SHARP

SERVICE MANUAL

S1stLC39LE650

Issued: 14th June 2013

1st Edition

LED LCD COLOUR TELEVISION

Wi-Fi & 3D Ready / DVB-T / T2 / C / S / S2 PAL B/G / SECAM B/G, D/K, L/L' SYSTEM COLOUR TELEVISION

MODELS

LC-39LE650E/RU/V
LC-39LE651E/K/RU/V
LC-39LE652E/RU/V

LC-50LE650E/RU/V
LC-50LE651E/K/RU/V
LC-50LE652E/RU/V

In the interests of user safety (required by safety regulations in some countries) the set should be re-stored to its original condition and only parts identical to those specified should be used.

CONTENTS

SHARP CORPORATION

ELECTRICAL SPECIFICATIONS

Specifications

Item			39" LCD COLOUR TV, Models: LC-39LE650E/RU/V LC-39LE651E/K/RU/V LC-39LE652E/RU/V LC-39LE654E/RU/V LC-39LU651E LC-39LM652E/V LC-39LK652E LC-39LX652E	50" LCD COLOUR TV, Models: LC-50LE650E/RU/V LC-50LE651E/K/RU/V LC-50LE652E/RU/V LC-50LE654E/RU/V LC-50LU651E LC-50LM652E/V LC-50LK652E LC-50LX652E	60" LCD COLOUR TV, Models: LC-60LE650E/RU LC-60LE651E/K/RU LC-60LE652E/RU LC-60LE654E/RU LC-60LU651E LC-60LM652E LC-60LK652E LC-60LX652E
LCD Panel (LED TV)			39" BLACK TFT	50" BLACK TFT	60" BLACK TFT
Resolution			6.220.800 dots (1.920 x 1.080 pixels)		
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60		
TV Func-tions	TV Standard	Analogue	CCIR (B/G, I, D/K, L/L')		
		Digital	DVB-T (2K/8K OFDM)(H.264), DVB-C, DVB-C2 (L*654 only), DVB-T2(L*651/654 only), DVB-S/S2 (L*652/654 only)		
	Receiving Channel	VHF/UHF	E2–E69 ch, F2–F10 ch, I21–I69 ch, IR A–IR J ch (Digital: IR A ch–E69 ch)		
		CATV	Hyper-band, S1–S41 ch		
	TV-Tuning System		Auto Preset 999 ch: non-Nordic / 9999 ch: Nordic (ATV: 99 ch), Auto Label, Auto Sort		
	STEREO / BILINGUAL		NICAM/A2		
Viewing angles			H: 176°, V: 176°		
Audio Amplifier			15 W + 15 W (Music power)		
Speaker			(96 mm x 30mm) x 2		
Terminals	TV Antenna	VHF/UHF	UHF/VHF 75 Ω Din type (Analogue & Digital)		
		Satellite (652/654 series only)	75 Ω F type (DVB-S/S2)		
	SERVICE		Ø 3.5 mm jack		
	SCART		SCART (AV input, RGB input, TV output, Y/C input)		
	PC INPUT		VGA (D-Sub 15pin), Ø 3.5 mm jack (shared with HDMI)		
	COMPONENTS		COMPONENT IN: Y/PB(CB)/PR(CR), RCA (AUDIO R/L)		
	HDMI1		HDMI, Ø 3.5 mm jack (shared with PC INPUT), ARC, 3D.		
	HDMI2		HDMI, Ø 3.5 mm jack (shared with PC INPUT), 3D.		
	HDMI3		HDMI, Ø 3.5 mm jack (shared with PC INPUT), 3D.		
	HDMI4		HDMI, Ø 3.5 mm jack (shared with PC INPUT), 3D.		
	USB 1		USB 2.0 HOST (A Type)		
	USB 2		USB 2.0 HOST (A type)		
	USB 3 (WIFI)		USB 2.0 HOST (A type) (Wi-Fi use only)		
	ETHERNET (10/100)		Network connector		
	AV		RCA connector (AV input)		
	S/PDIF OUT		RCA S/PDIF digital audio output.		
	C. I. (Common Interface)		EN50221, R206001, CI+ specification		
	Headphones		Ø 3.5 mm jack (Audio output)		
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian, Byelorussian, Romanian, Croatian, Serbian.		
Power Requirement			AC 220–240 V, 50 Hz		
Power Consumption (IEC62087 Method)			99W (0.24W Stby)	121W (0.24W Stby)	175W (0.24W Stby)
Weight			10.7Kg (Without stand) 13.3 Kg (With stand)	16.7Kg (Without stand) 20.1Kg (With stand)	24.3Kg (Without stand) 29.6 Kg (With stand)
Operating Temperature			0 °C to +40 °C		

IMPORTANT SERVICE SAFETY PRECAUTION

Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

> **CAUTION**: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE F101 (T4 AH / 250V)

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

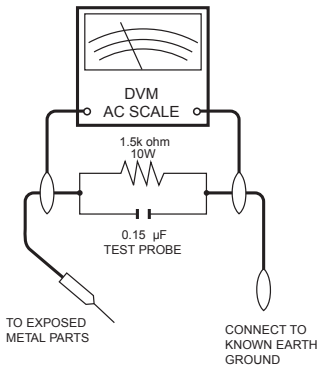
• Plug the AC cord directly into a 220~240 volt AC outlet. (Do not use an isolation transformer for this test).

•Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.

- •A true RMS reading multimeter should be used for this test, especially where the equipment uses a switch mode power supply which may result in very non-sinusoidal leakage current.
- •Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

Any reading of 1.05V peak (this corresponds to 0.7 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠".

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

1 Employing lead-free solder

"ALL PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.
Example:

Indicates lead-free solder of tin, silver and copper.

Indicates lead-free solder of tin, silver and nickel.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

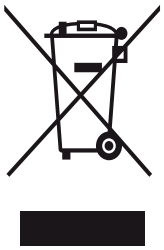
As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.
If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing.

Part No.	★	Description	Code
ZHNDAi123250E	J	ϕ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg(1roll)	BM

END OF LIFE DISPOSAL



Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.
Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.
*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

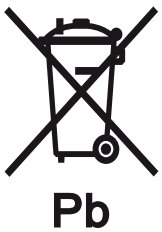
If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.



The battery supplied with this product contains traces of Lead.

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation. Please contact your local authority for details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery.

OPERATION MANUAL

Remote control unit

1 NET (Page 37)
Access “AQUOS NET+” mode.

2 Alphanumeric buttons 0–9
Set the channel. Enter desired numbers. Set the page in teletext mode.
- When the five Nordic countries (Sweden, Norway, Finland, Denmark or Iceland) are selected in the country setting from initial auto installation (Page 9), DTV services are four digits. When another country is selected, DTV services are three digits.

3 (Flashback)
Return to the previously selected channel or external input.

4 (Sound mode) (Page17)
Select a sound multiplex mode.

Picture format (Page 31)
Change between different picture formats.

5 +/– (Volume)
Increase/decrease TV volume.

6 (Mute)
TV sound on/off.

7 ▲/▼/◀/▶ (Cursor)
Select a desired item.

OK
Execute a command.
ATV/DTV/SAT: Display “CH list” when no other “MENU” screen is running.

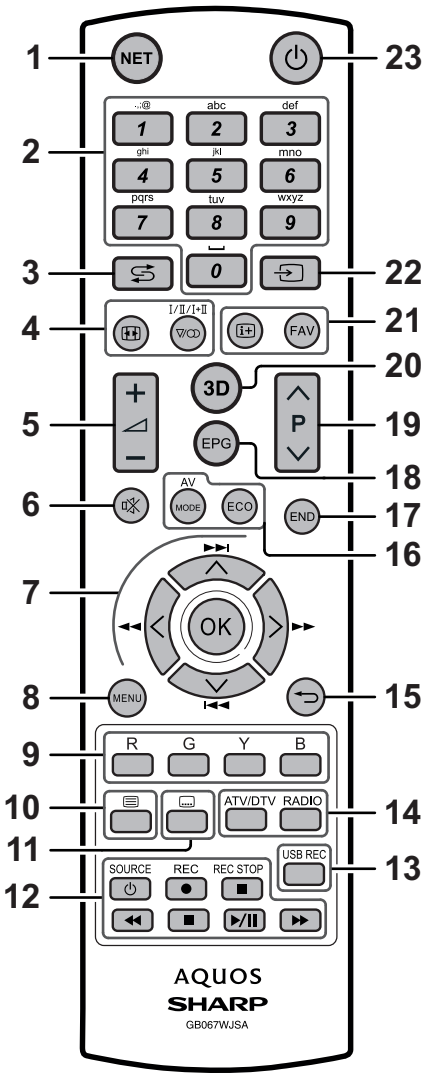
⏮/◀◀/▶▶/⏭
Not used.

8 MENU
Main menu screen on.
Come back to last option selected within MENU screen.

9 R/G/Y/B Colour buttons
The coloured buttons are correspondingly used to select the coloured items on the screen (e.g., EPG, MHEG-5, teletext).

10 Teletext (Page 20)
ATV: Display analogue teletext.
DTV/SAT: Select MHEG-5 or teletext for DTV/SAT.

11 Subtitle (Pages 17 and 20)
Switch subtitle languages on/off.



12 ◀◀/▶/▶▶/●/■ (Pages 49 and 53)
Video/Music/USB REC files reproduction buttons.

SOURCE (Page 44)
Operating HDMI-CEC device.

13 USB REC (Page 49)
Record a programme you are watching.

14 ATV/DTV
Access TV mode.

RADIO
DTV/SAT: Switch between radio and data mode.
- When only data broadcasting (no radio broadcasting) is transmitted by DVB, the radio broadcasting will be skipped.

15 Back
ATV/DTV/SAT: Return to the previous “Menu” screen.
NET: Return to the previous page (This may not function for some services).

16 Picture adjustment (Page 21)
Select picture settings.

ECO (Page 21)
Activate/deactivate low consumption mode (ECO).

17 END
ATV/DTV/SAT: Exit the “Menu” screen.

18 EPG (Page 18)
DTV/SAT: Display the EPG screen.

19 P∧/∨
ATV/DTV/SAT: Select the TV channel.
NET: Scrolls pages up/down.

20 3D (Page 54)
Select between 3D and 2D image viewing.

21 Channel information (Page 15)
Display the station information (channel number, signal, etc.) on the screen.
Within MENU screen shows a hint about item selected.

FAV
Define active station as favourite.

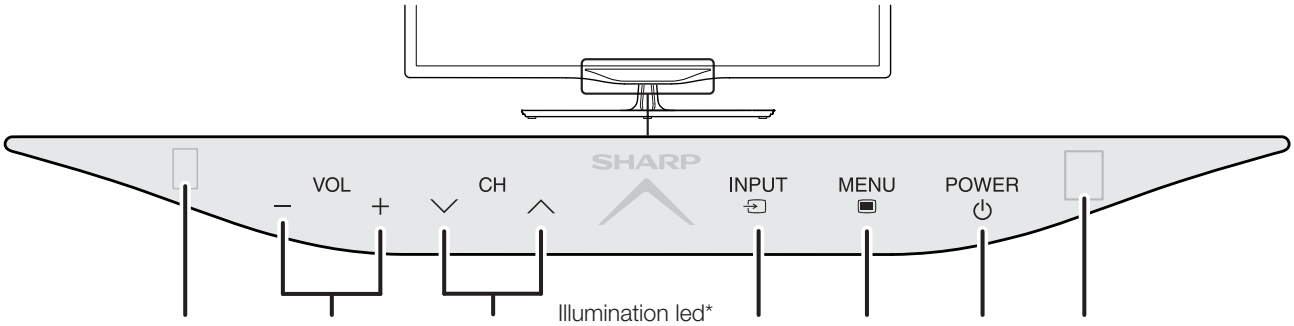
22 (AV selection) (Page 17)
Select an input source.

23 (Standby/On) (Page 17)

Important information:
Satellite services are only available for the LE652/654 model series.

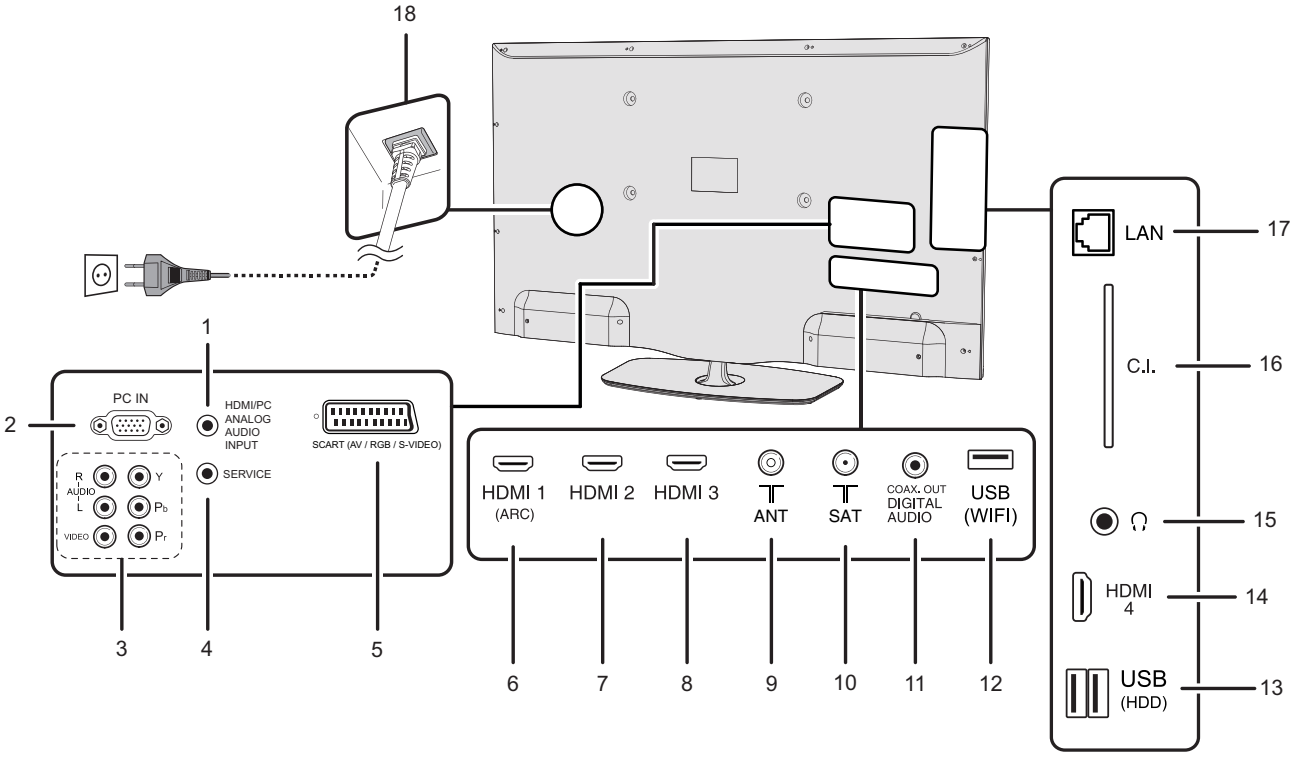
Operation Manual (Continued)

TV (Front view)



*TV indicator status (Page 17)

TV (Side and rear view)



1 Analog AUDIO input for DVI and PC (Jack 3.5mm connector)
2 PC Input
3 COMPONENTS / AV terminals
4 SERVICE connector (jack 3.5 mm)
5 SCART (AV/RGB, Y/C Input) terminal
6 HDMI 1 (HDMI/DVI/ARC)
7 HDMI 2 (HDMI/DVI)
8 HDMI 3 (HDMI/DVI)
9 Antenna input terminal
10 SAT (Satellite antenna input) (Only L*652 series)
11 Digital Audio Output terminal (SPDIF)
12 USB terminal (Wi-Fi use only)
13 USB terminal (USB REC / MEDIA PLAYER / SOFTWARE / HDD READY / 3D GLASSES BATTERY)
14 HDMI 4 (HDMI/DVI)
15 HEADPHONES jack
16 COMMON INTERFACE slot
17 LAN terminal
18 AC INPUT terminal

WARNING
- Excessive sound pressure from earphones and headphones can cause hearing loss.
- Do not set the volume at a high level. Hearing experts advise against extended listening at high volume levels.

Operation Manual (Continued)

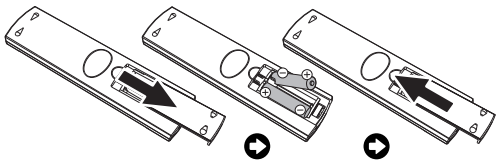
Inserting the batteries

Before using the TV for the first time, insert the two supplied “AAA” size batteries. When the batteries become depleted and the remote control unit fails to operate, replace the batteries with new “AAA” size batteries.

1 Open battery cover.

2 Insert two supplied “AAA” size batteries.
- Place batteries with their terminals corresponding to the (+) and (-) indicators in the battery compartment.

3 Close the battery cover.



CAUTION

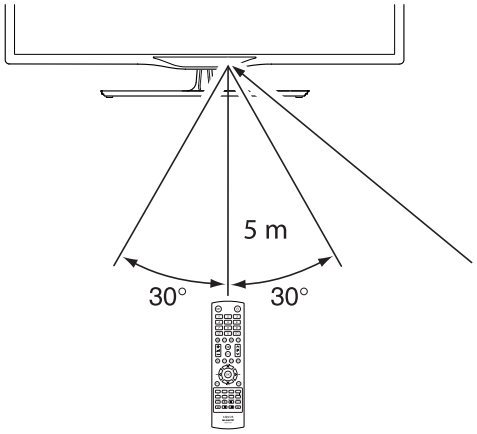
Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.
- When replacing the batteries, use zinc-carbon batteries instead of alkaline ones.

Note on disposing batteries:

The batteries provided contain no harmful materials such as cadmium, lead or mercury.
Regulations concerning used batteries stipulate that batteries may no longer be thrown out with the household rubbish. Deposit any used batteries free of charge into the designated collection containers set up at commercial businesses.

Using the remote control unit

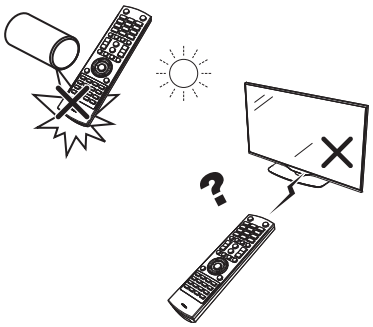
Use the remote control unit by pointing it towards the remote control sensor. Objects between the remote control unit and sensor may prevent proper operation.



Remote control sensor

Cautions regarding the remote control unit

- Do not expose the remote control unit to shock. In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote control sensor of the TV is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or the TV, or operate the remote control unit closer to the remote control sensor.



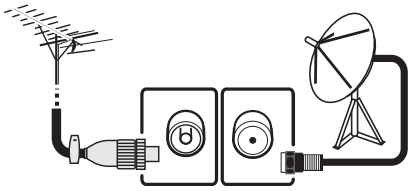
Operation Manual (Continued)

Initial installation overview

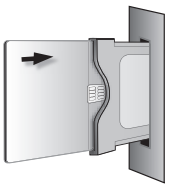
Follow the steps below one by one when using the TV for the first time. Some steps may not be necessary depending on your TV installation and connection.

1 Preparation

❶ Connect an antenna cable to the antenna terminal (Page 8).

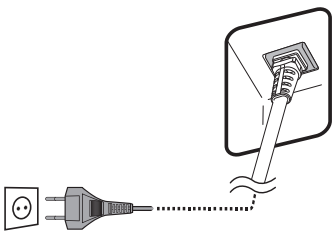


❷ If necessary, insert a CA card into the CI slot to watch scrambled broadcasts (Page 8.)



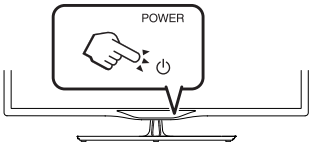
❸ Plug in the AC cord (Page 8).

Product shape varies in some countries.



2 Power on and run the auto installation

❶ Turn on the power using ⏻ on the TV (Page 17).



❷ Run the initial auto installation (Page 9).

✓ Language, Energy Efficiency, country, antenna type settings, etc.

✓ Go to **Next**.

⬇

Start searching channels

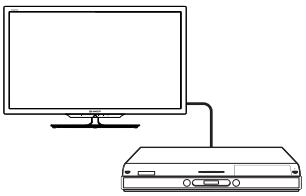
3 Watch TV

❶ **Congratulations! Now you can watch TV.**

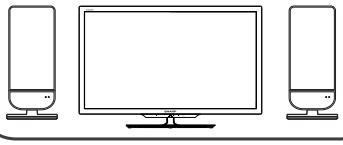
❷ If necessary, adjust the antenna to attain maximum signal reception (Page 14).

Connect external devices

❶ Connect external devices such as a DVD player/recorder as instructed (Pages 41, 42 and 43).



❷ Connect external audio devices such as speakers/amplifier as instructed (Pages 41, 42 and 43).



Connecting external devices

Before connecting ...

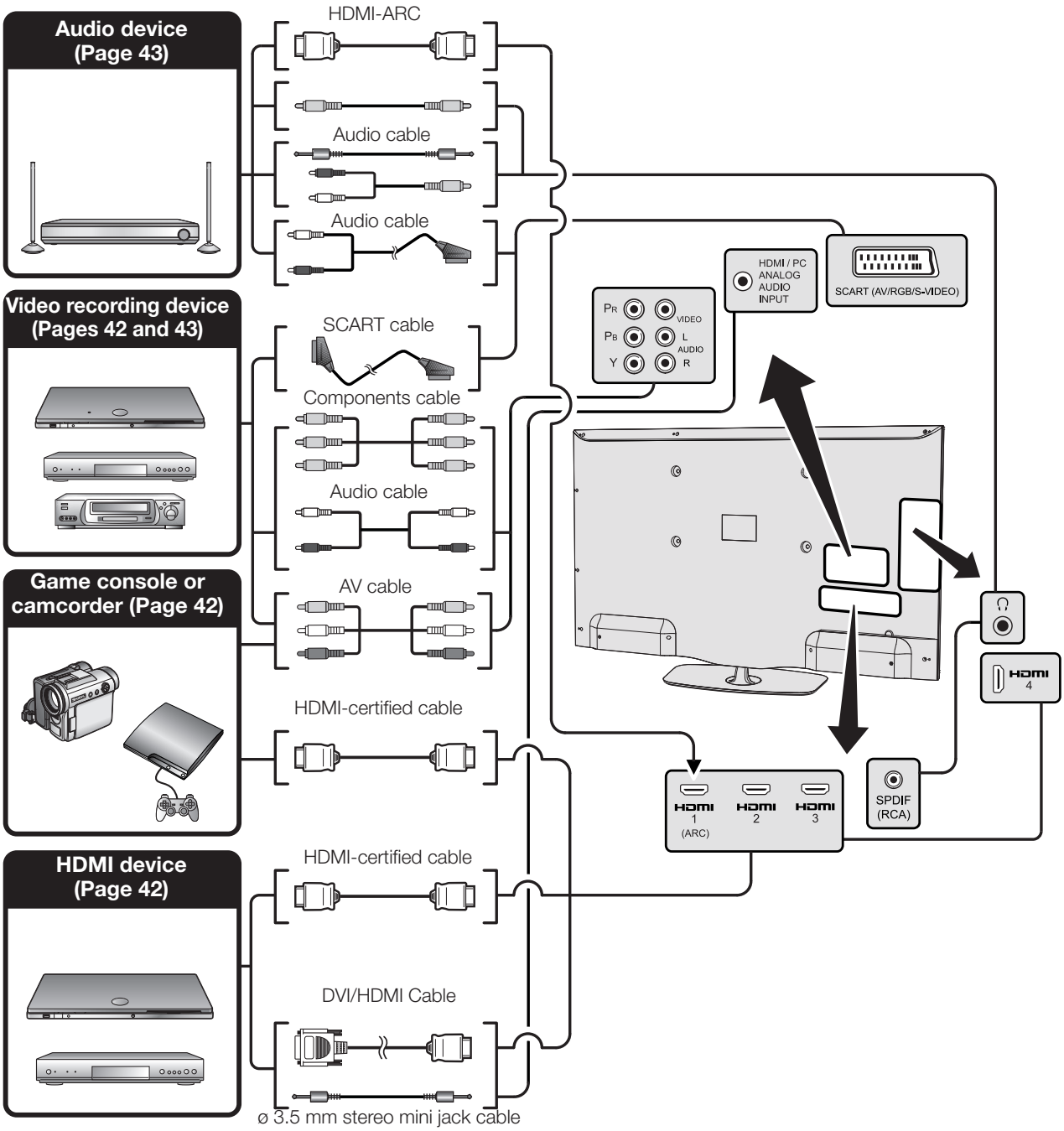
- Be sure to turn off the TV and any devices before making any connections.
- Firmly connect a cable to a terminal or terminals.
- Carefully read the operation manual of each external device for possible connection types. This also helps you get the best possible audiovisual quality to maximise the potential of the TV and the connected device.

Introduction to connections

The TV is equipped with the terminals as shown below. Find the cable corresponding the TV's terminal and connect the device.

NOTE

- The cables illustrated in pages 41, 42 and 43 are commercially available items.



Operation Manual (Continued)

Troubleshooting

Problem	Possible Solution
• No power.	• Check if you pressed ⏻ on the remote control unit. If the indicator on the TV lights up red, press ⏻. • Is the AC cord disconnected? • Check if you pressed ⏻ on the TV.
• The TV cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the TV after first turning off the power, or unplugging the AC cord and re-plugging it in after one or two minutes.
• Remote control unit does not operate.	• Are batteries inserted with polarity (+, −) aligned? • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light illuminating the remote control sensor?
• Picture is cut off.	• Is the image position correct? • Are screen mode adjustments (Picture format) such as picture size made correctly? (Page 31.)
• Strange colour, light colour, or dark colour, or colour misalignment.	• Adjust the picture tone. • Is the room too bright? The picture may look dark in a room that is too bright. • Check the “Picture” settings (Page 21).
• Power is suddenly turned off.	• The TV’s internal temperature has increased. Clean or remove any objects blocking the vent.
• No picture.	• Are connections to external equipment correct? (Pages 41, 42 and 43) • Is the input signal type selected correctly after connection? (Page 14) • Is the correct input source selected? (Page 31) • Is the picture adjustment correct? (Pages 21) • Is the antenna connected properly? (Pages 7 and 14)
• No sound.	• Is the volume too low? • Make sure that headphones are not connected. • Check if you pressed 🔇 on the remote control unit.
• The TV sometimes makes a cracking sound.	• This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV’s performance.

Problem	Possible solution
• 3D images are not displayed.	• Is **3D mode** set to “Automatic”? Press **3D** to switch to **3D mode** "Automatic". • If **3D mode** is set to “Automatic” but no 3D images are displayed, check the display format of the content being viewed. Some 3D image signals may not be recognised as 3D images automatically. Press **3D** to select the appropriate display format for the 3D image. • Are the 3D glasses set to 3D mode? • Is there an obstacle between the 3D glasses and the TV, or is something covering the infrared receiver on the 3D glasses? The 3D glasses operate by receiving a signal from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
• The 3D glasses turn off automatically.	• Is there an obstacle between the 3D glasses and the TV, or is something covering the infrared receiver on the 3D glasses? The 3D glasses turn off automatically after three minutes if no signal is received from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
• Switching the 3D glasses button to 2D or 3D does not cause the LED to light up green.	• Is the battery in the 3D glasses exhausted? If the LED light does not light after pressing the power button for more than one second, the battery is exhausted. Recharge the battery via mini USB connector.

Information on the software license for this product

Software composition

The software included in this product is comprised of various software components whose individual copyrights are held by SHARP or by third parties.

Software developed by SHARP and/or third part

The copyrights for the software components and various relevant documents included with this product that were developed or written by SHARP are owned by SHARP and are protected by the Copyright Act, international treaties, and other relevant laws. This product also makes use of freely distributed software and software components whose copyrights are held by third parties.

Operation Manual (Continued)

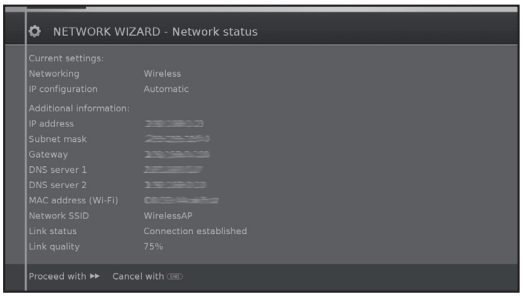
Multimedia/Network Setup

Network Setup

Connecting to the network

To enjoy internet services, you need to connect the TV to a router with a high speed connection to the internet. You can also connect the TV to your Home network server through a router or access point.
The TV connection to the router can either be wired or wireless.

To access the TV internet configuration go to **Setup→Multimedia/Network→Network settings→ Networking.** The next screen is shown:



Press ▶▶ to continue the installation.
Choose between **Wired** or **Wireless** connection.

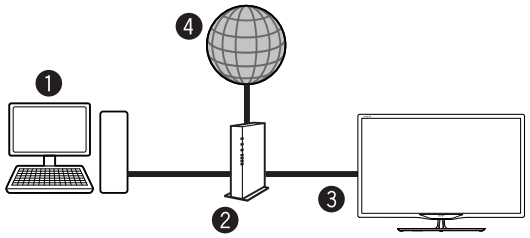
NOTE

- If you choose a wired connection to the router, you need an ETHERNET cable (not included, commercially available).
- If you do not have a broadband internet connection, consult the store where you purchased your TV or ask your internet service provider or telephone company.
- Wired and wireless connection cannot be used at the same time. Use only one of the connection types.
- A wireless LAN connection and performance cannot be guaranteed for all residential environments. In the following cases, the wireless LAN signal may be poor or drop, or the connection speed may become slower.
  - When used in buildings made with concrete, reinforced steel, or metal.
  - When placed near objects that obstruct the signal.
  - When used with other wireless devices that emit the same frequency.
  - When used in the vicinity of microwave ovens and other devices that emit a magnetic field, electrostatic charge, or electromagnetic interference.
- A stable connection speed is required to play back streaming content. Use a wired LAN connection if the wireless LAN speed is unstable.

Wired installation

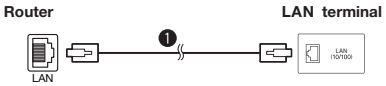
Use an ETHERNET cable to connect the LAN terminal on the TV to your broadcast router as shown below. This is recommended when enjoying services which require stable connection speeds, such as streaming media.

- **Wired connection overview**



❶ PC (Home Media Server)
❷ Router (commercially available)
❸ ETHERNET cable (commercially available)
❹ Network (Internet)

- **How to connect**



❶ ETHERNET cable

1 Switch on the router (commercially available). Refer to the router's operation manual for switching on.

2 Connect the LAN terminal on the TV to the router (commercially available) with an ETHERNET cable (commercially available).

3 Go to **Setup→Multimedia/Network→Network settings→Networking**.

4 Press **OK** and ▲/▼ to select **"wired"**, and then press **OK**.

5 Select type of **IP configuration:**

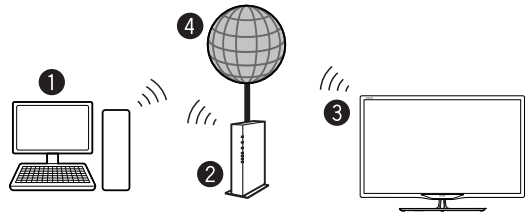
Automatic: Automatic configuration of the IP address via DHCP server or via multiple protocols according to UPnP specification.
Manual: Enter your fixed static IP addresses manually. (Ask your internet service provider).

6 Press **OK.**

Wireless installation

Use the SHARP (AN-WUD630) USB adapter with the TV.

- **Wireless connection overview**



❶ PC (Home Media Server)
❷ Wireless LAN router/access point
❸ Wireless AN-WUD630 LAN USB adapter (Sold separately)
❹ Network (Internet)

NOTE

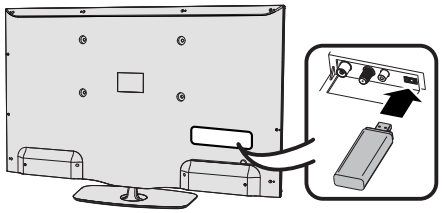
- When using the SHARP wireless LAN adapter, try to provide as much free space around the device for best performance.
- Make sure the firewalls in your network allow access to the TV wireless connection.

Operation Manual (Continued)

Multimedia/Network Setup

- Operations cannot be guaranteed when used with access points that do not have Wi-Fi® certification.
- A wireless LAN access point is required to connect the TV to the Internet using a wireless LAN. See the operation manual of your access point for setup.

• How to connect



1 Switch on your router/access point before starting the network installation.

2 Connect the AN-WUD630 USB adapter to the USB Wi-Fi port on the TV.

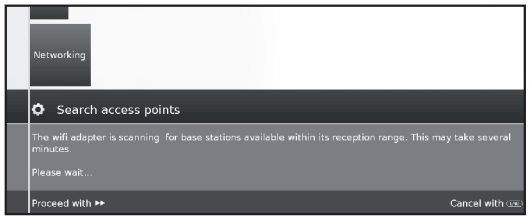
- Do not use a wireless LAN adapter other than the AN-WUD630 Sharp wireless LAN adapter, as operations cannot be guaranteed.
- If your wireless network is secured, have the encryption key ready to enter on screen.

3 Go to **Setup→Multimedia/Network→Network settings→Networking**.

4 Press **OK** and ▲/▼ to select "**wireless**", and then press **OK**.

The **"Wireless"** connection will be automatically selected if the TV detects only the wireless USB adapter.

The TV starts to search for wireless routers/access points.



5 Select required router/access point and press **OK**. As soon as ◀◀ is displayed , you can go back one installation step by pressing this button.

6 If your network has an access code, it is necessary to enter the code that allows access to the network. A screen keyboard will appear to enter the password.
Press **OK.**

7 Select IP address assignment method. You can choose between: **Automatic (DHCP)** or **Manual (Input Static IP Address).**

Automatic (DHCP): IP address is automatically issued by a DHCP server on your home network.

- A DHCP server has to be set up on a device on the network (WLAN router/access point).

Input Static IP Address: IP address is entered manually. Use the RC alphanumeric buttons, to input digits of IP address.

Press ▶▶ to continue.

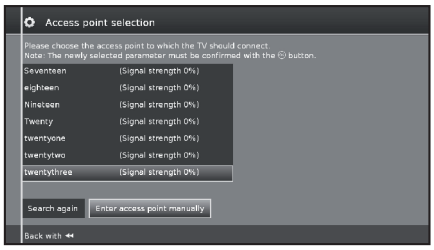
Afterwards you will see a summary of the settings.

8 Press ▶▶ to confirm settings.

NOTES

- To connect your TV to the internet, you must have a broadband internet connection.
- If you do not have a broadband internet connection, consult the store where you purchased your TV or ask your internet service provider or telephone company.
- There is no need to enter the security key for subsequent connections to the wireless network.

If your access point is set to a stealth mode (Hidden SSID, that prevents detection by other devices), you need to use manual method to enter the SSID name for desired access point.



1 Select **Enter access point manually** and press **OK.** Introduce the SSID name using the on-screen keyboard.

2 Select **Adopt** and press **OK** to fix the name.

3 Select **Encryption method** and press **OK.**

Only if your access point is secured a WEP key or a WAP password will be required.

4 Repeat the process from point 7 of previous explanation.

To change wireless LAN connection settings, go to **Setup → Multimedia/Network → Network settings → Networking**.

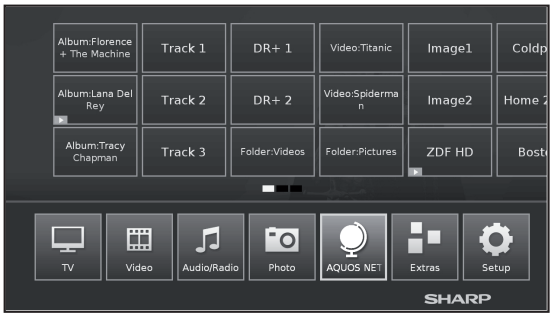
NOTES

- Any low bandwidth adapter (router, hub, wireless access point,…) will show poor network connection and then, poor streaming quality. It is recommended 56 Mbps or higher bandwidth for full feature.
- Working in close proximity to other Wireless/Bluetooth networks, may cause some trouble using a Wi-Fi adapter on the internet connected TV. Because the wireless link cannot be guaranteed, please try to change the Wi-Fi channel on the Access Point (AP) to avoid interference. Please refer to Access Point User Manual.
- Home Media (DLNA) requires external streaming media software installed on a PC, inside the HOME Network, that is not included with AQUOS NET+.
- Home Media (DLNA) server software as Windows Media Player 11 (Windows Vista included) or Windows Media Player 12 (Windows 7 included), TVersity (www.tversity.com), Nero Media Home (www.nero.com), or Twonky Media Manager (www.twonky.com) are preferred but others can also be used. Visit the DLNA website (www.dlna.org) to see the certified media server list. Follow the server software's user manual for setup, share and stream media contents.
- Home Media (DLNA) (Video, Music and Photo) data is organised in folders depending on the Server hierarchy; options such as Artist, Genre, Composer, Ratings, Playlist or Watch Folders may be present for sorting content, but can be different depending on the selected Media Server.
- The "Play To" function of some PC Media Players may result in very compressed video quality. For best video quality, please use the USB Media Player function of the TV.

Operation Manual (Continued)

TV menu options

AQUOS NET+ function



AQUOS NET+ option allows you to access to **AQUOS NET+** feature and Internet browser.

For this option it is necessary that the TV set is connected to Internet (See page 47).

1 Press **MENU** button, select **AQUOS NET+** and press **OK**. The next screen appears:

2 Press **END** to exit.

What is AQUOS NET+?

AQUOS NET+ is the feature that allows our Internet connected TV sets to easily reproduce digital media content coming from the Network. It provides access to Internet services (Internet browser, YouTube, Facebook and much more)

AQUOS NET+ provides a variety of services for each country.

NOTES

- As **AQUOS NET+** is an online system, it can be modified over time to better serve its purpose.
- Some **AQUOS NET+** services may be added, changed or discontinued after some time.
- Even in opern web-mode, users cannot download and save files or install plugins.

DISCLAIMERS

- SHARP Corporation bears no responsibility regarding the content and quality of the content provided by the content service provider.

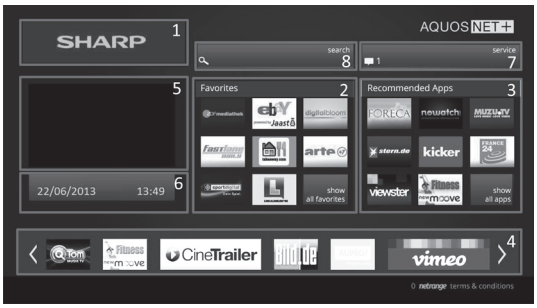
Operations in AQUOS NET+

Basic Operation

The illustrations on this page are for explanation purposes. They are subject to change without notice.

● Display the AQUOS NET+ screen

Press **NET** on remote control or select **AQUOS NET+** on main menu to open **AQUOS NET+** home page.



AQUOS NET+ screen is organised into 8 areas:

❶ AQUOS NET+ title banner
❷ User-defined Favorites
❸ Recommended Apps
❹ Interactive windows for direct brand communications or maintenance functions
❺ Media window
❻ Widget Area-real-time functions like date and time or similar
❼ Sharp Service Center
❽ Interactive Search window

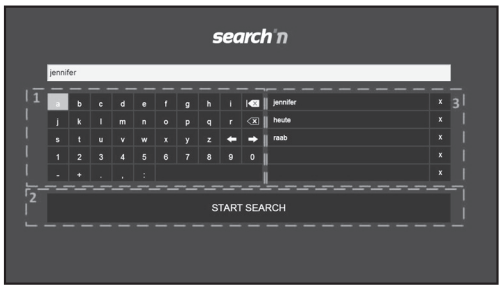
● Select a service

On **AQUOS NET+** screen use ▲/▼/◄/► to select the desired service, and then press **OK** to start it.

- Press ⮌ to return to the previous page.

You can also use "Search" utility to find specific services, related to a search term.

- Select "Search" and press **OK** to access the search page or start typing to directly search to specific terms**.**
- To search for a specific keyword, the word is entered using the virtual keyboard (1). The search is executed by clicking Start Search (2). The history of tthe last search terms can be found on the right side (3).

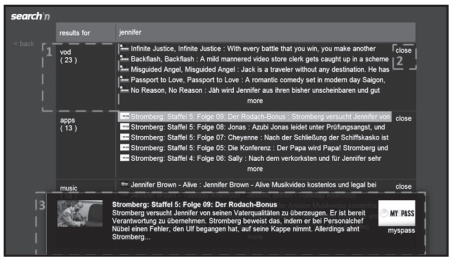


Operation Manual (Continued)

TV menu options

After searching for a specific term, the results are categorized by their type (1), including the number of search results. Categories can be hidden and expanded on request by selecting the close button (2) in the results overview.

Resting the cursor on a search result will bring up a preview overlay (3) with information of the selected content.



● User sections

The Home Screen is devided in 3 functional areas:

1 Interactive Media Area
This segment is used for the audio-visual presentation of various types of content.

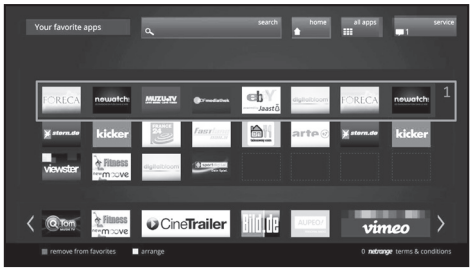
2 Favorite Apps Area
This area presents the top 8 apps of the user-defined favorite applications, including a link to all user-defined favorite applications.

3 Recommended Apps Area
This area presents a selection of recommended apps and also includes a link to the “all apps” screen as described below.

In Area 2 and 3, please use ◄/►/▲/▼ to select a service you want to access and press **OK**, direction arrows appear around the service logo.

● Favorite Apps Screen

This screen gives an overview of all user-defined favorites. Favorites can be selected in the all-apps screen, as described below. The Top row of apps is presented on the home-screen. The first row (1) is automatically presented in the favorite apps section on the home screen.



Apps can be re-arranged by the user:

1 Move the cursor to the application that shall be moved.
2 Use Yellow color key to enter arrange-mode.
3 Move selected service to the desired position and press the yellow color key again to confirm the new position.
To dismiss an application from the favorite Apps, place the cursor on the respective app and press the RED color-key on the remote control.

● Exit AQUOS NET+ screen

Press **MENU** button and select **TV** to return to tv mode.
You can also press **ATV**, **DTV**, **SAT** or **RADIO** button to exit.

NOTES

- When connecting the TV to the Internet, a message which requests a software update may be displayed in some cases.
- Some services can request to the user to Login or create a personal account. In this case, please follow the indication on the screen.
- PREMIUM Video-on-Demand (VOD) services are available in some countries.
- The illustrations on this page are for explanation purposes. They are subject to change without notice.
- **AQUOS NET+** screen language is adapted to the TV set language previously selected.
- While **AQUOS NET+** is active some TV menus or options could be disabled.

Advance Operation

AQUOS NET+ uses alphanumerical characters within some services, which can be introduced using the remote numerical keys, in a similar way that people use a mobile phone keypad. In order to make this task easier, the LE650 is ready to use an external USB keyboard (USB wired, USB-to-Wireless or USB-to-Bluetooth ready) to work only inside **AQUOS NET+**.
When an external keyboard is installed on TV set and the user select **AQUOS NET+**, then the keyboard mapping is:

1 ↵ (ENTER)/INTRO = OK (R/C). Used to enter inside any service or to fix data once inside.
2 ◄/►/▲/▼ (U/O/I/K, or u/o/i/k for not extended keyboard). Used to move between services or scroll pages on Left/Right direction.
3 **ESC**ape =⮌ (Return R/C). Return to previous page on services.
4 ← (Backspace). Erase last character entered.
5 **A..Z,a..z,0..9**, and some US symbols (period or dot, commercial at @, underscore, hyphen, exclamation, question, colon, opening parenthesis, closing parenthesis, number, slash, backslash, space). Used for Login, Passwords, Date, and so.

NOTES

- The TV does not support hot plug connection of USB devices like a keyboard. If you wish to connect any other device, please do it when the TV is Power Off or in Standby.
- Inside AQUOS NET+ services, please use standard US characters only (Not extended characters or Special Country Language dependent), in order to avoid problems with the applications.
- Using external USB keyboard is not possible to exit from AQUOS NET+. If necessary, use the **END** remote key.
- Some types of keyboard could show incompatibilities or try to use functions not supported by the TV.

Operation Manual (Continued)

Quick guide

Initial auto installation

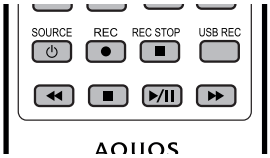
When the TV is powered on for the first time after purchase, the initial auto installation wizard appears. Follow the menus and make the necessary settings one after another.

Confirm the following before turning on the power

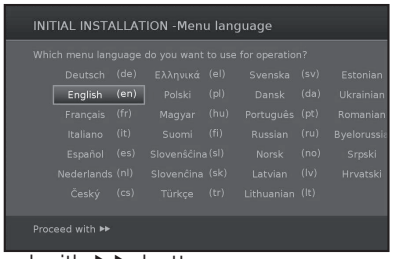
- Is the antenna cable connected?
- Is the AC cord plugged in?

1 Press ⏻ on the TV.

- The initial auto installation wizard appears.
- The auto installation can also be called in the TV menu, see **Repeat initial installation** on page 40.
- The routine of the first installation wizard depends on the selected settings.

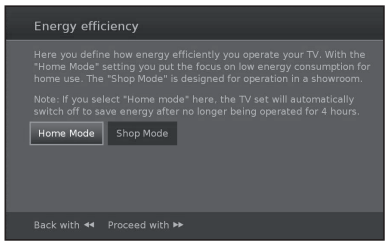


2 Setting the menu language.
Press ▲/▼/◀/▶ to select the desired language.



Proceed with ▶▶ button.

3 Setting **Energy Efficiency.**
Decide how efficiently you want to operate your TV set.



•**Home Mode**:
The emphasis for home use is on low energy consumption.
•**Shop Mode:**
The picture settings are aligned to operate in the presentation room. If the ambient brightness diminishes, the energy consumption is not reduced.

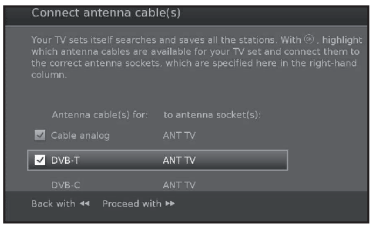
This setting can be changed later in the **MENU Extras→Energy Efficiency.**
Proceed with ▶▶ button.

4 Selecting the TV location.
Press ▲/▼/◀/▶ to select your country or area.

- This setting screen only appears during the initial auto installation.

Proceed with ▶▶ button.

5 Select broadcast settings.
Press ▲/▼ to move between different tune type.
Press **OK** to select the desired antenna.



Cable analogue: analogue broadcast via cable/ antenna.
DVB-T: Digital broadcast.
DVB-C: Cable digital broadcast.
DVB-S: Satellite broadcast.(Only 652/654 series)
Proceed with ▶▶ button.

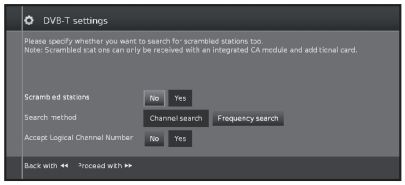
6 Select subtitles and audio languages.
Press ▲/▼/◀/▶ and **OK** to select the desired languages and alternative languages for subtitles and audio for DVB programmes.

Proceed with ▶▶ button.
•To set up audio commentary for the visually impaired, please see **Audio commentary** on page 25.

Setting options for DVB-T reception

If you have not selected DVB-T antenna in the antenna selection, continue with **Setting options for DVB-C reception** on page 10.

7 Selecting tuner settings.



● Scrambled stations

You can specify if coded stations are to be searched for in the search/update.

Select **yes** to save all scrambled stations.

- These stations can only be received in connection with a CI module and the appropriate CA Card.
- If a CI module with a CA Card is already inserted for the station search, all the stations which this module can descramble are also saved when **no** is selected.

● Search method

Select **Frequency search** if you want to run the station search independently of the channel grid.

● Accept logical channel number

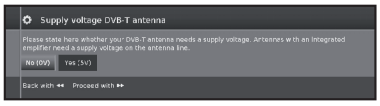
In various countries, digital stations are transmitted with a preset channel number per station, known as "Logical Channel Numbers" (LCN).
If you select **yes**, these default channel numbers will be used and the channels will be sorted as per LCN.

Operation Manual (Continued)

Quick guide

8 Supplying power to the antenna.

If you use a DVB-T antenna that requires a supply voltage and which is not supplied via a power adapter, then select **yes (5V)** for the antenna's power supply.



Press ▶▶ button.

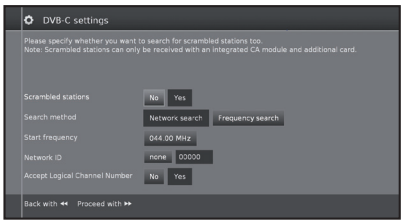
How to align your DVB-T antenna is described on page 14.

9 Continue with **Settings for all types of reception** (See page 13).

Setting options for DVB-C reception

If you have not selected DVB-C antenna in the antenna selection, continue with **Setting options for DVB-S reception** below.

The normal DVB-C settings are derived from the selection of the location and do not need to be changed.



Press ▲/▼/◀/▶ to change each item to the appropriate settings:

- **Network selection**
  If several networks are available via DVB-C, you can decide which network you want to receive your channels from.
- **Scrambled stations**
  You can specify if coded stations are to be searched for in the search/update.
  Select **yes** to save all scrambled stations.
  - These stations can only be received in connection with a CI module and the appropriate CA Card.
  - If a CI module with a CA Card is already inserted for the station search, all the stations which this module can descramble are also saved when **no** is selected.
- **Search method**
  If you select **Frequency Search,** a search is performed for all receivable stations. With **Network Search**, only the stations which the networks supply are searched, either for all receivable networks or only for the particular network specified under **Network ID.**
- **Start Frequency**
  The DVB stations are only searched for in the frequency range above the start frequency.
- **Network ID**
  Change this setting to register only the specified network ID.
- **Accept logical channel number**
  In various countries, digital stations are transmitted with a preset channel number per station, known as "Logical Channel Numbers" (LCN).
  If you select **yes**, these default channel numbers will be used and the channels will be sorted as per LCN.

NOTE

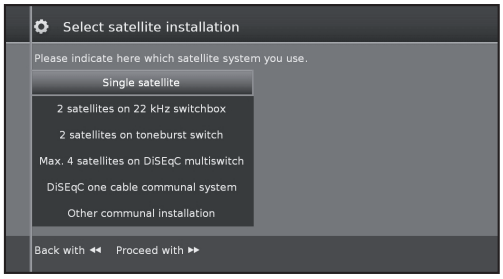
- The value of **Frequency** and **Network ID** should be set to the value specified by the cable provider.

Press ▶▶ to continue.

Setting options for DVB-S reception

If you have not selected a DVB-S antenna in the antenna selection, continue with **Settings for all types of reception** on page 13.

Select the satellite system.



Specify how you receive which satellite(s) (single satellite or type of satellite system). Ask your dealer in this regard.

The normal DVB-S settings are derived from the selection of the location and do not need to be changed in most cases.

- **Single satellite**
  Reception of a single satellite via a connected LNC (LNB). See page 11 for settings.
- **2 satellites on 22kHz switchbox**
  Reception of two different satellites with two LNCs (LNBs) which are connected to the TV set by a 22 kHz switchbox. See page 11 for settings.
- **2 satellites on Toneburst switch**
  Reception of two different satellites with two LNCs (LNBs) which are connected to the TV set by a toneburst switch. See page 11 for settings.
- **Max. 4 satellites on DiSEqC multiswitch**
  The TV set controls a DiSEqC multiswitch to which up to four LNCs (LNBs) for different satellites are connected. See page 11 for settings.
- **DiSEqC one cable communal system**
  Select setting if the TV set is connected to a DiSEqC single cable system (according to EN50494). Several satellite receivers can be connected to one satellite cable. See page 12 for settings.
- **Other communal installation**
  Select this setting if the TV set is connected to a single-cable system (without DiSEqC). Several satellite receivers can be connected to one satellite cable. As opposed to a DiSEqC one cable system there are restrictions in the range of certain reception frequencies in common single-cable community systems. See page 13 for settings.

Press ▶▶ to continue

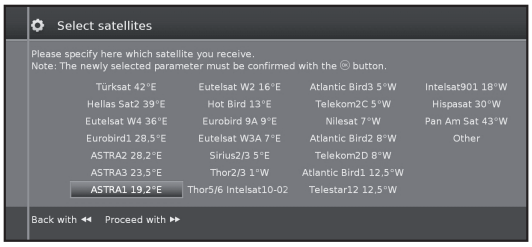
Operation Manual (Continued)

Quick guide

Setting options for Single satellite

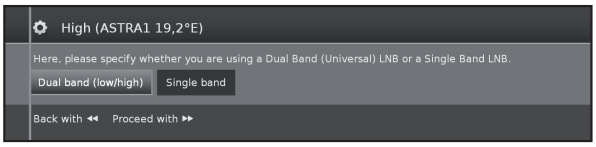
Reception of a single satellite via a connected LNC (LNB).

1 Select satellite.



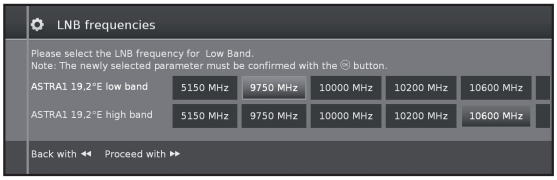
Press ▶▶ to continue.

2 Select **Dual Band (low/high)** or **Single Band.** Here you specify if you use a Dual Band (Universal) LBN or Single LBN.



Press ▶▶ to continue.

3 Specify here the oscillator frequency for your LNB.



Normally you do not need to change the values for high and low band, unless the LNB of your satellite system uses a different oscillator frequency (important for the frequency display).
If you use the setting **Single Band** in step **Dual/ Single Band,** you only have to define the LNB frequency for the Low Band.

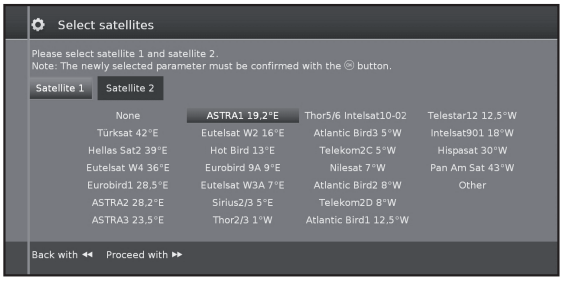
4 Press ▶▶ to continue.

See **Setting options for all DVB-S reception** on page 13 to continue.

Setting options for 2 satellites on 22kHz switchbox / 2 satellites on Toneburst switch

1 Select **Satellite1/Satellite2**

2 Select satellite name from list and press **OK.**
Press ▶▶ to continue.



3 Specify here the oscillator frequency for your LNB.

Normally you do not need to change the values for high and low band, unless the LNB of your satellite system uses a different oscillator frequency (important for the frequency display).

4 Press **OK** to select frequency and press ▶▶ to continue.

See **Setting options for all DVB-S reception** on page 13 to continue.

Setting options for Max. 4 satellites on DiSEqC multiswitch

Select DiSEqC multiswitch and adpat settings for this selection.

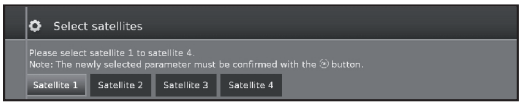
Operation Manual (Continued)

Quick guide

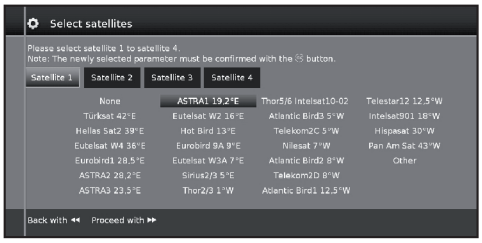
- **Repeat rate**
The refresh rate determines how often a DiSEqC command is output. A refresh is only necessary with cascaded system.
- **Control voltage**
The control voltage controls the switch of the polarisation level (horizontal/vertical) in non-DiSEqC capable components (e.g., control of single LNBs via DiSEqC multiswitch).
- **22kHz signal**
The 22kHz signal controls the switching between high and low band in the **Band** setting. The **Position** setting controls the selection of the satellites in non-DiSEqC capable components.
- **Toneburst**
The Toneburst controls the selection of the satellites in non-DiSEqC but Toneburst capable components with the **Position** and **Option** settings.

Press **OK** to adopt settings and press ▶▶ to continue.

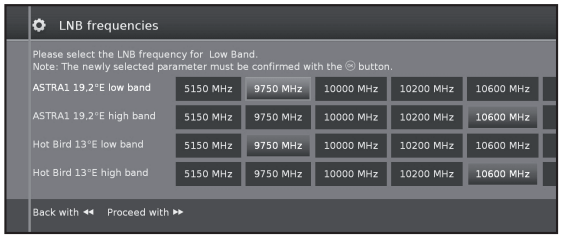
1 Select **Satellite1** to **Satellite4.**



2 Select satellite name from list and press **OK.** Press ▶▶ to continue.



3 Specify here the oscillator frequency for your LNB.

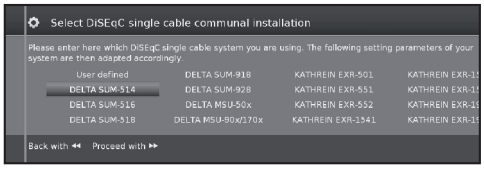


Normally you do not need to change the values for high and low band, unless the LNB of your satellite system uses a different oscillator frequency (important for the frequency display).

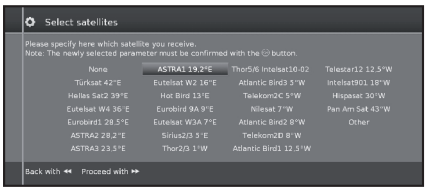
See **Setting options for all DVB-S reception** on page 13 to continue.

Setting options for DiSEqC one cable communal system

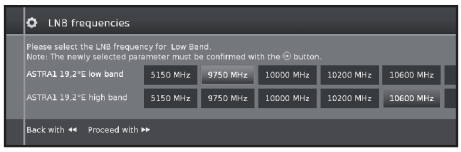
1 Select which DiSEqC single cable system you are using and press **OK**.



2 Select satellite name from list and press **OK**. Press ▶▶ to continue.

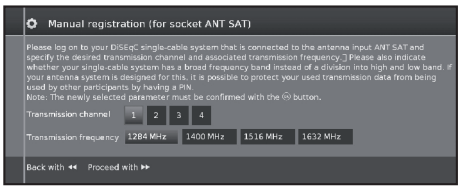


3 Specify here the oscillator frequency for your LNB and press **OK**. Press ▶▶ to continue.



Normally you do not need to change the values for high and low band, unless the LNB of your satellite system uses a different oscillator frequency (important for the frequency display).

4 Select and adjust settings for DiSEqC single cable communal installation.



Select the desired transmission channel and the corresponding transmission frequency.

PIN protection
If your system is designed for it, it is possible to protect your used transmission data from use by other subscribers with a PIN.

Define/change PIN
Here you can determine and change the PIN for **PIN protection**. Only possible when **yes** has been selected for **PIN protection**.

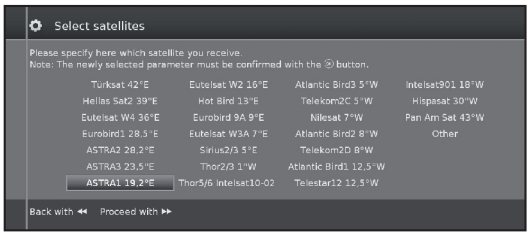
Continue with **Setting options for all types of reception** on page 13.

Operation Manual (Continued)

Quick guide

Setting options for Other communal installation

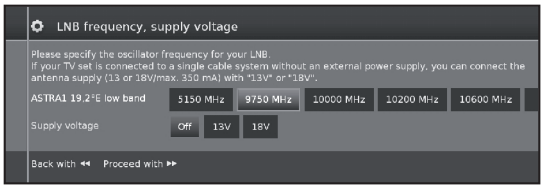
1 Select satellite.



Press ▶▶ to continue.

2 Specify here the oscillator frequency for your LNB.

If your set is connected to a single-cable system without external voltage supply, you can connect the antenna supply (13V or 18V / max. 450mA) with 13V or 18V.



Continue with **Setting options for DVB-S reception** below.

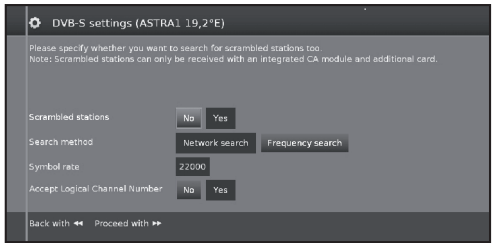
Setting options for DVB-S reception

● **Network selection**

If several networks are available via DVB-S, you can decide which network you want to receive your channels from.

● **Settings**

If several satellites are received, the following settings must be made for every satellite. The type of settings available may differ depending on the selected satellite or network.



● **Scrambled stations**

Select **yes** to save all scrambled stations.

- These stations can only be received in connection with a CI module and the appropriate CA Card.
- If a CI module with a CA Card is already inserted for the station search, all the stations which this module can descramble are also saved when **no** is selected.

● **Search method**

If you select **Frequency Search** here, a search is performed for all receivable stations. With **Network Search**, from all receivable networks all the stations are searched which are supplied by these networks.

● **Symbol rate**

The symbol rate is specified by the satellite provider and normally does not need to be changed.

● **Accept Logical Channel Number**

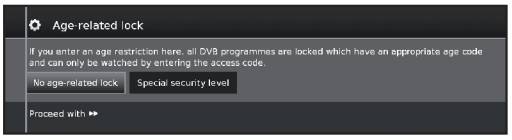
This setting allows you to decide whether you want to accept the Logical Channel Number (LCN).
Press ▶▶ to continue.

Continue with **Setting options for all types of reception** below.

Setting options for all types of reception

● **Age related lock**

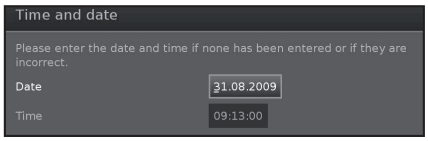
Allows you to restrict programmes depending on the age classification.



The information about age classification is provided by the broadcasting station.
The stations locked can only be watched after entering the access code (see page 24).

● **Time and date**

Enter the correct values with the numeric buttons here.



● **Network configuration**

Here you can now specify if you wish to configure a network **"Configure now"** (see page 47) or you wish to configure it later **"Do not configure or configure later"**.

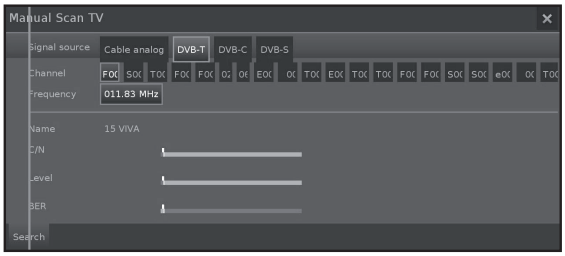
Quick guide

Positioning / aligning DVB-T antenna

If you install a DVB-T/T2/S/S2 antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.

In normal TV mode, without other displays, a DVB-T station is received and selected.

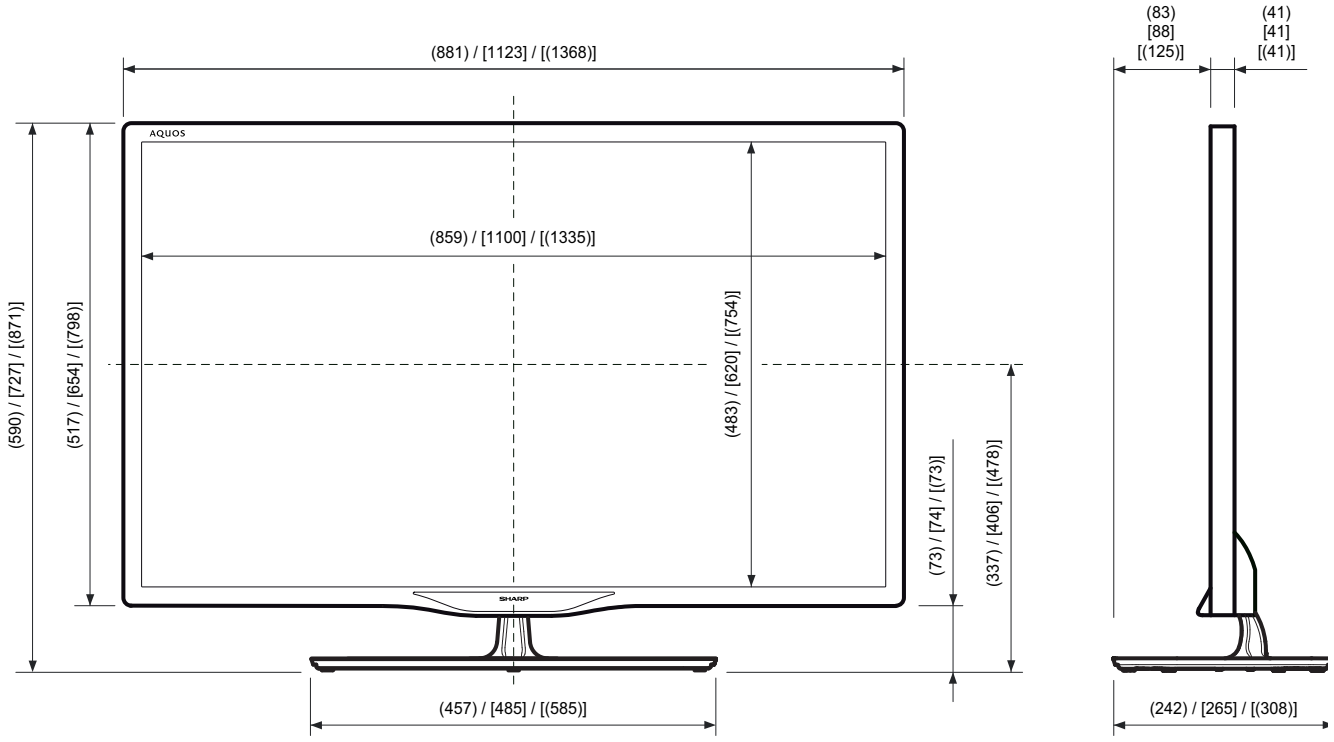
1 Select **Setup.**
2 Select **Stations.**
3 Select **Manual Scan TV.**

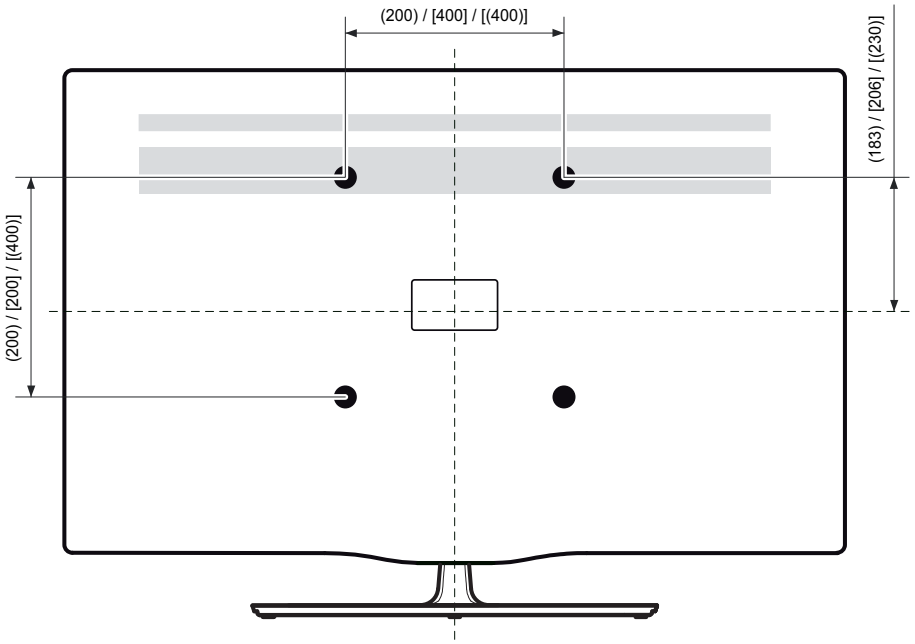


Position and align the antenna in such a manner that maximum values for **C/N** and **Level** are obtained.
The value for **BER** should be as low as possible.

4 Select **Search** and press **OK** to start search.

DIMENSIONS





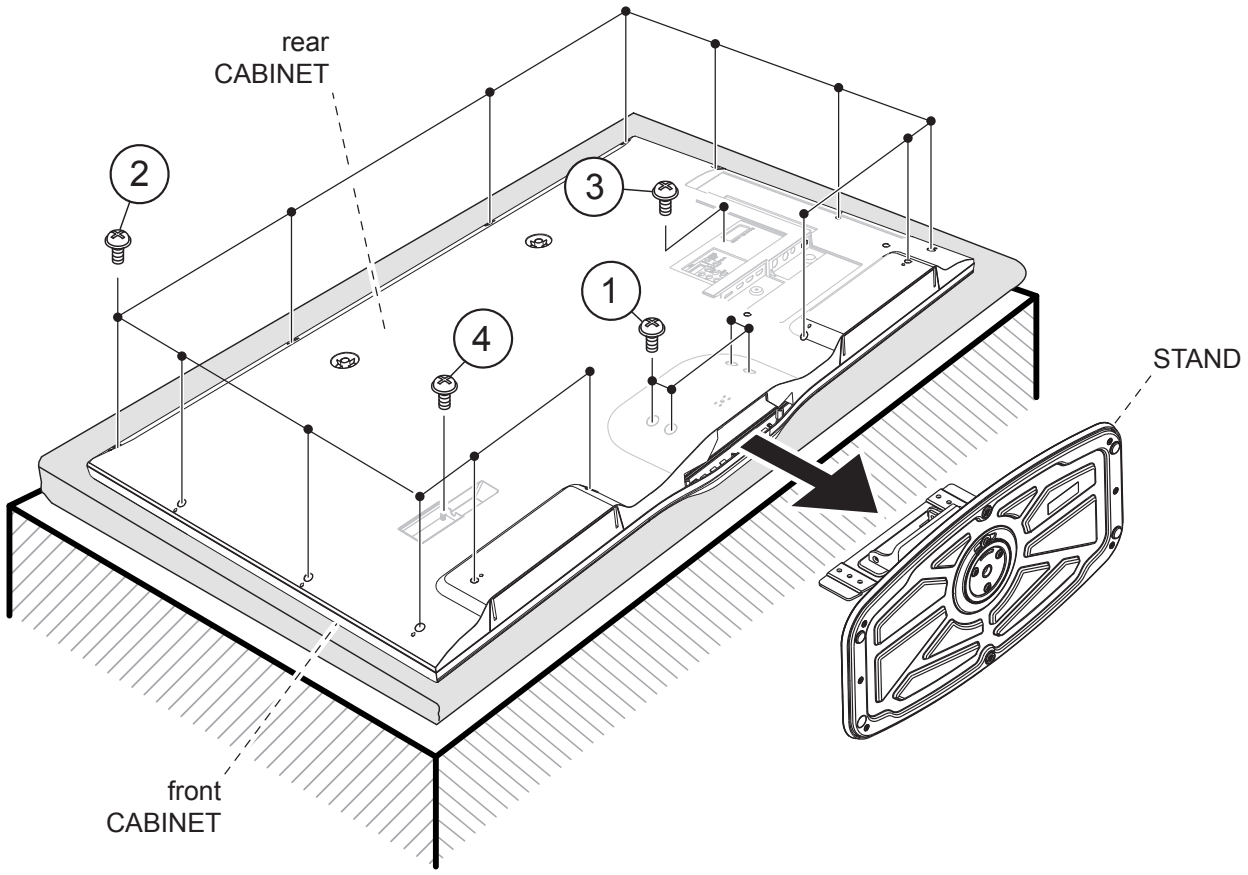
39”: ( )
50”: [ ]
60”: [( )]

REMOVING OF MAJOR PARTS

1. Removing of major Parts 39”

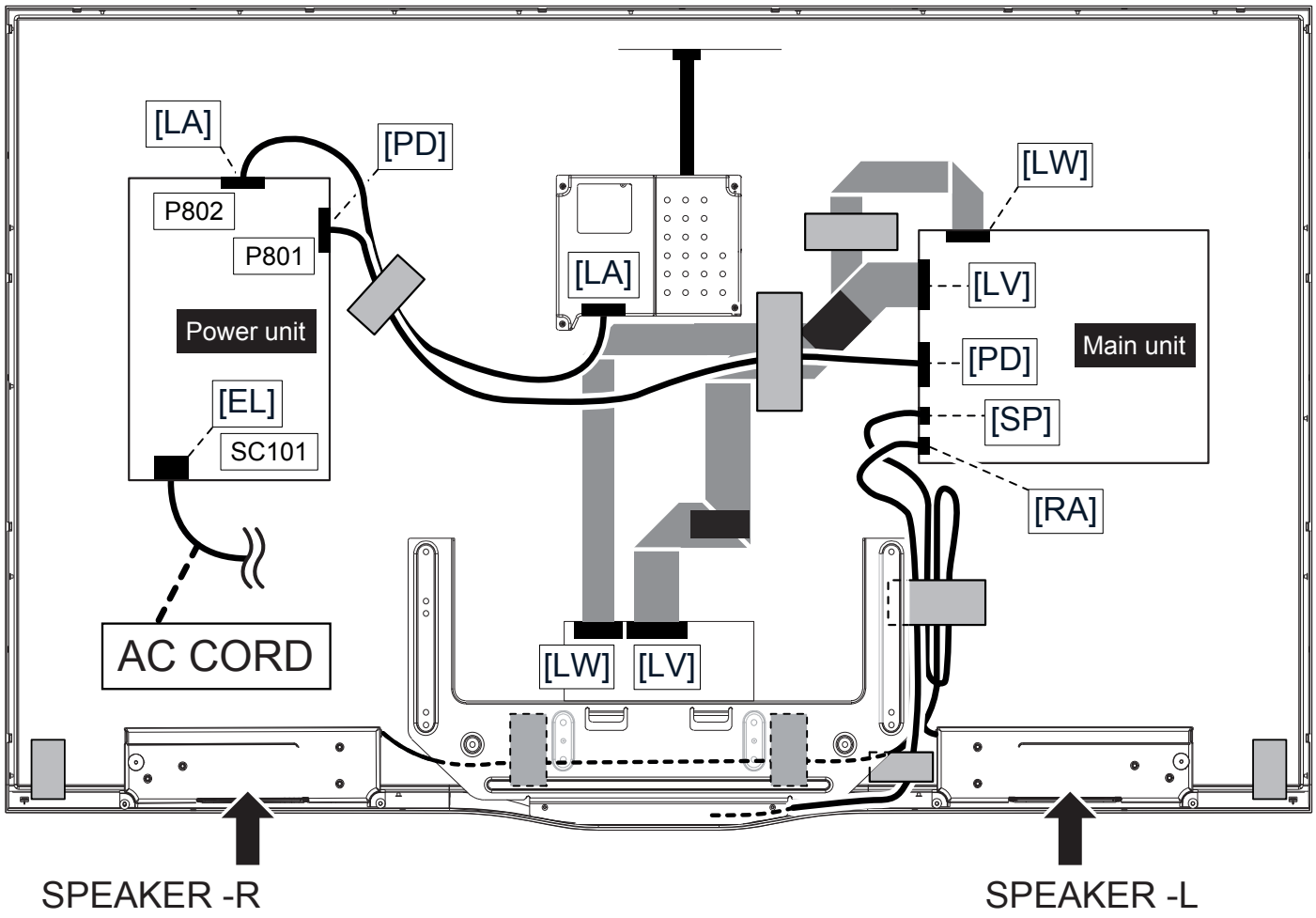
1.1. Remove the 4 lock screws ① and detach the Stand.

1.2. Remove the 14 lock screws ②, 1 lock screw ③, 1 lock screw ④ and detach the AC cord cover and Rear Cabinet



1. Removing of major Parts 39" (Continued)

1.3. Disconnect all the connectors from all the PWBs.



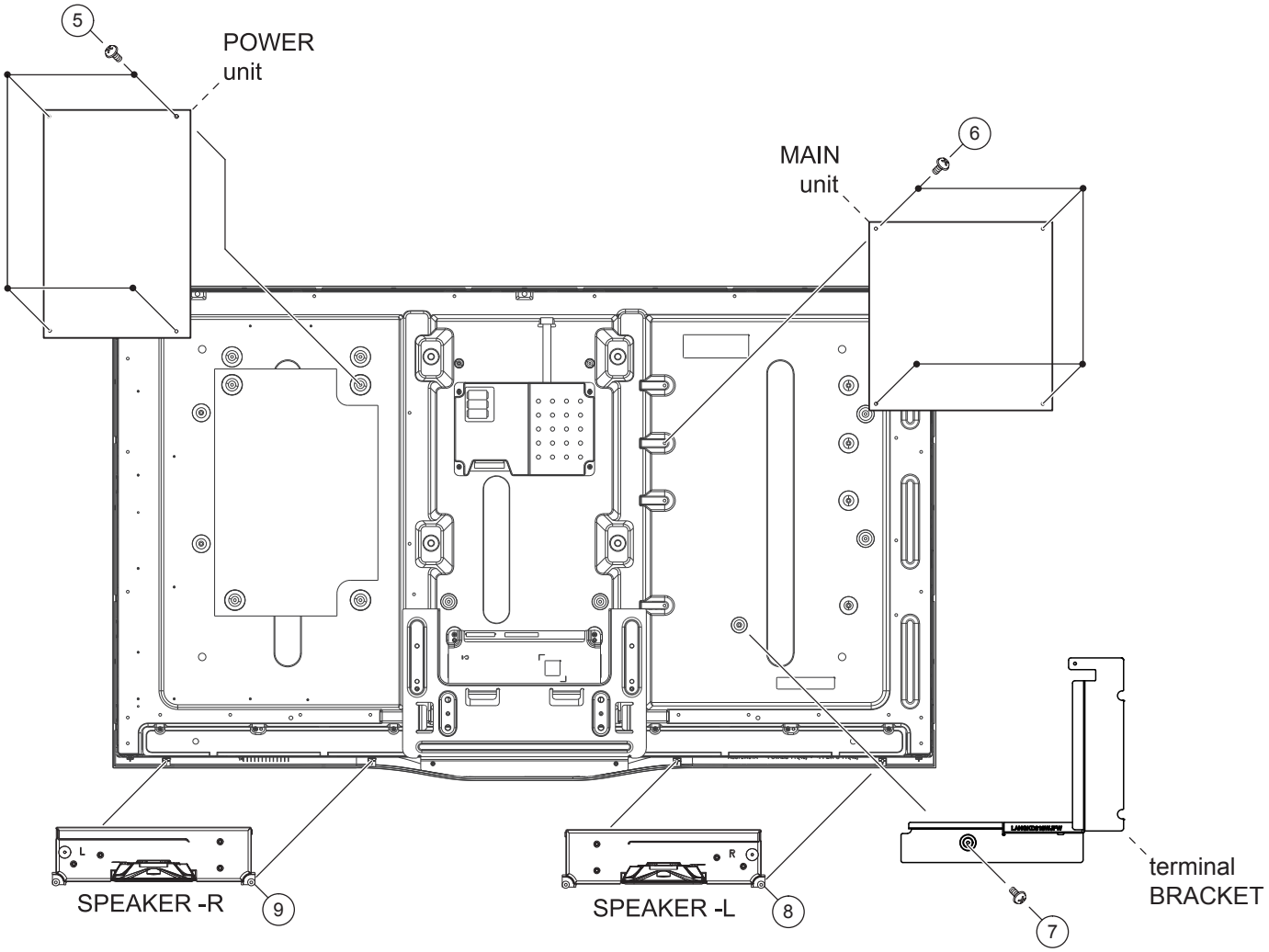
1. Removing of major Parts 39" (Continued)

1.4. Remove the 4 lock screws ⑤ and detach the POWER unit.

1.5. Remove the 4 lock screws ⑥ and detach the MAIN unit.

1.6. Remove the 1 lock screw ⑦ and detach the terminal BRACKET.

1.7. Remove the SPEAKER-L ⑧ and SPEAKER-R ⑨.

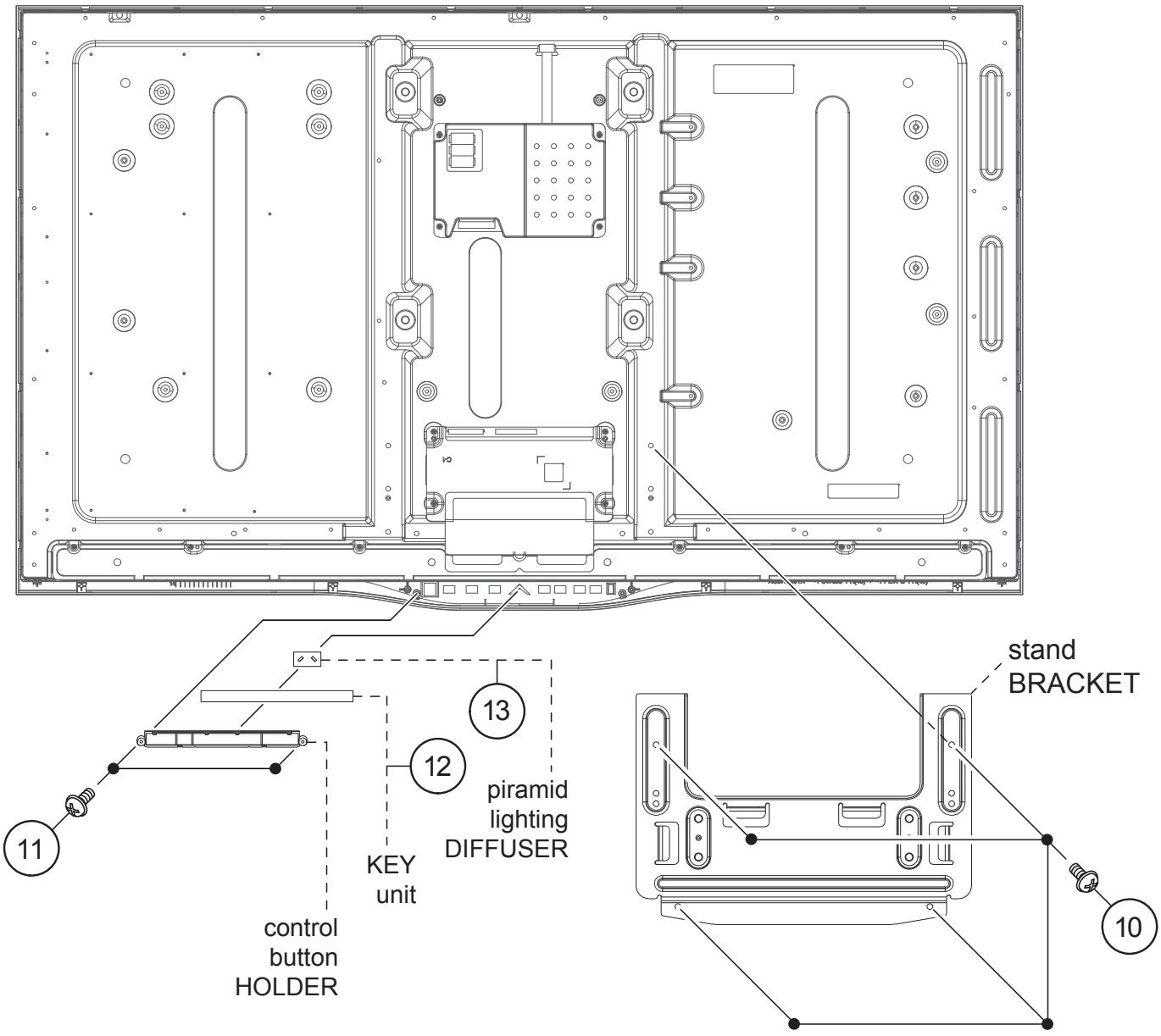


1. Removing of major Parts 39" (Continued)

1.8. Remove the 4 lock screws ⑩ and detach the stand BRACKET.

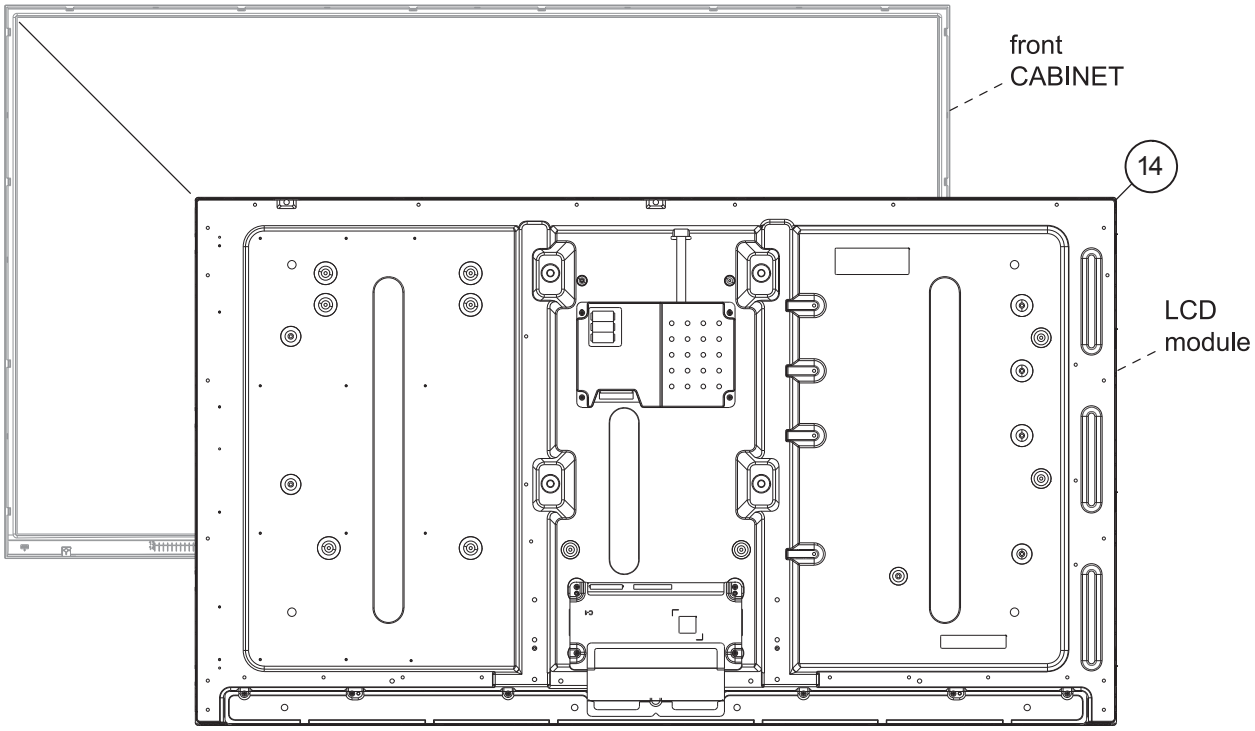
1.9. Remove the 2 lock screws ⑪ and detach the control button HOLDER.

1.10. Detach the KEY unit ⑫ and the pyramid lighting DIFFUSER ⑬.



1. Removing of major Parts 39" (Continued)

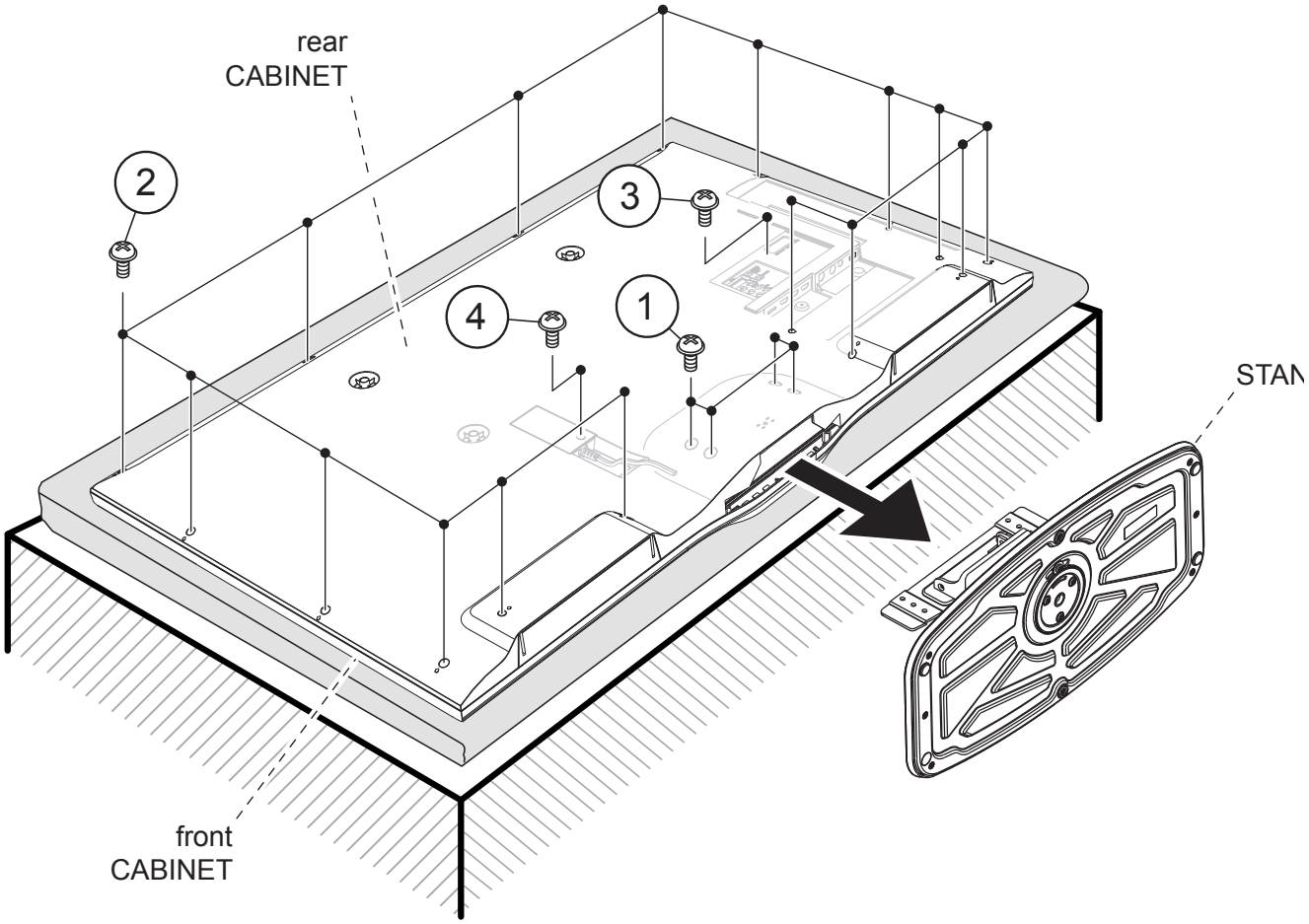
1.11. Detach the LCD module ⑭ from the front CABINET.



2. Removing of major Parts 50”

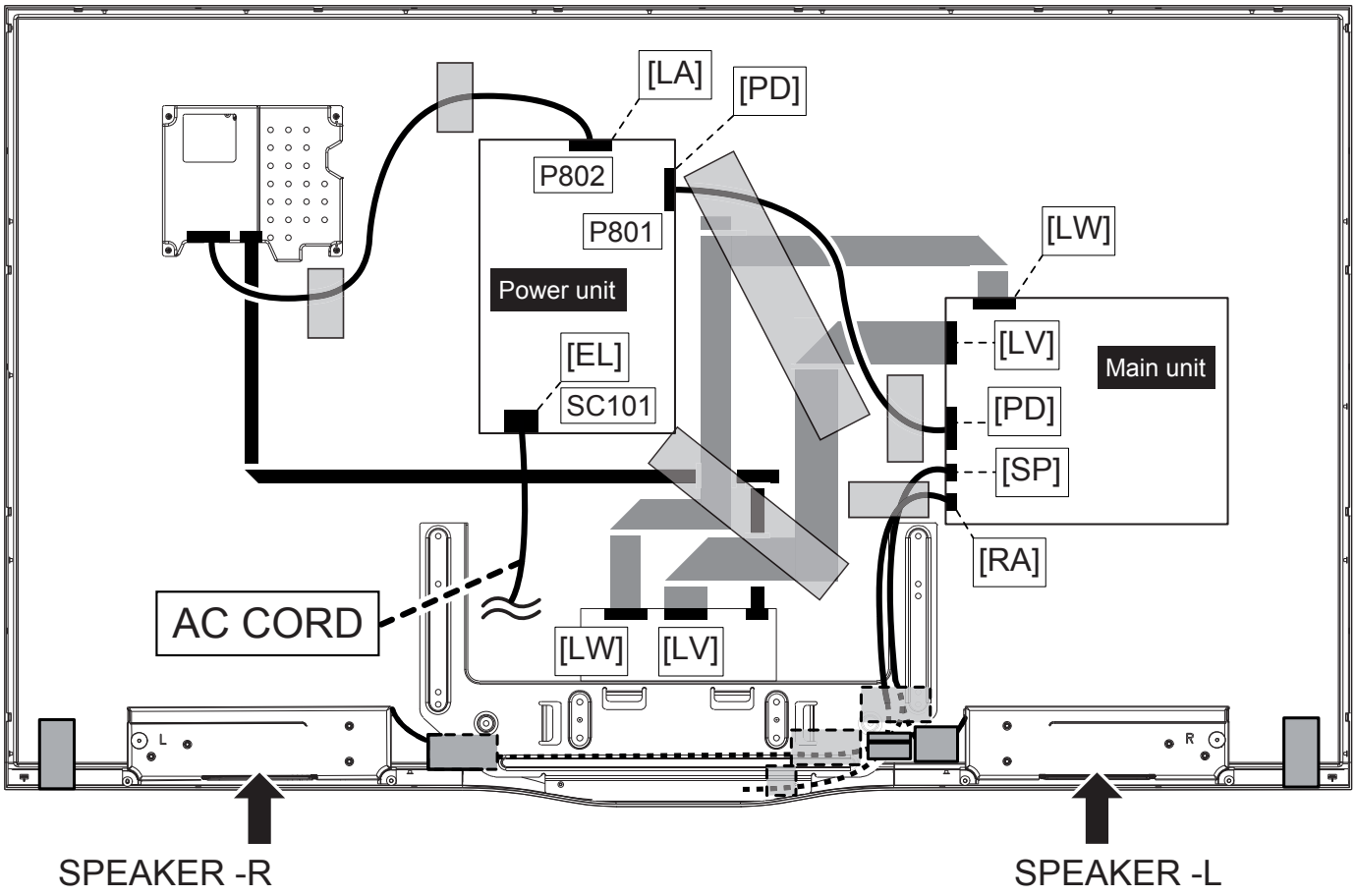
2.1. Remove the 4 lock screws ① and detach the Stand.

2.2. Remove the 14 lock screws ②, 1 lock screw ③, 1 lock screw ④ and detach the AC cord cover and Rear Cabinet



2. Removing of major Parts 50" (Continued)

2.3. Disconnect all the connectors from all the PWBs.



2. Removing of major Parts 50" (Continued)

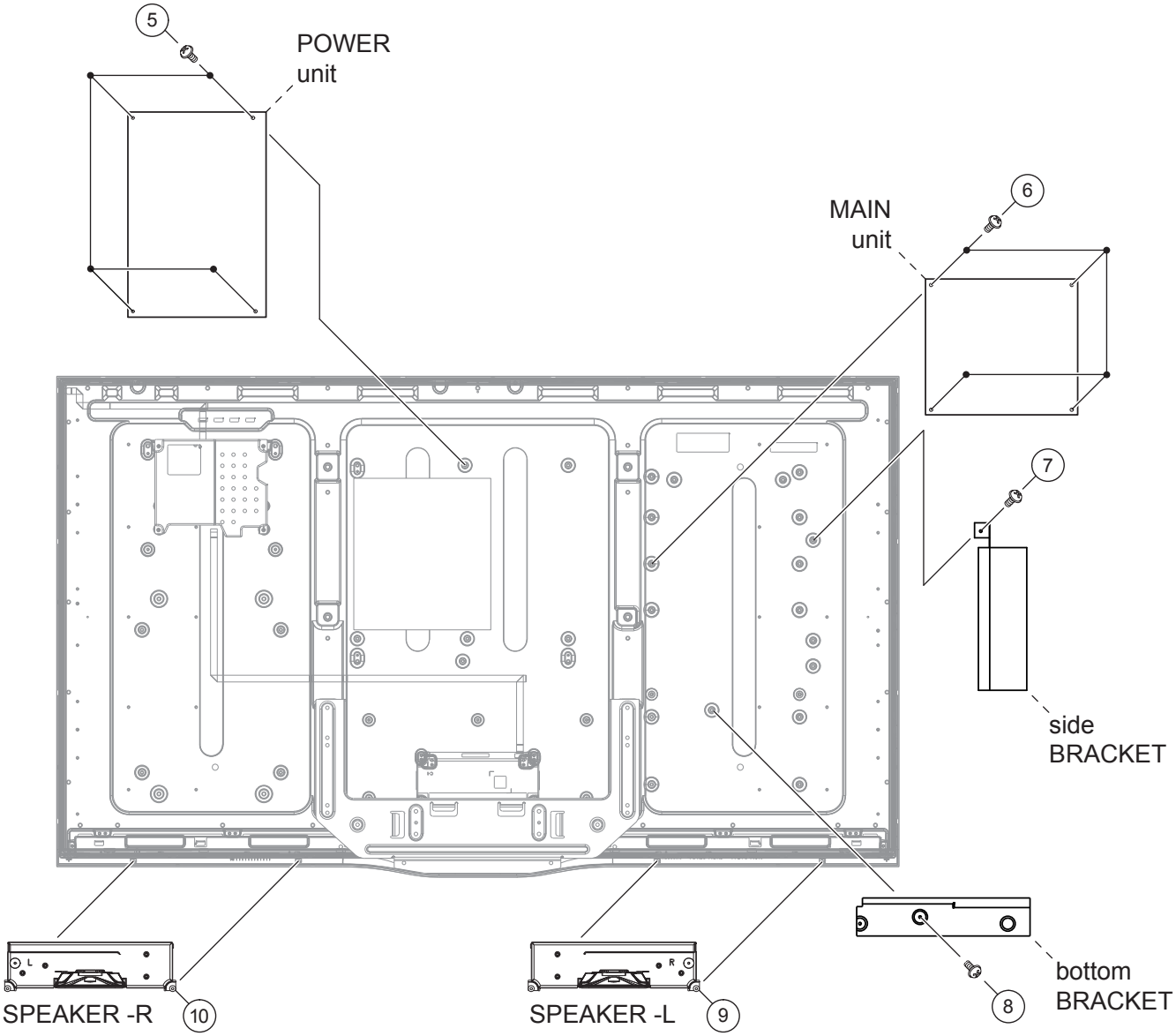
2.4. Remove the 4 lock screws ⑤ and detach the POWER unit.

2.5. Remove the 4 lock screws ⑥ and detach the MAIN unit.

2.6. Remove the 1 lock screw ⑦ and detach the side BRACKET.

2.7. Remove the 1 lock screw ⑧ and detach the bottom BRACKET.

2.8. Remove the SPEAKER-L ⑨ and SPEAKER-R ⑩.

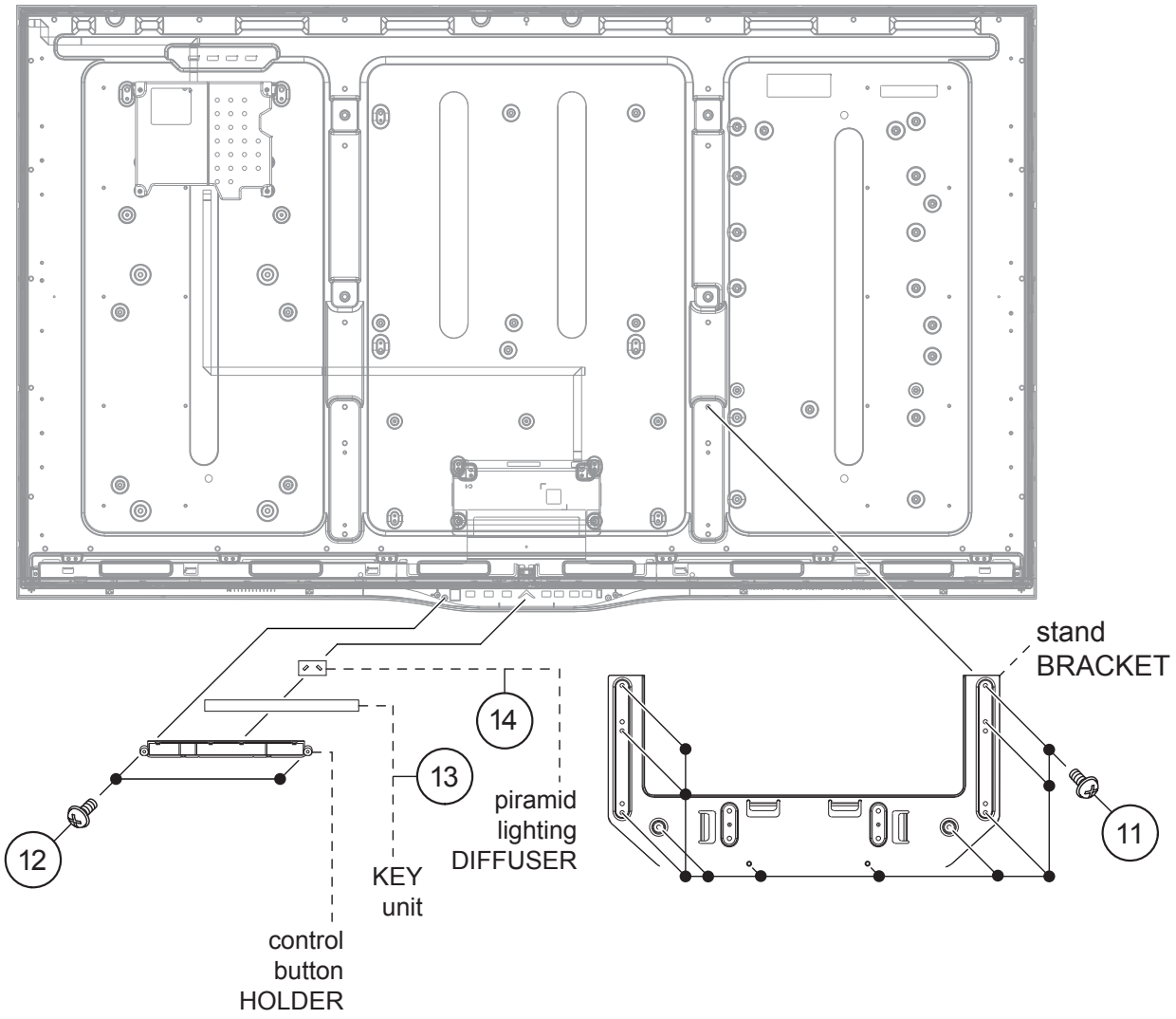


2. Removing of major Parts 50" (Continued)

2.9. Remove the 6 lock screws ⑪ and detach the stand BRACKET.

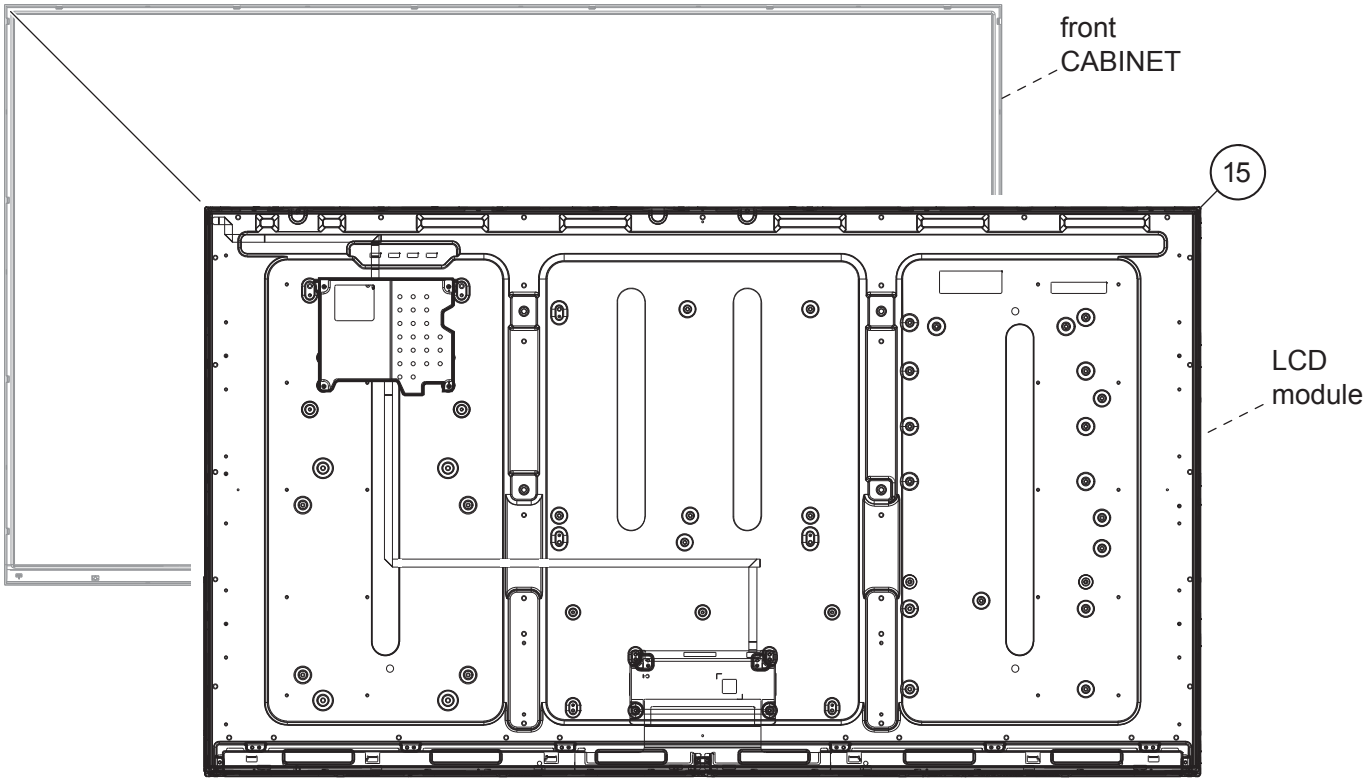
2.10. Remove the 2 lock screws ⑫ and detach the control button HOLDER.

2.11. Detach the KEY unit ⑬ and the pyramid lighting DIFFUSER ⑭.



2. Removing of major Parts 50" (Continued)

2.12. Detach the LCD module ⑮ from the front CABINET.



SERVICE ADJUSTMENTS

1. Adjustment method after PWB and/or IC replacement due to repair

The unit is set to the optimum performance at the time of shipment from the factory.

If any value should become improper or any adjustment is necessary due to the part replacement, make an adjustment according to the following procedure.

1.1. Procure the following units in order to replace the main unit:

MAIN UNIT **DUNTKG135FNxx**

NOTE: [Caution when replacing ICs in the main unit (IC0503, IC1507, IC1508, IC1509, IC1510)]

Before replacing the relevant part, procure the following parts in which the data have been rewritten.

Ref.	Description	Parts code IC + data	Description new IC code for service
IC0503	PC EDID LE65x/75x	RH-IXD660WJZZY	VHIBR24T02J-1Y File: LE65x_VGA_v1.bin
IC1507	HDMI1 EDID LE65x/75x	RH-IXD661WJZZY	VHIBR24T02J-1Y File: LE65x_HDMI1_v1.bin
IC1508	HDMI3 EDID LE65x/75x	RH-IXD663WJZZY	VHIBR24T02J-1Y File: LE65x_HDMI3_v1.bin
IC1509	HDMI4 EDID LE65x/75x	RH-IXD664WJZZY	VHIBR24T02J-1Y File: LE65x_HDMI4_v1.bin
IC1510	HDMI2 EDID LE65x/75x	RH-IXD662WJZZY	VHIBR24T02J-1Y File: LE65x_HDMI2_v1.bin

2. Entering and exiting the adjustment process mode. Standard method.

1. By key-unit.
   1. Unplug the AC power cord, plug the AC power cord and wait until pyramid led blue is iluminated and then:
   2. Press and hold “V-” and “CH-” keys, simultaneously.
   3. “SHARP FACTORY MENU” appears (see Figure 1).
   4. Unplug the AC power cord to exit of adjustments process.
2. By own R/C
   1. Turn on the TV set.
   2. Press “MENU”.
   3. Press “9”, ”9”, ”9”, “2”, “2”, “2” (to enter this code the time is limited to 5 sec. approx.)
   4. “SERVICE MENU” appears (see Figure 1).
   5. Press ◄/► cursor to select the desired function.
   6. Press “OK on boxes to go to submenu.
   7. Press “⮌” to return to “SHARP FACTORY” Main Menu.
   8. Press”END” or “MENU” to exit of adjustments mode.

3. Remote control key operation in Service Mode (Adjustment process mode).

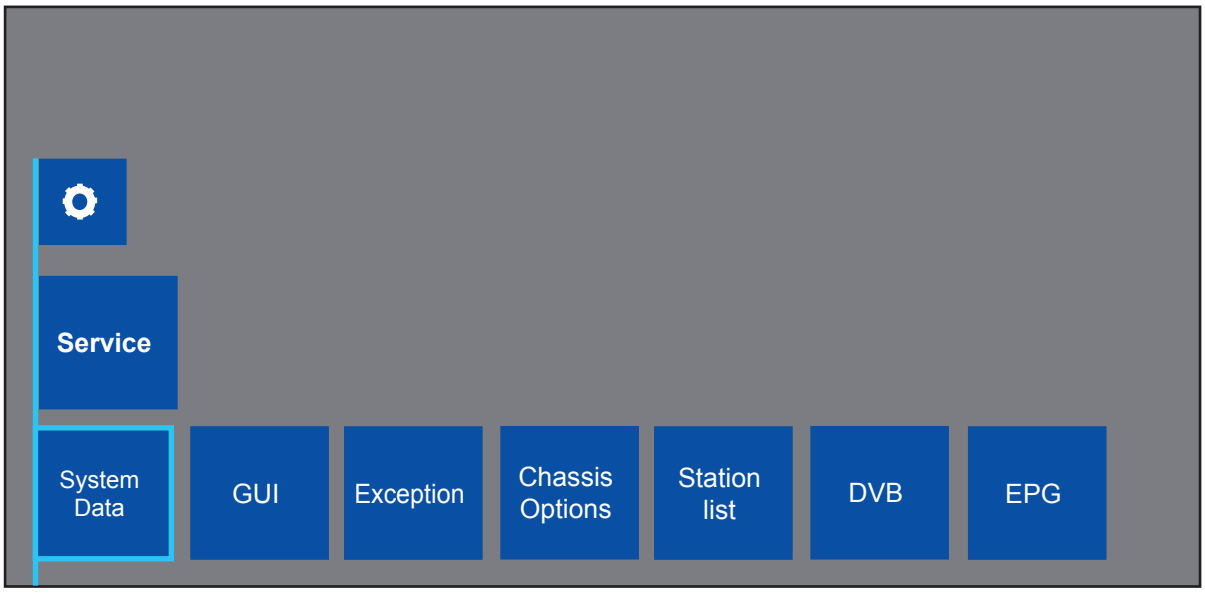
Remote Control key	Keyboard unit	Function
Cursor (◄/►)		Moving an item by one (LEFT/RIGHT) on “Service Menu”. Moving an item by one (LEFT/RIGHT) on SubMenus. Moving a Slider Horizontal Bar to select a value on SubMenu Function.
Cursor (▼/▲)		Enter on a SubMenu (▼). Exit from a SubMenu (▲). Exit of Service Mode (Adjustment mode).
OK		Selecting a MENU on “Service Menu” Selecting a SubMenu. Executing a function on a SubMenu.
MENU	**MENU**	Exit of Service Mode (Adjustment mode). Return to “Service Menu” from a SubMenu.
0..9		Enter numeric data on SubMenu Function.
◿ (+ / –)	**VOL** (+ / –)	Volume UP or DOWN.
P (∧ / ∨)	**CH** (∧ / ∨)	Channel UP or DOWN (Only in ATV/DTV mode), otherwise no action.
⏎	**INPUT**	No action

The required input mode should be switched previously to enter the Service Mode.

CAUTION: Use due care in handling the information described here lest the users should know how to enter the adjustment process mode. If the settings are tampered with in this mode, unrecoverable system damage may result.

4. Description of display

Figure 1: Main Service Adjustment Menu



In figure 1 the selected Menu is remarked by CYAN color, but same criteria is valid on internal SubMenus.
Please use the remote keys as is explained in “3. Remote control key operation in Service Mode” to access to all the options described below.

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
System Data	Package Main System Rfs Opt Main Bootloader Standby Controller WiFi Module	0.1.18.1 1.18.0.0 1.18.0.0 1.18.0.0 0.93.2.0 0.0.23.2 0.0.0.0		MAIN VERSION SoC STM8 VERSION
GUI				Don't use
Exception	Write to USB			Insert a USB Flash memory to capture the exception files
Chassis Options	Chassis Dummy	0		Don't use
	CiOptions	0		0: normal operation 1: disable CiPlus
	FactoryMode	0		0: normal operation 1: factory mode (KMode on)
	InitialInst	0		0: TV set starts normally 1: TV set starts with initial installation menu
	MpegDeblocking	0		Enable/Disable mpeg deblocking settings for SD services. 0: none 1: low 2: medium 3: high
	MpegDeringing	0		Enable/Disable mpeg deringing settings for SD services. 0: none 1: low 2: medium 3: high
	NoAudioDelay	0		Disable all audio delay 0: audio delay enabled 1: audio delay disabled

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
	NoAutoPowerOff	0		0: auto power off enabled (4h, without sync) 1: all auto power off functions disabled
	NoWSS	0		Disable wide screen signaling (WSS) evaluation (Scart and analogue tuner) 0: WSS evaluation enabled 1: WSS info is ignored for video scaling. Instead of WSS info user setting becomes active
	OldSwVersions	0		Installing old software versions allowed 0: normal operation - only newer software is accepted 1: older software is accepted, too
	Panel200Hz	0		Don’t use
	Panel3D	1		Don’t use
	PanelHFlip	0		Don’t use
	PanelVFlip	0		Don’t use
	RC5-Mapping	0		Don’t use
	RC5-Subsystem	0		Don’t use
	Service1	0		Don’t use
	SysTimeSource	0		Select the source of the system time information 0: time source automatic 1: use the internal real time clock 2: use NTP (network time protocol) 3: use the time form DVB transport stream

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
	WarmupMode	1		0: normal operation 1: automatically switch on after power on
Station List	Station Import			Insert USB Flash memory to import a station map from external file.
	Station Export			Insert USB Flash memory to save the current TV station map on a external file.
	Delete Station List			Delete the current TV station map.
Chassis				Don't use
DVB	DVB Info	Tuner1 Info	ATV/DVB Tuner Service Info Box	
		Tuner2 Info		Don't use
		Video Info	Video Info Box	
		Audio Info	Audio Info Box	
		PCR Info		Don't use
	Common Interface	Delete CI+ authentication contexts		Don't use (Engineering Purpose)
		Show CI+ information	CI+ information	Don't use (Engineering Purpose)
			Device ID	Don't use (Engineering Purpose)
			Valid from	Don't use (Engineering Purpose)
			Valid to	Don't use (Engineering Purpose)
EPG	DVB			Don't use
	Reset Update Date			Reset Update EPG timer
	Clear EPG database			Clear internal EPG data base

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
	Import EPG database			Import external EPG database from USB file.
	Export EPG database			Export EPG internal database to a USB file.
PQ Settings				Don't use (Engineering Purpose)
Public Mode	PUBLIC MODE			See Public Mode Description
	Power On fixed	Variable	Variable Fixed	Use ◄/► to adjust and "OK" to fix value
	Maximum volume	100	0…100	Enter number of maximum volume
	Volume fixed	Variable	Variable Fixed	Use ◄/►to adjust and "OK" to fix value
	Volume fixed level	33	0…100	Enter number of maximum volume
	RC button	Respond	Respond No respond	Use ◄/►to adjust and "OK" to fix value
	Panel button	Respond	Respond No respond	Use ◄/►to adjust and "OK" to fix value
	Menu Button	Respond	Respond No respond	Use ◄/► to adjust and "OK" to fix value
	On Screen Display	Yes	Yes No	Use ◄/► to adjust and "OK" to fix value
	Input mode start	Normal	Normal ATV DTV HDMI1 HDMI2 HDMI3 HDMI4 SCART-AV VIDEO PC IN COMPONENTS	Use ◄/► to adjust and "OK" to fix value
	Input TV mode program number	0	0…9999	Enter number of program

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
	Input mode fixed	Variable	Variable Fixed	Use ◄/► to adjust and “OK” to fix value
	RC path through	Off	On Off	Use ◄/► to adjust and “OK” to fix value (Need additional Hardware)
	Hotel mode	Off	On Off	Use ◄/► to adjust and “OK” to fix value
	RS232C Power On	Disable	Enable Disable	Use ◄/► to adjust and “OK” to fix value (Need additional Hardware)
	HDMI Level Power On	Disable	Enable Disable	Use ◄/► to adjust and “OK” to fix value (Need additional Hardware)
	Commit			Press "OK" to confirm changes
	Reset			Press "OK" to reset to default values
	Cancel			Press “OK” to cancel any change.
White Balance	MGAMMA Reset			Reset GAMMA adjustment to default values
	MGAMMA Pattern	Pattern1 Pattern2 Pattern3 Pattern4 Pattern5 Pattern6		
	MGAMMA IN1	160	0...1023	Pattern 1 modulation
	MGAMMA IN2	320	0...1023	Pattern 2 modulation
	MGAMMA IN3	480	0...1023	Pattern 3 modulation
	MGAMMA IN4	640	0...1023	Pattern 4 modulation
	MGAMMA IN5	800	0...1023	Pattern 5 modulation
	MGAMMA IN6	960	0...1023	Pattern 6 modulation
	MGAMMA IN R1	571	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G1	614	0...4096	Use ◄/► to adjust color temp.

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
	MGAMMA IN B1	675	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN R2	1189	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G2	1228	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN B2	1341	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN R3	1801	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G3	1843	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN B3	2000	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN R4	2421	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G4	2457	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN B4	2671	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN R5	3033	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G5	3071	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN B5	3338	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN R6	3666	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN G6	3686	0...4096	Use ◄/► to adjust color temp.
	MGAMMA IN B6	4000	0...4096	Use ◄/► to adjust color temp.
	MGAMMA COMMIT			Save the GAMMA changes in NVM.
Factory Init	OK:0			Press “OK” to install Factory Init mode on next switch-on.
Inch setting	39inch 50 inch 60 inch Second 39 inch Second 50 inch	Not used in M/P Not used in M/P		
Operation hours				
Operation hours reset	OK: 0			Press “OK” to reset counter

4. Description of display (continued)

Service Menu	SubMenu	Options 1	Options 2	Comments
Erase NVM	OK: 0			Press “OK” to erase NVM
Set Auto Installation flag	OK: 0			Press “OK” to setup Autoinstallation
LCD controller test patterns	No test Pattern White White 50% Grey Scale Red Green Blue Black			Press “OK” to activate it
SmartLoader (Clone TV)	Loud Data Save Data			Insert USB Flash memory and Press “OK”
Hardware adjustment	For CVBS signal For YC signal For COMPONENT signal For VGA signal			Press “OK” to execute de ADC Adjustment
Noise level information				Don’t use
Teletext information				Don’t use
Location of TV set	(List of countries)			Use ◀ / ▶ to select uninstallation country and press “OK” to fix it.

6. White Balance Adjustment

Condition:

● AV MODE= **Dynamic** (backlight at max.).

● Select correct Inch setting (39",50" or 60") in "Inch setting" menu.

● Adjustments reference device: **Minolta CA-210**

● Adjustments target: **x=0.274, y=0.284**

High: adjustments spec ±0.001, inspection spec: ±0.002

Low: adjustments spec ±0.002, inspection spec: ±0.004

1. Press "◄ / ►" until selecting "White Balance" option.
2. Press "**OK**".
3. "GAMMA" menu appears.
4. Press "◄ / ►" until selecting "MGAMMA RESET".
5. Press "**OK**", to restore default values.
6. Hold the default value for "MGAMMA G1". (Note: next, try to get the (x, y) adjustments target, changing "MGAMMA R1" and "MGAMMA B1" as follow).
7. Press "◄ / ►" until selecting "MGAMMA R1".
8. Press "**OK**" to enter "Internal Adjustments Pattern 1".
9. Press "◄ / ►" until you obtain the desired value.
10. Press "⮌" to return to previous menu.
11. Press "◄ / ►" until selecting "MGAMMA B1".
12. Press "**OK**" to enter "Internal Adjustments Pattern 1".
13. Press "◄ / ►" until you obtain the desired value.
14. Press "⮌" to return to previous menu.
    (Note: In case of not being possible to achieve the desired (x, y) target, try to get it by changing also the "MGAMMA G1")
15. Press "◄ / ►" until selecting "MGAMMA R2".
16. Press "**OK**" to enter "Internal Adjustments Pattern 2".
17. Repeat from step 6 to 14 for the "MGAMMA R2" and "MGAMMA B2".
18. Press "◄ / ►" until selecting "MGAMMA R3".
19. Press "**OK**" to enter "Internal Adjustments Pattern 3".
20. Repeat from step 6 to 14 for the "MGAMMA R3" and "MGAMMA B3".
21. Press "◄ / ►" until selecting "MGAMMA R4".
22. Press "**OK**" to enter "Internal Adjustments Pattern 4".
23. Repeat from step 6 to 14 for the "MGAMMA R4" and "MGAMMA B4".
24. Press "◄ / ►" until selecting "MGAMMA R5".
25. Press "**OK**" to enter "Internal Adjustments Pattern 5".
26. Repeat from step 6 to 14 for the "MGAMMA R5" and "MGAMMA B5".
27. Press "◄ / ►" until selecting "MGAMMA R6".
28. Press "**OK**" to enter "Internal Adjustments Pattern 6".
29. Repeat from step 6 to 14 for the "MGAMMA R6" and "MGAMMA B6".
30. Press "◄ / ►" until selecting "MGAMMACommit".
31. Press "**OK**", to save the new values.

NOTE:

For activating the W/B flag, only is necessary to send the order "Commit". After this action, the "W" W/B flag will change to "1".

7.Initialization to factory setting

Caution: When the factory settings have been ade, all user setting data, including the channel settings, are initialized.

The adjustments done in the adjustment process mode are not initialized. Keep this in mind when initializing these settings.

1. Enter in Service mode.
2. Press “◄” or “►” key until selecting “Factory Init”.
3. Press OK key twice.
4. Turn off the TV set.
5. When turns on again, the TV restarts in “Initial Installation” menu.

The following settings will be back to their factory ones:

- User settings
- Channel data (e.g. broadcast frequencies)
- Maker option setting
- Password data

8. Public Mode (Hotel mode)

1. How to Enter in the Public Mode (Hotel Mode).

There are two following ways to display the Public Mode setting screen.

Method 1:
Turn on the power and enter in the Service mode as usual and select [PUBLIC MODE].

Method 2:
Unplug the AC power cord.
Plug the AC power cord. When the LED light blue, press “VOL+” and “INPUT” keys at the same time.
Then, when you are asked for the password, enter “0027”.
After this sequence the TV will turn on showing the Public Mode setting screen. In another case, the screen is erased, and it operates in the ordinary mode.

2. Public Mode Settings.

1. POWER ON FIXED [VARIABLE ↔ FIXED]
   When it is set to “FIXED” the TV is impossible to be switch off by Main Switch or Remote Control.

2. MAXIMUM VOLUME [0 ↔ 100]
   Is possible to set the maximum volume at limited level

3. VOLUME FIXED [VARIABLE ↔ FIXED]
   Is possible to fix the sound volume at limited level.
   When “FIXED” is selected the sound volume before limited is fixed.

4. VOLUME FIXED LEVEL [0 ↔ 100]
   If “FIXED” has been selected, is possible to set a fixed volume at the level that is chosen.

5. RC BUTTON [RESPOND ↔ NO RESPOND]
   If “NO RESPOND” is selected, the remote control keys are inoperative.

6. PANEL BUTTON [RESPOND ↔ NO RESPOND]
   If “NO RESPOND” has been selected, the set’s keys remain deactivated (Except POWER key).

7. MENU BUTTON [RESPOND ↔ NO RESPOND]
   If “NO RESPOND” has been selected, “MENU” key, of remote control, is inoperative.

8. ON SCREEN DISPLAY [Yes ↔ No]
   If “OFF” has been selected, the On Screen Display does not appear.

9. INPUT MODE START [NORMAL → ATV → DTV→ HDMI1 → HDMI2 → HDMI3 → HDMI4 → SCART-AV → VIDEO → PC IN → COMPONENTS]
   When any other item than “NORMAL” has been selected, the sets will start in a selected input mode at the next power-on.

10. INPUT TV MODE PROGRAM NUMBER [1-999]
    If value is “0”, TV should start in the last program number selected by user if in the previous control ATV / DTV is selected, this is the normal user TV behavior. If value is different from “0”, TV should starts in the specified program number when it is switched on.

11. INPUT MODE FIXED [VARIABLE↔ FIXED]
    “FIXED” has been selected, any channels and input modes other than those selected at the start mode cannot be picked up.

8. Public Mode (Hotel mode) (continued)

10. INPUT TV MODE PROGRAM NUMBER [1-999]
If value is “0”, TV should start in the last program number selected by user if in the previous control ATV / DTV is selected, this is the normal user TV behavior. If value is different from “0”, TV should starts in the specified program number when it is switched on.

11. INPUT MODE FIXED [VARIABLE ↔ FIXED]
“FIXED” has been selected, any channels and input modes other than those selected at the start mode cannot be picked up.

12. RC PATH THROUGH [ON ↔ OFF] (Need additional Hardware)
When ON and RS-232 circuitry is really assembled , in pin #9 of RS-232 socket appears a feedback of the remote signal (3.3v logic type).

13. HOTEL MODE [ON ↔ OFF]
If ON has been selected the HOTEL MODE is activated.

14. RS-232C POWER ON [ENABLE ↔ DISABLE] (Need additional Hardware)
When this option is set to “ENABLE” it means that TV should be able to be switched on from standby mode through a RS232 command.

15. HDMI LEVEL POWER ON [ENABLE ↔ DISABLE] (Need additional Hardware)
Enabling this option, the polling of HDMI signal presence in a given HDMI input is being monitored.
[TV in ON mode] If there isn’t HDMI signal present, after some seconds TV should go to standby
[TV in standby mode] If there is HDMI signal present, TV should switch on.

16. COMMIT
Select Commit and press OK to apply the change.

17. RESET
Cancel all Public Mode settings. (It returns to the factory settings)

3. Public Mode Menu.

	Item	Description	Remarks (adjustment details, etc.)
	PUBLIC MODE	PUBLIC MODE Submenu	Press ">" or "OK" to enter to PUBLIC MODE Submenu
1	Power On fixed	Variable	Press ";" or "<" to change Variable/Fixed then press "OK"
2	Maximum volume	100	Enter number of maximum volume
3	Volume fixed	Variable	Press ";" or "<" to change Variable/Fixed then press "OK"
4	Volume fixed level	33	Enter number of maximum volume
5	RC button	Respond	Press ";" or "<" to change Respond/No respond then press "OK"
6	Panel button	Respond	Press ";" or "<" to change Respond/No respond then press "OK"
7	Menu Button	Respond	Press ";" or "<" to change Respond/No respond then press "OK"
8	On Screen Display	Yes	Press ";" or "<" to change Yes/No then press "OK"
9	Input mode start	Normal	Press ";" or "<" to change Normal/ATV/DTV/HDMI1.. then press "OK"
10	Input TV mode program number	0	Enter number of program
11	Input mode fixed	Variable	Press ";" or "<" to change Variable/Fixed then press "OK"
12	RC path through	Off	Press ";" or "<" to change On/Off then press "OK" (Need additional Hardware)
13	Hotel mode	Off	Press ";" or "<" to change On/Off then press "OK"
14	RS232C Power On	Disable	Press ";" or "<" to change Enable/Disable then press "OK" (Need additional Hardware)
15	HDMI Level Power On	Disable	Press ";" or "<" to change Enable/Disable then press "OK" (Need additional Hardware)
16	Commit		Press "OK" to confirm
17	Reset		Press "OK" to return to factory settings

9. SMART LOADER

Description.

The Smartloader is a function implemented in the service software of SEE designed LE750 series intended to easily replicate the user settings of one TV into another. These settings include (but not restricted to): picture and audio, tuning set-up, language and country selection, PIN, child locked programs… Factory adjustments are not copied as they are different for every TV.
The Smartloader makes possible the user data to be stored in a memory device connected to the USB terminal of the TV that is used as reference and later load those data into other TVs by using their respective USB terminal.

How it works.

In reference TV:

1. Insert a memory device in the USB slot.
2. Enter in service mode, select SmartLoader (Clone TV) menu.
3. Press “OK”.
4. Select “Save data” and press OK in the remote control.
5. Wait until “OK:0” is displayed, the file has been successfully created in the root directory of the memory device. In case of error, an explanation message is shown.

In TV to be cloned:

1. Insert a memory device with a file in it obtained following the above procedure.
2. Enter in service mode, select SmartLoader menu.
3. Select “Load data” and press OK button in the remote control.
4. After some seconds, “OK: 0” is displayed. In case of error, an explanation message is shown.
5. Reboot the TV to load the new settings.

Very important: All the TVs must have the same software version and hardware.

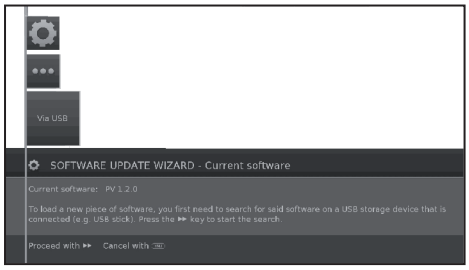
SOFTWARE UPGRADING

Software update via USB

It is possible to update the software on your SHARP TV.

1 Add the binary file to USB memory root.
2 Insert the memory in any USB side TV set socket.
3 Press **MENU** button.
4 With ◄/► select **Setup** and press **OK.**
5 Select **Control** → **Software** → **Software Update** → **Via USB.**

The next screen will appear:



The software version that is currently installed is displayed.

6 Press ▶▶ button to proceed. The TV searches for a new software file on the USB stick.

If a new software version is available after the search, a message appears:

New software Vx.xx

7 Press ▶▶ button to start loading the new software. Or press **END** to end the wizard (the software will not be updated).
•The updated percentage appears.

8 To make your TV completely ready for use again, please switch it off and on with the mains switch.

Software update via Internet

If an Internet connection is available, new software can be downloaded directly and installed in the TV set.

1 Press **MENU** button.

2 With ◄/► select **Setup** and press **OK.**

3 Select **Control** → **Software** → **Software Update** → **Via Internet.**

A message regarding data protection will be displayed.

4 If you do not agree with data protection message, please press ◀◀ to exit. If you agree, please press ▶▶ to continue.

The version of the software that is currently installed will be displayed.

5 By pressing ▶▶ the TV connects to the Internet and scans the update server for new software.

If a new software version is available, a message appears.

6 Press ▶▶ to start loading the new software.

If you want to end the wizard, please press **END**.

7 To make your TV completely ready for use again, please switch it off and on with the mains switch.

NOTES

- Please do not switch off the TV by the mains switch during software updating.
- The total programming process can take up to 50 minutes in total.

MAJOR ICs INFORMATION

1. General ICs Information

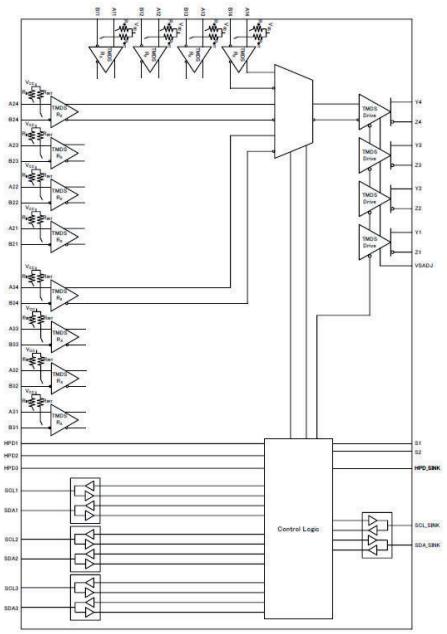
DUNTKF135WE (Main Unit)

IC 1505: HDMI Switch 3 inputs to 1 output.
Part number: BU16028KV (ROHM)
Sharp code: VHIBU16028K-1Q
http://www.rohm.com/products/databook/video/pdf/bu16006kv-e.pdf

Features:

- Supports 2.25 Gbps Signaling Rate for 480i/p, 720p, and 1080i/p Resolution to 12-Bit Color Depth.
- Compatible with HDMI 1.3a.
- 5V Tolerance to all DDC and HPD_SINK Inputs.
- Integrated Switchable 50ΩΩReceiver Termination.
- Integrated DDC buffer.
- Integrated Equalizer circuit to adapt long cable.

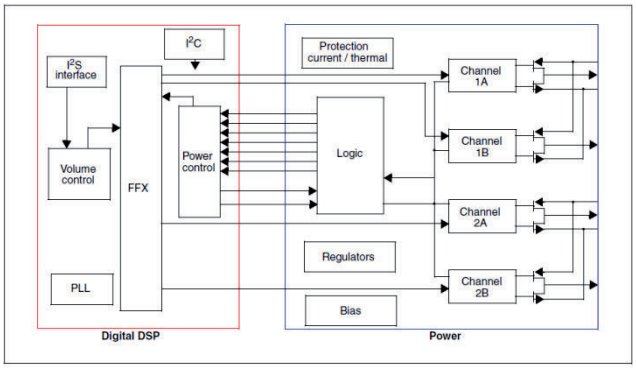
OBlock Diagram



IC 2701: Audio Power Amplifier.
Part number: STA333BW13TR (ST MICRO)
Sharp code: VHISTA333BW-1L.
http://www.st.com/internet/com/TECHNICAL_RESOURCES/TECHNICAL_LITERATURE/DATASHEET/CD00166760.pdf

Features:

- Wide-range supply voltage, 4.5 V to 21.5 V.
- Three power output configurations:
  - 2 channels of ternary PWM (2 x 20 W into 8 Ω at 18 V) + PWM output.
  - 2 channels of ternary PWM (2 x 20 W into 8 Ω at 18 V) + ternary stereo line-out.
  - 2.1 channels of binary PWM (left, right, LFE) (2 x 9 W into 4 Ω +1 x 20 W into 8 at 18 V).
- FFX with 100-dB SNR and dynamic range.
- Scalable FFX modulation index.
- Selectable 32- to 192-kHz input sample rates.
- I2C control with selectable device address.
- Digital gain/attenuation +48 dB to -80 dB with 0.5-dB/step resolution.
- Soft volume update with programmable ratio.
- Individual channel and master gain/attenuation.
- Dynamic range compression (DRC) or anti-clipping mode.
- Audio presets:
  - 15 preset crossover filters.
  - 5 preset anti-clipping modes.
  - Preset night-time listening mode.
- Individual channel soft/hard mute.
- Independent channel volume and DSP bypass.
- I2S input data interface.
- Input and output channel mapping.
- Automatic invalid input-detect mute.
- Up to 5 user-programmable bi-quads by channel.
- Three coefficients banks for EQ presets storing with fast recall via I2C interface.
- Bass/treble tones and de-emphasis control.
- Selectable high-pass filters for DC blocking.
- Advanced AM interference frequency switching and noise suppression modes.



MAJOR ICs INFORMATION (continued)

- Sub channel mix into left and right channels.
- Selectable high- or low-bandwidth noise-shaping topologies.
- Selectable clock input ratio.
- 96-kHz internal processing sample rate.
- Thermal overload and short-circuit protection technology
- Video apps: 576 x fs input mode supported.

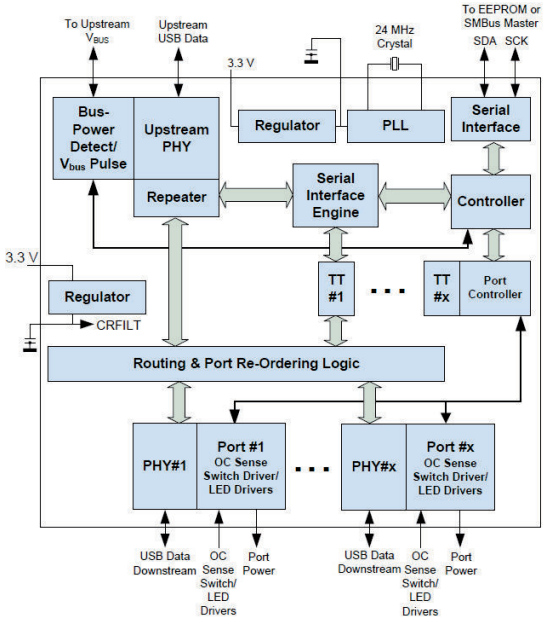
IC 2702: Headphone Amplifier.
Part number: TS488IQT (ST MICRO)
Sharp code : RH-IXD542WJZZY.
http://www.st.com/st-web-ui/static/active/en/resource/technical/document/datasheet/CD00083715.pdf

The TS488/9 is an enhancement of TS486/7 that eliminates pop and click noise and reduces the number of external passive components. The TS488/9 is a dual audio power amplifier capable of driving, in single-ended mode, either a 16 Ω or a 32 Ω stereo headset. Capable of descending to low voltages, it delivers up to 31 mW per channel (into 16 Ω loads) of continuous average power with 0.1% THD+N in the audio bandwidth from a 2.5 V power supply.

Features:
- Pop and click noise protection circuitry.
- Operating range from VCC = 2.2 V to 5.5 V.
- Standby mode active low (TS488) or high (TS489).
- Output power:
  – 120 mW at 5 V, into 16 Ω with 0.1% THD+N max (1 kHz).
  – 55 mW at 3.3 V, into 16 Ω with 0.1% THD+N max (1 kHz).
- Low current consumption: 2.7 mA max at 5 V.
- Ultra-low standby current consumption: 10 nA typical.
- High signal-to-noise ratio.
- High crosstalk immunity: 102 dB (F = 1 kHz).
- PSRR: 70 dB typ. (F = 1 kHz), inputs grounded at 5 V.
- Unity-gain stable.
- Short-circuit protection circuitry.

IC9552: USB 2.0 Hi-Speed Hub Controller
Part number: USB2514B-AEZG (SMSC)
Sharp code: VHI2514BAEZ-1Q
http://www.smsc.com/Downloads/SMSC/Downloads_Public/Data_Sheets/251xb.pdf

The SMSC USB251x hub is a family of low-power, OEM configurable, MTT (multi transaction translator) 1 hub controller IC products for embedded USB solutions. The “x” in the part number indicates the number of downstream ports available. The SMSC hub supports low-speed, full-speed, and hi-speed (if operating as a hi-speed hub) downstream devices on all of the enabled downstream ports.



Features
- Full power management with individual or ganged power control of each downstream port.
- Fully integrated USB termination and pull-up/pull-down resistors.
- Supports a single external 3.3 V supply source; internal regulators provide 1.2 V or 1.8 V internal core voltage.
- On-chip driver for 24 MHz crystal resonator or external 24/48 MHz clock input.
- Customizable vendor ID, product ID, and device ID.
- ESD protection up to 4 kilovolts on all USB pins.
- Supports self- or bus-powered operation.
- USB251xB2 and USB251xBi products support the USB Battery Charging specification.
- Package: 36-pin QFN (6x6 mm).

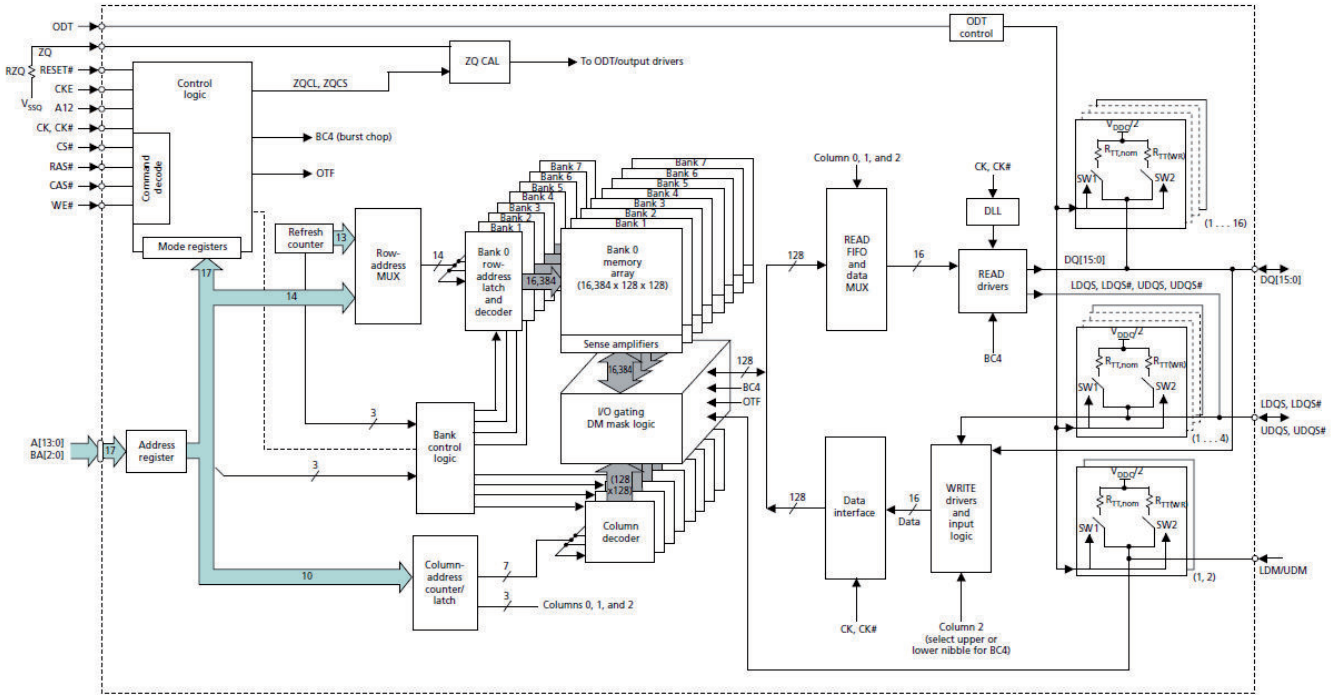
MAJOR ICs INFORMATION (continued)

IC 3501, IC3502 & IC 3503: 2Gb 16Bits DDR3-1600 SDRAM
Part number: MT41J128M16JT-125:K (MICRON)
Sharp code: RH-IXD538WJZZQ
http://www.micron.com/~/media/Documents/Products/Data%20Sheet/DRAM/2Gb_DDR3_SDRAM.pdf

DDR3 SDRAM uses double data rate architecture to achieve high-speed operation. The double data rate architecture is an 8n-prefetch architecture with an interface designed to transfer two data words per clock cycle at the I/O pins. A single read or write operation for the DDR3 SDRAM effectively consists of a single 8n-bit-wide, four-clock cycle data transfer at the internal DRAM core and eight corresponding n-bit-wide, one half-clock-cycle data transfers at the I/O pins. The differential data strobe (DQS, DQS#) is transmitted externally, along with data, for use in data capture at the DDR3 SDRAM input receiver. DQS is center-aligned with data for WRITEs. The read data is transmitted by the DDR3 SDRAM and edge-aligned to the data strobes.
The DDR3 SDRAM operates from a differential clock (CK and CK#). The crossing of CK going HIGH and CK# going LOW is referred to as the positive edge of CK. Control, command, and address signals are registered at every positive edge of CK. Input data is registered on the first rising edge of DQS after the WRITE preamble, and output data is referenced on the first rising edge of DQS after the READ preamble.
Read and write accesses to the DDR3 SDRAM are burst-oriented. Accesses start at a selected location and continue for a programmed number of locations in a programmed sequence. Accesses begin with the registration of an ACTIVATE command, which is then followed by a READ or WRITE command. The address bits registered coincident with the ACTIVATE command are used to select the bank and row to be accessed. The address bits registered coincident with the READ or WRITE commands are used to select the bank and the starting column location for the burst access.
The device uses a READ and WRITE BL8 and BC4. An auto precharge function may be enabled to provide a self-timed row precharge that is initiated at the end of the burst access.
As with standard DDR SDRAM, the pipelined, multibank architecture of DDR3 SDRAM allows for concurrent operation, thereby providing high bandwidth by hiding row precharge and activation time.
A self refresh mode is provided, along with a power-saving, power-down mode.

Features:

- VDD = VDDQ = 1.5V ±0.075V. 1.5V center-terminated push/pull I/O.
- Differential bidirectional data strobe with 8n-bit prefetch architecture.
- Differential clock inputs (CK, CK#).
- 8 internal banks.
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals.
- Programmable CAS READ latency (CL). Posted CAS additive latency (AL).
- Programmable CAS WRITE latency (CWL) based on tCK.
- Fixed burst length (BL) of 8 and burst chop (BC) of 4 (via the mode register set [MRS]).
- Self refresh temperature (SRT).
- Multipurpose register with Output driver calibration.



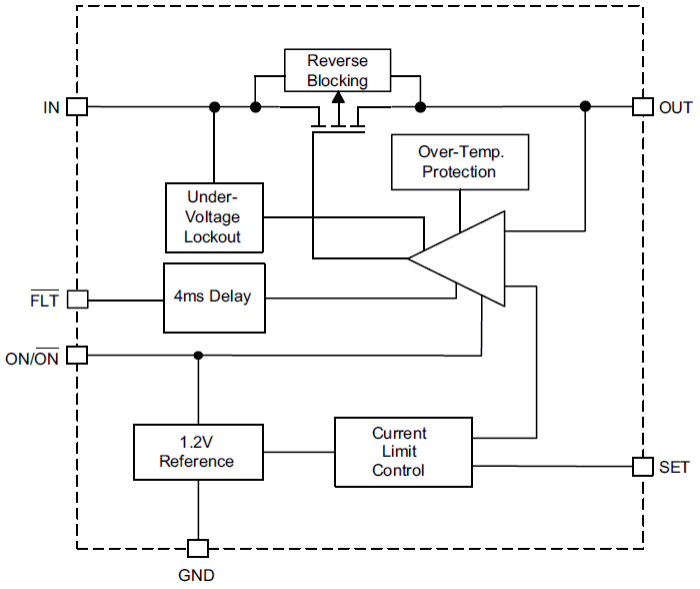
MAJOR ICs INFORMATION (continued)

IC9551: Adjustable Current Limited Load Switch with Fault Flag (USB1).
Part number: AAT4614IGU-2-T1 (SKYWORKS INC.)
Sharp code: RH-IXD309WJZZY
http://www.skyworksinc.com/uploads/documents/201939A.pdf

The AAT4614 Smart Switch is a current limited P-channel MOSFET power switch designed for high side load switching applications. This switch operates with inputs ranging from 2.4V to 5.5V, making it ideal for both 3V and 5V systems. An integrated current-limiting circuit protects the input supply against large currents which may cause the supply to fall out of regulation. Reverse current blocking is provided to protect the load switch from reverse current potentials while the device is shutdown.
The AAT4614 is also protected from thermal overload which is limited by power dissipation and junction temperatures. Current limit threshold is programmed with a resistor from SET to ground and may be adjusted for levels up to 1.4A. The ultra-fast current limit response to a sudden short circuit is a mere 1µs which reduces the requirements of local supply bypassing. An open drain FAULT flag signals an over-current or over-temperature condition after a 4ms blanking time to prevent false reporting. Quiescent current is a low 10µA and the supply current decreases to less than 1µA in shutdown mode.
The AAT4614 is offered in the 8-pin SC70JW, SOT23-6 and SOT23-5 packages, and is specified for operation over the -40°C to +85°C ambient temperature range.

Features.

- Input Voltage Range: 2.4V to 5.5V.
- Programmable Over-Current Threshold.
- Fast Transient Response:
- 1µs Response to Short Circuit.
- 10µA Typical while Enabled.
- 160mΩ Typical RDS(ON).
- Only 2.4V Needed for ON/OFF Control.
- Under-Voltage Lockout.
- Reverse Blocking During Disable.
- 4ms Fault Blanking.
- Fault Flag Open Drain Output.
- Active Hi/Lo Enable Options.
- Over-Temperature Protection.

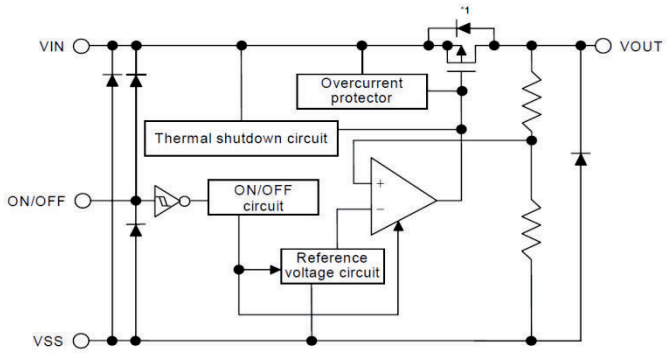


IC9553: Low Dropout LDO (USB2)
Part number: S-1170B50UC-OUJTFG (SEIKO)
Sharp code: VHIS170B50U-1Y
http://datasheet.sii-ic.com/en/voltage_regulator/S1170_E.pdf

The S-1170 Series is a positive voltage regulator with a low dropout voltage (LDO), high output voltage accuracy, and low current consumption developed based on CMOS technology.
A built-in low on-resistance transistor provides a low dropout voltage and large output current, a built-in overcurrent protector prevents the load current from exceeding the current capacitance of the output transistor, and a built-in thermal shutdown circuit prevents damage caused by the heat. An ON/OFF circuit ensures a long battery life. Compared with the voltage regulators using the conventional CMOS process, a larger variety of capacitors are available, including small ceramic capacitors. Small SOT-89-5 and 6-Pin HSON(A) packages realize high-density mounting.

Features:

- Output voltage: 1.5 V to 5.5 V, selectable in 0.1 V steps.
- High-accuracy output voltage: ±1.0%.
- Low dropout voltage (LDO): 120 mV typ. (3.0 V output product, Iout =300 mA).
- Low current consumption: During operation 80 µA typ. 160 µA max., During shutdown 0.1 µA typ. 1.0 µA max.
- High peak current capability: 800 mA output is possible (@ Vin >Vout(S) +1.0 V) *1
- Built-in ON/OFF circuit.
- High ripple rejection: 70 dB typ. (@ 1.0 kHz)
- Built-in overcurrent protector: Overcurrent of output transistor can be restricted.
- Built-in thermal shutdown circuit.



*1. Parasitic diode

MAJOR ICs INFORMATION (continued)

IC 3301: SOC Freeman Premier 2
Part number: FLI7560-AAB (ST MICRO)
Sharp code: RH-IXD514WJZZQ
http://www.st.com/st-web-ui/static/active/en/resource/technical/document/data_brief/DM00063486.pdf

The FLI7560 is a revolutionary new iDTV SoC that integrates two highly successful, market proven subsystems: STi710x digital/front-end processing and multi-format audio/video decoding from the STB market, and Faroudja video/back-end processing from the TV market. The FLI7560 is a high-performance, state-of-the-art SoC that can power DTT/cable/satellite/IPTV iDTV designs for worldwide deployment. From the software compatibility extending from the mature STi710x STAPI layer to the extensive video processing, tuning, and tools from Faroudja Labs, FLI7560 is an ideal solution for addressing the next generation of iDTV design requirements.

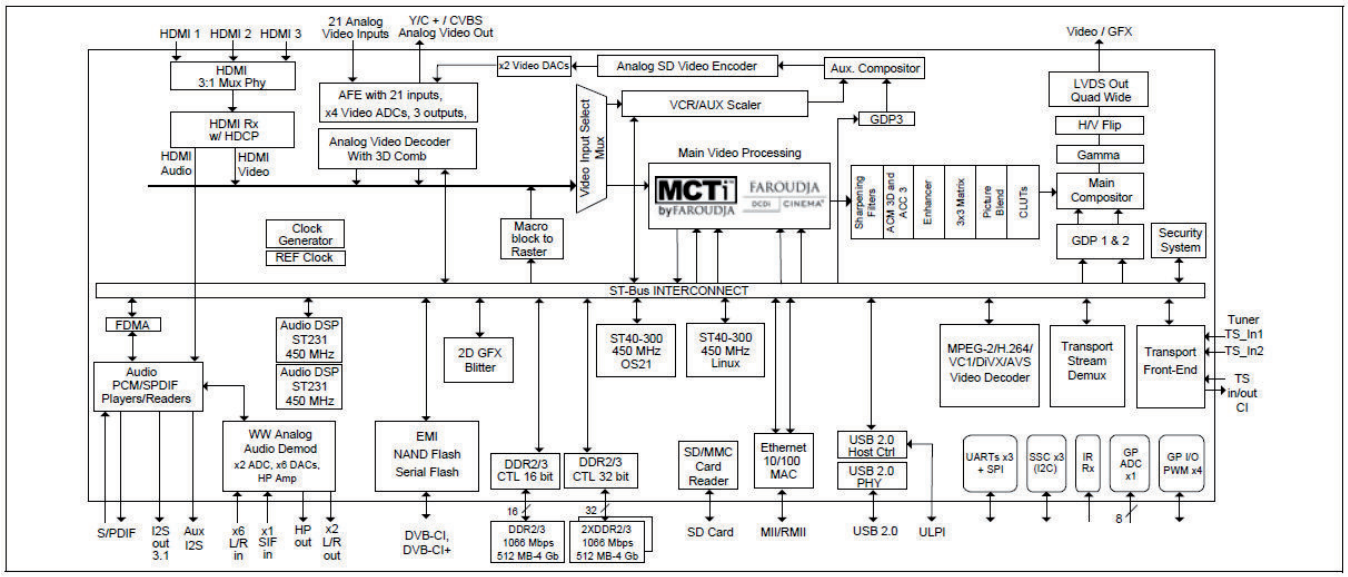
The FLI7560 is the latest in a family of scalable performance and software-compatible H.264 SoCs that address mainstream and performance segments of the iDTV market. Notably, it is a single-chip, 120 Hz TV solution incorporating Motion-Corrected Temporal Interpolation (MCTi) Faroudja technology. It utilizes industry-leading vector estimation to interpolate in between frames to correct film motion judder and panel motion blurring. Combining the artistic elements of film with the linear motion of video, FLI7560 provides audiences with a uniquely enjoyable viewing experience.

FLI7560 implements the latest generation of Faroudja Video Optimized technologies, which allow a high degree of customization for TV OEMs. Key technology improvements in this area include 14-bit color and contrast processing, upgraded sharpness, upgraded temporal noise reduction, and new MPEG noise reduction. Furthermore, FLI7560 supports all connectivity requirements to 3D sources and all mandatory 3D formats defined in the HDMI 1.4b specification.

Along with its high performance CPU, the FLI7560 is equipped with 256 Kbyte of level 2 cache to deliver the smoothest multi-instance Connected TV intuitive user experience. In addition, with its A/V decode, graphics engine, motion judder reduction and motion blur removal features, and extensive network interface capability, FLI7560 enables 3DTVs to deliver rich applications for convenient access to multimedia content, both from within the home, as well as from the web.

Features

- ST231@450MHz for advanced HD video decoding (H.264/VC-1/MPEG2/…). →Worldwide DTT broadcast video standards.
- Dual ST231@450MHz for advanced multichannel audio decoding (MPEG-1/2, MP3, WMA, Dolby® Digital/Dolby Digital+, AAC/AAC+/…) → Worldwide DTT broadcast audio standards.
- Dual ST40 CPU@450MHz (delivers 1600+DMIPS) runs Linux and OS21 → One CPU fully dedicated to application and user interface.
- 256 Kbyte level 2 cache --> For high performance Internet TV applications.
- Faroudja® video processing for Main Video --> Vivid picture quality for the consumer.
- Full support for HDMI 1.4b mandatory 3DTV input formats.
- Horizontal/vertical image flip support all panel types.
- Faroudja MCTi™ Frame Rate Conversion (FRC) for 2D and 3D content (film and video).
- Higher performance for SMART TV with more responsive navigation.
- 3DTV support 120 Hz (line-interleaved) and 60L60R (frame-sequential).
- Integrates auto 2D to 3D video/text conversion and depth control.
- Worldwide analog audio demodulator.
- 14-bit Advanced Color Management (3D) and Contrast processing --> Ultimate video quality for OEMs and consumers.
- High-quality graphics for rich, easy-to-use GUI.
- Advanced security supporting embedded CA, CI/CI+ and DRM apps; copy protection support including HDCP, AES/DES/TDES, RoviTM.
- 48-bit (3 x 16 or 1 x 16 + 1 x 32) DDR2/DDR31066 Mbps DRAM I/F --> Performance and flexibility with DRAM ICs.
- Quad high-speed 10-bit LVDS outputs --> convenient connectivity to panel TCON.

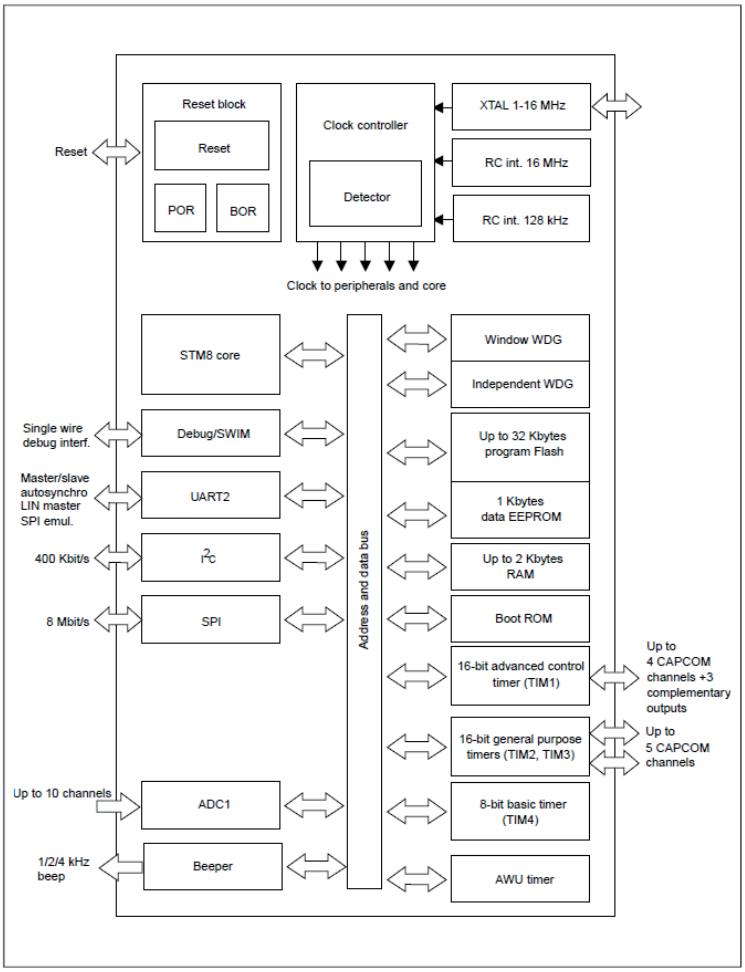


MAJOR ICs INFORMATION (continued)

IC 3800: STANDBY CONTROLLER
Part number: STM8S105K4T6CTR (ST MICRO)
Sharp code: RH-IXD550WJZZY
http://www.st.com/st-web-ui/static/active/en/resource/technical/document/datasheet/CD00200092.pdf

Features

- Core.
  - 16 MHz advanced STM8 core with Harvard architecture and 3-stage pipeline.
  - Extended instruction set.
- Memories.
  - Medium-density Flash/EEPROM:
    - Program memory up to 32 Kbytes (data retention: 20 years at 55°C after 10k cycles).
    - Data memory up to 1 Kbytes true data EEPROM (endurance 300k cycles).
  - RAM: Up to 2 Kbytes.
- Clock, reset and supply management.
  - 2.95 V to 5.5 V operating voltage.
  - Flexible clock control, 4 master clock sources:
    - Low power crystal resonator oscillator.
    - External clock input.
    - Internal, user-trimmable 16 MHz RC.
    - Internal low power 128 kHz RC.
- Clock security system with clock monitor.
- Power management:
  - Low power modes (wait, active-halt, halt).
  - Switch-off peripheral clocks individually.
- Permanently active, low consumption power-on and power-down reset.
- Interrupt management
  - Nested interrupt controller with 32 interrupts.
  - Up to 37 external interrupt on 6 vectors.
- Timers.
  - 2x 16-bit general purpose timers, with 2+3 CAPCOM channels (IC, OC or PWM).
  - Advanced control timer: 16-bit, 4 CAPCOM channels, 3 complementary outputs, dead-time insertion and flexible synchronization.
  - 8-bit basic timer with 8-bit prescaler.
  - Auto wake-up timer.
  - Window and independent watchdog timers.
- Communications interfaces.
  - UART with clock output for synchronous operation, Smartcard, IrDA, LIN.
  - SPI interface up to 8 Mbit/s.
  - I2C interface up to 400 Kbit/s.
- Analog-to-digital converter (ADC).
  - 10-bit, ±1 LSB ADC with up to 10 multiplexed channels, scan mode and analog watchdog.
- I/Os.
  - Up to 38 I/Os on a 48-pin package including 16 high sink outputs.
  - Highly robust I/O design, immune against current injection
- Unique ID.
  - 96-bit unique key for each device.



MAJOR ICs INFORMATION (continued)

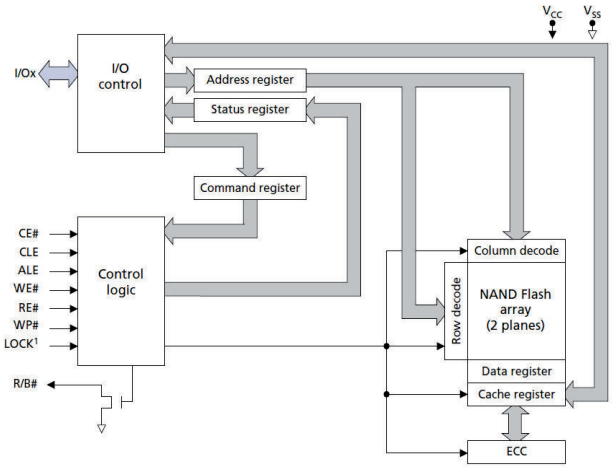
IC8401: 2Gbit NAND FLASH
Part number: MT29F4G08ABADAWP:D (MICRON)
Sharp code: RH-IXD552WJQZQ
http://datasheet.elcodis.com/pdf2/69/78/697874/mt29f4g08abadawpd.pdf

Micron NAND Flash devices include an asynchronous data interface for high-performance I/O operations. These devices use a highly multiplexed 8-bit bus (I/Ox) to transfer commands, address, and data. There are five control signals used to implement the asynchronous data interface: CE#, CLE, ALE, WE#, and RE#. Additional signals control hardware write protection and monitor device status (R/B#).

This hardware interface creates a low pin-count device with a standard pinout that remains the same from one density to another, enabling future upgrades to higher densities with no board redesign.

A target is the unit of memory accessed by a chip enable signal. A target contains one or more NAND Flash die. A NAND Flash die is the minimum unit that can independently execute commands and report status. A NAND Flash die, in the ONFI specification, is referred to as a logical unit (LUN). There is at least one NAND Flash die per chip enable signal. For further details, see Device and Array Organization.

This device has an internal 4-bit ECC that can be enabled using the GET/SET features.



These devices use NAND Flash electrical and command interfaces. Data, commands, and addresses are multiplexed onto the same pins and received by I/O control circuits. The commands received at the I/O control circuits are latched by a command register and are transferred to control logic circuits for generating internal signals to control device operations. The addresses are latched by an address register and sent to a row decoder to select a row address or to a column decoder to select a column address. Data is transferred to or from the NAND Flash memory array, byte by byte (x8) or word by word (x16), through a data register and a cache register. The NAND Flash memory array is programmed and read using page-based operations and is erased using block-based operations. During normal page operations, the data and cache registers act as a single register. During cache operations, the data and cache registers operate independently to increase data throughput. The status register reports the status of die operations.

IC9501: Single Port 10/100 Fast Ethernet Transceiver
Part number: KSZ8081RNDTR (MICREL)
Sharp code: RH-IXD543WJZZY

http://www.mouser.com/catalog/specsheets/KSZ8081RNDCA.pdf

The KSZ8081RND is a single-supply 10BaseT-100Base-TX Ethernet physical-layer transceiver for transmission and reception of data over standard CAT-5 unshielded twisted pair (UTP) cable.

The KSZ8081 is a highly-integrated PHY solution. It reduces board cost and simplifies board layout by using on-chip termination resistors for the differential pairs and by integrating a low-noise regulator to supply the 1.2V core, and by offering 1.8/2.5/3.3V digital I/O interface support.

The KSZ8081RND offers the Reduced Media Independent Interface (RMII) for direct connection to RMII-compliant MACs in Ethernet processors and switches

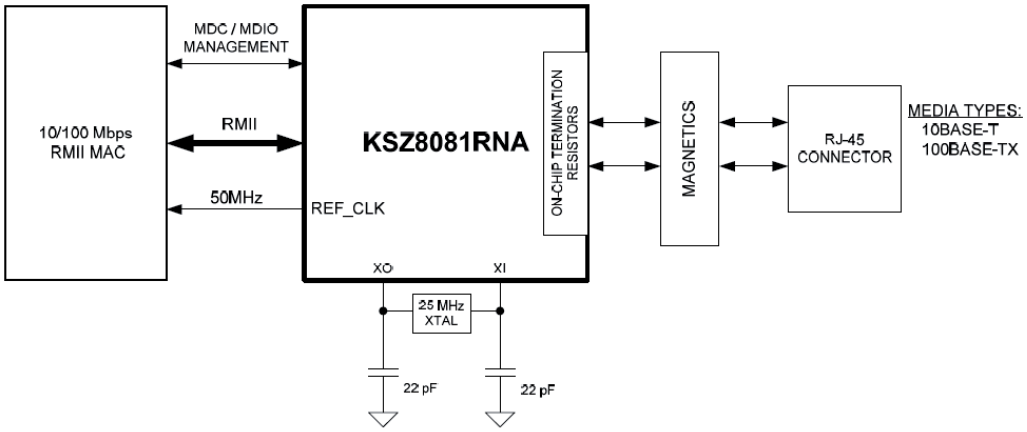
As the power-up default, the KSZ8081RND uses a 25MHz crystal to generate all required clocks, including the 50MHz RMII reference clock output for the MAC.

Features:

- Single-chip 10BaseT/100BaseTx IEEE 802.3 compliant Ethernet transceiver.
- RMII v1.2 Interface support with a 50MHz reference clock output to MAC.
- MDC/MDIO management interface for PHY register configuration.
- Programmable interrupt output.
- On-chip termination resistors for the differential pairs.
- Baseline wander correction.
- HP Auto MDI/MDI-X to detect and correct straight-through and crossover cable connections with disable and enable option.

MAJOR ICs INFORMATION (continued)

- Auto-negotiation to automatically select the highest link-up speed (10/100Mbps) and duplex (half/full).
- Loopback modes for diagnostics.
- Single 3.3V power supply with VDD I/O options for 1.8V, 2.5V or 3.3V.
- Built-on 1.2V regulator for core.



IC1106: Silicon Tuner (Analog & DVB-T/C/T2)
Part number: Si2178-A20-GMR (SILICON LABS)
Sharp code: RH-IXD518WJZZY
http://www.silabs.com/Support%20Documents/TechnicalDocs/Si2178-short.pdf

The Si2178 integrates a PAL/SECAM/NTSC analog TV demodulator with a universal hybrid TV tuner supporting all worldwide digital and analog TV standards. The Si2178 requires no external balun and offers the lowest-cost BOM for a hybrid TV tuner with analog demodulator. By combining Silicon Labs' proven digital low-IF architecture with a 4th-generation RF front-end, the Si2178 maintains the highest performance that exceeds MOPLL-based tuners, including industry-leading 2nd-order distortion performance.

Compared with competing silicon TV tuners, the Si2178 delivers an unprecedented level of front-end integration, resulting in the lowest number of external BOM components. No external tracking filters, wire-wound inductors, LNAs, SAW filters or inductive power supply filtering components are needed. The Si2178 offers low power consumption as well as an option for single or dual power supply operation. Also included is an internal power-on reset circuit, eliminating the need for external brownout protection components or additional pins in module applications.

For next-generation digital TV broadcast standards, such as DVB-T2 and DVB-C2, that are sensitive to integrated phase noise, the Si2178 offers industry-leading phase noise performance. A software-selectable cable mode is also included which offers high return-loss performance.

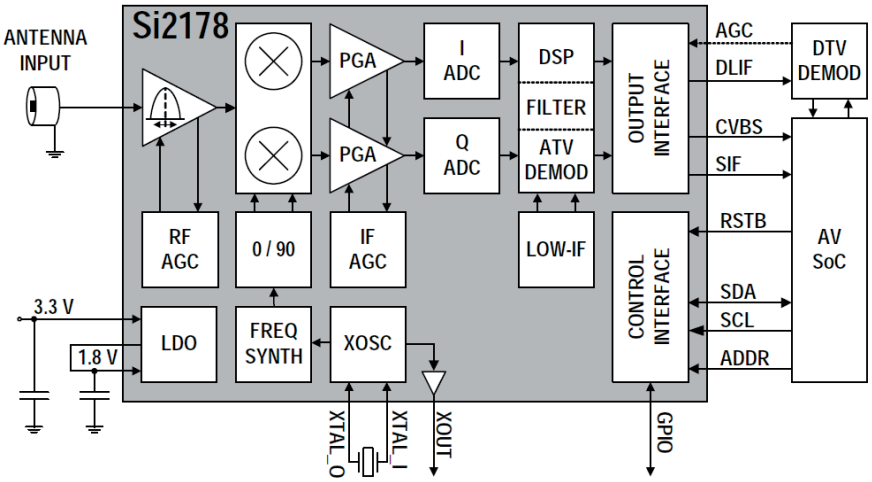
As with prior-generation Silicon Labs TV tuners, the Si2178 delivers superior picture quality and a higher number of received stations when compared to other silicon tuners and discrete MOPLL-based tuners. Both the tuner and analog demodulator incorporate worldwide field testing experience from three previous generations in high-volume production, to deliver the highest tolerance to real-world field reception conditions. The Si2178 also incorporates a harmonic-rejection mixer that delivers excellent immunity to Wi-Fi and LTE interference across the full RF input frequency range, with no need for external filtering components.

Features:

- Worldwide hybrid TV tuner.
  - Analog TV: NTSC, PAL/SECAM.
  - Digital TV: ATSC/QAM, DVB-T2/T/C2/C, ISDB-T/C, DTMB.
  - 42–1002 MHz frequency range.
- Analog TV demodulator.
  - Superior video SNR performance.
  - Over modulation and ICPM tolerant.
- Industry-leading margin to A/74, NorDig, D-Book, C-Book, ARIB, EN55020, Open Cable™ specifications.
- Lowest BOM for a silicon hybrid TV tuner.
  - No balum at RF input.
  - No external SAW filters or wire-wound inductors.
  - Integrated LNAs and complete tracking filters.

MAJOR ICs INFORMATION (continued)

- Best-in-class real-world reception.
  - Exceeds discrete MOPLL-based tuners.
  - Industry-leading phase noise performance.
  - High immunity to Wi-Fi and LTE interference.
- Low power consumption.
  - 3.3 V and 1.8 V power supplies.
  - Single-supply option for 3.3 V-only operations.
- Integrated power-on reset circuit.
- Flexible output interface.
  - Combined ALIF/DLIF output to SoC.
  - Optional DLIF output to external demodulator.



IC1102: DVB-T/C Demodulator.
Part number: Si2165-D-GMR (SILICON LABS)
Sharp code: RH-IXD519WJZZY
http://www.silabs.com/Support%20Documents/TechnicalDocs/Si2165-short.pdf

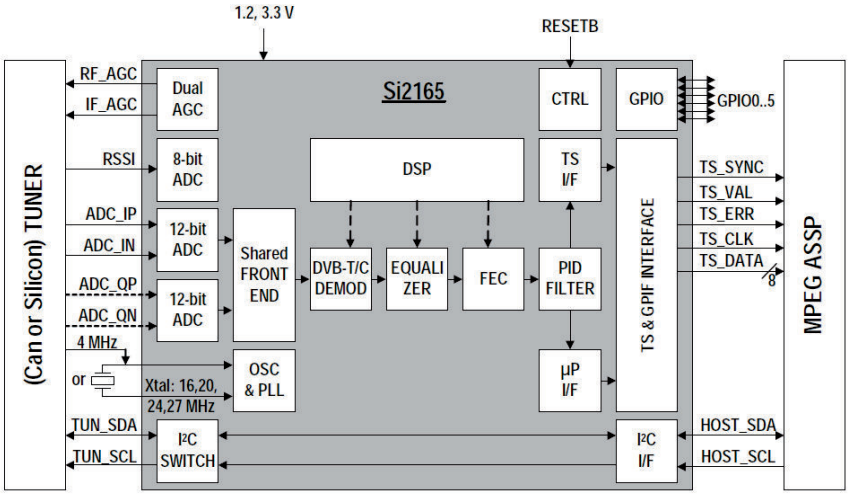
The Si2165 is a compact standalone DVB-T/C digital TV. The analog front-end consists of two ADCs with wide dynamic range (12-bit) to allow operation with standard IF (~36 MHz), Low-IF, or Zero-IF inputs. This enables the use of the Si2165 with any TV tuner, either metal can or silicon tuner based.
The multi-standard demodulator supports all modes of DVB-T (EN 300 744), including hierarchical modes. The Si2165 also supports ITU J.83 annex A/C and DVB-C (EN 300 429), including a user-configurable 31-tap equalizer. In addition to DVB-T's legacy modes, the Si2165 also complies with DVB-H (EN 300 744 Annex F) specificities: 4K FFT, extended TPS, “native” and “in-depth” de-interleavers. The Si2165 is able to receive DVB-H programs in fixed receiver applications (without decoding the additional MPE FEC layer).
An embedded 32-bit DSP controls device operation. Sophisticated on-chip algorithms ensure optimum reception even under difficult channel conditions, such as echoes outside the guard interval, pre-echoes, or strong impulse noise. For ease-of-use, DSP firmware is preloaded into ROM (device is immediately active at power-up). Nevertheless, there is a possibility of downloading additional patch code via the I2C interface (e.g., to adjust the demodulator to unexpected conditions or reception impairments).
Thanks to proprietary features, the Si2165 supports ultra-fast channel scanning for VHF/UHF terrestrial and cable DTV channels. For supported tuners, the Quickscan algorithm for blindscan is running onto the embedded DSP (in order to limit the host CPU load) and is provided as a downloadable patch file.
Serial or parallel master MPEG TS output modes are supported. Furthermore, a TS slave parallel mode is available via a GPIF port and provides a glueless interface to Silicon Labs' MCU devices with embedded USB interface. The user can optionally program a 32-PID hardware filter to reduce the output TS bit rate.
An internal I2C pass-through logic switch acts as an I2C repeater. This provides a “quiet” I2C bus to the RF front end.
A maximum of six general-purpose inputs/outputs are available; three GPIOs also feature Δ/Σ and interrupt output capabilities.
Best-in-class demodulation performance is achieved while still maintaining very low-power operation.
The Si2165 guarantees a low-cost system implementation due to its minimal BOM and very small package footprint.

Features:

- DVB-T (ETSI EN 300 744) demodulator & FEC decoder.
- ITU J.83 Annex A/C and DVB-C (EN 300 429) compliant demodulator & FEC decoder.
- NorDig Unified 2.0, D-Book & C-Book 4.0 compliant.

MAJOR ICs INFORMATION (continued)

- Suitable for low power design: 140 mW (typical, 36 MHz IF sampling mode).
- Dual 12-bit ADCs: accept 1st IF, low IF, or zero-IF inputs.
- DVB-T channel bandwidth: 5, 6, 7, 8 MHz.
- DVB-C symbol rate: 1 to 7.2 MBaud.
- DSP-based synchronization and control with embedded ROM code avoids need for code download at startup.
- Supports patch code downloads for in-field upgradeability.
- Independent AGC controls (for IF & RF), plus RSSI measurement.
- ACI filtering: fixed 8 MHz SAW filter even for 7 MHz channel.
- Advanced performance for SFN networks.
- Impulsive noise protection algorithm.
- Ultra fast automatic UHF/VHF band scanning (QuickScan).
- Master TS output modes, parallel or serial (with tri-state function).
- Slave TS parallel output: external device polls data from an embedded FIFO, providing a seamless interface to any USB controller.
- On-chip PID filtering to reduce TS output bit rate.
- Up to six GPIOs.
- Two 5 V tolerant I2C control buses (host-side, tuner-side) with on-chip I2C repeater.
- 4, 16, 20, 24, or 27 MHz clock/crystal reference.
- 3.3V & 1.2 V power supplies only.



IC1103*: DVB-T/C/S/S2 Demodulator (Terrestial and Satellite).
Part number: Si2167-B20-GM (SILICON LABS)
Sharp code: RH-IXD523WJZZQ
http://www.silabs.com/Support%20Documents/TechnicalDocs/Si2167-B20-short.pdf

The Si2167-B20 integrates DVB-T, DVB-C, DVB-S, DVB-S2 (AMC-compliant), and DSS digital demodulators into a single CMOS chip for terrestrial, cable, and satellite TV standards. Leveraging Silicon Labs' proven digital demodulation architecture, the Si2167-B20 achieves superior reception performance for each media while minimizing front-end design complexity and cost. Connecting the Si2167-B20 to a terrestrial and cable hybrid TV tuner, such as Silicon Labs' Si217x, results in a high performance and cost optimized TV front-end solution.

DVB-T and DVB-C demodulators are enhanced versions of proven and broadly used Si2167-A10 and Si2169/68 Silicon Labs devices. Furthermore, ITU J.83 Annex B is also supported for US and South American cable networks. The IF input supports standard IF (36 MHz) or low-IF.

For DVB-T and DVB-S/DSS, an innovative and advanced FEC decoding scheme is implemented resulting in higher performance.

The satellite demodulation functionality allows demodulating widely deployed DVB-S, DIRECTV™ (DSS) legacy standards, and new generation DVB-S2 satellite broadcast. A zero-IF interface allows for a seamless connection to market proven satellite silicon tuners. Constant Coding Modulation (CCM), QPSK/8PSK demodulation schemes and broadcast profile are the main specifications of the DVB-S2 demodulator. Silicon Labs' innovative LDPC and BCH decoding architecture delivers best-in-class reception while exhibiting low power dissipation.

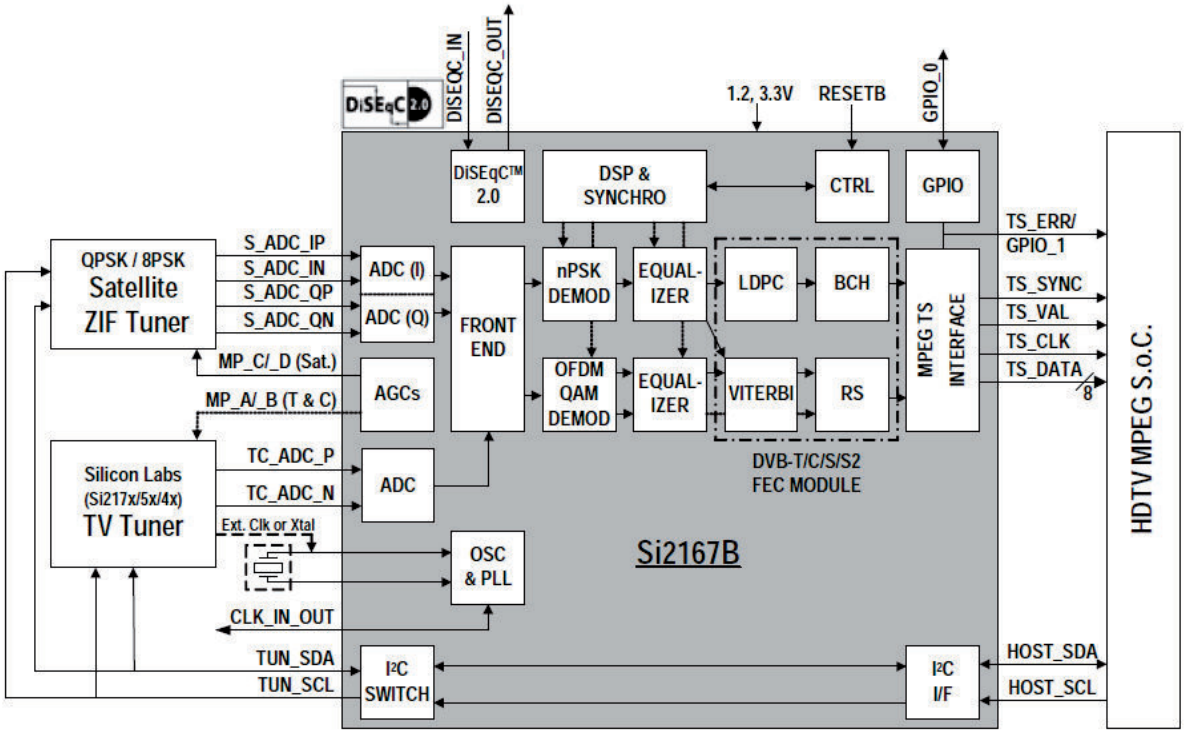
The Si2167-B20 offers an on-chip blind scanning algorithm for DVB-S/S2 and DVB-C standards (as well as blind lock function). It also integrates DiSEqC™ 2.0 LNB interface for satellite dish control.

MAJOR ICs INFORMATION (continued)

The Si2167-B20 programmable Transport Stream interface provides a flexible range of output modes and is fully compatible with all MPEG decoders or conditional access modules to support any customer application.

Features:

- DVB-T (ETSI EN 300 744).
  - COFDM demodulator and enhanced FEC decoder.
  - NorDig Unified 2.2.1, D-Book 7.0 compliant.
  - Supports all C.R., G.I., LP, and HP streams.
- DVB-C (ETSI EN 300 429) / ITU J.83 Annex A/B/C.
  - QAM demodulator and FEC decoder.
  - 1 to 7.2 MSymbol/s.
  - C-Book compliant.
- DVB-S2 (ETSI EN 302 307 & TR102-376).
  - QPSK/8PSK demodulator and FEC decoder.
  - Broadcast profile: CCM, 64800 bits frame, single TS.
  - 1 to 45 MSymbol/s (optimized for 2 to 32 MSymbol/s).
  - DIRECTV™ AMC compatible.
- DVB-S (ETSI EN 300 421).
  - QPSK demodulator and enhanced FEC decoder.
  - 1 to 45 MSymbol/s.
- DIRECTV™ DSS compliant.
- DiSEqC™ 2.0 interface and Unicable support.
- I2C serial bus interfaces (master and host).
- Three ADCs with independent IF and ZIF (differential) inputs for terrestrial/cable and satellite.
- GPIOs and multi-purpose ports for independent AGCs (up to 4) to control satellite and T/C tuners.
- Firmware control for upgradeability.
- Flexible TS interface with serial or parallel single output.
- Fast lock times for all media.
- Only two power supplies: 1.2 and 3.3 V.



IC1103*: DVB-T/C/T2 Demodulator.
Part number: Si2168-A30-GM (SILICON LABS)
Sharp code: RH-IXD525WJZZQ
http://www.silabs.com/Support%20Documents/TechnicalDocs/Si2168-A20-short.pdf

MAJOR ICs INFORMATION (continued)

The Si2168 integrates DVB-T2, DVB-T, and DVB-C digital demodulators into a single advanced CMOS technology mixed-signal die for next generation terrestrial and legacy cable TV standards. Leveraging Silicon Labs' proven digital demodulation architecture, the Si2168 achieves excellent reception performance while significantly minimizing front-end design complexity, cost, and power dissipation. Connecting the Si2168 to a terrestrial and cable hybrid TV tuner or digital only tuner, such as Silicon Labs' Si2176/56/46 devices, results in a high performance and cost optimized TV front-end solution.

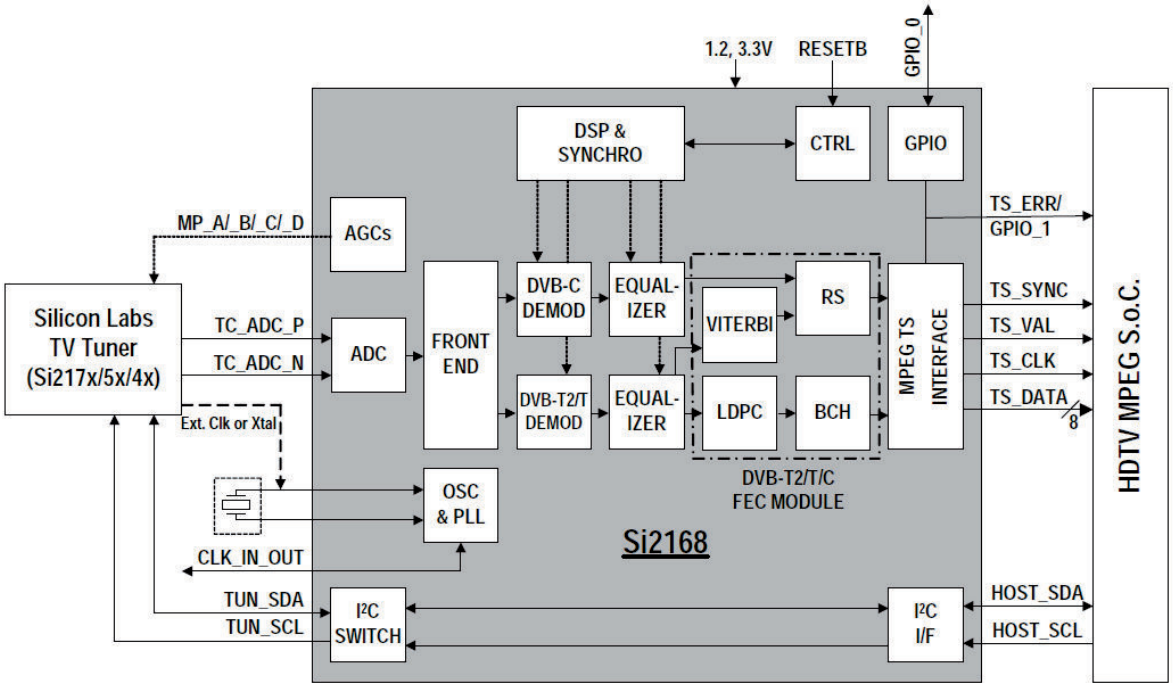
Silicon Labs internally developed DVB-T2 demodulator can accept a standard IF (36 MHz) or low-IF input and support all modes specified by the DVB-T2 standard. Main features of the DVB-T2 mode are 256 QAM with rotated constellations, SISO and MISO support, FEF management, fully autonomous signal acquisition including automatic L1 signalling parsing, 600 kHz acquisition range, support for all pilot patterns, and DVB-T/T2 auto-detection. The DVB-T and DVB-C demodulators are enhanced versions of proven and broadly used Si2161/63/65/67 Silicon Labs devices.

The Si2168 offers an on-chip blind scanning algorithm for the DVB-C standards as well as blind lock. The Si2168 can use a crystal, as a reference clock, or be driven by an external clock signal from the tuner.

The Si2168 programmable transport stream interface provides a flexible range of output modes and is fully compatible with all MPEG decoders or conditional access modules to support any customer application.

Features:

- DVB-T2 (ETSI EN 302 755).
  - COFDM demodulator and FEC (LDPC + BCH) decoder.
  - Bandwidth: 1.7, 5, 6, 7 or 8 MHz (and extended BW).
  - Supports up to 255 PLP(s) and outputs the data PLP plus the common PLP on a single TS.
  - NorDig-T2 Unified v2.2.1 and D-Book 7.0 compliant.
  - Firmware control (loaded in ROM).
- DVB-T (ETSI EN 300 744).
  - COFDM demodulator and FEC decoder.
  - NorDig Unified 2.2.1, D-Book 7.0 compliant.
- DVB-C (ETSI EN 300 429) / ITU J.83 Annex A/C.
  - QAM demodulator and FEC decoder.
  - 1 to 7.2 MSymbol/s.
  - C-Book compliant.
- I2C serial bus interfaces (master and host).
- GPIOs and multi-purpose ports for independent AGCs.
- Firmware control for upgradeability.
- Flexible TS interface with serial or parallel single output.
- Fast lock times for all standards including DVB-T2.
- Only two power supplies: 1.2 and 3.3 V.



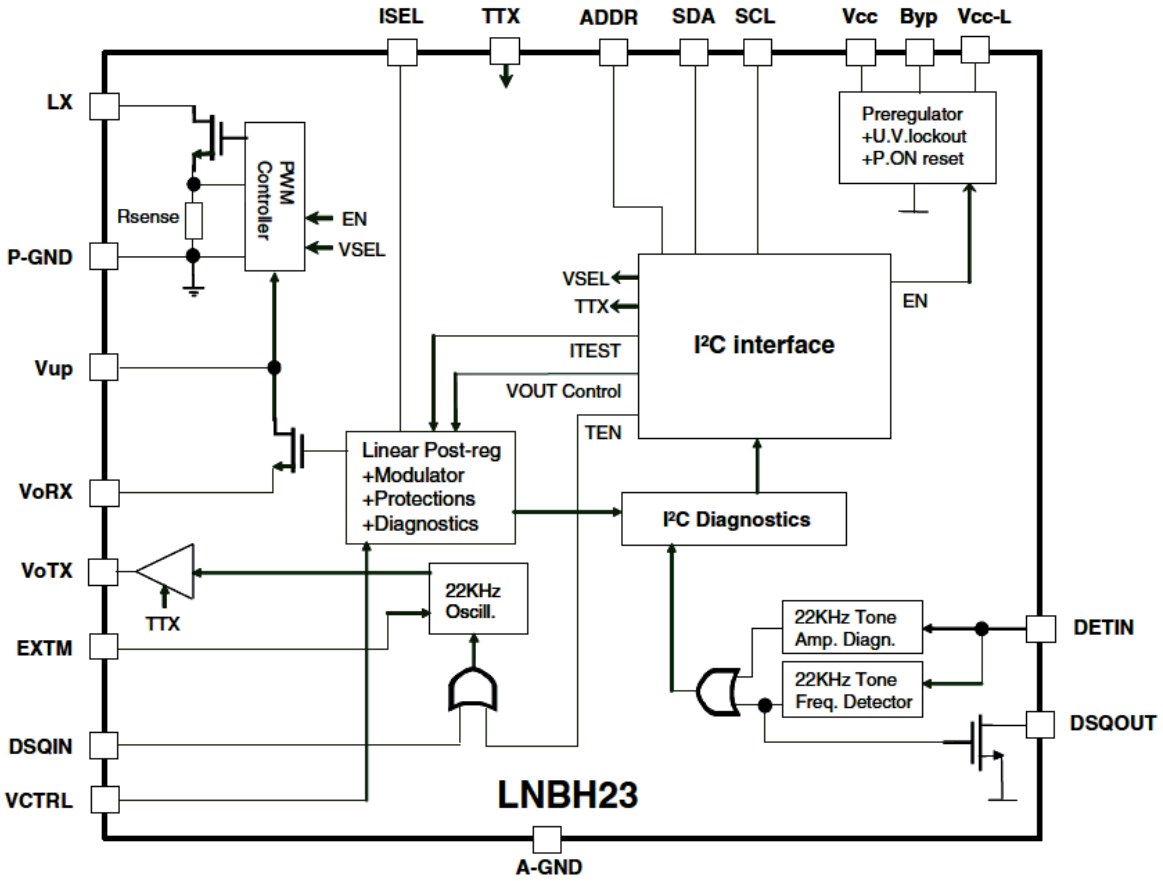
MAJOR ICs INFORMATION (continued)

IC1301: LNBs supply and Control IC.
Part number: LNBH23QTR (ST MICRO)
Sharp code: RH-IXD310WJZZY
http://www.st.com/st-web-ui/static/active/en/resource/technical/document/datasheet/CD00154977.pdf

Intended for analog and digital satellite receivers/sat-TV, sat-PC cards, the LNBH23 is a monolithic voltage regulator and interface IC, assembled in PowerSSO-24 ePAD and QFN32 (5 x 5 mm.) ePAD, specifically designed to provide the 13/18 V power supply and the 22 kHz tone signaling to the LNB down-converter in the antenna dish or to the multi-switch box. In this application field, it offers a complete solution with extremely low component count, low power dissipation together with simple design and I²C standard interfacing.

Features:

- Complete interface between LNB and I²C bus.
- Built-in DC-DC converter for single 12 V supply operation and high efficiency (typ. 93% @ 0.75A), with integrated NMOS.
- Selectable output current limit by external resistor.
- Compliant with main satellite receiver systems specifications.
- New accurate built-in 22 kHz tone generator suits widely accepted standards.
- Fast oscillator start-up facilitates DiSEqC™ encoding.
- Built-in 22 kHz tone detector supports bidirectional DiSEqC™ 2.0.
- Very low-drop post regulator and high efficiency step-up PWM with integrated power NMOS allow low power losses.
- Two output pins suitable to by-pass the output R-L filter and avoid any tone distortion (R-L filter as per DiSEqC™ 2.0 specs).
- Overload and over-temperature internal protections with I²C diagnostic bits.
- Output voltage and output current level diagnostic feedback by I²C bits.
- LNB short circuit dynamic protection.
- ± 4 kV ESD tolerant on output power pins.



MAJOR ICs INFORMATION (continued)

DUNTKG221WE01 (Touch & Led Unit)

IC5100: 8-Bit Flash Microcontroller
Part number: PIC16LF1503T-I /SL
Sharp code: RH-IXD572WJZZY
http://ww1.microchip.com/downloads/en/DeviceDoc/41607A.pdf

High-Performance RISC CPU:

- C Compiler Optimized Architecture
- Only 49 Instructions
- 3.5 Kbytes Linear Program Memory Addressing.
- 128 bytes Linear Data Memory Addressing
- Operating Speed:
  - DC – 20 MHz clock input.
  - DC – 200 ns instruction cycle.
- Interrupt Capability with Automatic Context Saving.
- 16-Level Deep Hardware Stack with Optional Overflow/Underflow Reset.
- Direct, Indirect and Relative Addressing modes:
  - Two full 16-bit File Select Registers (FSRs).
  - FSRs can read program and data memory.

Flexible Oscillator Structure:

- 16 MHz Internal Oscillator Block:
  - Factory calibrated to ±1%, typical.
- Software selectable frequency range from 16 MHz to 31 kHz.
- 31 kHz Low-Power Internal Oscillator.
- Three External Clock modes up to 20 MHz.

Special Microcontroller Features:

- Operating Voltage Range:
  - 1.8V to 3.6V (PIC16LF1503)
  - 2.3V to 5.5V (PIC16F1503)
- Self-Programmable under Software Control.
- Power-on Reset (POR).
- Power-up Timer (PWRT).
- Programmable Low-Power Brown-Out Reset (LPBOR).
- Extended Watchdog Timer (WDT):
  - Programmable period from 1 ms to 256s.
- • Programmable Code Protection
- • In-Circuit Serial Programming™ (ICSP™) via Two Pins.
- Enhanced Low-Voltage Programming (LVP).
- Power-Saving Sleep mode:
  - Low-Power Sleep mode.
  - Low-Power BOR (LPBOR).
- Integrated Temperature Indicator.

Low-Power Features (PIC16LF1503):

- Standby Current:
  - 20 nA @ 1.8V, typical.
- Watchdog Timer Current:
  - 300 nA @ 1.8V, typical
- Operating Current:
  - 30 uA/MHz @ 1.8V, typical

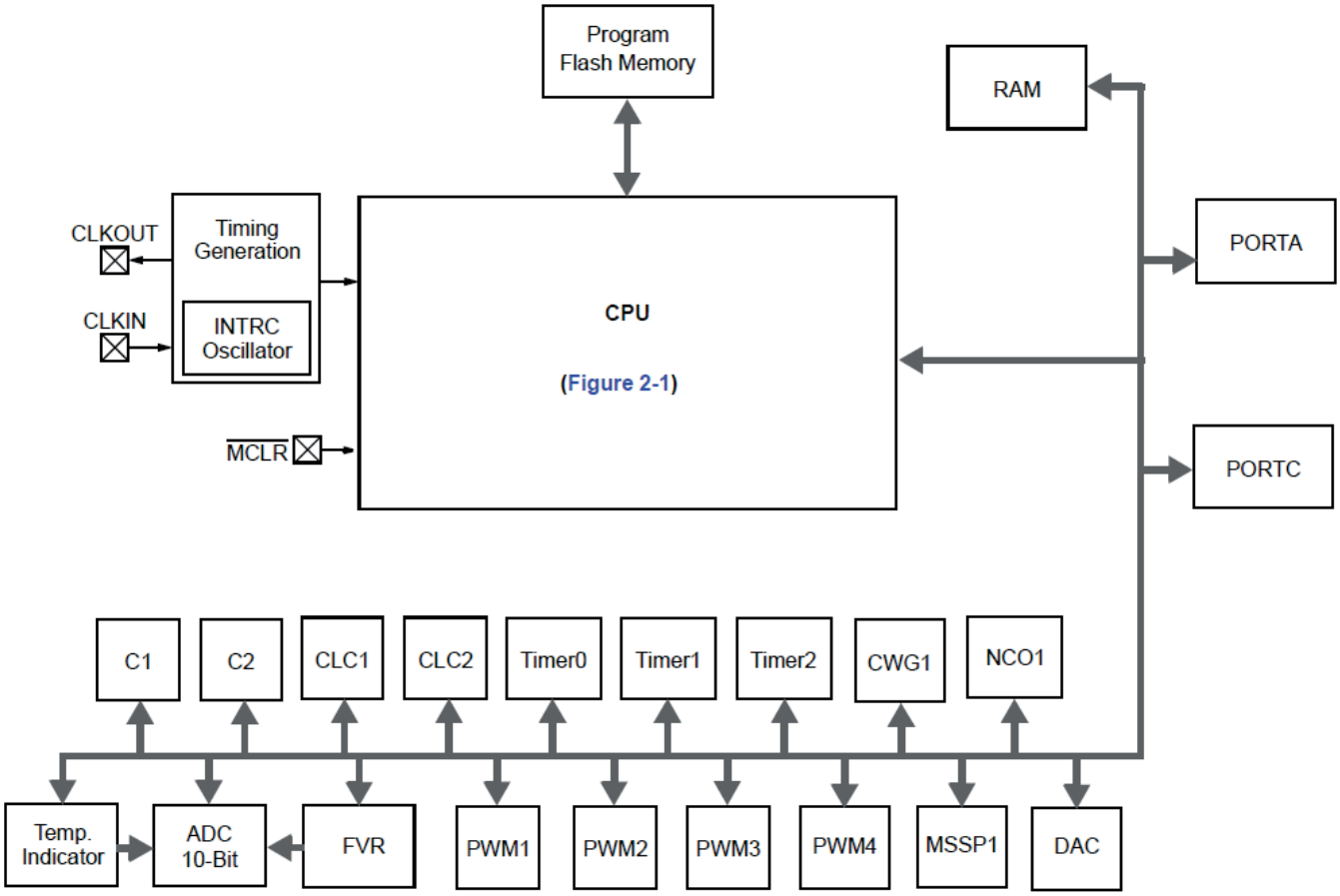
Peripheral Features:

- Analog-to-Digital Converter (ADC):
  - 10-bit resolution.
  - 8 external channels.
  - 2 internal channels:
    - Fixed Voltage Reference and DAC channels.
    - Temperature Indicator channel.
  - Auto acquisition capability.
  - Conversion available during Sleep.
- 2 Comparators:
  - Rail-to-rail inputs.
  - Power mode control.
  - Software controllable hysteresis.
- Voltage Reference module:
  - Fixed Voltage Reference (FVR) with 1.024V, 2.048V and 4.096V output levels.
  - 1 rail-to-rail resistive 5-bit DAC with positive reference selection.
- 12 I/O Pins (1 Input-only Pin):
  - High current sink/source 25 mA/25 mA.
  - Individually programmable weak pull-ups.
  - Individually programmable interrupt-on-change (IOC) pins.
- Timer0: 8-Bit Timer/Counter with 8-Bit Programmable Prescaler.
- Enhanced Timer1:
  - 16-bit timer/counter with prescaler.
  - External Gate Input mode.
- Timer2: 8-Bit Timer/Counter with 8-Bit Period Register, Prescaler and Postscaler.
- Four 10-bit PWM modules.
- Master Synchronous Serial Port (MSSP) with SPI and I2C™ with:
  - 7-bit address masking.
  - SMBus/PMBus™ compatibility.
- 2 Configurable Logic Cell (CLC) modules:
  - 16 selectable input source signals.
  - Four inputs per module.

MAJOR ICs INFORMATION (continued)

- Software control of combinational/sequential logic/state/clock functions.
- AND/OR/XOR/D Flop/D Latch/SR/JK.
- External or internal inputs/outputs.
- Operation while in Sleep.

- Numerically Controlled Oscillator (NCO):
  - 20-bit accumulator.
  - 16-bit increment.
  - True linear frequency control.
  - High-speed clock input.
- Selectable Output modes:
  - Fixed Duty Cycle (FDC).
  - Pulse Frequency Mode (PFM).
- Complementary Waveform Generator (CWG):
  - 8 selectable signal sources.
  - Selectable falling and rising edge dead-band control.
  - Polarity control.
  - 4 auto-shutdown sources.
  - Multiple input sources: PWM, CLC, NCO.



39"/ 50" POWER UNIT BLOCK DIAGRAM (RDENCA459WJQZ)

CIRCUIT BLOCK DIAGRAM

A. EMI FILTER AND RAW B+ CIRCUIT

AC INPUT

FUSE

EMI FILTER

MAIN RECTIFIER

PFC CONTTROL CIRCUIT

B. MAIN POWER STAGE

POWER TRANSFORMER

AUX. POWER

PWM DRIVER CIRCUIT

C. SECONDARY OUTPUT

RECTIFER & CIRCUIT

FILTER

12V

BUCK D to D

18V

18V

24V

E.FEED-BACK CIRCUIT

OPTO-ISOLATOR

OPTO-ISOLATOR

D.OUTPUT CONTROL

CONSTANT VOLTAGE CIRCUIT

OVP DETECT

PFC OVP

J.FEED-BACK CIRCUIT

OPTO-ISOLATOR

AUX. POWER

F. STAND BY POWER STAGE

CLAMP NETWORK

POWER TRANSFORMER

PWM/SWITCH DRIVER CIRCUIT

G. SECONDARY OUTPUT

RECTIFER CIRCUIT & FILTER

POWER ON/OFF

D203

5Vs

5.75V

H.FEED-BACK CIRCUIT

OPTO-ISOLATOR

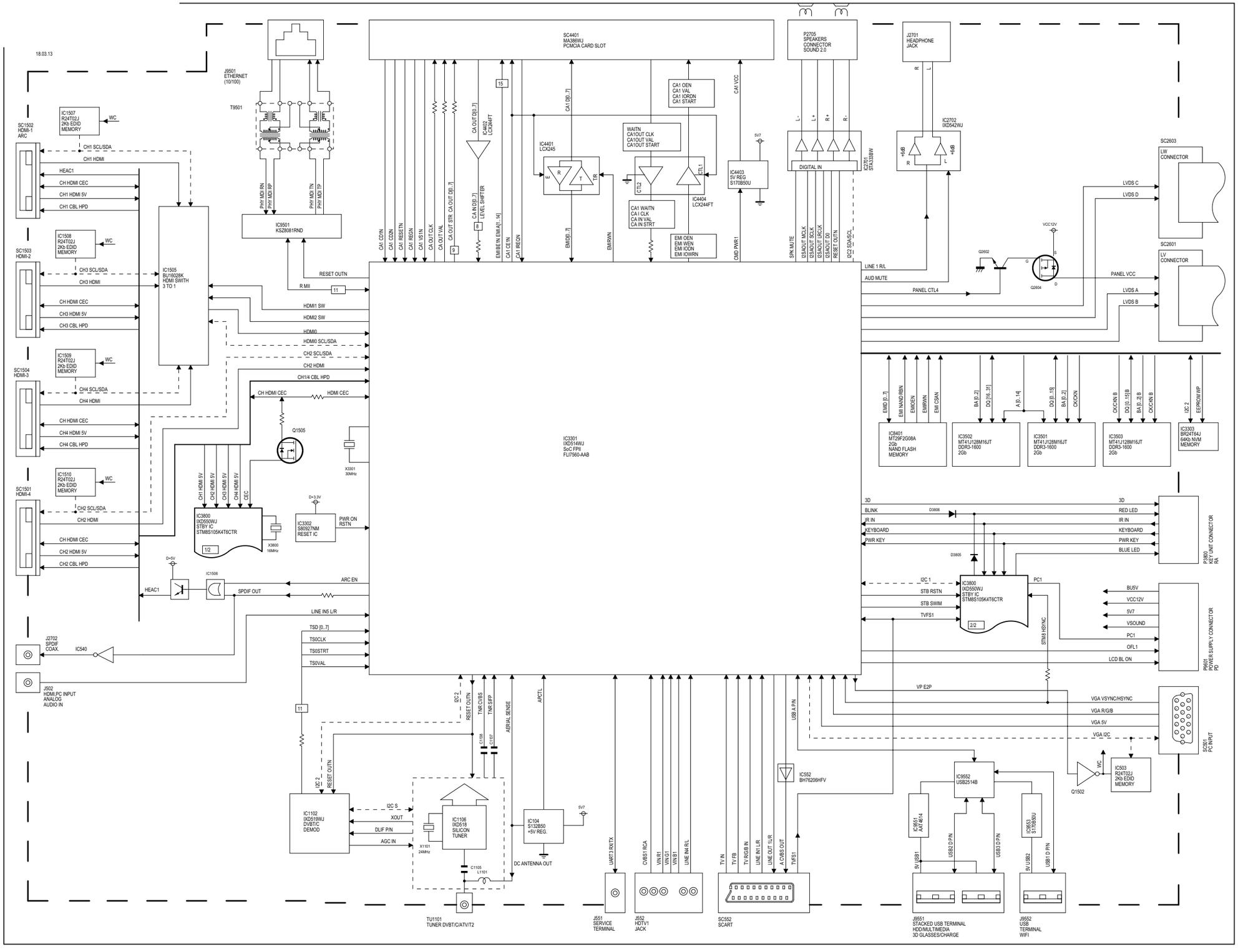
I.OUTPUT CONTROL

CONSTANT VOLTAGE CIRCUIT

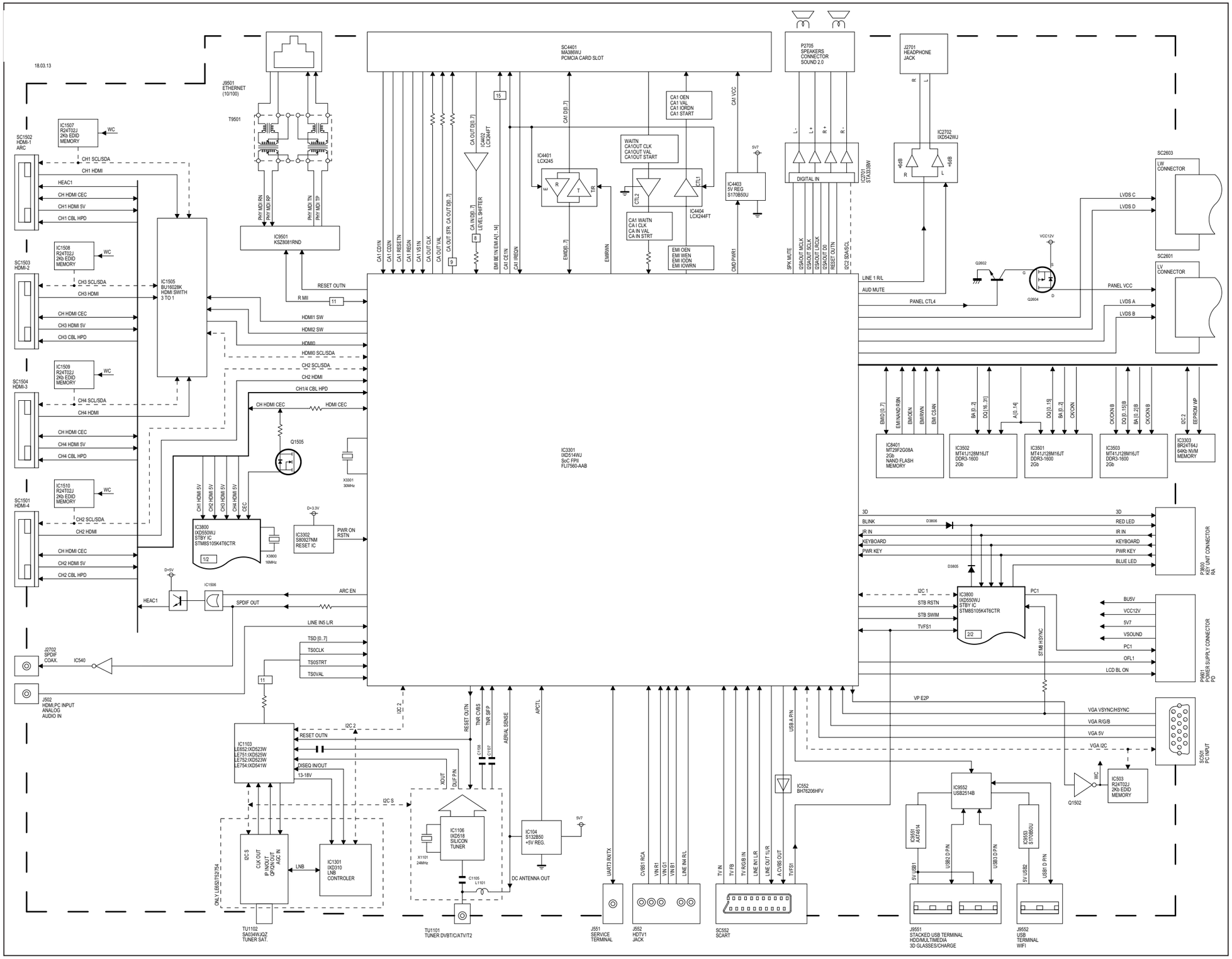
FSP GROUP 全漢企業股份有限公司 FSP Technology Inc.			
TITLE: FSP139-4F01			
P/N: PartNumber		size: A3	rev: 0
APPROVED: LJ	CHECKED: Chlu	DESIGNER: Vivian	
Date: 2012/10/9	PCB File: BD-FSP139-4F01-BLOCK	Sheet 1 of 1	
File: D:\LAYOUT\Summer 09\FSP139-4F01-R3(SHARP 39-50)\BD-FSP139-4F01-BLOCK.SchDoc			

線路圖 表單編號:7000P-0106

39”/ 50” MAIN UNIT BLOCK DIAGRAM (LE650 Series)



39”/ 50” MAIN UNIT BLOCK DIAGRAM (LE651/652 Series)



SCHEMATIC DIAGRAMS

Description:

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on the stable supply voltage of AC 230V. Signals are fed by a color bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω " is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.

C : Solid
S : Oxide Film
N : Metal Coating
W : Cement
T : Special

CAPACITOR

1. All capacitors are μF, unless otherwise noted. (P=pF=μμ F).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.

(ML): Mylar
(PF): Polypro Film
(TA): Tantalum
(ST): Styrol

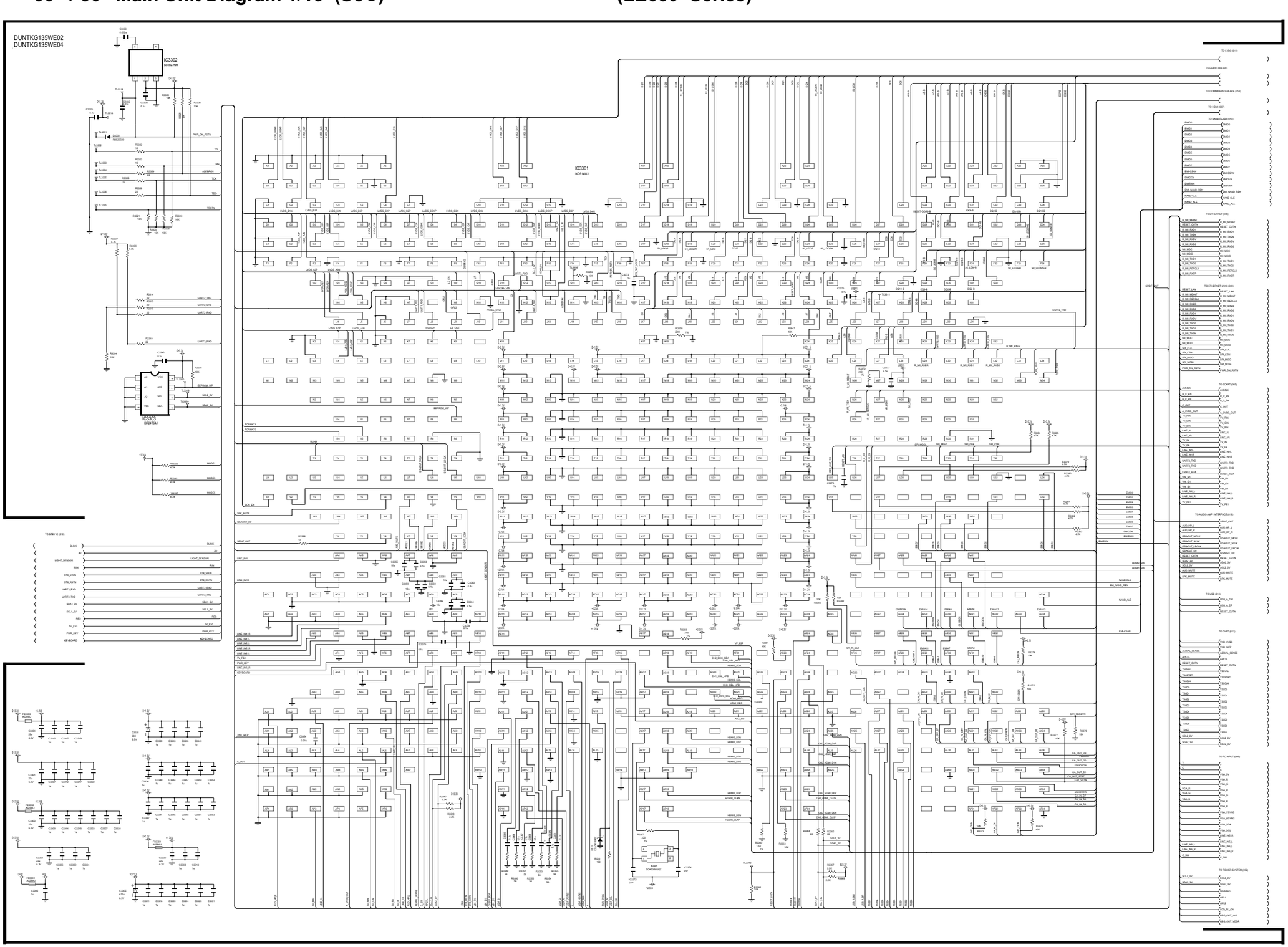
CAUTION:

This circuit diagram is original one, therefore there may be a slight difference from yours.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH " " ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

39” / 50” Main Unit Diagram 1/15 (SoC) (LE650 Series)



39” / 50” Main Unit Diagram 2/15 (System Power) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04

P9601
NB224WJ

PD		
Dimming	1	TL9601
BKL_PWM2	2	TL9602
BKL_PWM1	3	TL9603
BKL_EN	4	TL9604
POWER ON	5	TL9605
GND	6	TL9627
GND	7	TL9606
5V7	8	TL9610
5V7	9	TL9628
GND	10	TL9607
GND	11	TL9618
VCC12V	12	TL9608
VSOUND	13	
VCC5V Stby	14	

TL9611
FB9603 A529WJ
FB9604 A529WJ
FB9605 A529WJ
*R9649 100
*R9642 100
R9614 10K
C9603 1000P
R9607 22
5V7
VSOUND
VCC12V
5V_WF
BUSV
FB9601 A529WJ
TO SoC 001
OFL1 (J9)
LCD_BL_ON (G11)
TO LVDS CONN
OFL1
PWM2
TO STANDBY STM8
PC1 (PIN8)

3.3V STBY

IC9608
IXD532WJ
BU33TD3WG
BUSV
BU3.3V
TL9626
C9649 4.7u
C9648 0.1u
C9651 1u
VIN
VOUT
VSS
EN
NC

D+1.5V DDR3 SoC

IC9601
BD9328EF
5V7
FB9609 A528WJ
C9612 0.1u 25V
R9622 1K
R9612 0
C9614 0.1u
BST
SS
VIN
EN
SW
COMP
PGND
FB
GND
D+1.5V
TL9629
TL9612
L9601 10uH
C9605 10u 16V
C9613 10u 16V
R9617 2K
C9615 0.01u
R9618 30K 1%
R9606 20K 1%
C9606 22u 6.3V
C9609 22u 6.3V
C9610 10u 16V
R9602 1K
R9613 10
R9609 0
TO SoC 001
REG_OUT_VDDR (G17)

D+8 POWER

IC9606
IXD533WJ
BD80GA3WEFJ
VCC12V
FB9614 A529WJ
D+8V
TL9630
C9620 1u 25V
VOUT
VIN
VO_S
NC
GND
EN
C9621 1u 25V
KZA621WJQZ

D+2.5V POWER

D+2.5V
D+3.3V
TL9621
FB9617 A529WJ
C9622 10u 16V
C9625 10u 16V
IC9603
S170B25U
VOUT
VIN
ON
GND
NC

D+1.2V POWER

R9760 10K 1%
R9758 0
R9759 4.7K 1%
R9616 0
TO SoC 001
REG_OUT_1V2 (U25)
R9757 2.2K
+12V
VREG
IC9602
IXD534WJ
BD95841MUV
FB
VOUT
PGOOD
EN
GND
BOOT
SW
NC
VIN
PGND
R9611 0
C9611 0.1u
C9604 0.1u
VCC12V
FB9606 A528WJ
TL9631
C9601 10u 16V
C9602 10u 16V
L9602 2.7uH
TL9632
D+1.2V
C9617 22u 6.3V
C9618 22u 6.3V
C9619 22u 6.3V

D+5V POWER

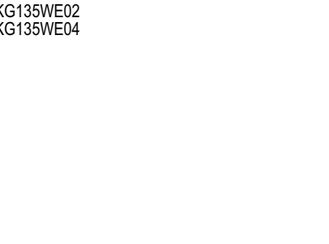
5V7
FB9613 A529WJ
IC9605
S132B50M
D+5V
TL9617
C9636 0.1u
C9637 1u 25V
C9639 1u 25V
VIN
VOUT
VSS
EN
NC

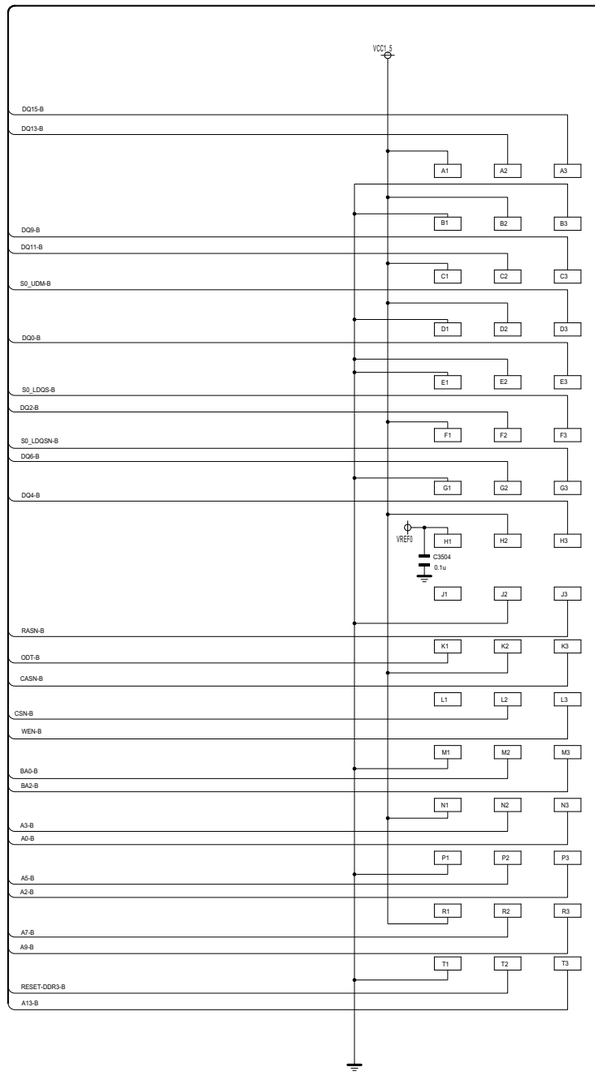
D+3.3V POWER

5V7
FB9701 A528WJ
IC9701
BD9328EF
D+3.3V
TL9623
C9701 10u 6.3V
C9703 10u 6.3V
C9702 10u 6.3V
C9704 10u 6.3V
L9701 10uH
C9705 0.1u 25V
R9701 0
C9706 10u 16V
C9623 10u 16V
C9708 0.1u
R9703 10K
R9705 7.5K 1%
C9707 330P
R9706 7.5K 1%
R9704 20K 1%
C9709 22P
R9702 56
BST
SS
VIN
EN
SW
COMP
PGND
FB
GND

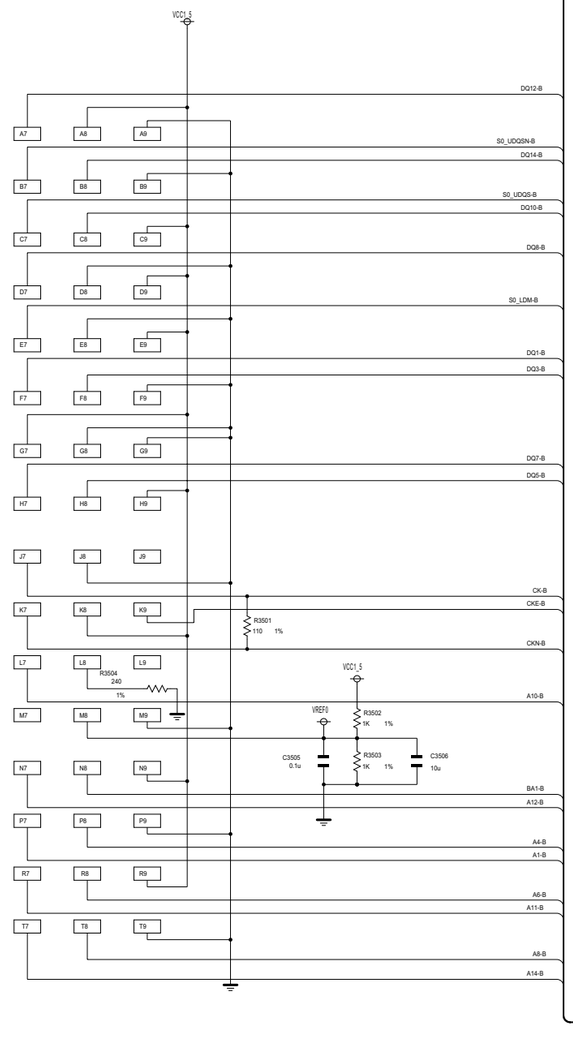
39” / 50” Main Unit Diagram 3/15 (DDR3 BLOCK II) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04



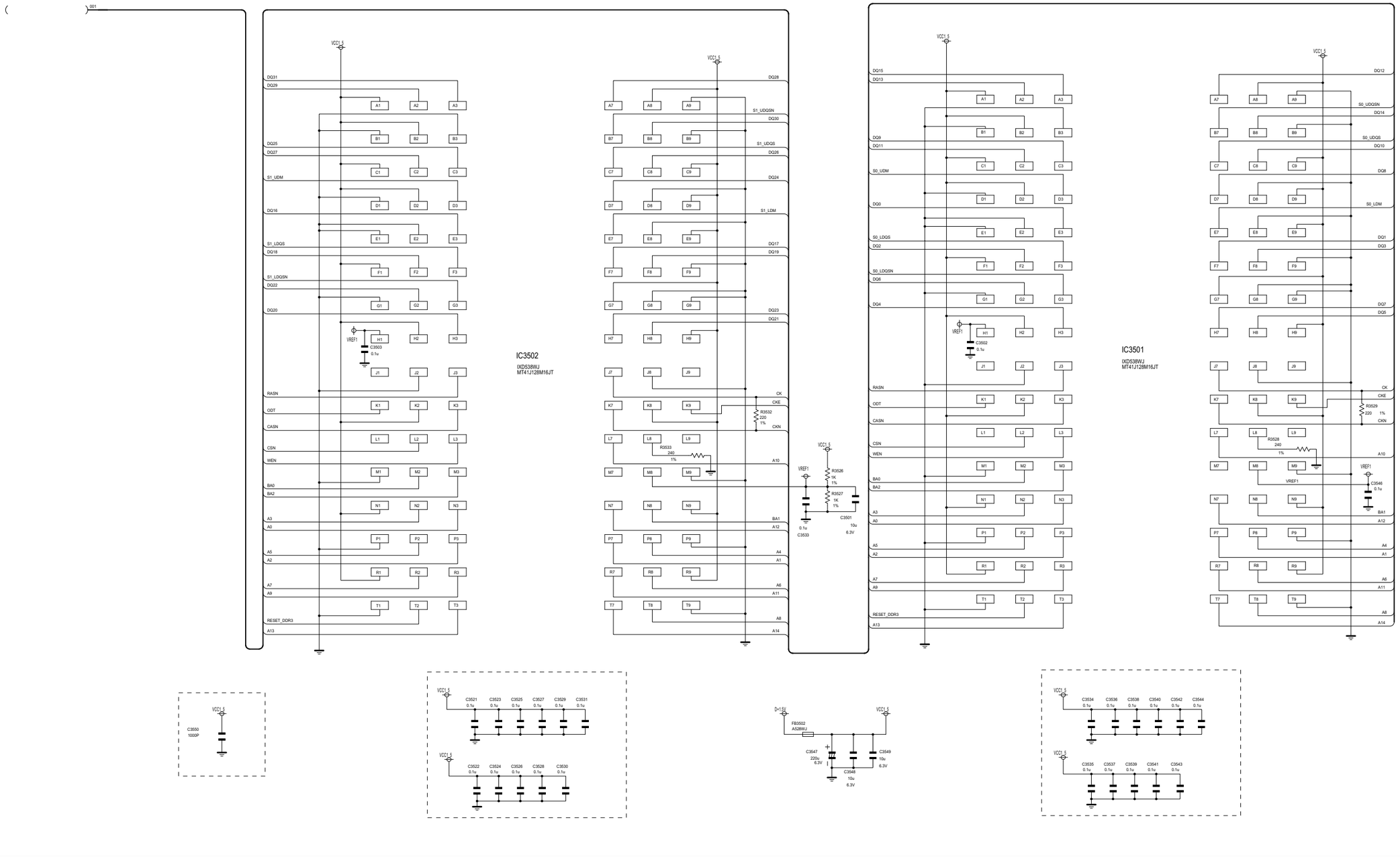


IC3503
IXD5389WJ
MT41J128M16JT



39” / 50” Main Unit Diagram 4/15 (DDR3 BLOCK) (LE650 Series)

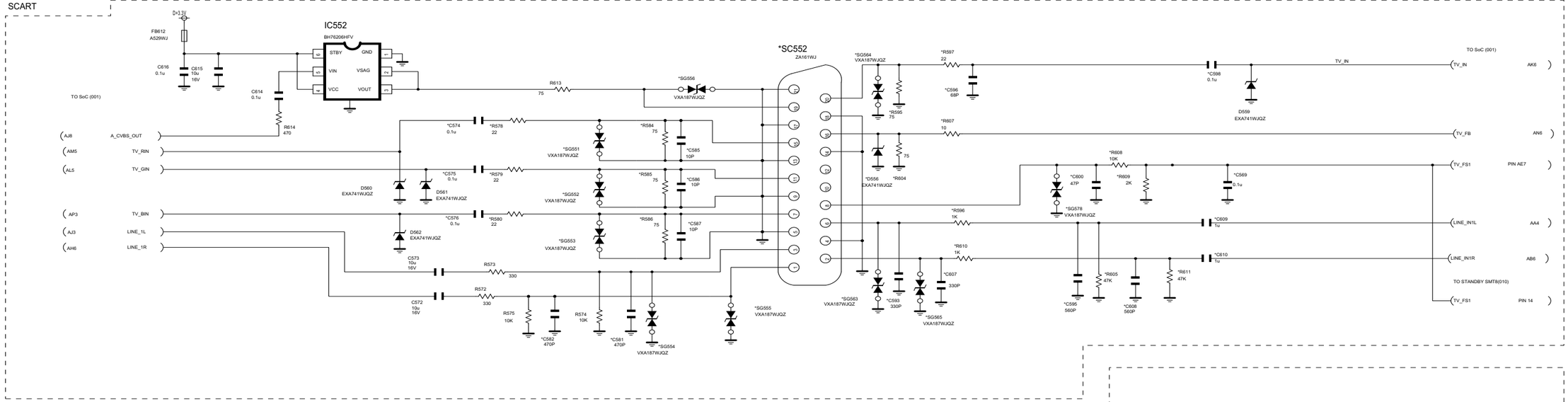
DUNTKG135WE02
DUNTKG135WE04



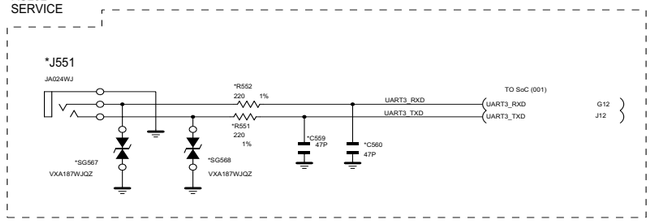
39” / 50” Main Unit Diagram 5/15 (SCART) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04

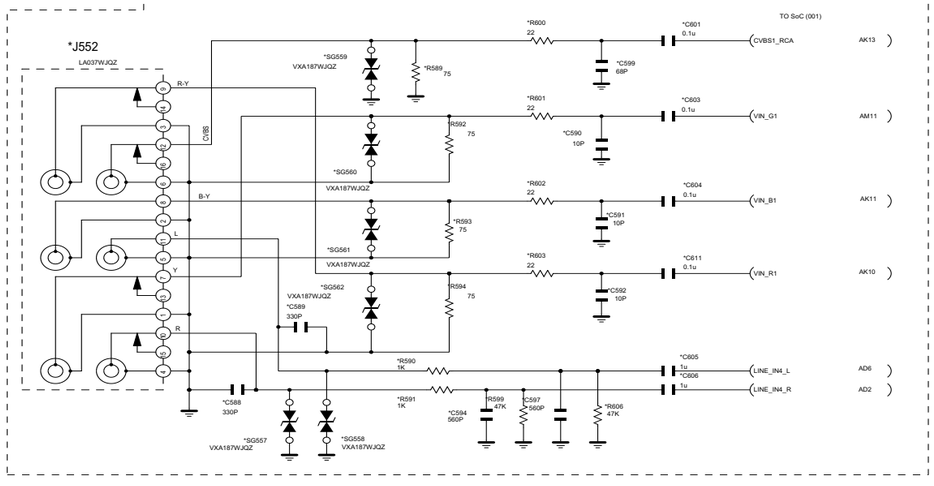
SCART



RS232 SERVICE



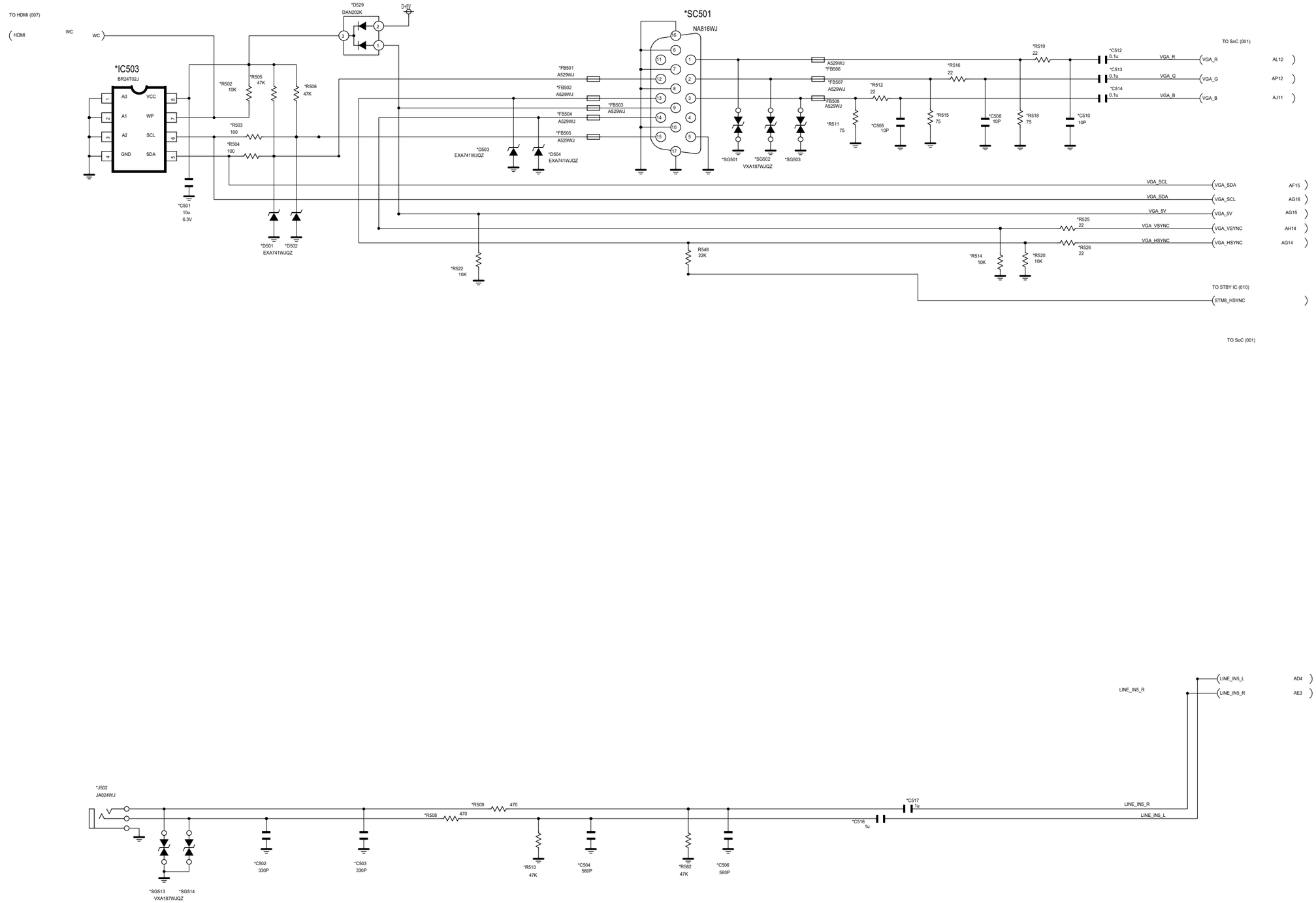
HDTV1



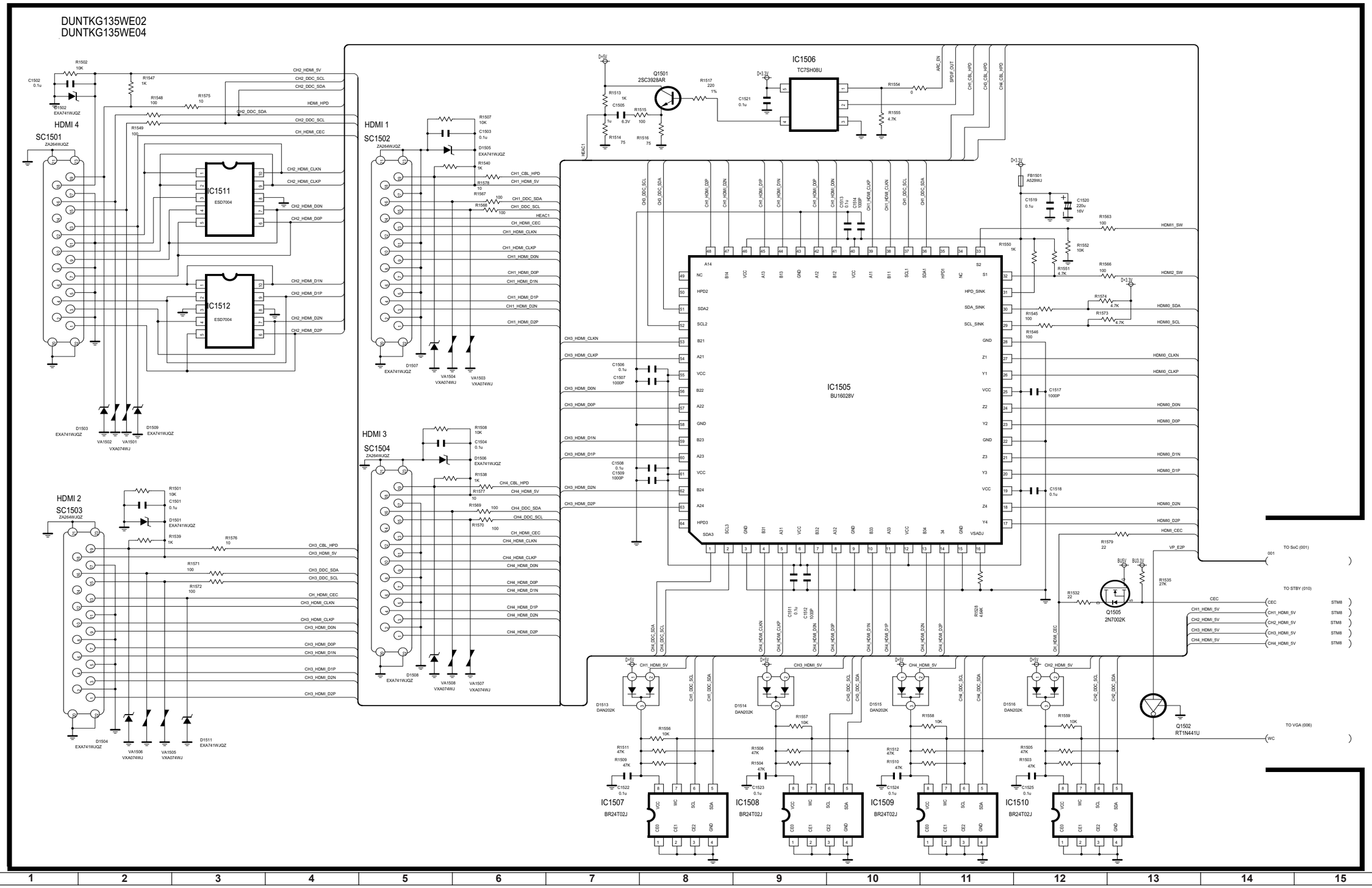
MINI-SCART

39” / 50” Main Unit Diagram 6/15 (PC INPUT) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04

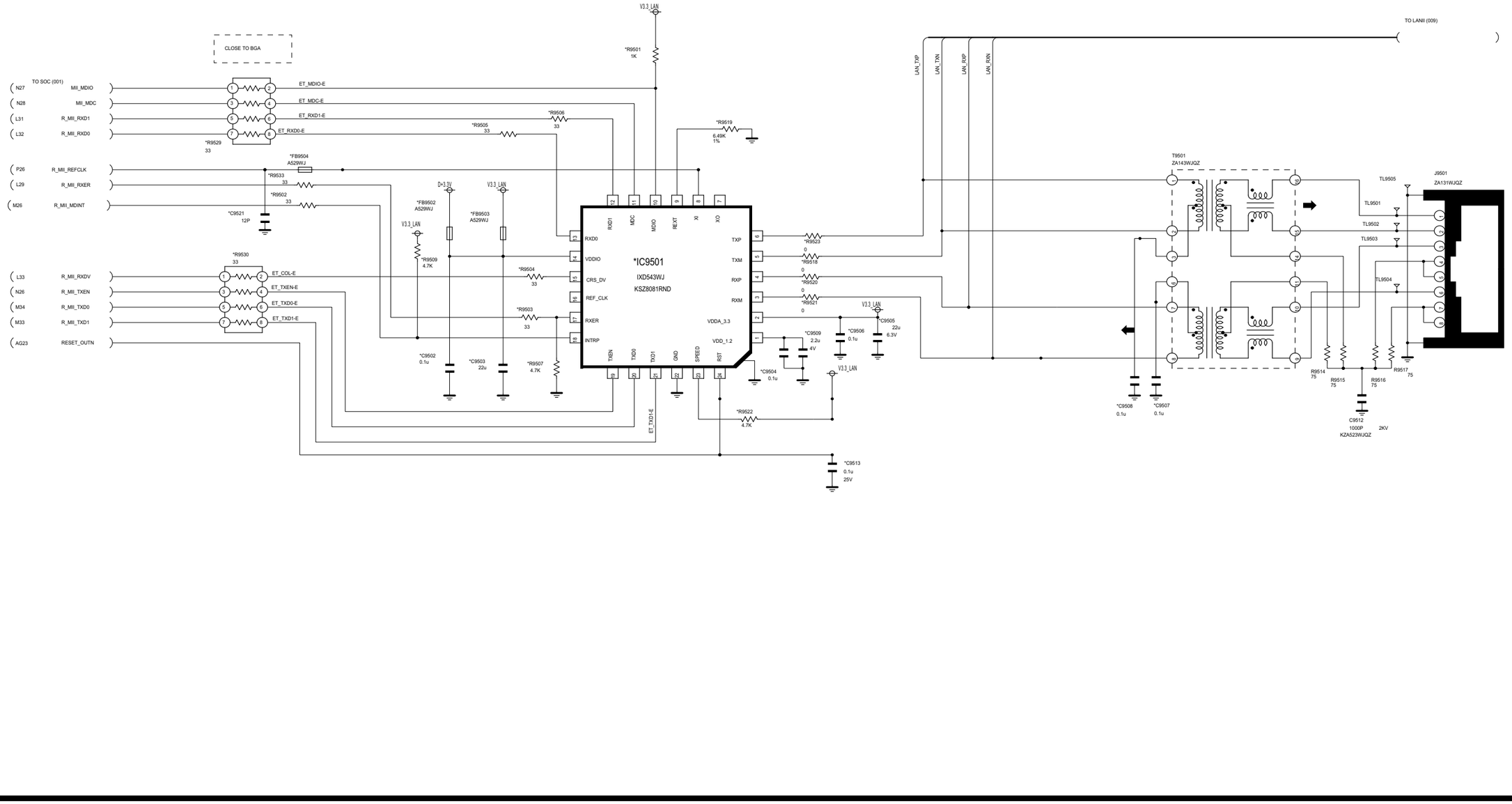


39” / 50” Main Unit Diagram 7/15 (HDMI) (LE650 Series)



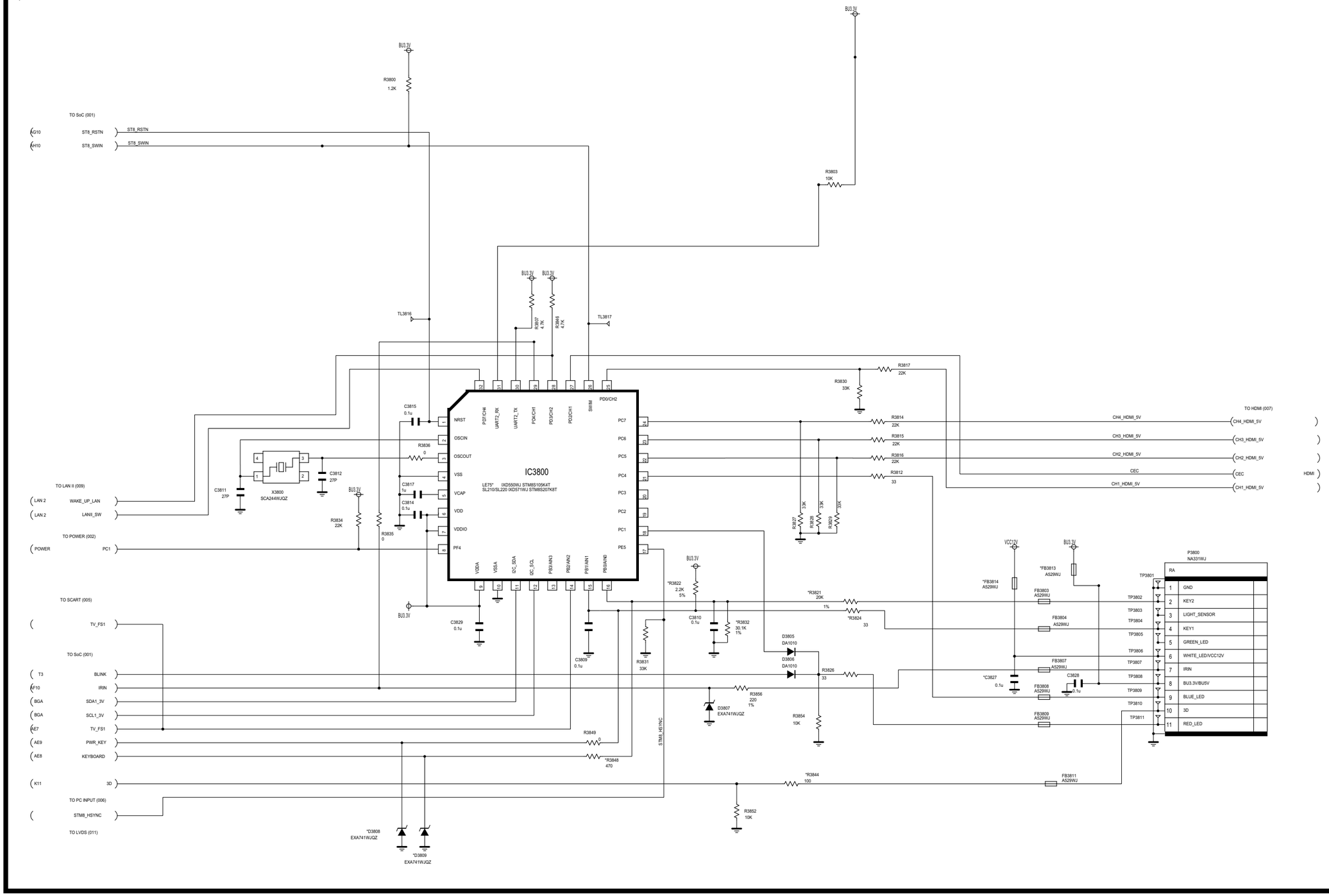
39” / 40” Main Unit Diagram 8/15 (LAN I) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04



39” / 50” Main Unit Diagram 9/15 (STANDBY STM8S) (LE650 Series)

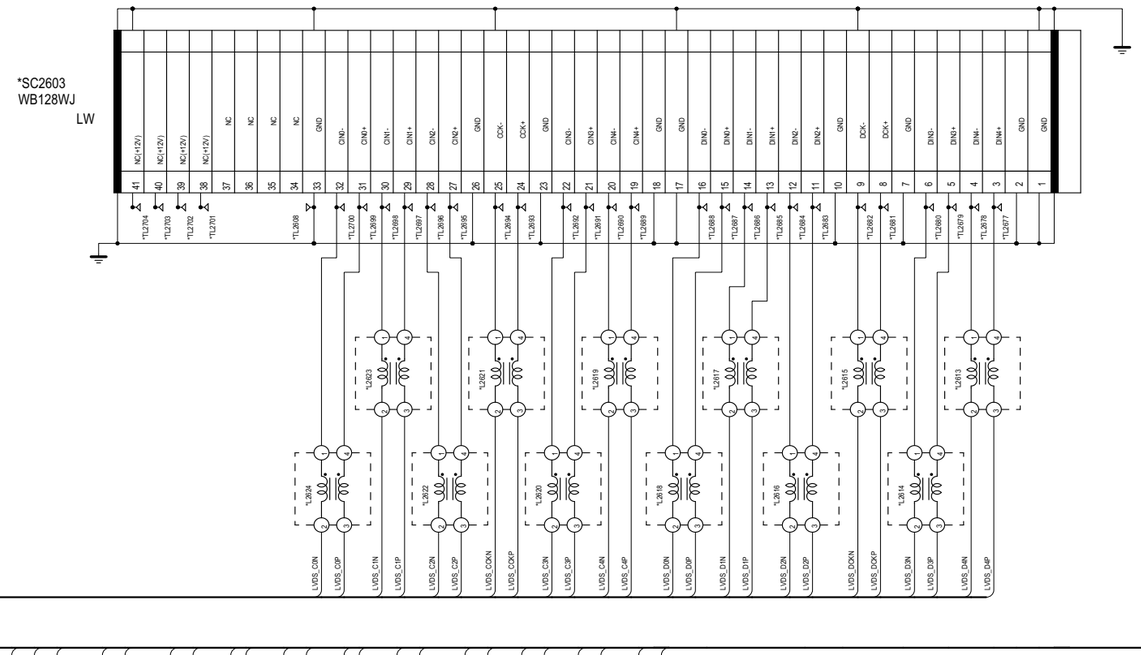
DUNTKG135WE02
DUNTKG135WE04

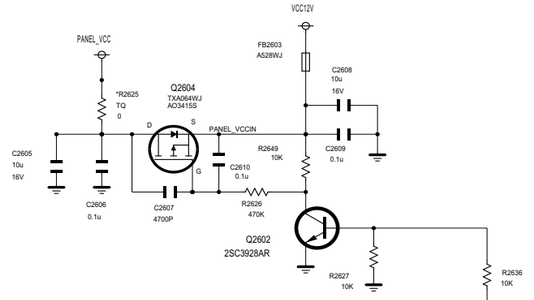


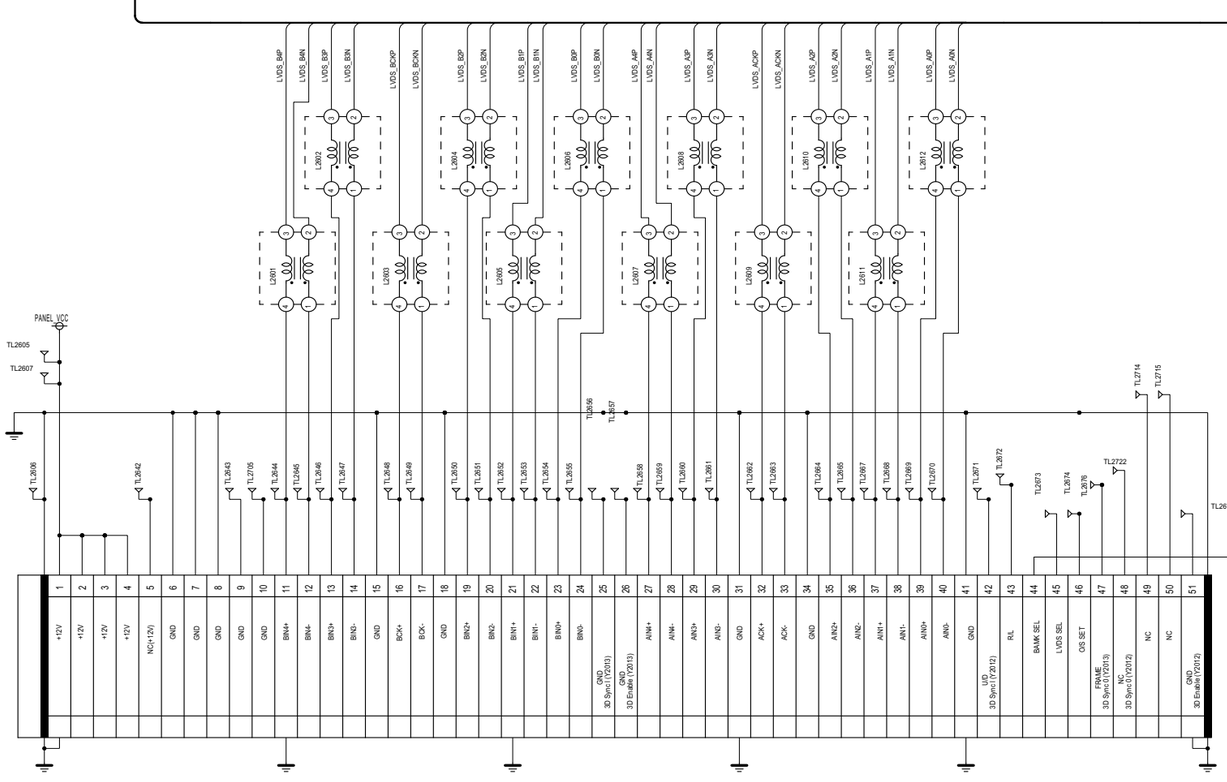
39” / 50” Main Unit Diagram 10/15 (PANEL INTERFACE) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04

*SC2603
WB128WJ
LW

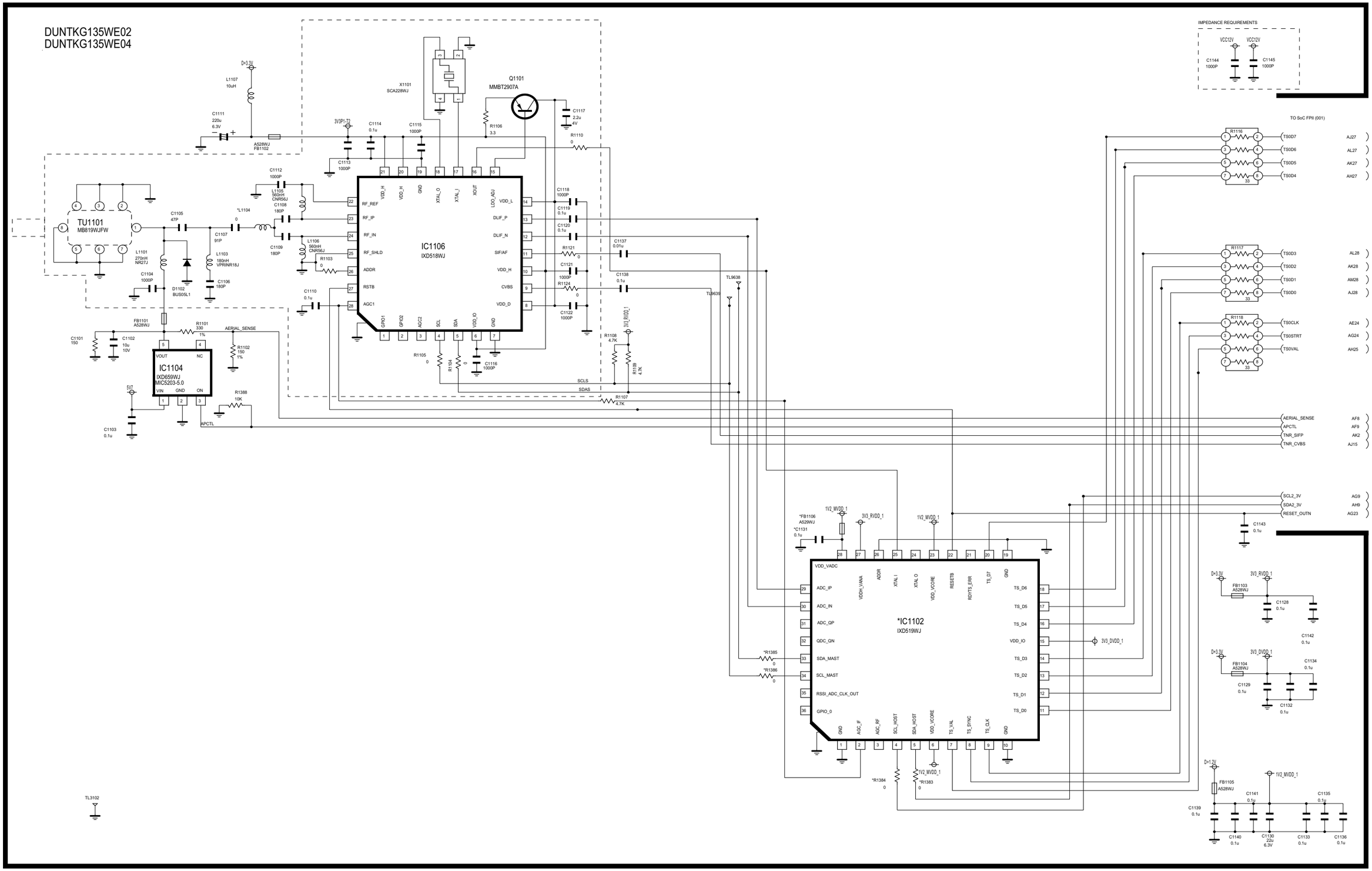






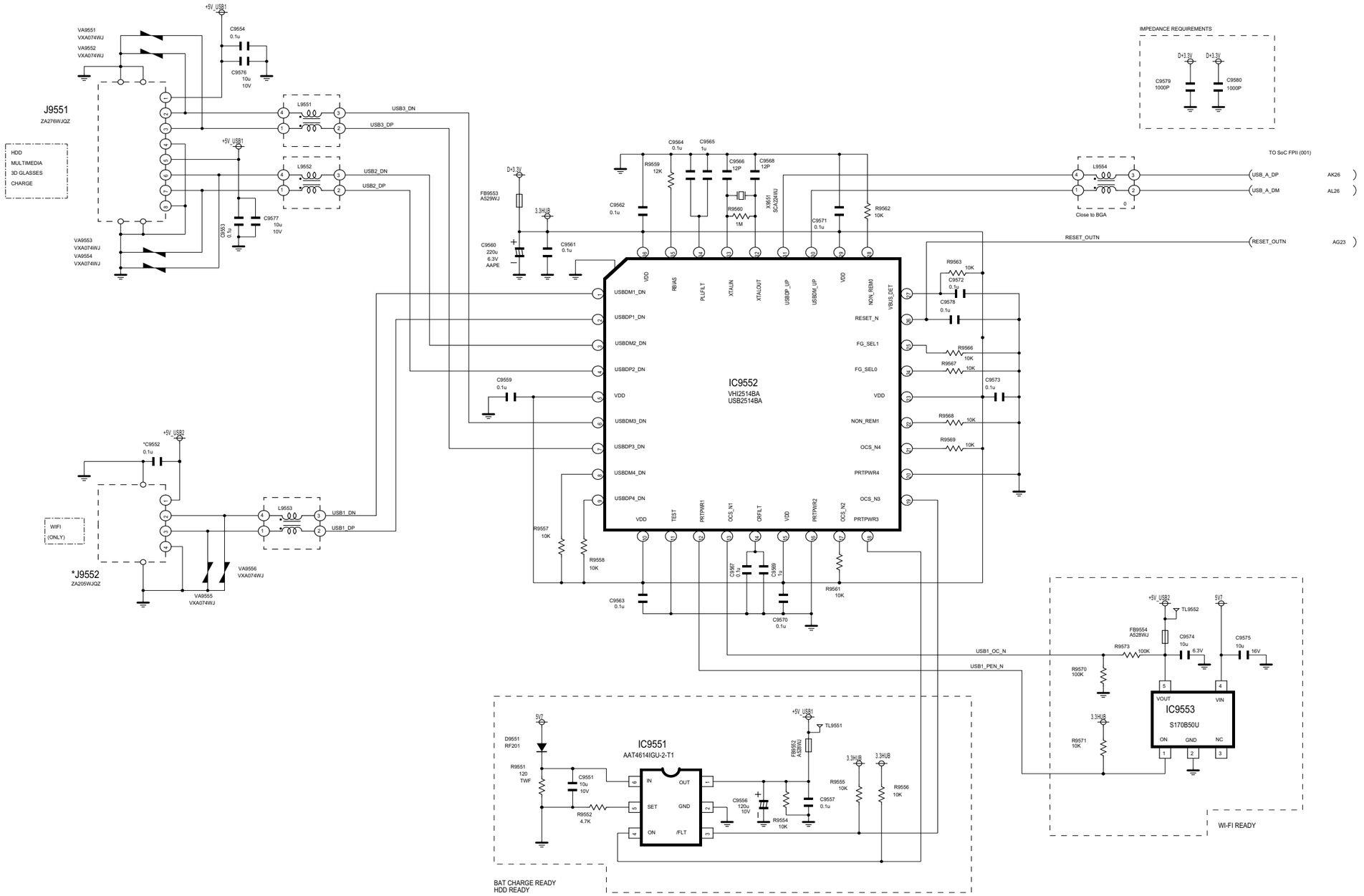
SC2601
WB127WJ
LV

39” / 50” Main Unit Diagram 11/15 (COFDM) (LE650 Series)



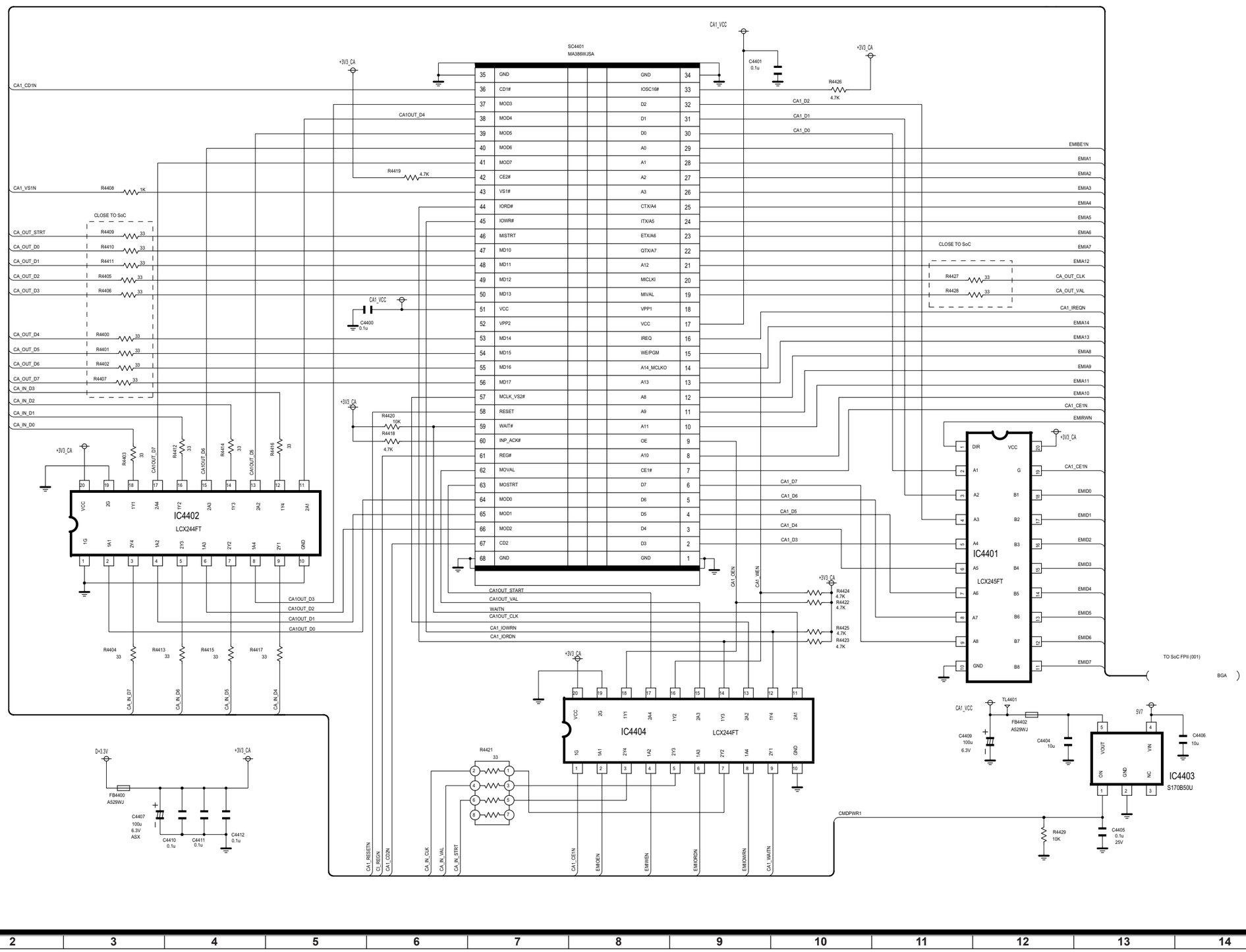
39” / 50” Main Unit Diagram 12/15 (USB) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04



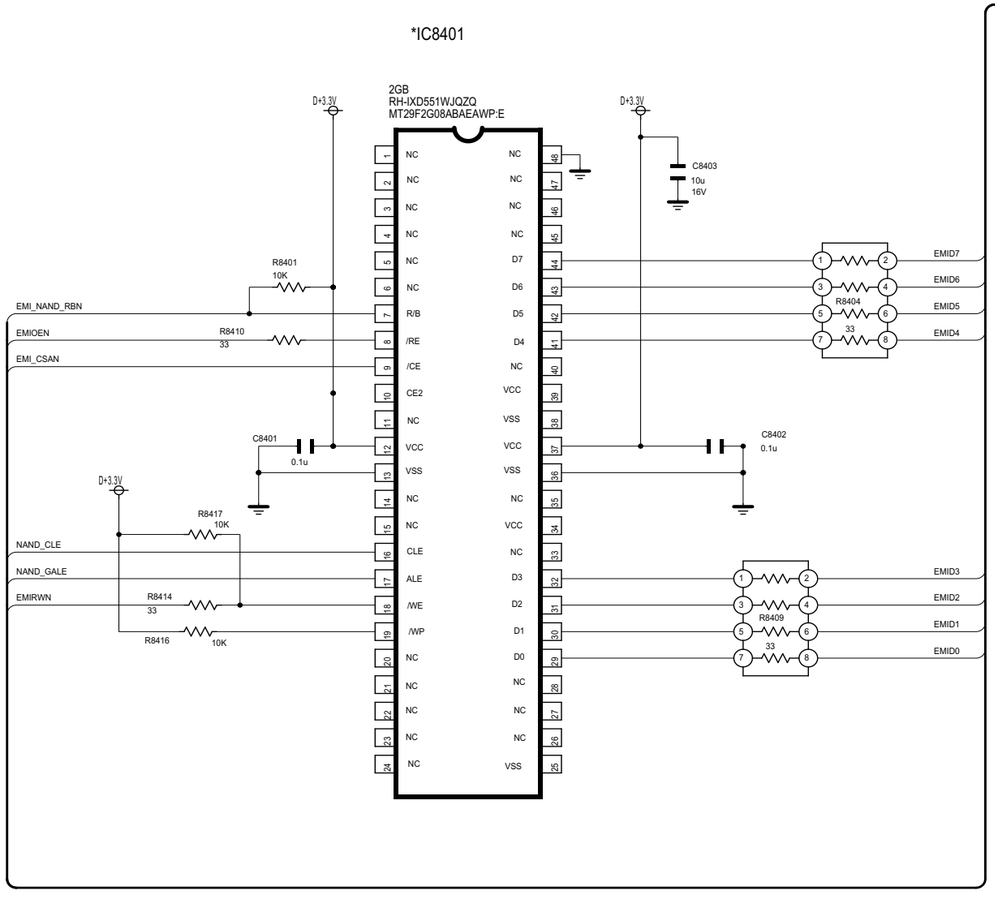
39” / 50” Main Unit Diagram 13/15 (PCMCIA) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04



39” / 50” Main Unit Diagram 14/15 (NAND FLASH) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04



39” / 50” Main Unit Diagram 15/15 (AUDIO AMP INTERFACE) (LE650 Series)

DUNTKG135WE02
DUNTKG135WE04

IC2701
STA333BW

IC2702
IXD542WJ

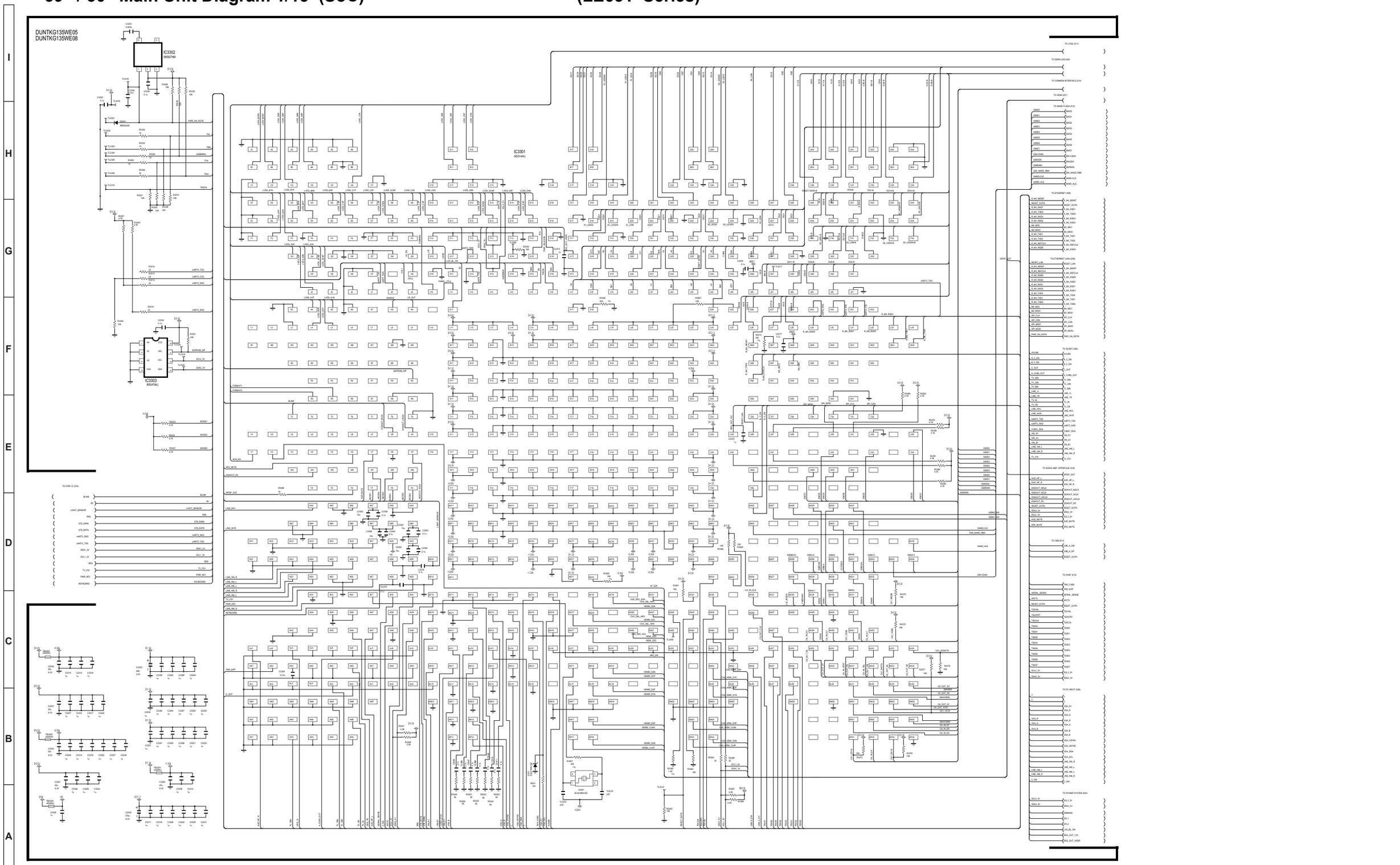
IC540
NC7SZ04P

*P2705
NA160WJ
SOUND 2.0

HEAD PHONE

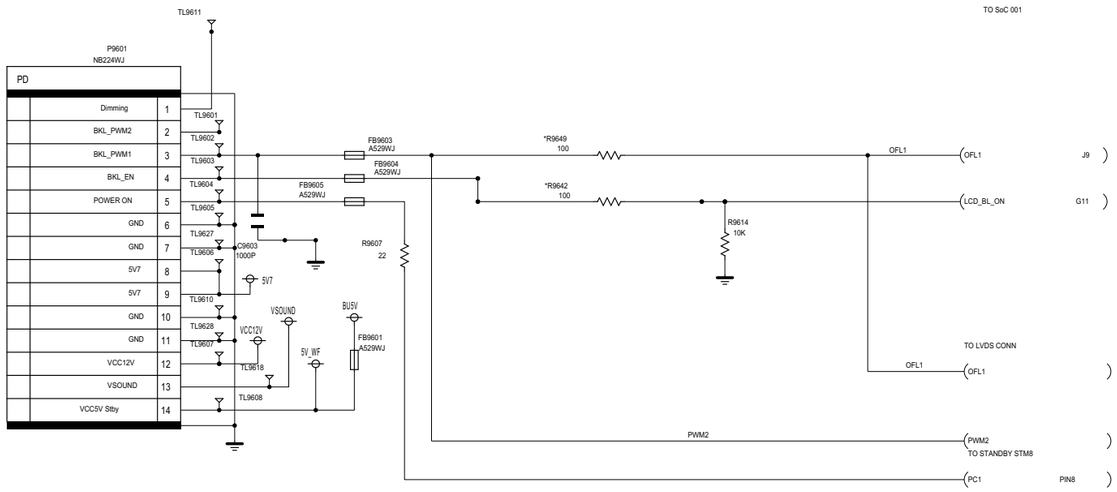
SPDIF OUT

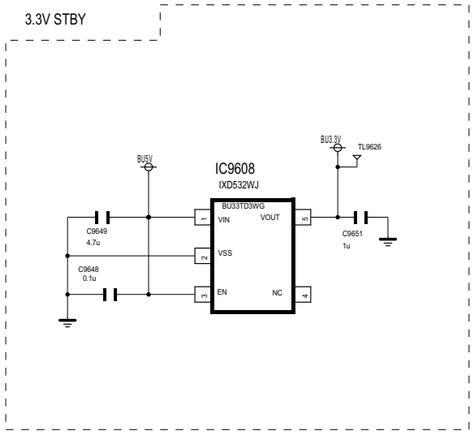
39” / 50” Main Unit Diagram 1/15 (SoC) (LE651 Series)

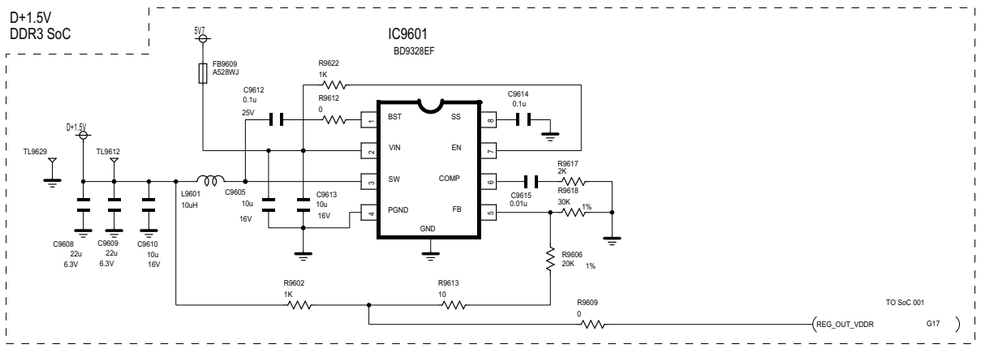


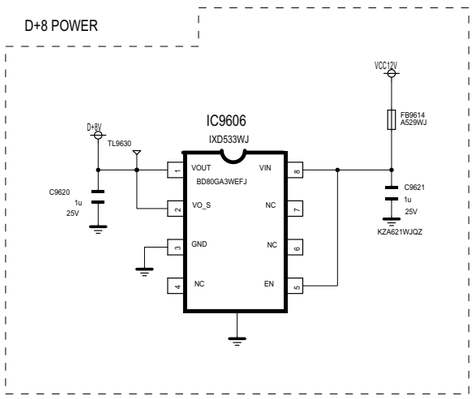
39” / 50” Main Unit Diagram 2/15 (System Power) (LE651 Series)

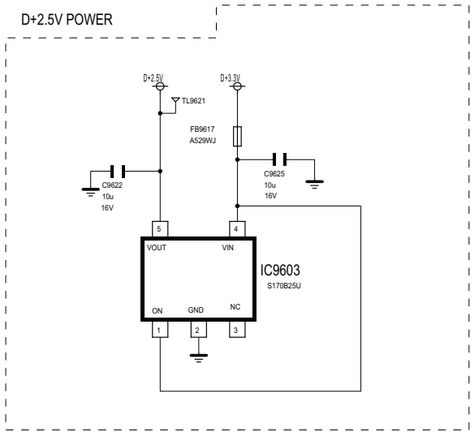
DUNTKG135WE05
DUNTKG135WE08

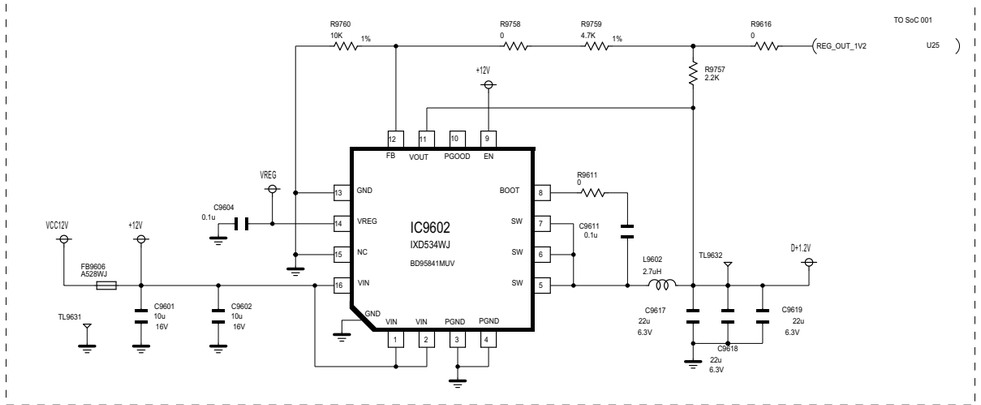


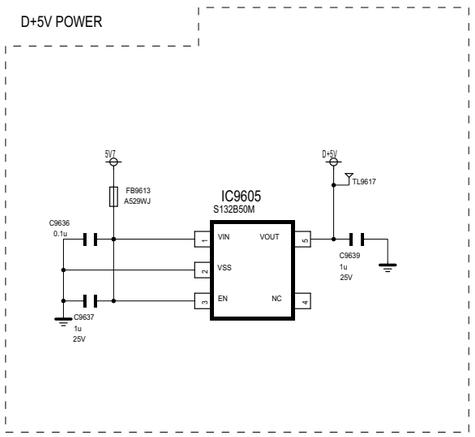


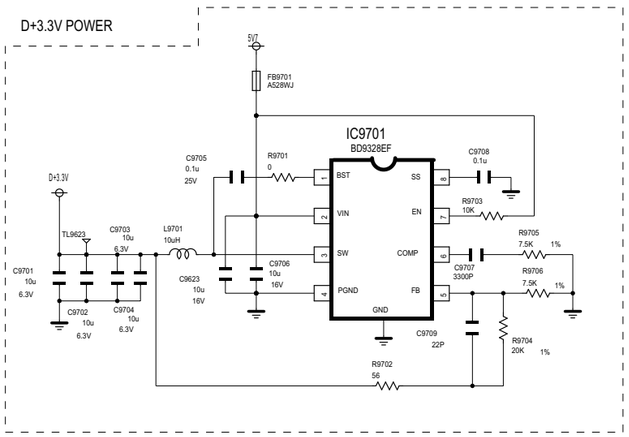






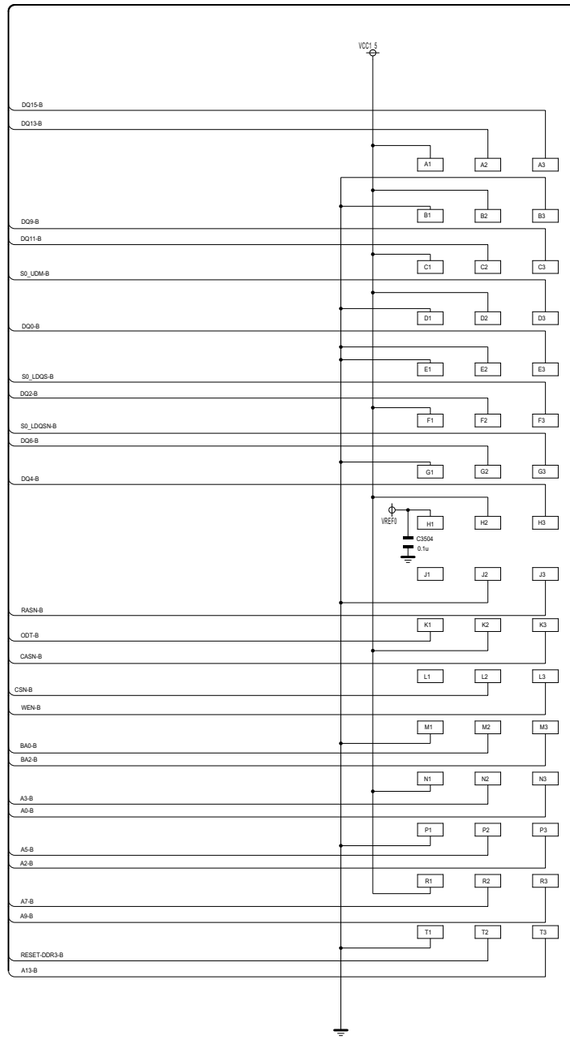




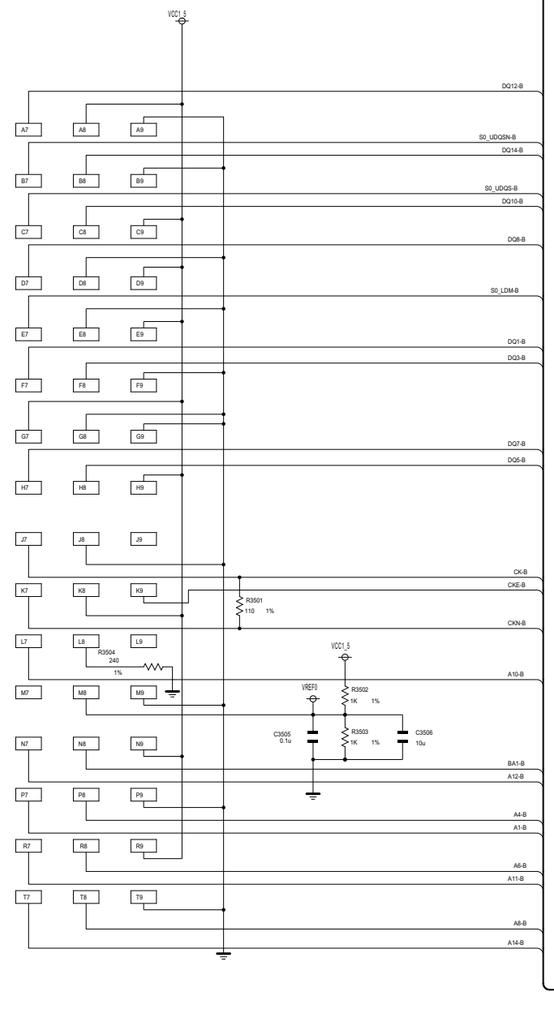


39” / 50” Main Unit Diagram 3/15 (DDR3 BLOCK II) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08

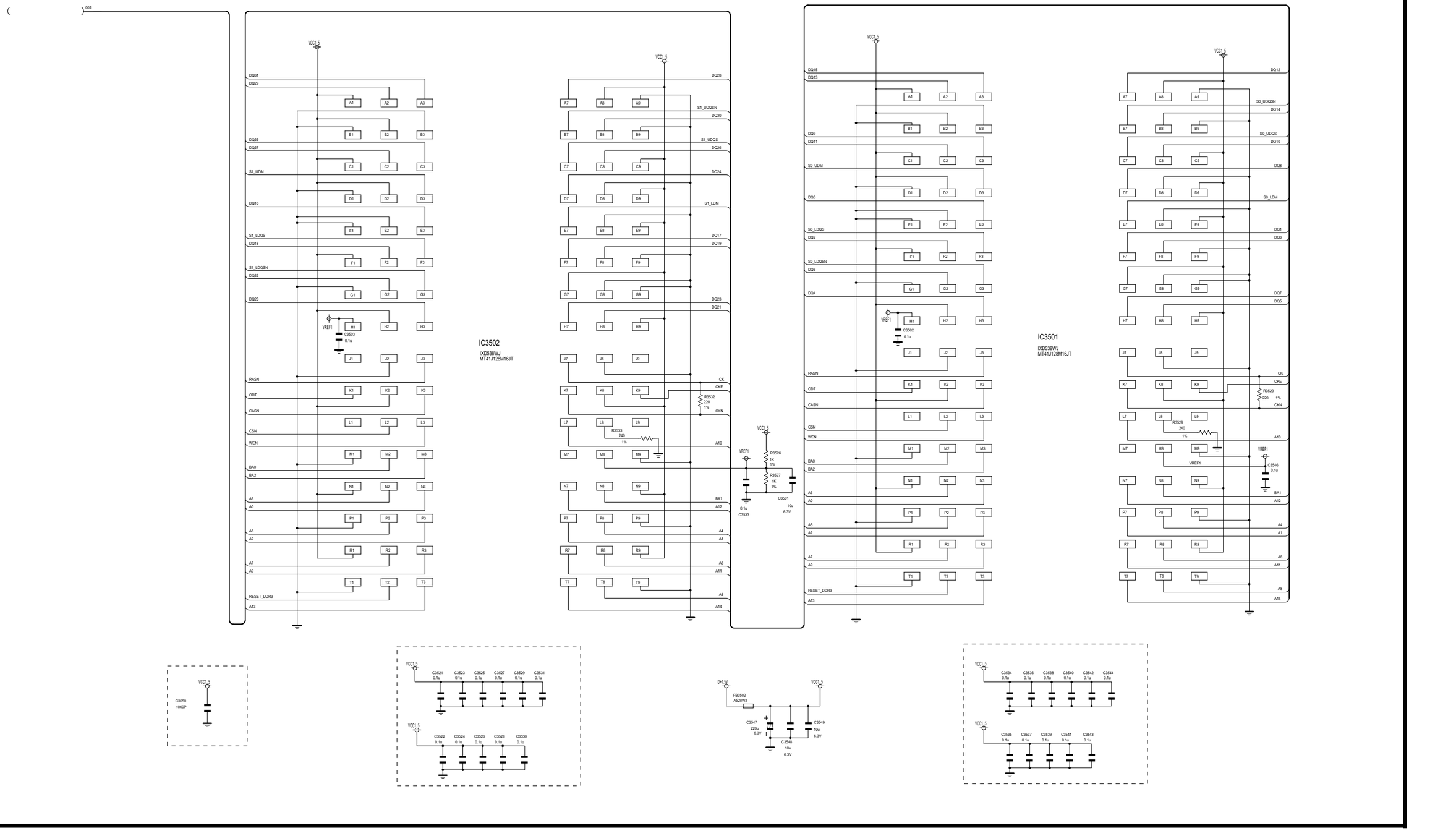


IC3503
IXD538WJ
MT41J128M16JT



39” / 50” Main Unit Diagram 4/15 (DDR3 BLOCK) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



39” / 50” Main Unit Diagram 5/15 (SCART) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08

SCART

IC552
BH76206HFV
STBY
GND
VIN
VSAG
VCC
VOUT

*SC552
ZA161WU

TO SoC (001)
A_CVBS_OUT
TV_RIN
TV_GIN
TV_BIN
LINE_1L
LINE_1R
TV_IN
TV_FB
TV_FS1
LINE_IN1L
LINE_IN1R
TO STANDBY SMTB(010)
PIN AE7
PIN 14

RS232
SERVICE

*J551
JA024WJ
UART3_RXD
UART3_TXD

HDTV1

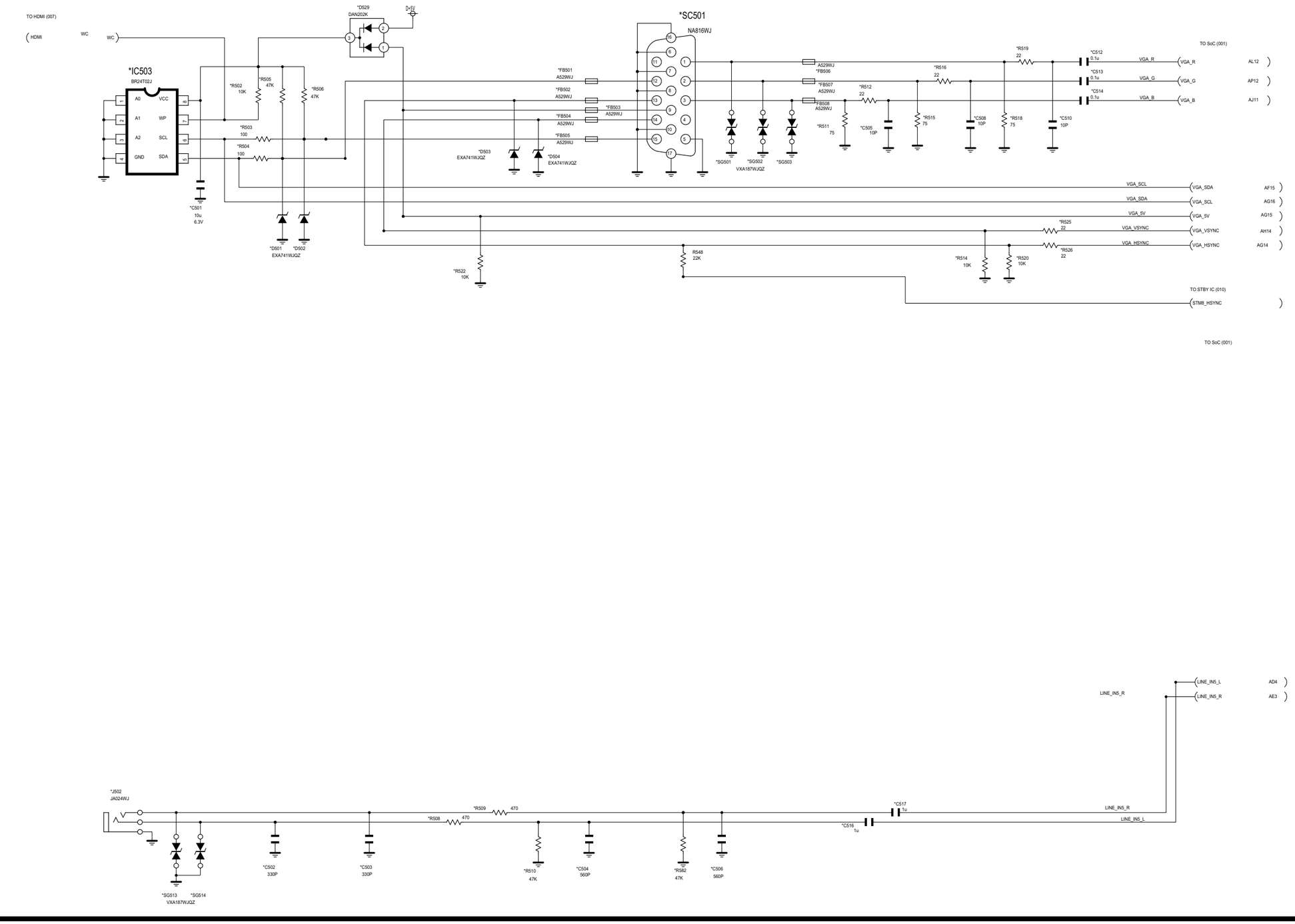
*J552
LA037WJGZ
R-Y
B-Y
L
Y
R
CVBS
CVBS1_RCA
YIN_G1
YIN_B1
YIN_R1
LINE_IN4_L
LINE_IN4_R

TO SOC (001)

MINI-SCART

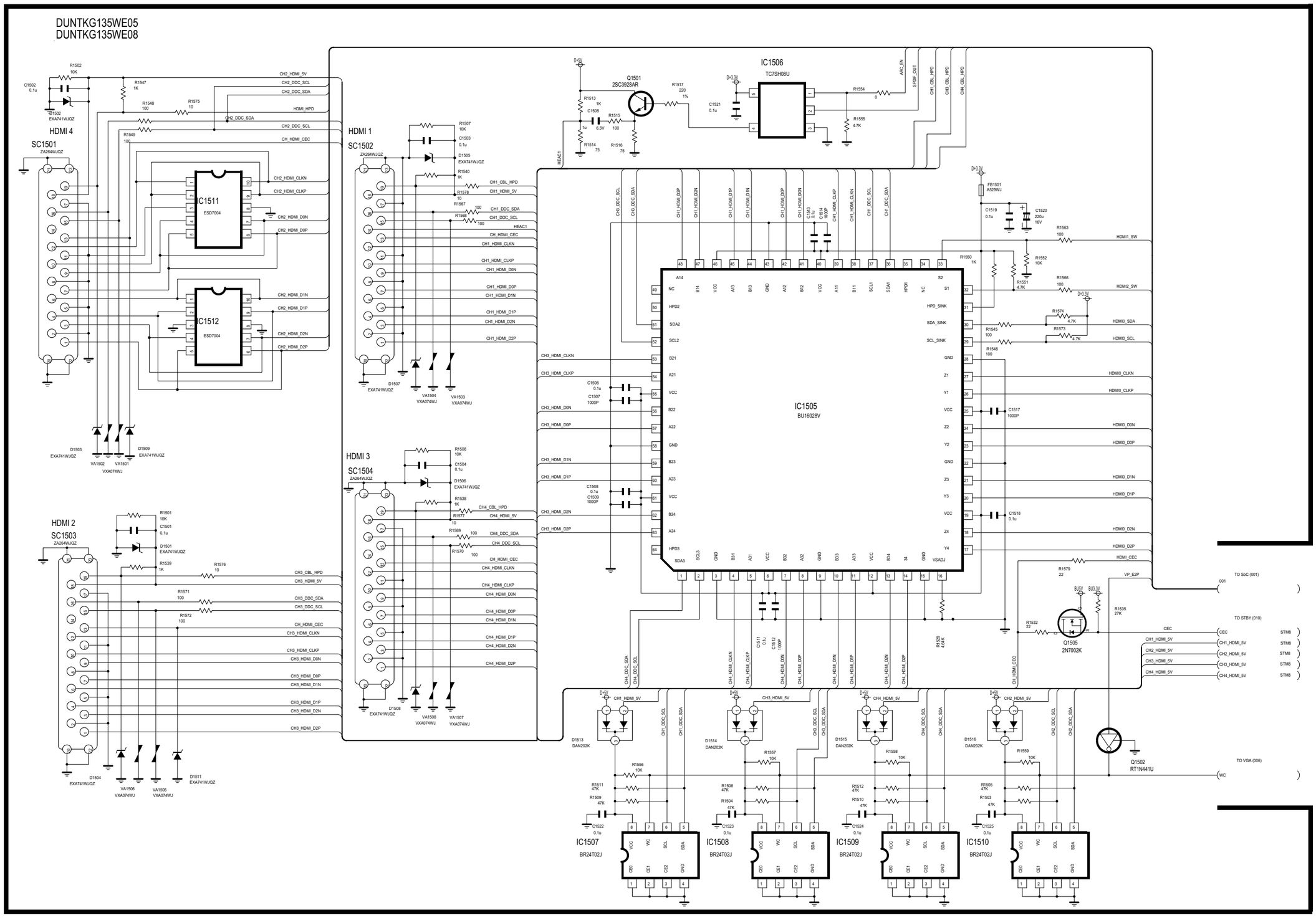
39” / 50” Main Unit Diagram 6/15 (PC INPUT) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



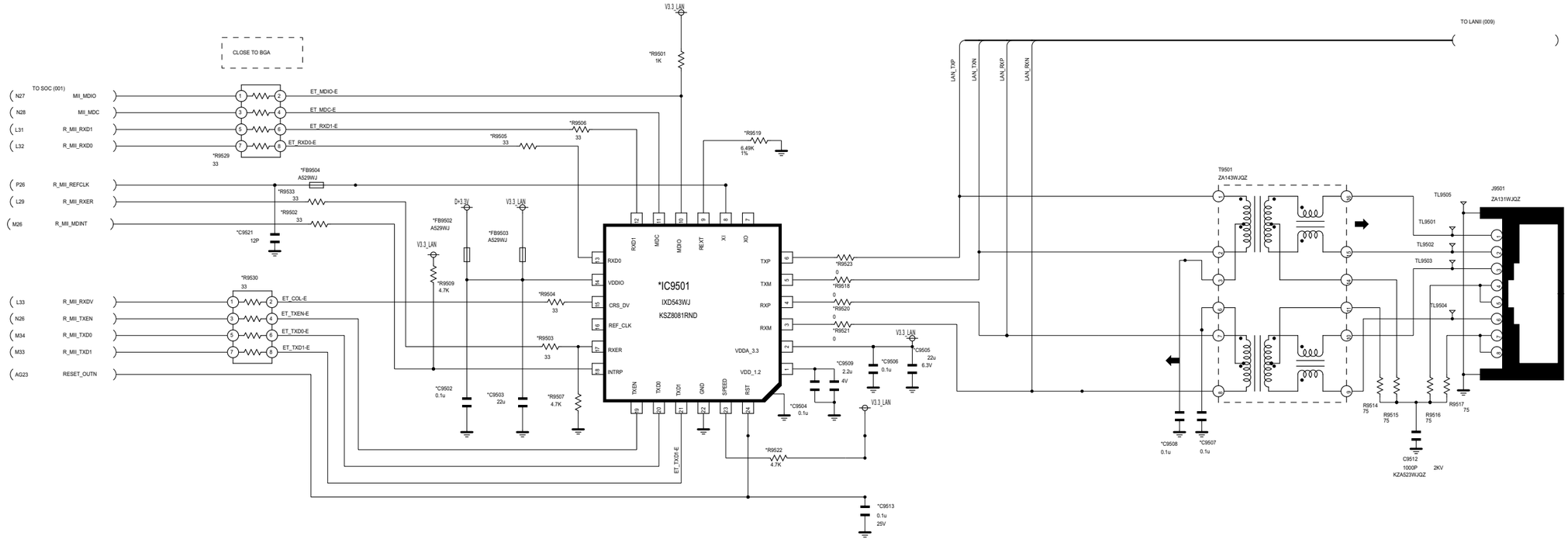
39” / 50” Main Unit Diagram 7/15 (HDMI) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



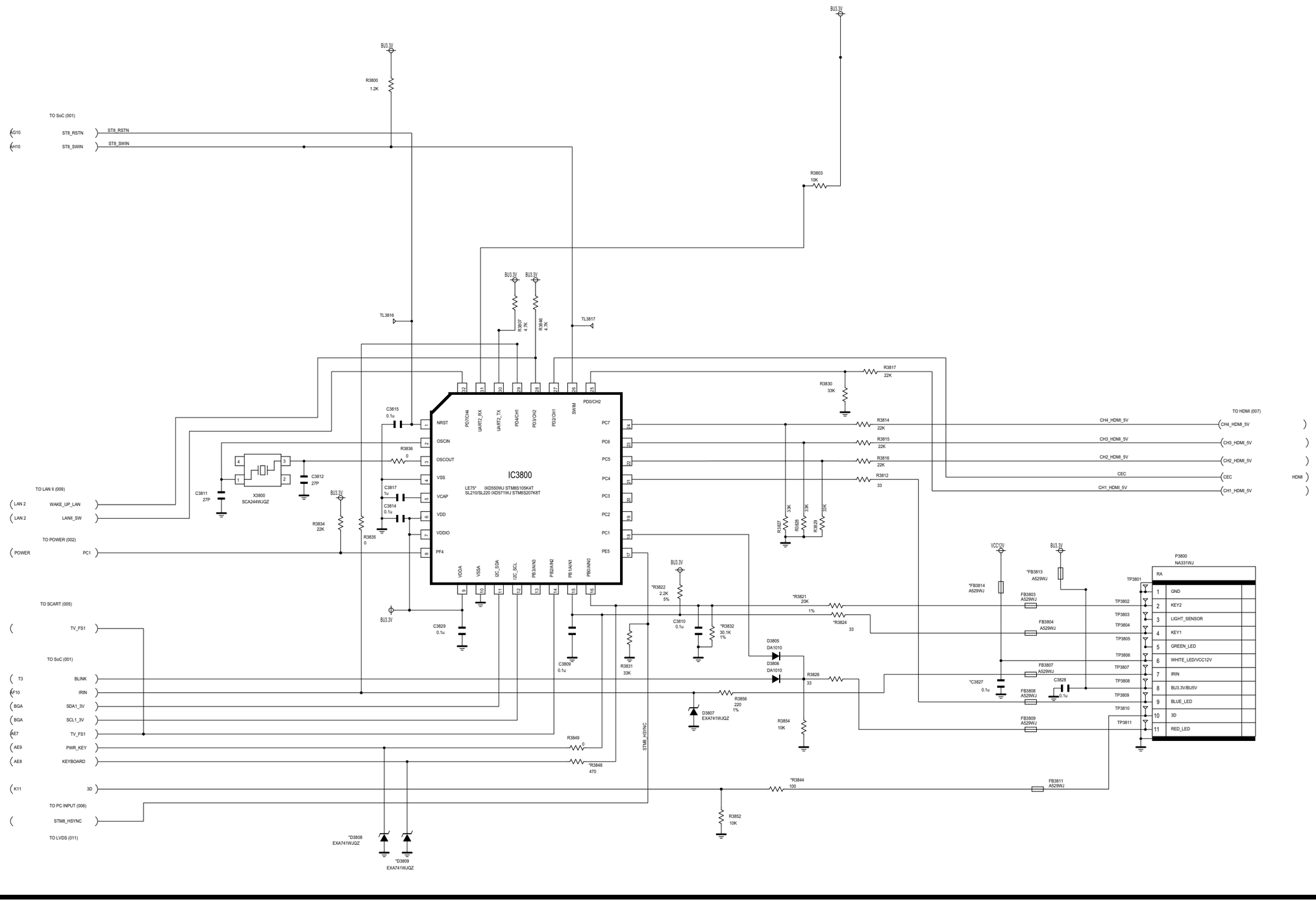
39” / 50” Main Unit Diagram 8/15 (LAN I) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



39” / 50” Main Unit Diagram 9/15 (STANDBY STM8S) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



39” / 50” Main Unit Diagram 10/15 (PANEL INTERFACE) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08

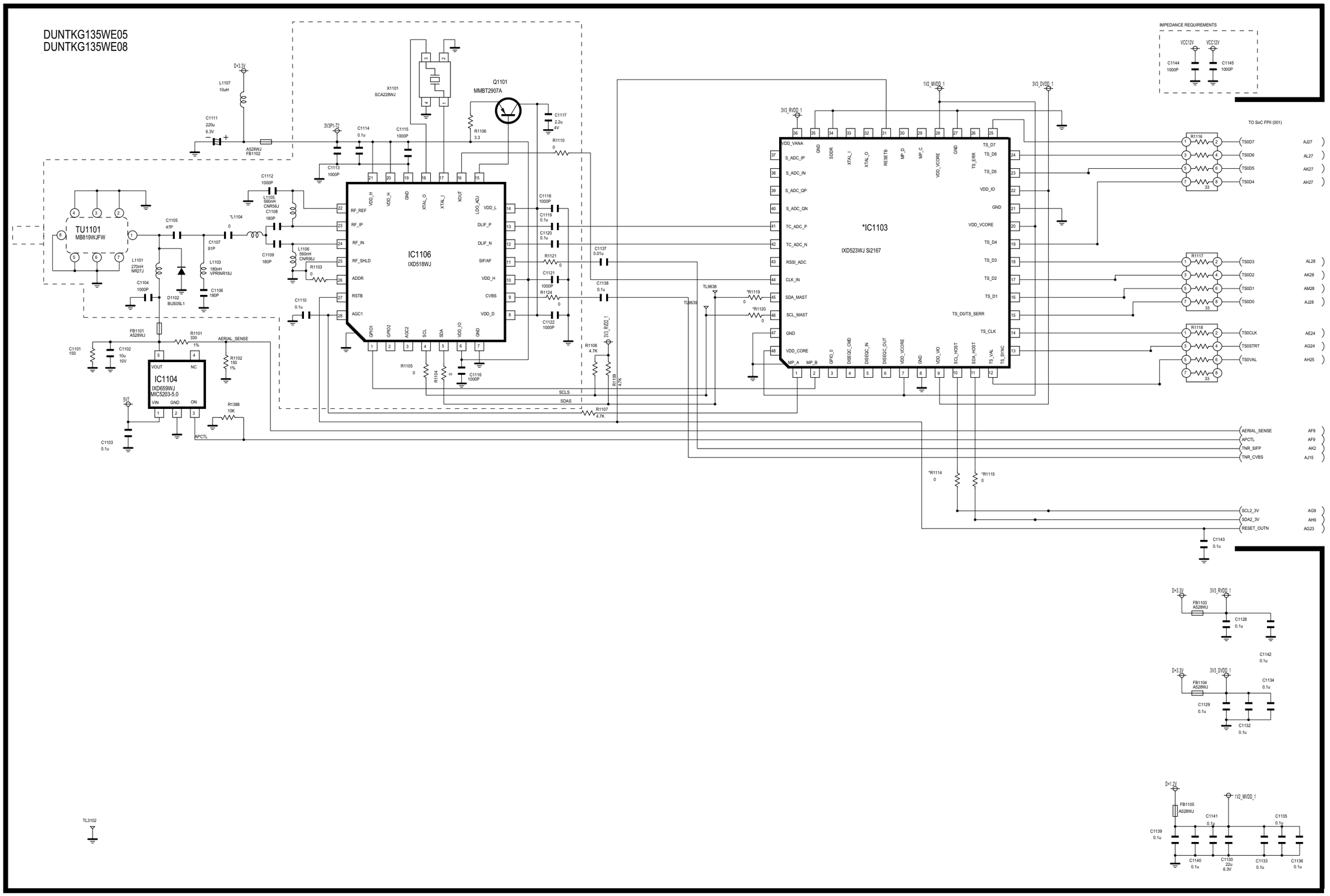
*SC2603
WB128WJ
LW

SC2601
WB127WJ
LV

TO SoC FPII (001)
TO POWER SYSTEM (002)
TO STBY IC (010)

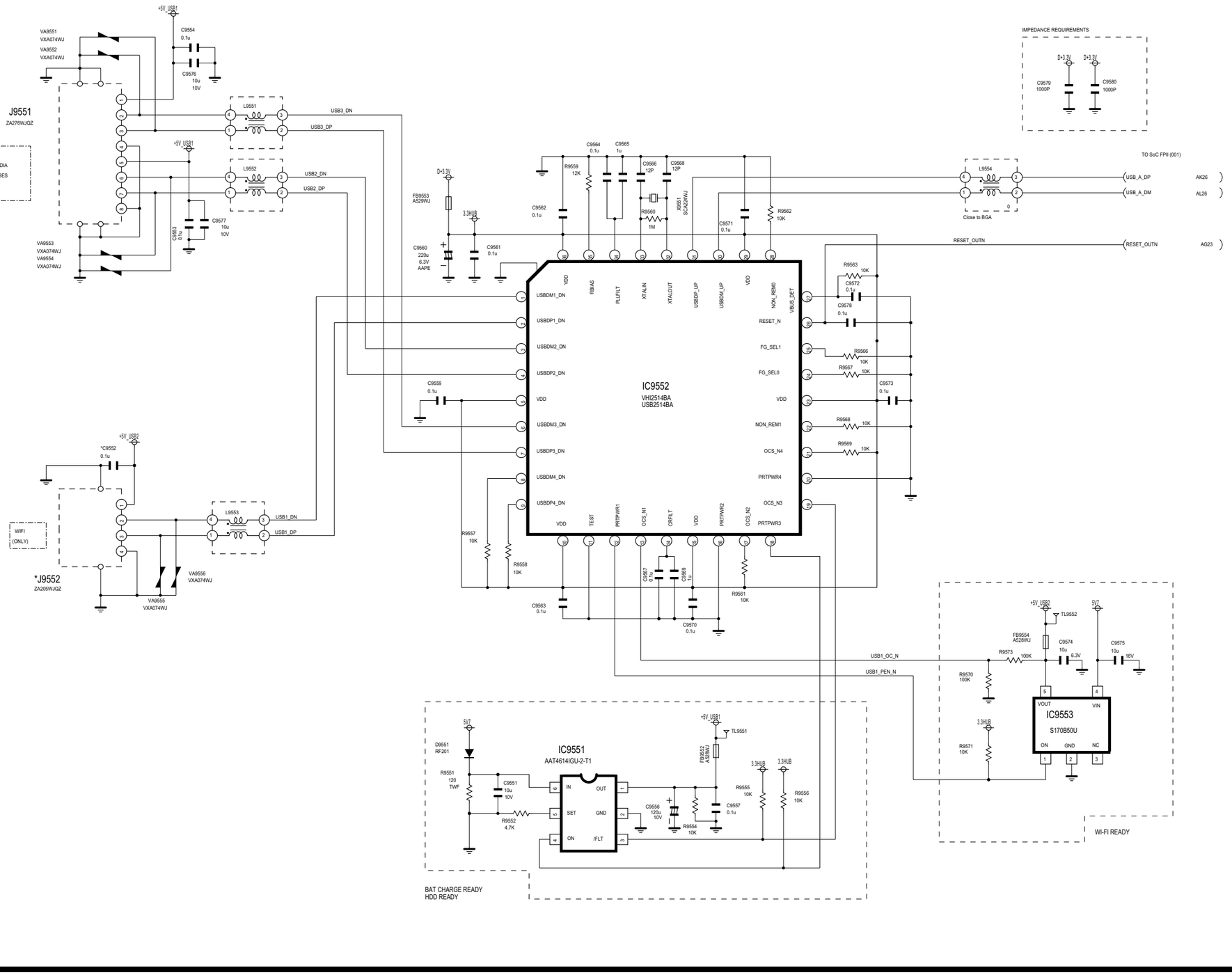
39” / 50” Main Unit Diagram 11/15 (COFDM) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



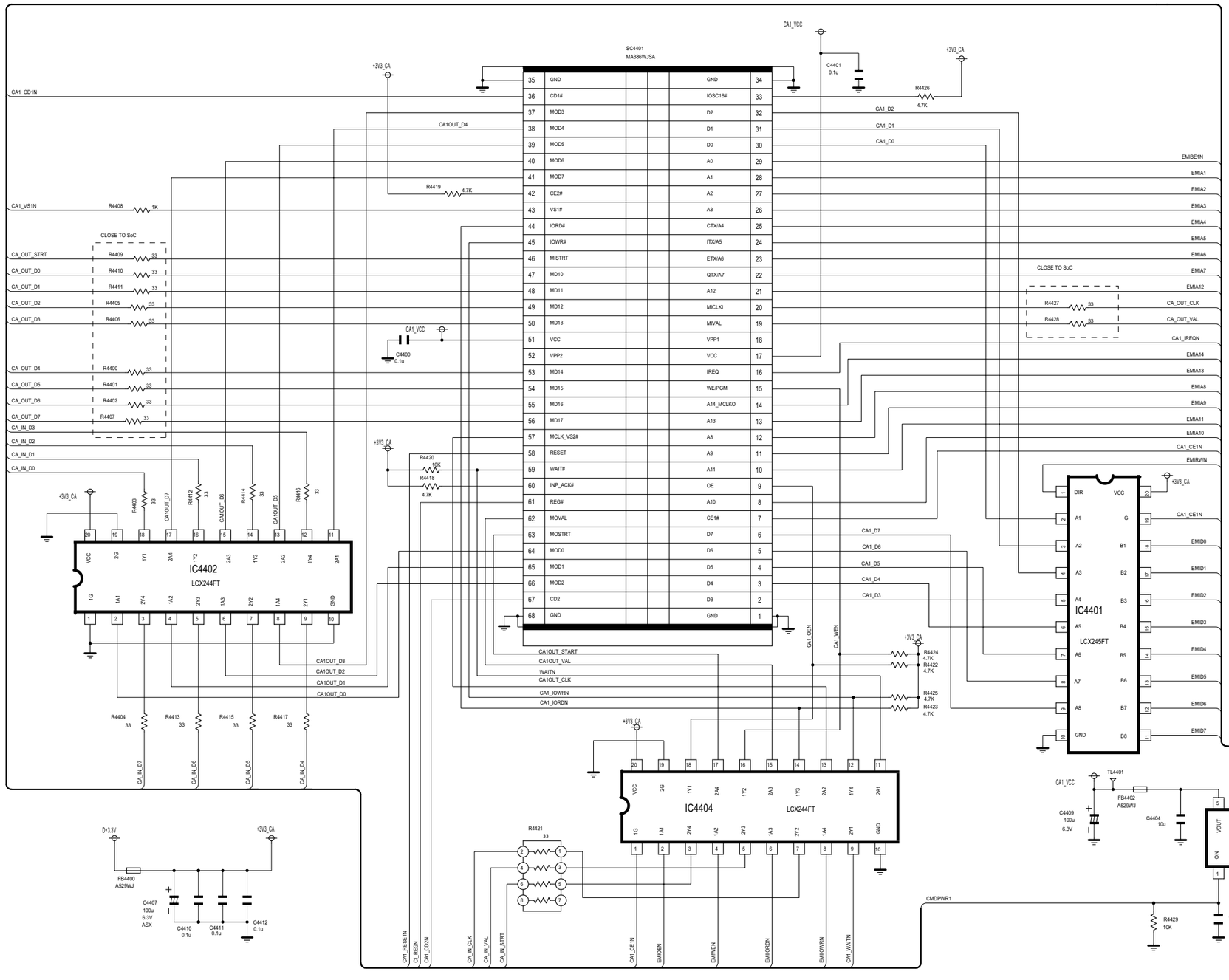
39” / 50” Main Unit Diagram 12/15 (USB) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



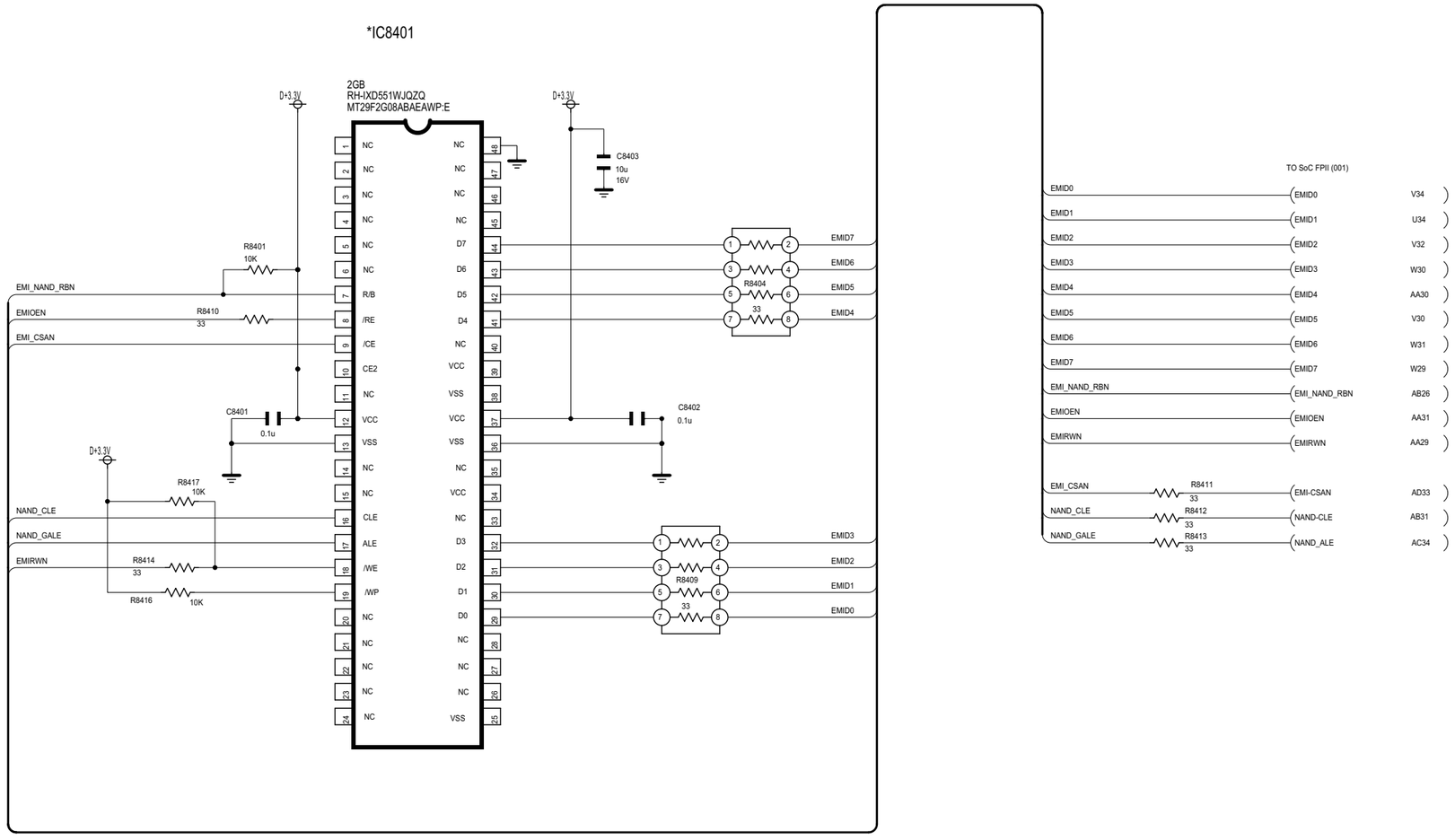
39” / 50” Main Unit Diagram 13/15 (PCMCIA) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



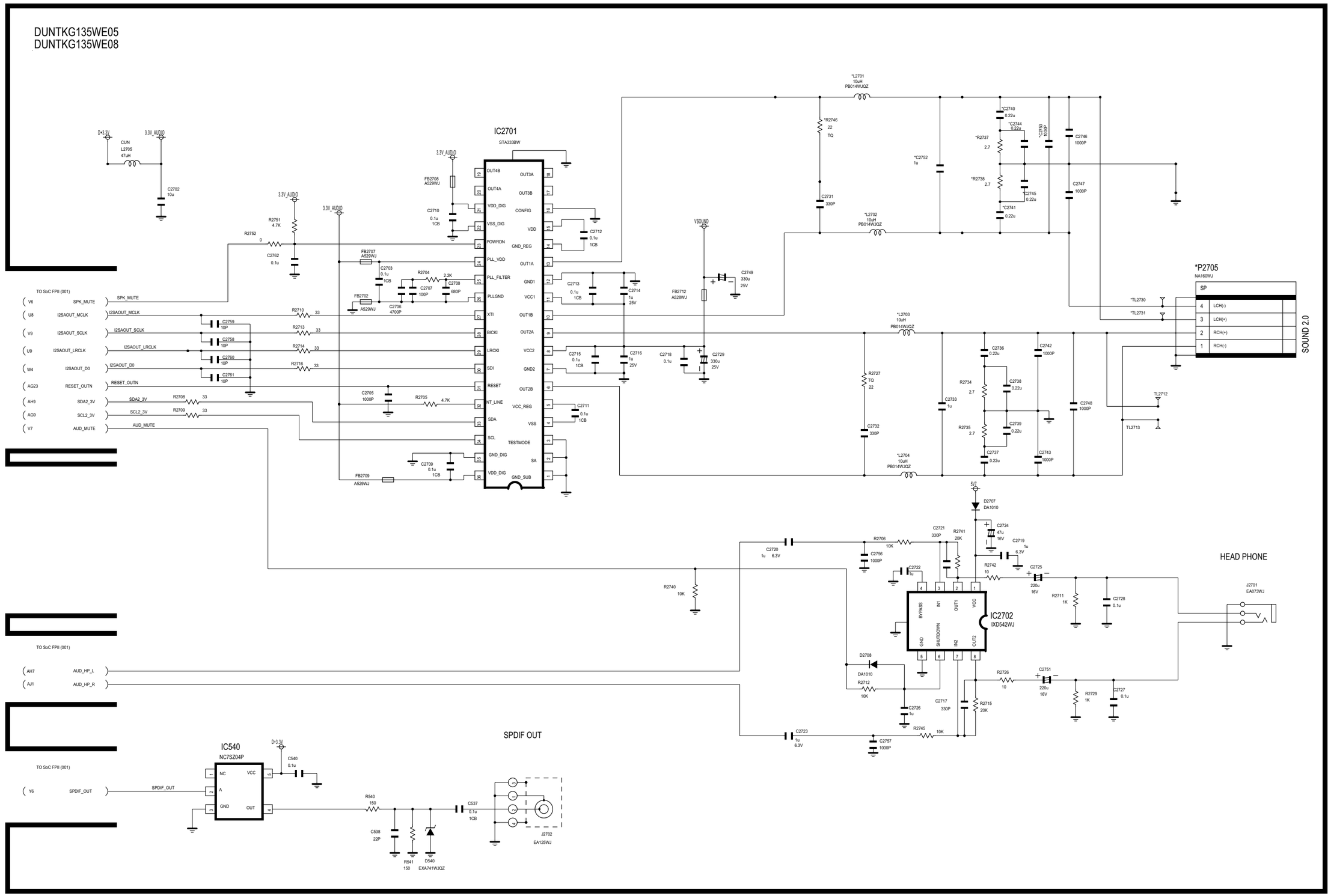
39” / 50” Main Unit Diagram 14/15 (NAND FLASH) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



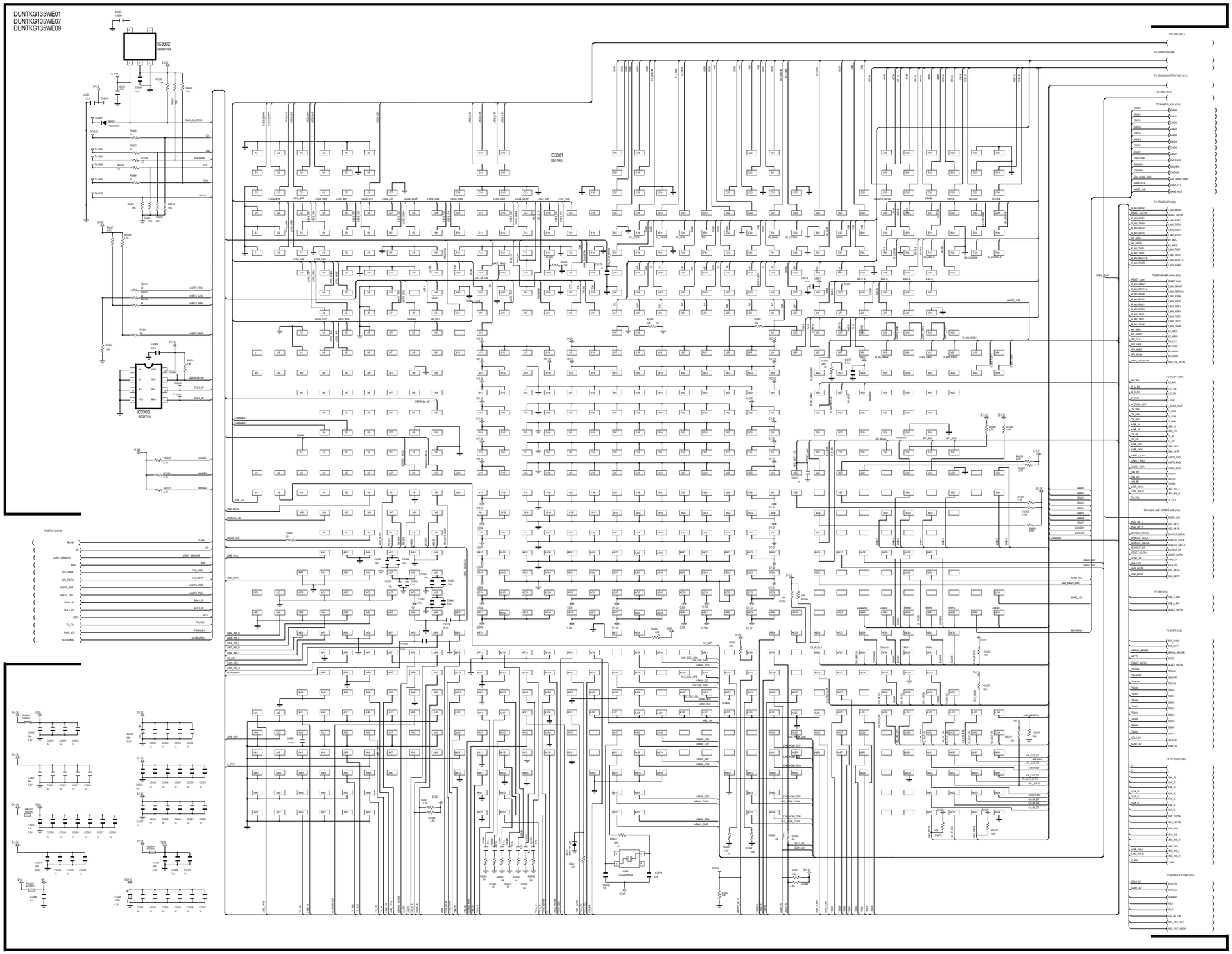
39” / 50” Main Unit Diagram 15/15 (INTERFACE) (LE651 Series)

DUNTKG135WE05
DUNTKG135WE08



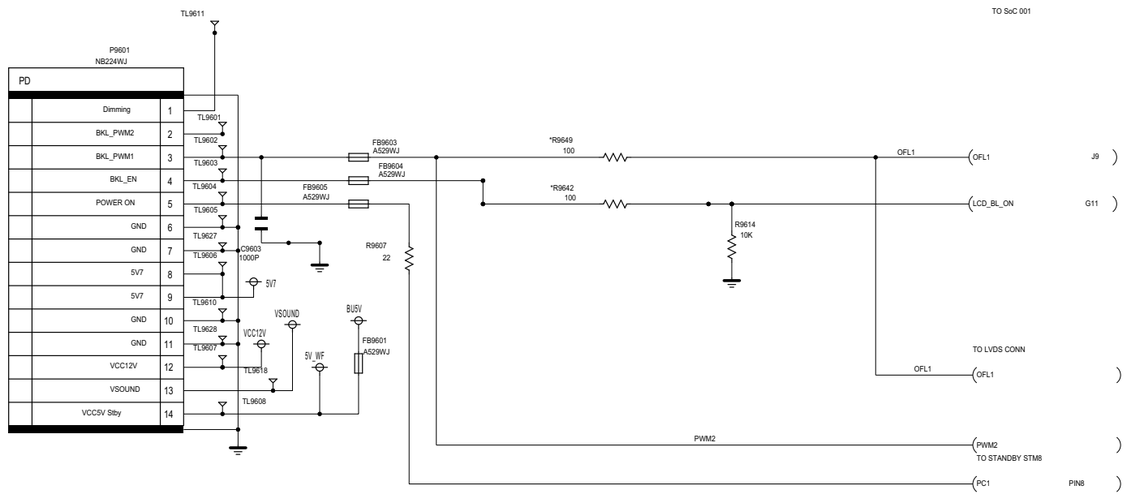
39” / 50” Main Unit Diagram 1/15 (SoC) (LE652 Series)

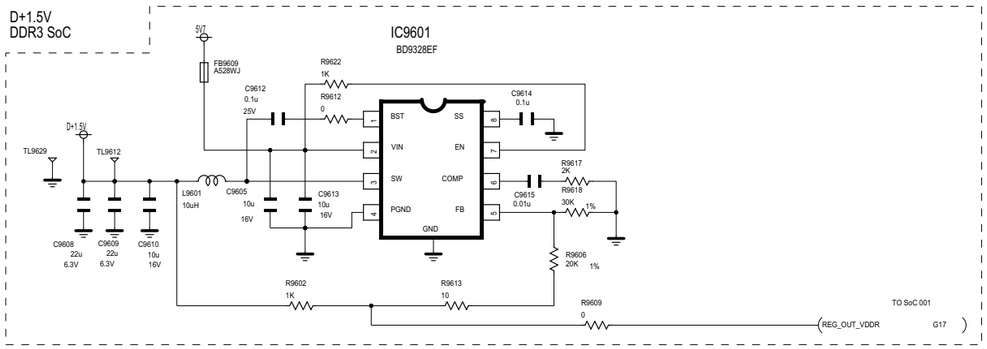
DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09

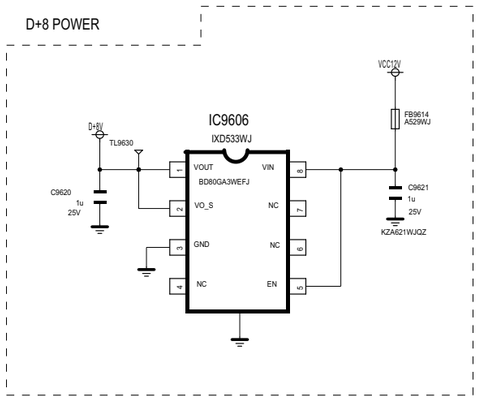


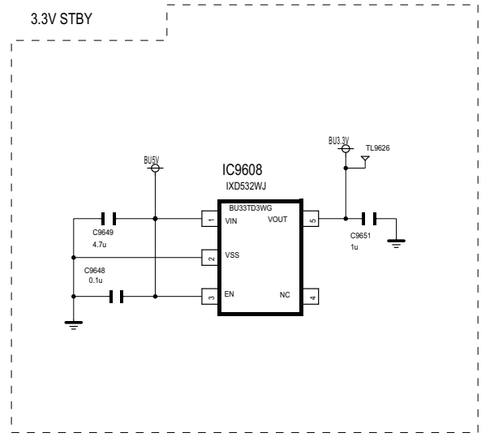
39” / 50” Main Unit Diagram 2/15 (System Power) (LE652 Series)

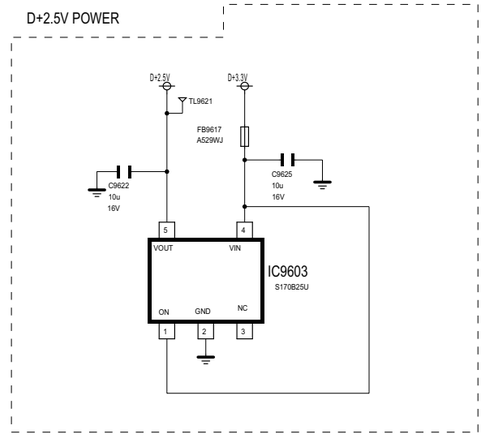
DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09

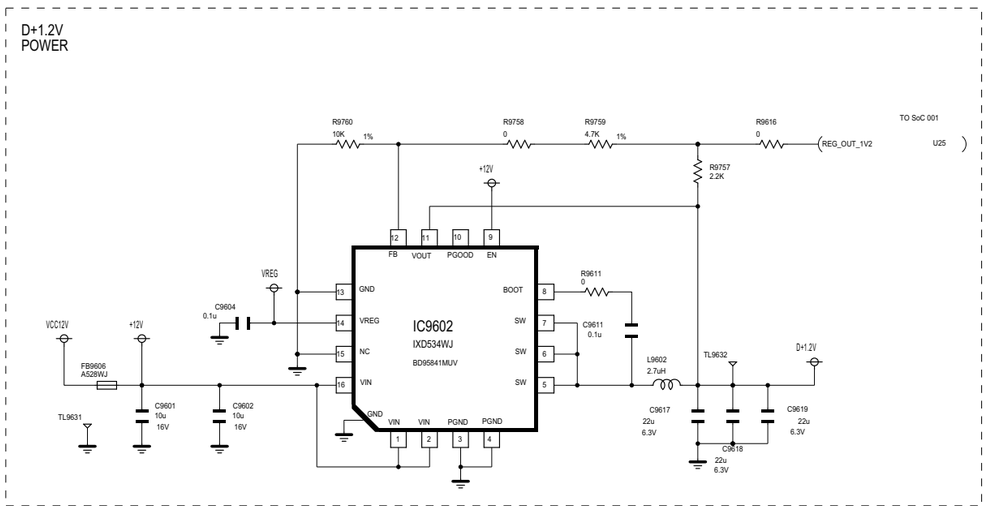


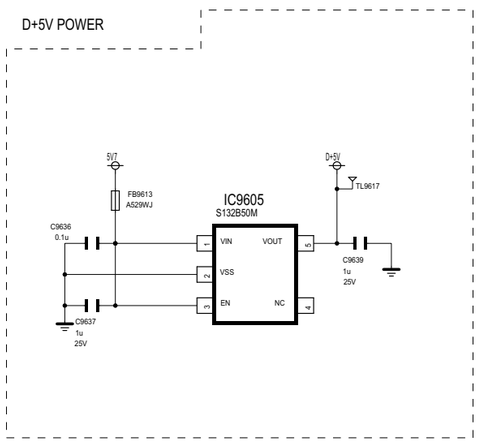


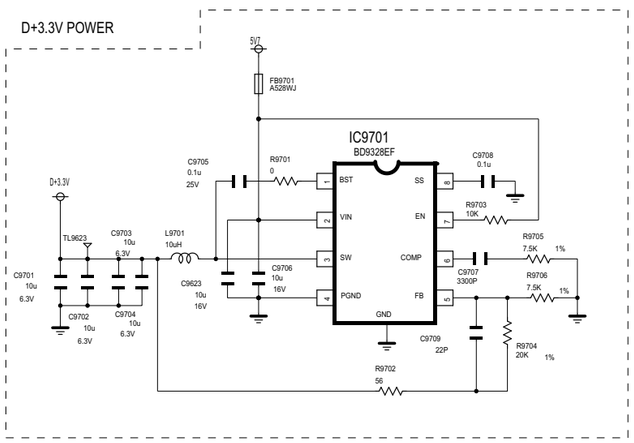






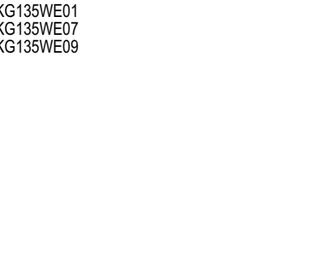


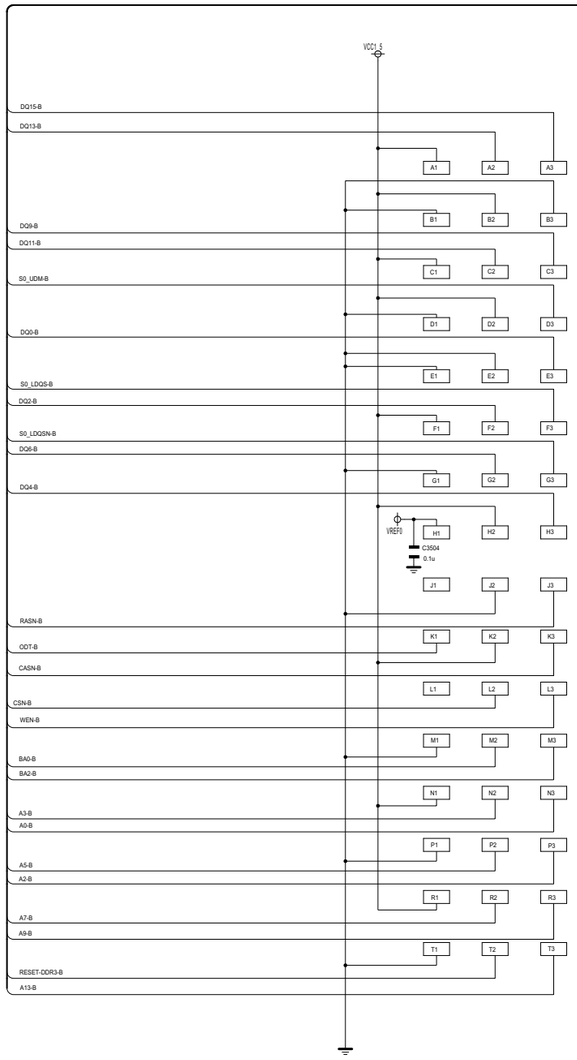




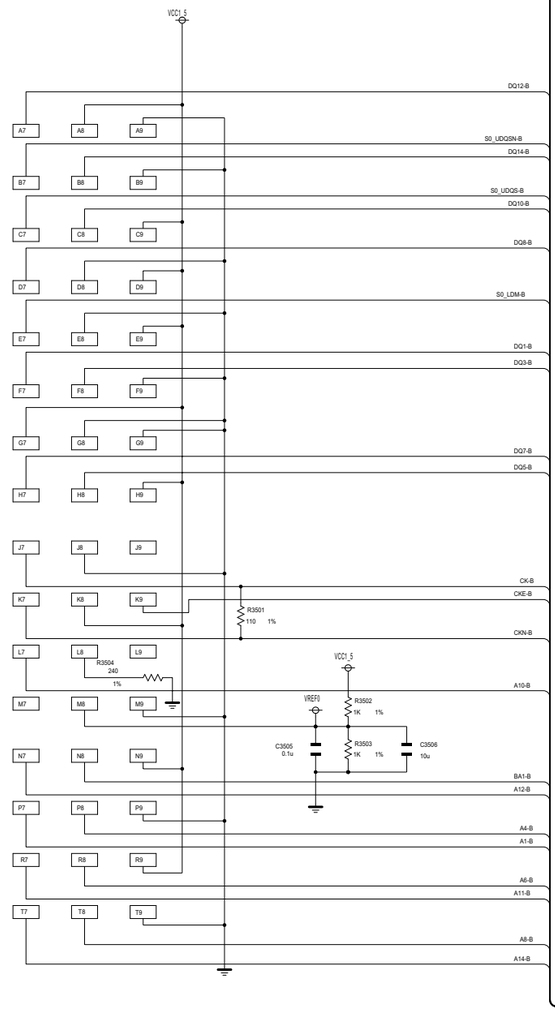
39” / 50” Main Unit Diagram 3/15 (DDR3 BLOCK II) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09



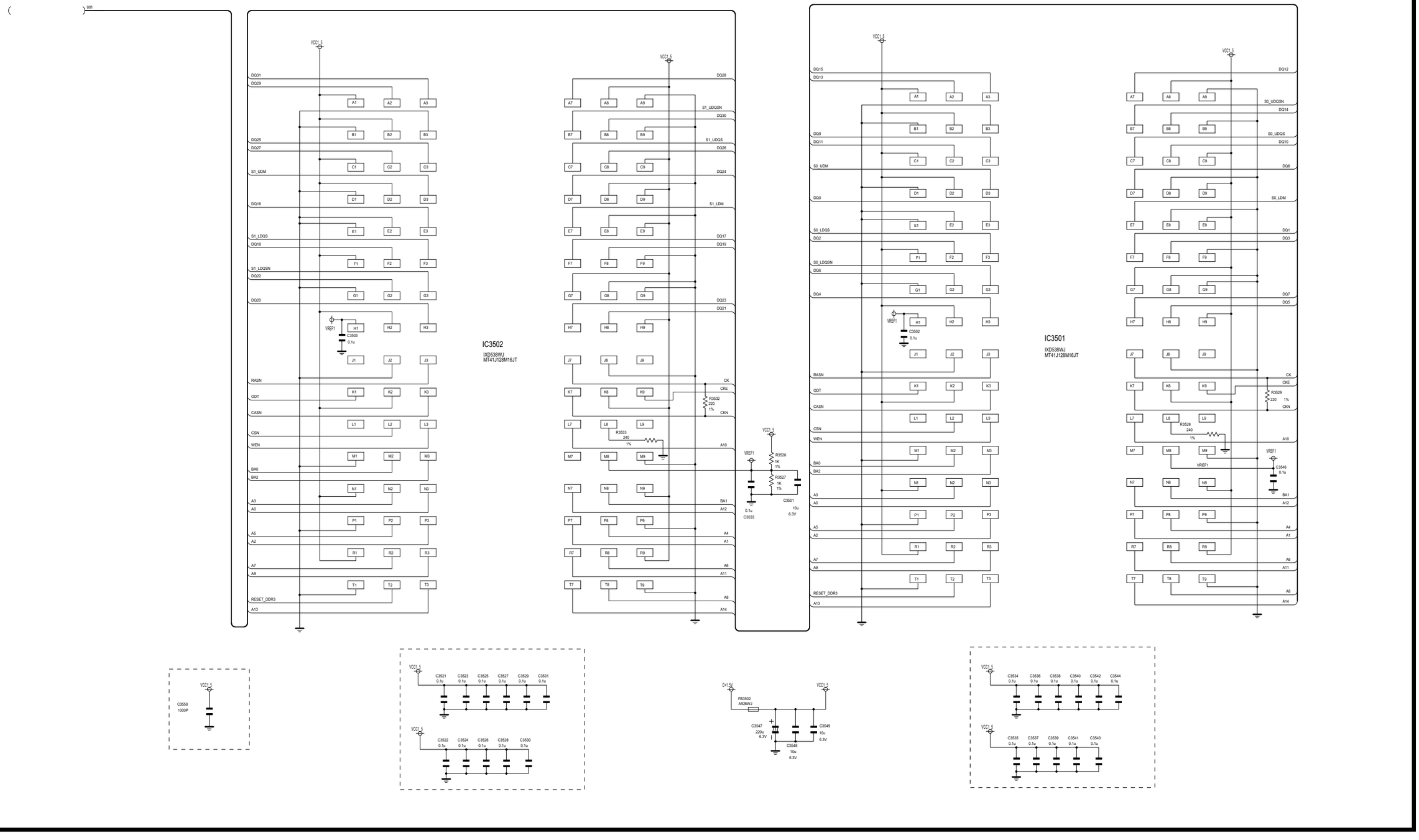


IC3503
IXDS38WJ
MT41J128M16JT



39” / 50” Main Unit Diagram 4/15 (DDR3 BLOCK) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09



39” / 50” Main Unit Diagram 5/15 (SCART) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09

SCART

IC552
BH7620HFV
STBY GND
VIN VSAG
VCC VOUT

*SC552
ZA161WJ

TO SoC (001)
A_CVBS_OUT
TV_RIN
TV_GIN
TV_BIN
LINE_1L
LINE_1R
TV_IN
TV_FB
TV_FS1
LINE_IN1L
LINE_IN1R
TO STANDBY SMTB(010)
PIN AE7
PIN 14

RS232
SERVICE

*J551
JA024WJ
UART3_RXD
UART3_TXD
G12
J12

HDTV1

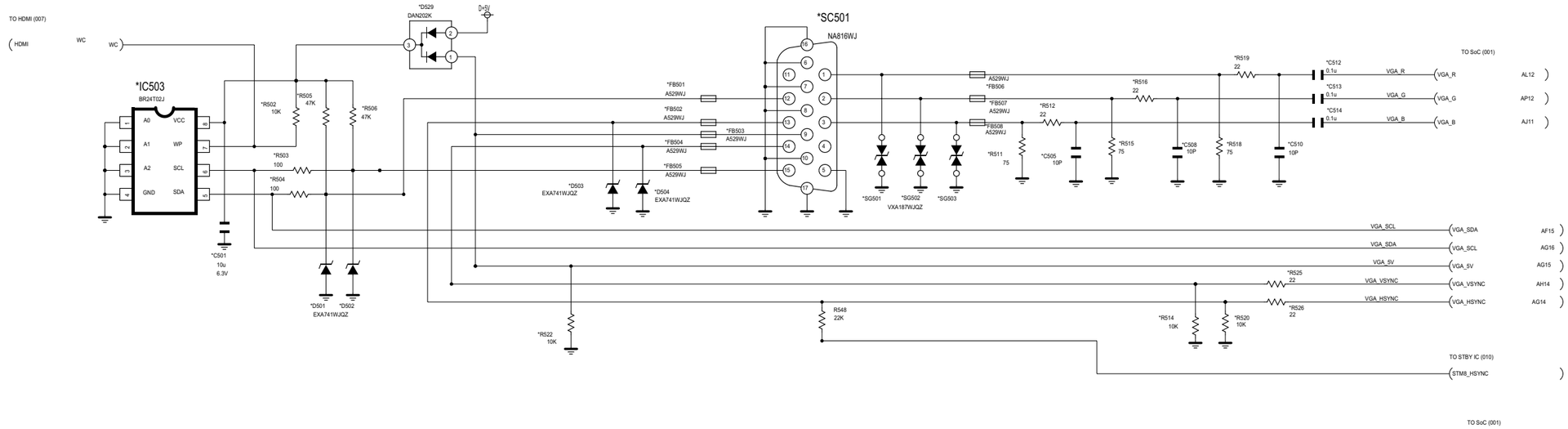
*J552
LA037WJQZ
R-Y
B-Y
Y
L
R
CVBS
CVBS1_RCA
VIN_G1
VIN_B1
VIN_R1
LINE_IN4_L
LINE_IN4_R
AK13
AM11
AK11
AK10
AD6
AD2

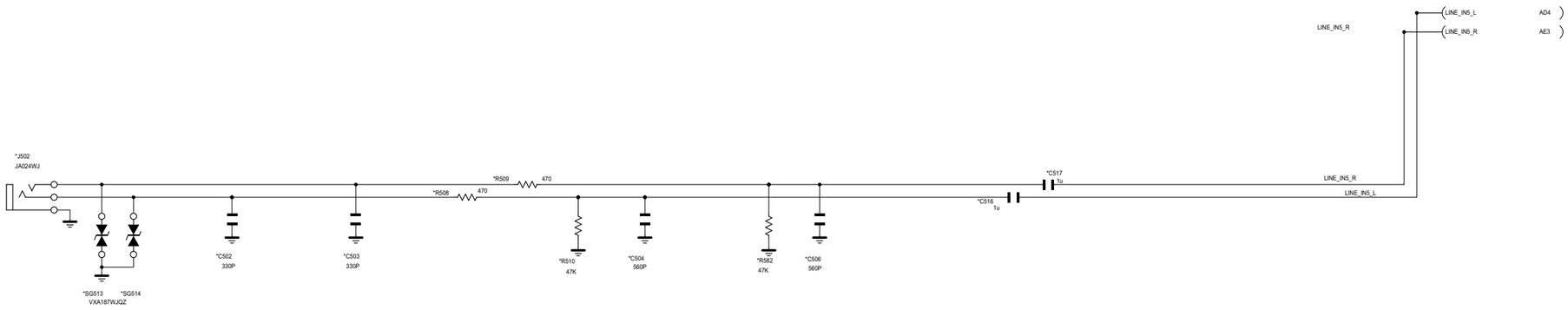
TO SOC (001)

MINI-SCART

39” / 50” Main Unit Diagram 6/15 (PC INPUT) (LE652 Series)

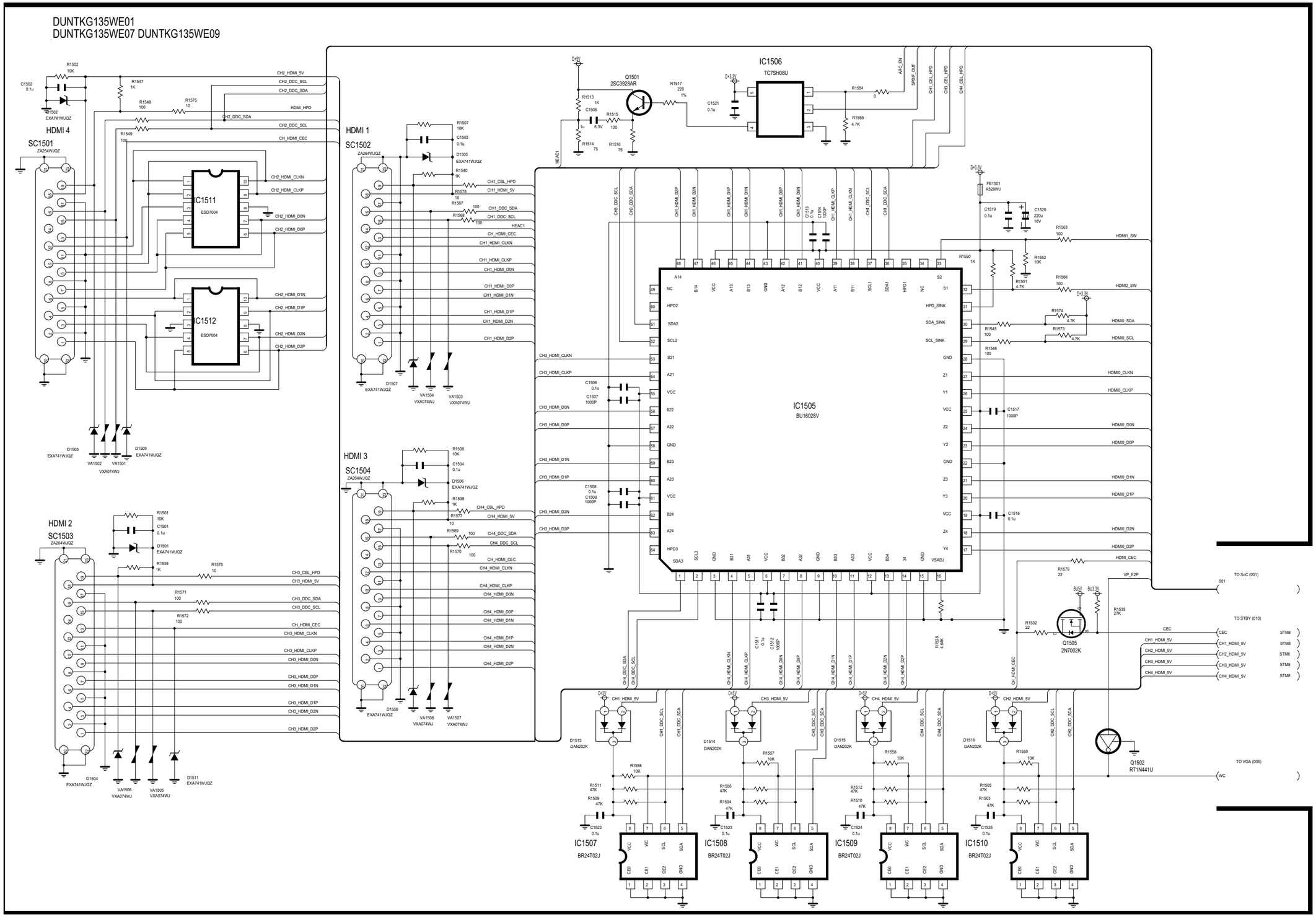
DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09





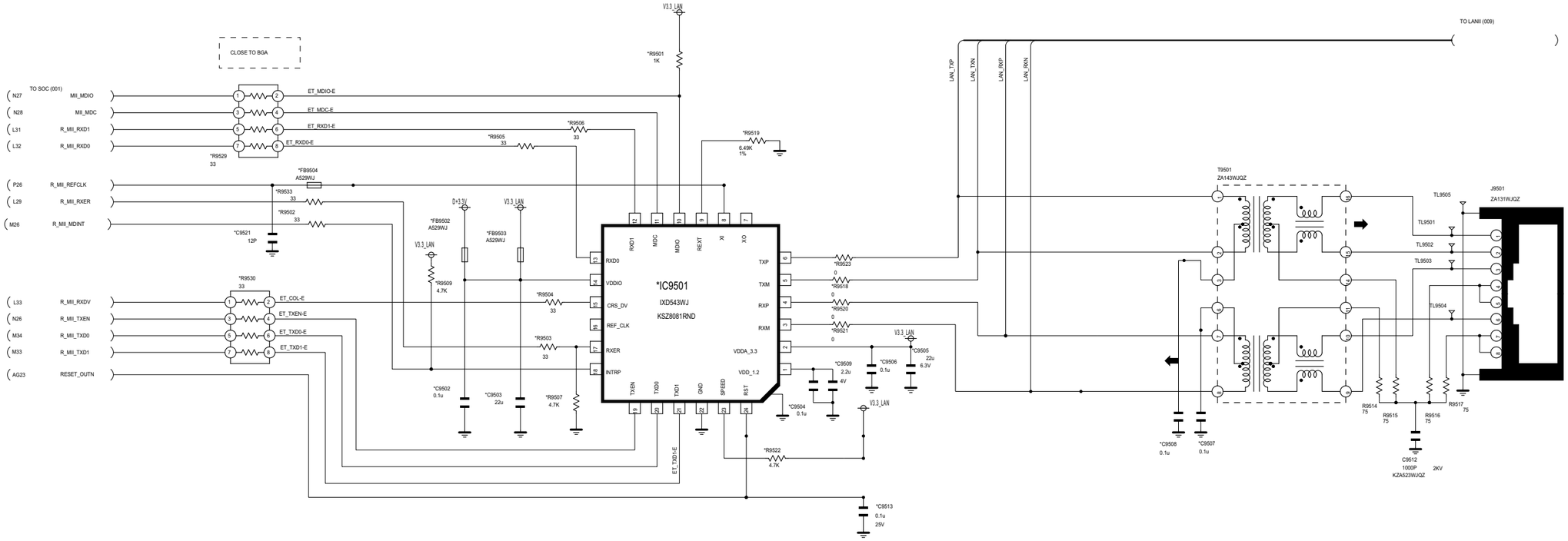
39” / 50” Main Unit Diagram 7/15 (HDMI) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09



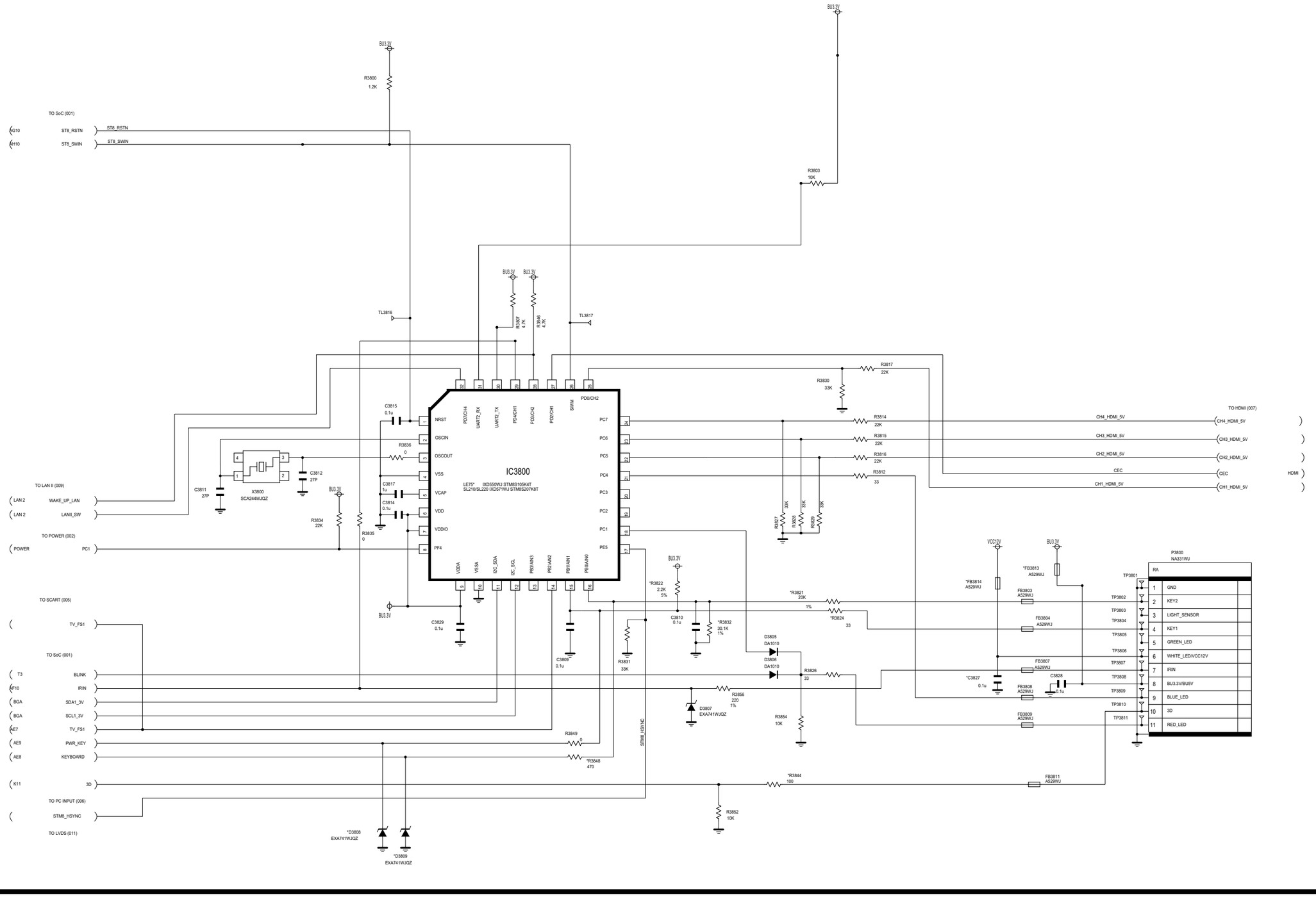
39” / 50” Main Unit Diagram 8/15 (LAN I) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09



39” / 50” Main Unit Diagram 9/15 (STANDBY STM8S) (LE652 Series)

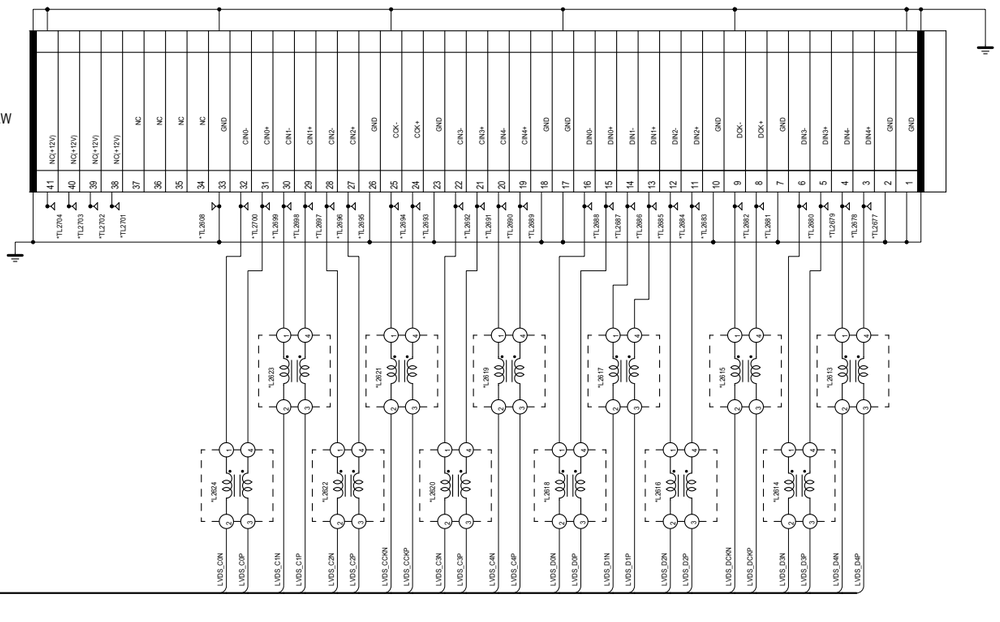
DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09

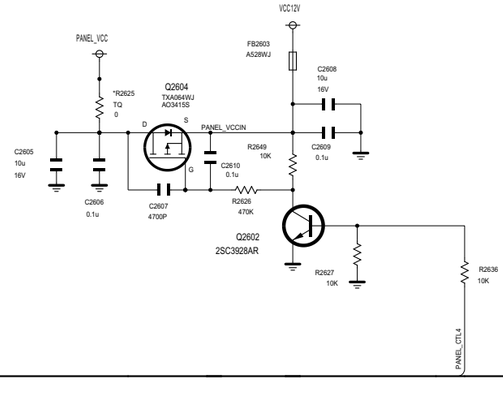


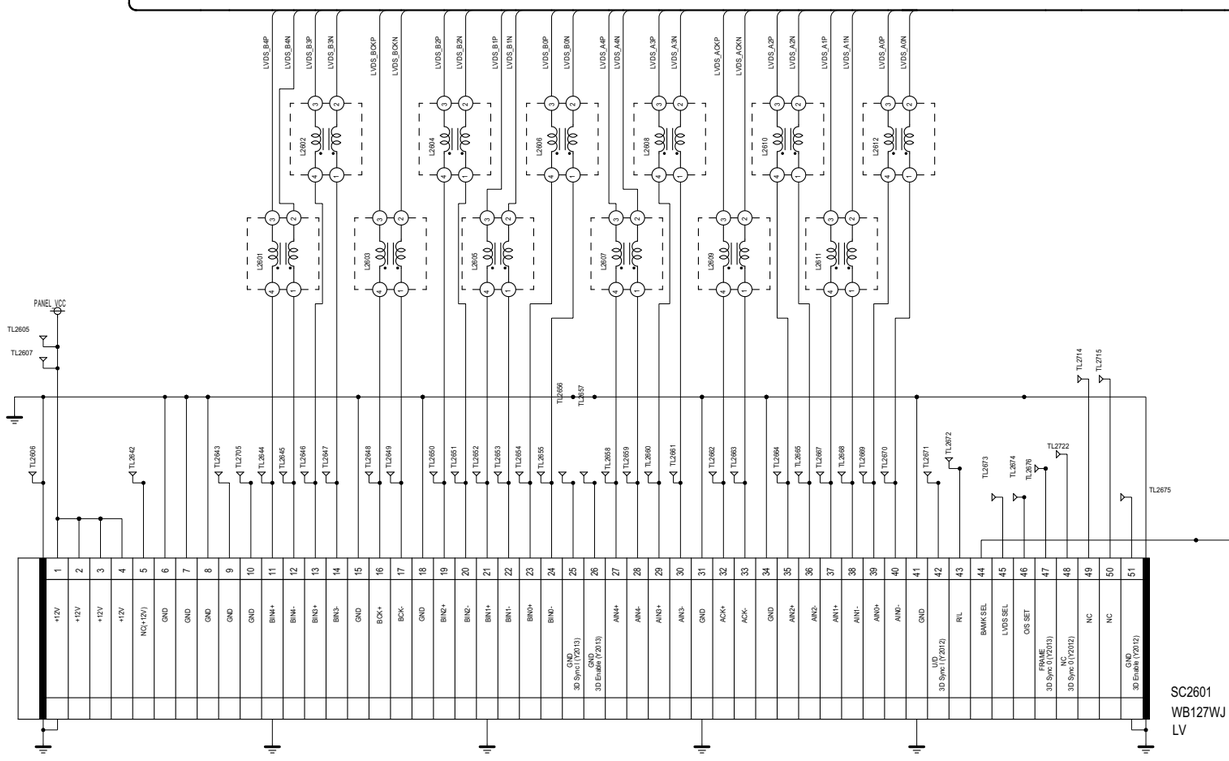
39” / 50” Main Unit Diagram 10/15 (PANEL INTERFACE) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09

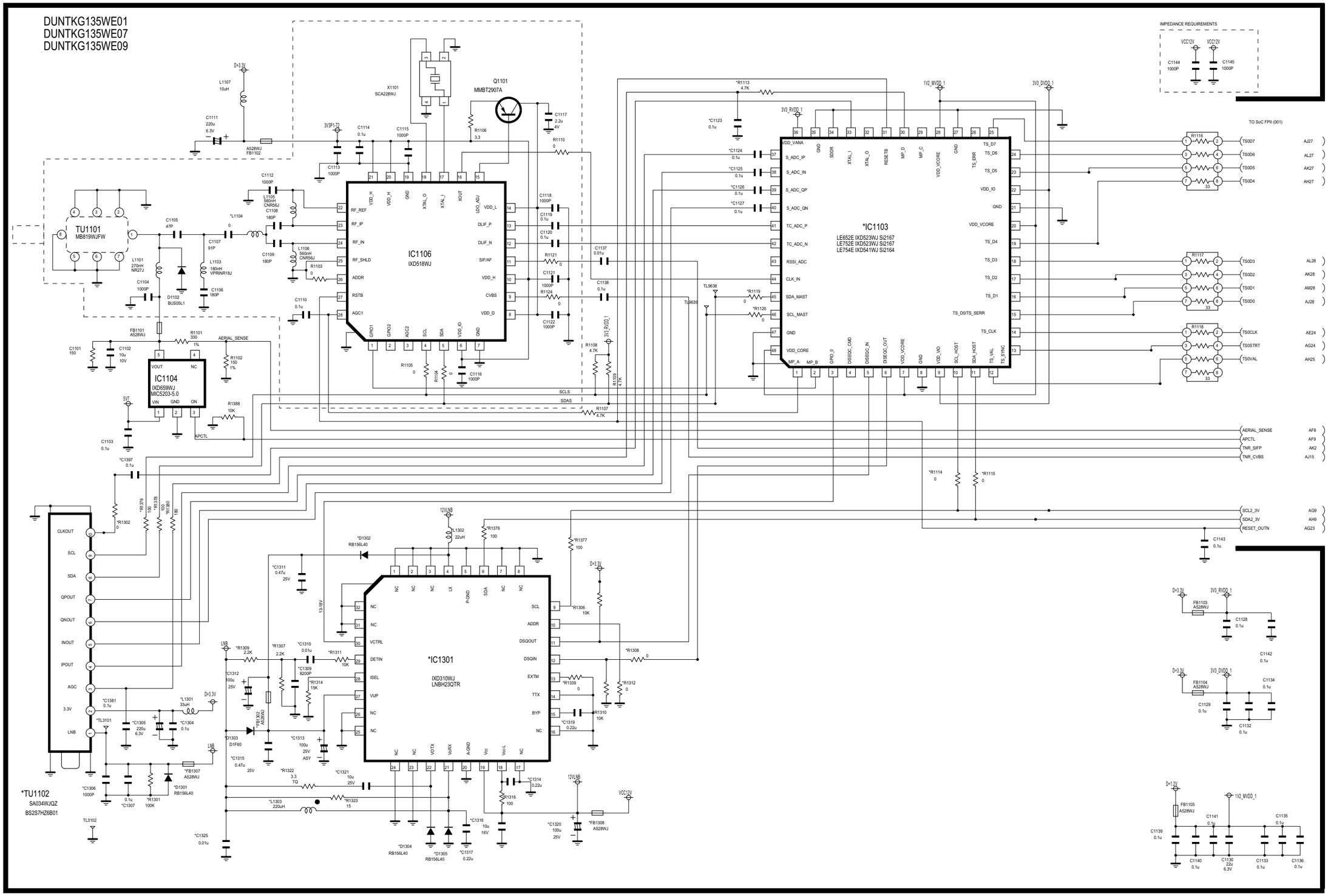
*SC2603
WB128WJ
LW





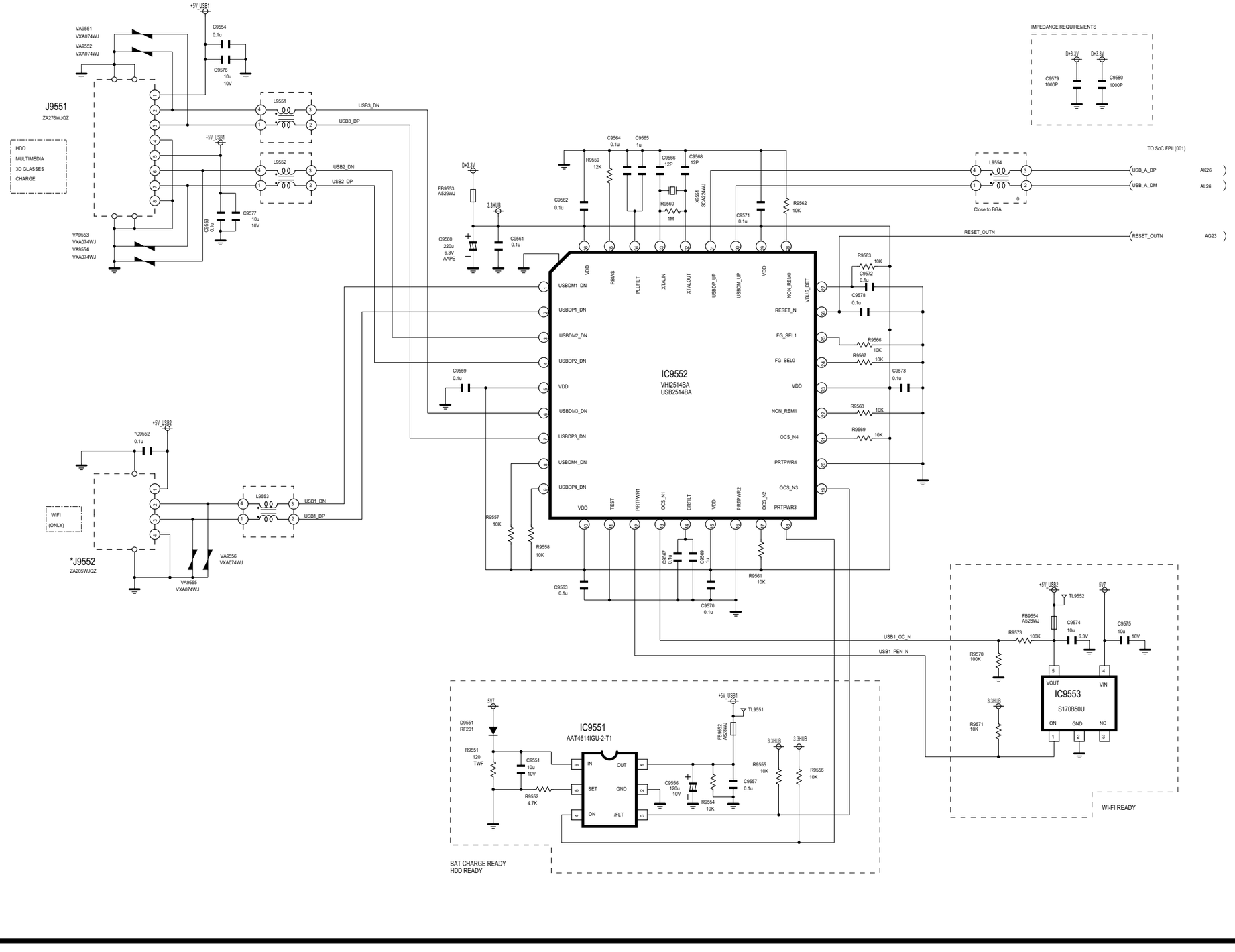


39” / 50” Main Unit Diagram 11/15 (COFDM) (LE652 Series)



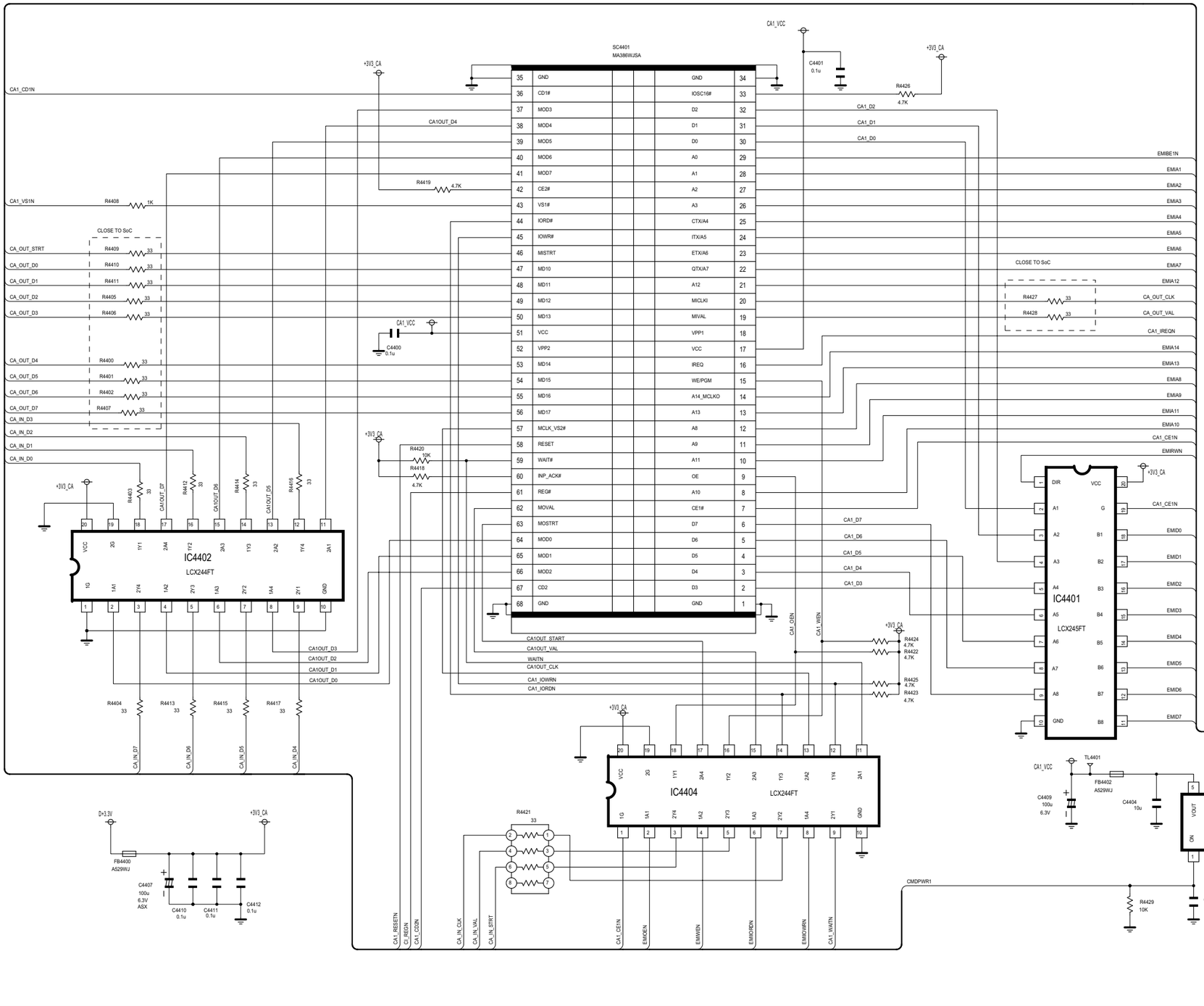
39” / 50” Main Unit Diagram 12/15 (USB) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09



39” / 50” Main Unit Diagram 13/15 (PCMCIA) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07 DUNTKG135WE09

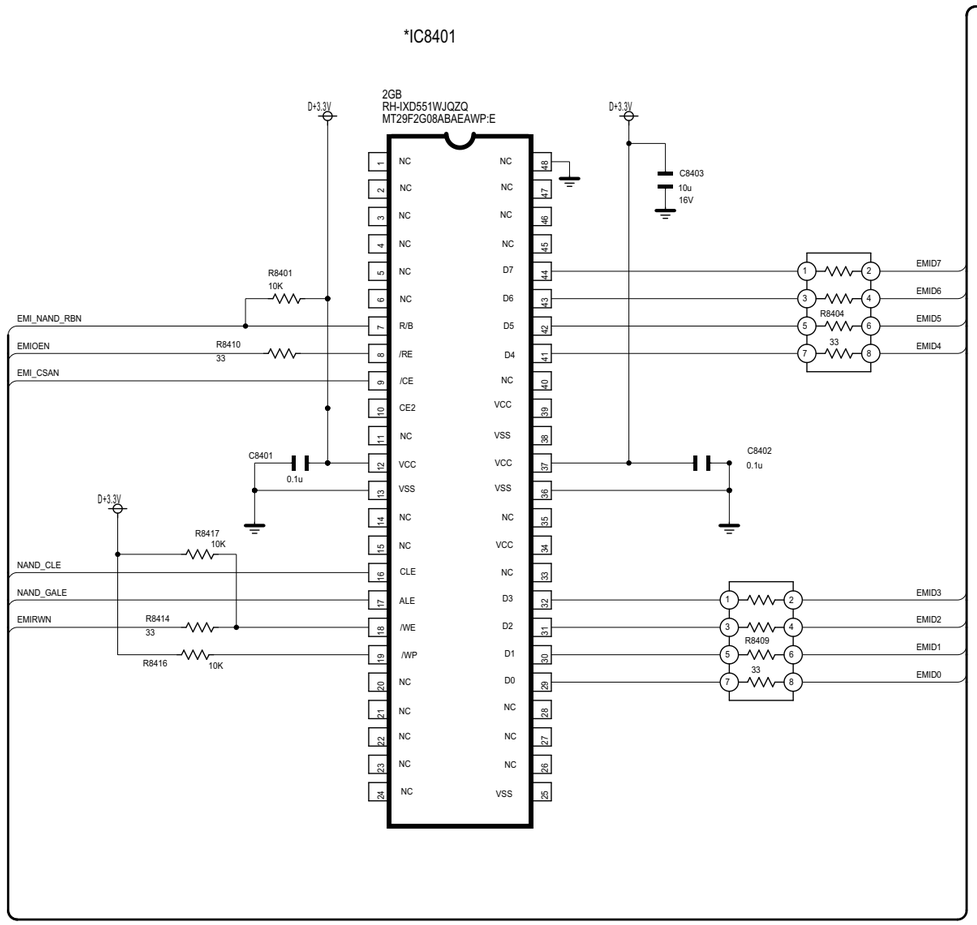


39” / 50” Main Unit Diagram 14/15 (NAND FLASH) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09

*IC8401

2GB
RH-IXD551WJQZQ
MT29F2G08ABAEAWP:E

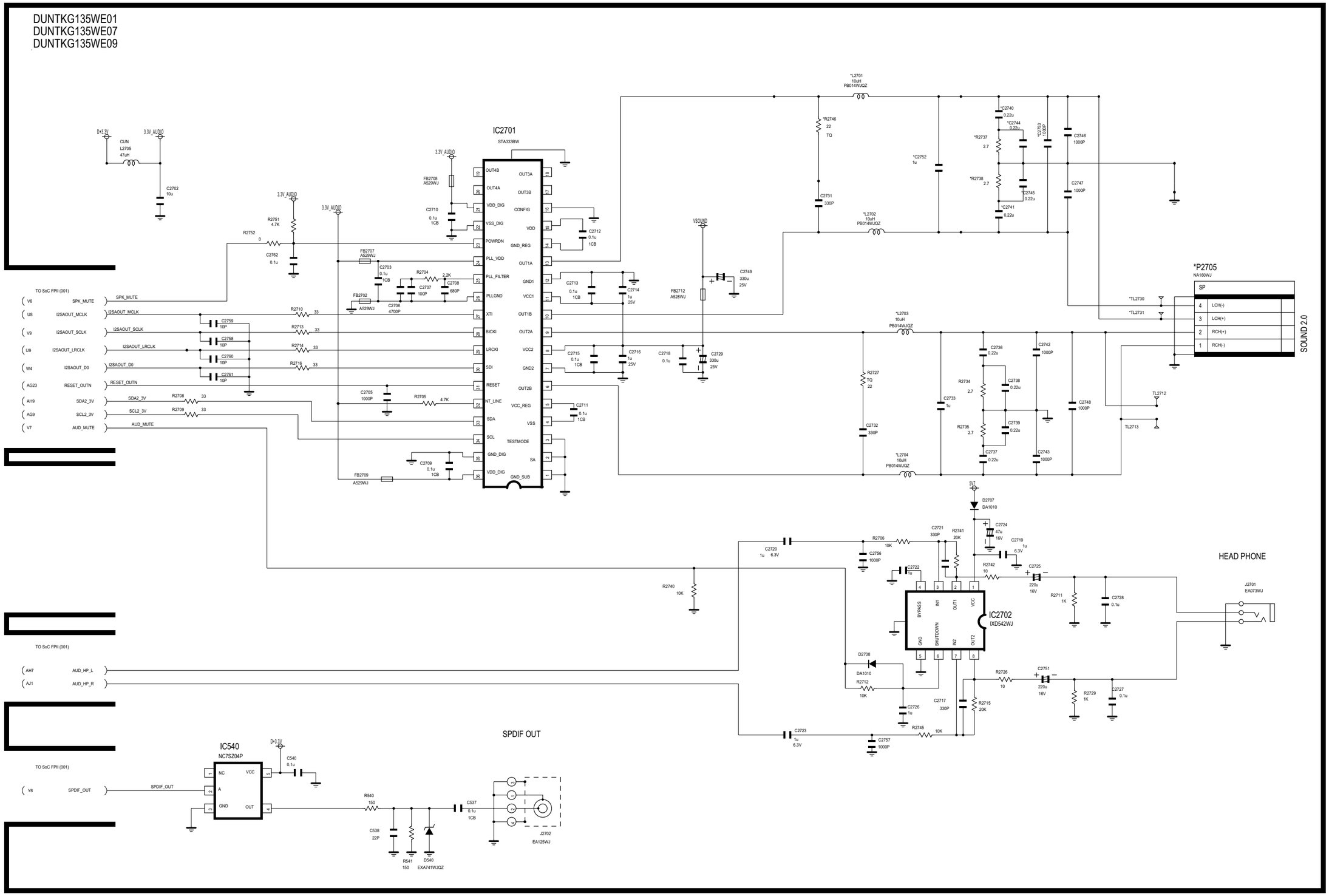


TO SoC FPII (001)

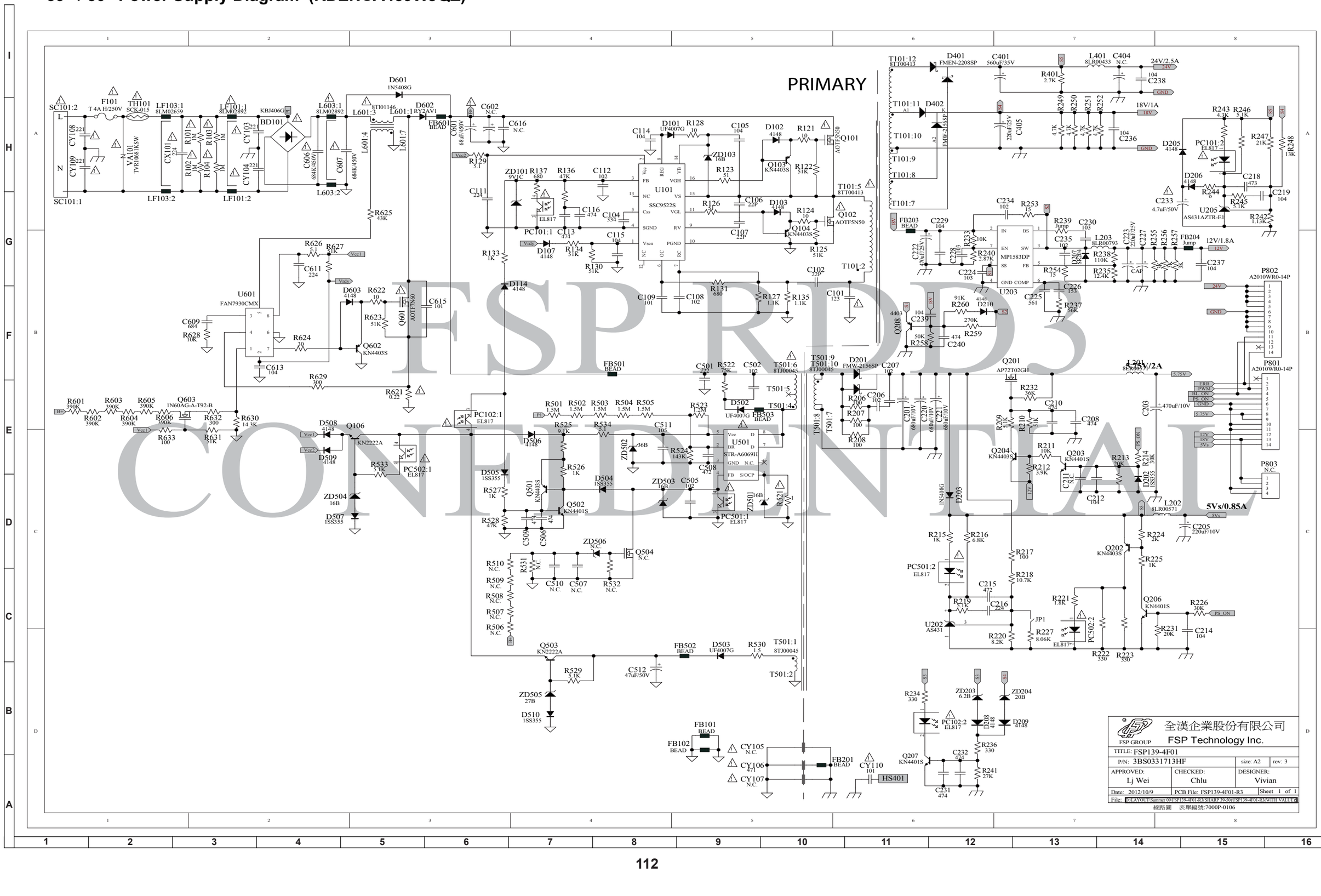
EMID0	EMID0	V34	
EMID1	EMID1	U34	
EMID2	EMID2	V32	
EMID3	EMID3	W30	
EMID4	EMID4	AA30	
EMID5	EMID5	V30	
EMID6	EMID6	W31	
EMID7	EMID7	W29	
EMI_NAND_RBN	EMI_NAND_RBN	AB26	
EMIOEN	EMIOEN	AA31	
EMIRWN	EMIRWN	AA29	
EMI_CSAN	R8411 33	EMI-CSAN	AD33
NAND_CLE	R8412 33	NAND-CLE	AB31
NAND_GALE	R8413 33	NAND_ALE	AC34

39” / 50” Main Unit Diagram 15/15 (NAND FLASH) (LE652 Series)

DUNTKG135WE01
DUNTKG135WE07
DUNTKG135WE09

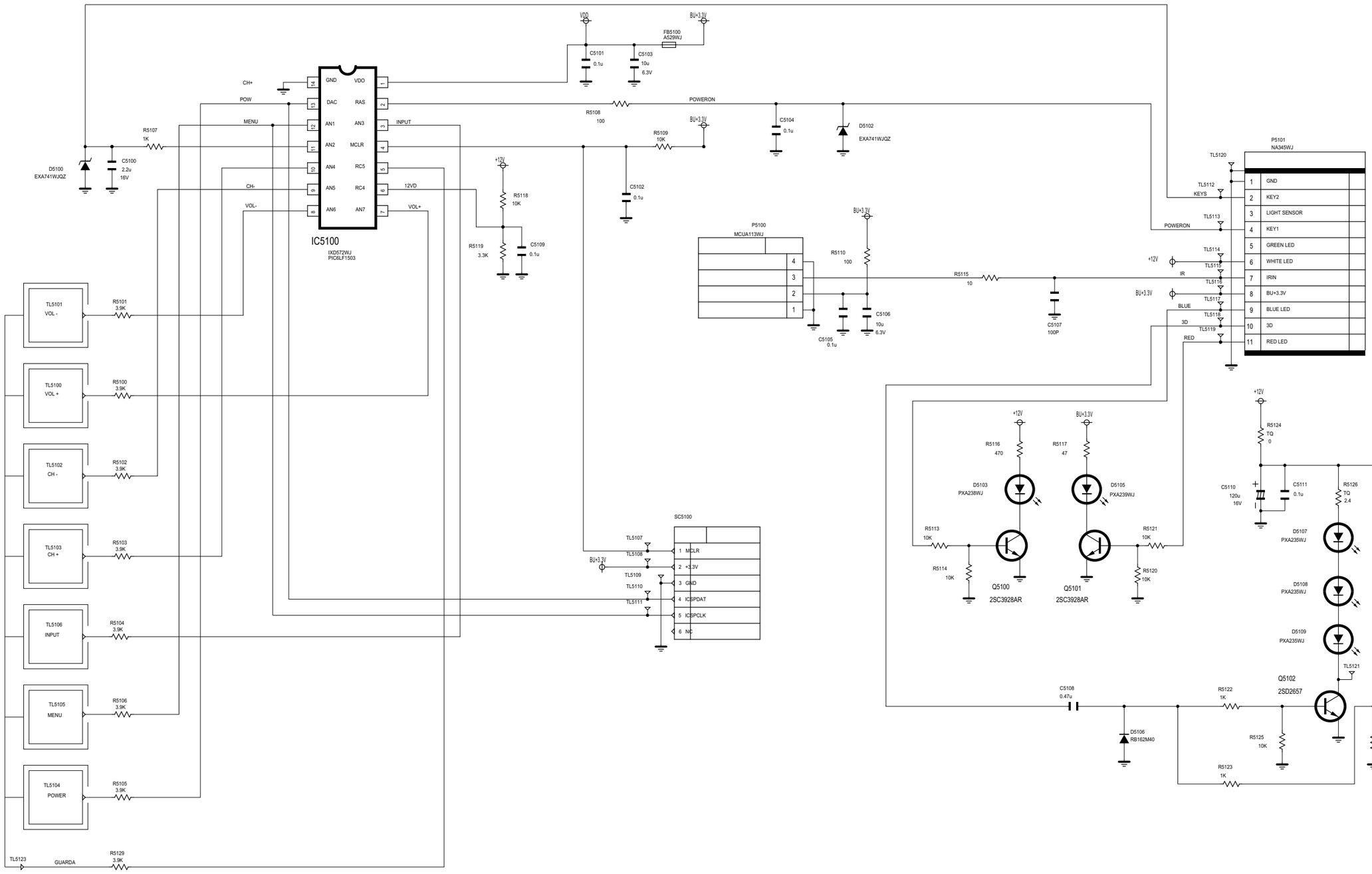


39” / 50” Power Supply Diagram (RDENCA459WJQZ)



39” / 50” Key Unit Diagram (DUNTKG221WE01)

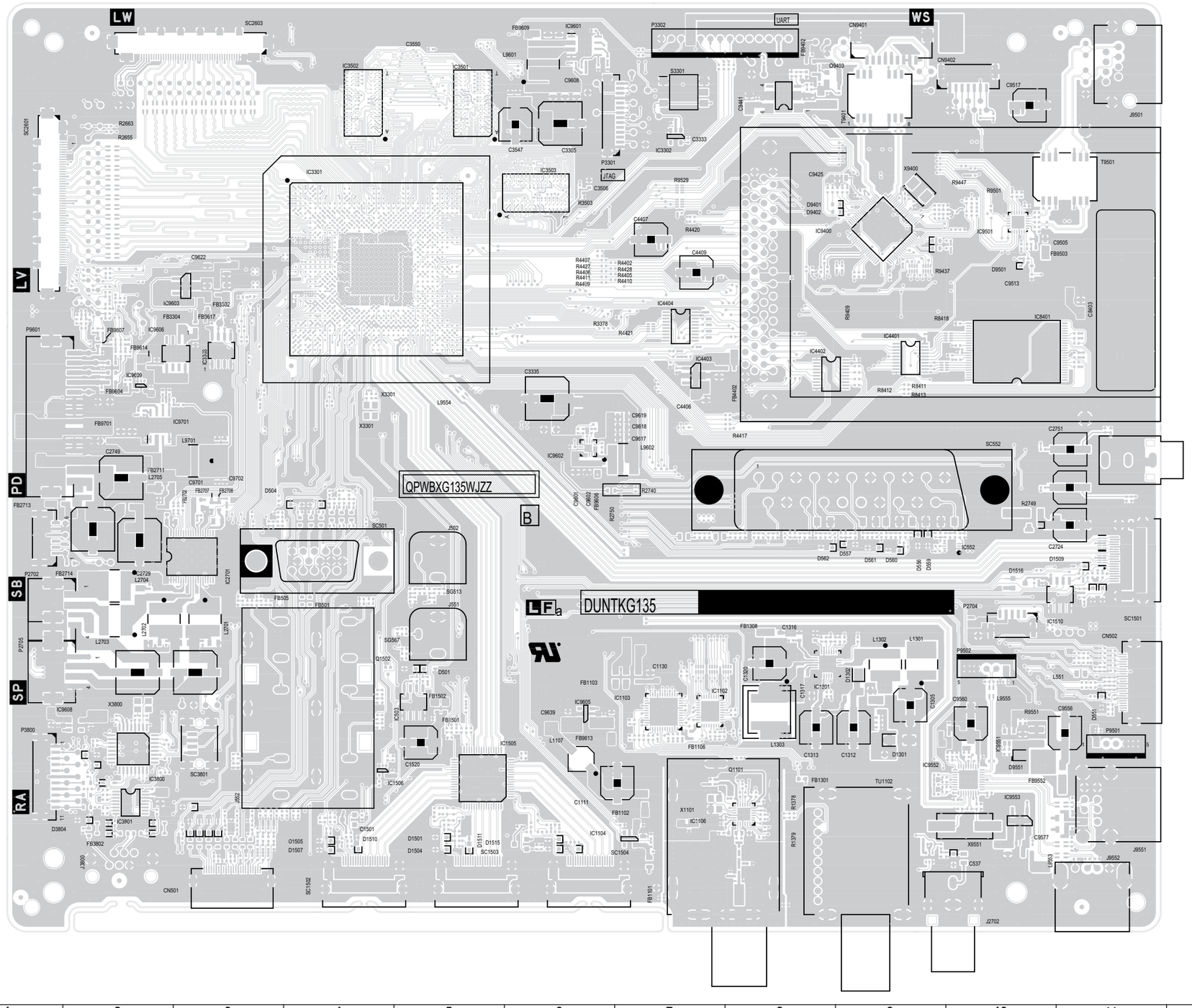
DUNTKG221WE01



PRINTED WIRING BOARD

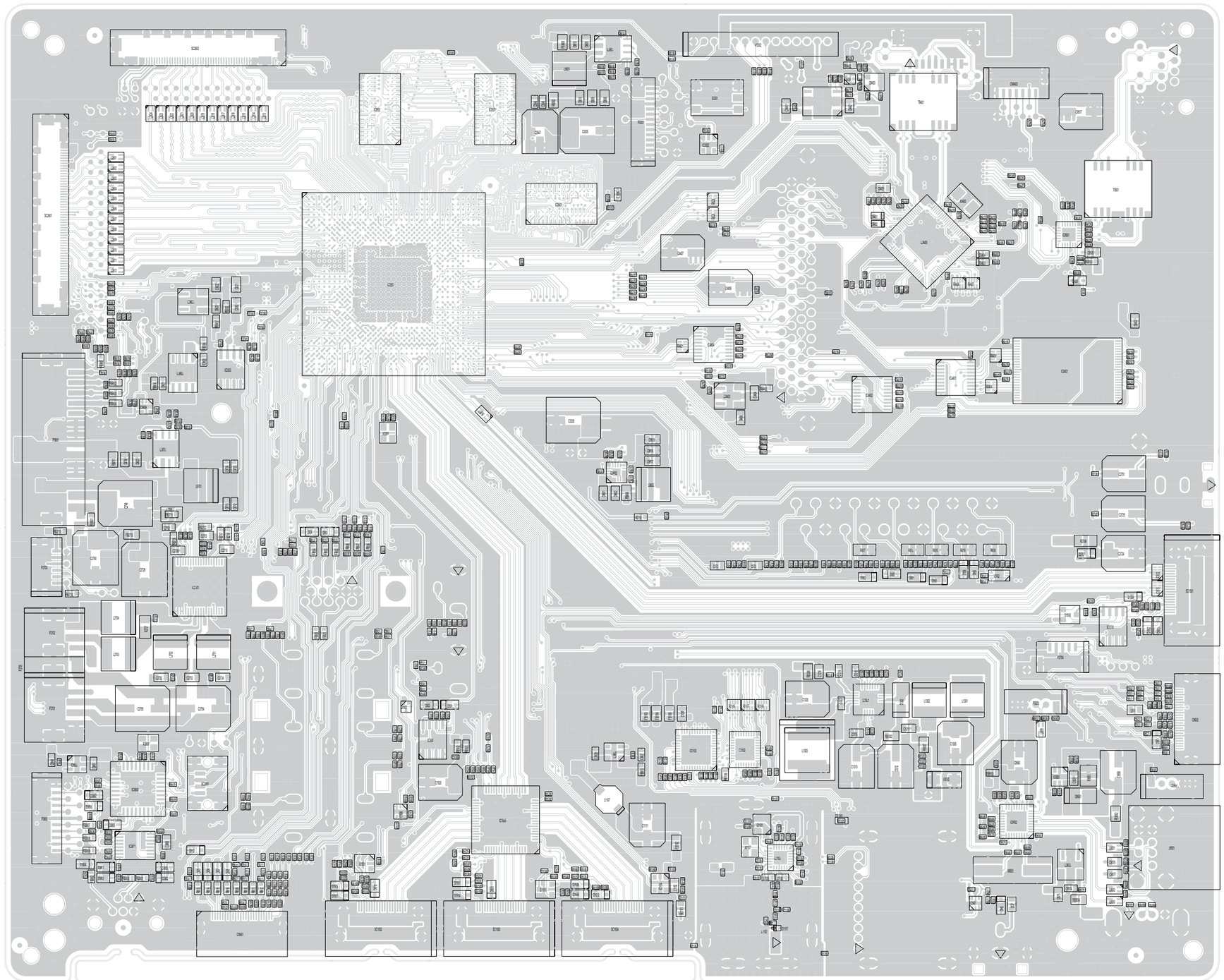
Main Unit PWB 1/4 (QPWBXG135WJZZ B)

Side A



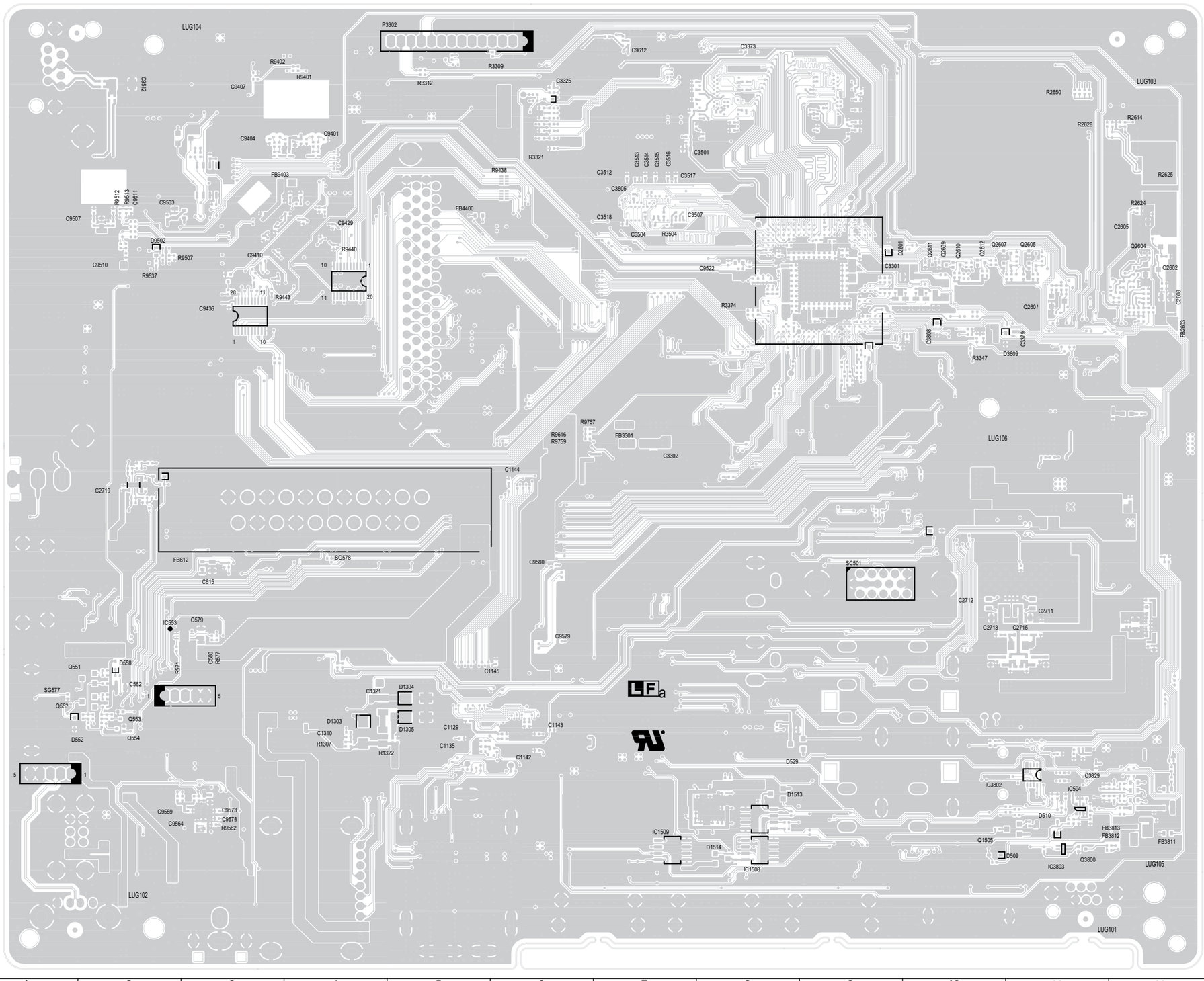
Main Unit PWB 2/4 (QPWBXG135WJZZ B)

Side A Chip Parts



Main Unit PWB 3/4 (QPWBXG135WJZZ B)

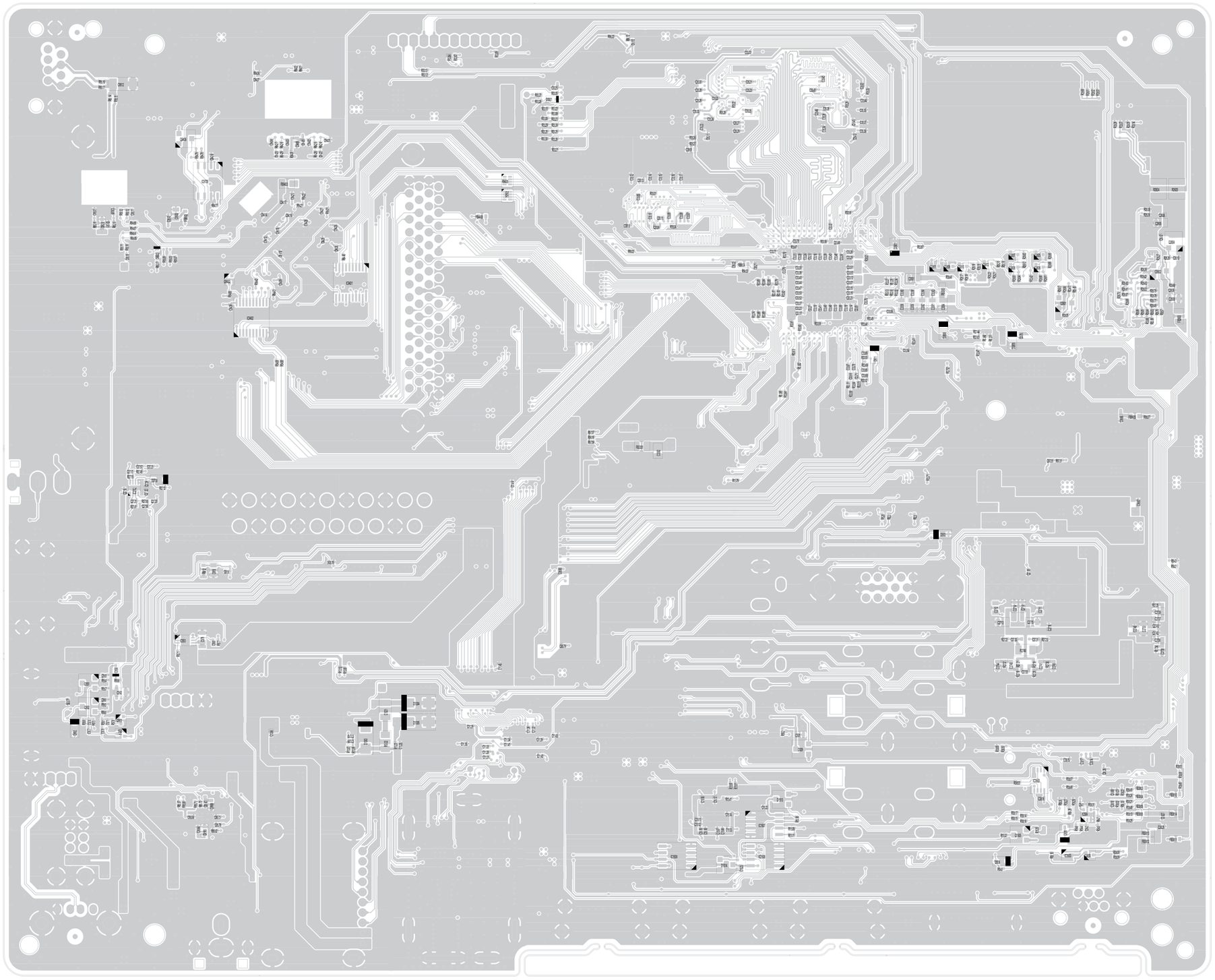
Side B



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

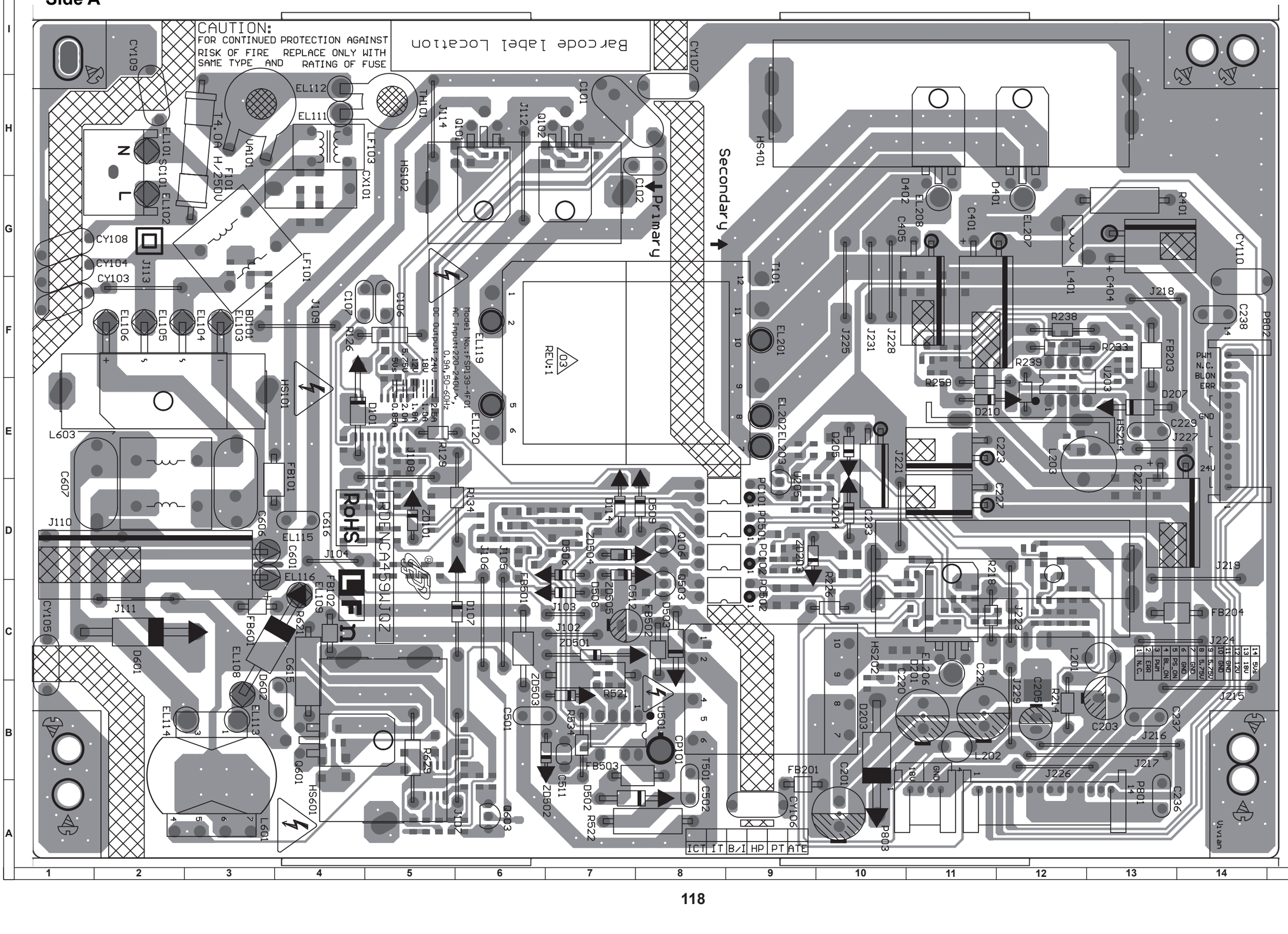
Main Unit PWB 4/4 (QPWBXG135WJZZ B)

Side B Chip Parts



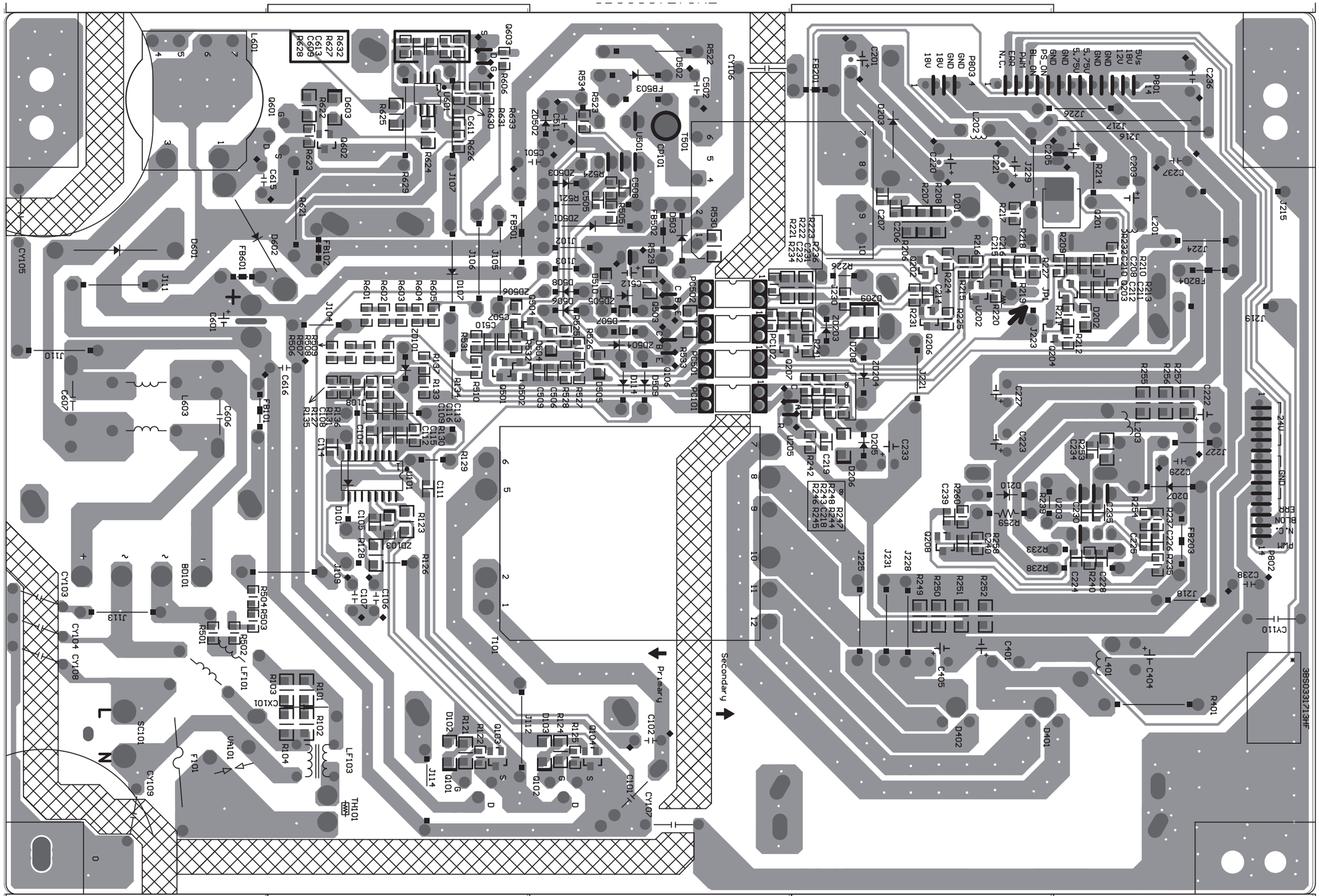
39” / 50” Power Unit PWB 1/2 (RDENCA459WJQZ)

Side A



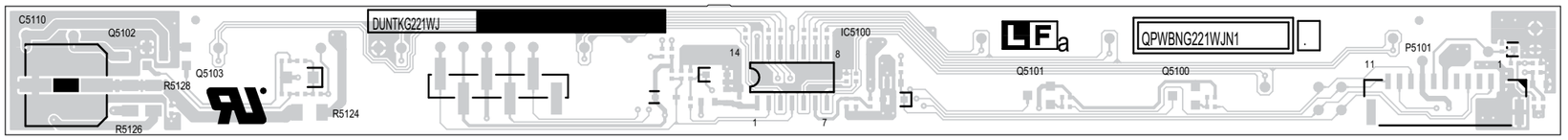
39” / 50” Power Unit PWB 2/2 (RDENCA459WJQZ)

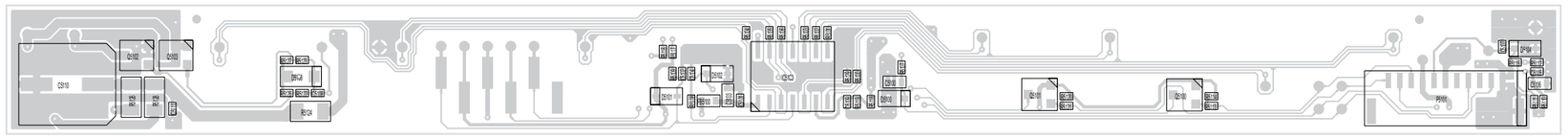
Side B



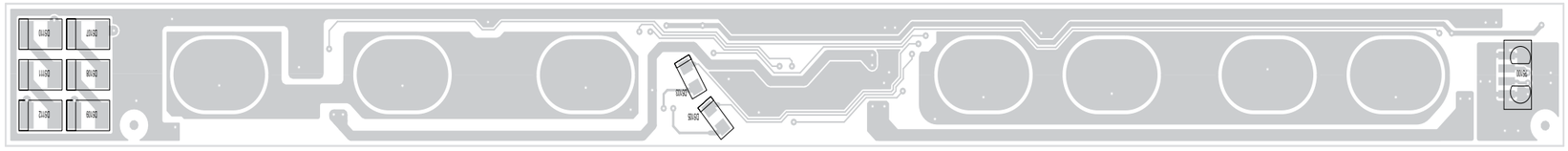
Key Unit PWB (QPWBNG221WJN1)

Side A





Side B



LC-39/50LE650E
LC-39/50LE651K
LC-39/50LE652E
PARTS LISTING

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual.
Electrical components having such features are identified by ⚠ in the Replacement Parts Listing.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.
1. MODEL NUMBER 2. REF. NO. 3. PART NO.
4. DESCRIPTION 5. CODE 6. QUANTITY

MARK * : SPARE PARTS DELIVERY SECTION (G: EPC SHARP GmbH)

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
			LCD PANEL		
			NOTE : THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY		
		RLCDTA283WJZZ	LCD 39" 100Hz FHD V390HK1-LE6 CMI	P	--
		RLCDTA282WJZZ	MODULE LCD 50" 100Hz FHD V500HK1-LE6 CMI	P	--
			PRINTED WIRING BOARDS		
		DUNTKG135FM04	MAIN PWB / ADJUST MAIN UNIT LE750/LE650	P	--
		DUNTKG135FM07	MAIN PWB / ADJUST MAIN UNIT LE752 /LE652	P	--
		DUNTKG135FM08	MAIN PWB / ADJUST MAIN UNIT LE751/LE651	P	--
		DUNTKG221WE01	TOUCH KEY +R/C+3D IR PWB/KEY UNIT	P	--
⚠		RDENCA459WJQZ	POWER UNIT W/O LED DRIVER 39"/50" CMI	P	--
		RKEYEA006WJZZ	CI+ KEY SERIES LE65x / LE75x ST MICRO	P	--
			DUNTKG135WE04 / 08		
			LE650 / LE651 MAIN Unit		
			INTEGRATED CIRCUITS		
	IC 0503	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 0540	VHINC7SZ04P-1Y	IC INVERTER GATE NC7SZ04P5X (FAIRCHILD)		
	IC 0552	RH-IXD540WJZZY	IC VIDEO AMPLIFIER +6dB BH76206HFV(ROHM)		
LE650	IC 1102	RH-IXD519WJZZY	IC Si2165-D-GMR SiLABS, DVB-T/C DEMOD		
LE651	IC 1103	RH-IXD525WJZZQ	IC Si2168-A30-GM SiLABS, DVB-T/C/T2 DEMO		
	IC 1104	VHIS132B50M-1Y	IC S-1132B50-M5T1G LDO 5V (SEIKO)		
	IC 1106	RH-IXD518WJZZY	IC Si2178-A20-GMR SiLABS, SILICON TUNER		
	IC 1505	VHIBU16028V-1Q	IC 3TO1 HDMI SWITCH BU16028KV-ZAE (ROHM)		
	IC 1506	VHITC7SH08U-1Y	IC 2-INPUT AND GATE TC7SH08-FU (TOSHIBA)		
	IC 1507	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1508	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1509	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1510	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1511	VHIESD7004M-1Y	Suppresor HDMI Array, ESD7004MUTAG (ON S		
	IC 1512	VHIESD7004M-1Y	Suppresor HDMI Array, ESD7004MUTAG (ON S		
	IC 2701	VHISTA333BW-1L	IC 40W AUDO AMPL. 2.1 STA333BM(ST MICRO)		
	IC 2702	RH-IXD542WJZZY	IC TS488IQT POPFree HeadPhones Ampl (ST		
	IC 3301	RH-IXD514WJZZQ	IC FLI7560-AAB CUT1.1 STMICRO FREEMAN PR		
	IC 3302	VHIS80927NM-1Y	CI S-80927CNMC-G8XT2G		
	IC 3303	VHIBR24T64J-1Y	IC NVM 64Kb BR24T64FJ-WE2 (ROHM)		
	IC 3501	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3502	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3503	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3800	RH-IXD550WJZZY	IC CPU STM8S105K4T6CTR (ST MICRO)		
	IC 4401	VHILCX245FT-1Y	CI TC74LCX245FT(EL,K)		
	IC 4402	VHILCX244FT-1Y	CI TC74LCX244FT(EL,K)		
	IC 4403	VHIS170B50U-1Y	CI S-1170B50UC-0UJTFG		
	IC 4404	VHILCX244FT-1Y	CI TC74LCX244FT(EL,K)		
	IC 8401	RH-IXD551WJQZQ	IC NANDFLASH 2Gb MT29F2G08ABAEAWP:E(MICR		
	IC 9501	RH-IXD543WJZZY	IC ETH-PHY RMII, KSZ8081RNDCATR (MICREL)		
	IC 9551	RH-IXD187WJZZY	CI AAT4614IGU-2-T1 ANALOGIC TECH		
	IC 9552	VHI2514BAEZ-1Q	IC USB2514B-AEZG		
	IC 9553	VHIS170B50U-1Y	CI S-1170B50UC-0UJTFG		
	IC 9601	VHIBD9328EF-1Y	IC BD9328EFJ 2A DCDC ROHM		
	IC 9602	RH-IXD534WJZZY	IC BD95841MUV-E2 (Rohm)		
	IC 9603	VHIS170B25U-1Y	IC S-1170B25UC LDO 2.5V (SEIKO)		
	IC 9605	VHIS132B50M-1Y	IC S-1132B50-M5T1G LDO 5V (SEIKO)		
	IC 9606	RH-IXD533WJZZY	IC BD80GA3WEFJ LDO (Rohm)		
	IC 9608	RH-IXD532WJZZY	IC BU33TD3WG LDO (Rohm)		
	IC 9701	VHIBD9328EF-1Y	IC BD9328EFJ 2A DCDC ROHM		
			TRANSISTORS		
	Q 1101	VSMMBT2907A-1Y	TRT MMBT2907ALT1G		
	Q 1501	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 1502	VSRT1N441U/-1Y	TRT RT1N441U-T111-1		
	Q 1505	VS2N7002KA+-1Y	TRT 2N7002KA-RTK/P (KEC)		
	Q 2602	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 2604	RH-TXA064WJZZY	TRT AO3415 P-Channel Mosfet ALPHA & OMEG		
			DIODES		
	D 0501	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0502	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0503	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0504	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0511	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0529	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 0540	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0556	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0559	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0560	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0561	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0562	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1102	VHEVBUS05L1-1Y	ESD DIODE VBUS05L1-DD1-G-08 VISHAY		
	D 1501	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1502	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1503	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1504	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1505	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1506	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1507	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1508	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1509	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1511	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1513	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1514	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1515	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1516	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 2707	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 2708	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 3301	VHDRB520S30-1Y	DIODO RB520S-30		
	D 3805	VHDHSU119//-1Y	DIODO HSU119TRF		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	D 3806	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 3807	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 3808	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 3809	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 9551	RH-DXA159WJZZY	DIODE RF201L2STE25 ROHM		
			PACKAGES CIRCUITS		
	SG 0501	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0502	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0503	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0513	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0514	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0551	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0552	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0553	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0554	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0555	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0556	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0557	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0558	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0559	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0560	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0561	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0562	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0563	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0564	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0565	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0567	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0568	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0578	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	VA 1501	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1502	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1503	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1504	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1505	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1506	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1507	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1508	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9551	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9552	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9553	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9554	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9555	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9556	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	X 1101	RCRSCA228WJQZY	CRYSTAL DSX321G-24MHz		
	X 3301	RCRSCA238WJQZY	Crystal NX3225GA-30MHz (NDK)		
	X 3800	RCRSCA244WJQZY	CRYSTAL NX3225GA-16MHz (NDK)		
	X 9551	RCRSCA224WJZZY	CRYSTAL AT-41CD2-24.000MHz_20_N_NDK		
			COILS AND FILTERS		
	FB 0501	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0502	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0503	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0504	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0505	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0506	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0507	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0508	RBLN-A529WJZZY	FERRITE MI0603M121R-10		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	FB 0612	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 1101	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1102	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1103	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1104	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1105	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1106	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 1501	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2603	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 2702	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2707	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2708	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2709	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2712	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3301	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3302	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3303	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3304	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3502	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3803	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3804	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3807	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3808	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3809	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3811	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3813	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3814	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 4400	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 4402	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9502	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9503	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9504	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9552	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9553	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9554	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9601	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9603	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9604	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9605	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9606	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9609	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9613	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9614	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9617	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9701	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	L 1101	VPRINR27J0000L	COIL LQG15HSR27J02D MURATA		
	L 1103	VPRINR18J0000L	COIL LQG15HSR18J02D MURATA		
	L 1104	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	L 1105	VPRCNR56J0000L	COIL MLG1608SR56J - TDK		
	L 1106	VPRCNR56J0000L	COIL MLG1608SR56J - TDK		
	L 1107	RCILPA049WJZZY	COIL CDRH4D18CLD-100NC SUMIDA		
	L 2601	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2602	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2603	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2604	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2605	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2606	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2607	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	L 2608	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2609	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2610	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2611	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2612	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2613	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2614	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2615	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2616	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2617	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2618	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2619	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2620	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2621	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2622	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2623	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2624	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2701	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2702	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2703	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2704	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2705	VPCUN470K2R0NY	INDUCTOR 47uH 0.15A (TDK NLCV32T-470-PF)		
	L 9551	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9552	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9553	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9554	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9601	RCILPB014WJQZY	COIL SWPA6045S100		
	L 9602	RCILPB011WJQZY	COIL SWPA6045S2R7		
	L 9701	RCILPB014WJQZY	COIL SWPA6045S100		
			CAPACITORS		
	C 0501	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 0502	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0503	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0504	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0505	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0506	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0508	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0510	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0512	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0514	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0516	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0517	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0537	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 0538	VCCCCZ1HH220JY	CERAM C 0402 22PF 50V 5%		
	C 0540	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0559	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0560	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0569	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0572	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0573	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0574	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0575	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0576	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0581	VCKYCZ1HB471KY	C CERAM 0402 470PF 50V 10%		
	C 0582	VCKYCZ1HB471KY	C CERAM 0402 470PF 50V 10%		
	C 0585	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 0586	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0587	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0588	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0589	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0590	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0591	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0592	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0593	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0594	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0595	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0596	VCCCCZ1HH680JY	C CERAM 0402 68PF 50V 5%		
	C 0597	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0598	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0599	VCCCCZ1HH680JY	C CERAM 0402 68PF 50V 5%		
	C 0600	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0601	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0603	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0604	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0605	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0606	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0607	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0608	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0609	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0610	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0611	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0614	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0615	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0616	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1101	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1102	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 1103	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1104	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1105	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 1106	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1107	VCCCCZ1HH910JY	C CERAM 0402 91PF 50V 5%		
	C 1108	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1109	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1110	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1111	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 1112	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1113	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1114	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1115	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1116	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1117	VCKYCZ0GB225MY	C CERAM 0402 2,2UF 4V 10%		
	C 1118	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1119	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1120	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1121	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1122	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1128	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1129	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1130	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 1131	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1132	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1133	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1134	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1135	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 1136	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1137	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 1138	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1139	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1140	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1141	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1142	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1143	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1144	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1145	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1501	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1503	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1505	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 1506	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1507	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1509	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1511	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1512	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1514	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1517	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1518	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1519	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1520	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 1521	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1522	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1523	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1524	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1525	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2605	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 2606	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2607	VCKYCZ1HB472KY	C CERAM 0402 4,7NF 50V 10%		
	C 2608	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 2609	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2610	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2702	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 2703	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2705	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2706	VCKYCZ1HB472KY	C CERAM 0402 4,7NF 50V 10%		
	C 2707	VCCCCZ1HH101JY	C CERAM 0402 100PF 50V 5%		
	C 2708	VCCCCZ1HH681JY	C CERAM 0402 680PF 50V 5%		
	C 2709	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2710	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2711	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2712	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2713	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2714	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 2715	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2716	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 2717	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2718	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2719	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2720	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2721	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2722	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 2723	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2724	VCEASX1CN476MY	C ELEC 47UF 16V MVL16VC47MF60E1		
	C 2725	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 2726	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2727	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2728	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2729	VCEASY1EN337MY	C ELEC 330UF 20% 25V MLA25VC330MH10		
	C 2731	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2732	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2733	VCKYTV1EB105KY	C CERAM 1uF 25V 2012SMD		
	C 2736	VCKYCY1EB224KY	C CERAM		
	C 2737	VCKYCY1EB224KY	C CERAM		
	C 2738	VCKYCY1EB224KY	C CERAM		
	C 2739	VCKYCY1EB224KY	C CERAM		
	C 2740	VCKYCY1EB224KY	C CERAM		
	C 2741	VCKYCY1EB224KY	C CERAM		
	C 2742	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2743	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2744	VCKYCY1EB224KY	C CERAM		
	C 2745	VCKYCY1EB224KY	C CERAM		
	C 2746	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2747	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2748	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2749	VCEASY1EN337MY	C ELEC 330UF 20% 25V MLA25VC330MH10		
	C 2751	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 2752	VCKYTV1EB105KY	C CERAM 1uF 25V 2012SMD		
	C 2753	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2756	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2757	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2758	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2759	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2760	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2761	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2762	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3301	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3302	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3303	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3304	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3305	VCEASY0JN477MY	C ELEC 470UF 6,3V MLA6,3VC470MF80		
	C 3306	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3307	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3308	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3309	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3310	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3311	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3312	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3313	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3314	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3315	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3316	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3317	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3318	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3319	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3320	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3321	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3322	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3323	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3324	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 3325	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3326	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3327	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3328	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3329	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3330	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3331	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3332	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 3333	VCKYCZ1CB223KY	C CERAM 0402 22NF 16V 10%		
	C 3334	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3335	VCAAPE0EJ687MY	C ELEC680UF 2.5V PCJ0E681MCLASHGS		
	C 3336	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3337	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3338	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3339	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3340	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3341	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3342	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3343	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3344	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3345	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3346	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3347	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3348	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3349	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3350	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3351	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3352	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3353	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3354	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 3355	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3358	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3359	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3360	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3361	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3362	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3363	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3364	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3365	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3366	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3367	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3368	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3369	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3370	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3371	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3372	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3373	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3374	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3375	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3376	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3377	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3378	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3379	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3501	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3503	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3505	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 3506	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3507	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3509	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3510	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3511	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3512	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3514	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3515	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3516	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3517	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3518	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3521	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3522	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3523	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3524	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3525	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3526	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3527	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3528	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3529	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3530	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3531	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3533	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3534	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3535	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3536	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3537	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3538	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3539	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3540	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3541	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3542	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3543	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3544	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3546	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3547	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 3548	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3549	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3550	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 3809	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3810	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3811	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3812	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3814	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3815	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3817	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3827	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3828	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3829	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4400	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4401	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4404	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 4405	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4406	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 4407	VCEASX0JN107MY	C ELEC 100UF 6,3V MVL6,3VC100MF60E1		
	C 4409	VCEASX0JN107MY	C ELEC 100UF 6,3V MVL6,3VC100MF60E1		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 4410	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4411	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4412	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8401	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8402	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8403	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9503	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9505	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9506	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9507	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9509	VCKYCZ0GB225MY	C CERAM 0402 2,2UF 4V 10%		
	C 9512	RC-KZA523WJQZY	C CERAM 1000PF 2000V GR442QR73D102KW01L		
	C 9513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9521	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9551	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9552	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9553	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9554	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9556	VCAAPE1AJ127MY	C ELEC 120UF 20% 10V LOW ESR		
	C 9557	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9559	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9560	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 9561	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9562	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9563	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9564	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9565	VCKYCY0JB105KY	CONDENSADOR GRM39B 105K 6.3 (1608)SMD		
	C 9566	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9567	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9568	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9569	VCKYCY0JB105KY	CONDENSADOR GRM39B 105K 6.3 (1608)SMD		
	C 9570	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9571	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9572	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9573	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9574	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9575	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9576	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9577	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9578	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9579	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9580	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9601	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9602	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9603	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9604	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9605	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9608	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9609	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9610	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9611	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9612	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9613	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9614	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9615	VCKYCZ1CB103KY	C CERAM 0402 10NF 16V 10%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 9617	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9618	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9619	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9620	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9621	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9622	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9623	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9625	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9636	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9637	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9639	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9648	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9649	RC-KZA116WJZZY	C CERAM 4,7UF 6,3V GRM188B30J475KE18D		
	C 9651	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9701	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9702	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9703	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9704	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9705	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9706	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9707	VCKYCZ1HB332KY	C CERAM 0402 3,3NF 50V 10%		
	C 9708	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9709	VCCCCZ1HH220JY	CERAM C 0402 22PF 50V 5%		
			TRANSFORMER		
	T 9501	RTRNZA143WJQZY	LAN TRANSF. MP11201C (MICROTEX)		
			RESISTORS		
	R 0502	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0503	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0504	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0505	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0506	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0508	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 0509	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 0510	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0511	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0512	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0514	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0515	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0516	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0518	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0519	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0520	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0522	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0523	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0525	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0526	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0540	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD		
	R 0541	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD		
	R 0548	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 0551	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 0552	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 0572	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD		
	R 0573	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD		
	R 0574	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0575	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0578	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 0579	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0580	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0582	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0584	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0585	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0586	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0589	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0590	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0591	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0592	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0593	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0594	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0595	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0596	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0597	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0599	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0600	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0601	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0602	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0603	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0604	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0605	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0606	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0607	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 0608	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0609	VRS-CZ1JF202JY	RES 0402 2KOHM 5% 1/16W SMD		
	R 0610	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0611	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0613	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0614	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 1101	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1102	VRS-CZ1JF332JY	RES 0402 3,3KOHM 5% 1/16W SMD		
	R 1103	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1104	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1105	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1106	VRS-CZ1JF3R3JY	RES 0402 3,3 OHM 5% 1/16W SMD		
	R 1107	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1108	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1109	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1110	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE651	R 1114	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE651	R 1115	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1116	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 1117	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 1118	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
LE651	R 1119	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE651	R 1120	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1121	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1124	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE650	R 1383	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE650	R 1384	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE650	R 1385	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
LE650	R 1386	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1388	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1501	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1502	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1503	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1504	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 1505	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1506	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1507	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1508	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1509	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1510	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1511	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1512	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1513	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1514	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 1515	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1516	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 1517	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 1528	VRSCZ1JB4641FT	RES 0402 4K64 OHM 1% 1/16W SMD		
	R 1532	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 1535	VRS-CZ1JF273JY	RES 0402 27KOHM 5% 1/16W SMD		
	R 1538	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1539	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1540	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1545	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1546	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1547	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1548	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1549	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1550	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1551	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1552	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1554	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1555	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1556	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1557	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1558	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1559	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1563	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1566	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1567	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1568	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1569	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1570	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1571	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1572	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1573	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1574	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1575	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1576	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1577	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1578	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1579	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 2625	VRS-TQ2BD000JY	RES OX 0 OHM 5% 1/8W SMD		
	R 2626	VRS-CZ1JF474JY	RES 0402 470KOHM 5% 1/16W SMD		
	R 2627	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2636	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2649	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2704	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 2705	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 2706	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2708	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2709	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 2710	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2711	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 2712	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2713	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2714	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2715	VRS-CZ1JF203JY	RES 0402 20KOHM 5% 1/16W SMD		
	R 2716	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2726	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 2727	VRS-TQ2EF220JY	RES OX 22 OHM 5% 1/4W SMD		
	R 2729	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 2734	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2735	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2737	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2738	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2740	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2741	VRS-CZ1JF203JY	RES 0402 20KOHM 5% 1/16W SMD		
	R 2742	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 2745	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2746	VRS-TQ2EF220JY	RES OX 22 OHM 5% 1/4W SMD		
	R 2751	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 2752	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3304	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3307	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3308	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3309	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3310	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3314	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3315	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3316	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3319	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3320	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3321	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3322	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3323	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3324	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3325	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3326	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3328	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3329	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3330	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3331	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3333	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3335	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3337	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3347	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3348	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3349	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3350	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3351	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3352	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3353	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3354	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3355	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3356	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3357	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3358	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3359	VRSCZ1JB2490FT	RES 0402 249 OHM 1% 1/16W SMD		
	R 3360	VRS-CZ1JF152FY	RES 0402 1,5KOHM 1% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 3361	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3362	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3363	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3364	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3365	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3366	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3367	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3368	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3369	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3370	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3373	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3374	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3375	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3376	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3377	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3378	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3379	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3380	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3381	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3382	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3383	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3384	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3385	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3386	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3501	VRS-CZ1JF111FY	RES 0402 110 OHM 1% 1/16W SMD		
	R 3502	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3503	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3504	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3526	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3527	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3528	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3529	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3532	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3533	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3800	VRS-CZ1JF122JY	RES 0402 1,2KOHM 5% 1/16W SMD		
	R 3803	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3807	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3812	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3814	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3815	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3816	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3817	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3821	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 3822	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3824	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3826	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3827	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3828	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3829	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3830	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3831	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3832	VRSCZ1JB3012FT	RES 0402 30K1 OHM 1% 1/16W SMD		
	R 3834	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3835	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3836	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3844	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 3846	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3847	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 3848	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 3849	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3852	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3854	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3856	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 4400	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4401	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4402	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4403	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4404	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4405	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4406	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4407	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4408	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 4409	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4410	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4411	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4412	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4413	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4414	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4415	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4416	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4417	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4418	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4419	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4420	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 4421	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 4422	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4423	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4424	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4425	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4426	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4427	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4428	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4429	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8401	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8404	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 8409	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 8410	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8411	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8412	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8413	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8414	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8416	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8417	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9501	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 9502	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9503	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9504	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9505	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9506	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9507	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9509	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9514	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9515	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9516	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9517	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9518	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9519	VRSCZ1JB6491FT	RES 0402 6,49KOHM 1% 1/16W SMD		
	R 9520	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9521	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9522	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9523	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9529	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 9530	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 9533	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9551	VRS-TW2HF121JY	RES CR1-4 120 OHM 5% 1/2W SMD		
	R 9552	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9554	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9555	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9556	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9557	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9558	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9559	VRS-CZ1JF123FY	RES 0402 12KOHM 1% 1/16W SMD		
	R 9560	VRS-CZ1JF105JY	RES 0402 1MOHM 5% 1/16W SMD		
	R 9561	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9562	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		
	R 9563	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9566	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9567	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9568	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		
	R 9569	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9570	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD		
	R 9571	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9573	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD		
	R 9602	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 9606	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 9607	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 9609	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9611	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9612	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9613	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 9614	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9616	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9617	VRS-CZ1JF202JY	RES 0402 2KOHM 5% 1/16W SMD		
	R 9618	VRS-CZ1JF303FY	RES 0402 30KOHM 1% 1/16W SMD		
	R 9622	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 9642	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 9649	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 9701	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9702	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD		
	R 9703	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9704	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 9705	VRS-CZ1JF752FY	RES 0402 7,5KOHM 1% 1/16W SMD		
	R 9706	VRS-CZ1JF752FY	RES 0402 7,5KOHM 1% 1/16W SMD		
	R 9757	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 9758	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9759	VRS-CZ1JF472FY	RES 0402 4,7 KOHM 1% 1/16 SMD		
	R 9760	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		
			MISCELLANEOUS		
	J 0502	QJAKJA024WJZZ	HEADPHONE CKX-035-347DBZ		
	J 0551	QJAKJA024WJZZ	HEADPHONE CKX-035-347DBZ		
	J 0552	QJAKLA037WJQZ	JACK RCA-639HA-00A-09		
	J 2701	QJAKEA073WJZZ	JACK LGY6502-0800F		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	J 2702	QJAKEA125WJZZ	RCA JACK FEMALE PCB SIDE ENTRY ORANGE(YU		
	J 9501	QJAKZA131WJQZQ	RJ45 JACK SIDE PCB 8P8C MTJ-882BX1-FS-EU		
	J 9551	QSOCZA276WJQZ	SOCKET USB DOUBLE UAR64		
	J 9552	QSOCZA205WJQZ	SOCKET UAR27-4K5C0L		
	P 2705	QPLGNA160WJZZY	CONECTOR SM04B-PASS-TBT(LF)		
	P 3800	QPLGNA331WJZZY	CONNECTOR SM11B-GHS-TB (LF)(SN), (JST)		
	P 9601	QPLGNB224WJZZY	CONNECTOR A2010WR0-14PS-SHP (JWT)		
	SC 0501	QSOCNA816WJZZ	VGA IN 15P. CONN VERTICAL (ACON)		
	SC 0552	QSOCZA161WJZZ	SCART RGB-11H		
	SC 1501	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1502	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1503	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1504	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 2601	QCNCWB127WJZZY	CONE LVDS 51P. I-PEX 20555-051E EVAFLEX5		
	SC 2603	QCNCWB128WJZZY	CONC LVDS 41P. I-PEX 20555-041E EVAFLEX5		
	SC 4401	QCNCMA386WJSA	PCMCIA CONN.LONG TYPE 68P 5V(CONCRAFT-TO		
		PSLDMB855WJFW	MS SHIELD CASE WITH CON. 2.GD30T19X10X14		
		PSLDMB856WJFW	MS SHIELD CASE COVER (2.D30T19X10X14)		
		QPWBXG135WJN1	PWB MAIN UNIT LE65x/LE75x Version N1		
			DUNTKG135WE07 **LE652 MAIN Unit**		
			INTEGRATED CIRCUITS		
	IC 0503	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 0540	VHINC7SZ04P-1Y	IC INVERTER GATE NC7SZ04P5X (FAIRCHILD)		
	IC 0552	RH-IXD540WJZZY	IC VIDEO AMPLIFIER +6dB BH76206HFV(ROHM)		
	IC 1103	RH-IXD523WJZZQ	IC Si2167-B20-GM SiLABS DVB-T/C/S/S2 DEM		
	IC 1104	VHIS132B50M-1Y	IC S-1132B50-M5T1G LDO 5V (SEIKO)		
	IC 1106	RH-IXD518WJZZY	IC Si2178-A20-GMR SiLABS, SILICON TUNER		
	IC 1301	RH-IXD310WJZZY	IC LNBH23QTR(QFN32 5x5mm) ST		
	IC 1505	VHIBU16028V-1Q	IC 3TO1 HDMI SWITCH BU16028KV-ZAE (ROHM)		
	IC 1506	VHITC7SH08U-1Y	IC 2-INPUT AND GATE TC7SH08-FU (TOSHIBA)		
	IC 1507	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1508	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1509	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1510	VHIBR24T02J-1Y	IC NVM 2Kb BR24T02J (ROHM)		
	IC 1511	VHIESD7004M-1Y	Suppresor HDMI Array, ESD7004MUTAG (ON S		
	IC 1512	VHIESD7004M-1Y	Suppresor HDMI Array, ESD7004MUTAG (ON S		
	IC 2701	VHISTA333BW-1L	IC 40W AUDO AMPL. 2.1 STA333BM(ST MICRO)		
	IC 2702	RH-IXD542WJZZY	IC TS488IQT POPFree HeadPhones Ampl (ST		
	IC 3301	RH-IXD514WJZZQ	IC FLI7560-AAB CUT1.1 STMICRO FREEMAN PR		
	IC 3302	VHIS80927NM-1Y	CI S-80927CNMC-G8XT2G		
	IC 3303	VHIBR24T64J-1Y	IC NVM 64Kb BR24T64FJ-WE2 (ROHM)		
	IC 3501	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3502	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3503	RH-IXD538WJZZQ	ICDDR3-1600 MT41J128M16JT-125:K(MICRON)		
	IC 3800	RH-IXD550WJZZY	IC CPU STM8S105K4T6CTR (ST MICRO)		
	IC 4401	VHILCX245FT-1Y	CI TC74LCX245FT(EL,K)		
	IC 4402	VHILCX244FT-1Y	CI TC74LCX244FT(EL,K)		
	IC 4403	VHIS170B50U-1Y	CI S-1170B50UC-0UJTFG		
	IC 4404	VHILCX244FT-1Y	CI TC74LCX244FT(EL,K)		
	IC 8401	RH-IXD551WJQZQ	IC NANDFLASH 2Gb MT29F2G08ABAEAWP:E(MICR		
	IC 9501	RH-IXD543WJZZY	IC ETH-PHY RMII, KSZ8081RNDCATR (MICREL)		
	IC 9551	RH-IXD187WJZZY	CI AAT4614IGU-2-T1 ANALOGIC TECH		
	IC 9552	VHI2514BAEZ-1Q	IC USB2514B-AEZG		
	IC 9553	VHIS170B50U-1Y	CI S-1170B50UC-0UJTFG		
	IC 9601	VHIBD9328EF-1Y	IC BD9328EFJ 2A DCDC ROHM		
	IC 9602	RH-IXD534WJZZY	IC BD95841MUV-E2 (Rohm)		
	IC 9603	VHIS170B25U-1Y	IC S-1170B25UC LDO 2.5V (SEIKO)		
	IC 9605	VHIS132B50M-1Y	IC S-1132B50-M5T1G LDO 5V (SEIKO)		
	IC 9606	RH-IXD533WJZZY	IC BD80GA3WEFJ LDO (Rohm)		
	IC 9608	RH-IXD532WJZZY	IC BU33TD3WG LDO (Rohm)		
	IC 9701	VHIBD9328EF-1Y	IC BD9328EFJ 2A DCDC ROHM		
			TRANSISTORS		
	Q 1101	VSMMBT2907A-1Y	TRT MMBT2907ALT1G		
	Q 1501	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 1502	VSRT1N441U/-1Y	TRT RT1N441U-T111-1		
	Q 1505	VS2N7002KA+-1Y	TRT 2N7002KA-RTK/P (KEC)		
	Q 2602	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 2604	RH-TXA064WJZZY	TRT AO3415 P-Channel Mosfet ALPHA & OMEG		
			DIODES		
	D 0501	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0502	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0503	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0504	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0511	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0529	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 0540	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0556	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0559	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0560	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0561	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 0562	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1102	VHEVBUS05L1-1Y	ESD DIODE VBUS05L1-DD1-G-08 VISHAY		
	D 1301	VHDRB156L40-1Y	DIODO RB156L-40TE25		
	D 1302	VHDRB156L40-1Y	DIODO RB156L-40TE25		
	D 1303	VHDD1F60///-1Y	DIODO D1F60-5053		
	D 1304	VHDRB156L40-1Y	DIODO RB156L-40TE25		
	D 1305	VHDRB156L40-1Y	DIODO RB156L-40TE25		
	D 1501	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1502	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1503	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1504	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1505	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1506	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1507	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1508	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1509	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1511	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 1513	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1514	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1515	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 1516	VHDDAN202K/-1Y	DIODO DAN202KT146		
	D 2707	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 2708	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 3301	VHDRB520S30-1Y	DIODO RB520S-30		
	D 3805	VHDHSU119//-1Y	DIODO HSU119TRF		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	D 3806	VHDHSU119//-1Y	DIODO HSU119TRF		
	D 3807	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 3808	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 3809	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASONIC)		
	D 9551	RH-DXA159WJZZY	DIODE RF201L2STE25 ROHM		
			PACKAGED CIRCUITS		
	SG 0501	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0502	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0503	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0513	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0514	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0551	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0552	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0553	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0554	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0555	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0556	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0557	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0558	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0559	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0560	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0561	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0562	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0563	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0564	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0565	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0567	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0568	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	SG 0578	RH-VXA187WJQZY	VARISTOR EZAEG2A50AX		
	VA 1501	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1502	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1503	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1504	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1505	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1506	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1507	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 1508	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9551	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9552	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9553	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9554	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9555	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	VA 9556	RH-VXA074WJZZY	VARISTOR AVRL101A1R1NTB		
	X 1101	RCRSCA228WJQZY	CRYSTAL DSX321G-24MHz		
	X 3301	RCRSCA238WJQZY	Crystal NX3225GA-30MHz (NDK)		
	X 3800	RCRSCA244WJQZY	CRYSTAL NX3225GA-16MHz (NDK)		
	X 9551	RCRSCA224WJZZY	CRYSTAL AT-41CD2-24.000MHz_20_N_NDK		
			COILS AND FILTERS		
	FB 0501	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0502	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0503	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0504	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0505	RBLN-A529WJZZY	FERRITE MI0603M121R-10		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	FB 0506	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0507	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0508	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 0612	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 1101	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1102	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1103	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1104	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1105	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1302	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1307	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1308	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 1501	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2603	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 2702	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2707	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2708	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2709	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 2712	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3301	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3302	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3303	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3304	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3502	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 3803	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3804	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3807	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3808	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3809	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3811	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3813	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 3814	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 4400	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 4402	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9502	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9503	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9504	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9552	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9553	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9554	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9601	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9603	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9604	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9605	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9606	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9609	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	FB 9613	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9614	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9617	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
	FB 9701	RBLN-A528WJZZY	FERRITA HI0805N600R-10		
	L 1101	VPRINR27J0000L	COIL LQG15HSR27J02D MURATA		
	L 1103	VPRINR18J0000L	COIL LQG15HSR18J02D MURATA		
	L 1104	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	L 1105	VPRCNR56J0000L	COIL MLG1608SR56J - TDK		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	L 1106	VPRCNR56J0000L	COIL MLG1608SR56J - TDK		
	L 1107	RCILPA049WJZZY	COIL CDRH4D18CLD-100NC SUMIDA		
	L 1301	RCILPB017WJQZY	COIL SWPA6045S330		
	L 1302	RCILPB016WJQZY	COIL SWPA6045S220		
	L 1303	RCILP0303TAZZY	COIL SLF10145-221MR65		
	L 2601	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2602	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2603	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2604	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2605	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2606	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2607	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2608	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2609	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2610	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2611	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2612	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2613	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2614	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2615	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2616	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2617	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2618	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2619	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2620	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2621	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2622	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2623	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2624	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 2701	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2702	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2703	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2704	RCILPB014WJQZY	COIL SWPA6045S100		
	L 2705	VPCUN470K2R0NY	INDUCTOR 47uH 0.15A (TDK NLCV32T-470-PF)		
	L 9551	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9552	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9553	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9554	VRS-CA1JF000JY	ARRAY 2 RES 0 OHM 5% 1/16W SMD		
	L 9601	RCILPB014WJQZY	COIL SWPA6045S100		
	L 9602	RCILPB011WJQZY	COIL SWPA6045S2R7		
	L 9701	RCILPB014WJQZY	COIL SWPA6045S100		
			CAPACITORS		
	C 0501	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 0502	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0503	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0504	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0505	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0506	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0508	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0510	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0512	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0514	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 0516	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0517	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0537	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 0538	VCCCCZ1HH220JY	CERAM C 0402 22PF 50V 5%		
	C 0540	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0559	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0560	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0569	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0572	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0573	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0574	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0575	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0576	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0581	VCKYCZ1HB471KY	C CERAM 0402 470PF 50V 10%		
	C 0582	VCKYCZ1HB471KY	C CERAM 0402 470PF 50V 10%		
	C 0585	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0586	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0587	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0588	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0589	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0590	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0591	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0592	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 0593	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0594	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0595	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0596	VCCCCZ1HH680JY	C CERAM 0402 68PF 50V 5%		
	C 0597	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0598	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0599	VCCCCZ1HH680JY	C CERAM 0402 68PF 50V 5%		
	C 0600	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 0601	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0603	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0604	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0605	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0606	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0607	VCCCCZ1HH331JY	CERAM C 0402 330PF 50V 5%		
	C 0608	VCCCCZ1HH561JY	CERAM C 0402 560PF 50V 5%		
	C 0609	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0610	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 0611	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0614	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 0615	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 0616	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1101	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1102	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 1103	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1104	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1105	VCCCCZ1HH470JY	CERAM C 0402 47PF 50V 5%		
	C 1106	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1107	VCCCCZ1HH910JY	C CERAM 0402 91PF 50V 5%		
	C 1108	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1109	VCCCCZ1HH181JY	C.CERAM C0402 180PF 50V 5%		
	C 1110	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 1111	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 1112	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1113	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1114	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1115	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1116	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1117	VCKYCZ0GB225MY	C CERAM 0402 2,2UF 4V 10%		
	C 1118	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1119	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1120	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1121	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1122	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1123	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1124	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1125	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1126	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1127	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1128	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1129	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1130	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 1132	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1133	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1134	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1135	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1136	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1137	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 1138	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1139	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1140	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1141	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1142	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1143	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1144	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1145	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1304	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1305	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 1306	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1307	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1309	VCKYCZ1EB822KY	C CERAM 0402 8,2NF 25V 10%		
	C 1310	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 1311	VCKYTV1EB474KY	C CERAM 470NF 25V 2125SMD		
	C 1312	VCEASY1EN107MY	C ELEC 100UF 20% 25V MLA25VC100MF80		
	C 1313	VCEASY1EN107MY	C ELEC 100UF 20% 25V MLA25VC100MF80		
	C 1314	RC-KZA709WJQZY	C CERAM 0,22 UF 25V TMK107BJ224KA-T		
	C 1315	VCKYTV1EB474KY	C CERAM 470NF 25V 2125SMD		
	C 1316	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 1317	RC-KZA709WJQZY	C CERAM 0,22 UF 25V TMK107BJ224KA-T		
	C 1319	RC-KZA709WJQZY	C CERAM 0,22 UF 25V TMK107BJ224KA-T		
	C 1320	VCEASY1EN107MY	C ELEC 100UF 20% 25V MLA25VC100MF80		
	C 1321	RC-KZA383WJZZY	C CERAM TMK2316BJ106KLFT 10UF 25V 10%		
	C 1325	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 1381	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1397	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1501	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 1502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1503	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1505	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 1506	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1507	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1509	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1511	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1512	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1514	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1517	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 1518	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1519	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1520	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 1521	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1522	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1523	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1524	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 1525	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2605	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 2606	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2607	VCKYCZ1HB472KY	C CERAM 0402 4,7NF 50V 10%		
	C 2608	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 2609	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2610	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2702	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 2703	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2705	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2706	VCKYCZ1HB472KY	C CERAM 0402 4,7NF 50V 10%		
	C 2707	VCCCCZ1HH101JY	C CERAM 0402 100PF 50V 5%		
	C 2708	VCCCCZ1HH681JY	C CERAM 0402 680PF 50V 5%		
	C 2709	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2710	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2711	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2712	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2713	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2714	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 2715	VCKYTV1CB104KY	C CERAM 100NF 16V 2125SMD		
	C 2716	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 2717	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2718	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2719	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2720	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2721	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2722	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2723	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2724	VCEASX1CN476MY	C ELEC 47UF 16V MVL16VC47MF60E1		
	C 2725	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 2726	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 2727	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2728	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 2729	VCEASY1EN337MY	C ELEC 330UF 20% 25V MLA25VC330MH10		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 2731	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2732	VCKYCZ1HB331KY	C CERAM 0402 330PF 50V 10%		
	C 2733	VCKYTV1EB105KY	C CERAM 1uF 25V 2012SMD		
	C 2736	VCKYCY1EB224KY	C CERAM		
	C 2737	VCKYCY1EB224KY	C CERAM		
	C 2738	VCKYCY1EB224KY	C CERAM		
	C 2739	VCKYCY1EB224KY	C CERAM		
	C 2740	VCKYCY1EB224KY	C CERAM		
	C 2741	VCKYCY1EB224KY	C CERAM		
	C 2742	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2743	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2744	VCKYCY1EB224KY	C CERAM		
	C 2745	VCKYCY1EB224KY	C CERAM		
	C 2746	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2747	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2748	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2749	VCEASY1EN337MY	C ELEC 330UF 20% 25V MLA25VC330MH10		
	C 2751	RC-EZ1339CEZZY	C ELEC 220UF 16V		
	C 2752	VCKYTV1EB105KY	C CERAM 1uF 25V 2012SMD		
	C 2753	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2756	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2757	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 2758	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2759	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2760	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2761	VCCCCZ1HH100DY	C CERAM 0402 10PF 50V 0,5%		
	C 2762	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3301	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3302	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3303	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3304	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3305	VCEASY0JN477MY	C ELEC 470UF 6,3V MLA6,3VC470MF80		
	C 3306	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3307	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3308	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3309	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3310	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3311	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3312	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3313	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3314	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3315	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3316	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3317	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3318	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3319	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3320	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3321	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 3322	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3323	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3324	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3325	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3326	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3327	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 3328	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3329	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3330	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3331	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3332	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 3333	VCKYCZ1CB223KY	C CERAM 0402 22NF 16V 10%		
	C 3334	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3335	VCAAPE0EJ687MY	C ELEC680UF 2.5V PCJ0E681MCLASHGS		
	C 3336	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3337	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3338	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3339	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3340	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3341	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3342	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3343	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3344	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3345	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3346	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3347	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3348	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3349	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3350	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3351	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3352	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3353	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3354	VCKYCZ1EB103KY	C CERAM 0402 10NF 25V 10%		
	C 3355	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3358	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3359	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3360	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3361	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3362	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 3363	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3364	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3365	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3366	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3367	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3368	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3369	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3370	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3371	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3372	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3373	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3374	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3375	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3376	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3377	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3378	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3379	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3501	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3503	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 3505	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3506	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3507	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3509	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3510	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3511	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3512	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3514	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3515	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3516	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3517	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3518	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3521	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3522	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3523	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3524	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3525	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3526	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3527	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3528	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3529	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3530	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3531	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3533	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3534	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3535	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3536	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3537	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3538	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3539	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3540	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3541	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3542	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3543	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3544	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3546	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3547	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 3548	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3549	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 3550	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 3809	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3810	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3811	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3812	VCCCCZ1HH270JY	C CERAM 0402 27PF 50V 5%		
	C 3814	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3815	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3817	RC-KZA146WJZZY	C CERAM 0402 1uF 6,3V 10% B-Grade		
	C 3827	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3828	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 3829	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4400	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4401	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 4404	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 4405	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4406	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 4407	VCEASX0JN107MY	C ELEC 100UF 6,3V MVL6,3VC100MF60E1		
	C 4409	VCEASX0JN107MY	C ELEC 100UF 6,3V MVL6,3VC100MF60E1		
	C 4410	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4411	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 4412	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8401	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8402	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 8403	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9502	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9503	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9504	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9505	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9506	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9507	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9508	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9509	VCKYCZ0GB225MY	C CERAM 0402 2,2UF 4V 10%		
	C 9512	RC-KZA523WJQZY	C CERAM 1000PF 2000V GR442QR73D102KW01L		
	C 9513	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9521	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9551	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9552	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9553	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9554	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9556	VCAAPE1AJ127MY	C ELEC 120UF 20% 10V LOW ESR		
	C 9557	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9559	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9560	VCAAPE0JJ227MY	C ELEC 220UF 20% 6,3V 6SVP220M		
	C 9561	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9562	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9563	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9564	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9565	VCKYCY0JB105KY	CONDENSADOR GRM39B 105K 6.3 (1608)SMD		
	C 9566	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9567	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9568	VCCCCZ1HH120JY	C CERAM 0402 12PF 50V 5%		
	C 9569	VCKYCY0JB105KY	CONDENSADOR GRM39B 105K 6.3 (1608)SMD		
	C 9570	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9571	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9572	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9573	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9574	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9575	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9576	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9577	RC-KZA616WJQZY	C CERAM 10uF 10V LMK212BJ106KGFT		
	C 9578	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9579	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9580	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9601	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9602	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9603	VCKYCZ1HB102KY	C CERAM 0402 1NF 50V 10%		
	C 9604	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	C 9605	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9608	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9609	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9610	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9611	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9612	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9613	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9614	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9615	VCKYCZ1CB103KY	C CERAM 0402 10NF 16V 10%		
	C 9617	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9618	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9619	RC-KZA385WJZZY	C CERAM 22UF 6,3V JMK212BJ226KG-T		
	C 9620	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9621	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9622	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9623	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9625	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9636	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9637	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9639	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9648	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9649	RC-KZA116WJZZY	C CERAM 4,7UF 6,3V GRM188B30J475KE18D		
	C 9651	RC-KZA621WJQZY	C CERAM 1uF 25V TMK107BJ105KAFT		
	C 9701	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9702	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9703	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9704	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME47D		
	C 9705	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9706	RC-KZA237WJZZY	C CERAM EMK212BJ106KGFT 10UF 16V 10%		
	C 9707	VCKYCZ1HB332KY	C CERAM 0402 3,3NF 50V 10%		
	C 9708	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 9709	VCCCCZ1HH220JY	CERAM C 0402 22PF 50V 5%		
			TUNER		
	TU 1102	RTUDSA034WJQZ	DIGITAL DBS TUNER BS2S7HZ6B01 (SHARP)		
			TRANSFORMER		
	T 9501	RTRNZA143WJQZY	LAN TRANSF. MP11201C (MICROTEX)		
			RESISTORS		
	R 0502	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0503	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0504	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0505	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0506	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0508	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 0509	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 0510	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0511	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0512	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0514	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0515	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0516	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0518	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0519	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 0520	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0522	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0523	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 0525	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0526	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0540	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD		
	R 0541	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD		
	R 0548	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 0551	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 0552	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 0572	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD		
	R 0573	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD		
	R 0574	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0575	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0578	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0579	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0580	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0582	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0584	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0585	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0586	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0589	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0590	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0591	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0592	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0593	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0594	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0595	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0596	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0597	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0599	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0600	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0601	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0602	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0603	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 0604	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0605	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0606	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0607	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 0608	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 0609	VRS-CZ1JF202JY	RES 0402 2KOHM 5% 1/16W SMD		
	R 0610	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 0611	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 0613	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 0614	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 1101	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1102	VRS-CZ1JF332JY	RES 0402 3,3KOHM 5% 1/16W SMD		
	R 1103	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1104	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1105	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1106	VRS-CZ1JF3R3JY	RES 0402 3,3 OHM 5% 1/16W SMD		
	R 1107	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1108	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1109	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 1110	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1113	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1114	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1115	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1116	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 1117	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 1118	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 1119	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1120	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1121	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1124	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1301	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD		
	R 1302	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1306	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1307	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 1308	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1309	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 1310	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1311	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1312	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1314	VRS-CZ1JF153FY	RES 0402 15KOHM 1% 1/16W SMD		
	R 1316	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1322	VRS-TQ2BD3R3JY	RES OX 3,3 OHM 5% 1/8W SMD		
	R 1323	VRS-CZ1JF150JY	RES 0402 15 OHM 5% 1/16W SMD		
	R 1339	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1376	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1377	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1378	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1379	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1380	VRS-CZ1JF181JY	RES 0402 180 OHM 5% 1/16W SMD		
	R 1388	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1501	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1502	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1503	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1504	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1505	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1506	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1507	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1508	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1509	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1510	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1511	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1512	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD		
	R 1513	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1514	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 1515	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1516	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 1517	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 1528	VRSCZ1JB4641FT	RES 0402 4K64 OHM 1% 1/16W SMD		
	R 1532	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 1535	VRS-CZ1JF273JY	RES 0402 27KOHM 5% 1/16W SMD		
	R 1538	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1539	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1540	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 1545	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1546	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1547	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1548	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1549	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1550	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 1551	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1552	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1554	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 1555	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1556	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1557	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1558	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1559	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 1563	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1566	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1567	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1568	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1569	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1570	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1571	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1572	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 1573	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1574	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 1575	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1576	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1577	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1578	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 1579	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 2625	VRS-TQ2BD000JY	RES OX 0 OHM 5% 1/8W SMD		
	R 2626	VRS-CZ1JF474JY	RES 0402 470KOHM 5% 1/16W SMD		
	R 2627	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2636	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2649	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2704	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 2705	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 2706	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2708	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2709	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2710	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2711	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 2712	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2713	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2714	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2715	VRS-CZ1JF203JY	RES 0402 20KOHM 5% 1/16W SMD		
	R 2716	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 2726	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 2727	VRS-TQ2EF220JY	RES OX 22 OHM 5% 1/4W SMD		
	R 2729	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 2734	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2735	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2737	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2738	VRS-CZ1JF2R7JY	RES 0402 2,7 OHM 5% 1/16W SMD		
	R 2740	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 2741	VRS-CZ1JF203JY	RES 0402 20KOHM 5% 1/16W SMD		
	R 2742	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 2745	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 2746	VRS-TQ2EF220JY	RES OX 22 OHM 5% 1/4W SMD		
	R 2751	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 2752	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3304	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3307	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3308	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3309	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3310	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3314	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3315	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3316	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3319	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3320	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3321	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3322	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3323	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3324	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3325	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 3326	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3328	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3329	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3330	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3331	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3333	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3335	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3337	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3347	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3348	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3349	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3350	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3351	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3352	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3353	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3354	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3355	VRS-CZ1JF560FY	RES 0402 56 OHM 1% 1/16W SMD		
	R 3356	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3357	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3358	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3359	VRSCZ1JB2490FT	RES 0402 249 OHM 1% 1/16W SMD		
	R 3360	VRS-CZ1JF152FY	RES 0402 1,5KOHM 1% 1/16W SMD		
	R 3361	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3362	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3363	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3364	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3365	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 3366	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3367	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3368	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3369	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3370	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3373	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 3374	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3375	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3376	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3377	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3378	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3379	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3380	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3381	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3382	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3383	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3384	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3385	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3386	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3501	VRS-CZ1JF111FY	RES 0402 110 OHM 1% 1/16W SMD		
	R 3502	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3503	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3504	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3526	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3527	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 3528	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3529	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3532	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 3533	VRS-CZ1JF241FY	RES 0402 240 OHM 1% 1/16W SMD		
	R 3800	VRS-CZ1JF122JY	RES 0402 1,2KOHM 5% 1/16W SMD		
	R 3803	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3807	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3812	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3814	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3815	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3816	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3817	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3821	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 3822	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 3824	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3826	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 3827	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3828	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3829	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3830	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3831	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD		
	R 3832	VRSCZ1JB3012FT	RES 0402 30K1 OHM 1% 1/16W SMD		
	R 3834	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD		
	R 3835	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3836	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3844	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 3846	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 3847	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3848	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 3849	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 3852	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3854	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 3856	VRS-CZ1JF221FY	RES 0402 220 OHM 1% 1/16W SMD		
	R 4400	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4401	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		

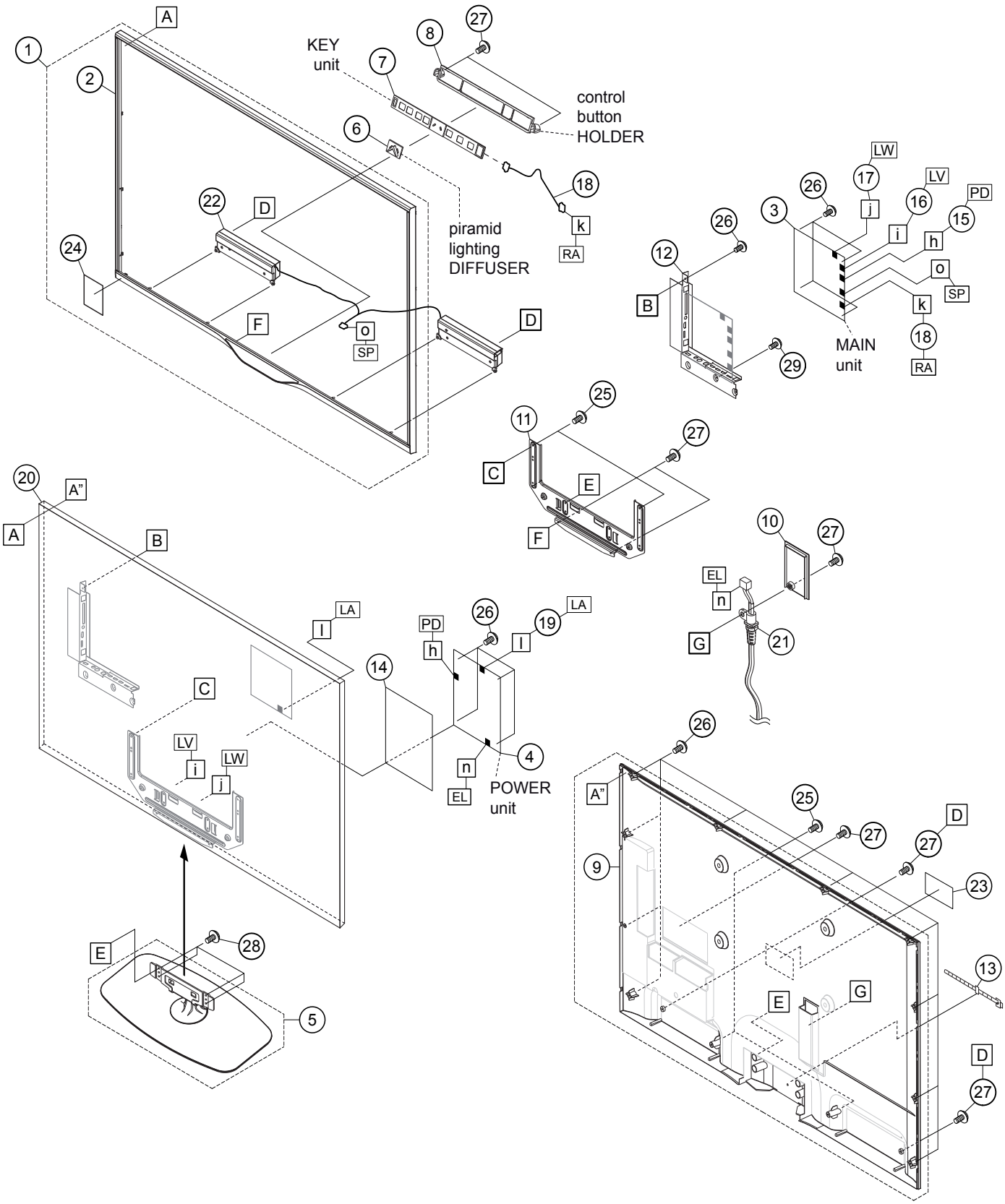
	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	R 4402	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4403	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4404	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4405	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4406	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4407	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4408	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 4409	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4410	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4411	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4412	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4413	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4414	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4415	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4416	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4417	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4418	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4419	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4420	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 4421	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 4422	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4423	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4424	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4425	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4426	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 4427	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4428	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 4429	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8401	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8404	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 8409	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 8410	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8411	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8412	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8413	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8414	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 8416	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 8417	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9501	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 9502	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9503	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9504	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9505	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9506	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9507	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9509	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9514	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9515	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9516	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9517	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD		
	R 9518	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9519	VRSCZ1JB6491FT	RES 0402 6,49KOHM 1% 1/16W SMD		
	R 9520	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9521	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9522	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9523	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9529	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 9530	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD		
	R 9533	VRS-CZ1JF330JY	RES 0402 33 OHM 5% 1/16W SMD		
	R 9551	VRS-TW2HF121JY	RES CR1-4 120 OHM 5% 1/2W SMD		
	R 9552	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD		
	R 9554	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9555	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9556	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9557	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9558	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9559	VRS-CZ1JF123FY	RES 0402 12KOHM 1% 1/16W SMD		
	R 9560	VRS-CZ1JF105JY	RES 0402 1MOHM 5% 1/16W SMD		
	R 9561	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9562	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		
	R 9563	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9566	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9567	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9568	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		
	R 9569	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9570	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD		
	R 9571	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9573	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD		
	R 9602	VRS-CZ1JF102FY	RES 0402 1KOHM 1% 1/16W SMD		
	R 9606	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 9607	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD		
	R 9609	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9611	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9612	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9613	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 9614	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9616	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9617	VRS-CZ1JF202JY	RES 0402 2KOHM 5% 1/16W SMD		
	R 9618	VRS-CZ1JF303FY	RES 0402 30KOHM 1% 1/16W SMD		
	R 9622	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 9642	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 9649	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 9701	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9702	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD		
	R 9703	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 9704	VRS-CZ1JF203FY	RES 0402 20KOHM 1% 1/16W SMD		
	R 9705	VRS-CZ1JF752FY	RES 0402 7,5KOHM 1% 1/16W SMD		
	R 9706	VRS-CZ1JF752FY	RES 0402 7,5KOHM 1% 1/16W SMD		
	R 9757	VRS-CZ1JF222JY	RES 0402 2,2KOHM 5% 1/16W SMD		
	R 9758	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD		
	R 9759	VRS-CZ1JF472FY	RES 0402 4,7 KOHM 1% 1/16 SMD		
	R 9760	VRS-CZ1JF103FY	RES 0402 10KOHM 1% 1/16W SMD		

MISCELLANEOUS

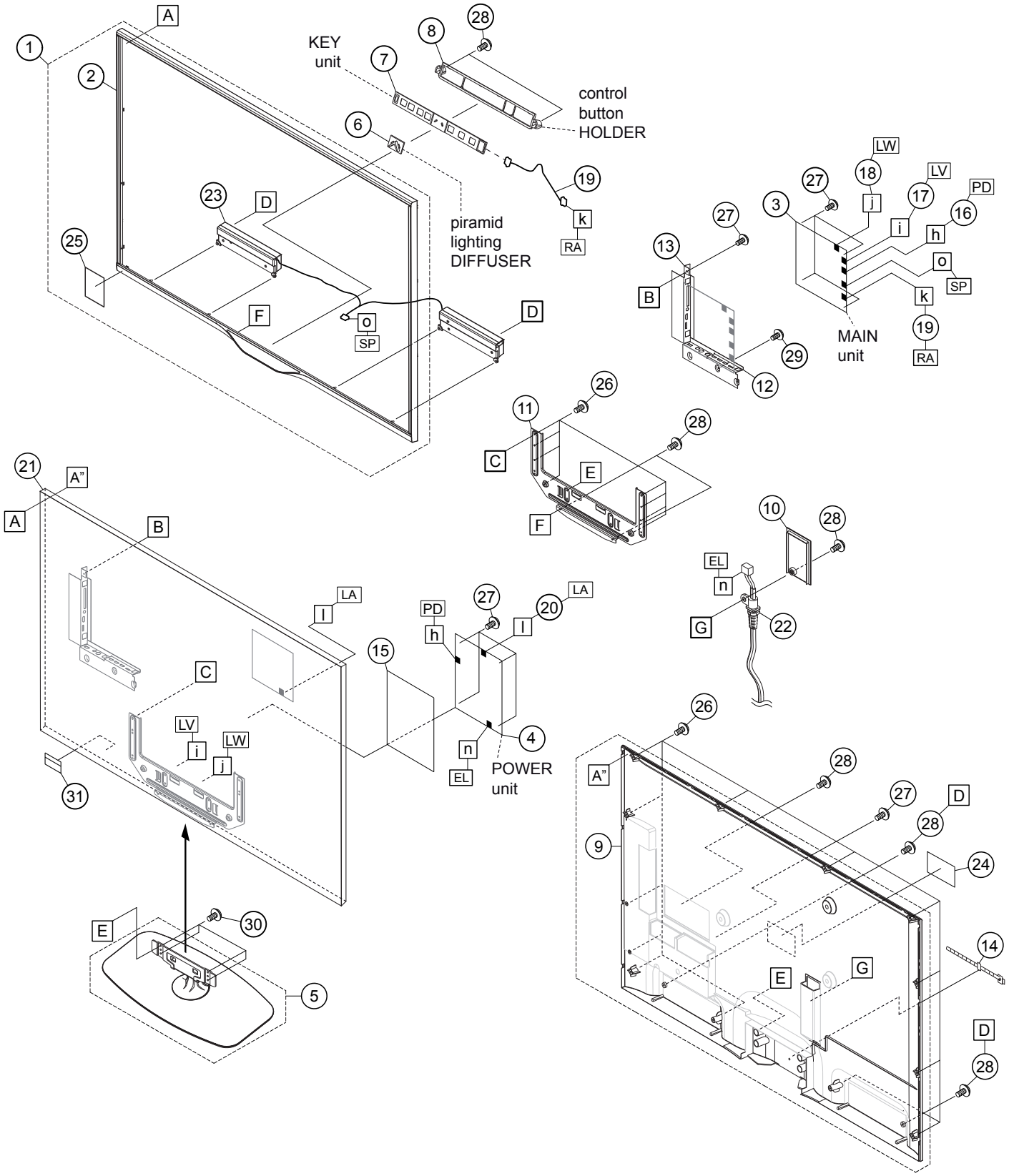
	J 0502	QJAKJA024WJZZ	HEADPHONE CKX-035-347DBZ		
	J 0551	QJAKJA024WJZZ	HEADPHONE CKX-035-347DBZ		
	J 0552	QJAKLA037WJQZ	JACK RCA-639HA-00A-09		
	J 2701	QJAKEA073WJZZ	JACK LGY6502-0800F		

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	J 2702	QJAKEA125WJZZ	RCA JACK FEMALE PCB SIDE ENTRY ORANGE(YU		
	J 9501	QJAKZA131WJQZQ	RJ45 JACK SIDE PCB 8P8C MTJ-882BX1-FS-EU		
	J 9551	QSOCZA276WJQZ	SOCKET USB DOUBLE UAR64		
	J 9552	QSOCZA205WJQZ	SOCKET UAR27-4K5C0L		
	P 2705	QPLGNA160WJZZY	CONECTOR SM04B-PASS-TBT(LF)		
	P 3800	QPLGNA331WJZZY	CONNECTOR SM11B-GHS-TB (LF)(SN), (JST)		
	P 9601	QPLGNB224WJZZY	CONNECTOR A2010WR0-14PS-SHP (JWT)		
	SC 0501	QSOCNA816WJZZ	VGA IN 15P. CONN VERTICAL (ACON)		
	SC 0552	QSOCZA161WJZZ	SCART RGB-11H		
	SC 1501	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1502	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1503	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 1504	QSOCZA264WJQZY	CONNECTOR HDMI CSS5019-0731E		
	SC 2601	QCNCWB127WJZZY	CONE LVDS 51P. I-PEX 20555-051E EVAFLEX5		
	SC 2603	QCNCWB128WJZZY	CONC LVDS 41P. I-PEX 20555-041E EVAFLEX5		
	SC 4401	QCNCMA386WJSA	PCMCIA CONN.LONG TYPE 68P 5V(CONCRAFT-TO		
		PSLDMB855WJFW	MS SHIELD CASE WITH CON. 2.GD30T19X10X14		
		PSLDMB856WJFW	MS SHIELD CASE COVER (2.D30T19X10X14)		
		DUNTKG135WE3G/	MAIN INS SMD B LE752/ LE652		
		QPWBXG135WJN1	PWB MAIN UNIT LE65x/LE75x Version N1		
			DUNTKG221WE01		
			LE65x KEY UNIT		
			INTEGRATED CIRCUITS		
	IC 5100	RH-IXD572WJZZY	IC CPU 8 bits TOUCH PIC16LF1503T		
			TRANSISTORS		
	Q 5100	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 5101	VS2SC3928AR-1Y	TRT 2SC3928AR-T112-1R MITSUBISHI		
	Q 5102	VS2SD2657++-1Y	TRANSISTOR NPN 2SD2657TL (ROHM)		
	Q 5103	VS2SD2657++-1Y	TRANSISTOR NPN 2SD2657TL (ROHM)		
			DIODES		
	D 5100	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASO		
	D 5102	RH-EXA741WJQZY	ZENER DIODE 5.6V DZ2J056MOL(PANASO		
	D 5103	RH-PXA238WJQZY	LED BLUE SMLA13BDTT86 (RANK R/S/T/U)ROH		
	D 5105	RH-PXA239WJQZY	RED LED SML-A12UT(J)T86 (RANK R/S/T)ROH		
	D 5106	VHDRB162M40-1Y	SCHOTTKY DIODE 40V RB162M-40TR(ROH		
	D 5107	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
	D 5108	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
	D 5109	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
	D 5110	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
	D 5111	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
	D 5112	RH-PXA235WJQZY	LED INFRA 3D EMITTER 850NM VSMY3850-GS0		
			COILS AND FILTERS		
	FB 5100	RBLN-A529WJZZY	FERRITE MI0603M121R-10		
			CAPACITORS		
	C 5100	VCKYCY1CB225KN	C CERAM 2,2UF 16V (GRM188B31C225KE		
	C 5101	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 5102	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 5103	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME4		
	C 5104	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 5105	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 5106	RC-KZA926WJQZY	C CERAM 10uF 6,3V GRM188B30J106ME4		
	C 5107	VCCCCZ1HH101JY	C CERAM 0402 100PF 50V 5%		
	C 5108	VCKYCZ1AB474KY	C CERAM 0402 470NF 10V 10%		
	C 5109	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
	C 5110	VCAAPE1CJ127MY	C ELEC 120UF 20% 16V LOW ESR (NICH		
	C 5111	VCKYCZ1EF104ZY	C CERAM 0402 100NF 25V 20%		
			RESISTORS		
	R 5100	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5101	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5102	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5103	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5104	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5105	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5106	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
	R 5107	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 5108	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 5109	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5110	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD		
	R 5113	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5114	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5115	VRS-CZ1JF100JY	RES 0402 10 OHM 5% 1/16W SMD		
	R 5116	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD		
	R 5117	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD		
	R 5118	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5119	VRS-CZ1JF332JY	RES 0402 3,3KOHM 5% 1/16W SMD		
	R 5120	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5121	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5122	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 5123	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD		
	R 5124	VRS-TQ2BD000JY	RES OX 0 OHM 5% 1/8W SMD		
	R 5125	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5126	VRS-TQ2BD2R4JY	RES OX 2,4 OHM 5% 1/8W SMD		
	R 5127	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD		
	R 5128	VRS-TQ2BD2R4JY	RES OX 2,4 OHM 5% 1/8W SMD		
	R 5129	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD		
			MISCELLANEOUS		
	P 5100	RRMCUA113WJZZY	INFRARED REC.38KHZ 950NM TSOP75438 FTT		
	P 5101	QPLGNA345WJZZY	CONNECTOR BM11B-GHS-TBT (LF)(SN)		

CABINET AND MECHANICAL PARTS 39”



CABINET AND MECHANICAL PARTS 50”



39" CABINET AND MECHANICAL PART LISTING

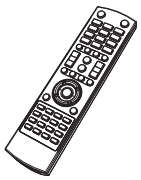
	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	1	CCABAC975WE02	KS-CAB-A LC39LE65*E	P	--
	2	GCABAC975WJ1B	FRONT CABINET	P	--
	3	DUNTKG135FM04	ADJUST MAIN UNIT LE650/LE750	P	--
	3	DUNTKG135FM7	ADJUST MAIN UNIT LE652/LE752	P	--
	3	DUNTKG135FM08	ADJUST MAIN UNIT LE651/LE751	P	--
⚠	4	RDENCA459WJQZ	POWER UNIT W/O LED DRIVER 39"/50" CMI	P	--
	5	CDAI-A864WJ01	KS-STAND LC39LE65*E	P	--
	6	HDECQB797WJ1A	PIRAMID LIGHTING DIFFUSER (CHLDFA077WE01 ctrl button set)	P	--
	7	DUNTKG221WE01	KEY UNIT LE65x (CHLDFA077WE01 ctrl button set)	P	--
	8	LHLDFA077WJ1A	CONTROL HOLDER LE650_LE750E (CHLDFA077WE01 ctrl button set)	P	--
	9	GCABBC168WJ1A	REAR CABINET LC39LE750	P	--
	10	GCOVAE525WJ1A	AC CORD COVER LC50LE650_750	P	--
	11	LANGKD808WJFW	STAND BRACKET LC39LE650_750	P	--
	12	LANGKD818WJFW	TERMINAL BRACKET	P	--
LE652	12	LANGKD916WJFW	TERMINAL BRACKET SATELLITE	P	--
	13	LHLDWA303WJKA	WIRE HOLDER (Rear Cabinet location)	P	--
	14	PZETKA726WJKZ	INSULATION SHEET POWER	P	--
	15	QCNW-N266WJQZ	PD WIRE 14 PINS 39" 50"(SERIES 65x/75x	P	--
	16	QCNW-N268WJQZ	LV WIRE 51 PINS 39"MODELS TOTOKU	P	--
	17	QCNW-N269WJQZ	LW WIRE 41 PINS 39" TOTOKU	P	--
	18	QCNW-N267WJQZ	RA WIRE 39" (SERIES 65x/75x)	P	--
	19	QCNW-N265WJQZ	LA WIRE 14 PINS 39" (SERIES 65x/75x)	P	--
	20	RLCDTA283WJZZ	LCD 39" 100Hz FHD V390HK1-LE6 CMI	P	--
	21	QACCKA055WJPZ	AC CORD	P	--
	21	QACCBA106WJPZ	AC CORD (FOR UK)	P	--
	22	RSP-ZA614WJZZ	SPEAKER SET (x2 WITH CABLE)	P	--
	23	TLABNC117WJZZ	MODEL LABEL (DLAB-E832WE01 set)	P	--
	24	TLABZD484WJZZ	ENERGY LABEL 39"	P	--
	25	XBBS740P06000	SCREW M4 x 6	P	--
	26	XBPS730P06WS0	SCREW PAN ST ZN M3x6	P	--
	27	XEPS730P08WS0	SCREW PAN ST ZN 3x8	P	--
	28	LX-BZA541WJF8	STAND SCREW M4x7 BK (CSAKAA186WJ02 BAG ASSEMBLY)	P	--
	29	LX-BZA540WJF7	SCREW PAN ST FLAT HEAD M3x6	P	--

50" CABINET AND MECHANICAL PART LISTING

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
	1	CCABAC966WE02	KS-CAB-A LC50LE65*E	P	--
	2	GCABAC966WJ1B	FRONT CABINET	P	--
	3	DUNTKG135FM04	MAIN PWB / ADJUST MAIN UNIT LE750/LE650	P	--
	3	DUNTKG135FM7	ADJUST MAIN UNIT LE652/LE752	P	--
	3	DUNTKG135FM08	ADJUST MAIN UNIT LE651/LE751	P	--
⚠	4	RDENCA459WJQZ	POWER UNIT W/O LED DRIVER 39"/50" CMI	P	--
	5	CDAI-A865WJ01	KS_STAND BASE LC50LE650E	P	--
	6	HDECQB797WJ1A	PIRAMID LIGHTING DIFFUSER (CHLDFA077WE02 ctrl button set)	P	--
	7	DUNTKG221WE02	KEY UNIT LE65x (CHLDFA077WE02 ctrl button set)	P	--
	8	LHLDFA077WJ1A	CONTROL HOLDER LE650_LE750E (CHLDFA077WE02 ctrl button set)	P	--
	9	GCABBC157WJ1A	REAR CABINET LC50LE750	P	--
	10	GCOVAE525WJ1A	AC CORD COVER LC50LE650_750	P	--
	11	LANGKD773WJFW	STAND BRACKET LC50LE650_750	P	--
	12	LANGKD752WJFW	BOTTOM BRACKET	P	--
LE652	12	LANGKD880WJFW	BOTTOM BRACKET SATELLITE	P	--
	13	LANGKD753WJFW	SIDE BRAKET	P	--
	14	LHLDWA303WJKA	WIRE HOLDER (Rear Cabinet location)	P	--
	15	PZETKA722WJKZ	INSULATION SHEET POWER	P	--
	16	QCNW-N266WJQZ	PD WIRE 14 PINS 39" 50"(SERIES 65x/75x	P	--
	17	QCNW-N286WJQZ	LV WIRE 51 PINS 50" TOTOKU	P	--
	18	QCNW-N285WJQZ	LW WIRE 41 PINS 50" TOTOKU	P	--
	19	QCNW-N031WJQZ	RA wire 50" (SERIES 65x/75x)	P	--
	20	QCNW-N036WJQZ	LA wire 14 pins 50" (SERIES 65x/75x)	P	--
	21	RLCDTA282WJZZ	LCD 50" 100Hz FHD V500HK1-LE6 CMI	P	--
	22	QACCKA055WJPZ	AC CORD	P	--
	23	RSP-ZA614WJZZ	SPEAKER SET (x2 WITH CABLE)	P	--
	24	TLABNC117WJZZ	MODEL LABEL (DLAB-E834WE01 set)	P	--
	25	TLABZD469WJZZ	ENERGY LABEL 50"	P	--
	26	XBBS740P06000	SCREW M4 x 6	P	--
	27	XBPS730P06WS0	SCREW PAN ST ZN M3x6	P	--
	28	XEPS730P08WS0	SCREW PAN ST ZN 3x8	P	--
	29	LX-BZA540WJF7	FLAT HEAD SCREW M3X6	P	--
	30	LX-BZA541WJF8	STAND SCREW M4x10 BK (CSAKAA186WJ02 BAG)	P	--
	31	LHLDWA294WJUZ	WIRE HOLDER	P	--

Supplied accessories

Remote control unit (×1)

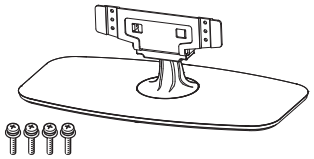


• "AAA" size battery (×2)

• Cable tie (x1)

• Operation manual (This publication)

• Stand unit (x1)



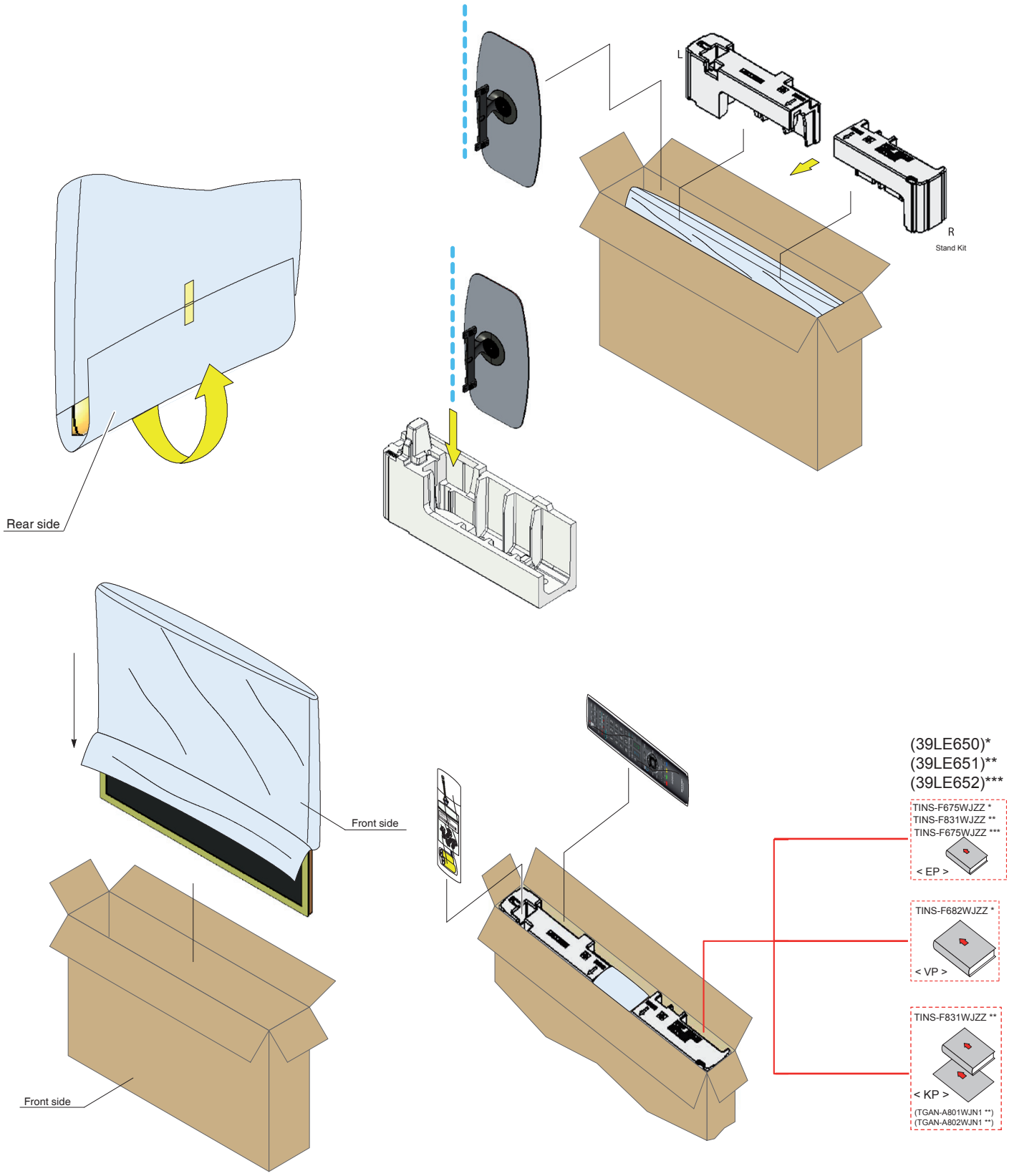
ACCESSORIES PARTS LISTING

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
		CSAKAA186WJ02	SCREW STAND BAG ASSEMBLY	P	--
		LX-BZA541WJF8	STAND SCREW M4x7 BK	P	--
		CSAKAA187WJ03	BAG ACCESSORIES SET SERIES LE650	P	--
		UBATUA047WJZZ	BATTERY R03-x2 ROCKET	P	--
		RRMCGB067WJSA	REMOTE CONTROL UNIT (LE650 SERIES)	P	--
		TINS-F675WJZZ	OWNERS MANUAL SERIE LE65x E (EUROPE)	P	--
		TINS-F682WJZZ	OWNERS MANUAL SERIE LE65x V (EAST EUROPE)	P	--
		TINS-F683WJZZ	OWNERS MANUAL SERIE LE65x RU (RUSSIA)	P	--
		TINS-F831WJZZ	OWNERS MANUAL SERIE LE65x E (NORDICS)	P	--
Only Models K		TGAN-A801WJN1	GUARANTEE	P	--
Only Models K		TGAN-A802WJN1	GUARANTEE / AQUOS CARE	P	--
Only Model RU K		TGAN-B651WJZZ	GUARANTEE SHEET RUSSIAN	P	--

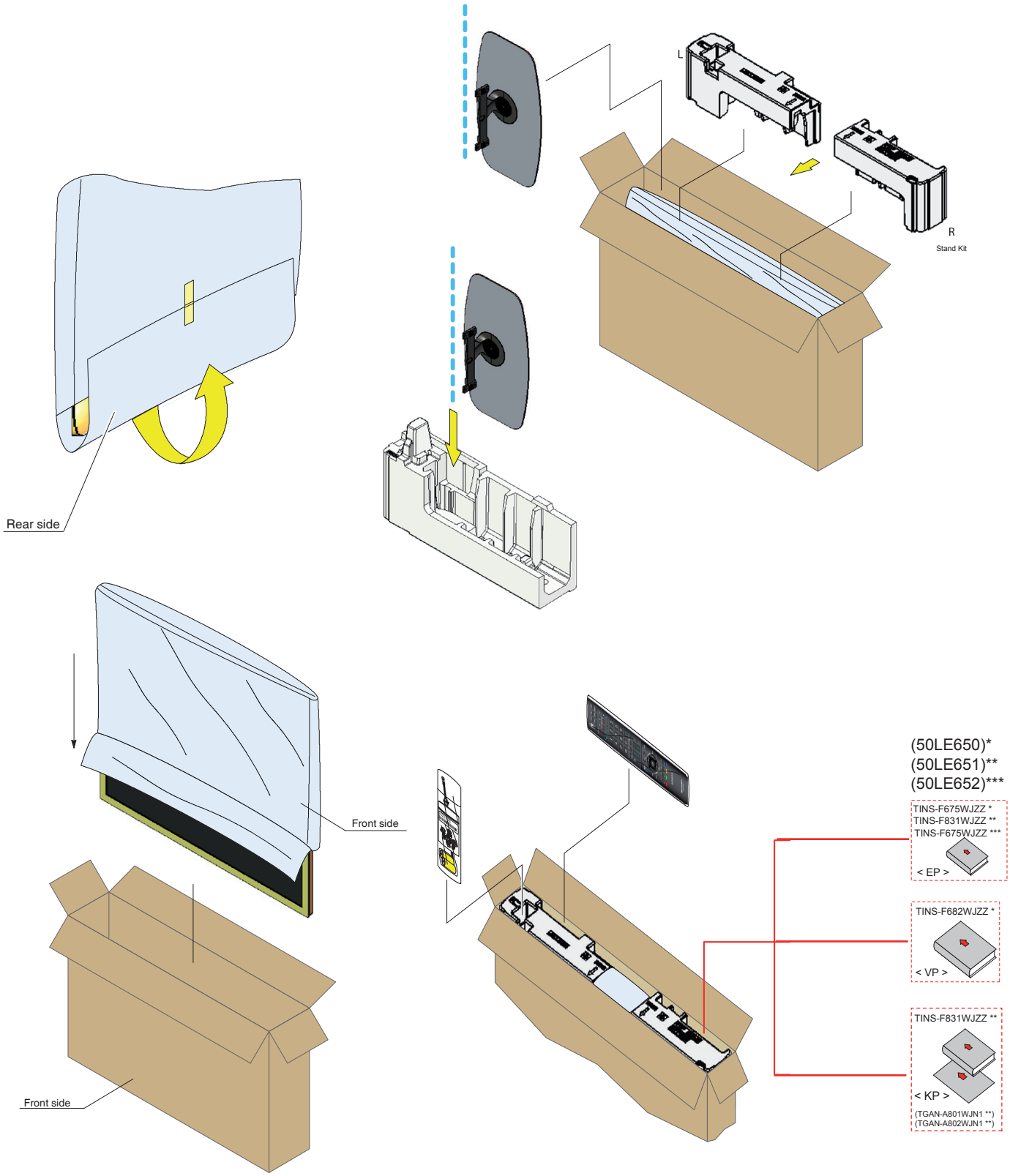
ACCESSORIES PARTS LISTING

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
		CSAKAA186WJ02	SCREW STAND BAG ASSEMBLY	P	--
		LX-BZA541WJF8	STAND SCREW M4x10 BK	P	--
		CSAKAA187WJ06	SCREW /BAG ACCESS SET LC50LE650/651/652	P	--
		UBATUA047WJZZ	BATTERY R03-x2 ROCKET	P	--
		RRMCGB067WJSA	REMOTE CONTROL UNIT (LE650 SERIES)	P	--
		TINS-F675WJZZ	OWNERS MANUAL LE65x	P	--
		TINS-F675WJZZ	OWNERS MANUAL SERIE LE65x E (EUROPE)	P	--
		TINS-F682WJZZ	OWNERS MANUAL SERIE LE65x V (EAST EUROPE)	P	--
		TINS-F683WJZZ	OWNERS MANUAL SERIE LE65x RU (RUSSIA)	P	--
		TINS-F831WJZZ	OWNERS MANUAL SERIE LE65x E (NORDICS)	P	--
Only Models K		TGAN-A801WJN1	GUARANTEE	P	--
Only Models K		TGAN-A802WJN1	GUARANTEE / AQUOS CARE	P	--
Only Model RU K		TGAN-B651WJZZ	GUARANTEE SHEET RUSSIAN	P	--

PACKING OF THE SET 39”



PACKING OF THE SET 50”



39" PACKING PARTS LISTING

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
		SPAKCH189WJZZ	PACKING CASE 39" LC39LE650E	P	--
		SPAKPB475WJZZ	PE BAG 40" LC39LE65*/75*	P	--
		SPAKXD842WJZZ	PACKING FOAM TOP 39"	P	--
		SPAKXD843WJZZ	PACKING FOAM BOTTOM 39"	P	--

50" PACKING PARTS LISTING

	REF No.	PARTS	DESCRIPTION	*	PRICE CODE
		SPAKCH188WJZZ	PACKING CASE 50" LC50LE65*	P	--
		SPAKCH009WJZZ	BOTTOM CASE LC50LE75*	P	--
		SPAKPB477WJZZ	P_ BAG /HOSSO-PP FOR 46"	P	--
		SPAKXD817WJZZ	PACKING FOAM TOP 50"	P	--
		SPAKXD818WJZZ	PACKING FOAM BOTTOM 50"	P	--

SHARP®

SHARP CORPORATION
AV System Group

Sharp Electronics (Europe) Limited
Sucursal en España
WTC Almeda Park
Plaça de la Pau, s/n (Ed. 6-PB)
08940 Cornellà de Llobregat
Barcelona-Spain