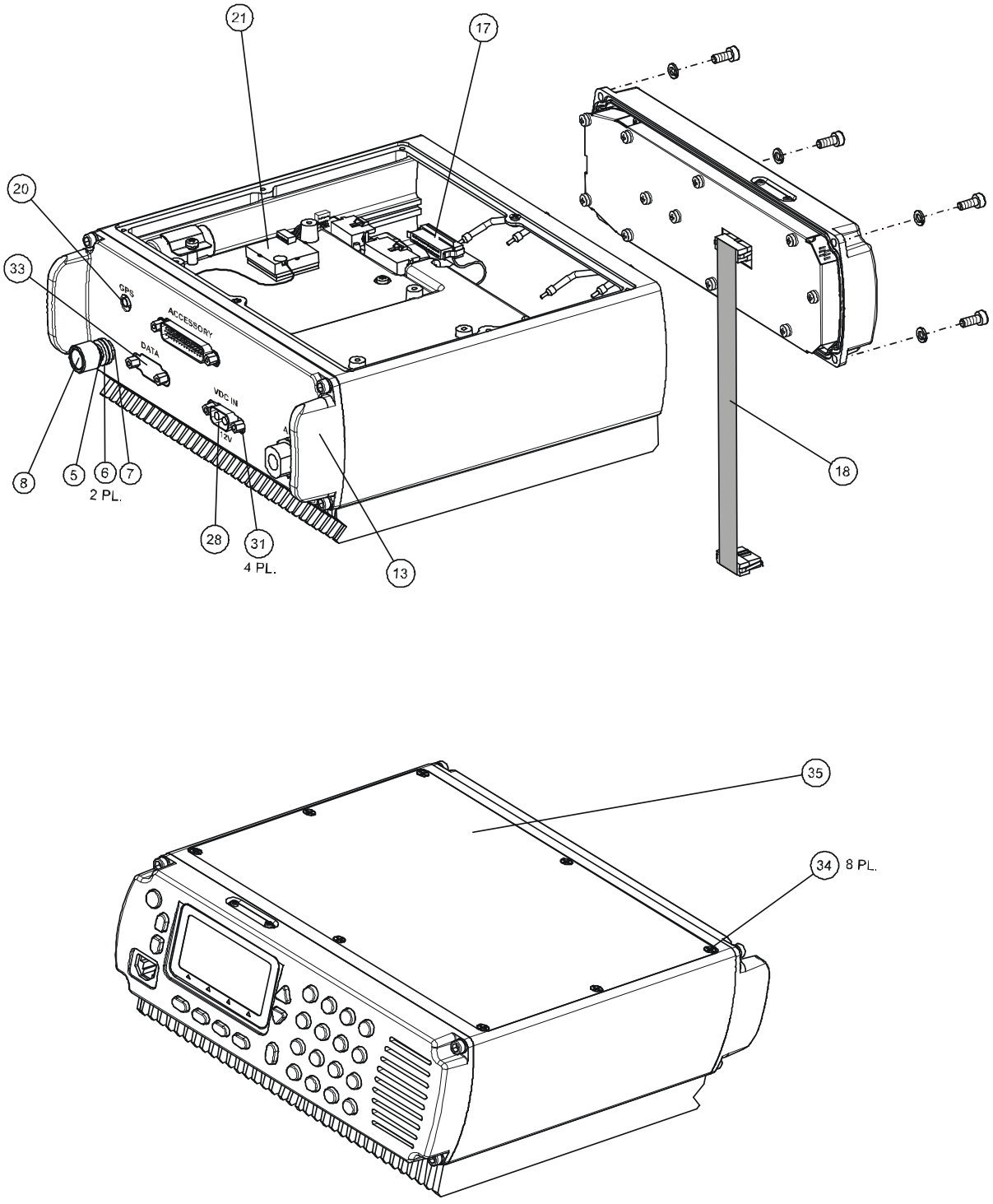


Figure B-1.B. Micom-Z Assembly, Dash Version (Sheet 2 of 2)

Table B-2. LORD Assembly, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-90832-00	LORD ASSEMBLY	Figure B-2
BL1	2072-95196-10	LORD MODULE	1.0
BL2	2072-48195-10	LORD PAD MACHINING	1.0
BL3	2072-48165-10	SHIELD HOUSING MACHINING	1.0
BL4	2072-90050-00	BATTERY ASSY, 0102703K64	1.0
BL5	4053-16001-00	WASHER, SPRING LOCK, M3	3.0
BL6	4052-15003-00	SCREW, CROSS RECESSED, PAN HEAD	3.0
BL7	2072-52004-00	SCREW, M3XP0.5X16	6.0
BL8	2072-40160-00	LOWER CONTACTS, 3904382P	1.0
BL9	2072-40150-00	UPPER CONTACTS, 3904381P	1.0
BL12	2072-48060-00	BATTERY HOLDER, LORD, MI	1.0
BL14	2072-45031-00	SCREW, M3X4, FH BLACK	4.0
BL15	2072-45018-00	HOLDER RIGHT, MICOM-Z	1.0
BL16	2072-45017-00	HOLDER LEFT, MICOM-Z	1.0

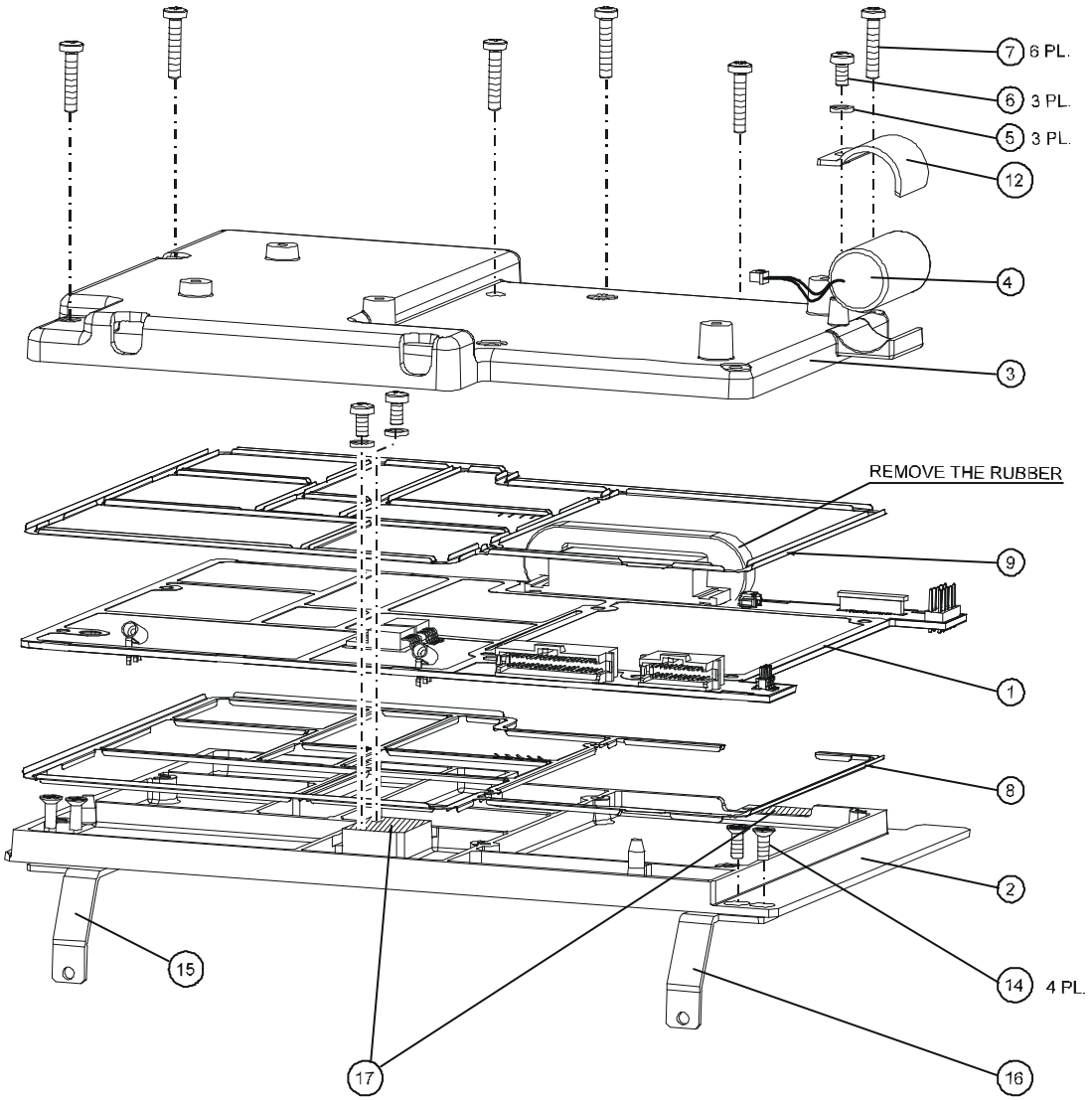


Figure B-2. LORD Assembly

Table B-3. LORD Module, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95196-10	LORD MODULE	Figure B-3
BL1	2072-32200-50	PCB LORD	1.0
BL2	2072-41030-00	SPACER	2.0
BL3	4053-10010-16	WASHER, SPRING, CRS, PASSIVATED, #4	2.0
C1	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C2	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C3	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C4	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C8	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C10	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C11	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C12	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C13	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C14	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C15	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C16	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C17	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C18	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C19	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C20	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C21	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C22	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C23	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C24	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C25	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C26	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C27	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C28	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C29	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C30	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C31	4017-20267-00	CAPACITOR, CHIP, X7R, 4.7NF, 10%	1.0
C34	2072-17025-00	CAPACITOR, CHIP, X7R, 2.7NF	1.0
C36	2072-17025-00	CAPACITOR, CHIP, X7R, 2.7NF	1.0
C37	2072-17031-00	CAPACITOR, CHIP, X7R, 1.8NF	1.0
C38	2072-17031-00	CAPACITOR, CHIP, X7R, 1.8NF	1.0
C39	2072-17031-00	CAPACITOR, CHIP, X7R, 1.8NF	1.0
C40	2072-17031-00	CAPACITOR, CHIP, X7R, 1.8NF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C41	2072-17031-00	CAPACITOR, CHIP, X7R, 1.8NF	1.0
C42	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C43	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C44	2072-17030-00	CAPACITOR, CHIP, X7R, 1.2NF	1.0
C45	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C46	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C47	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C48	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C49	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C50	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C51	2072-17028-00	CAPACITOR, CHIP, X7R, 620PF	1.0
C52	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C54	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C56	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C58	2072-17026-00	CAPACITOR, CHIP, X7R, 6.8NF	1.0
C60	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C61	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C62	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C65	4017-25274-00	CAPACITOR, 0603, NP0 180P 50V	1.0
C66	4017-25269-00	CAPACITOR, 0603, NP0 68P, 50V	1.0
C67	4017-25269-00	CAPACITOR, 0603, NP0 68P, 50V	1.0
C72	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C77	2072-17056-00	CAPACITOR, CHIP, CL1, +/-30, 120P	1.0
C78	2072-17056-00	CAPACITOR, CHIP, CL1, +/-30, 120P	1.0
C79	4017-25081-00	CAPACITOR, CHIP, CERAMIC, C0G, 680PF	1.0
C80	4017-25075-00	CAPACITOR, CHIP, CERAMIC, C0G, 220PF	1.0
C81	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C82	2072-17025-00	CAPACITOR, CHIP, X7R, 2.7NF	1.0
C83	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C84	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C85	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C86	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C87	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C88	4017-25062-00	CAPACITOR, CHIP, CERAMIC, C0G, 18PF	1.0
C89	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C90	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C91	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C92	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C93	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C94	2072-17030-00	CAPACITOR, CHIP, X7R, 1.2NF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C95	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C96	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C97	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C98	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C99	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C100	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C101	2072-17025-00	CAPACITOR, CHIP, X7R, 2.7NF	1.0
C102	2072-17025-00	CAPACITOR, CHIP, X7R, 2.7NF	1.0
C103	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C104	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C105	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C106	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C107	2072-17009-00	CAPACITOR, CHIP, 1206, 390PF, 5%	1.0
C108	2072-17009-00	CAPACITOR, CHIP, 1206, 390PF, 5%	1.0
C109	2072-17056-00	CAPACITOR, CHIP, CL1, +/-30, 120P	1.0
C110	4017-25075-00	CAPACITOR, CHIP, CERAMIC, C0G, 220PF	1.0
C111	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C112	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C129	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C130	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C160	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C172	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C179	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C200	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C300	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1000	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1001	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1002	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1003	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1004	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1005	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1006	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1007	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1008	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1009	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1010	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1011	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1012	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1013	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1014	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1015	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1016	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1017	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1018	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1019	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1020	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1021	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1022	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1023	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1024	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1025	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1026	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1027	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1028	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1029	4017-25063-00	CAPACITOR, CHIP, CERAMIC, C0G, 22PF	1.0
C1030	4017-60219-00	CAPACITOR	1.0
C1031	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1034	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1035	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C1036	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1037	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1038	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1039	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C1040	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1041	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1042	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1043	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1044	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1045	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C1046	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1047	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C1048	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1049	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1050	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1051	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1052	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1053	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1054	2187-17001-00	CAPACITOR, CHIP, 27PF, 5%	1.0
C1055	4017-25063-00	CAPACITOR, CHIP, CERAMIC, C0G, 22PF	1.0
C1058	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1059	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1060	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1061	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1062	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1063	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1064	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1065	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1066	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1067	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1068	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1069	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1070	2072-17017-00	CAPACITOR, CHIP, 0603, 11PF	1.0
C1071	2072-17017-00	CAPACITOR, CHIP, 0603, 11PF	1.0
C1072	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C1073	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1074	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1075	2072-17056-00	CAPACITOR, CHIP, CL1, +/-30, 120P	1.0
C1076	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C1077	4017-20171-00	CAPACITOR, CHIP, CERAMIC, 10NF, 100V	1.0
C1078	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1079	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1080	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C1081	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1082	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1083	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1084	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1160	4017-25252-00	CAPACITOR, CHIP, 2.7PF, 50V	1.0
C1161	4017-25252-00	CAPACITOR, CHIP, 2.7PF, 50V	1.0
C1162	4017-25252-00	CAPACITOR, CHIP, 2.7PF, 50V	1.0
C1163	4017-25252-00	CAPACITOR, CHIP, 2.7PF, 50V	1.0
C1200	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1201	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1202	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1203	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C1204	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1205	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1206,	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1207	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1208	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1209	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1210	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1211	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C1212	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1213	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1214	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1215	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1216	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1217	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1218	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1219	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1220	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1221	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1222	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1223	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1224	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1225	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1226	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C1227	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1228	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1229	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1230	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1231	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1232	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1233	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C1234	2072-17019-00	CAPACITOR, CHIP, 0603, 24PF	1.0
C1235	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1236	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C1237	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1238	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1239	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C1240	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1241	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1242	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1244	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1245	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C1800	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1801	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1802	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1803	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1804	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1805	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1806	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1807	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1808	4017-25293-10	CAPACITOR, CHIP, NP0, 1800PF, 1%	1.0
C1809	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1810	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1811	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1812	4017-20267-00	CAPACITOR, CHIP, X7R, 4.7NF, 10%	1.0
C1813	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C1814	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1815	4017-25075-00	CAPACITOR, CHIP, CERAMIC, C0G, 220PF	1.0
C1816	4017-25285-00	CAPACITOR, CHIP, 0603, NP0, 51PF	1.0
C1817	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1818	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1819	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1820	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1821	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1822	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C1823	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1824	4017-25293-10	CAPACITOR, CHIP, NP0, 1800PF, 1%	1.0
C1825	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1826	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1827	4017-20263-00	CAPACITOR, CHIP, X7R, 2.2NF, 10%	1.0
C1828	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1829	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1830	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1831	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1832	4017-25075-00	CAPACITOR, CHIP, CERAMIC, C0G, 220PF	1.0
C1833	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1834	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C1835	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C1836	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1837	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1838	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1839	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1840	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1841	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1842	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1843	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1844	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1845	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1846	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1847	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1848	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1851	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1852	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C1853	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1854	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1855	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1856	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1857	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1858	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1859	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1860	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1861	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1862	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1863	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C1864	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C1865	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1890	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C1956	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C1997	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1998	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C1999	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C2000	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2002	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2003	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2004	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2006	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2007	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2008	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2009	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C2010	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C2013	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C2014	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C2015	2072-17021-00	CAPACITOR, CHIP, 0603, 75PF	1.0
C2016	2072-17021-00	CAPACITOR, CHIP, 0603, 75PF	1.0
C2017	2072-17021-00	CAPACITOR, CHIP, 0603, 75PF	1.0
C2018	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2019	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C2020	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2021	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2024	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2025	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2030	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2031	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2032	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2035	4017-25260-00	CAPACITOR, 0603, NP0, 12 PF, 50V	1.0
C2036	2072-17015-00	CAPACITOR, CHIP, 0603, 4.3PF	1.0
C2037	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C2038	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C2039	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C2040	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C2041	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C2042	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C2043	4017-25285-00	CAPACITOR, CHIP, 0603, NP0, 51PF	1.0
C2044	4017-25285-00	CAPACITOR, CHIP, 0603, NP0, 51PF	1.0
C2045	2072-17017-00	CAPACITOR, CHIP, 0603, 11PF	1.0
C2046	2072-17017-00	CAPACITOR, CHIP, 0603, 11PF	1.0
C2047	2072-17016-00	CAPACITOR, CHIP, 0603, 7.5PF	1.0
C2048	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2049	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C2050	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C2051	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C2052	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C2053	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C2054	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C2055	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C2056	4017-25261-00	CAPACITOR, 0603, NP0, 15P 50V	1.0
C2057	4017-25261-00	CAPACITOR, 0603, NP0, 15P 50V	1.0
C2061	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2062	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2063	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2064	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2067	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2070	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C2071	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2072	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2073	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2074	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C2075	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2076	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2077	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2078	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2079	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2080	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2081	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2083	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2084	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2085	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2086	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2087	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2088	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2089	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2090	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2091	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2092	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2093	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2094	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2095	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2096	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2097	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2098	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2099	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2100	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2101	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2102	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2103	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2104	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2105	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2106	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2107	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2108	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2109	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2110	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2111	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2112	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2114	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2116	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2117	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C2118	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C2120	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C2121	4017-20266-00	CAPACITOR, CHIP, X7R, 3.9NF, 50V	1.0
C2123	2072-17017-00	CAPACITOR, CHIP, 0603, 11PF	1.0
C2124	4017-25256-00	CAPACITOR, CHIP, 5.6PF, 100V	1.0
C2125	4017-25256-00	CAPACITOR, CHIP, 5.6PF, 100V	1.0
C2133	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C2134	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C2136	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C2137	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C2138	4017-25062-00	CAPACITOR, CHIP, CERAMIC, C0G, 18PF	1.0
C2139	4017-25062-00	CAPACITOR, CHIP, CERAMIC, C0G, 18PF	1.0
C2140	4017-25061-00	CAPACITOR, CHIP, CERAMIC, C0G, 15PF	1.0
C2141	4017-25061-00	CAPACITOR, CHIP, CERAMIC, C0G, 15PF	1.0
C2142	4017-20266-00	CAPACITOR, CHIP, X7R, 3.9NF, 50V	1.0
C2146	4017-20269-00	CAPACITOR, 0603, X7R, 6.8NF, 50V	1.0
C2222	2072-17012-00	CAPACITOR, CHIP, 0805 20PF, 5%	1.0
C2900	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3000	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3002	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3003	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3005	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3006	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3007	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3008	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3010	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3011	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3012	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3013	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3014	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3015	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3016	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3017	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3019	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C3021	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C3023	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C3024	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C3025	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C3026	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3027	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C3028	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3029	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3031	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3033	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3034	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3035	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3036	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3037	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3038	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3040	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C3041	4017-25269-00	CAPACITOR, 0603, NP0, 68P, 50V	1.0
C3042	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C3043	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C3044	4017-25066-00	CAPACITOR, CHIP, CERAMIC, C0G, 39PF	1.0
C3045	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C3046	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C3047	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C3048	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C3075	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C3110	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3111	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3112	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C3500	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C3900	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C4000	4017-20276-00	CAPACITOR, CHIP, X7R, 33NF, 25V	1.0
C4002	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C4004	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4007	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4008	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4009	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4010	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4011	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4012	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4013	2072-17032-00	CAPACITOR, CHIP, X7R, 3.3NF	1.0
C4014	4017-25278-00	CAPACITOR, 0603, NP0, 390P 50V	1.0
C4015	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C4016	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4017	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4018	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C4020	4017-25077-00	CAPACITOR, CHIP, CERAMIC, C0G, 330PF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C4021	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4022	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4023	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C4035	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4038	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C4039	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C4040	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C4042	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C4043	2072-17104-00	CAPACITOR, TANTALUM, CHIP, 10UF, 16V	1.0
C4044	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C4045	2072-17104-00	CAPACITOR, TANTALUM, CHIP, 10UF, 16V	1.0
C4047	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4052	4017-25077-00	CAPACITOR, CHIP, CERAMIC, C0G, 330PF	1.0
C4053	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4054	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C4055	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4056	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C4057	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C4058	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4059	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C4060	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C4061	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C4062	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4064	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4065	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4066	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4067	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C4068	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C4069	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C4070	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C4071	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4072	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C4073	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C4074	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C4300	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C5000	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C5001	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5002	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5003	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5004	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C5005	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5006	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C5007	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C5008	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5009	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5010	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5011	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5013	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5016	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5017	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5021	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C5022	4017-20267-00	CAPACITOR, CHIP, X7R, 4.7NF, 10%	1.0
C5023	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5024	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5025	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5026	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5027	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5028	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5029	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C5032	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C5033	2072-17018-00	CAPACITOR, CHIP, 0603, 20PF	1.0
C6000	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C6002	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6004	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6006	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6008	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C6010	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6013	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6014	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C6015	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C6016	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6019	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6020	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6021	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6032	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C6033	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C6034	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C6035	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100N, 50V	1.0
C6039	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C6040	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C6041	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C6091	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
C7001	4017-25259-00	CAPACITOR, CHIP, CG, 10PF, 5%	1.0
C7002	4017-25259-00	CAPACITOR, CHIP, CG, 10PF, 5%	1.0
C7003	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7004	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7005	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C7006	2072-17107-00	CAPACITOR, TANTALUM, CHIP, 33UF, 16V	1.0
C7007	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C7008	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C7009	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C7010	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C7011	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7012	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7013	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7014	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7015	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7016	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7017	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7018	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7019	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7020	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C7021	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C7022	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C7027	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C7028	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C7029	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C7030	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C7031	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C9000	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9020	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9040	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9060	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9061	4017-25056-00	CAPACITOR, CHIP, CERAMIC, C0G, 5.6PF	1.0
C9063	4017-60307-00	CAPACITOR	1.0
C9066	4017-25061-00	CAPACITOR, CHIP, CERAMIC, C0G, 15PF	1.0
C9067	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C9069	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C9070	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C9071	4017-25061-00	CAPACITOR, CHIP, CERAMIC, C0G, 15PF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C9072	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C9074	2072-17014-00	CAPACITOR, CHIP, 0805 43PF, 5%	1.0
C9075	4017-25265-00	CAPACITOR, CHIP, 0603, NP0, 33PF	1.0
C9076	2072-17011-00	CAPACITOR, CHIP, 0805 7.5PF	1.0
C9078	4017-25053-00	CAPACITOR, CHIP, CERAMIC, C0G, 3.3PF	1.0
C9080	4017-25053-00	CAPACITOR, CHIP, CERAMIC, C0G, 3.3PF	1.0
C9081	4017-25347-00	CAPACITOR, CHIP, CH, 1PF, 5%	1.0
C9082	2072-17001-00	CAPACITOR, CHIP, 0805, 30PF, 5%	1.0
C9084	4017-25071-00	CAPACITOR, CHIP, CERAMIC, C0G, 100PF	1.0
C9087	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9089	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9091	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9093	4017-25259-10	CAPACITOR, CHIP, CG, 10PF, 1%	1.0
C9094	4017-25061-00	CAPACITOR, CHIP, CERAMIC, C0G, 15PF	1.0
C9095	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C9096	4017-25067-00	CAPACITOR, CHIP, CERAMIC, 47PF, 50V	1.0
C9097	4017-25060-00	CAPACITOR, CHIP, CERAMIC, C0G, 12PF	1.0
C9098	4017-25073-10	CAPACITOR, CHIP, 150PF, 1%, 50V	1.0
C9099	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9110	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C9200	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9300	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C9400	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9401	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9407	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C9419	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9420	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9421	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9422	2072-17104-00	CAPACITOR, TANTALUM, CHIP, 10UF, 16V	1.0
C9423	2072-17104-00	CAPACITOR, TANTALUM, CHIP, 10UF, 16V	1.0
C9472	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9481	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9482	4017-20567-00	CAPACITOR, CHIP, X7R, 10NF, 16V	1.0
C9483	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9484	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9485	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9486	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9487	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9488	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9489	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C9490	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9491	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9492	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9496	4017-20567-00	CAPACITOR, CHIP, X7R, 10NF, 16V	1.0
C9498	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9499	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9500	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9501	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9502	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9506	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9507	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9508	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9509	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9511	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9515	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9518	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9519	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9520	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9521	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9522	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9523	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9524	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9525	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9526	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9527	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9530	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9531	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9532	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9533	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9534	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9535	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9536	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9537	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9538	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C9539	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C9540	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C9541	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C9542	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9543	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C9544	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C9545	4017-25077-00	CAPACITOR, CHIP, CERAMIC, C0G, 330PF	1.0
C9548	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C9549	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C9551	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9552	4016-26040-10	RESISTOR, CHIP, 0603, 604, 1%	1.0
C9553	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C9554	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C9555	4017-80125-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 25V	1.0
C9556	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9557	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9558	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9559	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9560	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9561	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9562	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9563	4017-25276-00	CAPACITOR, CHIP, CG, 270PF, 5%	1.0
C9564	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9566	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9567	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9568	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9573	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9574	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9575	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9578	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9579	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9580	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9581	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9582	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9583	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9584	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
C9585	4017-20275-00	CAPACITOR, CHIP, X7 22NF, 25V	1.0
C9591	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9592	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C9594	4017-20261-00	CAPACITOR, 0603, X7R, 1.5N, 50V	1.0
C9595	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C9596	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C9597	4017-30033-00	CAPACITOR, PPS 0603, 2.7NF, 16V	1.0
C9598	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C9599	2072-17029-00	CAPACITOR, CHIP, X7R, 680PF	1.0
C9600	4017-60513-00	CAPACITOR	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C9601	4017-60513-00	CAPACITOR	1.0
C9602	4017-25077-00	CAPACITOR, CHIP, CERAMIC, C0G, 330PF	1.0
C9603	4017-25077-00	CAPACITOR, CHIP, CERAMIC, C0G, 330PF	1.0
C9604	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C9605	4017-20931-00	CAPACITOR, 1206, 10UF, 16V	1.0
C9606	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9607	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9608	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9609	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9610	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9611	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9612	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9613	4017-20930-00	CAPACITOR, X5R, 10UF, 10V 0805	1.0
C9614	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C9615	4017-20085-00	CAPACITOR, CHIP, CERAMIC, X7R, 100NF	1.0
C9616	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C9617	2072-17110-00	CAPACITOR, CHIP, 0603, X7R, 1UF	1.0
C9619	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C9620	2072-17105-00	CAPACITOR, TANTALUM, CHIP, 15UF, 25V	1.0
C1FL1	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL2	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL3	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL4	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL5	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL6	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL7	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL8	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL9	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL10	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL11	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL12	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL13	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL14	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL15	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL17	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL18	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL19	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL20	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL21	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL23	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C1FL24	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1FL27	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL28	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL29	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1FL30	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL31	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C1FL32	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C1FL33	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL1	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL2	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL3	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL4	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL5	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL6	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL7	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL8	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL9	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL10	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL11	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL12	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL13	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL14	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL15	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL17	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL18	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL19	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL20	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL21	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL23	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2FL24	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2FL27	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL28	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL29	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2FL30	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL31	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
C2FL32	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C2FL33	4017-20559-00	CAPACITOR, CHIP, X7R, 1NF, 10%	1.0
CR1	2072-21025-00	DIODE, PIN	1.0
CR2	2072-21025-00	DIODE, PIN	1.0
CR3	2072-21025-00	DIODE, PIN	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
CR4	2072-21025-00	DIODE, PIN	1.0
CR5	2072-21025-00	DIODE, PIN	1.0
CR6	2072-21025-00	DIODE, PIN	1.0
CR7	2072-21025-00	DIODE, PIN	1.0
CR8	2072-21025-00	DIODE, PIN	1.0
CR9	2072-21025-00	DIODE, PIN	1.0
CR10	2072-21025-00	DIODE, PIN	1.0
CR11	2072-21025-00	DIODE, PIN	1.0
CR12	2072-21025-00	DIODE, PIN	1.0
CR13	2072-21025-00	DIODE, PIN	1.0
CR14	2072-21025-00	DIODE, PIN	1.0
CR15	2072-21025-00	DIODE, PIN	1.0
CR16	2072-21025-00	DIODE, PIN	1.0
CR17	2072-21025-00	DIODE, PIN	1.0
CR1000	2072-21025-00	DIODE, PIN	1.0
CR1001	4021-10114-35	DIODE, SCHOTTKY, HSMS2800	1.0
CR1002	4021-10721-35	DIODE	1.0
CR1003	4021-10721-35	DIODE	1.0
CR1004	4021-10721-35	DIODE	1.0
CR1005	4021-10721-35	DIODE	1.0
CR1006	4021-10721-35	DIODE	1.0
CR1007	4021-10721-35	DIODE	1.0
CR1008	2072-21025-00	DIODE, PIN	1.0
CR1009	2072-21025-00	DIODE, PIN	1.0
CR1010	2072-21025-00	DIODE, PIN	1.0
CR1011	2072-21025-00	DIODE, PIN	1.0
CR1012	2072-21025-00	DIODE, PIN	1.0
CR1903	4021-10721-35	DIODE	1.0
CR1904	2072-21025-00	DIODE, PIN	1.0
CR1905	2072-21025-00	DIODE, PIN	1.0
CR2000	2072-21014-00	DIODE, TRIPLE	1.0
CR2001	2072-21025-00	DIODE, PIN	1.0
CR2002	2072-21025-00	DIODE, PIN	1.0
CR2003	2072-21025-00	DIODE, PIN	1.0
CR2008	4021-10721-35	DIODE	1.0
CR2009	4021-10721-35	DIODE	1.0
CR5000	4021-10115-35	DIODE, SCHOTTKY	1.0
CR5001	4021-10721-35	DIODE	1.0
CR5002	4021-10115-35	DIODE, SCHOTTKY	1.0
CR5003	4021-10115-35	DIODE, SCHOTTKY	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
CR5004	4021-10115-35	DIODE, SCHOTTKY	1.0
CR5005	4021-10115-35	DIODE, SCHOTTKY	1.0
CR9000	4021-10360-35	VARICAP	1.0
CR9020	4021-10360-35	VARICAP	1.0
CR9040	4021-10360-35	VARICAP	1.0
CR9063	4021-10115-35	DIODE, SCHOTTKY	1.0
CR9064	4021-10115-35	DIODE, SCHOTTKY	1.0
CR9066	4021-10360-35	VARICAP	1.0
CR9067	4021-10360-35	VARICAP	1.0
CR9068	4021-10115-35	DIODE, SCHOTTKY	1.0
CR9069	4021-10360-35	VARICAP	1.0
CR9070	4021-10721-35	DIODE	1.0
CR9071	4021-10360-35	VARICAP	1.0
CR9073	4021-10360-35	VARICAP	1.0
CR9074	4021-10360-35	VARICAP	1.0
CR9075	4021-10360-35	VARICAP	1.0
CR9076	4021-10360-35	VARICAP	1.0
CR9077	4021-10721-35	DIODE	1.0
CR9078	2072-21029-00	DIODE, VARACTOR	1.0
CR9079	4021-10360-35	VARICAP	1.0
E1001	2072-18001-00	INDUCTOR, BEAD, CHIP	1.0
E1002	2072-18001-00	INDUCTOR, BEAD, CHIP	1.0
F1	4023-60003-00	MULTIFUSE CHIP, 500MA	1.0
FL1	2072-14006-00	CRYSTAL FILTER	1.0
FL2	2072-14006-00	CRYSTAL FILTER	1.0
FL3	2072-14003-00	FILTER, CERAMIC, BP, 450KHZ	1.0
FL4	2072-14003-00	FILTER, CERAMIC, BP, 450KHZ	1.0
J1	2072-33016-00	COAX, RECEPTABLE, 002 PIN	1.0
J2	2072-33016-00	COAX, RECEPTABLE, 002 PIN	1.0
J3	2072-33007-00	HEADER, RT, 40 PIN	1.0
J4	4033-51109-01	CONNECTOR, 2 PIN, 1.25mm	1.0
J5	2072-33008-00	CONNECTOR, D-TYPE, 44 PIN	1.0
J6	2072-33006-00	CONNECTOR, HEADER, 24 PIN	1.0
J7	2072-33167-00	CONNECTOR, FPC VERTICAL	1.0
J8	2072-33151-00	HEADER, 8P	1.0
J10	4033-60052-01	CONNECTOR, MICRO 6S	1.0
L1	4018-12329-00	INDUCTOR, CHIP, 910NH	1.0
L2	4018-12329-00	INDUCTOR, CHIP, 910NH	1.0
L3	2072-18009-00	INDUCTOR, CHIP, 680NH, 5%	1.0
L4	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L5	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L6	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L7	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L8	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L10	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L12	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L13	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L14	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L15	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L16	4018-12036-50	INDUCTOR, RFC, 3.3UH, 5%	1.0
L20	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L22	4018-12022-20	INDUCTOR, RFC, 390NH, 2%	1.0
L25	2072-18006-00	INDUCTOR, CHIP, 8200NH, 5%	1.0
L26	2072-18006-00	INDUCTOR, CHIP, 8200NH, 5%	1.0
L27	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L28	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L29	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L30	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L31	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L32	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L33	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L34	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L35	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L36	2072-18005-00	INDUCTOR, CHIP, 6800NH, 5%	1.0
L37	2072-18004-00	INDUCTOR, CHIP, 5600NH, 5%	1.0
L38	2072-18004-00	INDUCTOR, CHIP, 5600NH, 5%	1.0
L39	2072-18003-00	INDUCTOR, CHIP, 4700NH, 5%	1.0
L42	2072-18002-00	INDUCTOR, CHIP, 1200NH, 5%	1.0
L43	2072-18002-00	INDUCTOR, CHIP, 1200NH, 5%	1.0
L44	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%,	1.0
L45	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%,	1.0
L46	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L47	2072-18010-00	INDUCTOR, CHIP, 2200NH, 10%	1.0
L48	2072-18010-00	INDUCTOR, CHIP, 2200NH, 10%	1.0
L49	2072-18010-00	INDUCTOR, CHIP, 2200NH, 10%	1.0
L50	4018-12329-00	INDUCTOR, CHIP, 910NH, 5%	1.0
L51	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L52	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L53	4018-12036-50	INDUCTOR, RFC, 3.3UH, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L54	4018-12036-50	INDUCTOR, RFC, 3.3UH, 5%	1.0
L55	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1000	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1006	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1007	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1008	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1012	4018-12329-00	INDUCTOR, CHIP, 910NH, 5	1.0
L1013	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1014	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1015	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1016	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1017	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1018	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1020	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1021	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1022	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1023	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1024	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1025	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1027	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1028	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1029	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1030	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1033	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1034	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1041	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1042	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1043	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1044	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1045	4018-12024-20	INDUCTOR, RFC, 0.560UH, 2%	1.0
L1046	4018-12024-20	INDUCTOR, RFC, 0.560UH, 2%	1.0
L1047	4018-12024-20	INDUCTOR, RFC, 0.560UH, 2%	1.0
L1048	4018-12024-20	INDUCTOR, RFC, 0.560UH, 2%	1.0
L1049	4018-12024-20	INDUCTOR, RFC, 0.560UH, 2%	1.0
L1050	4018-12014-00	COIL CHIP, 82NH, 5%	1.0
L1052	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1054	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L1056	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1057	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L1059	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L1214	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1800	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1801	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L1802	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L1803	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L1804	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L1805	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1806	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1807	2072-18009-00	INDUCTOR, CHIP, 680NH, 5%	1.0
L2000	4018-12419-00	INDUCTOR, RFC, CHIP, 33NH, 5%	1.0
L2001	2072-18002-00	INDUCTOR, CHIP, 1200NH, 5%	1.0
L2002	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L2003	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L2004	4018-12320-10	INDUCTOR, RFC, 0.27 UH, 1%	1.0
L2005	2072-18007-00	INDUCTOR, CHIP, 8.2NH, 5%	1.0
L2006	4018-12015-20	INDUCTOR, RFC, 100NH, 2%	1.0
L2007	4018-12015-20	INDUCTOR, RFC, 100NH, 2%	1.0
L2008	4018-12015-20	INDUCTOR, RFC, 100NH, 2%	1.0
L2009	4018-12015-20	INDUCTOR, RFC, 100NH, 2%	1.0
L2011	4018-12006-00	COIL CHIP, 15NH, 5%	1.0
L2012	4018-12013-00	INDUCTOR, RFC, 68NH, 10%	1.0
L2013	4018-12013-00	INDUCTOR, RFC, 68NH, 10%	1.0
L2017	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2018	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2019	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2020	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2021	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2022	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L2023	4018-12016-20	INDUCTOR, RFC, 120NH, 2%	1.0
L2024	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L2025	4018-12029-20	INDUCTOR, RFC, 1UH, 2%	1.0
L2026	4018-12014-00	COIL, CHIP, 82NH, 5%	1.0
L2027	4018-12016-20	INDUCTOR, RFC, 120NH, 2%	1.0
L2028	4018-12016-20	INDUCTOR, RFC, 120NH, 2%	1.0
L3000	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L3001	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L3002	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L3003	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L3004	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L3005	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L3006	2072-18008-00	INDUCTOR, CHIP, 10000NH, 5%	1.0
L3007	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L3008	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L4001	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L4002	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L5000	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L5001	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L5002	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L6000	2072-18009-00	INDUCTOR, CHIP, 680NH, 5%	1.0
L9000	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9020	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9040	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9060	4018-12329-00	INDUCTOR, CHIP, 910NH	1.0
L9061	4018-12329-00	INDUCTOR, CHIP, 910NH	1.0
L9062	4018-12329-00	INDUCTOR, CHIP, 910NH	1.0
L9064A	4018-20024-00	COIL, VARIABLE, 28NH	1.0
L9065A	4018-20006-00	COIL, VARIABLE, 67NH	1.0
L9066A	4018-20004-00	COIL, VARIABLE, 53NH	1.0
L9070	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9072	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9073	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9074	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9076A	4018-20006-00	COIL, VARIABLE, 67NH	1.0
L9077	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9079	4018-12032-20	INDUCTOR, RFC, 1.5UH, 2%	1.0
L9080	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9081	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9082	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9083	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9084	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L9085	4018-10142-00	INDUCTOR, 22UH	1.0
L1FL1	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL2	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL3	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL4	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL5	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL6	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL7	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL8	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL9	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L1FL10	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL11	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL12	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL13	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL14	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL15	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL17	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL18	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL19	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL20	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL21	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL23	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL24	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL27	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL28	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL29	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL30	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL31	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL32	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
L1FL33	4018-12206-00	INDUCTOR, CHIP, 22UH, 5%	1.0
Q1	4021-00342-35	TRANSISTOR, NPN	1.0
Q2	4021-00342-35	TRANSISTOR, NPN	1.0
Q3	4021-00342-35	TRANSISTOR, NPN	1.0
Q4	4021-00342-35	TRANSISTOR, NPN	1.0
Q5	4021-00342-35	TRANSISTOR, NPN	1.0
Q6	4021-00342-35	TRANSISTOR, NPN	1.0
Q7	4021-00342-35	TRANSISTOR, NPN	1.0
Q8	4021-00342-35	TRANSISTOR, NPN	1.0
Q9	4021-00342-35	TRANSISTOR, NPN	1.0
Q30	4021-00343-35	TRANSISTOR, PNP	1.0
Q1000	4021-00342-35	TRANSISTOR, NPN	1.0
Q1001	2072-21024-01	MOSFET, N-CHANNEL	1.0
Q1002	2072-21024-01	MOSFET, N-CHANNEL	1.0
Q1003	2072-21026-00	TRANSISTOR, RF	1.0
Q1004	2072-21026-00	TRANSISTOR, RF	1.0
Q1005	2072-21026-00	TRANSISTOR, RF	1.0
Q1006	2072-21026-00	TRANSISTOR, RF	1.0
Q1007	4021-00343-35	TRANSISTOR, PNP	1.0
Q1008	4021-00343-35	TRANSISTOR, PNP	1.0
Q1009	4021-00343-35	TRANSISTOR, PNP	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
Q1010	4021-00343-35	TRANSISTOR, PNP	1.0
Q1011	4021-00343-35	TRANSISTOR, PNP	1.0
Q1012	4021-00343-35	TRANSISTOR, PNP	1.0
Q1013	4021-00342-35	TRANSISTOR, NPN	1.0
Q1014	4021-00342-35	TRANSISTOR, NPN	1.0
Q1015	4021-00342-35	TRANSISTOR, NPN	1.0
Q1017	4021-00342-35	TRANSISTOR, NPN	1.0
Q1018	4021-00342-35	TRANSISTOR, NPN	1.0
Q1019	4021-00342-35	TRANSISTOR, NPN	1.0
Q1020	4021-00176-35	MOSFET, N-CHANNEL	1.0
Q1021	4021-00342-35	TRANSISTOR, NPN	1.0
Q1022	4021-00342-35	TRANSISTOR, NPN	1.0
Q1023	4021-00342-35	TRANSISTOR, NPN	1.0
Q1925	4021-00176-35	MOSFET, N-CHANNEL	1.0
Q2006	2072-21026-00	TRANSISTOR, RF	1.0
Q2007	2072-21026-00	TRANSISTOR, RF	1.0
Q2901	4021-00343-35	TRANSISTOR, PNP	1.0
Q3000	4021-00342-35	TRANSISTOR, NPN	1.0
Q3001	2072-21026-00	TRANSISTOR, RF	1.0
Q3002	2072-21026-00	TRANSISTOR, RF	1.0
Q4000	4021-00342-35	TRANSISTOR, NPN	1.0
Q4001	4021-00342-35	TRANSISTOR, NPN	1.0
Q4002	4021-00342-35	TRANSISTOR, NPN	1.0
Q4003	4021-00342-35	TRANSISTOR, NPN	1.0
Q4004	4021-00342-35	TRANSISTOR, NPN	1.0
Q4005	4021-00342-35	TRANSISTOR, NPN	1.0
Q5003	4021-00176-35	MOSFET, N-CHANNEL	1.0
Q5004	4021-00342-35	TRANSISTOR, NPN	1.0
Q5005	4021-00343-35	TRANSISTOR, PNP	1.0
Q5006	4021-00176-35	MOSFET, N-CHANNEL	1.0
Q9000	2072-21019-00	TRANSISTOR, FET	1.0
Q9020	2072-21019-00	TRANSISTOR, FET	1.0
Q9040	2072-21019-00	TRANSISTOR, FET	1.0
Q9060	2072-21019-00	TRANSISTOR, FET	1.0
Q9063	2072-21015-00	TRANSISTOR, W/RES BIAS	1.0
Q9064	2072-21015-00	TRANSISTOR, W/RES BIAS	1.0
Q9065	2072-21015-00	TRANSISTOR, W/RES BIAS	1.0
Q9066	4021-00342-35	TRANSISTOR, NPN	1.0
Q9067	4021-00342-35	TRANSISTOR, NPN	1.0
Q9068	4021-00176-35	MOSFET, N-CHANNEL	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
Q9069	4021-00342-35	TRANSISTOR, NPN	1.0
R1	4016-41000-10	RESISTOR, 2512, 100, 1%, 1W	1.0
R2	4016-41000-10	RESISTOR, 2512, 100, 1%, 1W	1.0
R3	4016-41000-10	RESISTOR, 2512, 100, 1%, 1W	1.0
R4	4016-41000-10	RESISTOR, 2512, 100, 1%, 1W	1.0
R5	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R6	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R7	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R8	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R9	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R10	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R11	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R12	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R13	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R14	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R15	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R16	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R17	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R18	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R19	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R20	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R21	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R22	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R23	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R24	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R25	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R26	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R27	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R28	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R29	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R30	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R31	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R32	4016-20100-50	RESISTOR, CHIP, 10 5%, 1/16W	1.0
R33	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R34	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R35	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R36	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R37	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R50	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R60	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R82	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R1000	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1001	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1002	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1003	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1005	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1006	4016-26819-10	RESISTOR, CHIP, 0603, 68.1, 1%	1.0
R1007	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1008	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1009	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R1010	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1011	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R1012	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R1013	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1014	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1015	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1016	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1017	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1018	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1019	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R1020	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R1021	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1022	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R1023	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1024	4016-23320-10	RESISTOR, 332, 1%, 1/16W	1.0
R1025	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1026	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1027	4016-23320-10	RESISTOR, 332, 1%, 1/16W	1.0
R1028	4016-23320-10	RESISTOR, 332, 1%, 1/16W	1.0
R1029	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1030	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1031	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1032	4016-22219-10	RESISTOR, 22.1, 1%, 1/16W	1.0
R1033	4016-26819-10	RESISTOR, CHIP, 0603, 68.1, 1%	1.0
R1034	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1035	4016-26819-10	RESISTOR, CHIP, 0603, 68.1, 1%	1.0
R1036	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1037	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1038	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1039	4016-22219-10	RESISTOR, 22.1, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1040	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1041	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1042	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1043	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1044	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1045	4016-23920-10	RESISTOR, 392, 1%, 1/16W	1.0
R1046	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1047	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1048	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R1049	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1050	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1051	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1052	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1053	4016-23920-10	RESISTOR, 392, 1%, 1/16W	1.0
R1054	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1055	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1056	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1057	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R1058	4016-23320-10	RESISTOR, 332, 1%, 1/16W	1.0
R1059	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1060	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1061	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1062	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1063	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1064	4016-23920-10	RESISTOR, 392, 1%, 1/16W	1.0
R1065	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R1066	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R1067	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R1068	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1069	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1070	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1071	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1072	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1073	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R1074	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1075	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1076	4016-32740-10	RESISTOR, CHIP, 0805, 274, 1%	1.0
R1077	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1088	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1200	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1201	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1202	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1203	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1204	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1205	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1206,	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R1207	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R1208	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1209	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1210	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1211	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1212	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1213	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1214	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1215	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1216	4016-22749-10	RESISTOR, 27.4, 1%, 1/16W	1.0
R1217	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R1218	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R1219	4016-22749-10	RESISTOR, 27.4, 1%, 1/16W	1.0
R1220	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R1221	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R1222	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1223	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1224	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1225	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1226	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1227	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1228	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R1229	4016-23659-10	RESISTOR, CHIP, 0603, 36.5, 1%	1.0
R1230	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1231	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1232	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1233	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R1234	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1235	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1236	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1237	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1238	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1239	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R1240	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1241	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R1242	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1243	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1244	4016-30279-50	RESISTOR, CHIP, 2.7 5%, 1/10W	1.0
R1245	4016-30279-50	RESISTOR, CHIP, 2.7 5%, 1/10W	1.0
R1246	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1247	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1248	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1251	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1252	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R1253	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R1254	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R1255	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1800	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1801	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1802	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1803	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R1804	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R1805	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1806	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1807	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R1808	4016-26810-10	RESISTOR, 681, 1%, 1/16W	1.0
R1809	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R1810	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R1811	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1812	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R1813	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R1814	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1815	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1816	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1817	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R1818	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1819	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1820	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1821	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R1822	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R1823	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1824	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R1825	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1826	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1827	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1828	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1829	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1830	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1831	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R1832	4016-60102-00	TRIMPOT, 10K	1.0
R1833	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1834	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1835	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R1836	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R1837	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R1838	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1839	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R1840	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R1841	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1842	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R1843	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R1845	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R1846	4016-22749-10	RESISTOR, 27.4, 1%, 1/16W	1.0
R1847	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R1848	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1850	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R1851	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R1852	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R1853	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1854	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R1855	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R1856	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R1857	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R1858	4016-23320-10	RESISTOR, 332, 1%, 1/16W	1.0
R1859	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1860	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1861	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1862	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1863	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1864	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R1865	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R1866	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1867	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R1868	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1869	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1870	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1871	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R1872	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R1899	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1911	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R1962	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R1998	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R2000	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R2002	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R2003	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R2004	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R2008	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R2009	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R2012	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R2017	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R2022	4016-28251-10	RESISTOR, 8.25K, 1%, 1/16W	1.0
R2026	4016-21300-10	RESISTOR, 130, 1%, 1/16W	1.0
R2029	4016-22749-10	RESISTOR, 27.4, 1%, 1/16W	1.0
R2034	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R2035	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R2036	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R2037	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R2038	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
R2043	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R2044	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R2045	4016-29091-10	RESISTOR, 9.09K, 1%, 1/16W	1.0
R2046	4016-25621-10	RESISTOR, CHIP, 0603, 5.62K, 1%	1.0
R2047	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R2048	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2049	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2050	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2051	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2052	4016-27501-10	RESISTOR, 7.5K, 1%, 1/16W	1.0
R2053	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2054	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2055	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2056	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R2057	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R2058	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R2059	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R2060	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R2061	4016-23920-10	RESISTOR, 392, 1%, 1/16W	1.0
R2062	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2063	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2064	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2065	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2066	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2067	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2068	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2069	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2070	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2071	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R2074	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R2077	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2078	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2079	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2080	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2081	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2082	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2083	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2084	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R2085	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R2086	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R2901	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R2903	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R2906	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R3000	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R3004	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R3006	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R3009	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R3010	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R3013	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R3016	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R3017	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R3019	4016-21300-10	RESISTOR, 130, 1%, 1/16W	1.0
R3020	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R3021	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R3023	4016-91491-00	THERMISTOR, NTC	1.0
R3024	4016-40109-50	RESISTOR, 2512, 1.0 5%, 1W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R3025	4016-40109-50	RESISTOR, 2512, 1.0 5%, 1W	1.0
R3027	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R3029	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R3031	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R3034	4016-26192-10	RESISTOR, CHIP, 0603, 61.9K, 1%	1.0
R3043	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R3044	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R3046	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R3047	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R3048	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3050	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R3051	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R3052	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R3053	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R3054	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R3055	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R3056	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R3057	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R3058	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R3059	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R3060	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3062	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3063	4016-23322-10	RESISTOR, 33.2K, 1%, 1/16W	1.0
R3064	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R3075	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R3076	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3300	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R3301	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R3302	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R3303	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R3310	4016-20106-50	RESISTOR, CHIP, 10M 5%, 1/16W	1.0
R3330	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3350	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R3600	4016-20106-50	RESISTOR, CHIP, 10M 5%, 1/16W	1.0
R3942	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4000	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4001	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4002	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4003	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4004	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R4005	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4006	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R4007	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4008	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R4009	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R4011	4016-28251-10	RESISTOR, 8.25K, 1%, 1/16W	1.0
R4012	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4013	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R4014	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R4015	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R4016	4016-25621-10	RESISTOR, CHIP, 0603, 5.62K, 1%	1.0
R4017	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R4018	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4019	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4021	4016-23013-10	RESISTOR, 301K, 1%, 1/16W	1.0
R4022	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R4024	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R4025	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4026	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R4028	4016-21472-10	RESISTOR, 14.7K, 1%, 1/16W	1.0
R4030	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R4033	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4037	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R4041	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4043	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4044	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R4047	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4049	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4050	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R4051	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R4052	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4053	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R4054	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4055	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R4056	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4057	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4058	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R4059	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R4060	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R4061	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R4062	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4063	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4064	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R4065	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4066	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R4067	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R4068	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R4069	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R4070	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R4071	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R4072	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R4073	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4074	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4075	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R4077	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R4078	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R4079	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R4080	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R4081	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R4082	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4083	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4084	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4085	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R4086	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R4087	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R4088	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R4200	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R4401	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R5000	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R5001	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5002	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5003	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5004	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5005	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5006	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5007	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5009	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R5013	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5014	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5016	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R5017	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5021	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5022	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R5023	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R5024	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R5025	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R5027	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R5029	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5030	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5034	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R5035	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R5037	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5038	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5039	4016-20106-50	RESISTOR, CHIP, 10M 5%, 1/16W	1.0
R5040	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5041	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5042	4016-22743-10	RESISTOR, 274K, 1%, 1/16W	1.0
R5043	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5044	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5046	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R5047	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5048	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5050	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5051	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5052	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R5053	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5054	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5055	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5056	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R5059	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5060	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R5063	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5065	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5066	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5067	4016-22000-10	RESISTOR, 200, 1%, 1/16W	1.0
R5068	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5070	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R5071	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5072	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R5075	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R5100	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5101	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5104	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R6000	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6002	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R6009	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6016	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6018	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6020	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6022	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R6023	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R6026	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R6027	4016-19090-10	RESISTOR, CHIP, 909, 1%, 1/8W	1.0
R6028	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6030	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R6032	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R6033	4016-27500-10	RESISTOR, CHIP, 0603, 750, 1%	1.0
R6034	4016-27500-10	RESISTOR, CHIP, 0603, 750, 1%	1.0
R6035	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R6036	4016-27500-10	RESISTOR, CHIP, 0603, 750, 1%	1.0
R6037	4016-19090-10	RESISTOR, CHIP, 909, 1%, 1/8W	1.0
R6038	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R6039	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R6040	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R6041	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R6042	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R7000	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R7001	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R7002	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R7003	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R7006	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R7007	4016-24752-10	RESISTOR, 47.5K, 1%, 1/16W	1.0
R9000	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R9020	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R9040	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R9060	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R9062	4016-22000-10	RESISTOR, 200, 1%, 1/16W	1.0
R9063	4016-22000-10	RESISTOR, 200, 1%, 1/16W	1.0
R9064	4016-22000-10	RESISTOR, 200, 1%, 1/16W	1.0
R9065	4016-22000-10	RESISTOR, 200, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9100	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R9200	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R9300	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R9400	4016-20100-50	RESISTOR, CHIP, 10, 5%, 1/16W	1.0
R9409	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9410	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9411	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9412	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9417	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9418	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9419	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9420	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9421	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9422	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9423	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9427	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9464	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R9465	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R9489	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9493	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9496	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9498	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9500	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9501	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9502	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9503	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9509	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9510	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9513	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9514	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9516	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R9519	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9520	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9521	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9522	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9523	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9524	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9525	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9526	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9527	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9528	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R9529	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R9530	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R9531	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R9532	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R9533	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R9535	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9536	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R9537	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R9538	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R9539	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9540	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9541	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9542	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9543	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9544	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9545	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9546	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9547	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9551	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9552	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9553	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9554	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9559	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R9560	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9561	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9562	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9563	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9564	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9565	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9566	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9567	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9568	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9569	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9570	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9571	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9572	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9573	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9574	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9575	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9576	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R9577	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R9578	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R9579	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R9580	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R9581	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R9582	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9583	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9584	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9585	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9586	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9587	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9588	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9589	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9590	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9591	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9592	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9593	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9594	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9595	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R9596	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R9597	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R9598	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R9599	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R9600	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R9601	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R9602	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R9603	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0
R9607	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9608	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9613	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9614	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R9621	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9625	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9626	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9627	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9628	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R9629	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R9630	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W 1	1.0
R9631	4016-21472-10	RESISTOR, 14.7K, 1%, 1/16W	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9632	4016-23013-10	RESISTOR, 301K, 1%, 1/16W	1.0
R9633	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9634	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9635	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9636	4016-51003-10	RESISTOR, CHIP, 0402, 100K	1.0
R9637	4016-55112-10	RESISTOR, CHIP, 0402, 51.1K, 1%	1.0
R9638	4016-55112-10	RESISTOR, CHIP, 0402, 51.1K, 1%	1.0
R9639	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9640	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9641	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9642	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9643	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9644	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9645	4016-52742-10	RESISTOR, CHIP, MF, 27K, 0.05W	1.0
R9646	4016-52742-10	RESISTOR, CHIP, MF, 27K, 0.05W	1.0
R9647	4016-22432-10	RESISTOR, 24.3K, 1%, 1/16W	1.0
R9648	4016-52002-10	RESISTOR, CHIP, MF, 20K, 0.063W	1.0
R9649	4016-52002-10	RESISTOR, CHIP, MF, 20K, 0.063W	1.0
R9652	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9653	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9654	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0
R9655	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R9656	4016-53321-10	RESISTOR, CHIP, MF, 3.32K, 0.063	1.0
R9657	4016-53321-10	RESISTOR, CHIP, MF, 3.32K, 0.063	1.0
R9658	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9659	4016-26191-10	RESISTOR, 6.19K, 1%, 1/16W	1.0
R9660	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9661	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9662	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9663	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R9664	4016-51001-10	RESISTOR, CHIP, 0402, 1K	1.0
R9665	4016-51001-10	RESISTOR, CHIP, 0402, 1K	1.0
R9670	4016-52740-10	RESISTOR, CHIP, 0402, 274	1.0
R9671	4016-52210-10	RESISTOR, CHIP, 0402, 221	1.0
R9672	4016-52210-10	RESISTOR, CHIP, 0402, 221	1.0
R9673	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9674	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9675	4016-21782-10	RESISTOR, 17.8K, 1%, 1/16W	1.0
R9676	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9677	4016-26811-10	RESISTOR, CHIP, 0603, 6.81K, 1%	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9678	4016-53321-10	RESISTOR, CHIP, MF, 3.32K, 0.063	1.0
R9679	4016-22001-10	RESISTOR, 2.0K, 1%, 1/16W	1.0
R9680	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R9688	4016-21821-10	RESISTOR, 1.82K, 1%, 1/16W	1.0
R9690	4016-26040-10	RESISTOR, CHIP, 0603, 604, 1%	1.0
R9691	4016-26040-10	RESISTOR, CHIP, 0603, 604, 1%	1.0
R9692	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9693	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9694	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9695	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9696	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9697	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9698	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9699	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9700	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9702	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R9704	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9705	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9706	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9707	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9708	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R9709	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R9710	4016-23922-10	RESISTOR, 39.2K, 1%, 1/16W	1.0
R1FL1	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL2	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL3	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL4	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL5	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL6	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL9	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL10	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL11	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL12	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL13	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL14	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL15	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL17	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL18	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL19	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL20	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R1FL21	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL23	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1FL24	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1FL27	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL28	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL29	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1FL30	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL31	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R1FL32	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R1FL33	4016-51000-10	RESISTOR, CHIP, 0402, 100	1.0
R2FL20	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R3FL20	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
U1	4021-60063-50	SHIFT REGISTER, 74HC595	1.0
U1000	4014-60015-00	MIXER, 500MHZ, LO-10DB	1.0
U1100	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U1104	2072-21039-00	D/A CONVERTER, 6 BIT, 4 CHANNELS	1.0
U1105	4021-44014-64	HEX SCHMITT TRIGGER	1.0
U1106	2072-21042-00	IC REGULATOR, 9.3V	1.0
U1107	2072-21042-00	IC REGULATOR, 9.3V	1.0
U1108	4014-60015-00	MIXER	1.0
U1109	4021-44014-64	HEX SCHMITT TRIGGER	1.0
U1110	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U1111	4021-70007-54	ANALOG SWITCH	1.0
U1112	4021-60063-50	SHIFT REGISTER, 74HC595	1.0
U1113	4021-31161-50	COUNTER, 74HC161	1.0
U1114	4021-31161-50	COUNTER, 74HC161	1.0
U1115	2072-21056-00	A/D CONVERTER	1.0
U1900	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U2002	2112-21805-00	DIVIDER, 8/2,4,8	1.0
U2003	2112-21805-00	DIVIDER, 8/2,4,8	1.0
U2004	2072-21044-00	IC	1.0
U2009	2072-21058-00	AMPLIFIER	1.0
U2010	2072-21058-00	AMPLIFIER	1.0
U3000	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U3001	2072-24012-00	OSCILLATOR, EPIC, 16.8MHZ	1.0
U3004	4021-20010-54	VOLTAGE REGULATOR, ADJUSTABLE, LP2951	1.0
U4000	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U4002	2072-21035-00	AMPLIFIER, AUDIO	1.0
U4003	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U5001	2072-21048-00	FLASH MEMORY, 256KX16,512KX8	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
U5005	4021-31014-64	HC, HEX SCHMITT TRIGGER	1.0
U5006	2072-21130-00	MUX/DMUX	1.0
U5007	2072-21130-00	MUX/DMUX	1.0
U5008A	2072-21036-00	IC, 68HC16	1.0
U5009	4021-62025-64	SRAM, 128KX8	1.0
U5010	4021-62025-64	SRAM, 128KX8	1.0
U5014	4021-75017-54	P.S. RESET, CONTROLLER	1.0
U6000	2072-21031-00	ASIC, DSM	1.0
U6021	2072-21045-00	REGULATOR, 5V	1.0
U6024	2072-21045-00	REGULATOR, 5V	1.0
U6025	2072-21045-00	REGULATOR, 5V	1.0
U6035	2072-21048-00	FLASH MEMORY, 256KX16,512KX8	1.0
U6038	2072-21052-00	SRAM, 64Kx24BIT, MEMORY	1.0
U6040	2072-21054-00	CODEC, 16BIT	1.0
U6042	2072-21050-00	DSP, 56303	1.0
U6043	2072-21051-00	EEPROM, 32Kx8BIT	1.0
U6062	2072-21057-00	RS-232 TRANSCEIVERS, 5V	1.0
U6063	2072-21057-00	RS-232 TRANSCEIVERS, 5V	1.0
U6065	4021-35000-54	2-INPUT NAND GATE, QUAD	1.0
U6068	2072-33137-00	OCTAL D-TYPE, FLIP FLOP	1.0
U6069	2072-33137-00	OCTAL D-TYPE, FLIP FLOP	1.0
U6070	2072-33137-00	OCTAL D-TYPE, FLIP FLOP	1.0
U6075	2072-21129-00	SYNTHESIZER, RF PLL	1.0
U6076	2072-21129-00	SYNTHESIZER, RF PLL	1.0
U6077	4021-44014-64	HEX SCHMITT TRIGGER	1.0
U6078	2072-21125-00	UART WITH 16-BYTE, QUAD	1.0
U6079	4021-44138-64	DECODER, VHC 3 TO 8	1.0
U6080	4021-44014-64	HEX SCHMITT TRIGGER	1.0
U6081	2072-21113-00	POTENTIOMETER, DIGITAL, 128TAP	1.0
U6082	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U6084	2388-21830-00	IC, 14053	1.0
U6085	2388-21830-00	IC, 14053	1.0
U6089	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0
U6096	4021-76014-54	ANALOG SWITCH, DUAL, SPST, 2.7F	1.0
U6097	4021-22123-54	VOLTAGE REGULATOR, 3.3V	1.0
U6098	4021-22114-50	VOLTAGE REGULATOR, 8V	1.0
U6099	2072-21130-00	MUX/DMUX	1.0
VR1	4021-10420-35	ZENER, 3.3V	1.0
VR2	4021-10420-35	ZENER, 3.3V	1.0
VR4	2072-21028-00	ZENER, 10V	1.0

Table B-3. LORD Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
VR5	2072-21028-00	ZENER, 10V	1.0
VR1500	4021-10421-35	ZENER, 5.6V	1.0
VR4000	4021-10422-35	ZENER, 27V	1.0
VR5001	4021-10421-35	ZENER, 5.6V	1.0
VR5002	4021-10421-35	ZENER, 5.6V	1.0
VR5003	4021-10421-35	ZENER, 5.6V	1.0
VR5004	4021-10421-35	ZENER, 5.6V	1.0
VR5009	4021-10421-35	ZENER, 5.6V	1.0
VR5010	4021-10421-35	ZENER, 5.6V	1.0
Y5002	2072-24011-00	CRYSTAL, MC-306-38.400KHZ	1.0

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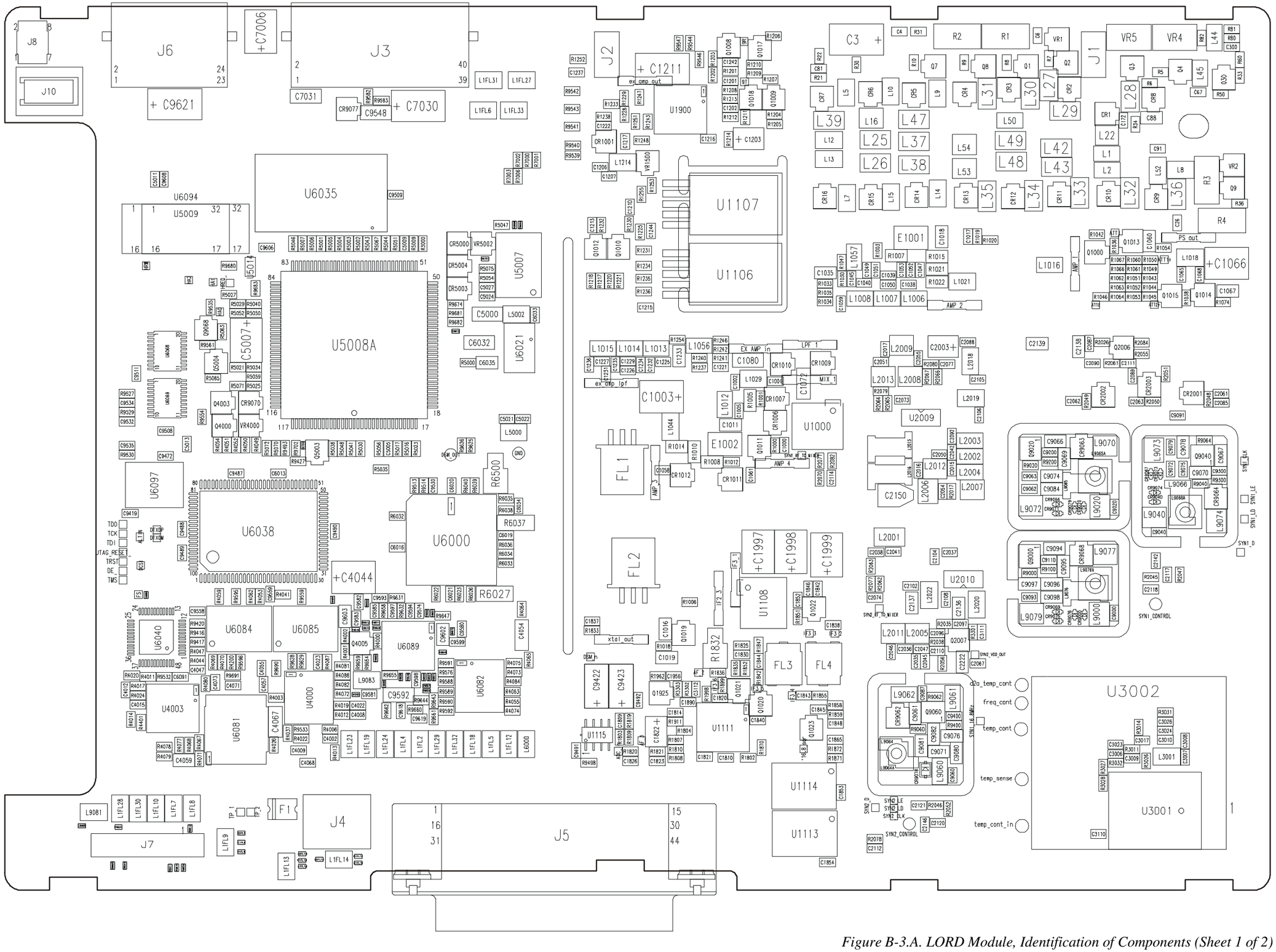

Figure B-3.A. LORD Module, Identification of Components (Sheet 1 of 2)

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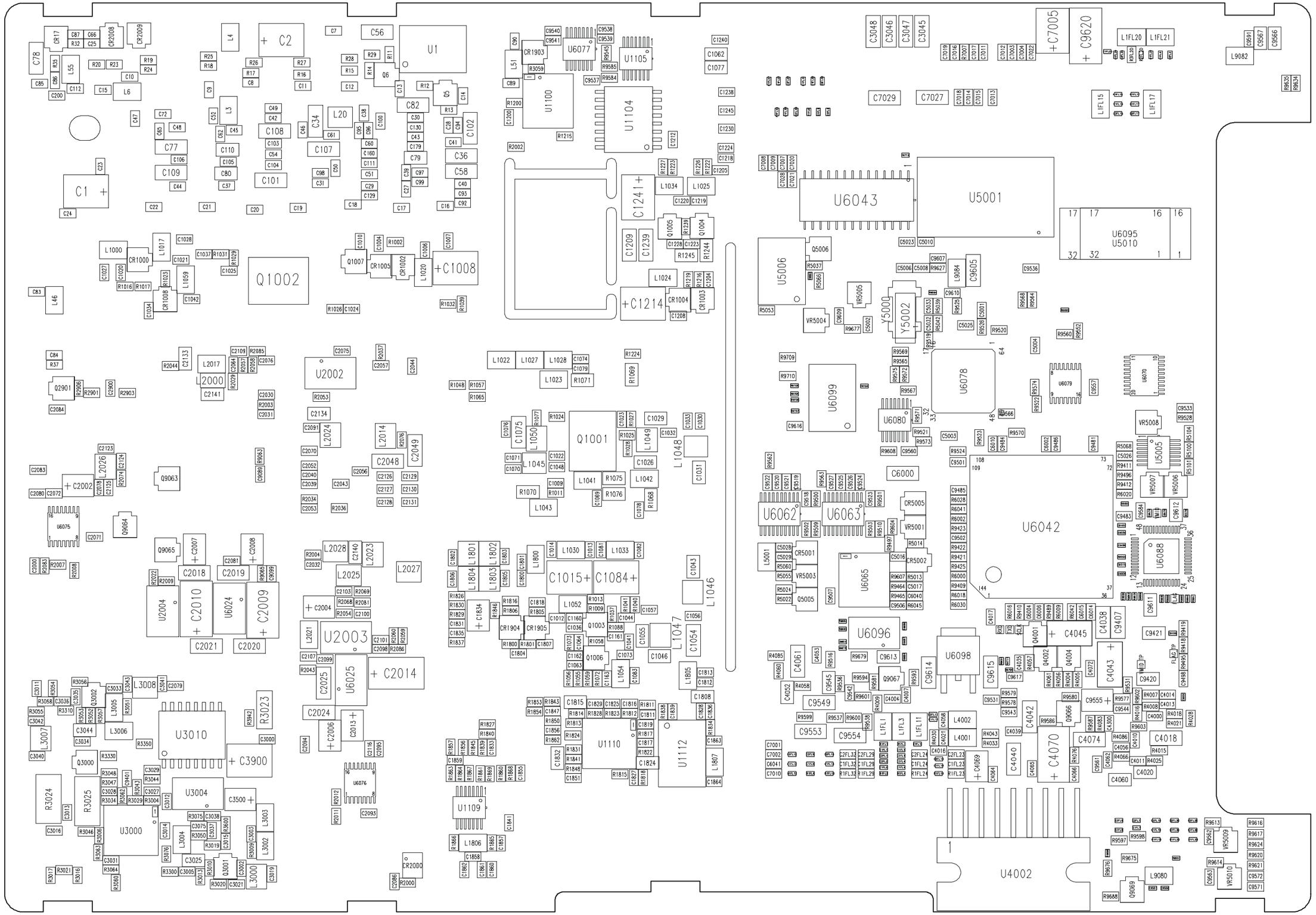

Figure B-3.B. LORD Module, Identification of Components (Sheet 2 of 2)

Table B-4. HI POWER Module, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95170-10	HI POWER MODULE	Figure B-4
BL1	2072-45014-00	POWER PAD	1.0
BL2	2072-32170-00	HI POWER PCB	1.0
BL3	4052-15003-00	SCREW, CROSS RECESSED, PAN HEAD	8.0
BL4	2072-33051-00	SPACER	1.0
BL5	2072-53004-00	WASHER, SHLDR 1483967A03	1.0
BL6	2072-40050-00	SHIELD, 2683423K03	1.0
BL7	2072-48026-00	SHIELD, RF	1.0
BL8	4052-12014-16	SCREW, M2X16, PAN HEAD	10.0
BL9	4053-70003-16	WASHER, SPRING, M2	10.0
BL10	4068-00007-20	WIRE, EL UNINSULATED, AWG, 20	.10
BL11	4053-16001-00	WASHER, SPRING, LOCK, M3	4.0
BL12	2201-63202-03	HEATSINK COMPOUND, DC340	.200
BL14	2201-64113-19	RTV734, CLEAR	.10
BL15	2072-90210-10	CABLE ANTENNA	1.0
BL16	2201-64106-05	ELECOLIT 631, A+B	.50
BL17	2338-56025-00	ADHESIVE BACK MOUNTS	1.0
BL18	2388-56043-00	STRIP, SST, 1.5M	1.0
BL19	2072-72024-00	IDENTIFICATION LABEL FOR 207295170F	1.0
C1	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C2	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C3	4017-80116-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 20V	1.0
C4	4017-80115-20	CAPACITOR, CHIP, TANTALUM, 47U	1.0
C5	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C6	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C8	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C10	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C11	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C12	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C13	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C14	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C15	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C16	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C17	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C18	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C19	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C20	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C21	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C22	4017-20102-00	CAPACITOR, CHIP, 10NF, 200V	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C23	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C24	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C26	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C27	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C28	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C29	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C30	4017-25101-00	CAPACITOR, CHIP, CERAMIC, 1NF, 200V	1.0
C32	4017-80115-20	CAPACITOR, CHIP, TANTALUM, 47U	1.0
C34	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C36	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C37	4017-25101-00	CAPACITOR, CHIP, CERAMIC, 1NF, 200V	1.0
C38	4017-20102-00	CAPACITOR, CHIP, 10NF, 200V	1.0
C40	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C41	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C43	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C44	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C45	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C46	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C47	4017-25093-00	CAPACITOR, CHIP, CERAMIC, C0G, 10NF	1.0
C48	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C49	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C50	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C51	4017-25093-00	CAPACITOR, CHIP, CERAMIC, C0G, 10NF	1.0
C52	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C53	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C55	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C56	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C57	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C58	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C59	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C60	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C62	4017-80116-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 20V	1.0
C63	4017-25265-10	CAPACITOR, CHIP, NP0, 33PF, 1%	1.0
C65	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C66	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C67	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C70	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C71	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C72	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C73	4017-80105-02	CAPACITOR, CHIP, TANTALUM, 22UF, 25V	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C74	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C75	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C76	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C77	2089-17003-00	CAPACITOR, PORCELAN, 10PF, 5%	1.0
C78	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C79	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C80	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C82	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C83	4017-25267-00	CAPACITOR, CHIP, 0603, NP0, 47PF	1.0
C84	4017-25267-00	CAPACITOR, CHIP, 0603, NP0, 47PF	1.0
C86	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C87	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C88	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C89	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C90	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C91	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C93	4017-20109-00	CAPACITOR, 1206, X7R, 10UF,	1.0
C94	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C95	4017-80116-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 20V	1.0
C96	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C97	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C98	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C99	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C100	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C101	2089-17022-00	CAPACITOR, PORCELAN, 150PF, 5%	1.0
C102	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C103	2089-17026-00	CAPACITOR, PORCELAN, 240PF, 5%	1.0
C105	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C106	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C107	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C108	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C109	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C110	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C111	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C112	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C113	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C114	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C115	2089-17023-00	CAPACITOR, PORCELAN, 180PF, 5%	1.0
C116	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C118	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C121	4017-80234-00	CAPACITOR, CHIP, TANTALUM, 100UF, 20V	1.0
C122	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C123	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C124	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C126	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C128	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C129	4017-80105-02	CAPACITOR, CHIP, TANTALUM, 22UF, 25V	1.0
C130	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C131	4017-80115-20	CAPACITOR, CHIP, TANTALUM, 47U	1.0
C132	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C134	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C135	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C136	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C137	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C138	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C139	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C140	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C141	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C142	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C143	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C145	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C146	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C147	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C148	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C149	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C150,	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C151	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C152	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C153	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C154	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C155	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C156	4017-25279-00	CAPACITOR, CHIP, CG, 470PF, 5%	1.0
C157	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C158	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C160	4017-80234-00	CAPACITOR, CHIP, TANTALUM, 100UF, 20V	1.0
C161	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C162	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C163	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C164	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C165	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C166	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C167	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C168	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C169	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C171	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C173	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C174	4017-20109-00	CAPACITOR, 1206, X7R, 10UF	1.0
C201	2089-17022-00	CAPACITOR, PORCELAN, 150PF, 5%	1.0
C202	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C203	2089-17023-00	CAPACITOR, PORCELAN, 180PF, 5%	1.0
C204	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C205	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C206	2089-17027-00	CAPACITOR, PORCELAN, 270PF, 5%	1.0
C207	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C208	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C209	2089-17015-00	CAPACITOR, PORCELAN, 68PF, 5%	1.0
C211	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C212	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C301	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C302	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C303	2089-17019-00	CAPACITOR, PORCELAN, 100PF, 5%	1.0
C304	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C305	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C306	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C401	2089-17025-00	CAPACITOR, PORCELAN, 220PF, 5%	1.0
C402	2089-17031-00	CAPACITOR, PORCELAN, 390PF, 5%	1.0
C403	2089-17017-00	CAPACITOR, PORCELAN, 82PF, 5%	1.0
C404	2089-17025-00	CAPACITOR, PORCELAN, 220PF, 5%	1.0
C405	2089-17024-00	CAPACITOR, PORCELAN, 200PF, 5%	1.0
C406	2089-17024-00	CAPACITOR, PORCELAN, 200PF, 5%	1.0
C407	2089-17019-00	CAPACITOR, PORCELAN, 100PF, 5%	1.0
C501	2089-17023-00	CAPACITOR, PORCELAN, 180PF, 5%	1.0
C502	2089-17013-00	CAPACITOR, PORCELAN, 56PF, 5%	1.0
C503	2089-17022-00	CAPACITOR, PORCELAN, 150PF, 5%	1.0
C504	2089-17019-00	CAPACITOR, PORCELAN, 100PF, 5%	1.0
C505	2089-17023-00	CAPACITOR, PORCELAN, 180PF, 5%	1.0
C506	2089-17023-00	CAPACITOR, PORCELAN, 180PF, 5%	1.0
C601	2089-17017-00	CAPACITOR, PORCELAN, 82PF, 5%	1.0
C602	2089-17007-00	CAPACITOR, PORCELAN, 22PF, 5%	1.0
C603	2089-17009-00	CAPACITOR, PORCELAN, 30PF, 5%	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C604	2089-17022-00	CAPACITOR, PORCELAN, 150PF, 5%	1.0
C605	2089-17013-00	CAPACITOR, PORCELAN, 56PF, 5%	1.0
C606	2089-17027-00	CAPACITOR, PORCELAN, 270PF, 5%	1.0
C701	2089-17013-00	CAPACITOR, PORCELAN, 56PF, 5%	1.0
C702	2089-17019-00	CAPACITOR, PORCELAN, 100PF, 5%	1.0
C703	4017-60012-20	CAPACITOR, PORC. 18PF, 2%	1.0
C704	2089-17017-00	CAPACITOR, PORCELAN, 82PF, 5%	1.0
C706	2089-17017-00	CAPACITOR, PORCELAN, 82PF, 5%	1.0
C707	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C708	4017-20102-00	CAPACITOR, CHIP, 10NF, 200V	1.0
C846	4017-80115-02	CAPACITOR, CHIP, 47UF, 10V	1.0
C848	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C850	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C851	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C852	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C853	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C854	4017-80115-02	CAPACITOR, CHIP, 47UF, 10V	1.0
C855	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C856	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C858	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C860	2089-17013-00	CAPACITOR, PORCELAN, 56PF, 5%	1.0
C861	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C862	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C863	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C864	2089-17033-00	CAPACITOR, PORCELAN, 470PF, 5%	1.0
C865	2089-17029-00	CAPACITOR, PORCELAN, 330PF, 5%	1.0
C866	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C867	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C868	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C869	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C870	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C871	4017-20181-00	CAPACITOR, 1210, X7R, 100NF, 200V	1.0
C872	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C873	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C875	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C877	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C878	4017-80226-00	CAPACITOR, CHIP, TANTALUM, 15UF, 35V	1.0
C880	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C882	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C884	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C885	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C886	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C887	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C888	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C889	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C895	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C896	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C897	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C898	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C900	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C901	4017-20271-00	CAPACITOR, CHIP, X7R, 10NF, 10%	1.0
C902	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C903	4017-25259-00	CAPACITOR, CHIP, CG, 10PF, 5%	1.0
C904	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C905	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C906	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
CR1	4021-10721-35	DIODE	1.0
CR6	4021-10114-35	DIODE, SCHOTTKY, HSMS2800	1.0
CR7	4021-10114-35	DIODE, SCHOTTKY, HSMS2800	1.0
CR8	2072-21018-00	DIODE, PIN	1.0
CR9	2072-21018-00	DIODE, PIN	1.0
CR10	4021-10721-35	DIODE	1.0
CR11	4021-10721-35	DIODE	1.0
CR13	4021-10403-35	DIODE, RECTIFIER, SCHOTTKY, MBRS360	1.0
CR14	4021-10282-35	DIODE, RECTIFIER	1.0
CR15	4021-10745-35	DIODE, SCHOTTKY	1.0
CR16	4021-10745-35	DIODE, SCHOTTKY	1.0
CR17	4021-10745-35	DIODE, SCHOTTKY	1.0
CR18	4021-10745-35	DIODE, SCHOTTKY	1.0
CR19	4021-10745-35	DIODE, SCHOTTKY	1.0
CR20	4021-10745-35	DIODE, SCHOTTKY	1.0
CR805	4021-10722-35	DIODE, DUAL	1.0
CR806	4021-10721-35	DIODE	1.0
CR809	4021-10513-35	DIODE, SCHOTTKY	1.0
CR810	4021-10114-35	DIODE, SCHOTTKY, HSMS2800	1.0
CR811	4021-10513-35	DIODE, SCHOTTKY	1.0
E1	4033-10178-01	SCREW TERMINAL, PC MOUNT	1.0
E2	4033-10178-01	SCREW TERMINAL, PC MOUNT	1.0
E3	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0
E6	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
E19	4023-00014-00	ARRESTOR	1.0
E26	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0
E27	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0
E28	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0
E29	4018-60032-00	BEAD, EMI, 600 OHM, 1.5A	1.0
K1	2338-31031-00	RELAY, 5V, DPDT	1.0
K101	2338-31031-00	RELAY, 5V, DPDT	1.0
K102	2338-31031-00	RELAY, 5V, DPDT	1.0
K201	2338-31031-00	RELAY, 5V, DPDT	1.0
K202	2338-31031-00	RELAY, 5V, DPDT	1.0
K301	2338-31031-00	RELAY, 5V, DPDT	1.0
K302	2338-31031-00	RELAY, 5V, DPDT	1.0
K401	2338-31031-00	RELAY, 5V, DPDT	1.0
K402	2338-31031-00	RELAY, 5V, DPDT	1.0
K501	2338-31031-00	RELAY, 5V, DPDT	1.0
K502	2338-31031-00	RELAY, 5V, DPDT	1.0
K601	2338-31031-00	RELAY, 5V, DPDT	1.0
K602	2338-31031-00	RELAY, 5V, DPDT	1.0
K701	2338-31031-00	RELAY, 5V, DPDT	1.0
K702	2338-31031-00	RELAY, 5V, DPDT	1.0
L1	4018-10117-00	INDUCTOR, 10UH	1.0
L2	4018-01022-00	COIL, 56UH, 10%	1.0
L3	4018-10117-00	INDUCTOR, 10UH	1.0
L11	4018-16024-00	COIL, CHIP, AIR, 68NH	1.0
L14	4018-10116-00	INDUCTOR, 33UH	1.0
L17	4018-16024-00	COIL, CHIP, AIR, 68NH	1.0
L18	4018-10116-00	INDUCTOR, 33UH	1.0
L19	4018-01022-00	COIL, 56UH, 10%	1.0
L20	4018-10116-00	INDUCTOR, 33UH	1.0
L101	2072-13023-13	COIL, RF, 3.39uH	1.0
L102	2072-13023-14	COIL, RF, 5.20uH	1.0
L201	2072-13023-11	COIL, RF, 2.20uH	1.0
L202	2072-13023-12	COIL, RF, 2.60uH	1.0
L301	2072-13023-09	COIL, RF, 1.35uH	1.0
L302	2072-13023-10	COIL, RF, 1.90uH	1.0
L401	2072-13023-07	COIL, RF, 0.88uH	1.0
L402	2072-13023-08	COIL, RF, 1.12uH	1.0
L501	2072-13023-05	COIL, RF, 0.55uH	1.0
L502	2072-13023-06	COIL, RF, 0.71uH	1.0
L601	2072-13023-03	COIL, RF, 0.55uH	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L602	2072-13023-05	COIL, RF, 0.55uH	1.0
L701	2072-13023-01	COIL, RF, 0.28uH	1.0
L702	2072-13023-01	COIL, RF, 0.28uH	1.0
P2	2072-33016-00	RECEPTACLE, COAX	1.0
P3	2072-33007-00	HEADER, RT, 40 PIN	1.0
P4	2072-33016-00	RECEPTACLE, COAX	1.0
Q1	4021-00302-35	TRANSISTOR, N-CHANNEL, DUAL	1.0
Q2	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q3	4021-06065-35	FET, RF	1.0
Q4	4021-06065-35	FET, RF	1.0
Q5	4021-06061-35	FET, RF	1.0
Q6	2072-21086-00	TRANSISTOR, POWER	1.0
Q7	4021-06061-35	FET, RF	1.0
Q8	4021-07057-35	TRANSISTOR, N-CHANNEL	1.0
Q10	4021-00341-35	TRANSISTOR, PNP	1.0
Q11	2072-21086-00	TRANSISTOR, POWER	1.0
Q12	4021-00415-35	FET, RF	1.0
Q13	4021-00302-35	TRANSISTOR, N-CHANNEL, DUAL	1.0
Q14	4021-07181-35	TRANSISTOR, N-CHANNEL	1.0
Q15	4021-07085-35	TRANSISTOR, P-CHANNEL	1.0
Q16	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q17	4021-00415-35	FET	1.0
Q19	4021-00415-35	FET	1.0
Q20	4021-00341-35	TRANSISTOR, PNP	1.0
Q22	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q23	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q26	4021-07181-35	TRANSISTOR, N-CHANNEL	1.0
Q801	4021-00415-35	FET	1.0
Q802	4021-00341-35	TRANSISTOR, PNP	1.0
Q803	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q805	4021-00415-35	FET	1.0
Q806	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q807	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
R1	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R2	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R4	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R5	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R6	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R7	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R8	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R9	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R11	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R13	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R15	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R18	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R20	4016-23162-10	RESISTOR, CHIP, 0603, 31.6K, 1%	1.0
R21	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R22	4016-60102-00	TRIMPOT, 10K OHM	1.0
R23	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R24	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R25	4016-25119-10	RESISTOR, CHIP, 0603, 51.1, 1%	1.0
R26	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R27	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R28	4016-40479-50	RESISTOR, CHIP, 4.7, 5%, 1W	1.0
R29	4016-14120-10	RESISTOR, CHIP, 412, 1%, 1/8W	1.0
R30	4016-14120-10	RESISTOR, CHIP, 412, 1%, 1/8W	1.0
R31	4016-40479-50	RESISTOR, CHIP, 4.7, 5%, 1W	1.0
R32	4016-14120-10	RESISTOR, CHIP, 412, 1%, 1/8W	1.0
R33	4016-14120-10	RESISTOR, CHIP, 412, 1%, 1/8W	1.0
R34	4016-11002-10	RESISTOR, CHIP, 10.0K, 1%, 1/8W	1.0
R35	4016-11002-10	RESISTOR, CHIP, 10.0K, 1%, 1/8W	1.0
R36	4016-60000-50	RESISTOR, CHIP, 0 OHM, 1/2W	1.0
R39	4016-32900-10	RESISTOR, CHIP, 0.2, 1%, 1W	1.0
R40	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R41	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R43	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R44	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R46	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R47	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R48	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R49	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R50	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R51	4016-24753-10	RESISTOR, CHIP, 0603, 475K, 1%	1.0
R53	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R55	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R57	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R58	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R59	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R60	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R61	4016-23652-10	RESISTOR, 36.5K, 1%, 1/16W	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R62	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R63	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R64	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R65	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R66	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R67	4016-60102-00	TRIMPOT, 10K OHM	1.0
R68	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R69	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R70	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R71	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R72	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R73	4016-60102-00	TRIMPOT, 10K OHM	1.0
R75	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R76	4016-21829-10	RESISTOR, CHIP, 0603, 18.2, 1%	1.0
R77	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R78	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R79	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R80	4016-23010-10	RESISTOR, CHIP, 0603, 301, 1%	1.0
R81	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R82	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R83	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R85	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R86	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R87	4016-12499-10	RESISTOR, CHIP, 24.9, 1%, 1/8W	1.0
R88	4016-24753-10	RESISTOR, CHIP, 0603, 475K, 1%	1.0
R89	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R90	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R91	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R92	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R97	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R98	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R100,	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R101	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R102	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R103	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R104	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R105	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R106	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R107	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R110	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R111	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R112	4016-21502-10	RESISTOR, 15.0K, 1%, 1/16W	1.0
R114	4016-28252-10	RESISTOR, CHIP, 0603, 82.5K, 1%	1.0
R116	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R117	4016-21103-10	RESISTOR, 110K, 1%, 1/16W	1.0
R118	4016-21502-10	RESISTOR, 15.0K, 1%, 1/16W	1.0
R119	4016-21502-10	RESISTOR, 15.0K, 1%, 1/16W	1.0
R120	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R121	4016-29093-10	RESISTOR, 909K, 1%, 1/16W	1.0
R123	4016-21502-10	RESISTOR, 15.0K, 1%, 1/16W	1.0
R124	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R125	4016-22432-10	RESISTOR, 24.3K, 1%, 1/16W	1.0
R127	4016-27152-10	RESISTOR, 71.5K, 1%, 1/16W	1.0
R128	4016-22432-10	RESISTOR, 24.3K, 1%, 1/16W	1.0
R129	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R130	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R131	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R132	4016-21008-50	RESISTOR, CHIP, 0603, 1 OHM, 5%	1.0
R133	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R134	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R135	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R136	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R137	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R138	4016-22432-10	RESISTOR, 24.3K, 1%, 1/16W	1.0
R143	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R144	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R145	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R148	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R149	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R150,	4016-22152-10	RESISTOR, 21.5K, 1%, 1/16W	1.0
R151	4016-28251-10	RESISTOR, 8.25K, 1%, 1/16W	1.0
R153	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R154	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R155	4016-22153-10	RESISTOR, CHIP, 0603, 215K, 1%	1.0
R156	4016-80080-00	RESISTOR, CHIP, MF, 0.02E, 0.25W	1.0
R157	4016-80080-00	RESISTOR, CHIP, MF, 0.02E, 0.25W	1.0
R158	4016-22002-01	RESISTOR, 20.0K, 0.1%, 1/16	1.0
R159	4016-22002-01	RESISTOR, 20.0K, 0.1%, 1/16	1.0
R161	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R162	4016-27503-10	RESISTOR, 750K, 1%, 1/16W	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R163	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R164	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R165	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R166	4016-22152-10	RESISTOR, 21.5K, 1%, 1/16W	1.0
R167	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R171	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R172	4016-21502-10	RESISTOR, 15.0K, 1%, 1/16W	1.0
R173	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R174	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R175	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R176	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R177	4016-29093-10	RESISTOR, 909K, 1%, 1/16W	1.0
R178	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R179	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R818	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R819	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R822	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R823	4016-24752-10	RESISTOR, 47.5K, 1%, 1/16W	1.0
R829	4016-22219-10	RESISTOR, 22.1, 1%, 1/16W	1.0
R830	4016-21501-10	RESISTOR, 1.50K, 1%, 1/16W	1.0
R833	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R835	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R836	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R837	4016-21211-10	RESISTOR, 1.21K, 1%, 1/16W	1.0
R839	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R840	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R841	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R842	4016-21822-10	RESISTOR, 18.2K, 1%, 1/16W	1.0
R843	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R844	4016-22432-10	RESISTOR, 24.3K, 1%, 1/16W	1.0
R845	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R846	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R848	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R849	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R850	4016-22439-10	RESISTOR, 24.3, 1%, 1/16W	1.0
R852	4016-28669-10	RESISTOR, CHIP, 0603, 86.6, 1%	1.0
R855	4016-22152-10	RESISTOR, 21.5K, 1%, 1/16W	1.0
R857	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R860	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R861	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R862	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R863	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R865	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R867	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R868	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R870	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R871	4016-29761-10	RESISTOR, CHIP, 9.76K, 1%, /16W	1.0
R872	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R874	4016-21004-10	RESISTOR, 1.0M, 1%, 1/16W	1.0
R875	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R876	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R881	4016-24750-10	RESISTOR, 475, 1%, 1/16W	1.0
R883	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R884	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R885	4016-28251-10	RESISTOR, 8.25K, 1%, 1/16W	1.0
R886	4016-28251-10	RESISTOR, 8.25K, 1%, 1/16W	1.0
R887	4016-22742-10	RESISTOR, 27.4K, 1%, 1/16W	1.0
R888	4016-28252-10	RESISTOR, CHIP, 0603, 82.5K, 1%	1.0
R891	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R893	4016-25621-10	RESISTOR, CHIP, 0603, 5.62K, 1%	1.0
R894	4016-22152-10	RESISTOR, 21.5K, 1%, 1/16W	1.0
R895	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R901	4016-24752-10	RESISTOR, 47.5K, 1%, 1/16W	1.0
R902	4016-28252-10	RESISTOR, CHIP, 0603, 82.5K, 1%	1.0
R903	4016-25622-10	RESISTOR, CHIP, 0603, 56.2K, 1%	1.0
R904	4016-23321-10	RESISTOR, 3.32K, 1%, 1/16W	1.0
R905	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R906	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R907	4016-22152-10	RESISTOR, 21.5K, 1%, 1/16W	1.0
R908	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R909	4016-24753-10	RESISTOR, CHIP, 0603, 475K, 1%	1.0
R910	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R911	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R912	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R913	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R914	4016-21503-10	RESISTOR, 150K, 1%, 1/16W	1.0
R915	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R916	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R917	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R918	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0

Table B-4. HI POWER Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R919	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R921	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R922	4016-21820-10	RESISTOR, 182, 1%, 1/16W	1.0
R923	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R924	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R928	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
RT1	4016-91495-00	THERMISTOR. NTC, 1K	1.0
RT2	4016-91494-00	THERMISTOR, NTC, 100K	1.0
RT3	4016-91494-00	THERMISTOR, NTC, 100K,	1.0
T1	2072-13004-00	RF POWER TRANSFORMER	1.0
T2	2072-13006-00	RF TRANSFORMER	1.0
T3	2089-13023-00	TRANSFORMER	1.0
T4	2072-13007-00	COIL, TOROID 2583727K-0	1.0
U1	4021-22155-54	VOLTAGE REGULATOR, 3.3V	1.0
U2	4021-22138-84	VOLTAGE REGULATOR, ADJUSTABLE	1.0
U3	4021-00039-35	TRANSISTOR, NPN, DARLINGTON, ARRAY, ULQ2003	1.0
U4	4021-60063-50	HCMOS, SHIFT REGISTER, 74HC595	1.0
U5	4021-20311-54	OPERATIONAL AMPLIFIER, DUAL	1.0
U6	4021-20127-54	VOLTAGE REGULATOR, ADJUSTABLE	1.0
U9	4021-20504-54	COMPARATOR, DUAL	1.0
U10	4021-20311-54	OPERATIONAL AMPLIFIER, DUAL	1.0
U11	4021-22122-74	VOLTAGE REGULATOR	1.0
U12	2388-21830-00	IC, 14053	1.0
U13	2072-21043-00	OPERATIONAL AMPLIFIER, QUAD	1.0
U14	4021-20311-54	OPERATIONAL AMPLIFIER, DUAL	1.0
U15	4021-20311-54	OPERATIONAL AMPLIFIER, DUAL	1.0
U16	4021-20127-54	VOLTAGE REGULATOR, ADJUSTABLE	1.0
U19	4021-41708-35	2-IN AND GATE, SINGLE	1.0
U20	4021-22307-64	DC/DC CONTROLLER	1.0
U21	4021-22138-84	VOLTAGE REGULATOR, ADJUSTABLE	1.0
U22	4021-44074-64	DUAL D-FLIPFLOP	1.0
U23	4021-22021-64	CONTROLLER OVERVOLT PROTECTION	1.0
VR2	4021-10585-35	TVS, UNI-DIRECTIONAL	1.0
VR3	4021-20129-54	REFERENCE VOLTAGE, 5.0V	1.0
VR4	4021-20129-54	REFERENCE VOLTAGE, 5.0V	1.0
VR801	4021-20129-54	REFERENCE VOLTAGE, 5.0V	1.0
VR802	4021-20129-54	REFERENCE VOLTAGE, 5.0V	1.0
VR803	4021-20129-54	REFERENCE VOLTAGE, 5.0V	1.0

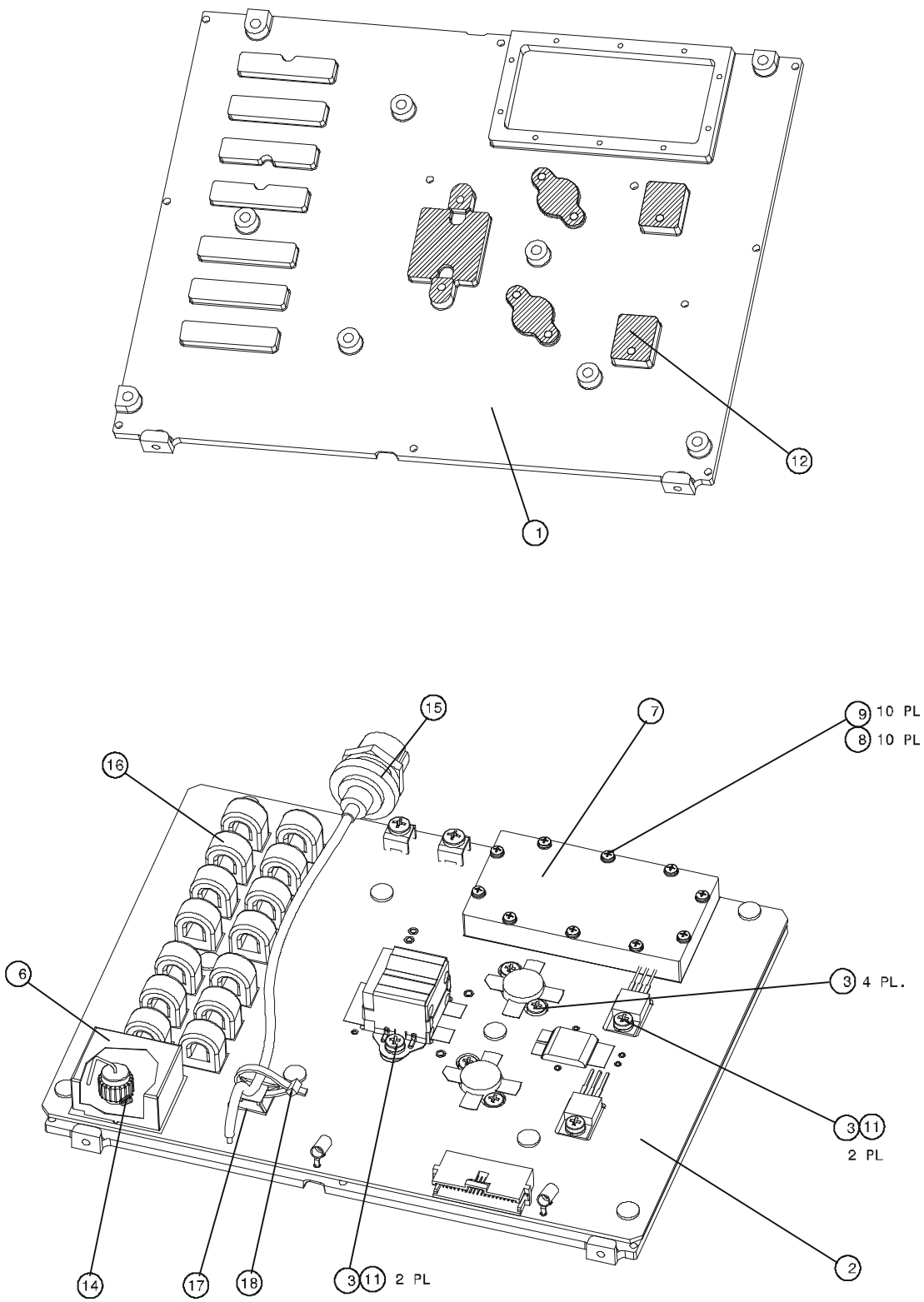

Figure B-4.A. HI POWER Module, Identification of Components (Sheet 1 of 3)

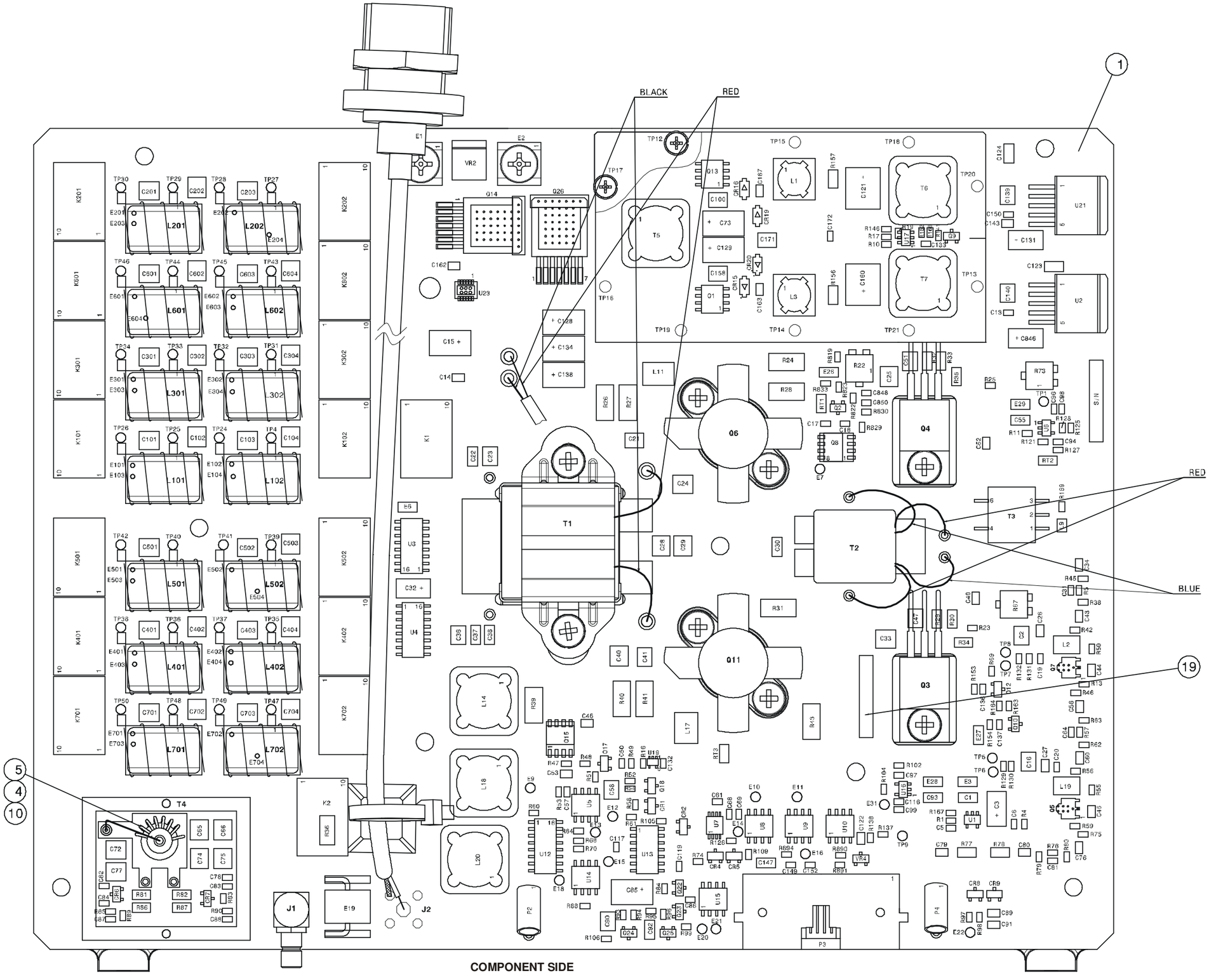

Figure B-4.B. HI POWER Module, Identification of Components (Sheet 2 of 3)

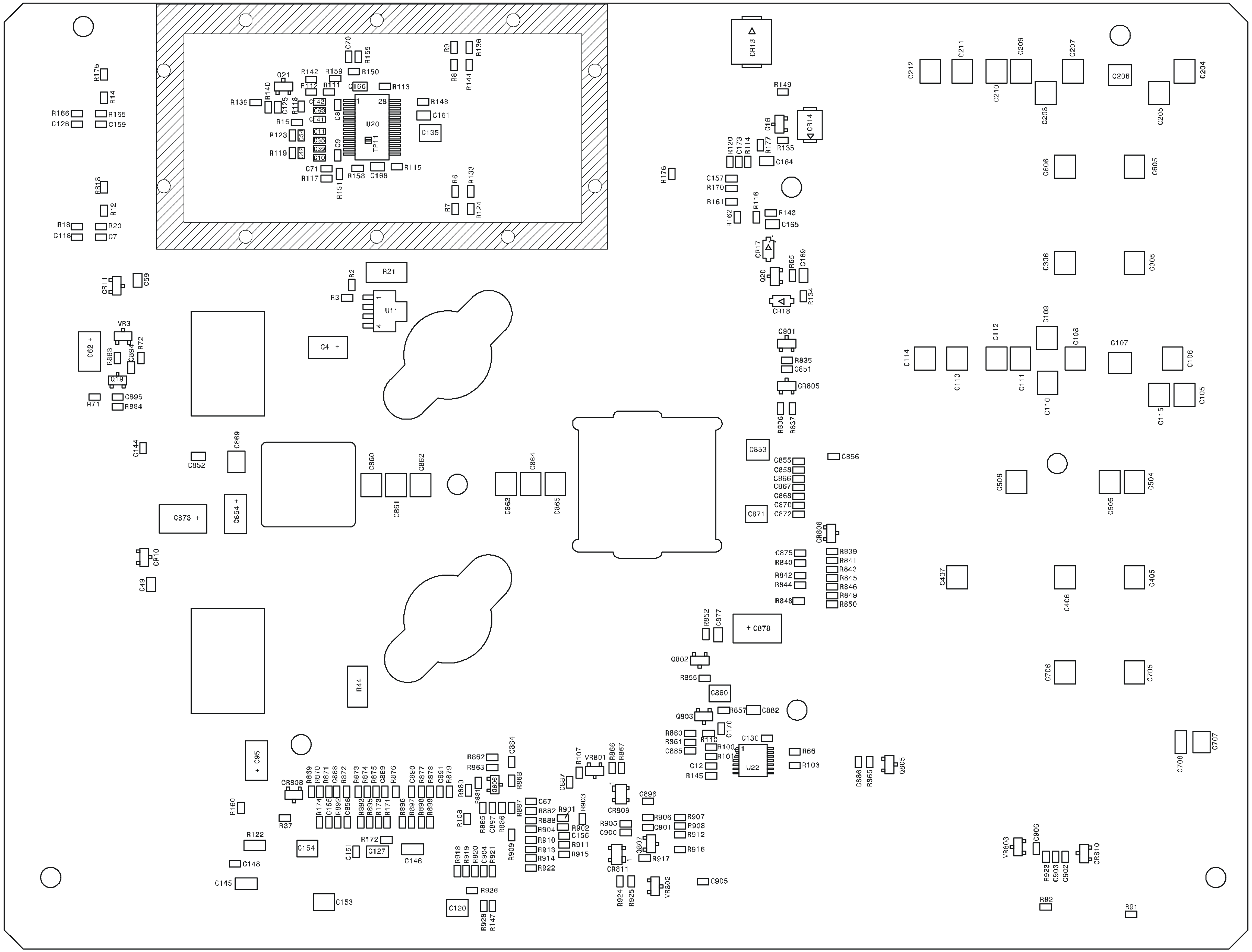

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Figure B-4.C. HI POWER Module, Identification of Components (Sheet 3 of 3)

Table B-5. Dash Front Panel, Control Head Assembly, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-90833-00	DASH FRONT PANEL ASSY	Figure B-5
BL1	2072-45001-10	FRONT PANEL	1.0
BL2	2072-95211-00	DASH FRONT PANEL MODULE	1.0
BL3	2072-45004-00	KEYPAD	1.0
BL4	2072-90115-00	DISPLAY ASSY	1.0
BL5	2072-45007-00	WINDOW, LC	1.0
BL6	2072-45008-00	HOLDER SPEAKER	1.0
BL7	2072-45020-00	PLUG	1.0
BL8	2072-31050-00	SPEAKER (MIRS) 5002236P	1.0
BL9	4052-15003-00	SCREW, CROSS RECESSED, PAN HEAD	13.0
BL10	2072-45030-00	SCREW, M2X6, PH, BLACK	6.0
BL11	2072-45036-00	INSERT	1.0
BL12	2072-56010-00	GASKET, SPEAKER ROGG. 32	1.0
BL13	2072-45033-00	RF SHIELD	1.0
BL14	2072-45034-00	SPACER	11.0
BL15	2072-90150-00	SPEAKER CABLE	1.0

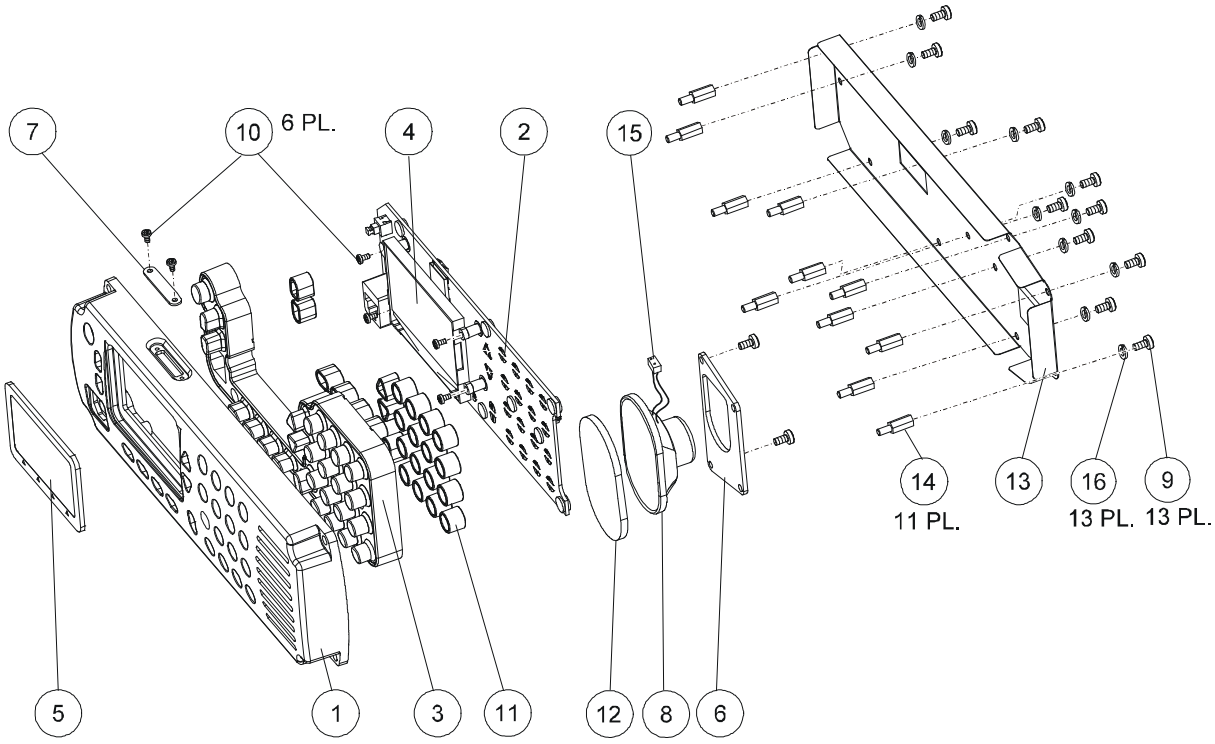

Figure B-5. Dash Front Panel, Control Head Assembly

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95211-00	DASH FRONT PANEL MODULE	Figure B-6
BL1	2072-32211-00	FRONT PANEL PCB	1.0
BL2	2072-45003-00	STUD FOR MICOM-Z	4.0
C1	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C2	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C3	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C4	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C5	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C6	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C7	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C8	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C9	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C10	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C11	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C12	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C13	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C14	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C15	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C16	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C19	4017-25265-10	CAPACITOR, CHIP, NP0, 33PF, 1%	1.0
C20	4017-25265-10	CAPACITOR, CHIP, NP0, 33PF, 1%	1.0
C21	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C22	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C23	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C24	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C25	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C26	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C27	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C32	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C33	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C35	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C36	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C39	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C42	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C43	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C44	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C45	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C46	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C47	4017-20161-00	CAPACITOR, CHIP, X7R, 1UF, 10V	1.0
C53	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C54	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C59	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C60	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C61	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C62	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C63	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C64	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C65	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C66	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C67	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C68	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C69	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C70	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C71	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C72	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C73	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C74	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C76	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C78	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C79	4017-80304-00	CAPACITOR, 47UF, 35V	1.0
C80	4017-20191-00	CAPACITOR, 1210, X7R, 1UF, 100V	1.0
C81	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C82	4017-20191-00	CAPACITOR, 1210, X7R, 1UF, 100V	1.0
C83	4017-80304-00	CAPACITOR, 47UF, 35V	1.0
C84	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0
C85	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C86	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C87	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C88	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C89	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C90	4017-25286-00	CAPACITOR, CHIP, C0G, 100PF, 1%	1.0
C91	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C92	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C93	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C94	4017-25275-00	CAPACITOR, CHIP, CG, 220PF, 5%	1.0
C95	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C96	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C97	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C98	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0
C99	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C121	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C501	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C502	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C503	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C504	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C505	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C506	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C513	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C544	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C545	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C550	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C551	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C552	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C553	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C554	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C555	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
CR2	4021-10403-35	DIODE, RECTIFIER, SCHOTTKY, MBRS360	1.0
CR501	4021-10098-35	DIODE, SWITCHING	1.0
DS1	4021-80052-35	LED, GREEN	1.0
DS2	4021-80052-35	LED, GREEN	1.0
DS3	4021-80052-35	LED, GREEN	1.0
DS4	4021-80052-35	LED, GREEN	1.0
DS5	4021-80052-35	LED, GREEN	1.0
DS6	4021-80052-35	LED, GREEN	1.0
DS7	4021-80052-35	LED, GREEN	1.0
DS8	4021-80052-35	LED, GREEN	1.0
DS9	4021-80052-35	LED, GREEN	1.0
DS10	4021-80052-35	LED, GREEN	1.0
DS11	4021-80052-35	LED, GREEN	1.0
DS12	4021-80052-35	LED, GREEN	1.0
DS13	4021-80052-35	LED, GREEN	1.0
DS14	4021-80052-35	LED, GREEN	1.0
DS15	4021-80052-35	LED, GREEN	1.0
DS16	4021-80052-35	LED, GREEN	1.0
DS17	4021-80052-35	LED, GREEN	1.0
DS18	4021-80052-35	LED, GREEN	1.0
DS19	4021-80052-35	LED, GREEN	1.0
DS20	4021-80052-35	LED, GREEN	1.0
DS21	4021-80052-35	LED, GREEN	1.0
DS22	4021-80052-35	LED, GREEN	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
DS23	4021-80052-35	LED, GREEN	1.0
DS24	4021-80052-35	LED, GREEN	1.0
DS25	4021-80052-35	LED, GREEN	1.0
DS26	4021-80052-35	LED, GREEN	1.0
DS27	4021-80052-35	LED, GREEN	1.0
E19	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E20	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E26	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E27	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E28	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E29	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E502	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
J3	4033-60109-00	CONNECTOR, FPC/FFC, 40S	1.0
J4	4033-53021-00	SD MEMORY CARD CONNECTOR	1.0
L1	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L2	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L3	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L4	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L5	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L6	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L7	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L8	4018-10116-00	INDUCTOR, 33UH	1.0
P1	4033-51109-01	CONNECTOR, 2 PIN, 1.25mm	1.0
P2	4033-51109-01	CONNECTOR, 2 PIN, 1.25mm	1.0
P3	4033-51201-01	HEADER, 24PIN	1.0
P4	4033-51007-01	HEADER, 2PIN	1.0
P5	4033-50225-01	STRIP, DOUBLE ROW, 5 PIN	1.0
P6	2072-33325-00	CONNECTOR, MICROPHONE	1.0
P7	4033-50212-01	STRIP, SINGLE ROW, 2 PIN	1.0
Q1	4021-00183-35	MOSFET, P-CHANNEL	1.0
Q2	4021-00299-35	MOSFET, N-CHANNEL	1.0
Q3	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q4	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q7	4021-00415-35	FET	1.0
Q501	4021-00415-35	FET	1.0
Q502	4021-00415-35	FET	1.0
Q503	4021-00341-35	TRANSISTOR, PNP	1.0
Q504	4021-00341-35	TRANSISTOR, PNP	1.0
Q505	4021-00415-35	FET	1.0
Q506	4021-00415-35	FET	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
Q507	4021-00415-35	FET	1.0
R1	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R2	4016-11009-10	RESISTOR, CHIP, 10.0K, 1%, 1/8W	1.0
R3	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R12	4016-21004-10	RESISTOR, 1.0M, 1%, 1/16W	1.0
R13	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R14	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R15	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R16	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R17	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R18	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R19	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R20	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R21	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R22	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R23	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R24	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R25	4016-21212-10	RESISTOR, 12.1K, 1%, 1/16W	1.0
R26	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R27	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R28	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R29	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R30	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R31	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R32	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R33	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R34	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R35	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R36	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R37	4016-21004-10	RESISTOR, 1.0M, 1%, 1/16W	1.0
R38	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R39	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R40	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R41	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R42	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R43	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R44	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R45	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R46	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R47	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R48	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R49	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R50	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R51	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R52	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R53	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R54	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R55	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R56	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R57	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R58	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R59	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R60	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R61	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R62	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R63	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R64	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R65	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R66	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R67	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R68	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R69	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R70	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R71	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R72	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R73	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R74	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R75	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R76	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R77	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R78	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R79	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R80	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R81	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R82	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R83	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R84	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R85	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R86	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R87	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R88	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R89	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R90	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R91	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R92	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R93	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R94	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R95	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R96	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R97	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R98	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R99	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R100	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R101	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R102	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R103	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R104	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R105	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R106	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R107	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R108	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R109	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R110	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R111	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R112	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R113	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R114	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R115	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R116	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R117	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R118	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R119	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R120	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R121	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R122	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R123	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R124	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R125	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R126	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R127	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R128	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R133	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R137	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R138	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R139	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R140	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R141	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R142	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R143	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R144	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R145	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R146	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R151	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R152	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R155	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R156	4016-10519-50	RESISTOR, CHIP, 5.1, 5%, 1/8W	1.0
R157	4016-13011-10	RESISTOR, CHIP, 3.01K, 1%, 1/8W	1.0
R158	4016-14751-10	RESISTOR, CHIP, 4.75K, 1%, 1/8W	1.0
R159	4016-15111-10	RESISTOR, CHIP, 5.11K, 1%, 1/8W	1.0
R160	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
R166	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R167	4016-14750-10	RESISTOR, CHIP, 475, 1%, 1/8W	1.0
R170	4016-23329-10	RESISTOR, CHIP, 0603, 33.2, 1%	1.0
R177	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R178	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R181	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R186	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R187	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R193	4016-24121-10	RESISTOR, 4.12K, 1%, 1/16W	1.0
R194	4016-23012-10	RESISTOR, CHIP, 0603, 30.1K, 1%	1.0
R195	4016-31900-10	RESISTOR, CHIP, 0.1, 1%, 1W	1.0
R196	4016-31900-10	RESISTOR, CHIP, 0.1, 1%, 1W	1.0
R197	4016-23162-10	RESISTOR, CHIP, 0603, 31.6K, 1%	1.0
R198	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R201	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R202	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R203	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R204	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R206	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R207	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R212	4016-22213-10	RESISTOR, 221K, 1%, 1/16W	1.0
R213	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R214	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R215	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R220	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R221	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R222	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R223	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R226	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R229	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R233	4016-14129-10	RESISTOR, CHIP, 41.2, 1%, 1/8W	1.0
R502	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R507	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R508	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R509	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R512	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
R513	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R514	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R515	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R516	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R517	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R518	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R519	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R520	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R521	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R522	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R523	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R524	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R525	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R527	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R528	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R529	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R530	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R531	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R532	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R533	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R535	4016-60000-50	RESISTOR, CHIP, 0 OHM, 1/2W	1.0

Table B-6. CONTROL HEAD Module (Dash Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R536	4016-18251-10	RESISTOR, CHIP, 8.25K, 1%, 1/8W	1.0
R538	4016-24029-10	RESISTOR, CHIP, 0603, 40.2, 1%	1.0
R539	4016-23329-10	RESISTOR, CHIP, 0603, 33.2, 1%	1.0
R541	4016-28669-10	RESISTOR, CHIP, 0603, 86.6, 1%	1.0
R563	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R569	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R581	4016-12671-10	RESISTOR, CHIP, 2.67K, 1%, 1/8W	1.0
R582	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R583	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R584	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R601	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R602	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
RT1	4016-91103-20	THERMISTOR, NTC	1.0
SW26	2036-31016-00	SWITCH, DPDT, LOCKING	1.0
T1	4018-10178-00	TRANSFORMER, DUAL WINDING, SHIELDED	1.0
U1	4021-50043-64	MICROCONTROLLER, 8051	1.0
U3	4021-31132-50	SCHMITT TRIGGER, 74HC132	1.0
U4	4021-22111-54	VOLTAGE REGULATOR, 3.3V	1.0
U5	4021-22108-54	VOLTAGE REGULATOR, 3.0V	1.0
U6	4021-22020-64	PWM CONTROLLER	1.0
U7	4021-20504-54	COMPARATOR, DUAL	1.0
VR1	4021-10471-35	ZENER, 4.3V	1.0
VR2	4021-10471-35	ZENER, 4.3V	1.0
VR501	4021-10810-35	ZENER, 3.6V	1.0
VR502	4021-10471-35	ZENER, 4.3V	1.0
VR503	4021-10471-35	ZENER, 4.3V	1.0
VR504	4021-10471-35	ZENER, 4.3V	1.0
VR505	4021-10471-35	ZENER, 4.3V	1.0
VR506	4021-10471-35	ZENER, 4.3V	1.0
VR507	4021-10471-35	ZENER, 4.3V	1.0
VR508	4021-10471-35	ZENER, 4.3V	1.0
VR509	4021-10471-35	ZENER, 4.3V	1.0
VR510	4021-10471-35	ZENER, 4.3V	1.0
VR511	4021-10471-35	ZENER, 4.3V	1.0
Y1	4022-50026-00	CRYSTAL QUARTZ, 7.3728 MHz	1.0

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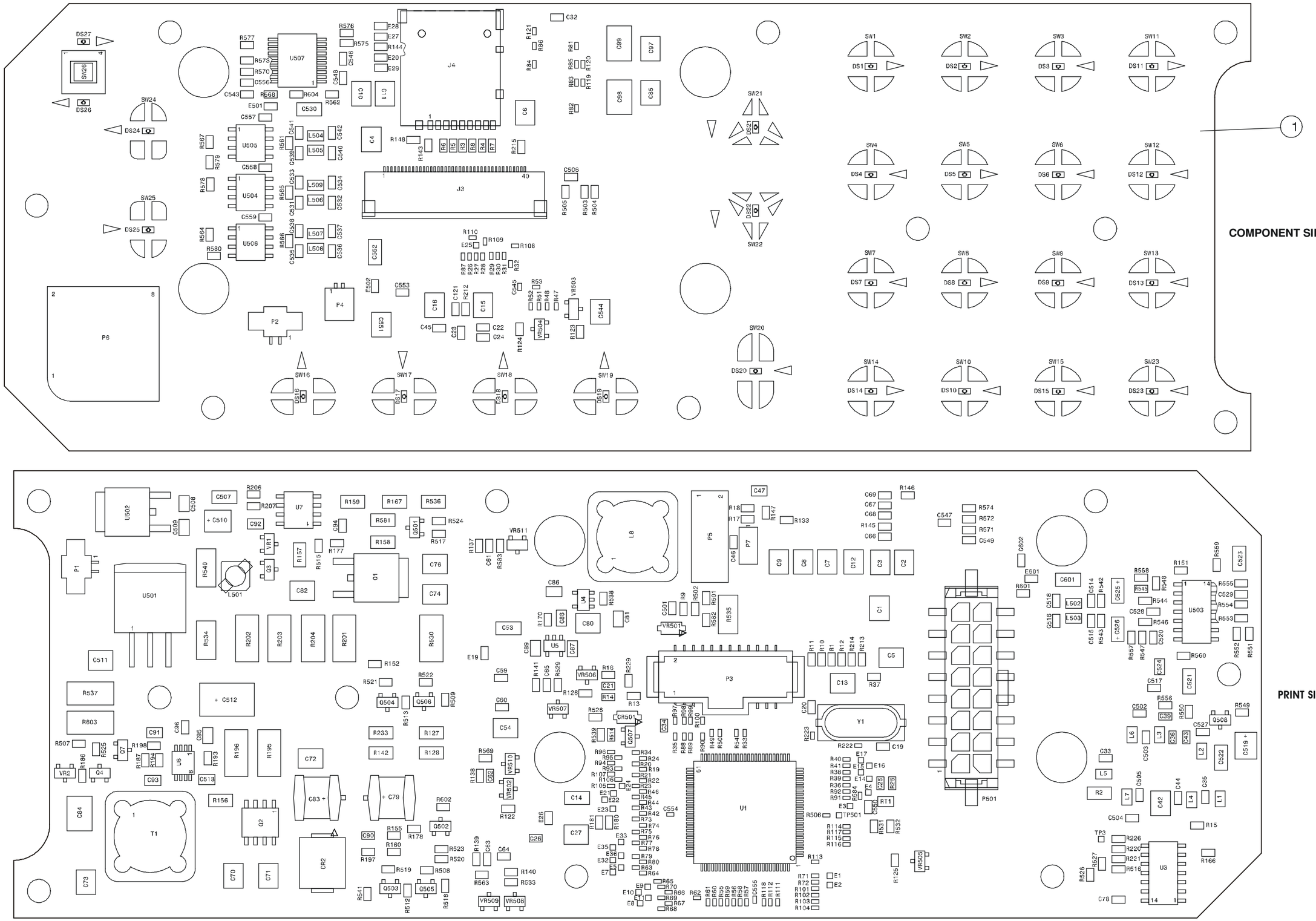

Figure B-6. CONTROL HEAD Module (Dash Mount Version), Identification of Components

Section II. MICOM-Z TRUNK-MOUNT VERSION

Table B-7. Micom-Z Assembly, Trunk Version, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-90719-20	MICOM-Z ASSEMBLY, TRUNK	Figure B-7
BL1	2072-95170-10	HI POWER MODULE	1.0
BL2	2072-45029-10	BLANK PANEL	1.0
BL3	2072-90832-00	LORD ASSY	1.0
BL5	4053-10013-16	WASHER, SPRING, CRS, PASSIVATED, #10	1.0
BL6	4053-00037-16	WASHER, FLAT, CRS, PASSIVATED, .219	2.0
BL7	4051-00011-16	NUT, HEX, CRS, PASSIVATED, #10-32	1.0
BL8	2089-41660-00	KNOB	1.0
BL10	4053-10012-16	WASHER, SPRING, CRS, BLACK, #8	8.0
BL12	4053-16001-00	WASHER, SPRING, LOCK, M3	1.0
BL13	2072-45002-10	REAR PANEL	1.0
BL14	2072-72108-00	LABEL DISASSEMBLY	1.0
BL15	2072-72109-00	LABEL DISASSEMBLY	1.0
BL16	2072-09296-00	CABLE COAX, LORD-H.P PA	2.0
BL18	2072-90160-00	CABLE, FLAT, TO CHASSIS	1.0
BL19	2072-34007-00	CABLE, FLAT, STRIP, GPS	1.0
BL20	2072-90890-00	GPS ANTENNA TRANSITION	1.0
BL21	2072-90900-10	GPS CARD	1.0
BL22	4052-12019-88	SCREW, PH PHIL CRES, M 3X	9.0
BL23	2072-45011-00	BOX, MICOM-Z	1.0
BL24	4053-15002-00	WASHER, FLAT	1.0
BL25	2201-63202-03	HEATSINK COMPOUND, DC340	.200
BL26	2072-45041-00	LOCK PAD	2.0
BL27	4052-60248-88	SCREW, PH PHIL CRES, M 3X	1.0
BL28	2072-93405-00	INTERNAL CABLE	1.0
BL30	4052-60247-88	SCREW, CAP SOCK CRES, M 4	8.0
BL31	2072-56022-00	SPACER FOR CONNECTOR SUB-D	4.0
BL32	4052-30011-16	SCREW, #10-32X3/4	1.0
BL33	2072-45042-00	PLUG COVER, D-TYPE, 9 PIN	1.0
BL34	2072-45031-00	SCREW, M3X4, FH, BLACK	8.0
BL35	2072-45013-00	COVER	1.0
BL36	2072-09295-00	CABLE, FLAT, LORD-H.P	1.0
BL37	2072-90831-00	FRONT PANEL ASSY, TRUNK	1.0
BL38	2072-95212-00	MODULE INTERCONNECTION	1.0
BL39	2072-44015-00	BUSHING FOR TUNER	1.0
BL40	2072-33019-00	INSULATOR TO-220 CHAS, 1480075	1.0
BL41	4053-00068-16	WASHER, FLAT, CRS, PASSIVATED, .143	1.0
BL42	2072-09727-00	CABLE PANEL RADIO 16	1.0
BL44	4052-60246-88	SCREW, PH PHIL CRES, M 3X	3.0

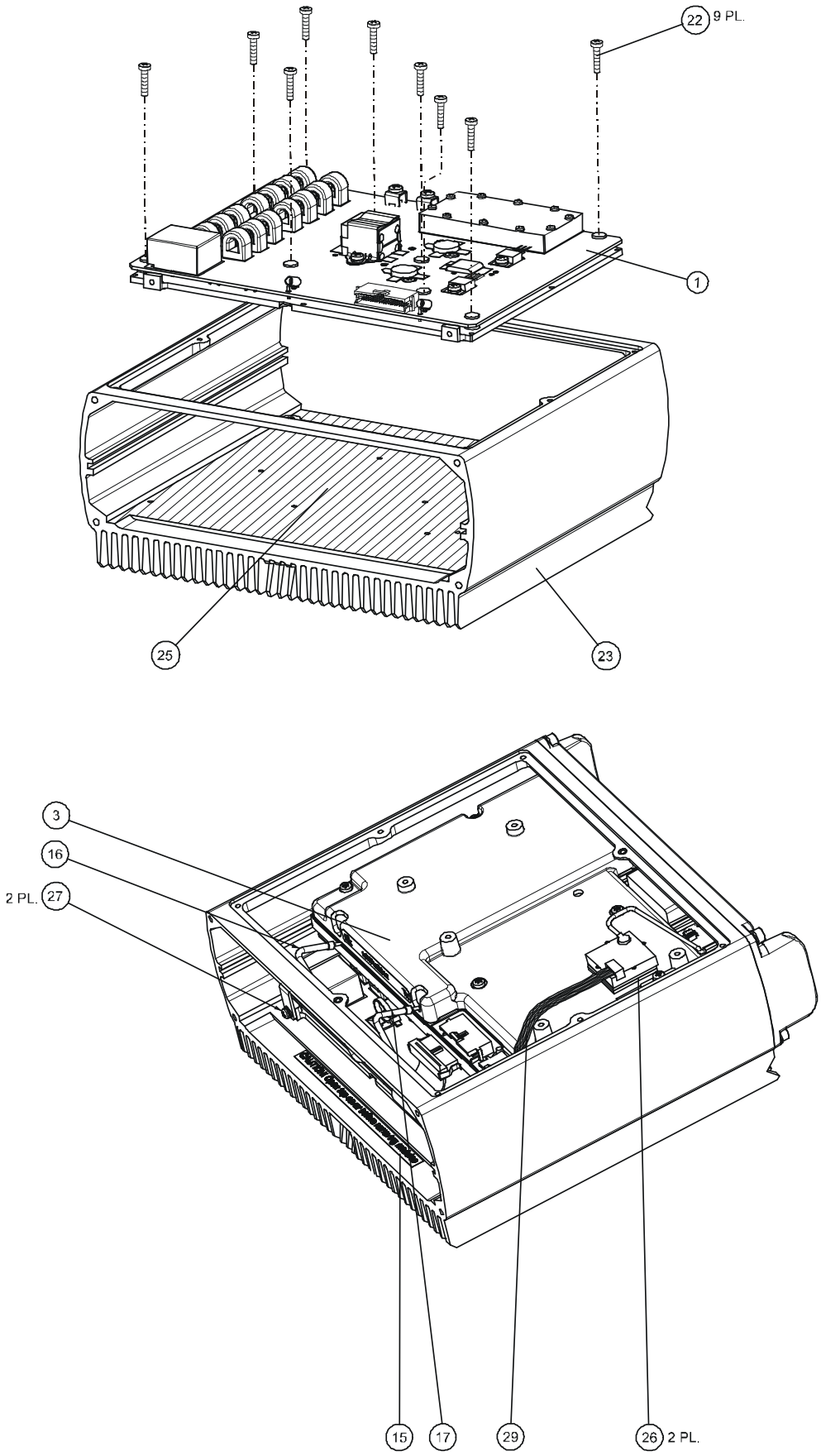

Figure B-7.A. Micom-Z Assembly, Trunk Version (Sheet 1 of 2)

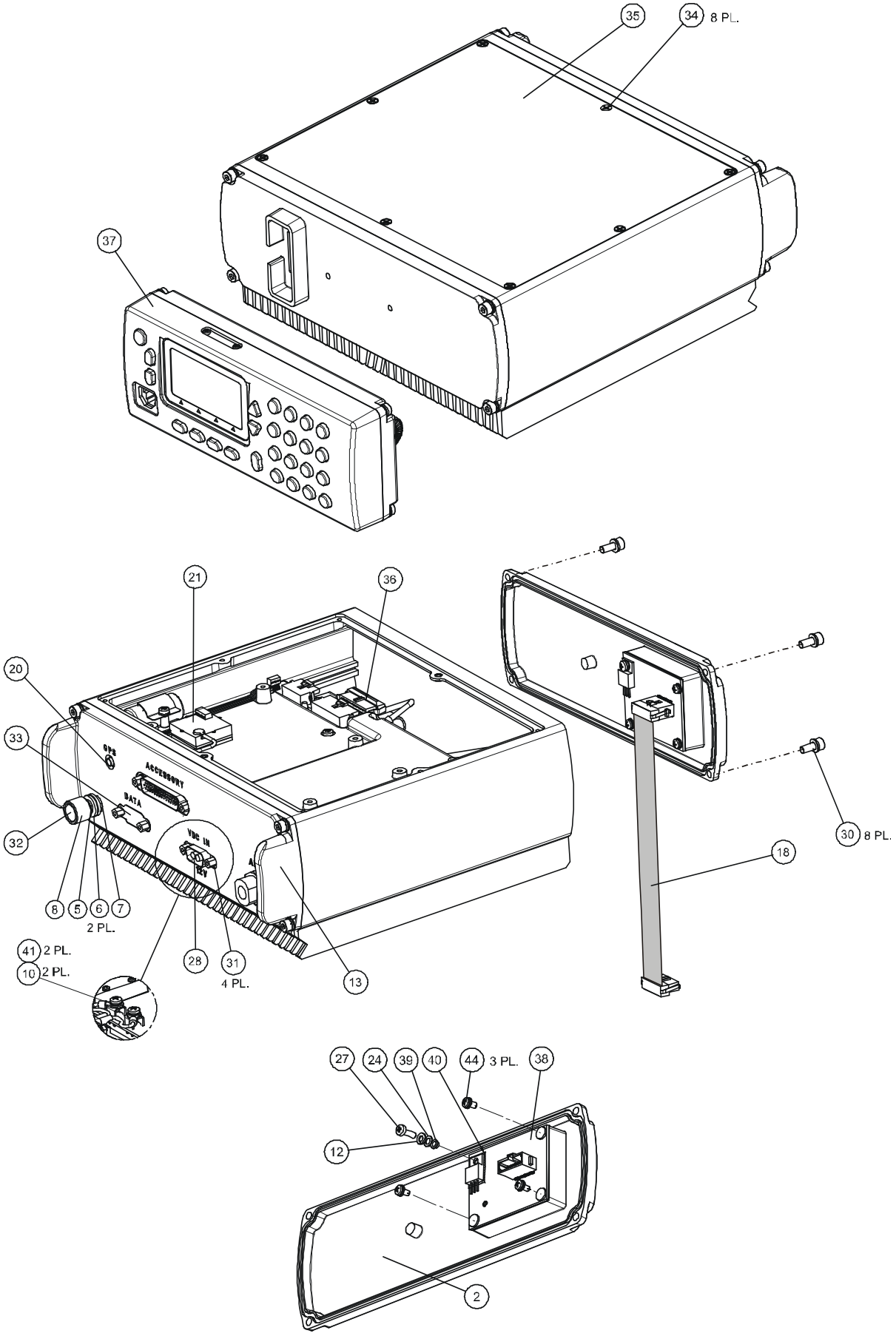

Figure B-7.B. Micom-Z Assembly, Trunk Version (Sheet 2 of 2)

Table B-8. LORD Assembly, Parts List

The LORD assembly used in the Micom-Z trunk version is identical to the LORD assembly used in the Micom-Z dash version.

See page B-4 to page B-58.

Table B-9. HI POWER Module, Parts List

The HI POWER module used in the Micom-Z trunk version is identical to the HI POWER module used in the Micom-Z dash version.

See page B-59 to page B-78.

Table B-10. Trunk Front Panel, Control Head Assembly, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-90831-00	FRONT PANEL TRUNK ASSY	Figure B-8
BL1	2072-45015-10	FRONT PANEL	1.0
BL2	2072-95211-10	FRONT PANEL MODULE TRUNK	1.0
BL3	2072-45004-00	KEYPAD	1.0
BL4	2072-90115-00	DISPLAY ASSY	1.0
BL5	2072-45007-00	WINDOW LC	1.0
BL6	2072-45036-00	INSERT	1.0
BL7	2072-45020-00	PLUG	1.0
BL8	2072-45027-10	REAR PANEL	1.0
BL9	4052-15003-00	SCREW, CROSS RECESSED, PAN HEAD	9.0
BL10	2072-45030-00	SCREW, M2X6 PH BLACK	6.0
BL12	4053-10012-15	WASHER, SPRING, CRS, BLACK, #8	4.0
BL13	2072-48180-00	SCREW, CAPTIVE FOR CHASSIS	4.0

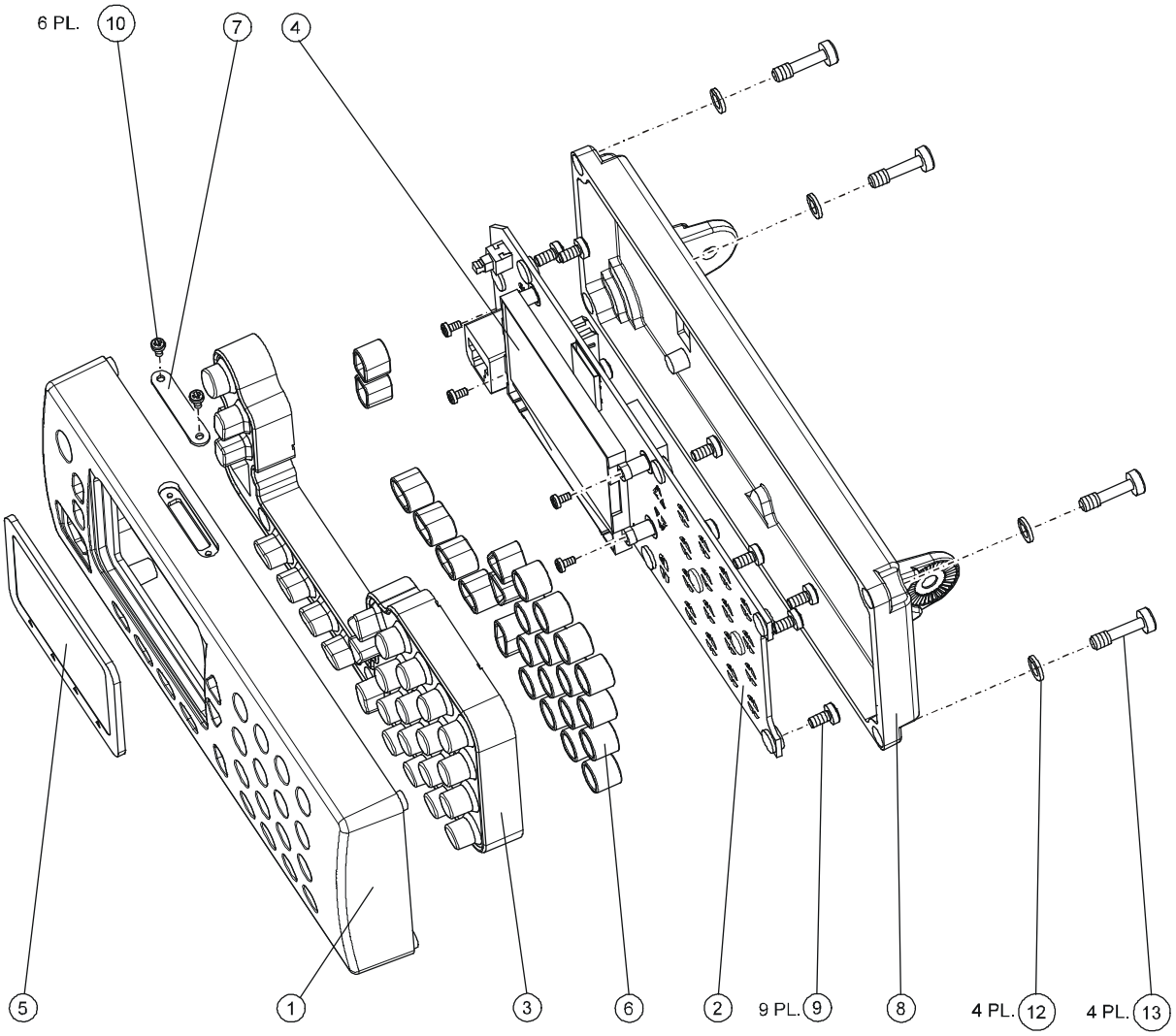

Figure B-8. Trunk Front Panel, Control Head Assembly

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95211-10	FRONT PANEL MODULE TRUNK	Figure B-9
BL1	2072-32211-00	FRONT PANEL PCB	1.0
BL2	2072-45003-00	STUD FOR MICOM-Z	4.0
C1	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C2	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C3	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C4	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C5	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C6	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C7	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C8	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C9	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C10	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C11	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C12	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C13	4017-20153-00	CAPACITOR, CHIP, CERAMIC, 2.2UF, 25V	1.0
C14	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C15	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C16	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C19	4017-25265-10	CAPACITOR, CHIP, NP0, 33PF, 1%	1.0
C20	4017-25265-10	CAPACITOR, CHIP, NP0, 33PF, 1%	1.0
C21	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C22	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C23	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C24	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C25	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C26	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C27	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C32	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C33	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C35	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C36	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C39	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C42	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C43	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C44	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C45	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C46	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C47	4017-20161-00	CAPACITOR, CHIP, X7R, 1UF, 10V	1.0
C53	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C54	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C59	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C60	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C61	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C62	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C63	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C64	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C65	4017-25271-00	CAPACITOR, CHIP, CG, 100PF, 5%	1.0
C66	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C67	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C68	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C69	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C70	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C71	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C72	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C73	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C74	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C76	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C78	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C79	4017-80304-00	CAPACITOR, 47UF, 35V	1.0
C80	4017-20191-00	CAPACITOR, 1210, X7R, 1UF, 100V	1.0
C81	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C82	4017-20191-00	CAPACITOR, 1210, X7R, 1UF, 100V	1.0
C83	4017-80304-00	CAPACITOR, 47UF, 35V	1.0
C84	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0
C85	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C86	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C87	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C88	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C89	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C90	4017-25286-00	CAPACITOR, CHIP, C0G, 100PF, 1%	1.0
C91	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C92	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C93	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C94	4017-25275-00	CAPACITOR, CHIP, CG, 220PF, 5%	1.0
C95	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C96	4017-25263-10	CAPACITOR, CHIP, NP0, 22PF, 1%	1.0
C97	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C98	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0
C99	2089-17202-00	CAPACITOR, 1812, X7R, 15UF, 25V	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C121	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C501	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C502	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C503	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C504	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C505	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C506	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C507	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C508	4017-20151-00	CAPACITOR, CHIP, X7R, 100NF, 25V	1.0
C509	4017-20151-00	CAPACITOR, CHIP, X7R, 100NF, 25V	1.0
C510	4017-80126-02	CAPACITOR, CHIP, TANTALUM, 15UF, 16V	1.0
C511	4017-20191-00	CAPACITOR, 1210, X7R, 1UF, 100V	1.0
C512	4017-80308-00	CAPACITOR, 22UF, 35V	1.0
C513	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C514	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C515	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C516	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C517	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C518	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C519	4017-80127-02	CAPACITOR, CHIP, TANTALUM, 33UF, 10V	1.0
C520	4017-25277-00	CAPACITOR, CHIP, CG, 330PF, 5%	1.0
C521	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C522	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C523	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C524	4017-20201-00	CAPACITOR, CHIP, X7R, 470NF, 16V	1.0
C525	4017-80102-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 10V	1.0
C526	4017-80102-02	CAPACITOR, CHIP, TANTALUM, 4.7UF, 10V	1.0
C527	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C528	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C529	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C530	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C531	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C532	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C533	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C534	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C535	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C536	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C537	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C538	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C539	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
C540	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C541	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C542	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C543	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C544	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C545	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C546	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C547	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C548	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C549	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C550	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C551	4017-20192-00	CAPACITOR, 1210, X7R, 4.7UF, 50V	1.0
C552	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C553	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C554	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C555	4017-20578-00	CAPACITOR, CHIP, 0402, 100NF	1.0
C556	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C557	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C558	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C559	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C601	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C602	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
CR2	4021-10403-35	DIODE, RECTIFIER, SCHOTTKY, MBRS360	1.0
CR501	4021-10098-35	DIODE, SWITCHING	1.0
DS1	4021-80052-35	LED, GREEN	1.0
DS2	4021-80052-35	LED, GREEN	1.0
DS3	4021-80052-35	LED, GREEN	1.0
DS4	4021-80052-35	LED, GREEN	1.0
DS5	4021-80052-35	LED, GREEN	1.0
DS6	4021-80052-35	LED, GREEN	1.0
DS7	4021-80052-35	LED, GREEN	1.0
DS8	4021-80052-35	LED, GREEN	1.0
DS9	4021-80052-35	LED, GREEN	1.0
DS10	4021-80052-35	LED, GREEN	1.0
DS11	4021-80052-35	LED, GREEN	1.0
DS12	4021-80052-35	LED, GREEN	1.0
DS13	4021-80052-35	LED, GREEN	1.0
DS14	4021-80052-35	LED, GREEN	1.0
DS15	4021-80052-35	LED, GREEN	1.0
DS16	4021-80052-35	LED, GREEN	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
DS17	4021-80052-35	LED, GREEN	1.0
DS18	4021-80052-35	LED, GREEN	1.0
DS19	4021-80052-35	LED, GREEN	1.0
DS20	4021-80052-35	LED, GREEN	1.0
DS21	4021-80052-35	LED, GREEN	1.0
DS22	4021-80052-35	LED, GREEN	1.0
DS23	4021-80052-35	LED, GREEN	1.0
DS24	4021-80052-35	LED, GREEN	1.0
DS25	4021-80052-35	LED, GREEN	1.0
DS26	4021-80052-35	LED, GREEN	1.0
DS27	4021-80052-35	LED, GREEN	1.0
E19	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E20	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E26	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E27	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E28	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E29	4018-60030-00	BEAD, EMI, 75 OHM, 200mA	1.0
E501	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E502	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
E601	4018-60017-00	BEAD, EMI, 60 OHM, 500mA	1.0
J3	4033-60109-00	CONNECTOR FPC/FFC, 40S	1.0
J4	4033-53021-00	SD MEMORY CARD CONNECTOR	1.0
L1	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L2	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L3	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L4	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L5	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L6	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L7	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L8	4018-10116-00	INDUCTOR, 33UH	1.0
L501	4018-10202-00	INDUCTOR, 10UH	1.0
L502	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L503	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L504	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L505	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L506	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L507	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L508	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L509	4018-12052-00	COIL, FIXED, 4.7UH	1.0
P2	4033-51109-01	CONNECTOR, 2 PIN, 1.25mm	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
P4	4033-51007-01	HEADER, 2 PIN	1.0
P5	4033-50225-01	STRIP, DOUBLE ROW, 5 PIN	1.0
P6	2072-33325-00	CONNECTOR, MIC	1.0
P7	4033-50212-01	STRIP, SINGLE ROW, 2 PIN	1.0
P501	4033-51315-00	CONNECTOR, HEADER, DUAL ROW, 16 PIN	1.0
Q1	4021-00183-35	MOSFET, P-CHANNEL	1.0
Q2	4021-00299-35	MOSFET, N-CHANNEL	1.0
Q3	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q4	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
Q7	4021-00415-35	FET	1.0
Q501	4021-00415-35	FET	1.0
Q502	4021-00415-35	FET	1.0
Q503	4021-00341-35	TRANSISTOR, PNP	1.0
Q504	4021-00341-35	TRANSISTOR, PNP	1.0
Q505	4021-00415-35	FET	1.0
Q506	4021-00415-35	FET	1.0
Q507	4021-00415-35	FET	1.0
Q508	4021-00202-35	TRANSISTOR, NPN, MMBT2222A	1.0
R1	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R2	4016-11009-10	RESISTOR, CHIP, 10.0K, 1%, 1/8W	1.0
R3	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R4	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R5	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9	4016-22210-10	RESISTOR, 221, 1%, 1/16W	1.0
R12	4016-21004-10	RESISTOR, 1.0M, 1%, 1/16W	1.0
R13	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R14	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R15	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R16	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R17	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R18	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R19	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R20	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R21	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R22	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R23	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R24	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R25	4016-21212-10	RESISTOR, 12.1K, 1%, 1/16W	1.0
R26	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R27	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R28	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R29	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R30	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R31	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R32	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R33	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R34	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R35	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R36	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R37	4016-21004-10	RESISTOR, 1.0M, 1%, 1/16W	1.0
R38	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R39	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R40	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R41	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R42	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R43	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R44	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R45	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R46	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R47	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R48	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R49	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R50	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R51	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R52	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R53	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R54	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R55	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R56	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R57	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R58	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R59	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R60	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R61	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R62	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R63	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R64	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R65	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R66	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R67	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R68	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R69	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R70	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R71	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R72	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R73	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R74	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R75	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R76	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R77	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R78	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R79	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R80	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R81	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R82	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R83	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R84	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R85	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R86	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R87	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R88	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R89	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R90	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R91	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R92	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R93	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R94	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R95	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R96	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R97	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R98	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R99	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R100	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R101	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R102	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R103	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R104	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R105	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R106	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R107	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R108	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R109	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R110	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R111	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R112	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R113	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R114	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R115	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R116	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R117	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R118	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R119	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R120	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R121	4016-51002-10	RESISTOR, CHIP, MF, 10K, 0.06W	1.0
R122	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R123	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R124	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R125	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R126	4016-21500-10	RESISTOR, CHIP, MF, 150E, 0.063W	1.0
R127	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R128	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R133	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R137	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R138	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R139	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R140	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R141	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R142	4016-11500-10	RESISTOR, CHIP, 150, 1%, 1/8W	1.0
R143	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R144	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R145	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R146	4016-25112-10	RESISTOR, 51.1K, 1%, 1/16W	1.0
R151	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R152	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R155	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R156	4016-10519-50	RESISTOR, CHIP, 5.1, 5%, 1/8W	1.0
R157	4016-13011-10	RESISTOR, CHIP, 3.01K, 1%, 1/8W	1.0
R158	4016-14751-10	RESISTOR, CHIP, 4.75K, 1%, 1/8W	1.0
R159	4016-15111-10	RESISTOR, CHIP, 5.11K, 1%, 1/8W	1.0
R160	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R166	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R167	4016-14750-10	RESISTOR, CHIP, 475, 1%, 1/8W	1.0
R170	4016-23329-10	RESISTOR, CHIP, 0603, 33.2, 1%	1.0
R177	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R178	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R181	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R186	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R187	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R193	4016-24121-10	RESISTOR, 4.12K, 1%, 1/16W	1.0
R194	4016-23012-10	RESISTOR, CHIP, 0603, 30.1K, 1%	1.0
R195	4016-31900-10	RESISTOR, CHIP, 0.1, 1%, 1W	1.0
R196	4016-31900-10	RESISTOR, CHIP, 0.1, 1%, 1W	1.0
R197	4016-23162-10	RESISTOR, CHIP, 0603, 31.6K, 1%	1.0
R198	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R201	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R202	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R203	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R204	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R206	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R207	4016-25111-10	RESISTOR, 5.11K, 1%, 1/16W	1.0
R212	4016-22213-10	RESISTOR, 221K, 1%, 1/16W	1.0
R213	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R214	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R215	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R220	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R221	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R222	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R223	4016-52219-10	RESISTOR, CHIP, 0402, 22.1	1.0
R226	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R229	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R233	4016-14999-10	RESISTOR, CHIP, 49.9, 1%, 1/8W	1.0
R501	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R505	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R507	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R508	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R509	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R512	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
R513	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R514	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R515	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R516	4016-23011-10	RESISTOR, 3.01K, 1%, 1/16W	1.0
R517	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R518	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R519	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R520	4016-21000-10	RESISTOR, 100, 1%, 1/16W	1.0
R521	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R522	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R523	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R524	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R525	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R527	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R528	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R529	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R530	4016-43329-10	RESISTOR, CHIP, 33.2, 1%, 1W	1.0
R531	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R532	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R533	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R534	4016-60000-50	RESISTOR, CHIP, 0 OHM, 1/2W	1.0
R535	4016-60000-50	RESISTOR, CHIP, 0 OHM, 1/2W	1.0
R536	4016-18251-10	RESISTOR, CHIP, 8.25K, 1%, 1/8W	1.0
R537	4016-45119-10	RESISTOR, 2512 51.1, 1%, 1W	1.0
R538	4016-24029-10	RESISTOR, CHIP, 0603, 40.2, 1%	1.0
R539	4016-23329-10	RESISTOR, CHIP, 0603, 33.2, 1%	1.0
R540	4016-62009-10	RESISTOR, CHIP, 20, 1%, 1/2W	1.0
R541	4016-28669-10	RESISTOR, CHIP, 0603, 86.6, 1%	1.0
R542	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R543	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R544	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R545	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R546	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R547	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R548	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R549	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R550	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R551	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R552	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R553	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R554	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R555	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R556	4016-25620-10	RESISTOR, CHIP, 0603, 562, 1%	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R557	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R558	4016-22740-10	RESISTOR, 274, 1%, 1/16W	1.0
R559	4016-22741-10	RESISTOR, 2.74K, 1%, 1/16W	1.0
R560	4016-24751-10	RESISTOR, 4.75K, 1%, 1/16W	1.0
R561	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R562	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R563	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R564	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R565	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R566	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R567	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R568	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R569	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R574	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R575	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R576	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R577	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R578	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R579	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R580	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
R581	4016-12671-10	RESISTOR, CHIP, 2.67K, 1%, 1/8W	1.0
R582	4016-20000-50	RESISTOR, CHIP, 0603, JUMPER	1.0
R583	4016-21101-10	RESISTOR, 1.10K, 1%, 1/16W	1.0
R584	4016-50000-50	RESISTOR, CHIP, 0402, JUMPER	1.0
R601	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R602	4016-25110-10	RESISTOR, 511, 1%, 1/16W	1.0
R603	4016-45119-10	RESISTOR, 2512 51.1, 1%, 1W	1.0
R604	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%	1.0
RT1	4016-91103-20	THERMISTOR, NTC	1.0
SW26	2036-31016-00	SWITCH, DPDT, LOCKING	1.0
T1	4018-10178-00	TRAFO, DUAL WINDING, SHIELDED	1.0
U1	4021-50043-64	MICROCONTROLLER, 8051	1.0
U3	4021-31132-50	SCHMITT TRIGGER, 74HC132	1.0
U4	4021-22111-54	VOLTAGE REGULATOR, 3.3V	1.0
U5	4021-22108-54	VOLTAGE REGULATOR, 3.0V	1.0
U6	4021-22020-64	PWM CONTROLLER	1.0
U7	4021-20504-54	COMPARATOR, DUAL, 2-36V	1.0
U501	4021-20045-84	VOLTAGE REGULATOR, FIXED	1.0
U502	4021-22114-50	VOLTAGE REGULATOR, FIXED	1.0
U503	4021-20170-54	OPERATIONAL AMPLIFIER, QUAD	1.0

Table B-11. CONTROL HEAD Module (Trunk Mount Version), Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
U504	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0
U505	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0
U506	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0
U507	4021-70697-64	RS232, 2TX+2RX	1.0
VR1	4021-10471-35	ZENER, 4.3V	1.0
VR2	4021-10471-35	ZENER, 4.3V	1.0
VR501	4021-10810-35	ZENER, 3.6V	1.0
VR502	4021-10471-35	ZENER, 4.3V	1.0
VR503	4021-10471-35	ZENER, 4.3V	1.0
VR504	4021-10471-35	ZENER, 4.3V	1.0
VR505	4021-10471-35	ZENER, 4.3V	1.0
VR506	4021-10471-35	ZENER, 4.3V	1.0
VR507	4021-10471-35	ZENER, 4.3V	1.0
VR508	4021-10471-35	ZENER, 4.3V	1.0
VR509	4021-10471-35	ZENER, 4.3V	1.0
VR510	4021-10471-35	ZENER, 4.3V	1.0
VR511	4021-10471-35	ZENER, 4.3V	1.0
Y1	4022-50026-00	CRYSTAL QUARTZ, 7.3728 MHz	1.0

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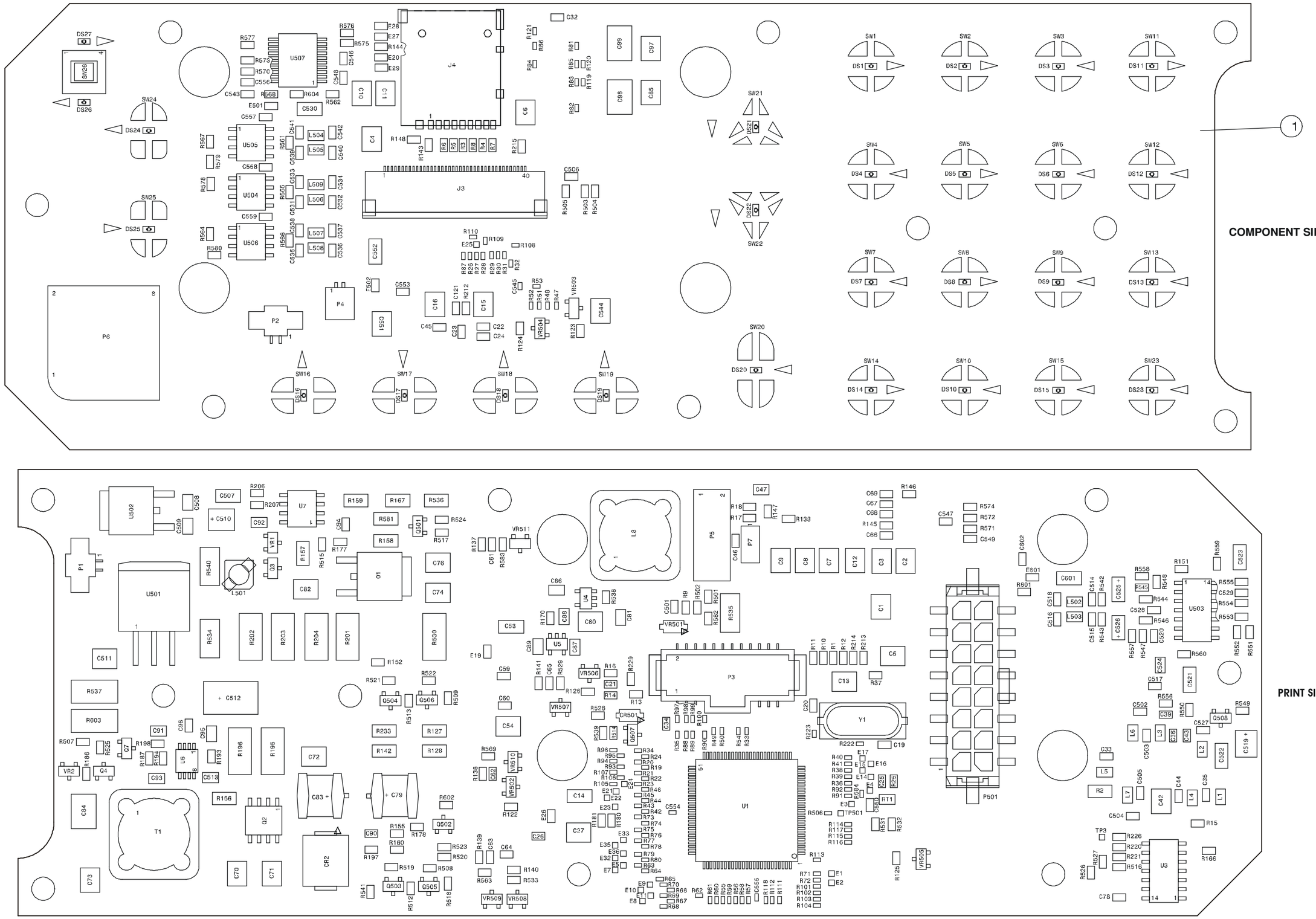


Figure B-9. CONTROL HEAD Module (Trunk Mount Version), Identification of Components

Table B-12. INTERCONNECTION Module, Parts List

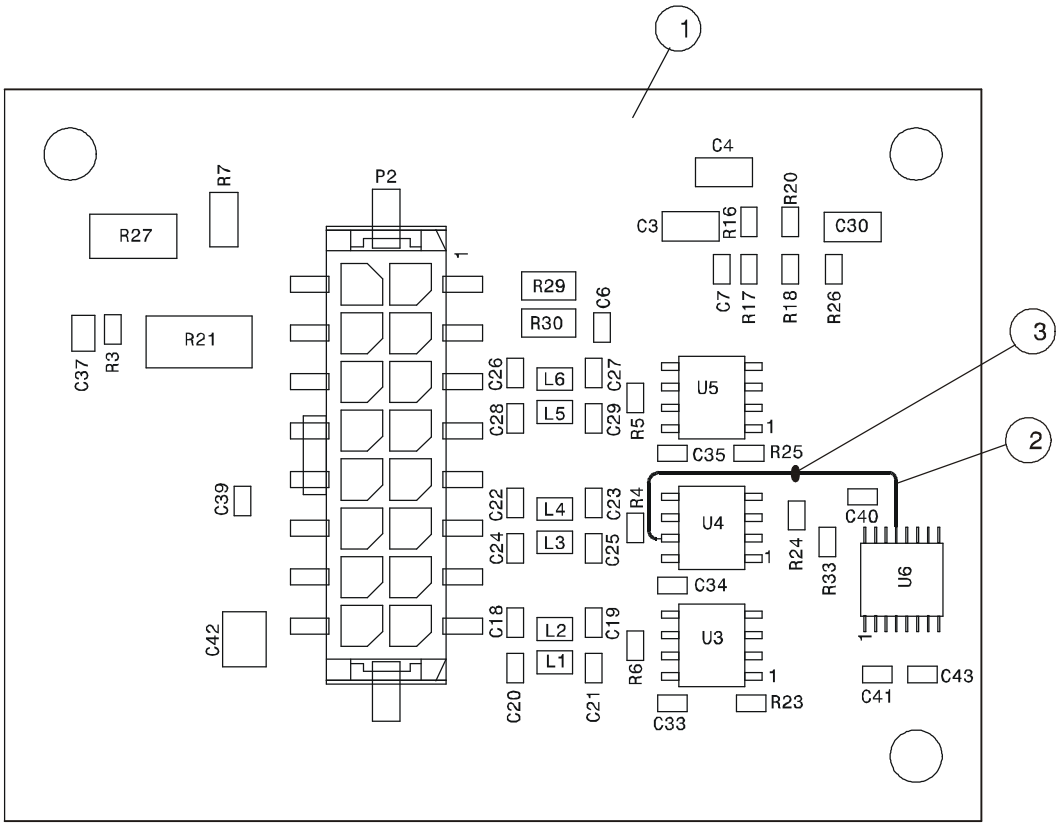
Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95212-00	INTERCONNECTION MODULE	Figure B-10
BL1	2072-32212-00	INTERCONNECTION PCB	1.0
C1	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C2	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C3	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C4	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C5	2072-17821-00	CAPACITOR, CHIP, X7R, 390NF, 16V	1.0
C6	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C7	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C8	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C9	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C10	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C11	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C14	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C15	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C16	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C17	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0
C18	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C19	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C20	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C21	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C22	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C23	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C24	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C25	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C26	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C27	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C28	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C29	4017-25274-00	CAPACITOR, 0603, NP0, 180PF, 50V	1.0
C30	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C31	4017-20109-25	CAPACITOR, CHIP, X7R, 10UF	1.0
C32	4017-20567-00	CAPACITOR, CHIP, X7R, 10NF, 16V	1.0
C33	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C34	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C35	4017-20284-00	CAPACITOR, CHIP, CERAMIC, 100NF, 16V	1.0
C36	4017-20151-00	CAPACITOR, CHIP, X7R, 100NF, 25V	1.0
C37	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C38	4017-20165-00	CAPACITOR, CHIP, CERAMIC, 100NF, 50V	1.0
C39	4017-25282-00	CAPACITOR, CHIP, CG, 1NF, 5%	1.0

Table B-12. INTERCONNECTION Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
L1	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L2	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L3	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L4	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L5	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L6	4018-12052-00	COIL, FIXED, 4.7UH	1.0
L7	4018-10016-00	COIL, CHIP, 22UH, 10%	1.0
L8	4018-10016-00	COIL, CHIP, 22UH, 10%	1.0
L9	4018-10016-00	COIL, CHIP, 22UH, 10%	1.0
L10	4018-10016-00	COIL, CHIP, 22UH, 10%	1.0
L11	4018-10016-00	COIL, CHIP, 22UH, 10%	1.0
P1	4033-51201-01	HEADER, 0.05", 24 PIN, DUAL ROW	1.0
P2	4033-51315-00	CONNECTOR, HEADER,16 PIN, DUAL ROW	1.0
Q1	2072-21060-00	TRANSISTOR, PNP, 60V	1.0
R1	4016-15620-10	RESISTOR, CHIP, 562, 1%, 1/8W	1.0
R2	4016-12610-10	RESISTOR, CHIP, 261, 1%, 1/8W	1.0
R3	4016-21542-10	RESISTOR, 15.4K, 1%, 1/16W	1.0
R4	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R5	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R6	4016-21001-10	RESISTOR, 1.00K, 1%, 1/16W	1.0
R7	4016-16199-10	RESISTOR, CHIP, 61.9, 1%, 1/8W	1.0
R8	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R9	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R10	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R11	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R12	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R13	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R14	4016-21002-10	RESISTOR, 10.0K, 1%, 1/16W	1.0
R15	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R16	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R17	4016-25622-10	RESISTOR, CHIP, 0603, 56.2K, 1%	1.0
R18	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R19	4016-22002-10	RESISTOR, 20.0K, 1%, 1/16W	1.0
R20	4016-21003-10	RESISTOR, 100K, 1%, 1/16W	1.0
R21	4016-41821-10	RESISTOR, 2512, 1.82K, 1%, 1W	1.0
R22	4016-24322-10	RESISTOR, 43.2K, 1%, 1/16W	1.0
R23	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%,	1.0
R24	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%,	1.0
R25	4016-21009-10	RESISTOR, CHIP, 0603, 10, 1%,	1.0
R26	4016-22671-10	RESISTOR, 2.67K, 1%, 1/16W	1.0

Table B-12. INTERCONNECTION Module, Parts List (Cont'd)

Ref. Des.	Mfg. Catalog No.	Description	Qty.
R27	4016-65620-10	RESISTOR, CHIP, 562, 1%, 1/2W	1.0
R29	4016-10000-10	RESISTOR, CHIP, 1/8W, JUMPER	1.0
R30	4016-10000-10	RESISTOR, CHIP, 1/8W, JUMPER	1.0
U1	4021-20084-54	OPERATIONAL AMPLIFIER, MC33072D	1.0
U2	4021-20010-54	VOLTAGE REGULATOR, ADJUSTABLE, LP2951	1.0
U3	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0
U4	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0
U5	4021-70098-54	LINE TRANSCEIVER, RS-485	1.0



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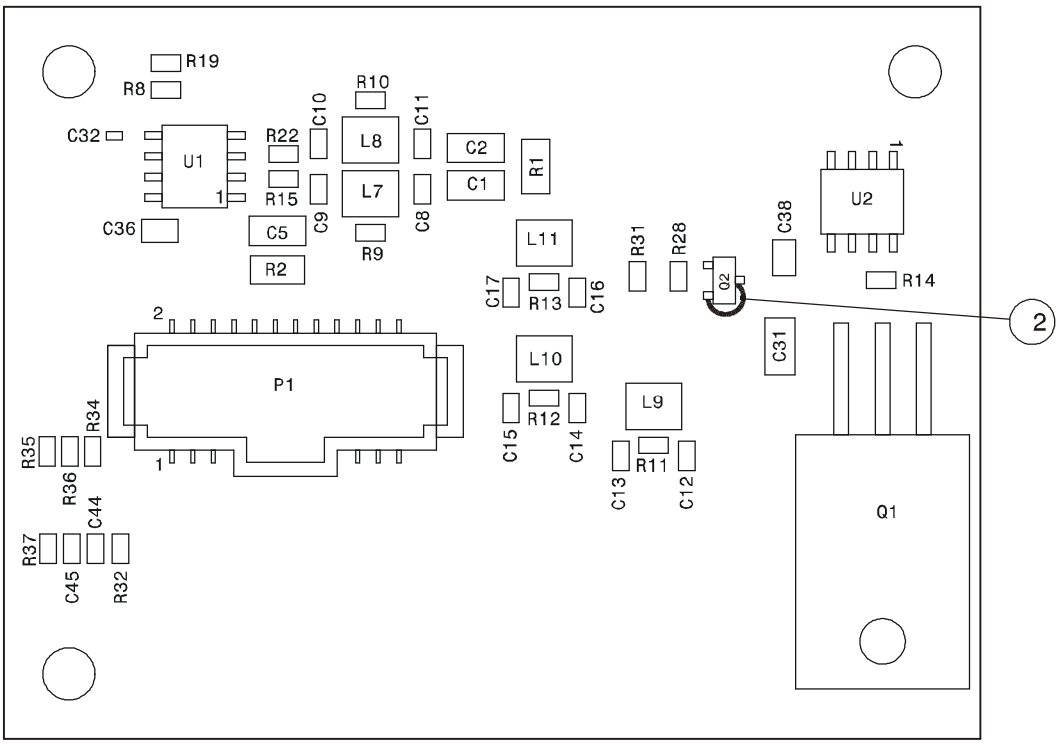

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Figure B-10. INTERCONNECTION Module, Identification of Components

Section III. COOLING TRAY

Table B-13. Cooling Tray Assembly, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
BL1	2072-45037-00	COOLING TRAY	Figure B-11
BL2	4056-90028-88	PROTECTIVE BUFFER	4.0
BL3	2072-52039-00	SCREW, M3×10, PHILIPS BLACK	4.0
BL4	4052-15008-00	CROSS COUNTERSUNK HEAD	4.0
BL5	2072-40970-00	GRILL FOR FAN, 1308116L0	1.0
BL6	2072-51002-00	NUT, M4X0.7 HEX SSTP	4.0
BL7	4053-15001-00	FLAT WASHER	8.0
BL8	4053-70002-16	WASHER, SPRING, M4	4.0
BL9	2072-41030-00	SPACER, 4-40 X 3116, 03MB	4.0
BL10	4053-16001-00	SPRING LOCKWASHERS, M3	4.0
BL12	4052-60246-88	SCREW, PH PHIL CRES, M 3X	7.0
BL13	2072-51004-00	NUT, M3 DIN 93,4 02MB0000	4.0
BL14	2072-93014-00	INTERNAL CABLE, 9 PIN TO FAN	1.0
BL15	2072-95235-00	FAN CONTROL MODULE	1.0

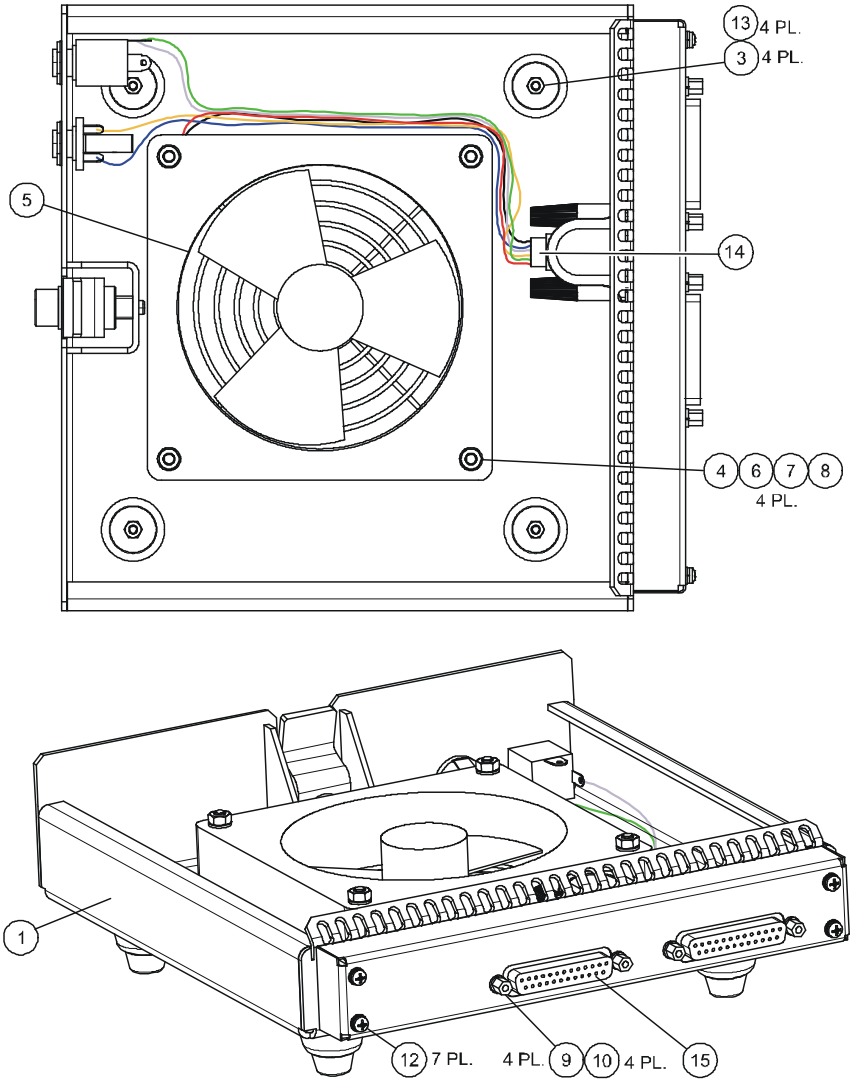


Figure B-11. Cooling Tray Assembly

Table B-14. FAN CONTROL Module, Parts List

Ref. Des.	Mfg. Catalog No.	Description	Qty.
	2072-95235-00	FAN CONTROL MODULE	Figure B-12
C1	4017-25282-00	CAPACITOR, 1NF, 06035A102JAT2A	1
C2	4017-25282-00	CAPACITOR, 1NF, 06035A102JAT2A	1
C3	4017-25282-00	CAPACITOR, 1NF, 06035A102JAT2A	1
C4	4017-25282-00	CAPACITOR, 1NF, 06035A102JAT2A	1
C5	4017-80112-02	CAPACITOR, 2.2UF, 293D225X0035C2T	1
C6	4017-80112-02	CAPACITOR, 2.2UF, 293D225X0035C2T	1
C7	4017-25279-00	CAPACITOR, 470PF, CM105CG471J50AT	1
C8	4017-25282-00	CAPACITOR, 1NF, 06035A102JAT2A	1
C9	4017-20271-00	CAPACITOR, 10NF, CM105X7R103K50AT	1
C10	4017-20271-00	CAPACITOR, 10NF, CM105X7R103K50AT	1
J1	4033-40091-02	CONNECTOR, 25 PIN, FEMALE, CD729S31D4	1
J2	4033-40093-02	CONNECTOR, CD7225S31D4	1
J3	4033-40093-02	CONNECTOR, CD7225S31D4	1
L1	4018-12206-00	INDUCTOR, 22 UH, NL252018T-220J	1
L2	4018-12206-00	INDUCTOR, 22 UH, NL252018T-220J	1
Q1	4021-00342-35	TRANSISTOR, PNP, MMBT3904LT1	1
Q2	4021-00179-35	TRANSISTOR, NPN, MJD2955T4	1
R1	4016-11100-10	RESISTOR, 1K, CRCW12061100FRT2	1
R2	4016-11001-10	RESISTOR, 1K, CRCW12061001FRT2	1
R3	4016-45110-10	RESISTOR, 511, CRCW25125110FR67	1
R4	4016-45110-10	RESISTOR, 511, CRCW25125110FR67	1
R5	4016-21002-10	RESISTOR, 10K, CRCW06031002FRT1	1
R6	4016-14750-10	RESISTOR, 475, CRCW12064750FRT2	1
R7	4016-25622-10	RESISTOR, 56.2K, CRCW06035622FRT1	1
U1	4021-20010-54	VOLTAGE REGULATOR, ADJUSTABLE, LP2951CMX	1

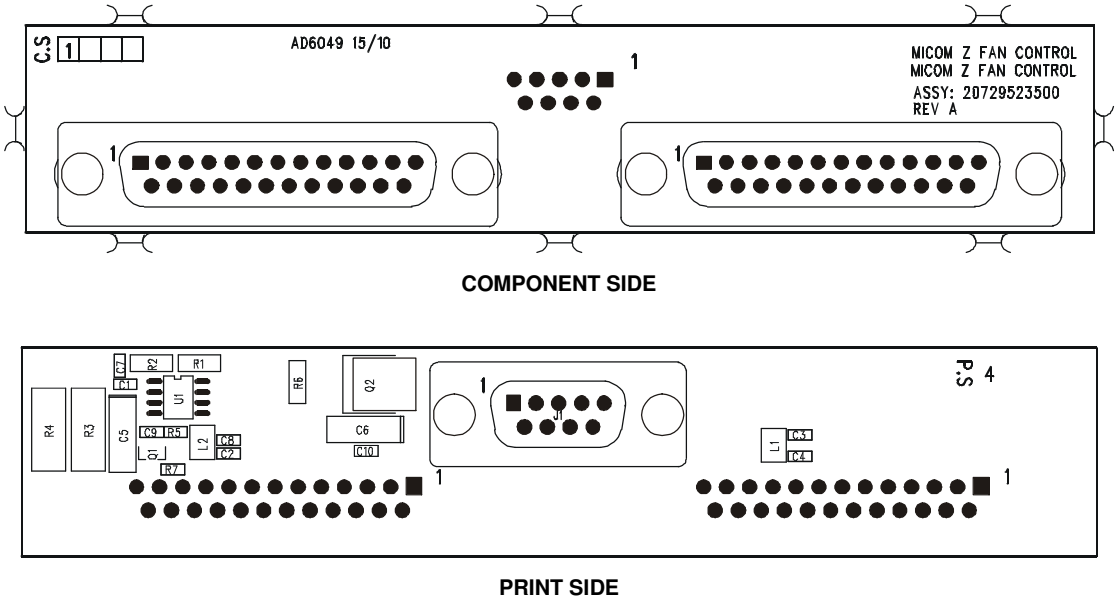
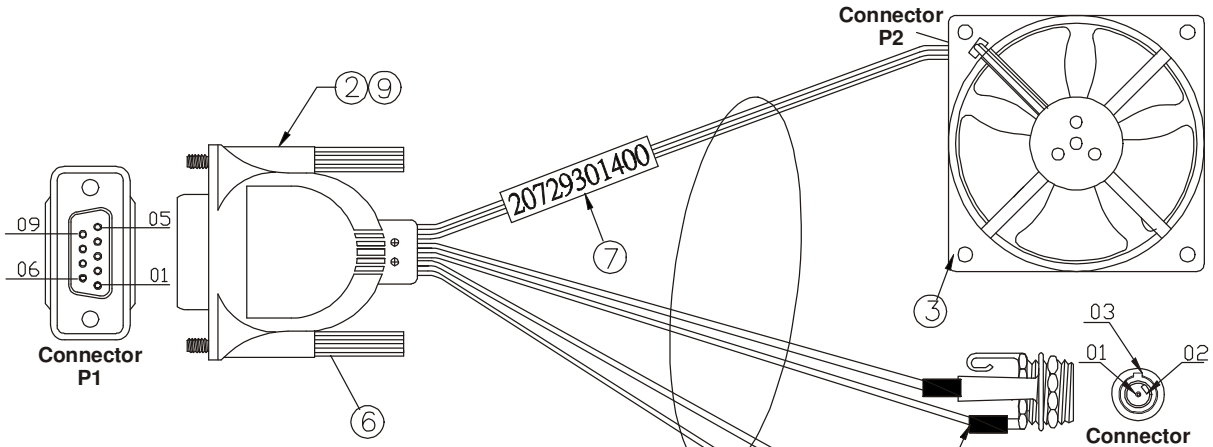


Figure B-12. FAN CONTROL Module, Identification of Components

Table B-15. Fan Harness Assembly, Parts List

Ref. Des.	Description	Qty.
1	WIRE HARNESS	Figure B-13
2	CONNECTOR, 9 PIN, D-TYPE, FEMALE	1
3	FAN, 298DHLP11000	1
4	5.3 mm DC PHONE JACK	1
5	1/4" PHONE JACK	1
6	SCREW, 4-40 UNC, 23.0 mm	2
7	LABEL	1
8	HEATSHRINK TUBING	4
9	OUTER MOLD, 45 PIN, PVC	



Connector P1	Color	Connector P2	Connector P3	Connector P4
1	Red	1		
3	Black	2		
4	Orange		1	
5	Blue		2	
7	Green			1
9	White			2

Figure B-13. Fan Harness Assembly

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