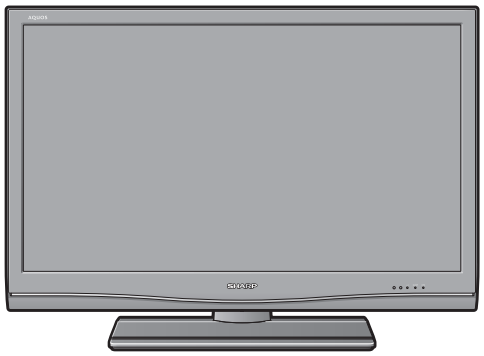
SHARP SERVICE MANUAL

No. S97S9LC32X20E



LCD COLOUR TELEVISION

MODELS LC-32X20E/S/RU LC-37X20E/S/RU

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

CONTENTS

SAFETY PRECAUTION
IMPORTANT SERVICE SAFETY PRECAUTION....i
Precautions for using lead-free solder ii

CHAPTER 1. OPERATION MANUAL
[1] SPECIFICATIONS 1-1
[2] OPERATION MANUAL 1-2
[3] DIMENSIONS 1-7

CHAPTER 2. REMOVING OF MAJOR PARTS
[1] REMOVING OF MAJOR PARTS (LC-32X20E/S/RU).... 2-1
[2] REMOVING OF MAJOR PARTS (LC-37X20E/S/RU).... 2-11

CHAPTER 3. ADJUSTMENT PROCEDURE
[1] ADJUSTMENT PROCEDURE 3-1

CHAPTER 4. TROUBLESHOOTING TABLE
[1] TROUBLESHOOTING TABLE 4-1

CHAPTER 5. MAJOR IC INFORMATIONS
[1] MAJOR IC INFORMATIONS 5-1

CHAPTER 6. BLOCK DIAGRAM/WIRING DIAGRAM
[1] SYSTEM BLOCK DIAGRAM 6-1
[2] TERMINAL BLOCK DIAGRAM 6-2
[3] MAIN BLOCK DIAGRAM 6-3
[4] POWER BLOCK DIAGRAM 6-4
[5] WIRING DIAGRAM (LC-32X20E/S/RU) 6-5
[6] WIRING DIAGRAM (LC-37X20E/S/RU) 6-6

CHAPTER 7. PRINTED WIRING BOARD
[1] MAIN UNIT PRINTED WIRING BOARD.... 7-1
[2] TERMINAL UNIT PRINTED WIRING BOARD.... 7-5
[3] R/C, LED UNIT PRINTED WIRING BOARD.... 7-8
[4] KEY UNIT PRINTED WIRING BOARD 7-8
[5] MINI AV UNIT PRINTED WIRING BOARD.... 7-9
[6] POWER UNIT PRINTED WIRING BOARD.... 7-11

CHAPTER 8. SCHEMATIC DIAGRAM
[1] DESCRIPTION OF SCHEMATIC DIAGRAM.... 8-1
[2] SCHEMATIC DIAGRAM 8-2

Parts Guide

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.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SAFETY PRECAUTION

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.

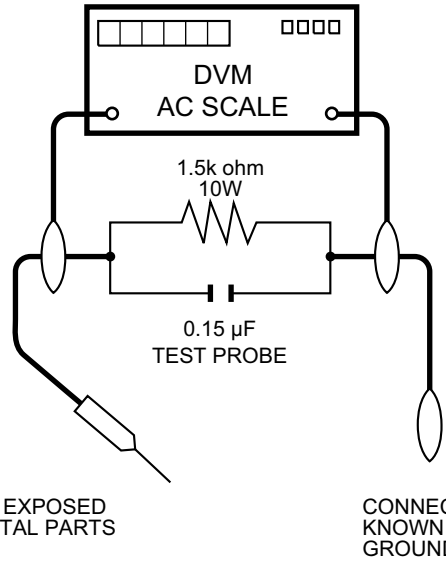
CAUTION:
FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.
F7000 (5A/250V)

■ BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

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

3. 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.
4. 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.
5. 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.
- 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.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- 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 1.05 V 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 color 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 "⚠" and shaded areas in the Replacement Parts List and Schematic Diagrams.

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

■Employing lead-free solder

- "PWBs" 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 copper.

■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.

■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

CHAPTER 1. OPERATION MANUAL

[1] SPECIFICATIONS

Specifications

Item			32" LCD COLOUR TV, Model: LC-32X20E, LC-32X20S, LC-32X20RU	37" LCD COLOUR TV, Model: LC-37X20E, LC-37X20S, LC-37X20RU
LCD panel			32" Advanced Super View & BLACK TFT LCD	37" Advanced Super View & BLACK TFT LCD
Number of dots			6,220,800 dots (1920 × 1080 × 3 dots)	
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60	
TV Function	TV-Standard	Analogue	CCIR (B/G, I, D/K, L/L')	
		Digital	DVB-T (2K/8K OFDM)	
	Receiving Channel	VHF/UHF	E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch (Digital: E5-E69ch)	
		CATV	Hyper-band, S1–S41ch	
	TV-Tuning System		Auto Preset 999 ch, Auto Label, Auto Sort	
	STEREO/BILINGUAL		NICAM/A2	
Brightness			450 cd/m^2	
Viewing angles			H : 176˚ V : 176˚	
Audio amplifier			10W × 2	
Speaker			(40 mm × 100 mm) × 2 / Ø 20 mm × 2	
Terminals	Antenna		UHF/VHF 75 Ω Din type (Analogue & Digital)	
	RS-232C		D-Sub 9 pin male connector	
	EXT 1		SCART (AV input, Y/C input, RGB input, TV output)	
	EXT 2		SCART (AV input/monitor output, Y/C input, AV Link, RGB input)	
	EXT 3		S-VIDEO (Y/C input), RCA pin (AV input)	
	EXT 4		HDMI	
	EXT 5		HDMI	
	EXT 6		HDMI, Ø 3.5 mm jack	
	EXT 7		15 pin mini D-sub, Ø 3.5 mm jack	
	EXT 8		COMPONENT IN: Y/Pb(Cb)/Pr(Cr), RCA pin (L/R)	
	DIGITAL AUDIO OUTPUT		Optical SPDIF Digital audio output	
	C. I. (Common Interface)		EN50221, R206001	
	OUTPUT		RCA pin (Audio)	
	Headphones		Ø 3.5mm 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	
Power Requirement			AC 220–240 V, 50 Hz	
Power Consumption			132W (0.5 W Standby) (Method IEC60107)	170W (0.5 W Standby) (Method IEC60107)
Weight			15.0 kg (Without stand), 18.0 kg (With stand)	18.0 kg (Without stand), 21.0 kg (With stand)
Operating temperature			0˚C to +40˚C	

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Optional accessory

The listed optional accessories are available for the LCD colour TVs. Please purchase them at your nearest shop.

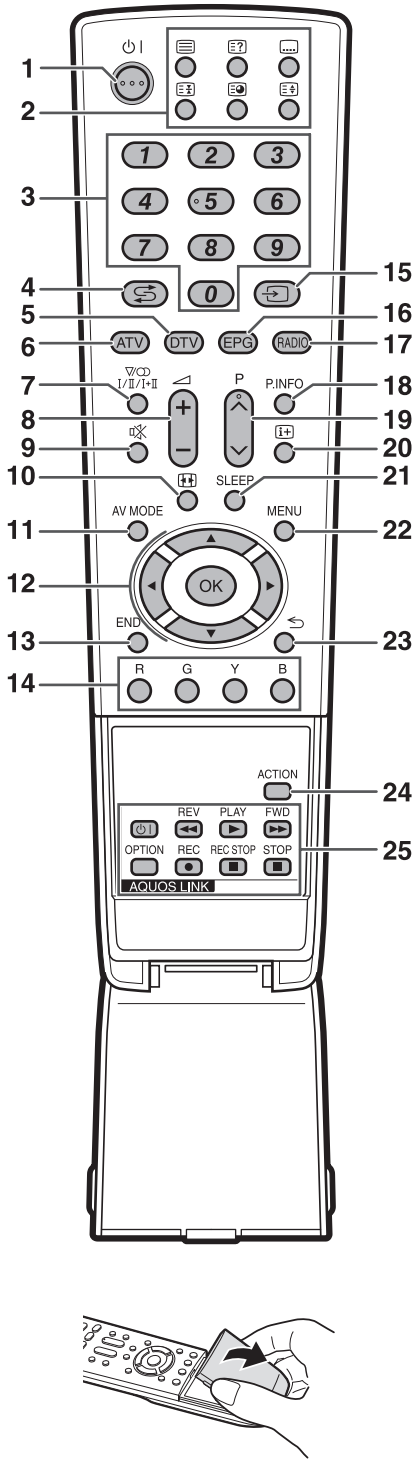
- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

No.	Part name	Part number
1	Wall mount bracket	AN-37AG2
2	Attachment	AN-37P30

[2] OPERATION MANUAL

Introduction

Remote control unit



1 ⏻ | **(Standby/On)**

2 **Buttons for useful operations**

(Teletext)
ATV: Display analogue teletext.
DTV: Select MHEG-5 and teletext for DTV (Page 14)

(Reveal hidden Teletext)

(Subtitle)
ATV/DTV/External: Switch subtitle languages on/off.

(Freeze/Hold)
Press to freeze a moving image on the screen.
TELETEXT: Stop updating Teletext pages automatically orrelease the hold mode.

(Subpage)

(Top/Bottom/Full)
Set the area of magnification in teletext mode.

3 **0 - 9 numeric buttons**
Set the channel
Enter desired numbers.
Set the page in teletext mode.

4 **(Flashback)**
Press to return to the previous image in normal viewing mode.

5 **DTV**
Press to access DTV mode.

6 **ATV**
Press to access conventional analogue TV mode.

7 **(Sound mode)**
Select the sound multiplex mode.

8 **(+/–) (Volume)**
Increase/decrease TV volume.

9 **(Mute)**
TV sound on/off

10 **(WIDE MODE)**
Select the wide mode.

11 **AV MODE**
Select a video setting.

12 **▲/▼/◀/▶ (Cursor)**
Select a desired item on the setting screen.

OK
Execute a command within the menu screen.
ATV/DTV: Display the programme list when no other menu screen is running.

13 **END**
Exit the menu screen.

14 **R/G/Y/B (Colour) buttons**
On the menu screen, the coloured buttons are correspondingly used to select the coloured items on the screen. (e.g. EPG, MHEG-5, TELETEXT)

15 **(INPUT SOURCE)**
Select an input souce. (TV, EXT1, EXT2, EXT3, EXT4, EXT5, EXT6, EXT7, EXT8)

16 **EPG**
DTV: Display the EPG screen.

17 **RADIO**
DTV: Switch between Radio and Data mode.
- When only data boadcasting (no radio broadcasting) is transmitted by DVB, switching to Data mode will be performed.

18 **P. INFO**
Press to display programme information which is transmitted though digital video broadcasting in the upper left corner of the screen. (DTV only)

19 **P (∧/∨)**
Select the TV channel.
In analogue TV mode, external sources can also be selected.

20 **(Display information)**
Press to display the station information (channel number, signal, etc.) in the upper right corner of the screen.

21 **SLEEP**
Press to schedule a time for the TV to automatically standby.

22 **MENU**
ATV/DTV: Menu screen on/off.

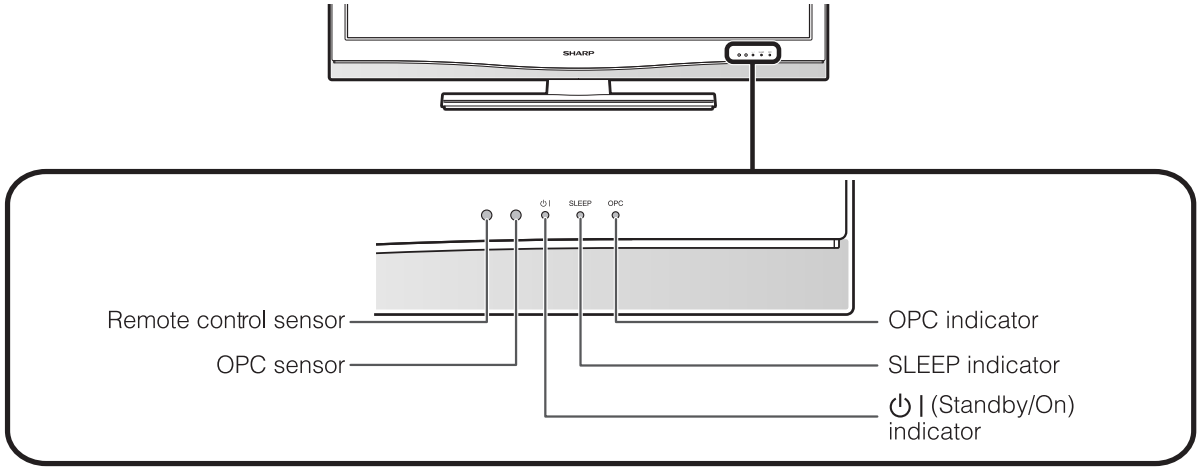
23 **(Return)**
Return to the previous menu sceen.

24 **ACTION (Action Mode)**
This key does not work on this model.

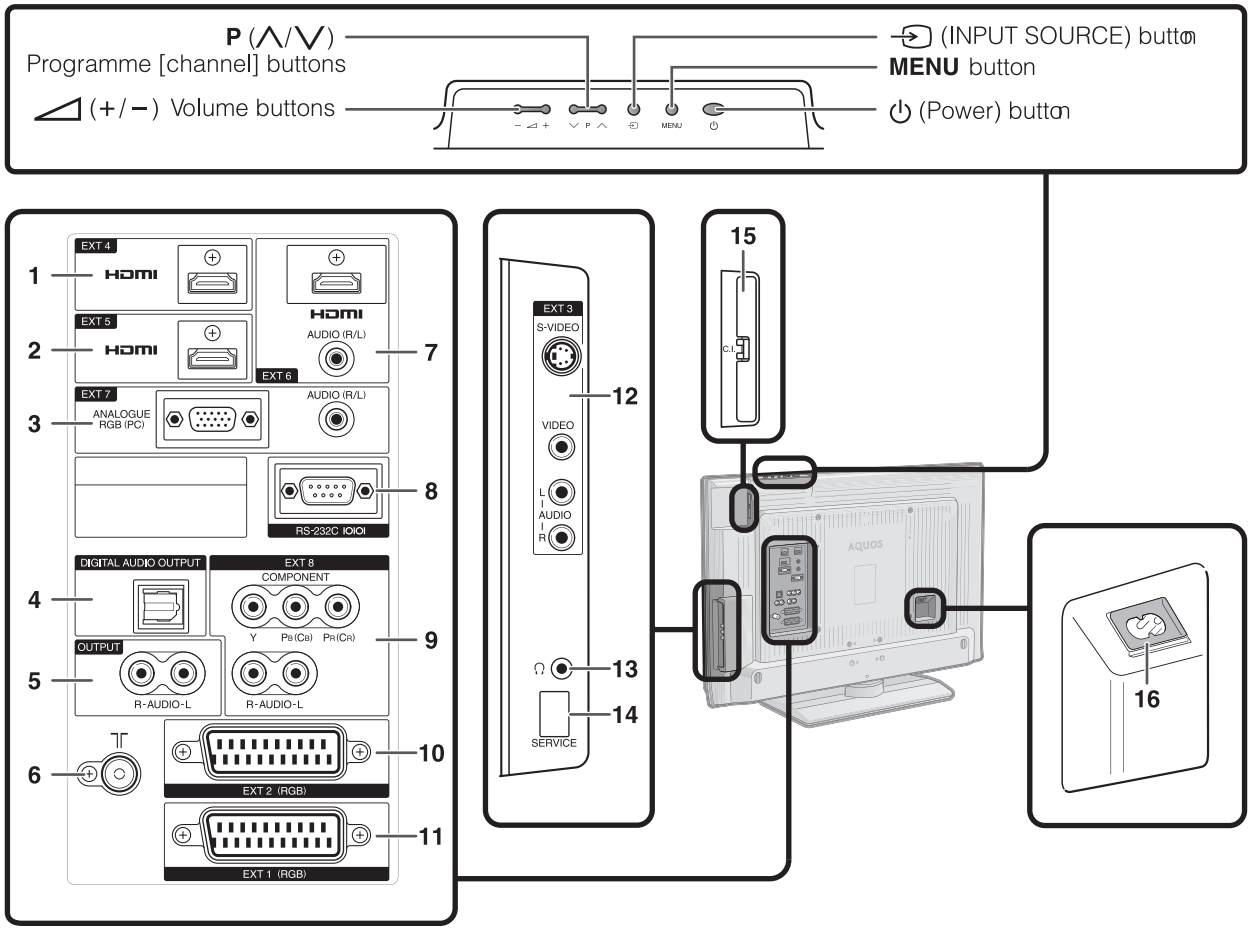
25 **AQUOS LINK buttons**
If external equipment such as a AQUOS BD Player is connected via HDMI cables and is AQUOS LINK compatible, you can use these AQUOS LINK buttons.

Introduction

TV (Front view)



TV (Rear view)



1 EXT 4 (HDMI) terminal
2 EXT 5 (HDMI) terminal
3 EXT 7 (ANALOGUE RGB/AUDIO) terminal
4 DIGITAL AUDIO OUTPUT terminal
5 OUTPUT (AUDIO) terminals
6 Antenna terminal
7 EXT 6 (HDMI/AUDIO) terminals
8 RS-232C terminal
9 EXT 8 (COMPONENT/AUDIO) terminal
10 EXT 2 (RGB) terminal
11 EXT 1 (RGB) terminal
12 EXT 3 terminals
13 Headphones
14 SERVICE socket
15 COMMON INTERFACE slot
16 AC INPUT terminal

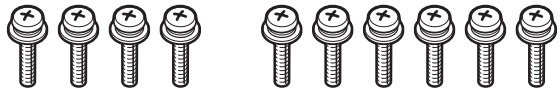
Preparation

Attaching the stand unit

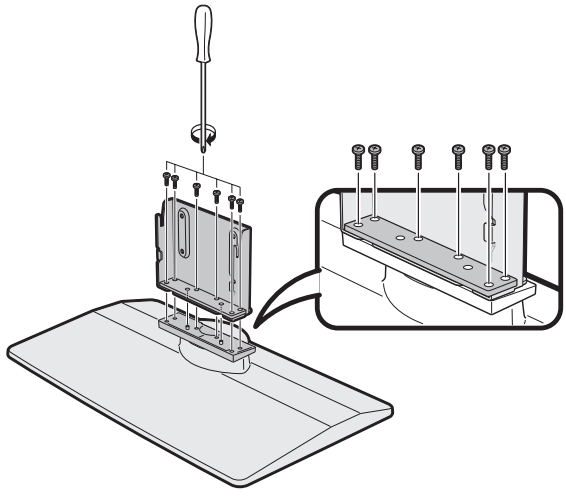
- Before attaching (or detaching) the stand, unplug the AC cord from the AC INPUT terminal
- Before performing work spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

CAUTION
- **Attach the stand in the correct direction.**
- **Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.**

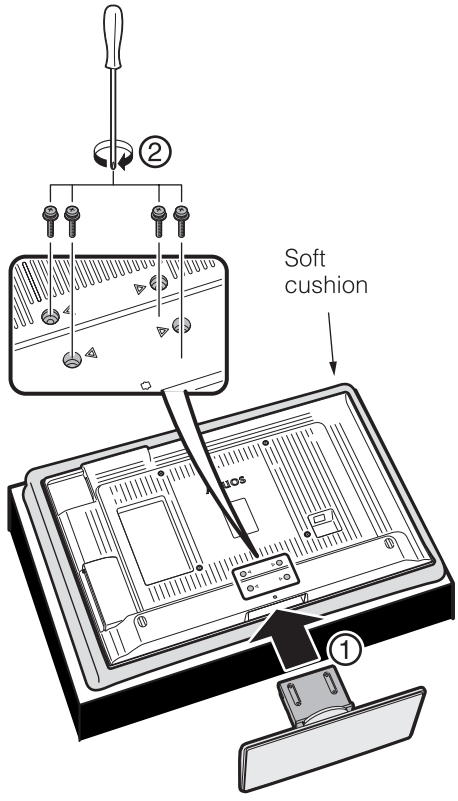
1 Confirm that there are 10 screws with the stand unit.



2 Attach the supporting post for the stand unit onto the base using the 6 screws with the screw driver (supplied) as shown.



3 ① Insert the stand into the openings on the bottom of the TV. (Hold the stand so it will not drop from the edge of the base area.)
② Insert and tighten the 4 screws into the 4 holes on the rear of the TV.

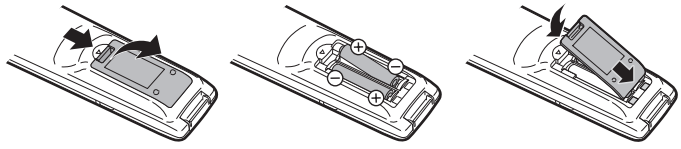


NOTE
- To detach the stand unit, perform the steps in reverse order.

Preparation

Inserting the batteries

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



1 Open the battery cover.

2 Insert two supplied "AAA" size batteries.
- Place batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.

3 Close the battery cover.

CAUTION

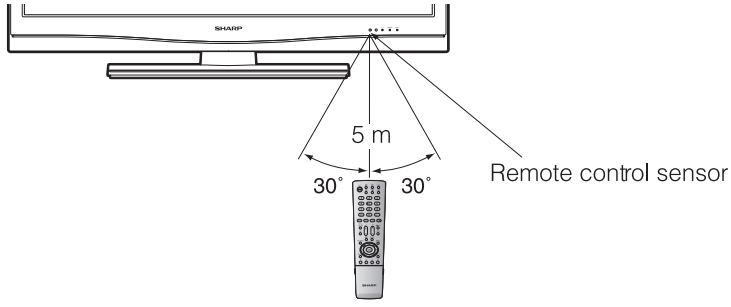
Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life 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.

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.

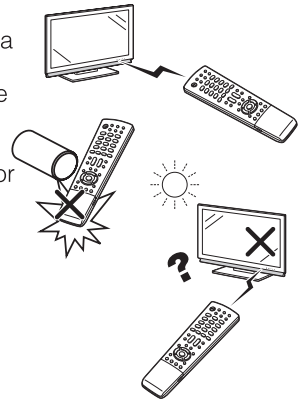
Using the remote control unit

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.



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 case, change the angle of the lighting or TV, or operate the remote control unit closer to the remote control sensor.



Appendix

Troubleshooting

Problem	Possible Solution
• No power.	• Check if you pressed ⏻ I on the remote control unit. If the indicator on the TV lights upred, press ⏻ I. • Is the AC cord disconnected? • Check if you pressed ⏻ on the TV.
• Unit cannot be operated.	• External influences such as lightning, static electricity , etc., may cause improper operation. In this case, operate the unit after first tur ning the power off, or unplugging the AC cord and re-plugging it in after 1 or 2 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 fluor escent light illuminated onto the remote control sensor?
• Picture is cut off.	• Is the image position correct? • Are screen mode adjustments (WIDE MODE) such as picture size made correctly?
• Strange colour, light colour, or dark, 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 colour system setting.
• Power is suddenly tuned off.	• The unit's internal temperature has increased. Remove any objects blocking the vent or clean. • Is the sleep timer set? Select "Off" from the "Sleep Timer" menu. • Is "No signal off" activated?
• No picture.	• Are connections to external equipment correct? • Is the input signal type selected correctly after connection? • Is the correct input source selected? • Is a non-compatible signal being input? • Is the picture adjustment correct? • Is the antenna connected properly? • Is "On" selected in "Audio Only"?
• 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 change in temperature. This does not affect the TV's performance.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
  Storage temperature: +5˚C to +35˚C.

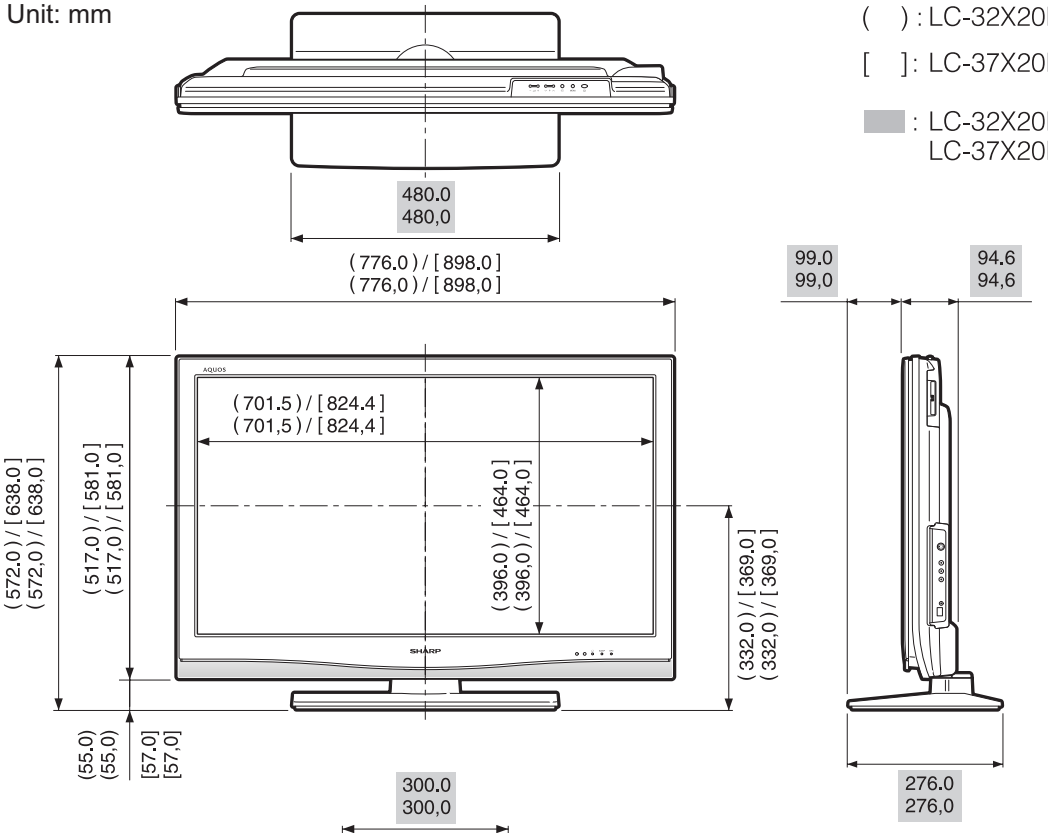
[3] DIMENSIONS

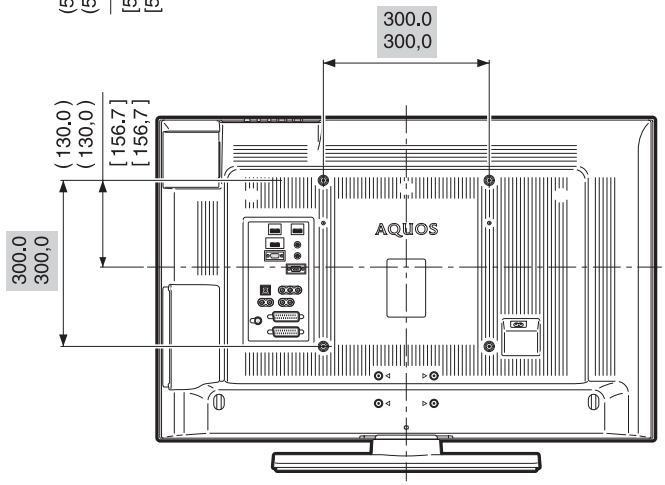
Unit: mm

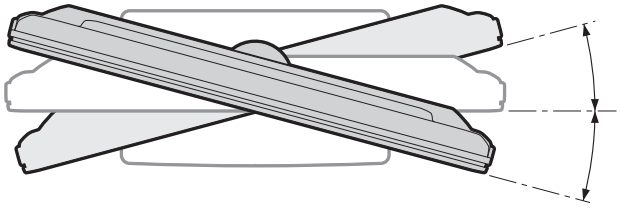
( ) : LC-32X20E/LC-32X20S/LC-32X20RU

[ ] : LC-37X20E/LC-37X20S/LC-37X20RU

: LC-32X20E/LC-32X20S/LC-32X20RU
LC-37X20E/LC-37X20S/LC-37X20RU





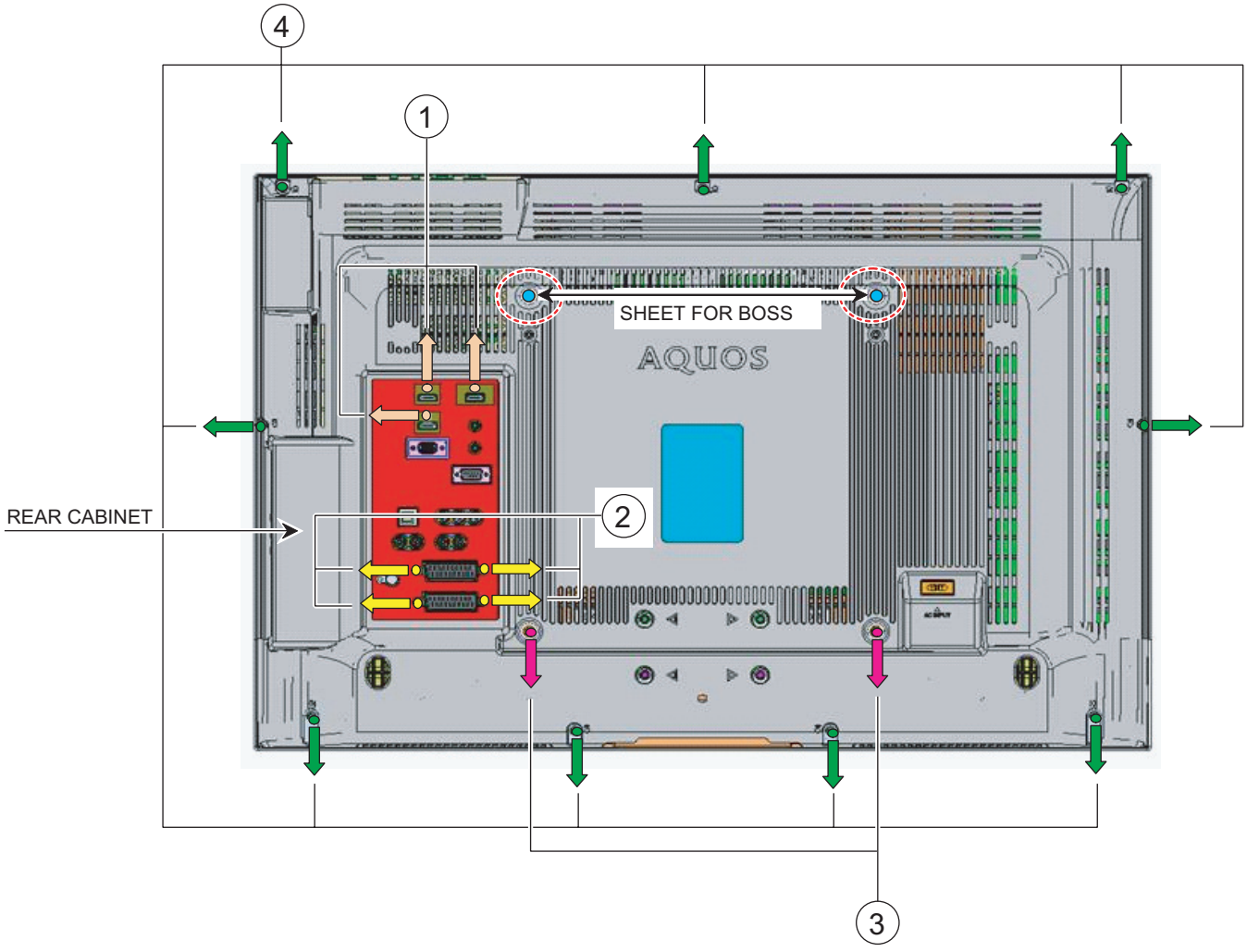


:LC-32X20E/LC-32X20S/LC-32X20RU
:LC-37X20E/LC-37X20S/LC-37X20RU

CHAPTER 2. REMOVING OF MAJOR PARTS

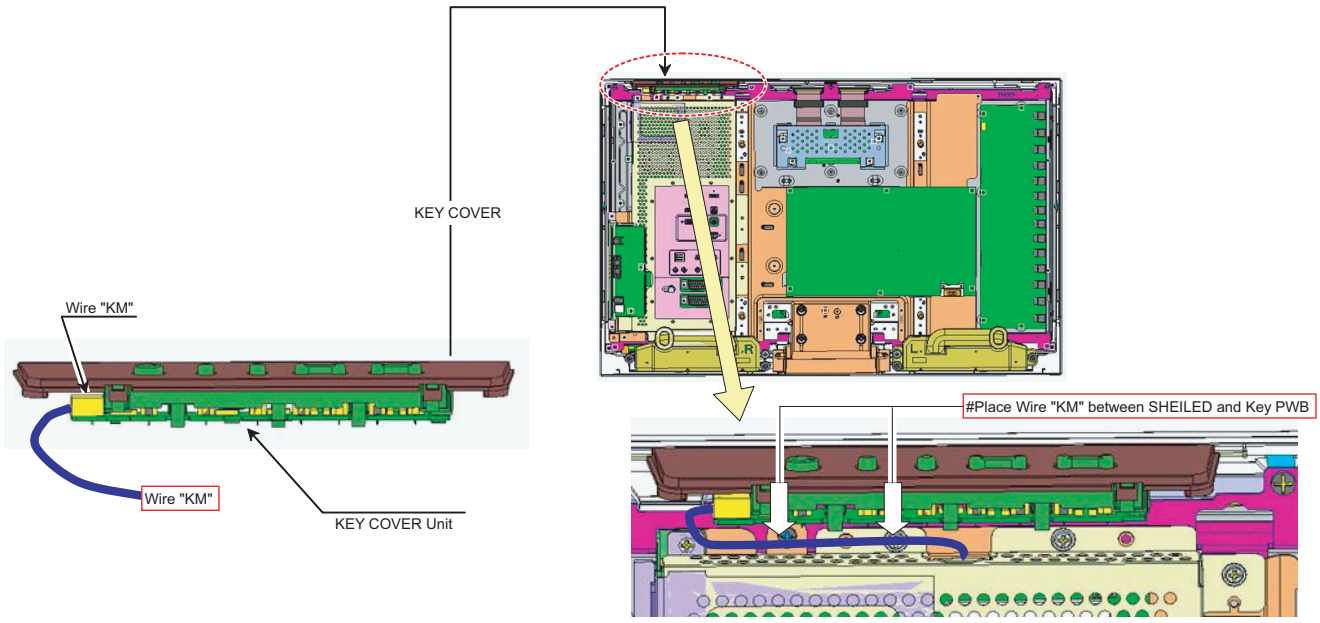
[1] REMOVING OF MAJOR PARTS (LC-32X20E/S/RU)

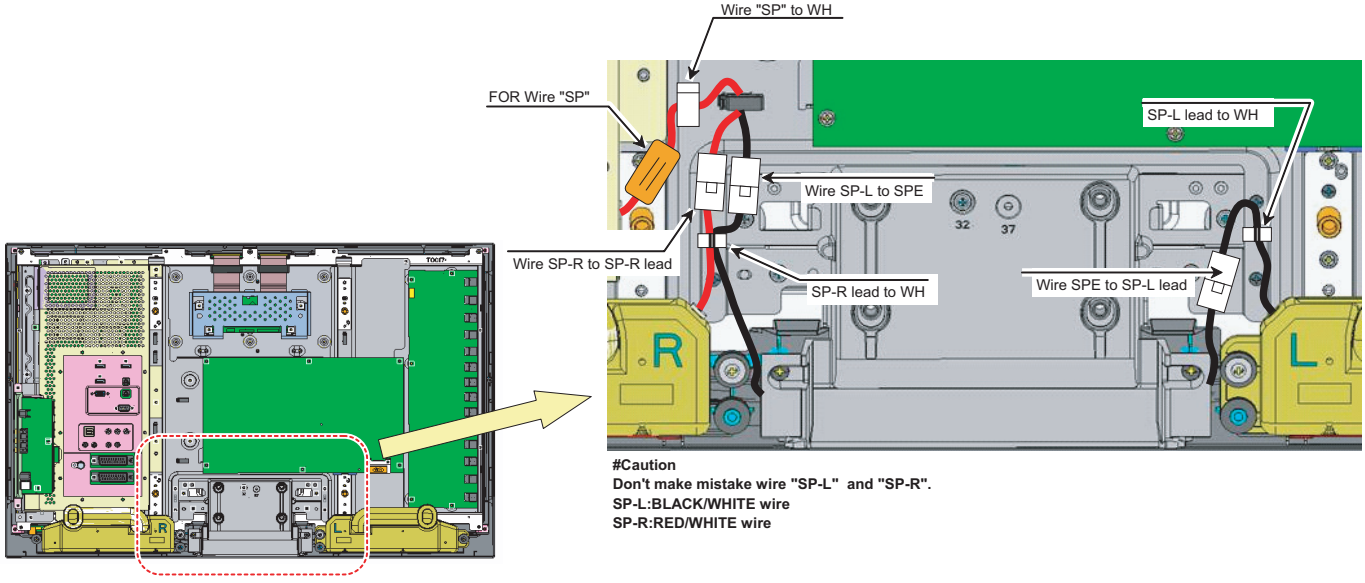
1. Remove the 3 lock screws ①, 4 lock screws ②, 2 lock screws ③ and the 9 lock screws ④. Detach the Rear Cabinet.



2. Remove all the connectors from PWBs.

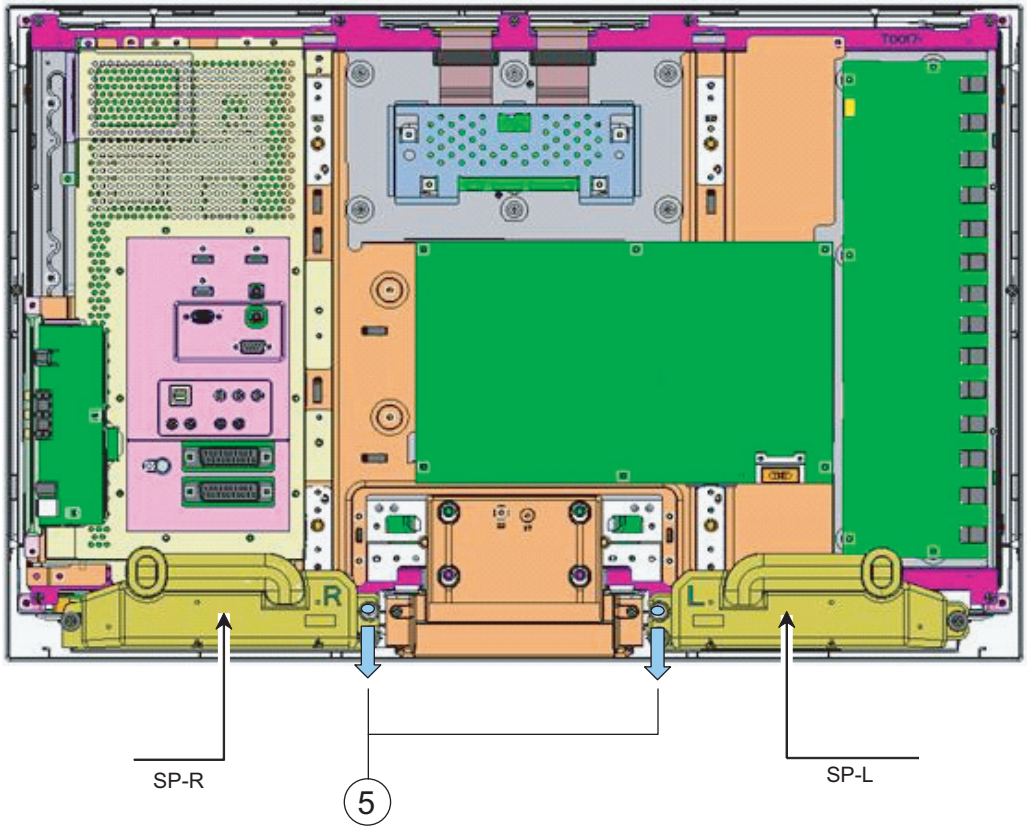
   Detach the KEY COVER Unit.



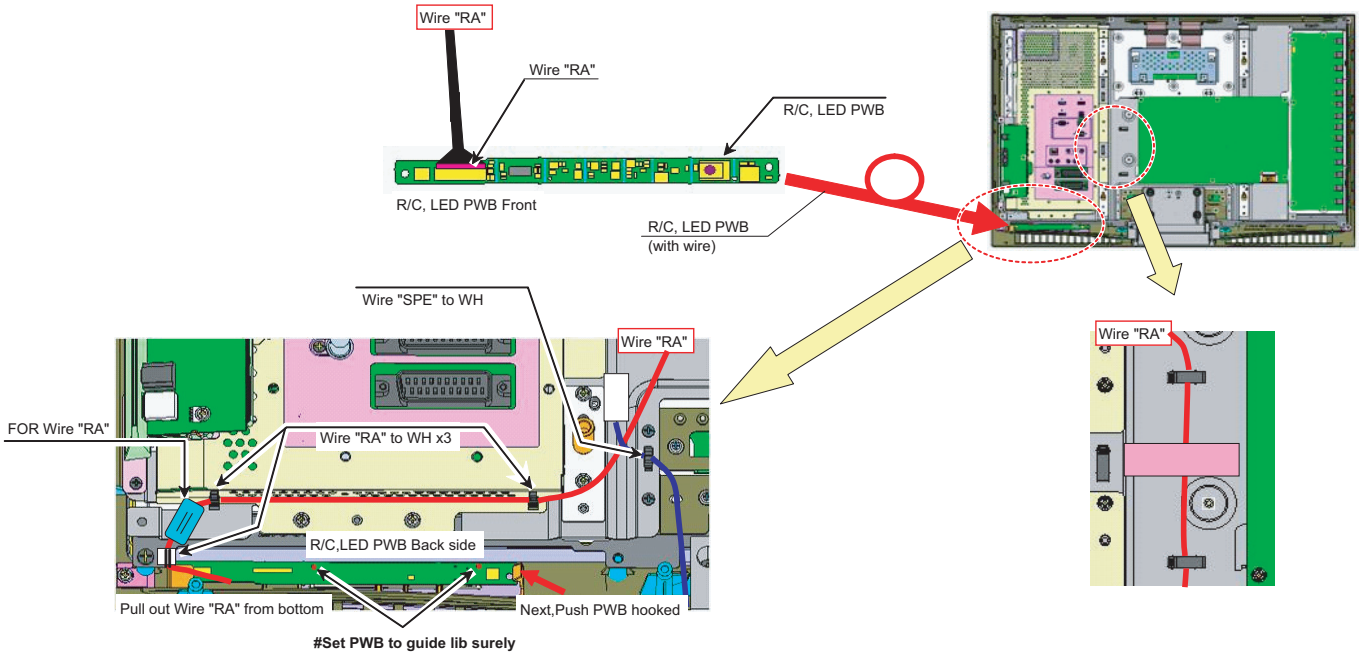


#Caution
Don't make mistake wire "SP-L" and "SP-R".
SP-L:BLACK/WHITE wire
SP-R:RED/WHITE wire

3. Remove the 2 lock screws (5) and detach the Speaker L/R.

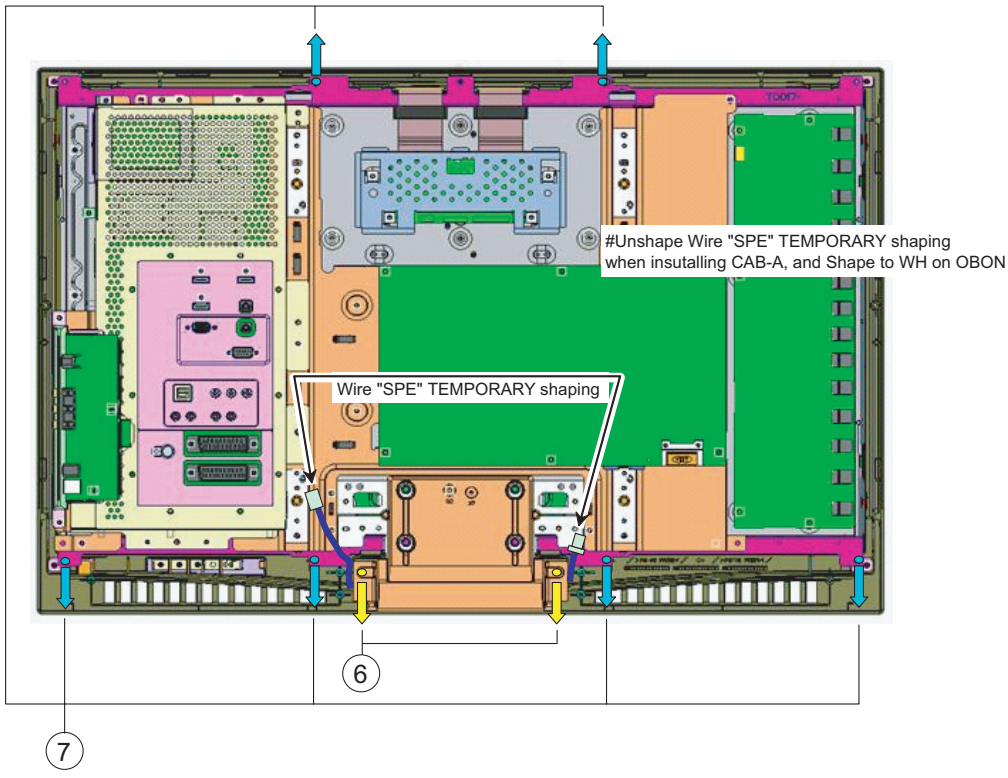


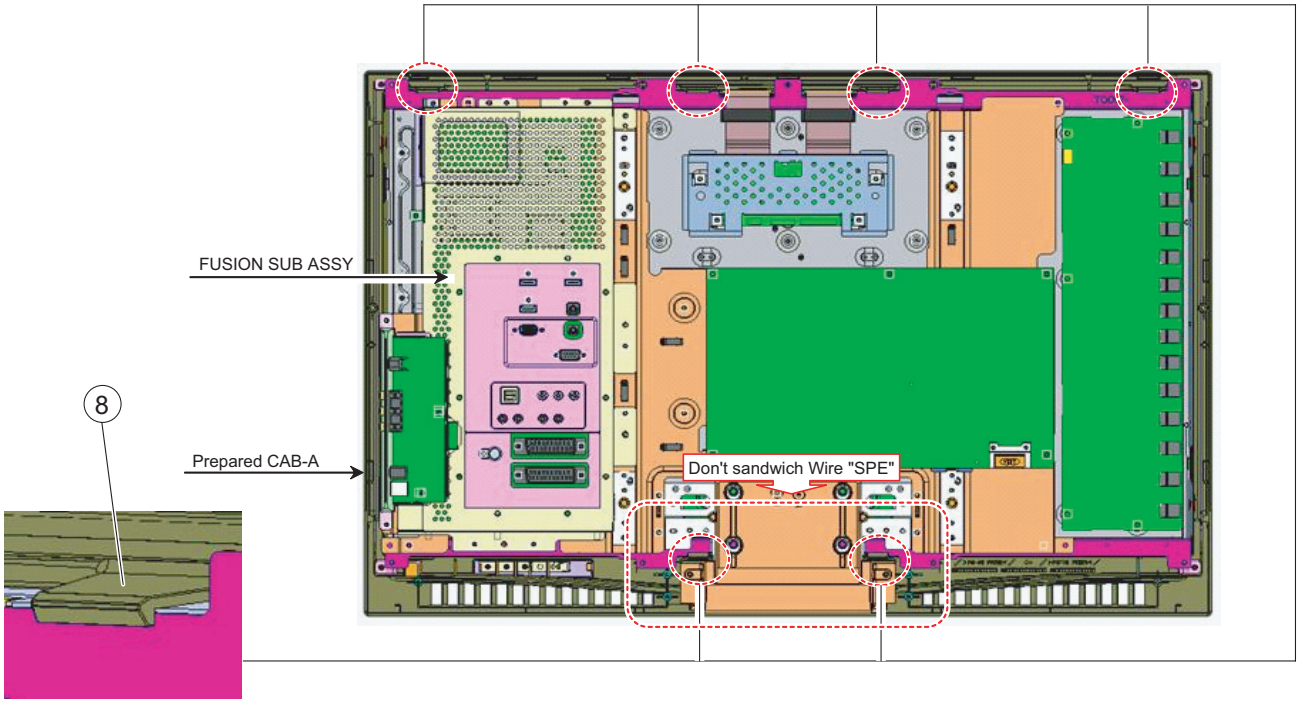
4. Remove all the connectors from PWBs.



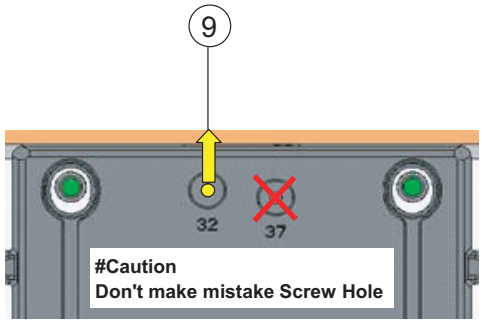
5. Remove the R/C, LED Unit.

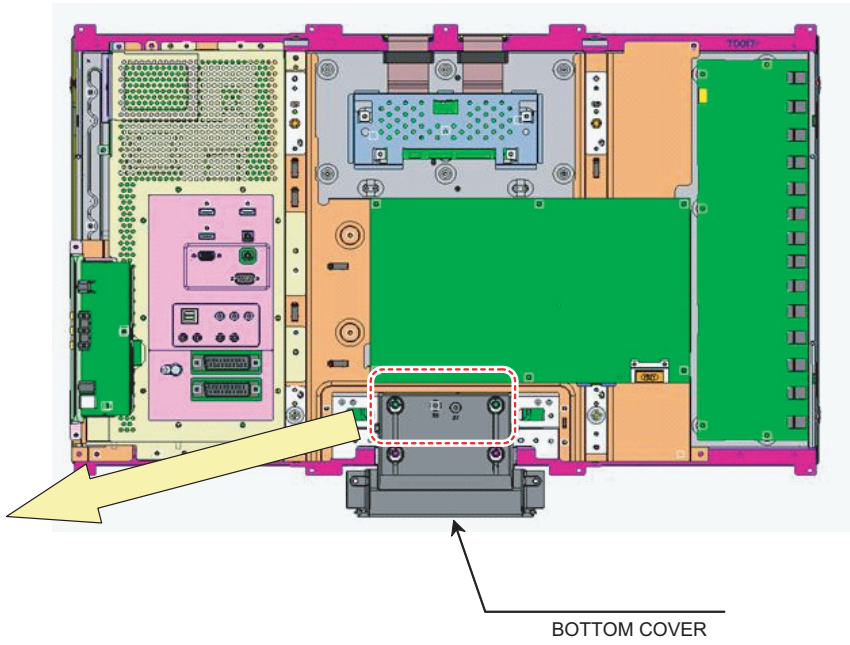
6. Remove the 2 lock screws ⑥, 6 lock screws ⑦ and the 6 lock hooks ⑧. Detach the LCD Panel Module.





7. Remove the 1 lock screw ⑨ and detach the Bottom Cover.

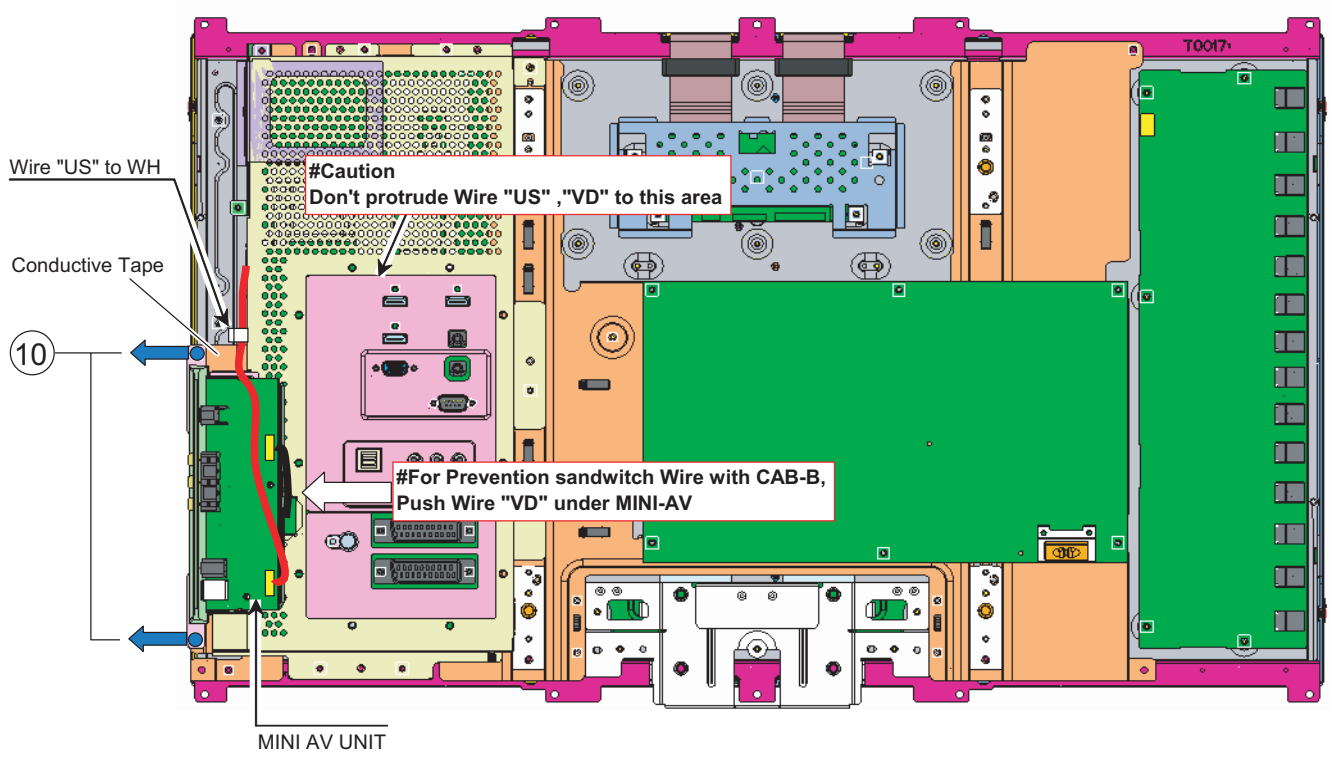


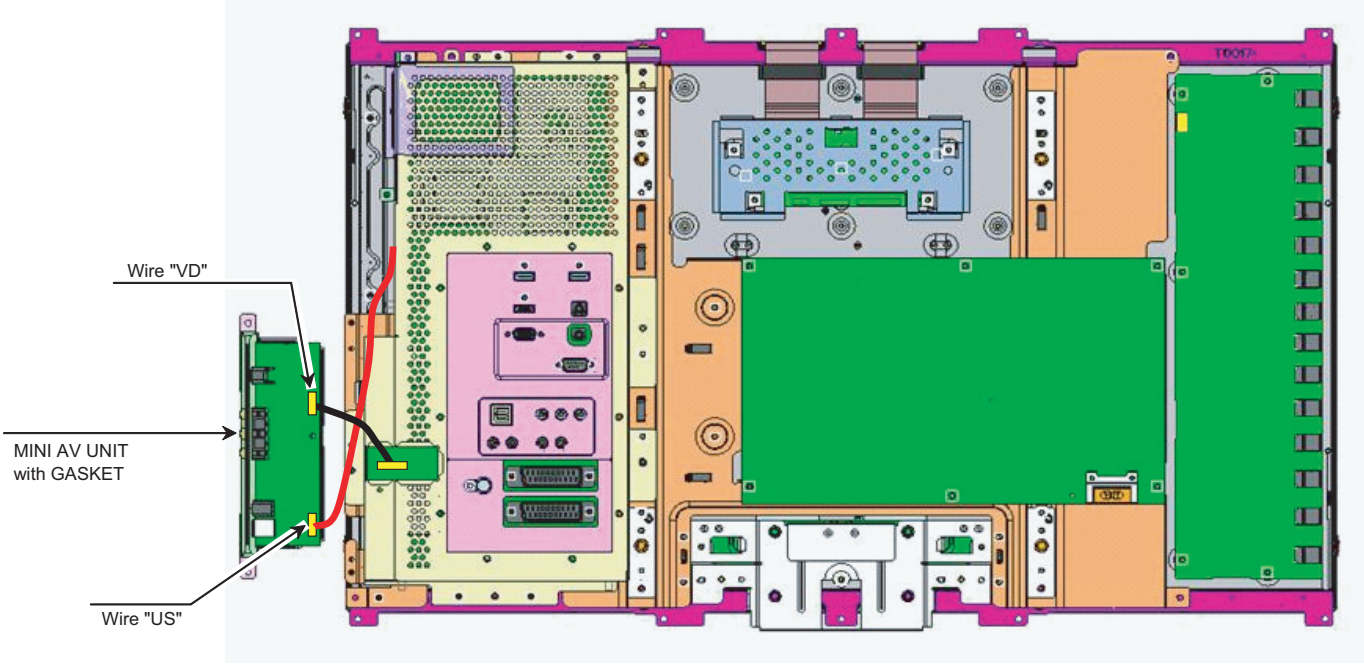


8. Remove the 2 lock screws (10) and detach the MINI AV Unit.

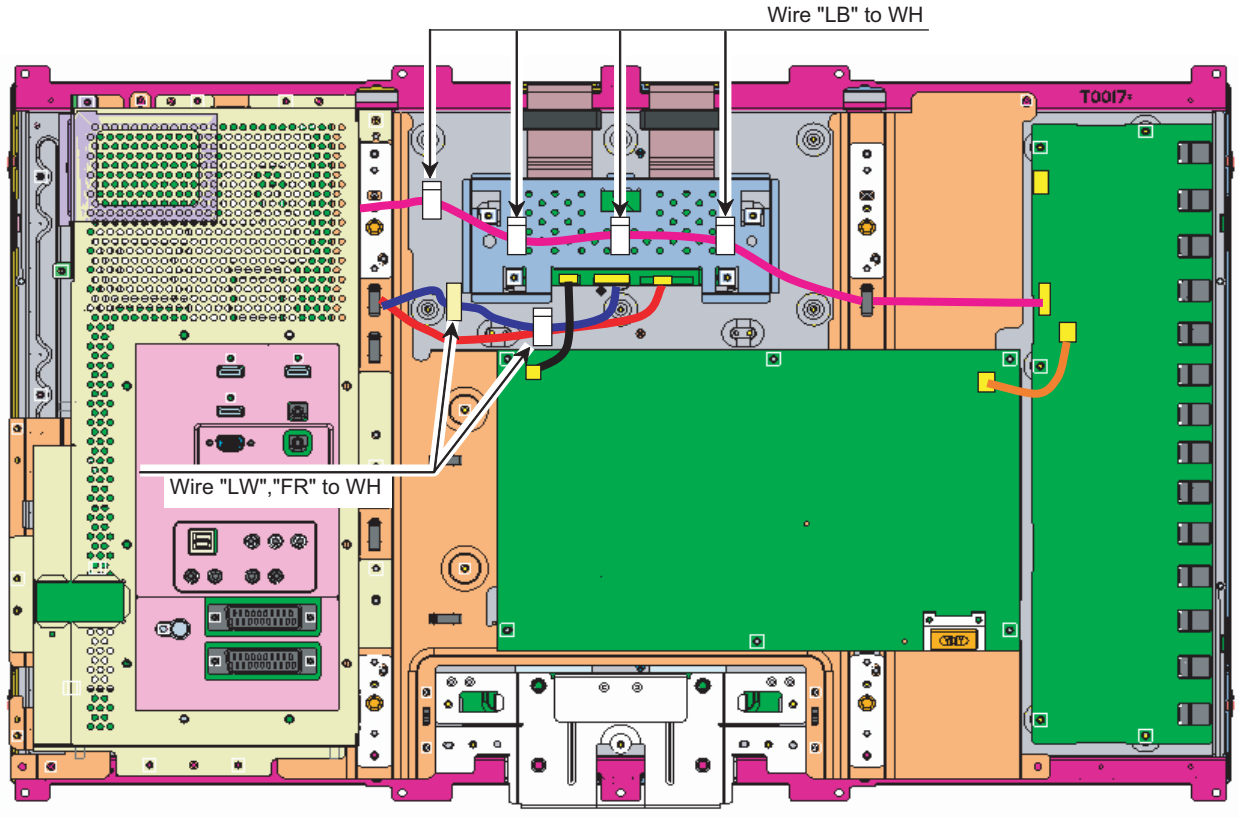
   Detach the Conductive Tape.

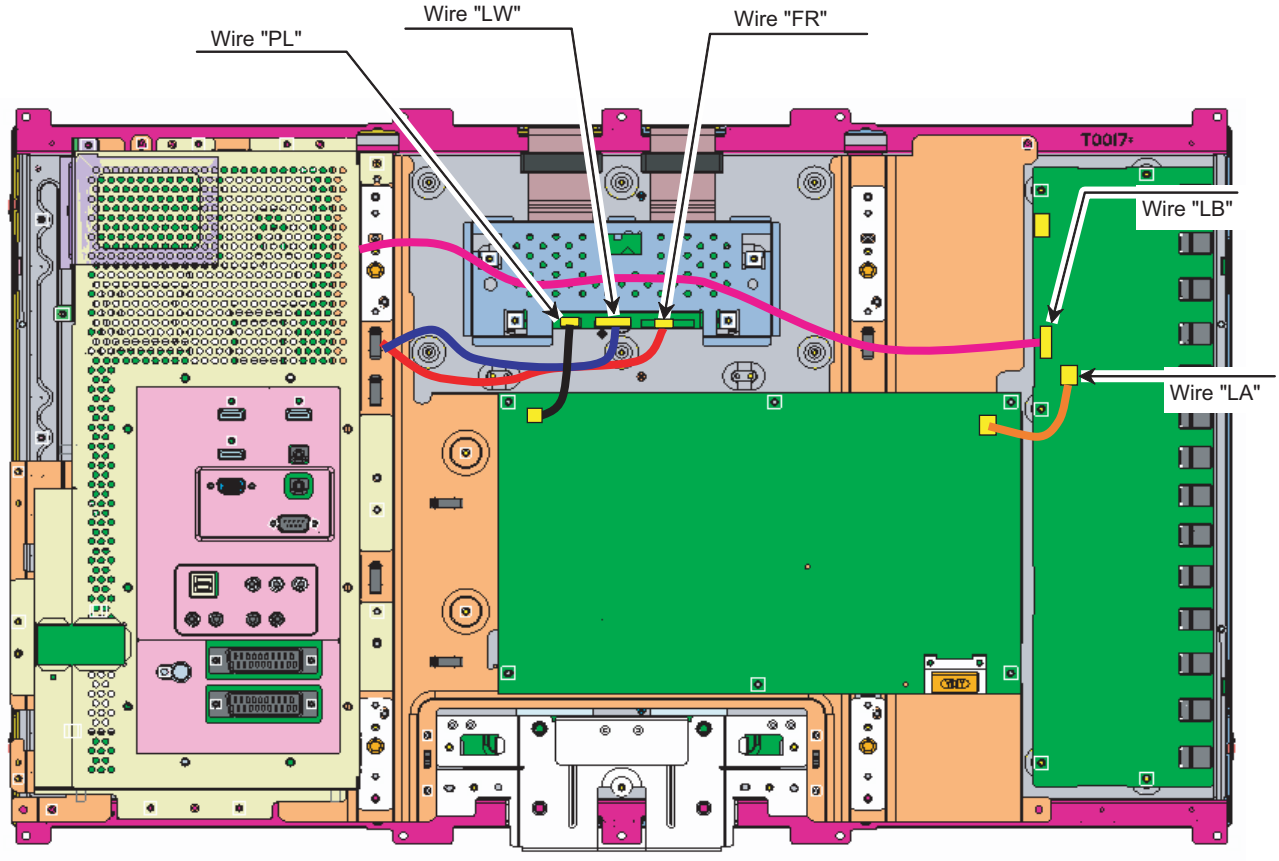
   Remove all the connectors from PWBs.



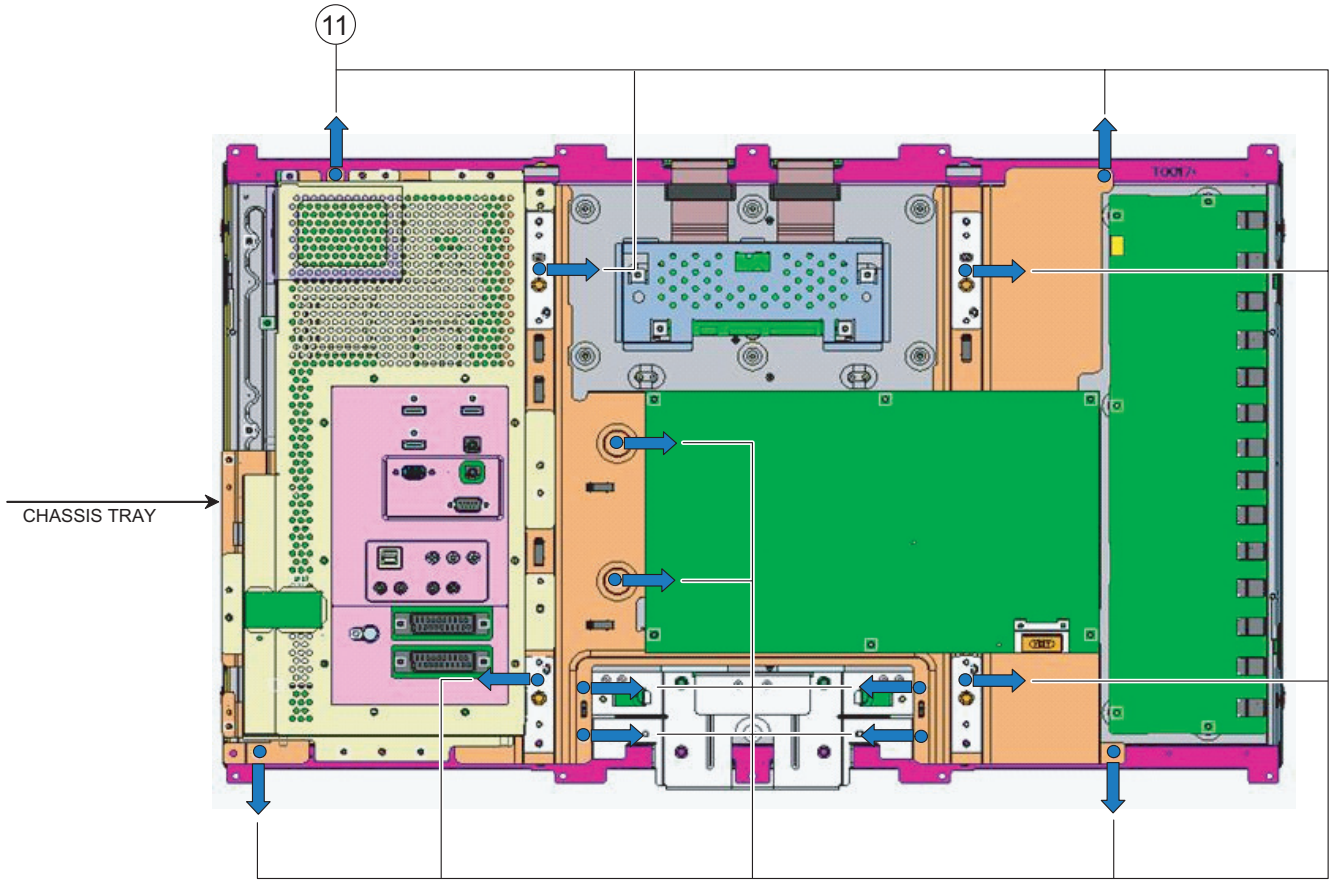


9. Remove all the connectors from PWBs.



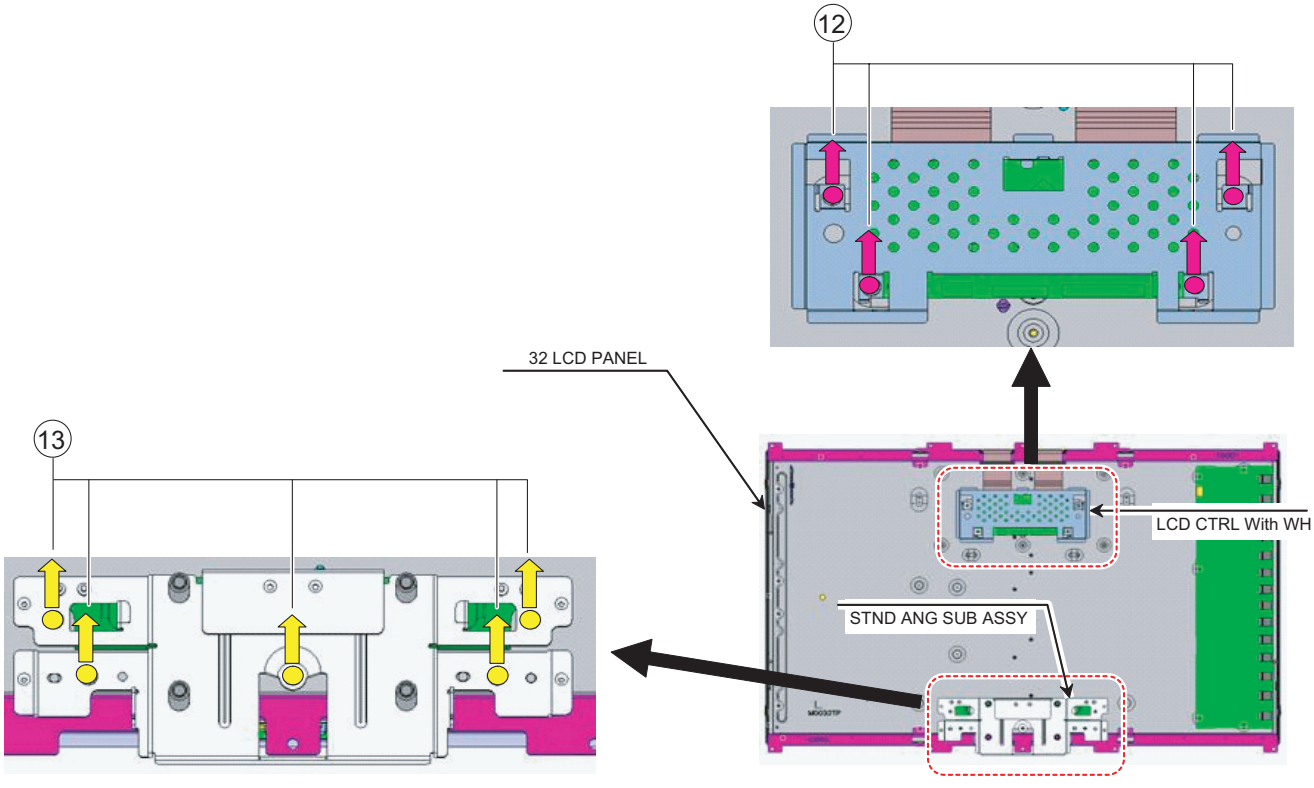


10. Remove the 14 lock screws (11) and detach the Chassis Tray.

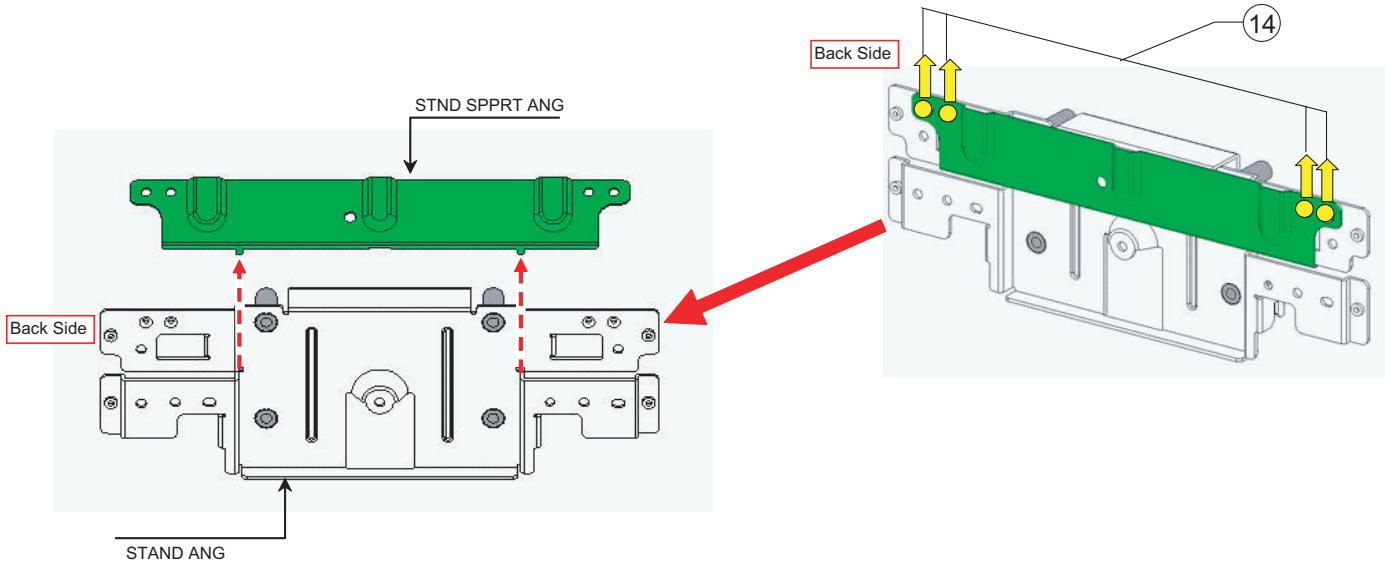


11. Remove the 4 lock screws (12) and detach the LCD Control Cover.

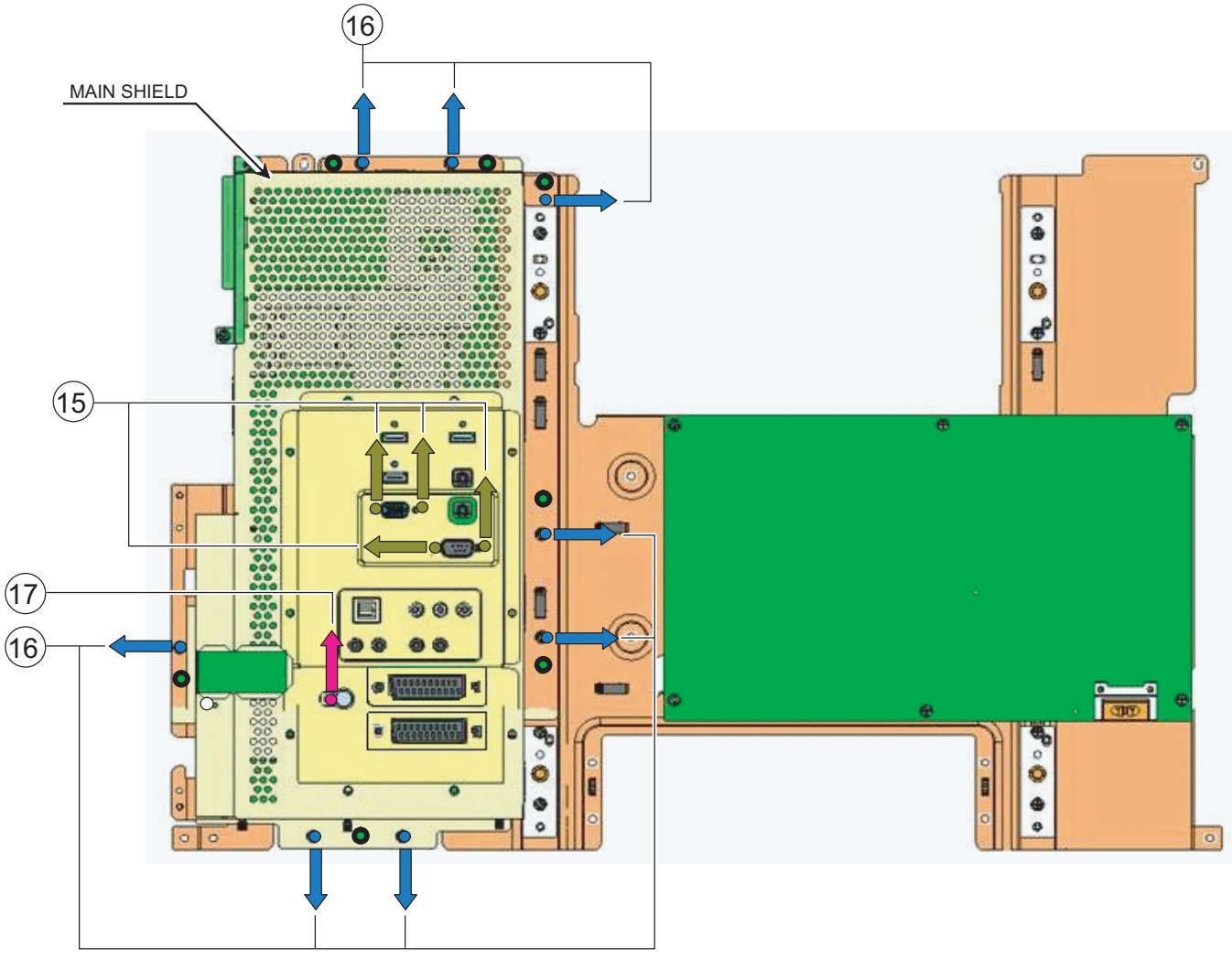
Remove the 5 lock screws (13) and detach the Stand Angle Sub Ass'y.



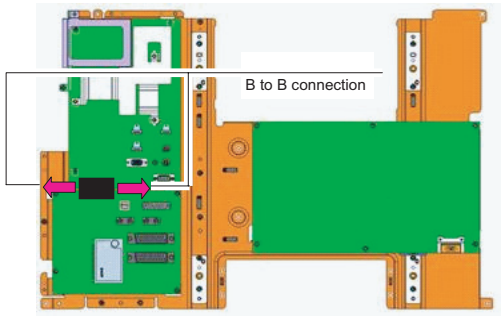
12.Remove the 4 lock screws ⑭ and detach the Stand Support Angle.

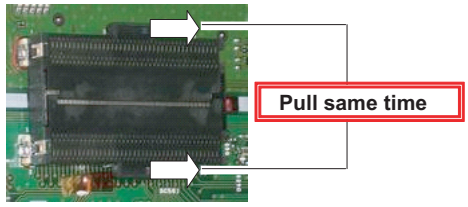


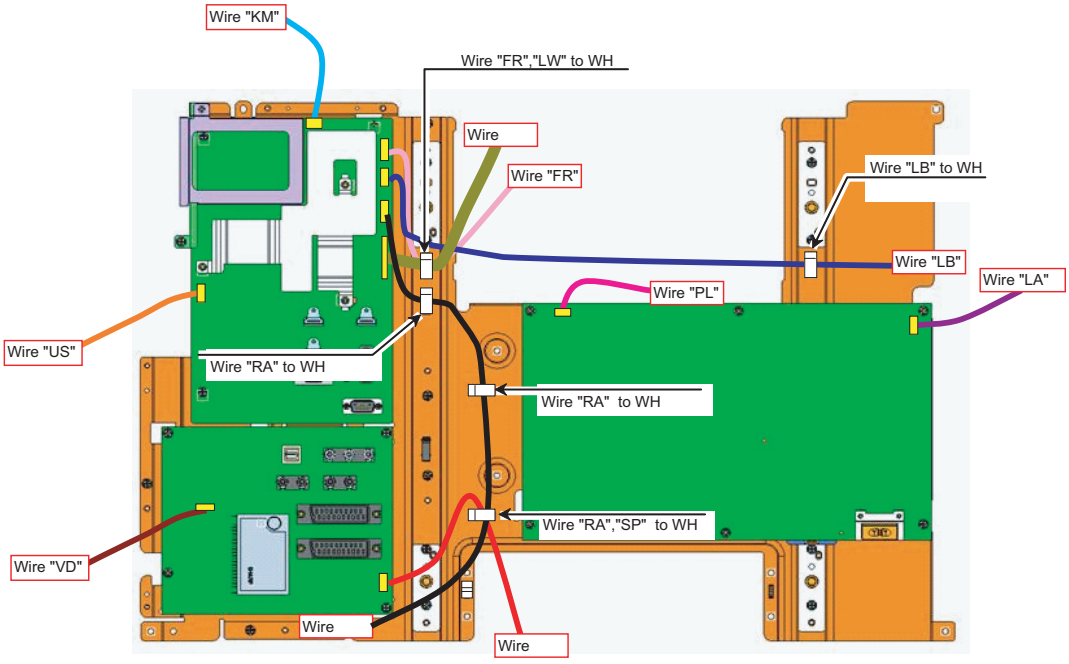
13.Remove the 4 lock screws ⑮, 8 lock screws ⑯ and the 1 lock screw ⑰. Detach the Main Shield.

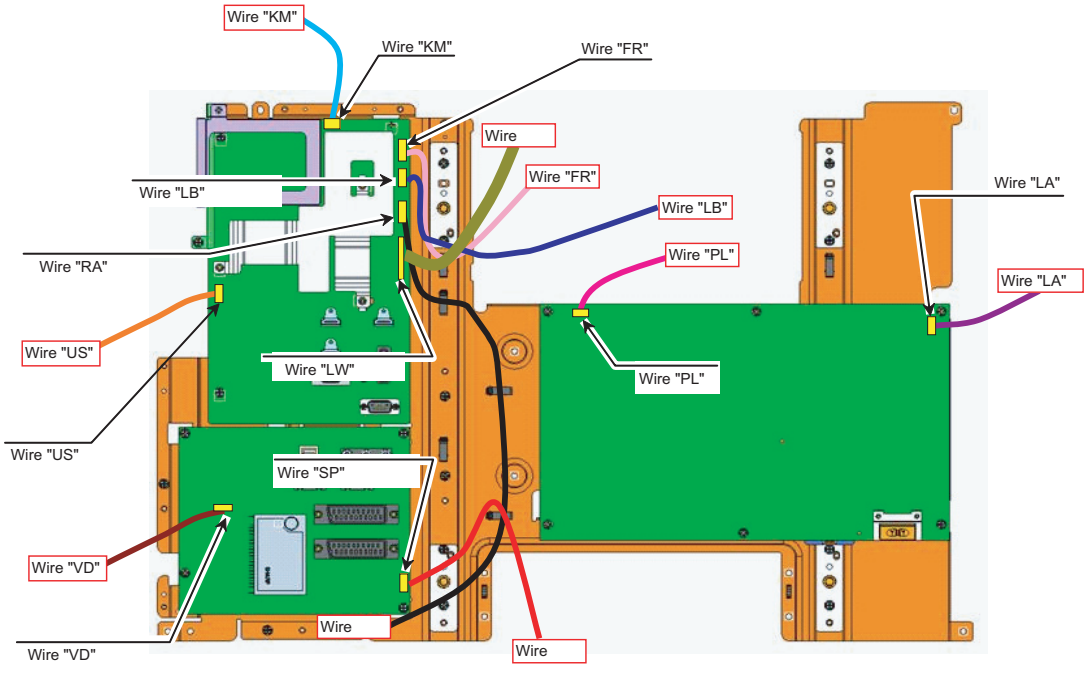


14.Remove all the connectors from PWBs.



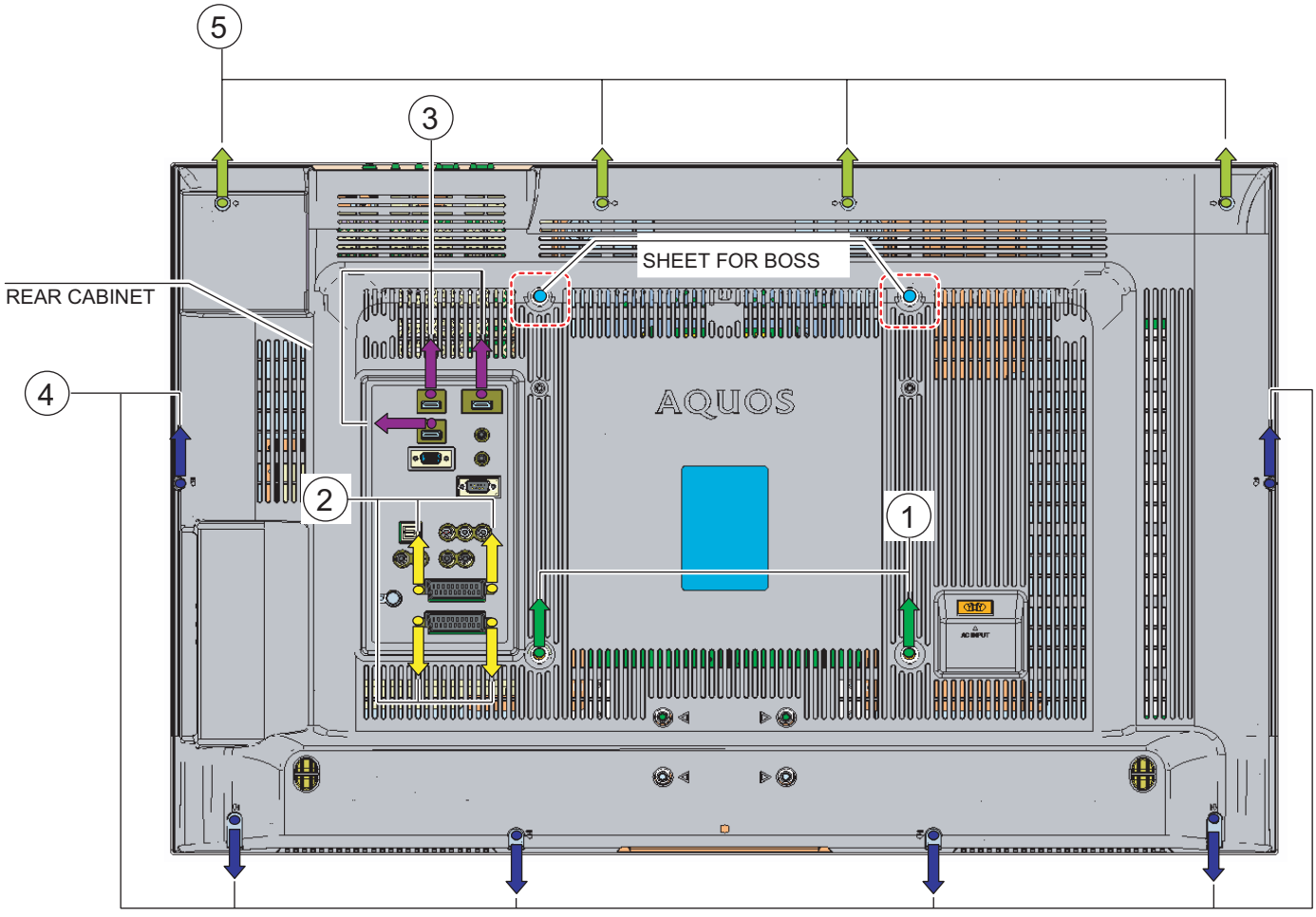






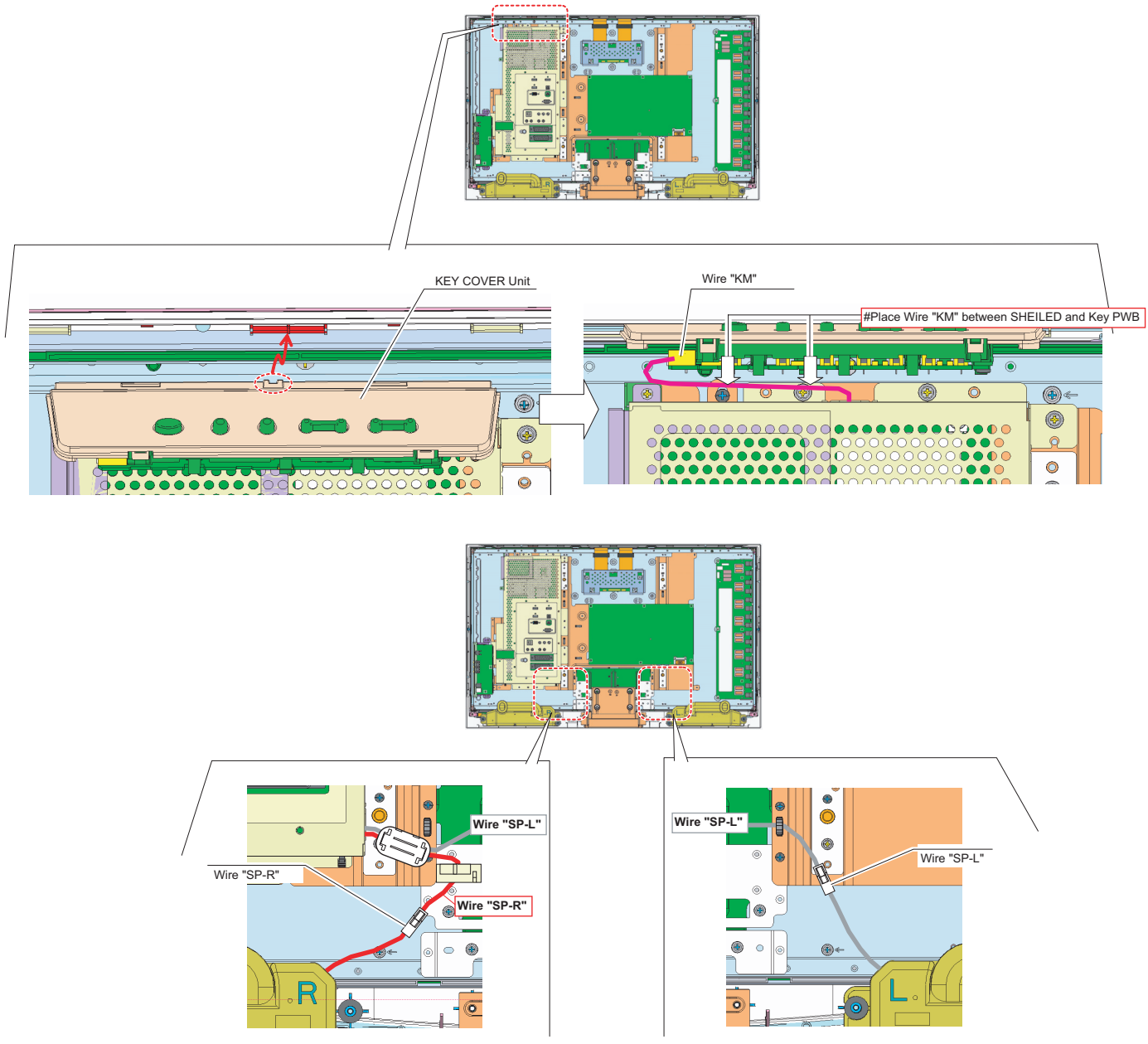
[2] REMOVING OF MAJOR PARTS (LC-37X20E/S/RU)

1. Remove the 2 lock screws ①, 4 lock screws ②, 3 lock screws ③, 6 lock screws ④ and the 4 lock screws ⑤. Detach the Rear Cabinet.

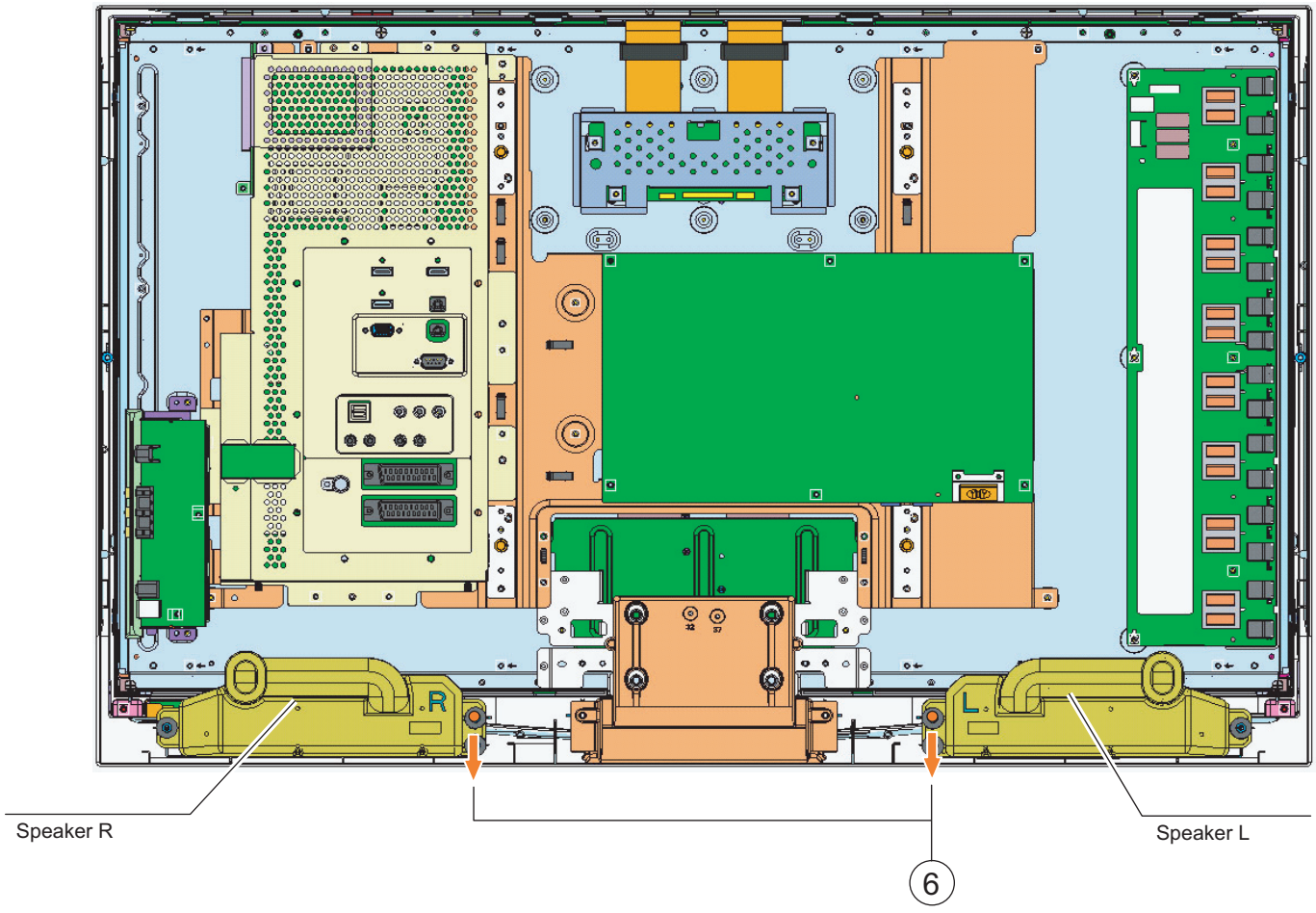


2. Detach the KEY COVER Unit.

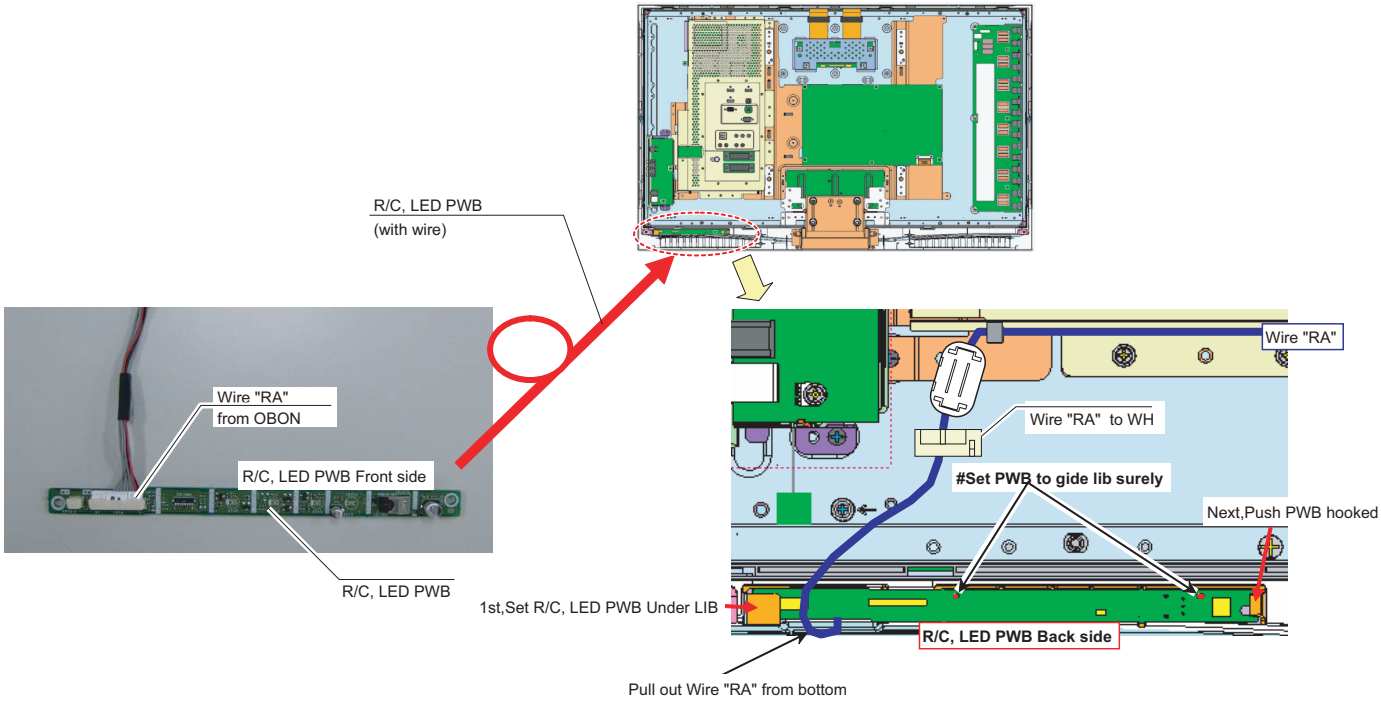
   Remove all the connectors from PWBs.



3. Remove the 2 lock screws (6) and detach the Speaker L/R.

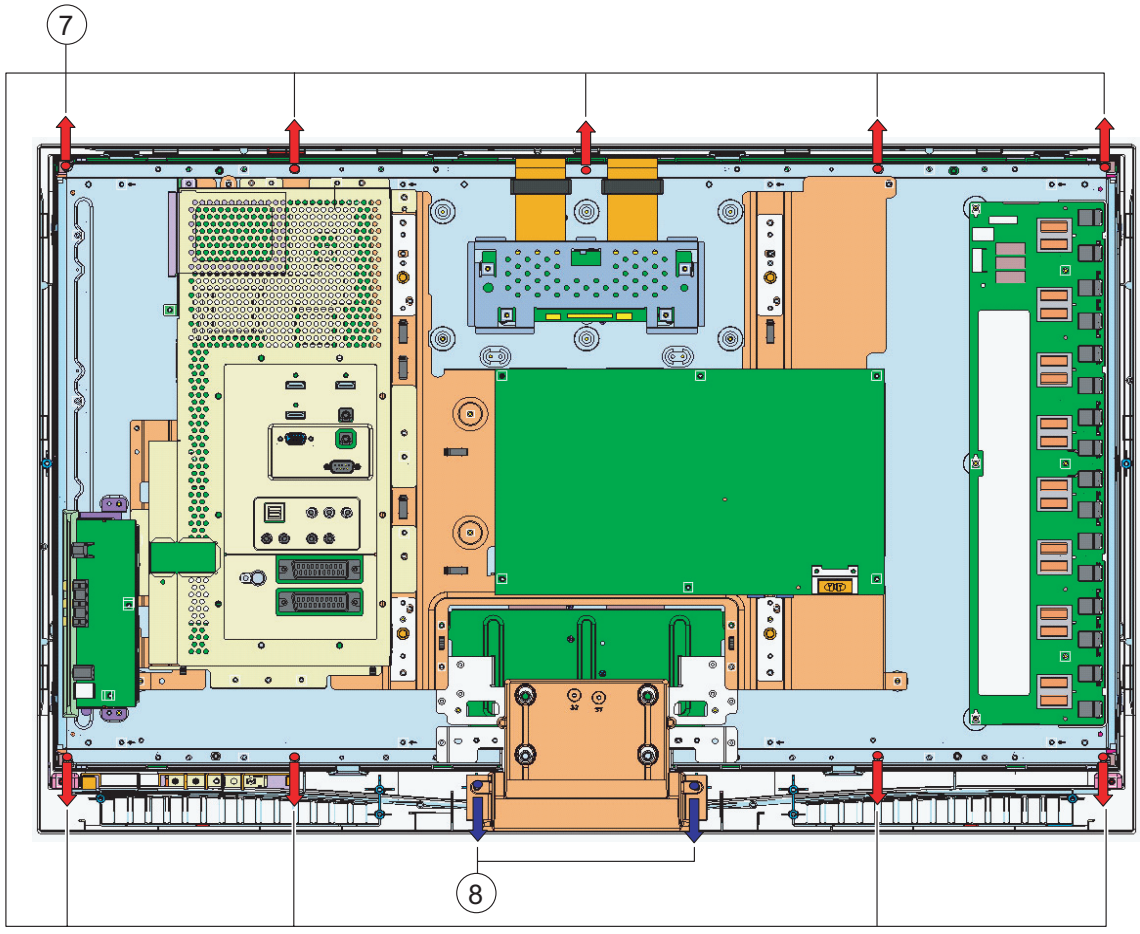


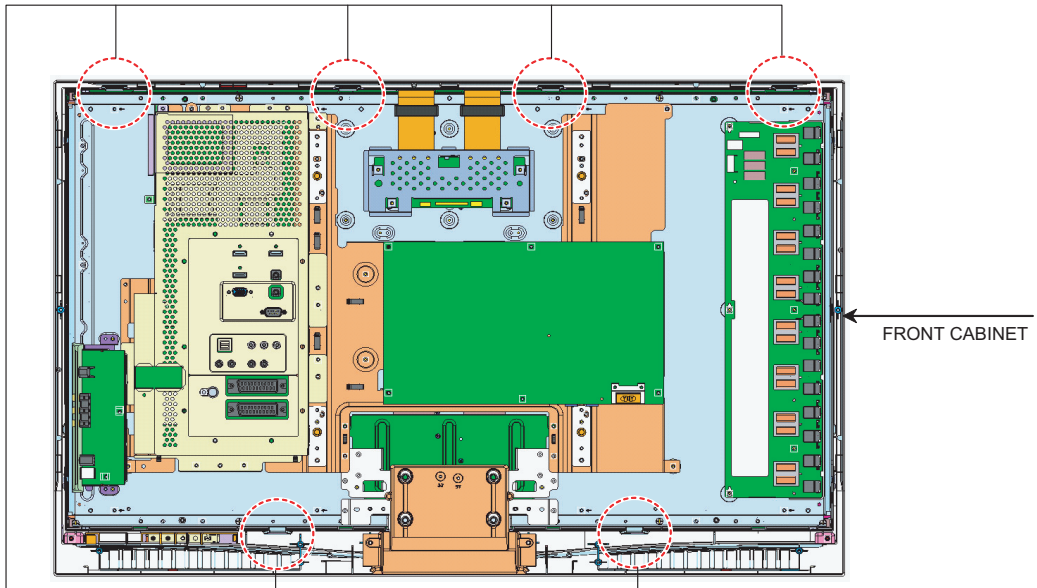
4. Remove all the connectors from PWBs.

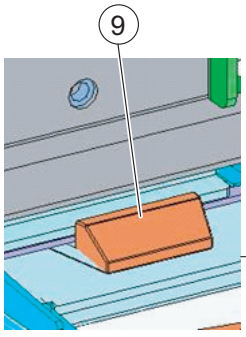


5. Remove the R/C, LED Unit.

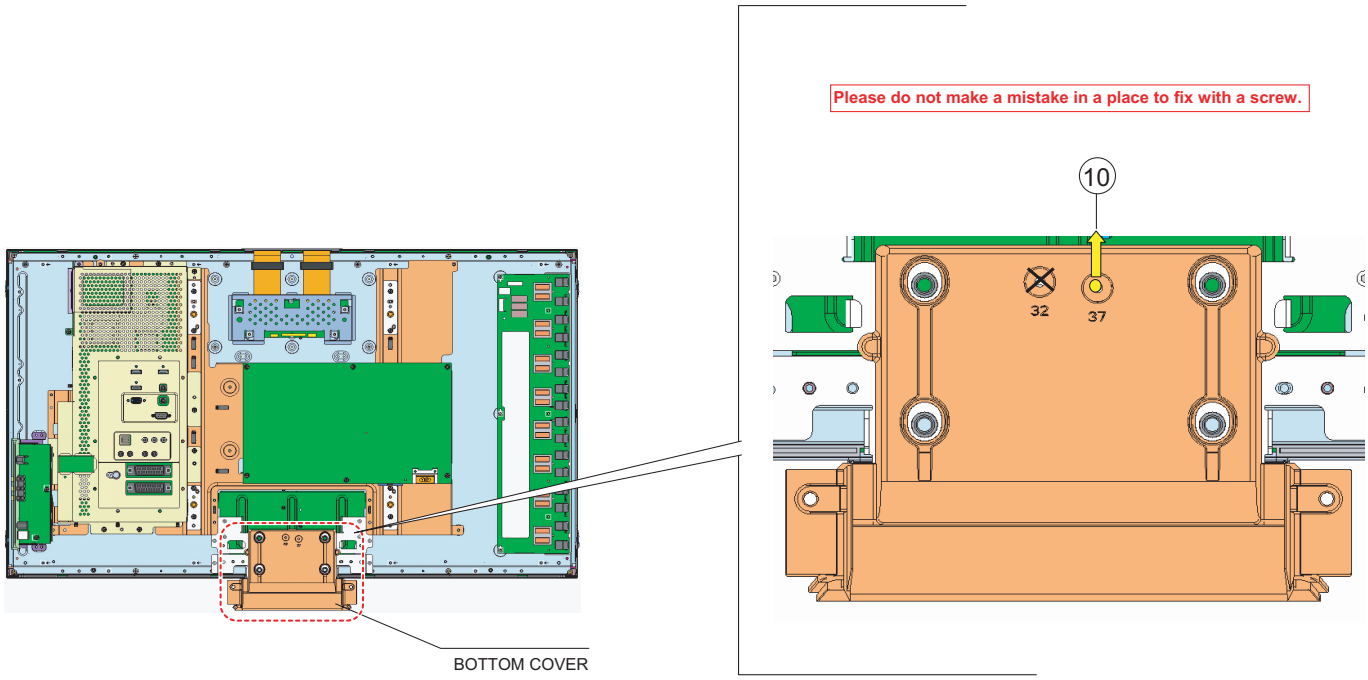
6. Remove the 9 lock screws (7), 2 lock screws (8) and the 6 lock hooks (9). Detach the LCD Panel Module.



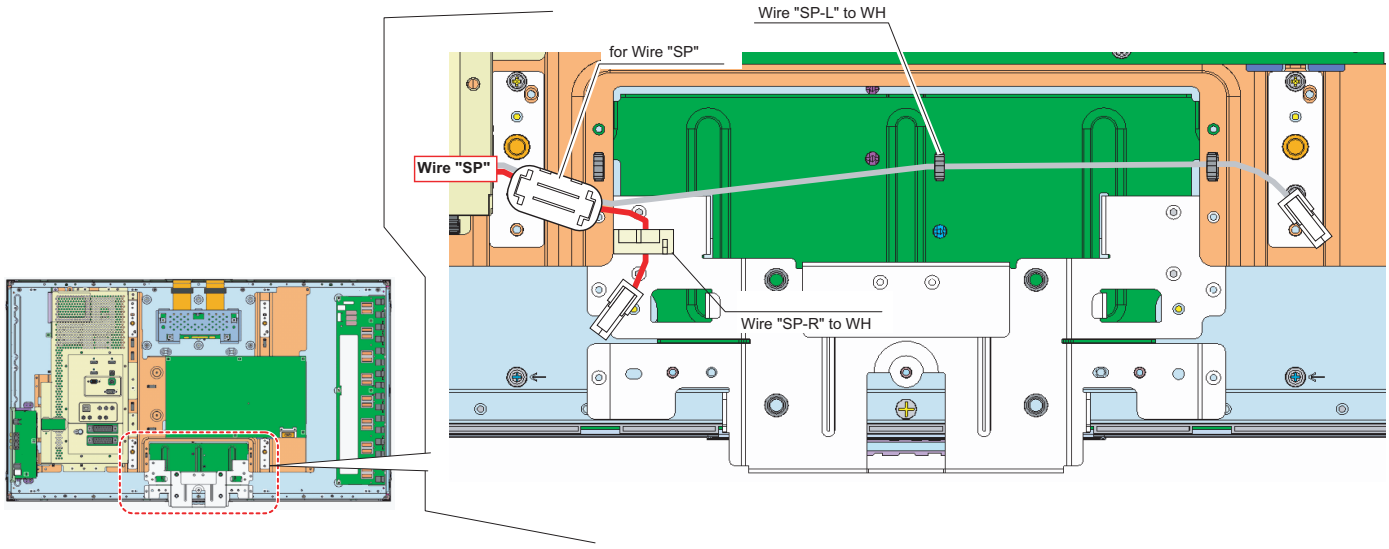


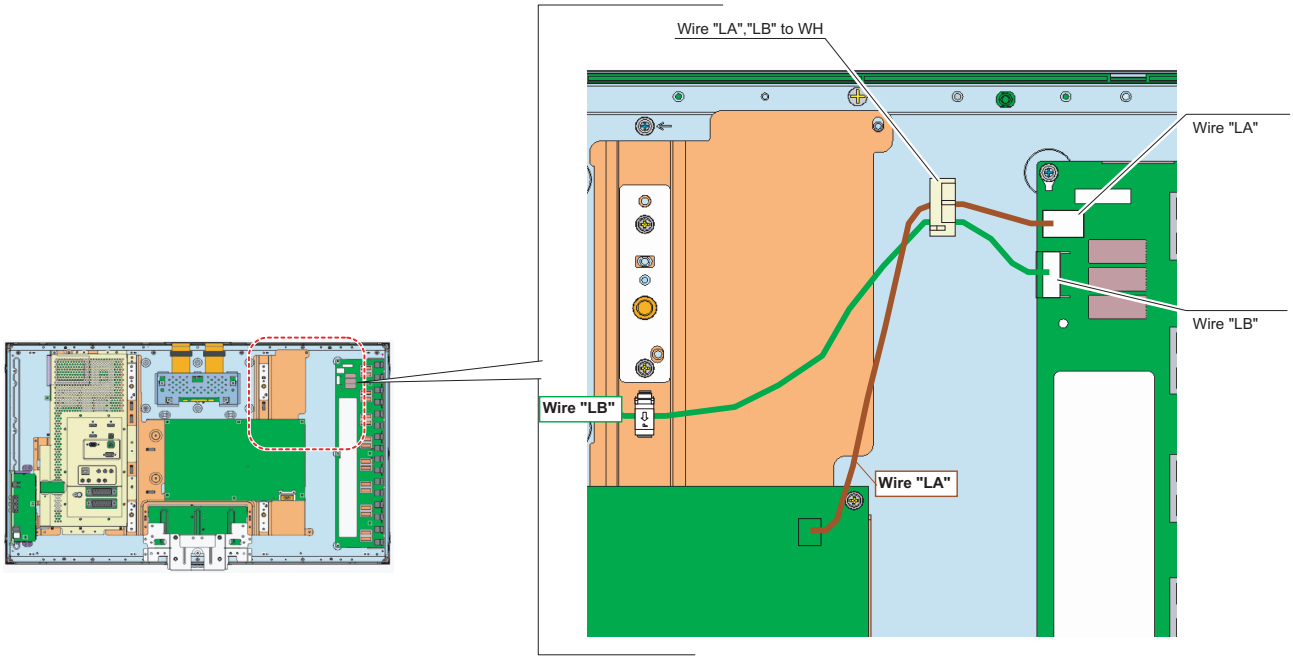


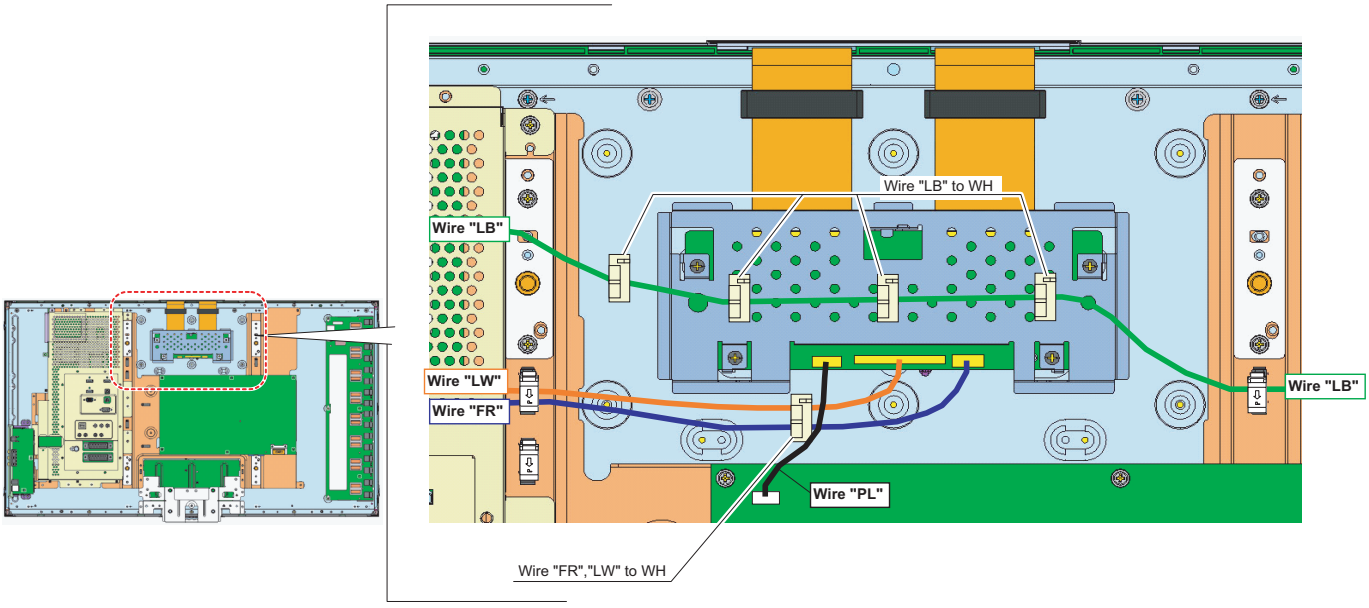
7. Remove the 1 lock screw (10) and detach the Bottom Cover.

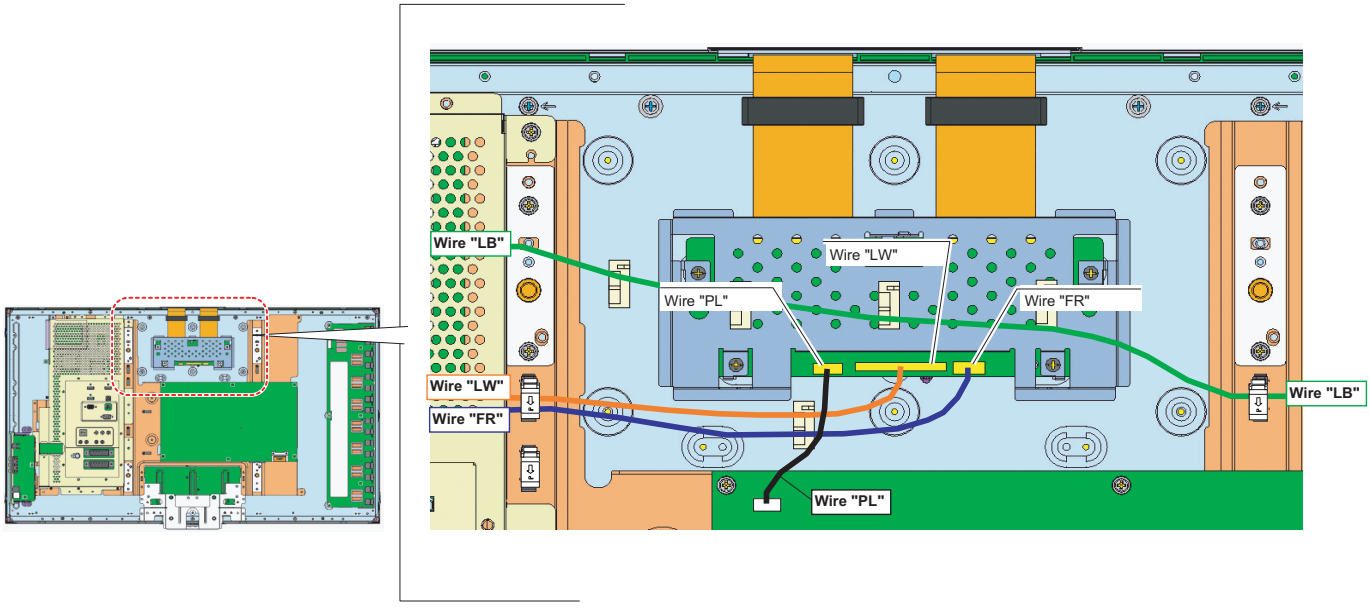


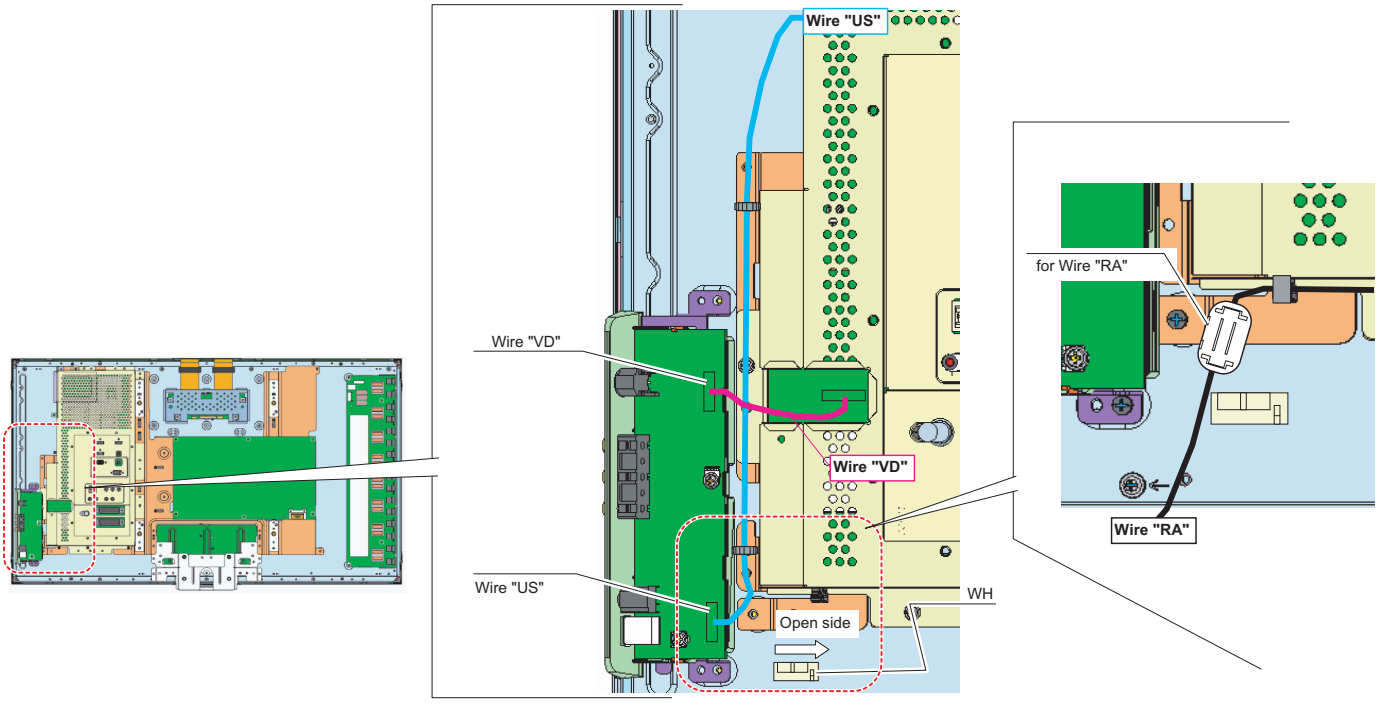
8. Remove all the connectors from PWBs.



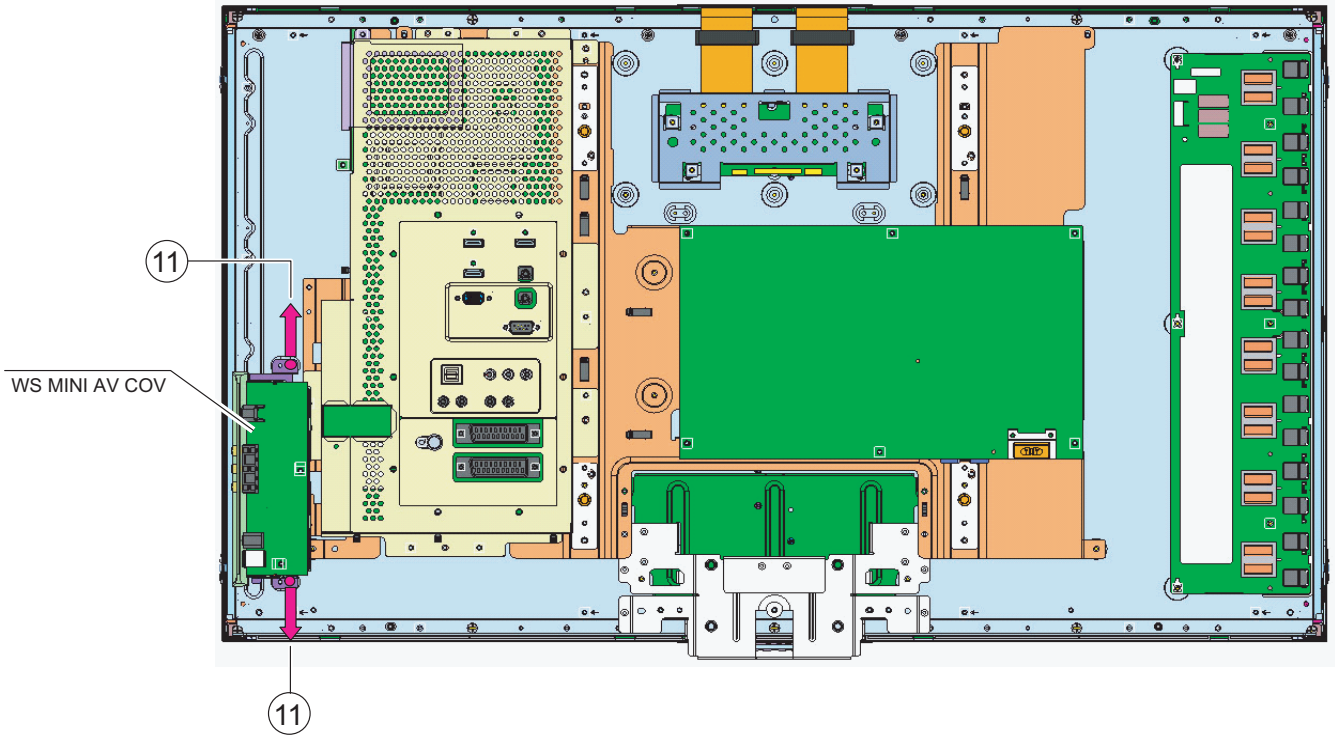



Wire "LB" to WH
Wire "LB"
Wire "LW"
Wire "FR"
Wire "LB"
Wire "PL"
Wire "FR","LW" to WH


Wire "LB"
Wire "LW"
Wire "PL"
Wire "FR"
Wire "LW"
Wire "FR"
Wire "LB"
Wire "PL"



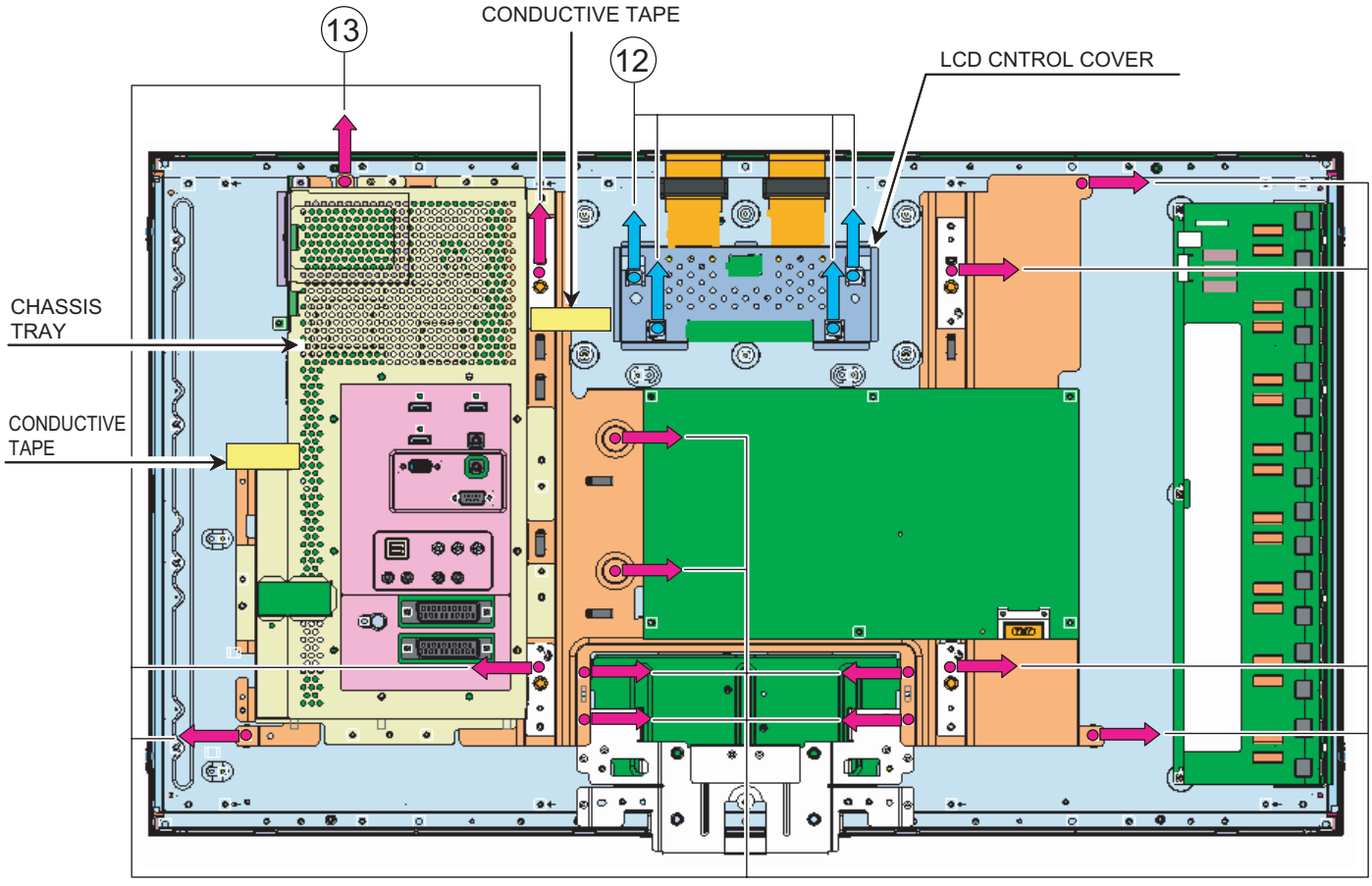
9. Remove the 2 lock screws (11) and detach the MINI AV Unit.



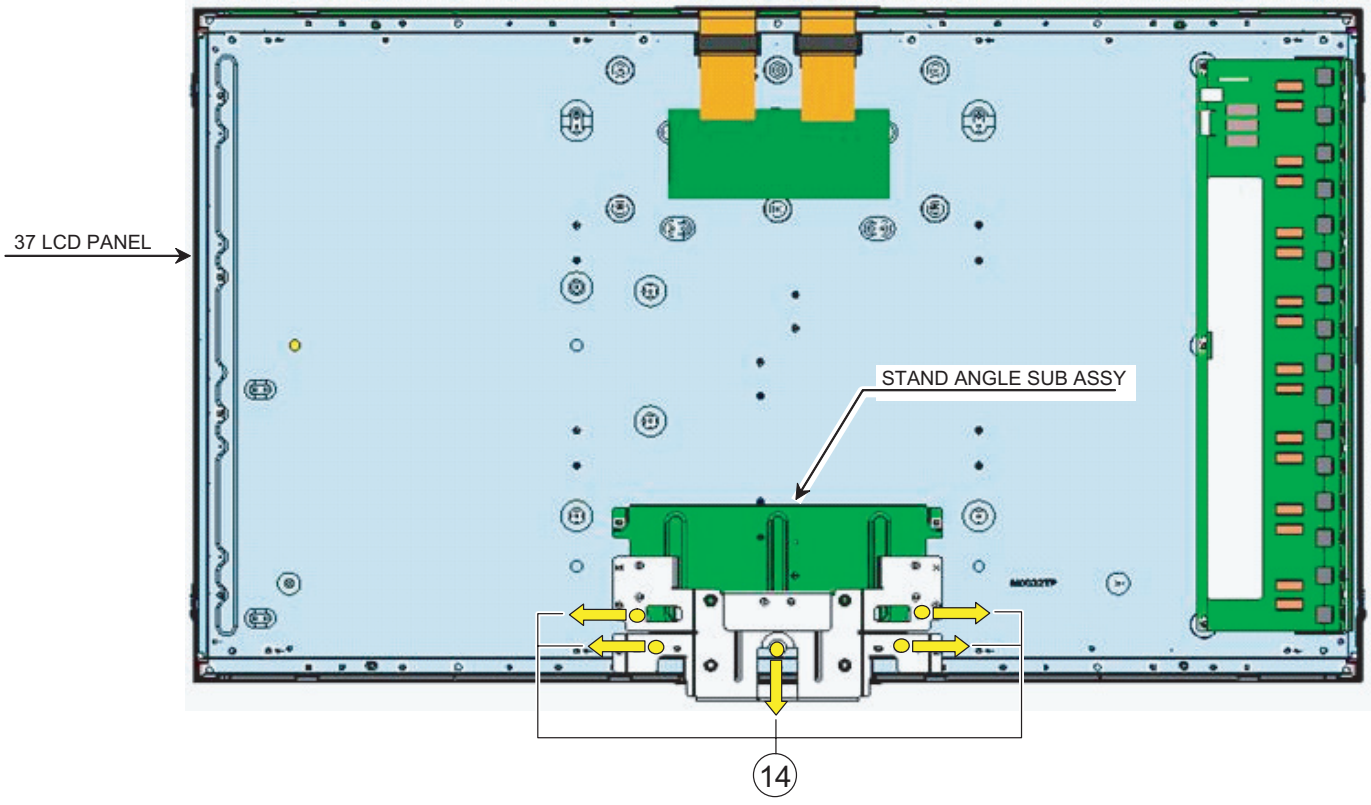
10. Remove the 4 lock screws ⑫ and detach the LCD Control Cover.

    Detach the 2 Conductive Tapes.

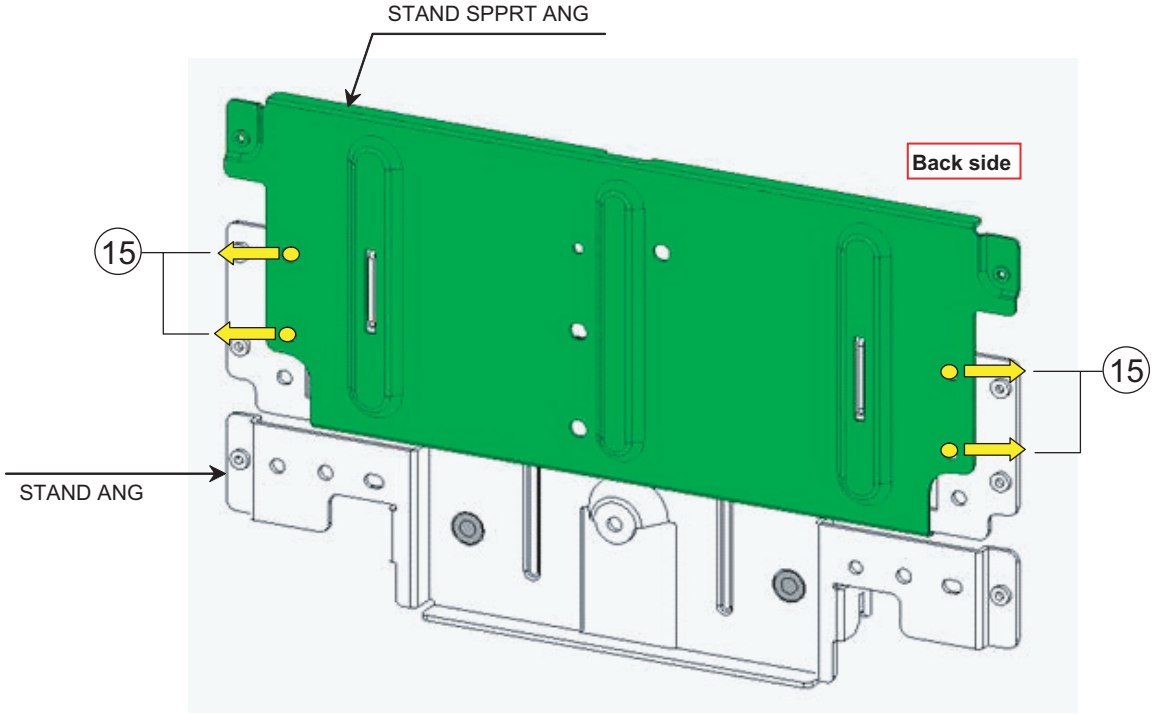
    Remove the 14 lock screws ⑬ and detach the Chassis Tray.



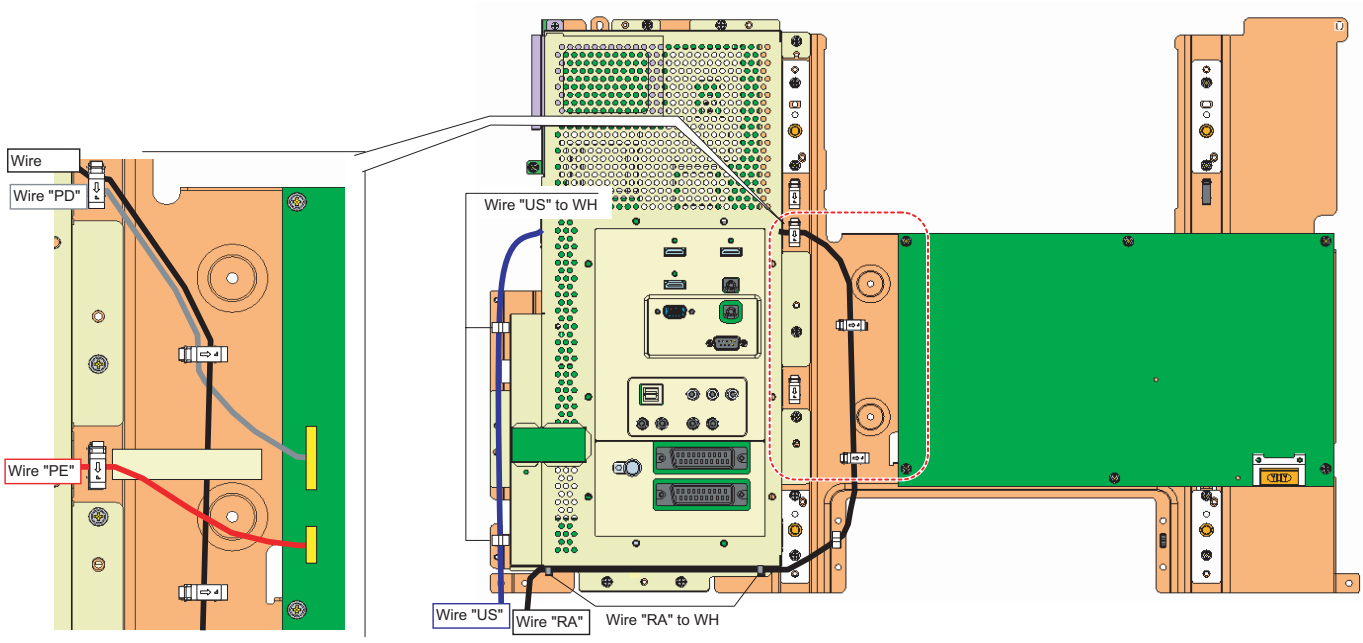
11. Remove the 5 lock screws (14) and detach the Stand Angle Sub Ass'y.



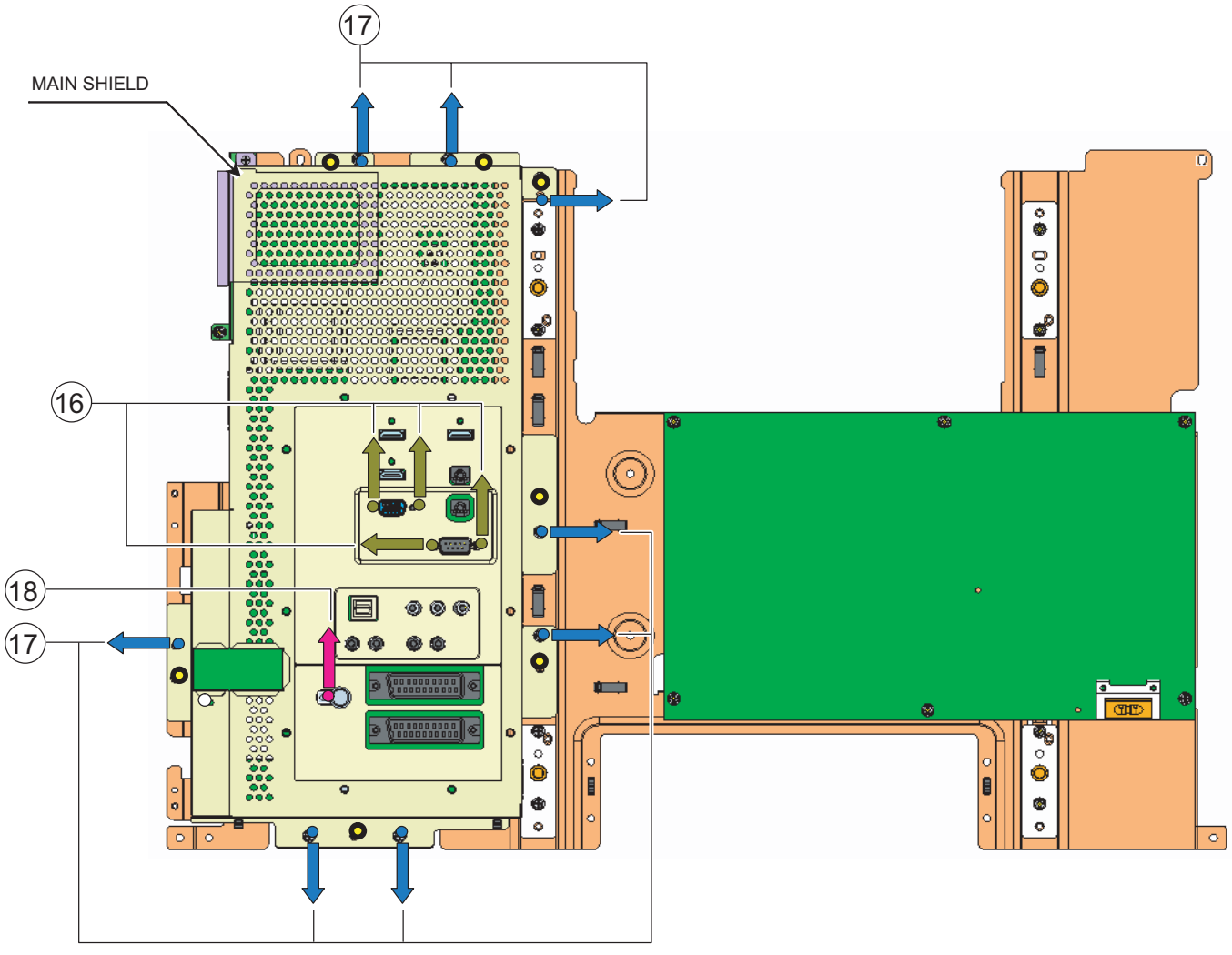
12. Remove the 4 lock screws (15) and detach the Stand Support Angle.



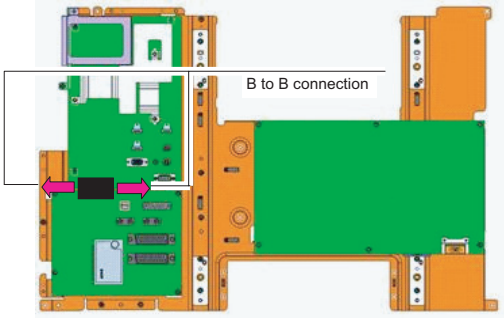
13.Remove all the connectors from PWBs.

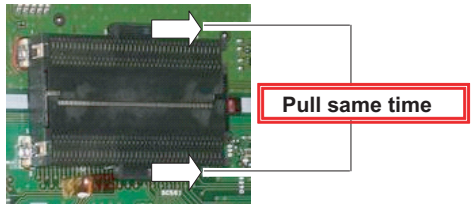


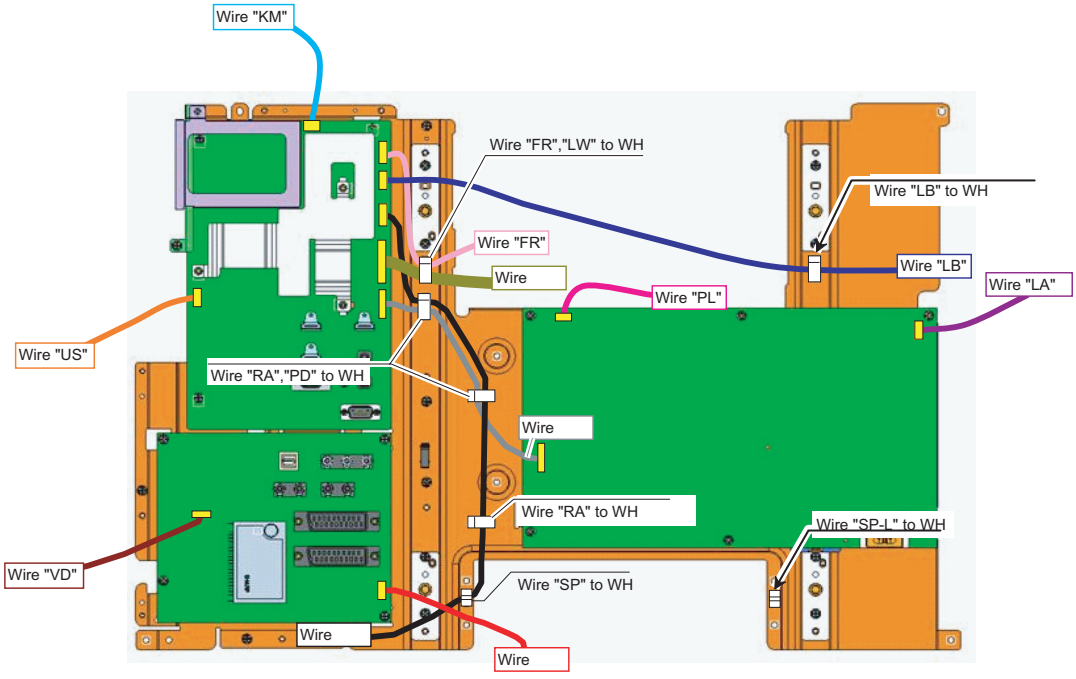
14.Remove the 4 lock screws ⑯, 8 lock screws ⑰ and the 1 lock screw ⑱. Detach the Main Shield.

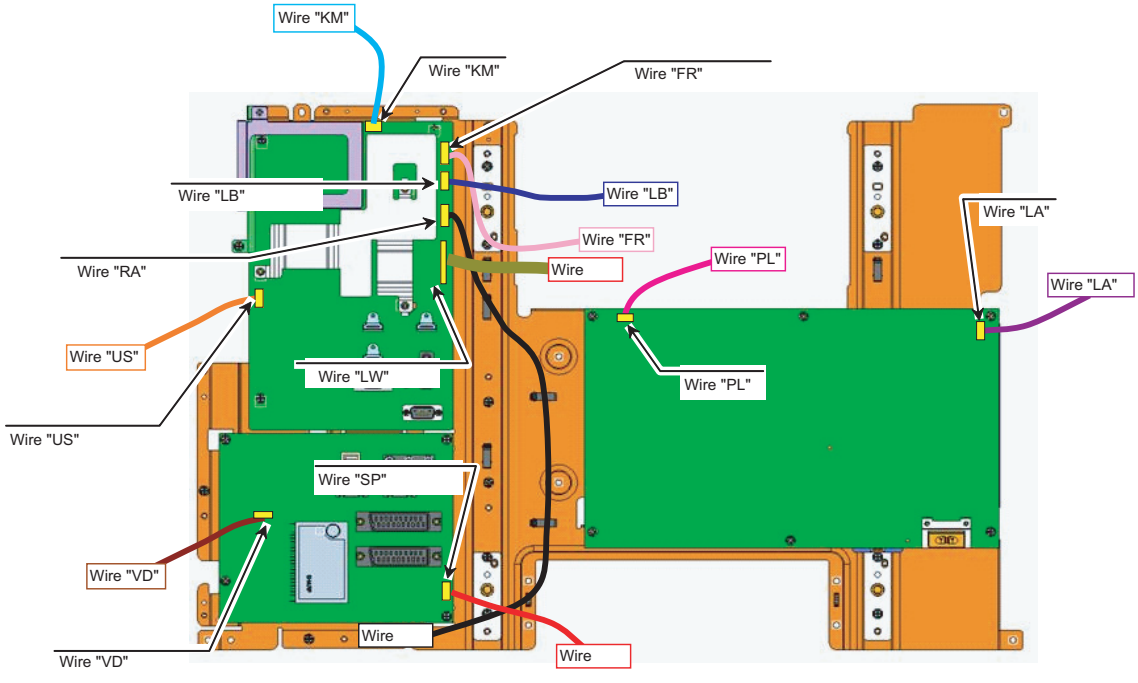


15.Remove all the connectors from PWBs.









CHAPTER 3. ADJUSTMENT PROCEDURE

[1] ADJUSTMENT PROCEDURE

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

The unit is set to the optimum 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. Procure the following units in order to replace the main unit, IC3301, IC8101, IC3501, IC3502, IC8301, IC8302, IC8303, or IC8304.

   MAIN UNIT: DUNTKE237FM02

NOTE: [Caution when replacing ICs in the main unit (IC1501/IC1502/IC1503/IC1505/IC2002)]

The above ICs are EEPROMs storing the EDID data of HDMI and the monitor microcomputer. Before replacing the relevant part, procure the following parts in which the data have been rewritten.

IC2002	RH-IXB986WJN8Q	Monitor microcomputer
IC1505	RH-IXC284WJQZS	HDMI_EXT4
IC1501	RH-IXC285WJQZS	HDMI_EXT5
IC1502	RH-IXC286WJQZS	HDMI_EXT6
IC1503	RH-IXC287WJQZS	RGB (PC)_EXT7

2. After replacing the LCD panel or LCD control PWB, check PANEL_SIZE in the following procedure.
   1) Enter the process adjustment mode.
   2) Use the cursor keys ∧ / ∨ and P ∧ / ∨ of R/C to select the item [PANEL_SIZE] on the page 33/33.
   3) Verify that the panel size is displayed.
   4) If the size doesn't match, select the values of the panel size with the Vol ∧ / ∨ keys.
   5) After selection in Step 4), press the OK key, and it is completed with OK displayed.
3. After replacing the LCD panel or LCD control PWB, adjust the VCOM in the following procedure.
   1) Enter the process adjustment mode.
   2) Use the cursor keys ∧ / ∨ and P ∧ / ∨ of R/C to select the item [VCOM ADJ] on the page 10/33.
   3) Press the OK key to verify that the adjustment pattern is displayed.
   4) Use the +/- keys of VOL of L/C to adjust the flicker in the center of the screen to minimum.
   5) When the optimal state is achieved in Step 4, press the OK key to turn the pattern to OFF.

2. Entering and exiting the adjustment process mode

1. Press the “POWER” key on the set of running TV set to force off the power.
2. While holding down the “VOL (-)” and “INPUT” keys on the set at once, plug in the AC power cord to turn on the power.

   The letter “K” appears on the screen.
3. Next, hold down the “VOL (-)” and “P (V)” keys on the set at once.

   Multiple lines of character string appearing on the screen indicate that the set is now in the adjustment Process mode. If you fail to enter the adjustment process mode (the display is the same as normal startup), retry the procedure. (Another procedure)
4. Press the “MENU” key on the main unit to display OSD.
5. Move the cursor to SERVICE (OSD) using the cursor keys on the remote control.

   Then press the “MENU” key on the remote control to enter the service mode (adjustment process mode).
6. To exit the adjustment process mode after the adjustment is done, unplug the AC power cord to force off the power. (When the power is turned off with the remote controller, once unplug the AC power cord and plug it in again. In this case, wait 10 seconds or so before plugging.)

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.

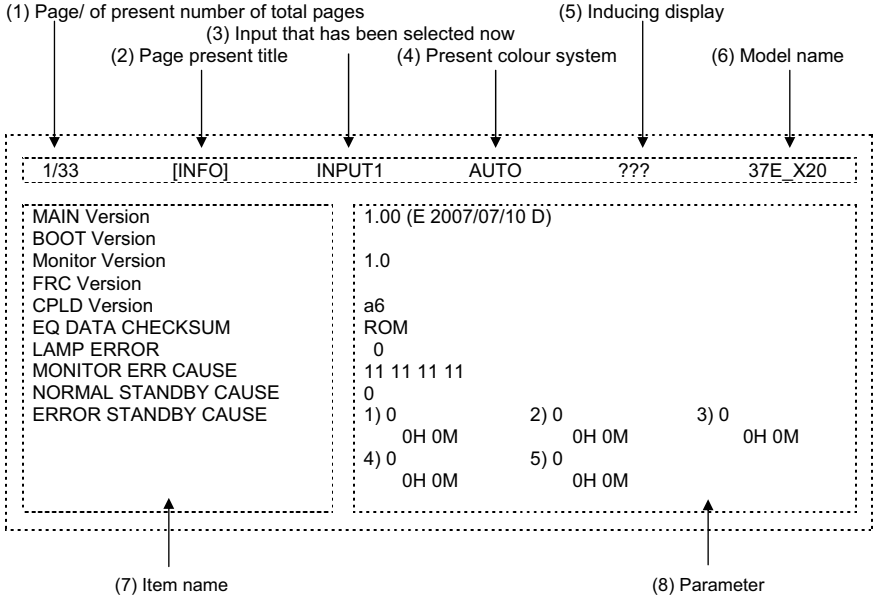
3. Remote controller key operation and description of display in adjustment process mode.

1. key operation

Remote controller key	Main unit key	Function
P (▽ / △)	P (▽ / △)	Moving an item (line) by one (UP/DOWN)
VOL (+/-)	VOL (+/-)	Changing a selected item setting (+1/-1)
Cursor (UP/DOWN)	—	Turning a page (PREVIOUS / NEXT)
Cursor (</>)	—	Changing a selected line setting (+10/-10)
INPUT SOURCE on remote controller	—	Input source switching (toggle switching) (TV→EXT1~8)
RETURN	—	Returning to a present page
OK	—	Executing a function

Input mode is switched automatically when relevant adjustment is started so far as the necessary input signal is available.

4. Description of display



No.	Description	Display specification
(1)	Page/ of present number of total pages	2char/2char Decimal Number mark.
(2)	Page present title	It bundles it by Max. 15 char “[“ ”]”.
(3)	Input that has been selected now	TV/INPUT1/INPUT2/INPUT3/INPUT5/INPUT6/INPUT7/INPUT8
(4)	Present colour system	NTSC/PAL/SECAM/COMP15K/COMP33K/COMP45K/COMP28K/COMP31K
(5)	Inducing display	EUROPE/RUSSIA/SWEDEN
(6)	Model name	MODEL NAME
(7)	Item name	Max. 30 char
(8)	Parameter	Max. 60 char

5. Adjustment process mode menu

The character string in brackets [ ] will appear as a page title in the adjustment process menu header.

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
1/33		[INFO]		
	1	MAIN Version		Main software version
	2	BOOT Version		BOOT Version.
	3	Monitor Version		Monitor software version
	4	FRC Version		FRC Version
	5	CPLD Version		CPLD Version.
	6	EQ DATA CHECKSUM		Audio data checksum.
	7	LAMP ERROR		Number of termination due to lamp error.
	8	MONITOR ERR CAUSE		Last error standby cause.
	9	NORMALSTANDBY CAUSE		Situation that became standby at the end. (Excluding the error)
	10	ERROR STANDBY CAUSE	[1] 00H 00M [2] 00H 00M [3] 00H 00M [4] 00H 00M [5] 00H 00M	Error standby cause Total operating time before error.
2/33		[INIT]		
	1	INDUSTRY INIT	Enter	Initialization to factory settings execution.
	2	INDUSTRY INIT(-Hotel)	OFF	Initialization to factory settings execution. (Hotel mode is excluded)
	3	HOTEL MODE	OFF	Hotel mode setting execution.
	4	Center Acutime	5H 0M	Main operating hours.
	5	RESET	OFF	Main operating hours reset.
	6	Backlight Acutime	19H 35M	Backlight operating hours.
	7	RESET	OFF	Backlight operating hours reset.
	8	LAMP ERROR RESET	OFF	Lamp error reset.
	9	ADJ PARAM SET	Enter	ADJ PARAM SET
	10	VIC XPOS	0	X-coordinate setting for VIC READ
	11	VIC YPOS	0	Y-coordinate setting for VIC READ
	12	VIC SIGNAL TYPE	MAIN	Signal type setting for VIC READ
	13	VIC READ	OFF	Picture level acquisition function (Level appears in green on the upper right)
3/33		[TUNER ADJ]		
	1	RF AGC ADJ	Enter	RF-AGC auto adjustment execution
	2	TUNER ADJ	Enter	TUNER auto adjustment execution
	3	PAL+TUNER ADJ	Enter	PAL TUNER auto adjustment execution
	4	RF AGC ADJ(CA-8CH)	Enter	RF-AGC auto adjustment execution (CA-8CH)
	5	TUNER ADJ(CA-8CH)	Enter	TUNER auto adjustment execution (CA-8CH)
	6	PAL+TUNER ADJ(CA-8CH)	Enter	PAL TUNER auto adjustment execution (CA-8CH)
	7	RF AGC	16	RF AGC adjustment
	8	TUNER DAC	150	TUNER signal level adjustment
	9	RF AGC READ	OFF	
4/33		[PAL MAIN]		
	1	PAL ADJ	Enter	PAL adjustment
	2	SECAM ADJ	Enter	SECAM adjustment
	3	N358 ADJ	Enter	N358 adjustment
	4	PAL CONTRAST	130	PAL contrast adjustment
	5	SECAM CONTRAST	137	SECAM CONTRAST adjustment
	6	N358 CONTRAST	120	N358 CONTRAST adjustment
5/33		[CEC TEST]		
	1	HDMI CEC TEST	Enter	CEC test
	2	INSPECT USB TERM	Enter	
	3	MONIDATA READ[TEMP/OPC]	OFF	MONITOR Temperature/ OPC Acquisition tool.
	4	CAUSE RESET	Enter	
6/33		[COMP15KMAIN]		
	1	COMP15K ALL ADJ	Enter	Component 15K picture level adjustment
	2	COMP15K MAIN Y GAIN	194	Y GAIN adjustment value
	3	COMP15K MAIN CB GAIN	215	Cb GAIN adjustment value
	4	COMP15K MAIN CR GAIN	212	Cr GAIN adjustment value
	5	COMP15K Y OFFSET	66	Y OFFSET adjustment value
	6	COMP15K CB OFFSET	512	Cb OFFSET adjustment value
	7	COMP15K CR OFFSET	513	Cr OFFSET adjustment value

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
7/33		[HDTV]		
	1	HDTV ADJ	Enter	HDTV video level adjustment
	2	HDTV Y GAIN	195	HDTV Y GAIN adjustment value
	3	HDTV CB GAIN	205	HDTV Cb adjustment value
	4	HDTV CR GAIN	203	HDTV Cr adjustment value
	5	HDTV Y OFFSET	65	HDTV Y OFFSET adjustment value
	6	HDTV CB OFFSET	512	HDTV Cb OFFSET adjustment value
	7	HDTV CR OFFSET	512	HDTV Cr OFFSET adjustment value
8/33		[ANALOG PC]		
	1	ANALOG PC ADJ	Enter	DVI ANALOG video level adjustment
	2	R OFFSET	64	R CUTOFF adjustment value
	3	G OFFSET	64	G CUTOFF adjustment value
	4	B OFFSET	66	B CUTOFF adjustment value
	5	R GAIN	193	R DRIVE adjustment value
	6	G GAIN	189	G DRIVE adjustment value
	7	B GAIN	194	B DRIVE adjustment value
9/33		[SCART]		
	1	SCART RGB ADJ	Enter	SCART RGB level adjustment
	2	SCART R CUTOFF	65	SCART R CUTOFF adjustment value
	3	SCART G CUTOFF	60	SCART G CUTOFF adjustment value
	4	SCART B CUTOFF	64	SCART B CUTOFF adjustment value
	5	SCART R GAIN	200	SCART R GAIN adjustment value
	6	SCART G GAIN	195	SCART G GAIN adjustment value
	7	SCART B GAIN	201	SCART B GAIN adjustment value
10/33		[LUMAADJ]		
	1	VCOM ADJ	69	
	2	LCD LUMA ADJ	Enter	
	3	LCD LUMA UP	26	
	4	LCD LUMA DOWN	13	
11/33		[FR DDRTEST]		
	1	DDRA TEST1	Enter	
	2	DDRA TEST2	Enter	
	3	DDRB TEST1	Enter	
	4	DDRB TEST2	Enter	
	5	DDRB TEST3	Enter	
	6	FRC ON/OFF	Enter	
	7	SOUSAM DDR BIST	Enter	
	8	SOUSAS DDR BIST	Enter	
12/33		[LEV]		
	1	LEV1	176	
	2	LEV2	352	
	3	LEV3	528	
	4	LEV4	656	
	5	LEV5	800	
	6	LEV6	928	
13/33		[MGXX1]		
	1	MG1R	178	W/B adjustment, gradation 1R adjustment value
	2	MG1G	184	W/B adjustment, gradation 1G adjustment value
	3	MG1B	138	W/B adjustment, gradation 1B adjustment value
	4	MG2R	227	W/B adjustment, gradation 2R adjustment value
	5	MG2G	232	W/B adjustment, gradation 2G adjustment value
	6	MG2B	177	W/B adjustment, gradation 2B adjustment value
	7	MG3R	316	W/B adjustment, gradation 3R adjustment value
	8	MG3G	322	W/B adjustment, gradation 3G adjustment value
	9	MG3B	249	W/B adjustment, gradation 3B adjustment value

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
14/33		[MGXX2]		
	1	MG4R	474	W/B adjustment, gradation 4R adjustment value
	2	MG4G	485	W/B adjustment, gradation 4G adjustment value
	3	MG4B	384	W/B adjustment, gradation 4B adjustment value
	4	MG5R	791	W/B adjustment, gradation 5R adjustment value
	5	MG5G	815	W/B adjustment, gradation 5G adjustment value
	6	MG5B	673	W/B adjustment, gradation 5B adjustment value
	7	MG6R	905	W/B adjustment, gradation 6R adjustment value
	8	MG6G	948	W/B adjustment, gradation 6G adjustment value
	9	MG6B	800	W/B adjustment, gradation 6B adjustment value
15/33		[ACTIVEBL1]		
	1	ABL TEST MODE	Enter	
	2	PRINT DEBUG	OFF	
16/33		[SOUND1]		
	1	AUDIO_PARAMETER_SWITCH	ROM	
	2	AU_FLAT		
	3	INPUT_MIXER_GAIN		
	4	OUTPUT_MIXER_GAIN		
	5	PEQ1_F0		
	6	PEQ1_Q		
	7	PEQ1_GAIN		
	8	PEQ2_F0		
	9	PEQ2_Q		
	10	PEQ2_GAIN		
	11	PEQ3_F0		
	12	PEQ3_Q		
	13	PEQ3_GAIN		
17/33		[SOUND 2]		
	1	PEQ4_F0		
	2	PEQ4_Q		
	3	PEQ4_GAIN		
	4	PEQ5_F0		
	5	PEQ5_Q		
	6	PEQ5_GAIN		
	7	GAIN_ADJUSTER1		
	8	GAIN_ADJUSTER2		
	9	GAIN_ADJUSTER3		
	10	GAIN_ADJUSTER4		
	11	GAIN_ADJUSTER5		
	12	GAIN_ADJUSTER6_SP		
	13	GAIN_ADJUSTER6_HP		
18/33		[SOUND 3]		
	1	LOUT1_VOLUME_CONTROL		
	2	ROUT1_VOLUME_CONTROL		
19/33		[M PWM]		
	1	PWM		
	2	PWM FREQ		
	3	PWM DUTY		
	4	OSC FREQ		
	5	OSC DUTY		
20/33		[M OPC1]		
	1	OPC LDUTY0		
	2	OPC LDUTY1		
	3	OPC LDUTY2		
	4	OPC LDUTY3		
	5	OPC LDUTY4		
	6	OPC LDUTY5		
	7	OPC LDUTY6		
	8	OPC LDUTY7		
	9	OPC LDUTY8		
	10	OPC LDUTY9		
	11	OPC LDUTY10		
	12	OPC LDUTY11		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
21/33		[M OPC2]		
	1	OPC LDUTY12		
	2	OPC LDUTY13		
	3	OPC LDUTY14		
	4	OPC LDUTY15		
	5	OPC LDUTY16		
	6	OPC LDUTY17		
	7	OPC LDUTY18		
	8	OPC LDUTY19		
	9	OPC LDUTY20		
	10	OPC LDUTY21		
	11	OPC LDUTY22		
22/33		[M OPC3]		
	1	OPC LDUTY23		
	2	OPC LDUTY24		
	3	OPC LDUTY25		
	4	OPC LDUTY26		
	5	OPC LDUTY27		
	6	OPC LDUTY28		
	7	OPC LDUTY29		
	8	OPC LDUTY30		
	9	OPC LDUTY31		
	10	OPC LDUTY32		
23/33		[M ADL1]		
	1	OPC33 ADLEVEL 0		
	2	OPC33 ADLEVEL 1		
	3	OPC33 ADLEVEL 2		
	4	OPC33 ADLEVEL 3		
	5	OPC33 ADLEVEL 4		
	6	OPC33 ADLEVEL 5		
	7	OPC33 ADLEVEL 6		
	8	OPC33 ADLEVEL 7		
	9	OPC33 ADLEVEL 8		
	10	OPC33 ADLEVEL 9		
	11	OPC33 ADLEVEL 10		
	12	OPC33 ADLEVEL 11		
24/33		[M ADL2]		
	1	OPC33 ADLEVEL 12		
	2	OPC33 ADLEVEL 13		
	3	OPC33 ADLEVEL 14		
	4	OPC33 ADLEVEL 15		
	5	OPC33 ADLEVEL 16		
	6	OPC33 ADLEVEL 17		
	7	OPC33 ADLEVEL 18		
	8	OPC33 ADLEVEL 19		
	9	OPC33 ADLEVEL 20		
	10	OPC33 ADLEVEL 21		
	11	OPC33 ADLEVEL 22		
25/33		[M ADL3]		
	1	OPC33 ADLEVEL 23		
	2	OPC33 ADLEVEL 24		
	3	OPC33 ADLEVEL 25		
	4	OPC33 ADLEVEL 26		
	5	OPC33 ADLEVEL 27		
	6	OPC33 ADLEVEL 28		
	7	OPC33 ADLEVEL 29		
	8	OPC33 ADLEVEL 30		
	9	OPC33 ADLEVEL 31		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
26/33		[M V6THE]		
	1	V6 OS THERMO 1	64	
	2	V6 OS THERMO 2	77	
	3	V6 OS THERMO 3	87	
	4	V6 OS THERMO 4	97	
	5	V6 OS THERMO 5	108	
	6	V6 OS THERMO 6	119	
	7	V6 OS THERMO 7	131	
27/33		[M V5THE]		
	1	V5 OS THERMO 1	64	
	2	V5 OS THERMO 2	77	
	3	V5 OS THERMO 3	87	
	4	V5 OS THERMO 4	97	
	5	V5 OS THERMO 5	108	
	6	V5 OS THERMO 6	119	
	7	V5 OS THERMO 7	131	
28/33		[M BLCTL TEMP]		
	1	BL TEMP1		
	2	BL TEMP2		
	3	BL TDUTY		
29/33		[M EEP SET]		
	1	MONITOR TIME OUT	ON	Monitor and the main communication time-out setting
	2	MONITOR MAX TEMP	31	MONITOR MAX temperature setting
	3	MONITOR EEP READ / WRITE	WRITE	MONITOR EEPROM READ/WRITE Setting/execution
	4	MONITOR EEP ADR	0x 0	MONITOR EEPROM arbitrary addressing
	5	MONITOR EEP DATA	0x 0	MONITOR EEPROM arbitrary data specification
30/33		[M TEST PATTERN]		
	1	LCD TEST PATTERN	OFF	Pattern with built-in LCD controller display
31/33		[MEM CLEAR]		
	1	KEY LOCK(1217)	Enter	
	2	KOUTEI AREA ALL CLEAR		Adjustment value clearness in all areas in process
	3	A MODE AREA CLEAR		Adjustment value clearness of process A mode
	4	BACKUP AREA CLEAR		Adjustment value clearness in process backup area
	5	B MODE AREA CLEAR		Adjustment value clearness of process B mode
	6	EXECUTION		Clear execution
32/33		[FR REGI]		
	1	READ/WRITE	READ	
	2	SLAVE ADDRESS	SLAVE0	
	3	REGISTOR ADDRESS	0x 0	
			0x 0	
	4	WRITE DATA	0x 0	
			0x 0	
	5	READ DATA	0x 0	
			0x 0	
33/33		[ETC]		
	1	EEP SAVE	OFF	Writing setting values to EEPROM.
	2	EEP RECOVER	OFF	Reading setting values from EEPROM.
	3	MONITOR ERROR CAUSE RESET	OFF	
	4	STANDBY CAUSE RESET	OFF	Reset stand by cause.
	5	MODEL NAME	X20	Model name setting
	6	PANEL SIZE	37	Panel size setting.
	7	PRODUCT EEP ADR	0x 0	
	8	PRODUCT EEP DATA	0x 0	

6. Special features

1. NORMAL STANDBY CAUSE (Page 1/33)

   Display of a cause (code) of the last standby.

   The cause of the last standby is recorded in EEPROM whenever possible.

   Checking this code will be useful in finding a problem when you repair the troubled set.

2. EEP SAVE (Page 33/33)

   Storage of EEP adjustment value

3. EEP RECOVER (Page 33/33)

   Retrieval of EEP adjustment value from storage area.

7. Lamp error detection

1. Function

   This LCD color TV set incorporates a lamp error detection feature that automatically turns off the power for safety under abnormal lamp or lamp circuit conditions. If by any chance anything is wrong with the lamp or lamp circuit or if the lamp error detection feature is activated for some reason, the following will result.

   1) The power is interrupted in about 6 seconds after it is turned on.

      (The power LED on the front of the TV set turns red from green and keeps blinking in red: ON for 250 ms and OFF for 1 sec.).

   2) If the above phenomenon 1) occurs 5 times consecutively, it becomes impossible to turn on the power. (The power LED remained red).

2. Measures

   1) Checking with lamp error detection OFF

      Enter the adjustment process mode, referring to 1. Entering and exiting the adjustment process mode.

      If there is a problem with the lamp or lamp circuit, the lamp will go out. (The power LED is green.)

      Then, you can check the operation to see if the lamp and lamp circuit are in trouble.

   2) Resetting the lamp error count

      After the lamp and lamp circuit are found out of trouble, reset the lamp error count. If a lamp error is detected five consecutive times, the power cannot be turned on. Using the cursor (UP/DOWN) key, move to the cursor to [LAMP ERROR RESET], Line 8 on adjustment process mode service page 2/33. With the cursor (LEFT/RIGHT) keys, select the [LAMP ERROR RESET] value. Finally press the cursor (OK) eys to reset the value to “0”.

      Table of contents of adjustment process mode Page 2/33

[INIT]			
INDUSTRY INIT	Enter		
INDUSTRY INIT(-Hotel)	OFF		
HOTEL MODE	OFF		
Center Acutime			
RESET	OFF		
Backlight Acutime			
RESET	OFF		
LAMP ERROR RESET	OFF	←	← Resetting to "0"
ADJ PARAM SET	Enter		
VIC XPOS	0		
VIC YPOS	0		
VIC SIGNAL TYPE	MAIN		
VIC READ	OFF		

8. Public Mode (Hotel Mode)

1. Starting the Public Mode
   - There are two following ways to display the PUBLIC Mode setting screen.

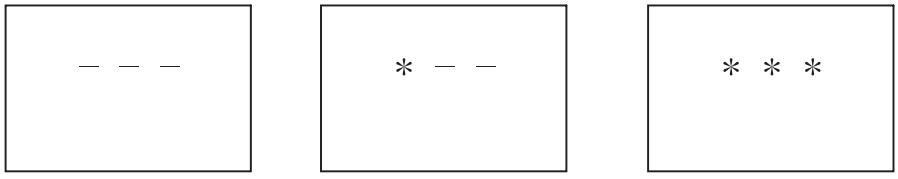
   1) On the process adjustment mode screen (2/33), set the “HOTEL MODE” Flag to ON.

      Turn off the power, and turn it on again, pressing the [CHANNEL UP] and [Volume UP] keys of the main unit at the same time.

   2) Enter the Pass Word, and start the unit.

      a) Turn on the power, pressing the [INPUT] and [Volume UP] keys of the main unit at the same time.

      b) Display the Pass Word input screen.



      Operation procedure
      - The initial input position is the digit at the left end.
      - For the numeric keys [0] to [9] of R/C, key input is accepted. Input of the other keys is prohibited.
      - Change “-” to “*” by inputting the numeric key at the input position, and shift the input position rightward one digit.
      - When three digits are completely input, the Pass Word is judged.

      c) Check the Pass Word by inputting three digits.

      If the Pass Word is [0] [2] [7] , it shifts to the PUBLIC Mode setting screen.

      In another case, the screen is erased, and it operates in the ordinary mode.

2. Exiting the Public Mode screen
   - There are two following ways to exit the Public Mode setting screen.

   1) Turn off the power.

   2) Select “Execution” in the PUBLIC_Mode to execute it.

      Activate the restart under the set content. Here, the START input SOURCE setting is excluded since this item is referred to only when the power is turned on.

3. Set value of the Public Mode
   - Each set value in the PUBLIC Mode is initialized when the factory setting is applied.

     (The setting of the PUBLIC MODE Flag in the process adjustment mode screen is not changed.)

4. Basic operation in the Public Mode

Volume ▲/▼ or Cursor ←/→		Change or execution of the set value.
Channel ▲/▼ or Cursor ↑/↓		Movement to the selected item.
Decision (ok)		Execution (Used by the items “Execution” and “RESET”.)
PUBLIC Mode R/C	Ordinary operation mode:	It enters the PUBLIC Mode. PUBLIC MODE Flag is set to “ON”.
	PUBLIC Mode:	It exits the PUBLIC Mode. PUBLIC MODE Flag does not change. Any set item in PUBLIC Mode is not initialized.

Public Mode	
POWER ON FIXED	[VARIABLE]
SHUT DOWN MODE	[NORMAL]
MAXIMUM VOLUME	[60]
VOLUME FIXED	[VARIABLE]
VOLUME FIXED LEVEL	[20]
RC BUTTON	[RESPOND]
PANEL BUTTON	[RESPOND]
MENU BUTTON	[RESPOND]
AV POSITION FIXED	[VARIABLE]
ON SCREEN DISPLAY	[YES]
INPUT MODE START	[NORMAL]
INPUT MODE FIXED	[VARIABLE]
LOUD SPEAKER	[ON]
RC PATH THROUGH	[OFF]
232C POWON	[DISABLE]
HOTELMODE	[ON]
RESET	
EXECUTE	

5. Operation after “RESET”

Select “RESET” in the PUBLIC Mode, and it operates as follows when it is executed (refer to the basic operation).

- The set contents in the PUBLIC mode are initialized.
- It does not exit the PUBLIC mode.
- PUBLIC MODE Flag does not change. (It is not set to OFF.)

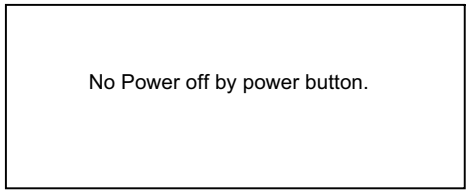
6. Setting items (* Item names and selective items are expressed in English.)

1) Power ON Fixed (POWER ON FIXED)

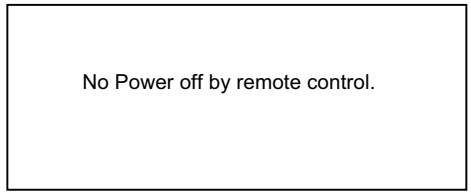
Selection	“VARIABLE” or “FIXED” is selectable. (Loop is provided.)
Default	“VARIABLE”
Function	• When "FIXED" is set, “Power ON/Standby Key” of the main unit and R/C is disabled.
Keys disabled when not set to Default	• OFF_TIMER (SLEEP)
Remarks	The function does not work for any other standby factors (see below). • No operation OFF • No signal OFF (including the power management)

If the power button is pressed in the ordinary mode when set to “FIXED”, the caution is displayed for 5 seconds.

When power button on the main unit is pressed



When power button on R/C is pressed



* The OSD display is an example.

If another ODS is previously displayed, the status is reset (MENU or similar).

2) Volume Maximum Level [MAXIMUM VOLUME]

Selection	0~60 (Loop is not provided.)
Default	60
Function	• Even if VOL is adjusted to a value higher than the adjusted one, it is not set to that value. (Only the speakers of the main unit)
Exception	
Remarks	• When it is set to 59 or less, the number is displayed and the volume bar is not displayed during operation in the ordinary mode. • VOLUME can be abbreviated to VOL.

3) Volume Fixed [VOLUME FIXED]

Selection	“VARIABLE” or “FIXED” is selectable. (Loop is provided.)
Default	“VARIABLE”
Function	It is selectable whether or not the volume is fixed to the value adjusted in the volume fixed level mode. (Only the speakers of the main unit)
Exception	• In the adjustment process, the volume can be set as desired regardless of this setting.
Keys disabled when not set to Default	• Volume high/low (VOL+/-) (Both R/C and main unit) • Mute (MUTE)
Remarks	• Volume Fixed is prior to Volume Maximum Level. • Even if the above disabled keys are operated, the volume is not displayed. • VOLUME can be abbreviated to VOL.

4) Volume Fixed Level [VOLUME FIXED LEVEL]

Selection	0~60 (Loop is not provided.)
Default	Currently set volume
Function	The volume is fixed to the adjusted value. (Only the speakers of the main unit)
Exception	• In the adjustment process, the volume can be set as desired regardless of this setting.
Keys disabled when not set to Default	
Remarks	• When Volume Fixed is set to “VARIABLE”, the setting is inhibited to change. • VOLUME can be abbreviated to VOL.

5) R/C Operation [RC BUTTON]

Selection	“RESP0ND” or “NO RESPOND” is selectable. (Loop is provided.)
Default	RESP0ND
Function	R/C key operation is set. When set to “NO RESPOND”, the R/C keys are disabled in the ordinary mode. The power key (Power ON/Standby Key) is also disabled.
Exception	• Regardless of the setting contents, the process mode, inspection mode and PUBLIC_Mode Key are enabled. • Regardless of the setting contents, all keys can be used while entering the process mode, inspection mode or PUBLIC_Mode.
Remarks	The CARD function stops all functions including the input switching and direct key when set to “NO RESPOND”.

6) Main Unit Operation [PANEL BUTTON]

Selection	“RESP0ND” or “NO RESPOND” is selectable. (Loop is provided.)
Default	RESP0ND
Function	NO RESPOND: Excluding power supply (Video/Standby key), the main unit keys are disabled.
Exception	• Regardless of the setting contents, the start operation of the process mode, inspection mode and PUBLIC_Mode is enabled. • Regardless of the setting contents, all keys can be used while entering the process mode, inspection mode and PUBLIC_Mode.

7) MENU Operation [MENU BUTTON]

Selection	“RESP0ND” or “NO RESPOND” is selectable. (Loop is provided.)
Default	RESP0ND
Function	The MENU keys on the main unit and R/C MENU are disabled.
Exception	• Regardless of the setting contents, the start operation of the process mode, inspection mode and PUBLIC_Mode is enabled. • Regardless of the setting contents, all keys can be used whileentering the process mode, inspection mode or PUBLIC_Mode.
Key that becomes invalid excluding Default besides MENU Key because of setting	ON_TIMER, Auto Preset, Manual_Memory, and clock setting All Direct Shift keys to the MENU display
Remarks	When set to “NO RESPOND”, • ON_TIMER is set to “OFF”.

8) ODS Display [ON SCREEN DISPLAY]

Selection	“YES” or “NO” is selectable. (Loop is provided.)
Default	YES
Function	When set to “ON”, the following OSD is not displayed. Register, Setting, Adjustment MENU, Channel_Call, Volume Bar In the case of Wide Model, if the following operation is performed, it is immediately switched (since MENU can not be displayed). Input switching
Keys which can be enabled (Exquisite example)	Brightness sensor, light control
Keys disabled when not set to Default (Example)	Still screen, screen display, MENU, OFF_TIMER, A V Position, Wide Mode switch, Auto Instolation
Remarks	• When set to “ON”, a) The OFF_TIMER (SLEEP TIMER) setting time is cleared.

9) Start Mode [INPUT MODE START]

Selection	“NORMAL”, “TV(*Channel)”, “INPUT1”, “INPUT2” (Loop is provided.)
Default	NORMAL
Function	When the power is ON, the input source or channel to start is set. In the NORMAL mode, it follows the contents of Last_Memory.
Remarks	• When set to a mode other than “NORMAL”, a) It is inhibited to display the Channel Setting MENU and to set the Channel. b) On start with “ON_TIMER”, the set Channel of ON_TIMER is prior. • When set to “NORMAL”, “Mode Fixed (START MODE FIXED)” is set to “VARIABLE” to inhibit the selection.

10)Mode Fixed [INPUT MODE FIXED]

Selection	“VARIABLE” or “FIXED” is selectable. (Loop is provided.)
Default	VARIABLE
Function	When set to “FIXED”, it is disable to switch to other channel or input after start in the set value of “Start Mode (INPUT MODE START)”.
Keys disabled when not set to Default (Example)	Channel UP/Down, Direct, Channel Button, FLASHBACK, INPUT, STILL, Digit Select and Direct input switching
Remarks	• When “START MODE” is set to “NORMAL”, this item is disable to set. (Automatically set to “VARIABLE”.) • When set to “FIXED”, The Channel setting MENU (Menu-setup-Auto Installation, Programme setup and Child Lock item hatching) and Input Selection MENU in MENU are not displayed.

9. Video signal adjustment procedure

* The adjustment process mode menu is listed in Section 4.

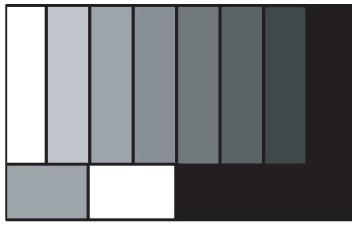
Signal generator level adjustment check (Adjustment to the specified level)

- Composite signal PAL : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)
- RGB signal : 0.7Vp-p ± 0.02Vp-p
- 15K component signal (50 Hz) : Y level : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)
  : PB, PR level : 0.7Vp-p ± 0.02Vp-p

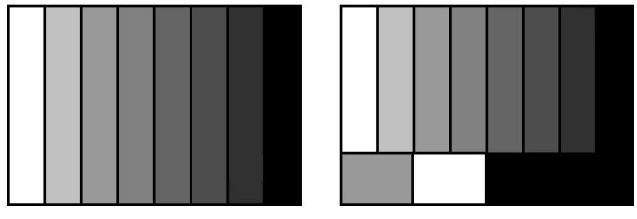
1. Entering the adjustment process mode

   Enter the adjustment process mode according to Section 3.

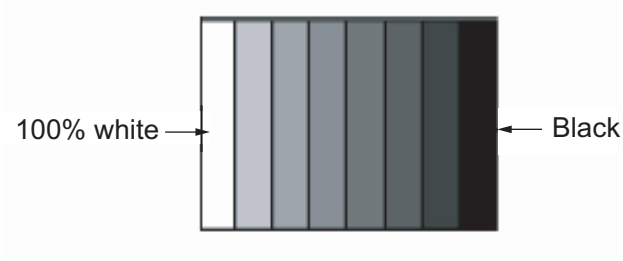
2. RF AGC adjustment

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] PAL Split Field Colour Bar RF signal U/V [Terminal] TUNER	• Feed the PAL Split Field colour bar signal (E-12ch) to TUNER. Signal level: 55 dB μV ± 1dB (75Ω LOAD) [E-12CH]  ↑ 100% white
2	Auto adjustment performance	Page 3/33	Bring the cursor on [RF AGC ADJ] and press [OK] [RF AGC ADJ OK] appears when finished.

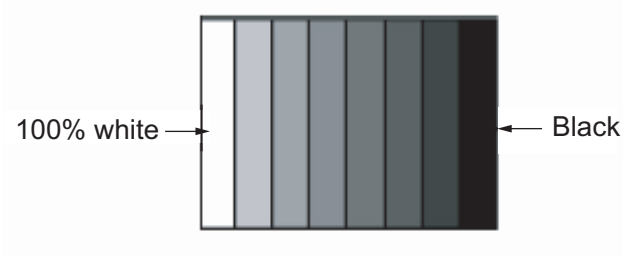
3. PAL signal & tuner adjustment

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] PAL Full Field Color Bar Composite or RF signal [Terminal] EXT1 SCART IN TUNER	• Feed the PAL full field colour bar signal (75% colour saturation) to EXT1 SCART IN. • Feed the RF signal (PAL colour bar) to TUNER. • Make sure the PAL colour bar pattern has the sync level of 7:3 with the picture level. [VIDEO IN SIGNAL] [RF Signal]  ↑ 100% white ↑ 100% white
2	Auto adjustment performance	Page 3/33	Bring the cursor on [PAL+TUNER ADJ] and press [OK] [PAL+TUNER ADJ OK] appears when finished.

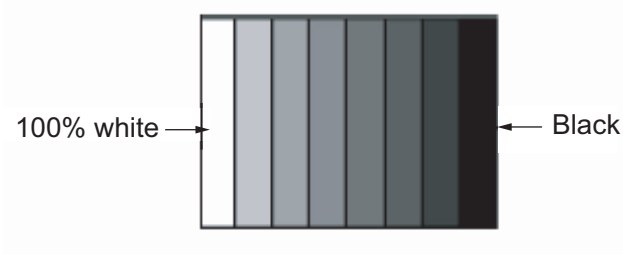
4. SECAM adjustment

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] SECAM Full Field Colour Bar signal [Terminal] EXT1 SCART IN	• Feed the SECAM full field colour bar signal (75% colour saturation) to EXT1 SCART IN. 
2	Auto adjustment performance	Page 4/33	Bring the cursor on [SECAM ADJ] and press [OK] [SECAM ADJ OK] appears when finished.

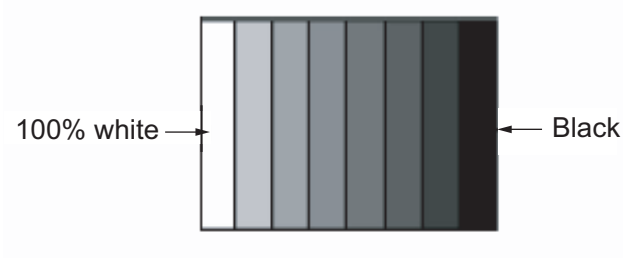
5. ADC adjustment (Component 15K)

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] COMP15K, 50Hz 100% Full Field Colour Bar signal [Terminal] EXT8 COMPONENT IN	• Feed the COMPONENT 15K 100% full field colour bar signal (100% colour saturation) to EXT8 COMPONENT IN. 
2	Auto adjustment performance	Page 6/33	Bring the cursor on [COMP15k ALL ADJ] and press [OK] [COMP15k ALL ADJ OK] appears when finished.

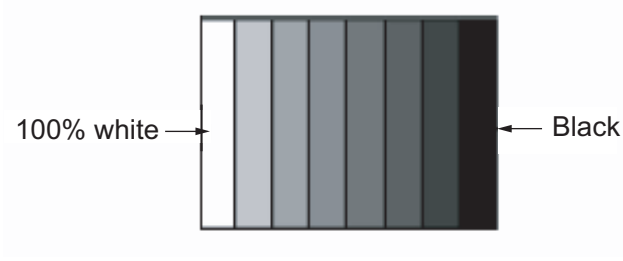
6. ADC adjustment (Component 33K)

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] COMP33K, 50Hz 100% Full Field Colour Bar signal [Terminal] EXT8 COMPONENT IN	• Feed the COMPONENT 33K 100% full field colour bar signal (100% colour saturation) to EXT8 COMPONENT IN. 
2	Auto adjustment performance	Page 7/33	Bring the cursor on [HDTV ADJ] and press [OK] [HDTV ADJ OK] appears when finished.

7. DVI-I adjustment (ANALOG D-sub15PIN)

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] XGA 60Hz 100% Full Field Colour Bar signal [Terminal] EXT7 PC IN	• Feed the XGA 60Hz 100% full field colour bar signal (100% colour saturation) to EXT7 PC IN. 
2	Auto adjustment performance	Page 8/33	Bring the cursor on [ANALOG PC ADJ] and press [OK] [ANALOG PC ADJ OK] appears when finished.

8. RGB adjustment (SCART)

	Adjustment point	Adjustment Conditions	Adjustment procedure
1	Setting	[Signal] RGB15K, 50Hz 100% Full Field Colour Bar signal [Terminal] EXT1 SCART IN	• Feed the RGB15k 50Hz 100% full field colour bar signal (100% colour saturation) to EXT1 SCART IN. 
2	Auto adjustment performance	Page 9/33	Bring the cursor on [SCART RGB ADJ] and press [OK] [SCART RGB ADJ OK] appears when finished.

10. White Balance Adjustment

Adjustment gradation values (IN) appear on page 12/33 of process adjustment, and adjustment initial values (offset value) appear on pages 13/33 and 14/33.

For white balance adjustment, adjust the offset values on pages 13/33 and 14/33.

[Condition of the unit for inspection]: Modulated light: MAX (+8)

[Adjustment reference device] : Minolta CA-210

[Adjustment]

Check that the values on page 12/33 of process adjustment are set as below. If not, change them accordingly.

Point 1 (LEV1)	176
Point 2 (LEV2)	352
Point 3 (LEV3)	528
Point 4 (LEV4)	656
Point 5 (LEV5)	800
Point 6 (LEV6)	928

1) Display the current adjustment status at point 6. (Page 12/33 of process adjustment)

   The display for checking the adjustment status is toggled by pressing the “6” button on the remote control.

   (Normal OSD display → “6” → display for check (OSD disappears) → “6” → normal OSD display → . . .)

2) Read the value of the luminance meter. x=0.272, y =0.277

3) Change MG6R/MG6B (Adjustment offset value) on page 14/33 of process adjustment so that the values of the luminance meter approach x=0.272 and y =0.277.

   (Basically, G is not changed. If adjustment fails with R and B, change G. When G is lowered, the weaker of R and B must be fixed.)

4) Display the adjustment status of the current point 5. (Each time the “5” button on the remote control is pressed, the adjustment status check display is toggled.)

   (Normal OSD display → “5” → Check display (OSD disappears) → “5” → Normal OSD display → . . .)

   Change MG5R/MG5B (adjustment offset value) on page 14/33 of process adjustment so that the values of the luminance meter approach x = 0.272 and y = 0.277.

5) Repeat step 4) for points 4, 3, 2, and 1.

[Adjustment reference standard value]

Adjustment spec ± 0.002 Inspection spec ± 0.004 (point 1 and 2)

Adjustment spec ± 0.001 Inspection spec ± 0.002 (Excluding the above-mentioned)

* Adjusting procedure by use of [RS-232C]

1. Get ready the PC with COM port (RS-232C) running on Windows 95/98/ME/2000/XP operating system, as well as the RS-232C cross cable.
2. Start the unit with the RS-232C cable connected.
3. Start the terminal software. (The freeware readily available on the Internet will do.)
4. Make the following settings.

Baud rate	9,600 bps
Data LENGTH	8 bit
Parity bit	None
Stop bit	1 bit
Flow control	None

5. If the settings are correct, the terminal software indicates “ERR” against pressing of the “ENTER” key.
6. After the settings are done correctly, it is possible to make an adjustment by typing in the command shown in the table below and pressing the “ENTER” key on the keyboard.
7. Command entry is successful if the terminal software indicates “OK” when the “ENTER” is pressed. If “ERR” is shown, retry to enter the command.
8. Send the process mode switching command to switch from the RS232C operation mode to the process mode.

   KRSW0001: “ERR” is returned.

   KKT10037: When “OK” is returned, the process mode becomes active. When “ERR”, start over from KRSW0001.
9. Send each adjustment command.

   RS-232C command list

Command	Function	Remarks
KYOF0000	Remote control disabled	
OSDS0001	OSD display inhibited	
SBSL0016	Light control level MAX	
MSET0001	Background adjustment start	
MSET0004	Initialization of adjustment value	
LEV60928	Graduation 6 (928-graduation adjustment)	
MG6G ****	Adjustment of G of graduation 6	0000 ~ 4095
MG6R ****	Adjustment of R of graduation 6	0000 ~ 4095
MG6B ****	Adjustment of B of graduation 6	0000 ~ 4095
LEV50800	Graduation 5 (800-graduation adjustment)	
MG5G ****	Adjustment of G of graduation 5	Calculated value
MG5R ****	Adjustment of R of graduation 5	0000 ~ 4095
MG5B ****	Adjustment of B of graduation 5	0000 ~ 4095
LEV40656	Graduation 4 (656-graduation adjustment)	
MG4G ****	Adjustment of G of graduation 4	Calculated value
MG4R ****	Adjustment of R of graduation 4	0000 ~ 4095
MG4B ****	Adjustment of B of graduation 4	0000 ~ 4095
LEV30528	Graduation 3 (528-graduation adjustment)	
MG3G ****	Adjustment of G of graduation 3	Calculated value
MG3R ****	Adjustment of R of graduation 3	0000 ~ 4095
MG3B ****	Adjustment of B of graduation 3	0000 ~ 4095
LEV20352	Graduation 2 (352-graduation adjustment)	
MG2G ****	Adjustment of G of graduation 2	Calculated value
MG2R ****	Adjustment of R of graduation 2	0000 ~ 4095
MG2B ****	Adjustment of B of graduation 2	0000 ~ 4095
LEV10184	Graduation 1 (176-graduation adjustment)	
MG1G ****	Adjustment of G of graduation 1	Calculated value
MG1R ****	Adjustment of R of graduation 1	0000 ~ 4095
MG1B ****	Adjustment of B of graduation 1	0000 ~ 4095
MSET0003	Writing of adjustment value	

11. Confirmation item

1. Magi-Link Inspection

   The thing that the Magi-Link circuit operates is confirmed.

2. HDMI-CEC Inspection

   The thing that the HDMI-CEC circuit operates is confirmed.

12. Initialization to factory settings

CAUTION: When the factory settings have been made, 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.

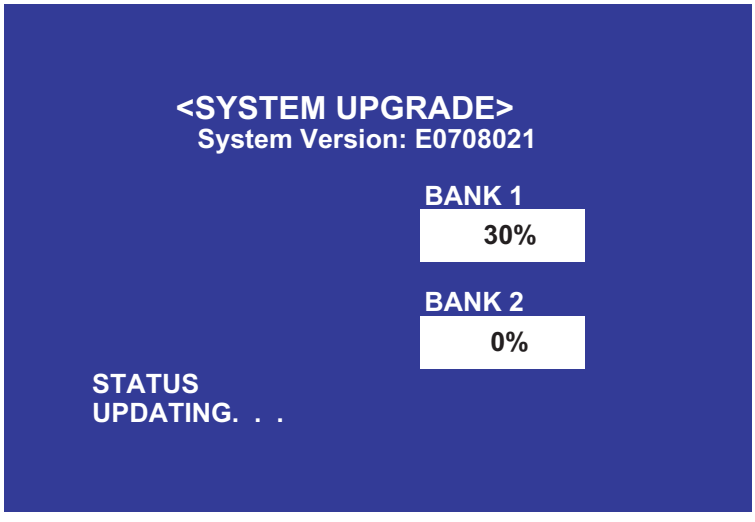
	Adjustment item	Adjustment conditions	Adjustment procedure
1	Factory settings	ends by turning off the MAIN POWER key. (See to below caution)	[Factory setting with adjustment process mode] • Enter the adjustment process mode. • Move the cursor to [INDUSTRY INIT] on page 2/33. • Use the R/C key to select a region from [EUROPE/RUSSIA/SWEDEN] and press the [OK] key. • “EXECUTING” display appears. • After a while, “SUCCESS” display appears, the setting is completed. When succeeding: Background color (green) When failing: Background color (red)
			The following items are initialized in the factory setting. 1) User settings 2) Channel data (e.g. broadcast frequencies) 3) Maker option setting 4) Password data

After adjustments, exit the adjustment process mode. To exit the adjustment process mode, turn off the MAIN power key. When the power is turned off with the remote control, unplug the AC power cord and plug it back in.

13. Upgrading the software

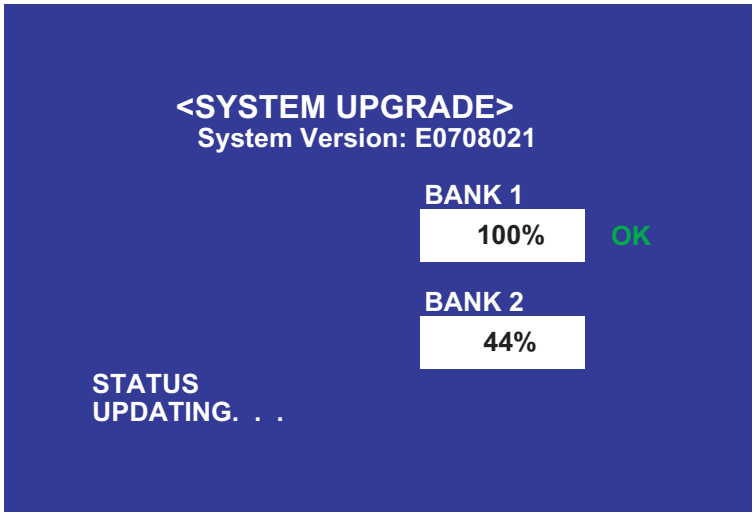
1. Turn off the AC power (Unplug the AC power cord).
2. Insert the upgrading USB flash memory for upgrade into the service slot.
3. While holding down the power button, plug in the AC power cord of the main unit to turn on the power.
4. Upgrade begins automatically.

   After the set starts, the upgrade screen like the figure below is displayed.

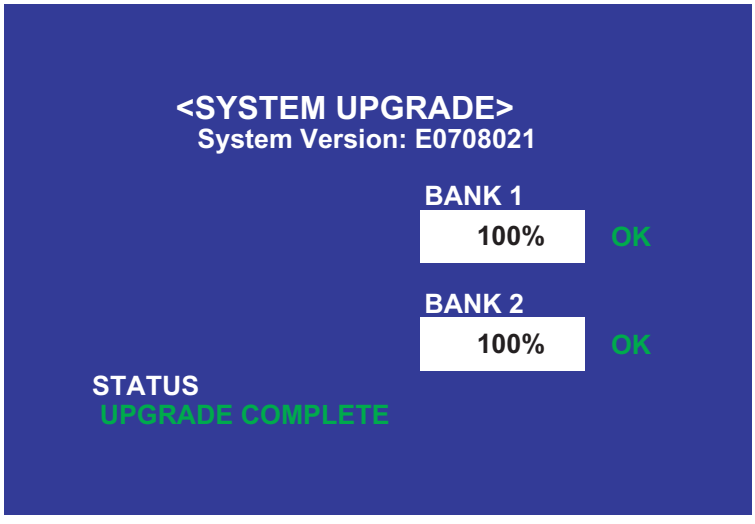


5. If any of the procedures fails, the following upgrade failure screen shows up. For the failing procedure, the “NG” marking turns red.

NOTE: In such case, try to upgrade the software again. If it still fails, the hardware may be in trouble.



6. When all the procedures are complete, the following upgrade success screen shows up. The new software version can be confirmed on screen. The version number appears when each item has been successfully upgraded. Finally the main version number appears on screen.



7. Turn off the AC power (Unplug the AC power cord). Take out the upgrading USB flash memory.
8. Now the software has been upgraded.

NOTE: Then get the set started and call the process adjustment screen 1/33 to check the main software version.

CAUTION

1) Do not take out and put in the USB flash memory during formatting.
2) It takes about one minute to the rewriting completion.
   Please confirm the upgrade status on the screen becomes 100%.

CHAPTER 4. TROUBLESHOOTING TABLE

[1] TROUBLESHOOTING TABLE

Power unit operation check.

Are the power cord and harness in the unit properly connected?	NO →	Connect the power cord and harness properly, and turn on the power.
↓ YES		
Is F7000 normal?	NO →	Isn't FL7001, L7001, CX7000-1, Z7000, BD7000, TH7000, Z7001, IC7801, etc. out of order? Moreover, whether the short-circuit with the circumference circuit is checked.
↓ YES		
Is B_BUS (+280V) output? (Set the main power SW to OFF.) * When power on/off switch is on • • • About +400V	NO →	Does the PFC circuit operate normally? (L7800, L7801, T7800, D7806, Q7804-5, IC7800-1 and etc. And, the circuit around the protection circuit etc. is checked.)
↓ YES		
Is a voltage of BU5V applied to pin (8) of connector (PD)? (Set the main power SW to OFF.)	NO →	Does the switching circuit operate normally? Check circuit around the primary side (T7901, IC7904, Q7902, Q7912-4, D7905-6, D7904, D7910, etc.), the secondary side (D7918, L7900, etc.), the AC_DET circuit (D7911-2, IC7909, IC7902, Q7910, Q7915, etc.), and the protection circuit.
↓ YES		
Are INV60V, UR15, and S15V output as for the power on/off switch when it is on?	NO →	Does the inverter circuit operate normally? Check circuit around the primary side (T7001, T7600, IC7603, IC7601, IC7600, Q7600-2, D7608, D7610, TH7600, etc.), the secondary side (D7560, L7560, D7150, L7150, L7152, Q7911, etc.), the PS_ON circuit (Q7300-1, etc.), and the protection circuit.
↓ YES		
Similarly, is PNL12V output as for the power on/off switch when it is on?	NO →	Check PNL_POW circuit of Q7121-2, etc. and the circuit around the regulator circuit etc. of IC7121, L7121, D7121, etc.

The sound is not emitted from the speaker though the picture has come out.

↓

No sound output in all modes?

↓

TEREMINAL UNIT:

Is the audio signal output of pins (38) (L-ch) and (39) (R-ch) of IC1404 (CODEC) normal? — NO → Check IC1404 and its peripheral circuits.

↓ YES

Is audio signal input to pin (5/L), pin (9/R) of IC1301 (AMP)? — NO → Check the line between IC1404 and IC1301.

↓ YES

Is MUTE circuit [SP_MUTE_LINE, S_STBY_LINE] normal? — NO → Check the SP_MUTE_LINE and S_STBY_LINE. (Q1302, etc.)

↓ YES

Is the audio signal output of pins (2, 1) (L-ch) and (3, 4) (R-ch) of P1301 (AOUDIO-CONNECTOR) normal? — NO → Check IC1301 and its peripheral circuits.

↓ YES

Check Speaker Box (right and left) and wire harness.

No sound (during the reception of TV(ANALOG) broadcasting)

↓

Does not the sound go out though the picture has come out when UHF/VHF is received?

↓

TEREMINAL UNIT:

Is the IF signal output from pin (17) of TUNER (TU7501)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Is the SIF signal sent to pins (23) and (24) of IC7504 (IFDE-MOD)? — NO → Check FL7501 and its peripheral circuits.

↓ YES

Is the SIF signal input from pin (12) of IC7504 to pin (3) of IC1402 (SOUND MULTIPLEX DECODER)? — NO → Check the line between IC7504 and IC1402. (Q7504, etc.)

↓ YES

Is audio signal input from pin (24/L-ch), (22/R-ch) of IC1402 to pin (61, 62) of IC1404 (CODEC)? — NO → Check the line between IC1402 and IC1404.

↓ YES

Refer to “No sound output in all modes”.

No sound (during the reception of TV (DIGITAL) broadcasting)

↓

Does not the sound go out though the picture has come out when DTV is received?

MAIN UNIT:

↓

Is DTV_SPDIF audio signal output from pin (T2) of IC8101 (CPU/DECODER) to pin (2) of connector SC1101?	NO →	Check the line between IC8101 and SC1101, and their peripheral circuits.

TERMINAL UNIT:

↓ YES

Is DTV_SPDIF audio signal input from pin (2) of connector SC501 to pin (4) of IC1404 (CODEC)?	NO →	Check the line between SC501 and IC1404. (SC1101/SC501, etc.)

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (1)

↓

Does not the sound of the audio signal input to EXT1 (SCART1) go out?
Does not the sound of the audio signal input to EXT2 (SCART2) go out?

TEREMINAL UNIT:

↓

EXT1 Is the audio signal properly sent to pins (6) (IN1_L) and (2) (IN1_R) of SCART1 (SC502)?	NO →	Check the setting of an external input device that connects of SC502.
EXT2 Is the audio signal properly sent to pins (6) (IN2_L) and (2) (IN2_R) of SCART2 (SC503)?	NO →	Check the setting of an external input device that connects of SC503.

↓ YES

EXT1 Is the audio signal properly sent to pins (51) (IN1_L) and (52) (IN1_R) of IC1404 (CODEC)?	NO →	Check the line between SC502 and IC1404.
EXT2 Is the audio signal properly sent to pins (53) (IN2_L) and (54) (IN2_R) of IC1404 (CODEC)?	NO →	Check the line between SC503 and IC1404.

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (2)

↓

Does not the sound of the audio signal input to EXT3 go out?

↓

MINI AV_UNIT:

Is audio signal output from pin (5/IN3-L), (4/IN3-R) of input terminal J901 to pin (3), (1) of connector P901?

NO → Check connection of between from J901 to P901 and the external input device.

↓ YES

TERMINAL UNIT:

Is audio signal input to pin (3/IN3-L), (1/IN3-R) of connector P501?

NO → Check the connector (P901/P501).

↓ YES

Is audio signal input to pin (55/IN3-L), (56/IN3-R) of IC1404 (CODEC)?

NO → Check the line between P501 and IC1404.

↓ YES

Is CVBS signal detection signal V3_PLUG signal from pin (7) in input terminal J901 normal?

NO → Check the connection to J901 and external devices.

↓ YES

Is V3_PLUG signal input to pin (2) of IC506 (VIDEO SELECTOR)?

NO → Everything from V3_PLUG_LINE J901 to pin (2) of IC506 is checked. (connector P901/P501 and etc.)

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (3)

↓

Does not the sound of the audio signal input to EXT4/5/6 (HDMI) go out?

↓

Is picture of the signal input from EXT4/5/6 displayed?

NO → Refer to “Does not the picture of the HDMI signal input to EXT4/5/6 go out?”.

↓ YES

MAIN UNIT:

Is the HDMI_SPDIF audio signal output from pin (W12) of IC3301 (VIDEO PROCESSOR) to pin (4) of connector SC1101?

NO → Check the line between IC3301 and SC1101, and their peripheral circuits.

↓ YES

TERMINAL UNIT:

Is HDMI_SPDIF audio signal input from pin (4) of connector SC501 to pin (5) of IC1404 (CODEC)?

NO → Check the line between SC501 and IC1404. (SC1101/SC501, etc.)

↓ YES

Refer to “No sound output in all modes”.

No sound from external input devices (4)

Does not the sound of the audio signal input to EXT6 (Analog) go out?

Whether “Analog” has selected it in the Audio setup of the HDMI option is checked.

MAIN UNIT:

YES

Is audio signal sent from pin (2/L) and (3/R) of input terminal J1502 to pin (1) and (6) of IC1504 (SW)?

NO

Check the connection between J1502 and the peripheral circuit, the external input devices.

Does not the sound of the audio signal input to EXT7 go out?

MAIN UnIT:

YES

Is audio signal sent from pin (2/L) and (3/R) of input terminal J1501 to pin (3) and (7) of IC1504 (SW)?

NO

Check the connection between J1501 and the peripheral circuit, the external input devices.

Is audio signal output from pin (15/HDMI_PC_L) and pin (11/HDMI_PC_R) of IC1504 to pin (44) and (46) of connector SC1101?

NO

Check the line between IC1504 and SC1101, and their peripheral circuits.

TERMINAL UNIT:

YES

Is audio signal (HDMI_PC_L=MAIN_L, HDMI_PC_R=MAIN_R) sent to pins (44) and (46) of SC501?

NO

Check the connector (SC1101/SC501)

YES

Is audio signal input to pin (59/MAIN_L) and (60/MAIN_R) of IC1404 (CODEC)?

NO

Check the line between SC501 and IC1404.

YES

Refer to “No sound output in all modes”.

No sound from external input devices (5)

Does not the sound of the audio signal input to EXT8 go out?

TEREMINAL UNIT:

Is audio signal sent from pins (2/IN4-L) and (4/IN4-R) of input terminal J502?

NO

Check the connection to J502 and external devices.

YES

Is audio signal sent from pins (57/IN4-L) and (58/IN4-R) of IC1404?

NO

Check the line between J502 and IC1404.

YES

Refer to “No sound output in all modes”.

The audio signal is not output (1)

↓

The audio signal of UHF/VHF and DTV is not output from EXT1 (SCART).

↓ TEREMINAL UNIT:

Is audio signal sent to pins (3/L-ch) and (1/R-ch) of SCART1 (SC502)? — YES → Check the connection to SCART1 and external devices.

↓ NO

Is S-MUTE-LINE [MAIN_UNIT pin (93) of IC9101 (CPLD)] at H? — YES → Check the peripheral circuits of IC9101 and S-MUTE_LINE. (Q502, Q504, etc.)

↓ NO

Is audio signal sent to pins (24/L-ch) and (22/R-ch) of IC1402 (SOUND MULTIPLEX DECODER)? — YES → Check the line between SC502 and IC1402. (Q508, Q507, IC1407, etc.)

↓ NO

Check IC1402 and its peripheral circuits.

The audio signal is not output (2)

↓

The audio signal of UHF/VHF and DTV is not output from EXT2 (SCART).

↓ TEREMINAL UNIT:

Is audio signal sent to pins (3/L-ch) and (1/R-ch) of SCART2 (SC503)? — YES → Check the connection to SCART2 and external devices.

↓ NO

Is S2-MUTE-LINE [MAIN_UNIT pin (91) of IC9101 (CPLD)] at H? — YES → Check the peripheral circuits of IC9101 and S2-MUTE_LINE. (Q501, Q503, etc.)

↓ NO

Is audio signal sent to pins (3/L-ch) and (13/R-ch) of IC7510 (SW)? — YES → Check the line between IC7510 and SC503. (Q506, Q505, etc.)

↓ NO

Is audio signal input to pins (2/L-ch) and (15/R-ch) of IC7510? — YES → Check IC7510 or peripheral circuits. (SC_AUD_SEL_LINE, etc.)

↓ NO

Is audio signal sent to pins (24/L-ch) and (22/R-ch) of IC1402 (SOUND MULTIPLEX DECODER)? — YES → Check the line between IC7510 and IC1402. (IC1407, etc.)

↓ NO

Check IC1402 and its peripheral circuits.

The audio signal is not output (3)

↓

The audio signal of MONITOR is not output from EXT2 (SCART).

↓

TEREMINAL UNIT:

Is audio signal sent to pins (3/L-ch) and (1/R-ch) of SCART2 (SC503)? — YES → Check the connection to SCART2 and external devices.

↓ NO

Is S2-MUTE-LINE [MAIN_UNIT pin (91) of IC9101 (CPLD)] at H? — YES → Check the peripheral circuits of IC9101 and S2-MUTE_LINE. (Q501, Q503, etc.)

↓ NO

Is audio signal sent to pins (3/L-ch) and (13/R-ch) of IC7510 (SW)? — YES → Check the line between IC7510 and SC503. (Q506, Q505, etc.)

↓ NO

Is audio signal input to pins (1/L-ch) and (12/R-ch) of IC7510? — YES → Check IC7510 or peripheral circuits. (SC_AUD_SEL_LINE, etc.)

↓ NO

Is audio signal sent to pins (40/L-ch) and (41/R-ch) of IC1404 (CODEC)? — YES → Check the line between IC7510 and IC1404. (IC1405, etc.)

↓ NO

Check IC1404 and its peripheral circuits.

The audio signal is not output (4)

↓

No audio signal output from AUDIO_OUTPUT terminal.

↓

TEREMINAL UNIT:

Is audio signal output to pin (2/L-ch), (4/R-ch) of audio output terminal J503? — YES → Check the connection to J503 and external devices.

↓ NO

Do pin (72)] of MONITOR_MUTE_LINE [IC506 (VIDEO_SELECTOR), pin (55)] of MUTE-A_ALL_LINE [MAIN_UNIT IC2002 (UCON) become H? — YES → Check the IC506,IC2002, its peripheral circuit and MONITOR_MUTE_LINE, MUTE-A_ALL_LINE. (Q512, Q511, D551, etc.)

↓ NO

Is the audio signal output of pins (40/L-ch) and (41/R-ch) of IC1404 (CODEC)? — YES → Check the line between IC1404 and J503. (IC1405, Q509, Q510, etc.)

↓ NO

Check IC1404 and its peripheral circuits.

The audio signal is not output (5)

↓

No audio signal output from DIGITAL_AUDIO_OUTPUT terminal.

↓

TEREMINAL UNIT:

Is audio signal output to pin (1) of digital sound output terminal D501? — YES → Check D501 or peripheral circuits. (B3.3V_LINE, etc.)

↓ NO

Do pin (92) of SPDIF_MUTE_LINE [MAIN_UNIT IC9101 (CPLD)], pin (55) of MUTE-A_ALL_LINE [MAIN_UNIT IC2002 (UCON)] become H? — YES → Check IC9101, IC2002, its circumference circuit and SPDIF_MUTE_LINE, MUTE-A_ALL_LINE. (Q521, D521, etc.)

↓ NO

Is an audio signal input from pin (23) of IC1404 (CODEC) to pin (2) of IC502, and is the logic signal input into pin (1)? — YES → Check IC502 or peripheral circuits.

↓ NO

Check IC1404 and its peripheral circuits.

The audio signal is not output (6)

↓

No sound from HEDPHONE_OUTPUT terminal.

↓

MINI AV_UNIT:

Is the HP_PLUG signal input into pin (87) of MAIN_UNIT's IC9101 (CPLD) from pin (6) of a headphone terminal (J802)? — NO → Check the line between J802 and IC9101. (P801/P1101, IC9105, etc.)

↓ YES

Is the audio signal output to pin (2)/L pin (3)/R of headphone terminal J802? — YES → Check HEAD-PHONE (J802) or peripheral circuits.

MAIN UNIT: ↓ NO

Is the audio signal input into pin (5) and (7)of connector P1101 from pin (48)/L, (50)/R of connector SC1101? — YES → Check the line between P1101 and J802. (P801/P1101, etc.)

TERMINAL UNIT: ↓ NO

Is audio signal sent to pins (48/L-ch), (50/R-ch) of SC501? — YES → Check the connector SC501/SC1101.

↓ NO

Is audio signal sent to pins (36/L-ch), (35/R-ch) of IC1404 (CODEC)? — YES → Check pin (86) of MUTE circuit HP_MUTE_LINE [MAIN_UNIT IC9101 (CPLD) pin (86)] becomes H or not. (Q1402, Q1401, IC9101, etc.)

↓ NO

Check IC1404 or peripheral circuits.

No picture on the display (1)

The picture doesn't appear in all modes.

MAIN UNIT:

Is LVDS signal output from 1st_channel and 2nd_channel of IC3301(VIDEO PROCESSER) in each mode?
TA1_P/M (A14/B14), TB1_P/M (A15/B15), TC1_P/M (A16/B16), TD1_P/M (A18/B18), TE1_P/M (A19/B19), TCLK1_P/M (A17/B17), TA2_P/M (A20/B20), TB2_P/M (C20/D19), TC2_P/M (D20/E19), TD2_P/M (F20/G19), TE2_P/M (G20/H19), TCLK2_P/M (E20/F19)

NO → Check IC3301 and its peripheral control circuits. (IC2002, IC8101, IC3501, IC3502, etc.)

YES

Is the above-mentioned LVDS signal output to connector P2601?

NO → Check the line between IC3301 and P2601.

YES

Is LCD controller's control signal normal?

NO → control signals R/L_LINE, U/D_LINE, TEMP1/2/3_LINE, DET_PNL12V, ROMSEL0_LINE, ROMSEL1_LINE, and it peels off and whether normality is checked.

PANEL_UNIT: YES

Similarly, is the LVDS signal input to connector CN1 of the panel module?

NO → Wire harness (LW) is checked.

YES

Check the panel module.

No picture on the display (2)

Does not the picture come out when VHF/UHF is received?

TERMINAL UNIT:

Is IF signal output from pin (17) of TUNRE (TU7501)?

NO → Check whether I2C is normally accessed between named TU7501 and IC7507 (COFDM).

YES

Is IF signal input to pin (1) and (2) of IC7504 (IF-DEMO)?

NO → Check the FL7502 (VIF_SAW) and their peripheral circuits.

YES

Is picture signal input from pin (17) of IC7504 to pin (9) of IC506 (VIDEO_SELECTOR)?

NO → Check the line between IC7504 and IC506. (Q7505, IC7508, etc.)

YES

Is CVBS signal (MAIN_Y/V) output from pin (52) of IC506 to pin (68) of connector SC501?

NO → Check the line between IC506 and SC501.

MAIN UNIT: YES

Is CVBS signal (MAIN_Y/V) input to pin (68) of connector SC1101?

NO → Check the connector SC501/SC1101.

YES

Is CVBS signal (MAIN_Y/V) input to pin (Y4) of IC3301 (VIDEO_PROCESSOR)?

NO → Check the line between SC1101 and IC3301.

YES

Refer to “The picture doesn't appear in all modes.”

No picture on the display (3)

Does not the picture come out when DTV is received?

TERMINAL UNIT:
Is the voltage of regulation for a TUNER circuit and the power supply terminal of IC7507 (COFDM) supplied? (Refer to the circuit diagram)
NO → Each power supply circuit is checked.

YES
Is IF signal output from pin (20), (21) of TUNER (TU7501) to pin (30), (31) of IC7507 (COFDM)?
NO → Check the tuner, IC7507 and their peripheral circuits. Replace as required.

TERMINAL UNIT: YES
Similarly, is communication control carried out between pin (14),(15) of TU7501, and pin (4), (5)of IC7507?
NO →

YES
Does X7502 (20.48MHz) oscillate?
NO → Check X7502 and its peripheral circuits.

YES
Is MPEG data (FECLK, FED_D, FESTR_PSYNC, FEVAL_DEN) from IC7507 are output to pin (18)/FECLK, (16)/FED_D and pin (26)/FESTR_PSYNC, (20)/FEVAL_DEN of a connector (SC501)?
NO → Is the control signal named IC7507 and IC9101 (CPLD) normal? (FE_RST_LINE, FEERR_LINE, FEPG0_COMP_LINE, FEPG1_LOCK_LINE, IC7502 etc.)

MAIN UNIT: YES
Is the digital signal input into pin (18)/FECLK, (16)/FED_D and pin (26)/FESTR_PSYNC, (20)/FEVAL_DEN of a connector (SC1101)?
NO → Check the connector SC501/SC1101.

YES
Is the digital signal input into pin (AF3)/FECLK, (AF2)/ FED_D, (AF4)/FESTR_PSYNC, (AH3)/FEVAL_DEN of IC8101 (CPU/ DECODER)?
NO → Check the line between SC1101 and IC8101.

YES
Do X8101 (24.00MHz)/ X8102 (32.768kMHz) oscillate?
NO → Check the X8101/ X8102 and their peripheral circuits.

YES
Are video signal VDB_R [0:9], VDB_G [0:9], VDB_B [0:9], and VBD_CLK/DE/HD/VD are output from IC8101 to IC3301 (VIDEO PROCESSOR)?
NO → Check IC8101, IC3301 and their peripheral circuits. (IC8301-IC8304 (DDR2_SDRAM), etc.)

YES
Refer to “The picture doesn't appear in all modes.”

<External input EXT1,EXT2> No picture on the display (4)

↓

Does not the picture of the CVBS signal input to EXT1 go out?
Does not the picture of the CVBS signal input to EXT2 go out?

↓

TERMINAL UNIT:

<EXT1> Is CVBS signal sent to pin (20) of SCART1 (SC502)?	NO →	Check the setting of an external input device that connects of SC502.
<EXT2> Is CVBS signal sent to pin (20) of SCART2 (SC503)?	NO →	Check the setting of an external input device that connects of SC503.

↓ YES

<EXT1> Is CVBS signal sent to pin (65) of IC506?	NO →	Check the line between SC502 and IC506.
<EXT2> Is CVBS signal sent to pin (71) of IC506?	NO →	Check the line between SC503 and IC506.

↓ YES

Is Y/C signal output to pin (68) of connector SC501 from pin (52) of IC506?	NO →	Check the line between IC506 and SC501.

↓ YES

MAIN UNIT:

Is CVBS signal (MAIN_Y/V) input to pin (68) of connector SC1101?	NO →	Check the connector SC501/SC1101.

↓ YES

Is CVBS signal (MAIN_Y/V) input to pins (Y4) of IC3301 (VIDEO_PROCESSOR)?	NO →	Check the line between SC1101 and IC3301.

↓ YES

Refer to “The picture doesn't appear in all modes.”

<External input EXT1,EXT2> No picture on the display (5)

↓

Does not the picture of the R/G/B video signal input to EXT1 go out?
Does not the picture of the R/G/B video signal input to EXT2 go out?

↓

TERMINAL UNIT:

<EXT1> Is RGB1 signal sent to pins (15)/R1, (11)/G1 and (7)/B1 of SCART1 (SC502)?	NO →	Check the setting of an external input device that connects of SC502.
<EXT2> Is RGB2 signal sent to pins (15)/R2, (11)/G2 and (7)/B2 of SCART2 (SC503)?	NO →	Check the setting of an external input device that connects of SC503.

↓ YES

<EXT1> Is RGB1 signal sent to pins (25)/R1, (21)/G1 and (23)/B1 of IC506?	NO →	Check the line between SC502 and IC506.
<EXT2> Is RGB2 signal sent to pins (31)/R2, (27)/G2 and (29)/B2 of IC506?	NO →	Check the line between SC503 and IC506.

↓ YES

Is RGB signal output from pin (54), (56), and (55) of IC506 to pin (66), (62), and (64) of connector (SC501)?	NO →	Check the line between IC506 and SC501.

↓ YES

MAIN UNIT:

Is RGB signal sent to pins (66), (62), (64) of connector (SC1101)?	NO →	Check the connector (SC501/SC1101)

↓ YES

Is RGB signal sent to pins (Y8), (V6), (W9) of IC3301 (VIDEO_PROCESSOR)?	NO →	Check the line between SC1101 and IC3301. (Q1104, Q1105, Q1106, etc.)

↓ YES

Refer to “The picture doesn't appear in all modes.”

<External input EXT1,EXT2> No picture on the display (6)

↓

Does not the picture of the Y/C video signal input to EXT1 go out?
Does not the picture of the Y/C video signal input to EXT2 go out?

↓

TERMINAL UNIT:

<EXT1> Is Y/C video signal sent to pins (20) and (15) of SCART1 (SC502)?	NO →	Check the setting of an external input device that connects of SC502.
<EXT2> Is Y/C video signal sent to pins (20) and (15) of SCART2 (SC503)?	NO →	Check the setting of an external input device that connects of SC503.

↓ YES

<EXT1> Is Y/C signal sent to pins (67), (69) of IC506?	NO →	Check the line between SC502 and IC506.
<EXT2> Is Y/C signal sent to pins (73), (75) of IC506?	NO →	Check the line between SC503 and IC506.

↓ YES

Is Y/C signal output to pin (68), (70) of connector SC501 from pin (52/Y), (50/C) of IC506?	NO →	Check the line between IC506 and SC501.

MAIN UNIT: ↓ YES

Is Y/C signal sent to pins (68), (70) of connector (SC1101)?	NO →	Check the connector (SC501/SC1101)

↓ YES

Is Y/C signal sent to pins (Y4), (V9) of IC3301 (VIDEO_PROCESSOR)?	NO →	Check the line between SC1101 and IC3301.

↓ YES

Refer to “The picture doesn't appear in all modes.”

<When EXT3 is used for external input> No picture on the display (7)

↓

Does not the picture of the composite video signal input to EXT3 go out?

↓

MINI AV UNIT:

Is CVBS signal output from pin (6) in input terminal J901 to pin (5) of connector P901?

NO → Check the line between J901 and P901.

↓ YES

TERMINAL UNIT:

Is the CVBS signal input from pin (5) of connector P501 to pin (3) of IC506 (VIDEO SELECTOR)?

NO → Check the line between P501 and IC506. (Connector P901/P501, etc.)

↓ YES

Is the composite video signal detection signal V3_PLUG signal from pin (7) of the input terminal J901 normal?

NO → Check J901 or peripheral circuits.

↓ YES

Is the V3_PLUG signal input to pin (2) of IC506?

NO → Check the between V3_PLUG_LINE J901 and pin (2) of TERMINAL UNIT's IC506. (ConnectorP901/P501,etc)

↓ YES

Is video signal MAIN_Y/V output into pin (68) of connector SC501 from pin (52) of IC506?

NO → Check the line between IC506 and SC501.

↓ YES

MAIN UNIT:

Is picture signal MAIN_Y/V input to pin (68) of connector SC1101?

NO → Check the connector (SC501/SC1101)

↓ YES

Is picture signal MAIN_Y/V input to pin (Y4) of IC3301 (VIDEO_PROCESSOR)?

NO → Check the line between SC1101 and IC3301.

↓ YES

Refer to “The picture doesn't appear in all modes.”

<When EXT3 is used for external input> No picture on the display (8)

↓

Does not the picture of the Y/C video signal input to EXT3 go out?

↓

MINI AV_UNIT:

Is Y/S signal input into pin (13), (11) of connector P901 from pin (3)/Y, (4)/C of J902?

NO → Check the line between J901 and P901.

↓ YES

TERMINAL UNIT:

Is Y/C signal input into pin (5), (7) of IC506 (VIDEO SELECTOR) from pin (13)/Y, (11)/C of connector P501?

NO → Check the line between P501 and IC506. (Connector P901/P501, etc.)

↓ YES

Is the Y/C video signal detection function S3_PLUG signal from pin (6) of the input terminal J902 normal?

NO → Check J902 or peripheral circuits.

↓ YES

Is the S3_PLUG signal input to pin (42) of IC506?

NO → Check the between S3_PLUG_LINE J902 and pin (42) of TERMINAL UNIT's IC506. (connector P901/P501, etc.)

↓ YES

Is Y/C signal output into pin (68), (70) of connector SC501 from pin (52)/Y, (50)/C of IC506?

NO → Check the line between IC506 and SC501.

↓ YES

MAIN UNIT:

Is Y/C signal input to pin (68), (70) of connector SC1101?

NO → Check the connector (SC501/SC1101)

↓ YES

Is Y/C signal input to pin (Y4), (V9) of IC3301 (VIDEO_PROCESSOR)?

NO → Check the line between SC1101 and IC3301.

↓ YES

Refer to "The picture doesn't appear in all modes."

<When EXT4 is used for external input> No picture on the display (9)

↓

Does not the picture of the HDMI signal input to EXT4 go out?

↓

MINI AV_UNIT:

Is the HDMI detection function output from pin (19) of the HDMI terminal (SC1503) normal?

NO → Check between SC1503 and IC1507 (HDMI_SW) of pin (56). (IC1508, etc.)

↓ YES

Is EDID data pin (6)/SCL, pin (5)/SDA of IC1505 (EEPROM) accessed, and is it read from pin (15), (16) of a HDMI terminal (SC1503)?

NO → Is access possible in the re-writing or exchange of EDID data of IC1505?

↓ NO

Check the circumference circuit of SC1503, IC1505 and IC1507.

↓ YES

Is TMDS signal input into pin (59,58)/TMDS6_CLK±, (62, 61)/ TMDS6_D0±, (65, 64)/TMDS6_D1±, (68, 67)/TMDS6_D2± of IC1507 from SC1501?

NO → Check the line between connector (SC802) and IC1507. (SC802, SC1503 and Wire harness (HM))

↓ YES

Is each signal output from pin (10, 11)/TMDS_CLKP/N, (7, 8)/ TMDS_D0P/N, (4, 5)/TMDS_D1P/N, (1, 2)/TMDS_D2P/N, (77, 78)/SDA_SINK/SCL_SINK, (79)/DDC5VOR_A of IC1507?

NO → Is the control signal named IC1507 and IC9101 (CPLD) normal? (HDMI_SW_INT, HDMI_RST, etc.)

↓ YES

Is each signal of IC3301 (VIDEO_PROCESSOR) pin (L1, L2)/TMDS_CLKP/N, (M1, M2)/TMDS_D0P/N, (N1, N2)/TMDS_D1P/N, (P1, P2)/ TMDS_D2P/N, (T11, U11)/SDA_SINK/SCL_SINK, (T10)/DDC5VOR_A input?

↓ YES

Refer to “The picture doesn't appear in all modes.”

↓ NO

Check the line between SC1101 and IC3301.

<When EXT5/6 is used for external input> No picture on the display (10)

↓

Does not the picture of the HDMI signal input to EXT5/6 go out?

↓

MAIN UNIT:

EXT5
Is the HDMI detection function output from pin (19) of the HDMI terminal (SC1501) normal?

NO →

EXT5
Check between SC1501and IC1507(HDMI_SW)of pin(16). (IC1506, etc.)

EXT6
Is the HDMI detection function output from pin (19) of the HDMI terminal (SC1502) normal?

NO →

EXT6
Check between SC1502 and IC1507(HDMI_SW) of pin(36). (IC1506, etc.)

↓ YES

Check the connection and setup with the external HDMI devices.

↓ YES

EXT5
Is EDID data pin (6)/SCL, pin (5)/SDA of IC1501 (EEPROM) accessed, and is it read from pin (15), (16) of a HDMI terminal (SC1501) pin(15), (16)?

NO →

Is access possible in the re-writing or exchange of EDID data of IC1501?

↓ NO

Check the circumference circuit of SC1501, IC1501and IC1507.

EXT6
Is EDID data pin (6)/SCL, pin (5)/SDA of IC1502 (EEPROM) accessed, and is it read from pin (15), (16) of a HDMI terminal (SC1501) pin (15), (16)?

NO →

Is access possible in the re-writing or exchange of EDID data of IC1502?

↓ NO

Check the circumference circuit of SC1501, IC1501and IC1507.

↓ YES

EXT5
Is TMDS signal input into pin (19, 18)/TMDS2_CLKP/N±, (22, 21)/TMDS2_D0P/N, (25, 24)/TMDS2_D1P/N, (28, 27)/TMDS2_D2P/N of IC1507 from SC1501?

NO →

Check the line between SC1501 and IC1507.

EXT6
Is TMDS signal input into pin (39, 38)/TMDS1_CLKP/N±, 42, 41)/TMDS1_D0P/N, (45, 44)/TMDS1_D1P/N, (48, 47)/TMDS1_D2P/N of IC1507 from SC1502?

NO →

Check the line between SC1502 and IC1507.

↓ YES

Is each signal output from pin (10, 11)/TMDS_CLKP/N, (7, 8)/TMDS_D0P/N, (4, 5)/TMDS_D1P/N, (1, 2)/TMDS_D2P/N, (77, 78)/SDA_SINK/SCL_SINK, (79)/DDC5VOR_A of IC1507?

NO →

Is the control signal of IC1507 and IC9101 (CPLD) normal? (HDMI_SW_INT, HDMI_RST, etc.)

↓ YES

Is each signal of IC3301 (VIDEO_PROCESSOR) pin (L1, L2)/TMDS_CLKP/N, (M1, M2)/TMDS_D0P/N, (N1, N2)/TMDS_D1P/N, (P1, P2)/TMDS_D2P/N, (T11, U11)/SDA_SINK/SCL_SINK, (T10)/DDC5VOR_A input?

↓ YES

Refer to “The picture doesn't appear in all modes.”

↓ NO

Check the line between IC1507 and IC3301.

<When EXT7 is used for external input> No picture on the display (11)

↓

Does not the picture of the DVI(ANALOG) video signal input to EXT7(15pin-D-SUB terminal) go out?

MAIN_UNIT: ↓

Are the video signal and the synchronized signal input from pin (1, 2, 3)/(R, G, B), (13 and 14)/(V, H) of input terminal D-SUB (SC1504)?

YES → Check the connection and setup between SC1504 and its circumference circuit as well as the external HDMI devices. (IC1503, etc.)

↓ NO

Are the video signal and the synchronized signal input from pin (U8, Y7, W10)/ (R, G, B), pin (V10, U10)/(H, V) of IC3301 (VIDEO PROCESSOR)?

YES → Check the line between SC1504 and IC3301.

↓ NO

Refer to “The picture doesn't appear in all modes.”

<When EXT8 is used for external input> No picture on the display (12)

↓

Does not the picture of the component video signal input to EXT8 go out?

TERMINAL UNIT: ↓

Is COMPONENT video signal input into pin (3)/Y, (5)/Pb, (7)/Pr of the input terminal J508?

NO → Check the connection of J508 and the external input device.

↓ YES

Is COMPONENT video signal input into pin (33)/Y, (35)/Pb, (37)/Pr of IC506 (VIDEO SELECTOR)?

NO → Check the line between J508 and IC506.

↓ YES

Is detection signal COMP1_PLUG of the COMPONENT video signal from pin (2) of the input terminal J508 normal?

NO → Check from the input terminal J508 to pin (38) of IC506.

↓ YES

Is COMPONENT signal output into pin (56), (58), (60) of the connector SC501 from pin (60)/Y, (59)/PB, (58)/PR of IC506?

NO → Check the line between IC506 and SC501. (Q516, Q518, Q520, etc.)

MAIN UNIT: ↓ YES

Is COMPONENT signal output from pin (56), (58), (60) of the connector (SC1101)?

NO → Check the connector (SC501/SC1101)

↓ YES

Is COMPONENT signal input into pin (W6), (Y9), (W8) of IC3301 (VIDEO_PROCESSOR)?

NO → Check the line between SC1101 and IC3301.

↓ YES

Refer to “The picture doesn't appear in all modes.”

<During external connection> No picture on the monitor (1)

↓

No picture appears on EXT1 - connected monitor during the tuner (U/V) reception.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? · · · Set it to “CVBS”, “Y/C” or “RGB”.
2) Is ANT-CABLE disconnected or connected improperly? · · · Connect it correctly as per the operation manual.
3) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
4) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
5) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓ TERMINAL UNIT:

Is CVBS signal output into pin (19) of SC502 (SCART1) from pin (2) of IC1501 (SW)? — YES → Check the setting of an external input device that connects of SC502.

↓ NO

Is TUNRE_CVBS signal input into pin (6) of IC503 (SW)? — YES → Check the IC501 (SW), IC503 (SW) and their peripheral circuits.

↓ NO

Is TUNRECVBS signal output from pin (17) of IC7504 (IF-DEMO)? — YES → Check the line between IC7504 and IC503. (Q7505, IC7508, etc.)

↓ NO

Is IF signal output from pin (17) of TUNRE (TU7501)? — YES → Check the IC7504/FL7502 (VIF_SAW) and its peripheral circuits.

↓ NO

Check whether I2C is normally accessed between TU7501 and IC7507 (COFDM).

<During external connection> No picture on the monitor (2)

↓

No picture appears on EXT1 - connected monitor during the tuner (DTV) reception.

↓

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? · · · Set it to “CVBS”, “Y/C” or “RGB”.
2) Is ANT-CABLE disconnected or connected improperly? · · · Connect it correctly as per the operation manual.
3) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
4) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
5) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

↓ TERMINAL UNIT:

Is CVBS signal outputted from pin (2) of IC1501 (SW) to pin (19) of SC502 (SCART1)? — YES → Check the setting of an external input device that connects of SC502.

↓ NO

Is DTV_CVBS signal sent to pin (4) of IC503 (SW)? — YES → Check the IC501 (SW), IC503 (SW) and their peripheral circuits.

↓ NO MAIN UNIT:

Is DTV_CVBS signal output to pin (54) of connector (SC1101)? — YES → Check the line between SC1101 (MAIN_UNIT)/ SC501 (TERMINAL UNIT) and IC503.

↓ NO

Is DTM_CVBS signal output to pin (AD4) of IC8101? — YES → Check the line between IC8101 and SC1101.

↓ NO

Check the IC8101 and its peripheral circuits.

<During external connection> No picture on the monitor (3)

SCART2:

No picture from EXT1 appears on EXT2-connected monitor.

NOTE: Normally, if the screen during display is sent to EXT2, no picture is sent to EXT2.

Checklist:

1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? · · · Set it to “CVBS”, “Y/C” or “RGB”.
2) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
3) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
4) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

TERMINAL UNIT:

Is CVBS signal input from pin (51) of IC506 to pin (19) of SCART2 (SC503)?

YES → Check the setting of an external input device that connects of SC503.

NO ↓

Is CVBS signal sent to pin (65) of IC506 (VIDEO_SELECTOR)?

YES → Check the IC506 and its peripheral circuits.

NO ↓

Is CVBS signal sent to pin (20) of SCART1 (SC502)?

YES → Check the line between S502 and IC506.

NO ↓

Check the setting of an external input device that connects of SC502.

<During external connection> No picture on the monitor (4)

SCART2:

No picture from EXT3 appears on EXT2- connected monitor.

Checklist:
1) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? · · · Set it to “CVBS”, “Y/C” or “RGB”.
2) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
3) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
4) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

TERMINAL UNIT:

Is CVBS signal input from pin (51) of IC506 to pin (19) of SCART2 (SC503)? — YES → Check the setting of an external input device that connects of SC503.

NO

Is CVBS signal input from pin (5) of the connector P501 to pin (3) of IC506 (VIDEO SELECTOR)? — YES → Check the IC506 and its peripheral circuits.

MINI AV UNIT: NO

Is CVBS signal input from pin (6) of the input terminal J901 to pin (5) of the connector (P501)? — YES → Check the connector (P501/P901)

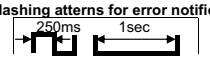
NO

Is V3_PLUG signal of the CVBS signal detection function from pin (7) of the input terminal J901 normal? — YES → Check the setting of an external input device that connects of J901.

NO

Check between V3_PLUG_LINE J901 and pin (2) of IC506 in the TERMINAL UNIT. (Connector P901/P501, etc.)

LED flashing atterns for error notification



1) Power red LED

Error type	Power red LED operation (1 cycle)	Remarks Description
Lamp failure Flashes once: Fast	H: On L: Off	ERR_PNL(IC2002_43pin): Abnormal L. Confirmed after 5 consecutive detections at 1 second intervals (detected Note that after five detection counts, the lamp cannot be activated except in the monitoring process. (For Accumulated counts are cleared to 0 when the corresponding setting in the process A is made, when the power
Power failure Flashes twice	H: On L: Off	Refer to "Power failure details".
Communication failure with main CPU Flashes 3 times	H: On L: Off	Refer to "Communication failure details". Communication line failure or main CPU(IC8101) communication failure. → Check main CPU (IC8101).
Monitor temp. failure Flashes 5 times	H: On L: Off	If the panel temperature is 60℃ or more for 15 seconds or more in a row, CAUTION appears on the OSD of AVC If the panel temperature is 60℃ or more for 15 seconds or more in a row, error standby is activated. (MONITOR MAX TEMP of process adjustment (28/31): Change of temperature failure AD value): Thermistor

2) Power failure details (Power LED flashes twice and OPC LED flashes)

Error type	OPC LED operation (1 cycle)	Remarks Description
PS_ON 12V failure Flashes once	H: On L: Off	AC_DET(IC2002_16pin): Abnormal (L). Main converter 12V is not applied. If error is detected during operation, the power is turned on again by interrupt handling (instantaneous bl
PS_ON 10V failure Flashes 3 times	H: On L: Off	DET_10V(IC2002_57pin): Abnormal (L). Main power UR15V is not applied. If error is detected during start-up or operation, the power is turned on again by polling.
D_POW Digital 3.3V failure Flashes 4 times	H: On L: Off	DET_D3V3(IC2002_59pin): Abnormal (L). D3.3V is not applied. If error is detected during start-up or operation, the power is turned on again by polling.
PANEL_POW Panel 5V failure Flashes 5 times	H: On L: Off	DET_PNL5V(IC2002_58pin): Abnormal (L). Panel power is not applied. If error is detected during start-up or operation, the power is turned on again by polling.
Main failure Flashes 7 times	H: On L: Off	Main microprocessor detection error The details are displayed on page 1 of process adjustment for the main microprocessor (IC8101).

3) Communication failure details (Power LED flashes 3 times and OPC LED flashes)

Error type	OPC LED operation (1 cycle)	Remarks Description
Initial communication reception failure Flashes once	H: On L: Off	Initial communication from the main CPU (IC8101) is not received. → Communication line failure or main CPU (IC8101) start-up failure
Start-up confirmation reception failure Flashes twice	H: On L: Off	Start-up reason confirmation from the main CP(IC8101) is not received. → Main CPU (IC8101) start-up failure or monitor microprocessor (IC2002) reception failure
Regular communication failure Flashes 3 times	H: On L: Off	Regular communication that is performed at 1 second intervals in the normal operation is interrupted. → Main CPU (IC8101) operation failure or monitor microprocessor (IC2002) reception failure
Restart failure Flashes 4 times	H: On L: Off	When restarted by a software with the standby off/on, restart completion notification is not received. → Main CPU (IC8101)restart failure to monitor microprocessor (IC2002) reception failure

CHAPTER 5. MAJOR IC INFORMATIONS

[1] MAJOR IC INFORMATIONS

1. MAJOR IC INFORMATIONS

1.1. IC7504 (VHiTDA9886+-1Y)

The TDA9886 is an alignment-free multistandard (PAL, SECAM and NTSC) vision and sound IF signal PLL demodulator for positive and negative modulation, including sound AM and FM processing.

1.2. IC7507 (VHiCE6353++-1Q)

CE6353 DVB-T demodulator meets the performance requirements of NorDig Unified 1.0.2 standard. The device includes a high-performance 10-bit A/D converter capable of accepting direct IF integrated digital filtering and requires only a single 8 MHz channel SAW filter for 6, 7 and 8 MHz COFDM signal reception, plus a 7-bit ADC for RF level indication.

1.3. IC506 (VHiMM3151XQ-1Q)

This video switch controlled by the I2C bus is used to switch between component signal, S-video signal and composite signal.

The signal group input from each input terminal and the tuner is selected by the control signal of the I2C bus.

The selected output signal is fed to IC3301 (IXC010WJ) of the video processor circuit.

1.4. IC1402 (VHiR2S15502-1Y)

R2S15502SP is a Sound Multiplex Decoder IC.

It supports the NICAM and A2 system.

It incorporates the high-speed ADC, and all processings are digitally implemented including demodulation.

1.5. IC1403 (VHiTAS3108D-1Y)

This IC is an audio processor for the digital TV and a 1-chip IC equipping the DSP only for audio with the AD/DA converter.

The 48bit DSP core has a processing capability of 135MHz and 675MIPS and realizes the high-quality audio processing.

1.6. IC1404 (VHiAK4683EQ-1Q)

1-chip 24bit CODEC (COmpression/DECompression) with a built-in 2ch ADC and 4ch ADC. The ADC has the enhanced dual bit architecture to realize the wide dynamic range. The DAC adopts the newly-developed advanced multi-bit architecture to achieve wider dynamic range and low outband noise. It also incorporates the digital audio receiver (DIR) and transmitter (DIT) compatible with 192kHz and 24bit. The DIR automatically detects Non-PCM data stream such as Dolby Digital (AC-3). For the digital audio output, ADC output or external digital input can be selected. The control is set through the serial μP I/F.

1.7. IC1301 (VHiYDA147SZ-1Y)

High-efficiency digital audio power amplifier IC with maximum power output of 20W (Vddp=14V, RL=4Ω) x 2ch.

It incorporates the “DRC (Dynamic range compression)” function. Since the volume is increased at low volume level and is decreased at high volume level, it is possible to prevent sudden volume change. It is also provided with the “power limiter” which can set the output limit.

1.8. IC402 (VHiBD9305AF-1Y)

1ch step-down switching regulator control

It supplies a power supply voltage of +5.0V.

1.9. IC9601/9603/9604/9606 (VHiTPS40055-1Y)

DC/DC converter IC. It supplies power supply voltages of 3.3/1.8/1.3/1.2V.

This IC has various user programming functions such as operation frequency, soft-start time, voltage feed forward, high-side current limit, and external loop compensation. It is also provided with the stabilized 10V gate drive power supply for the boot strap charging circuit of the high-side N channel MOSFET and the driver for the low-side synchronous rectification MOSFET.

1.10. IC9602 (VHiMP2367DN-1Y)

Monolithic step down regulator.

It supplies a power supply voltage of D5.0V.

- Programmable Soft-Start.
- Fixed 340kHz frequency.
- Cycle-by-Cycle over current protection.
- Input Under Voltage Lockout.

1.11. IC1507 (VHiSii9185+-1Q)

Sil9185 is a 3-input/1-output switch compatible with HDMI1.3.

- Built in Consumer Electronics Control (CEC) support
- Individual control of Hot Plug Detect (HPD) for each port
- 5V detect to help speed soft mute of audio during plug-in, plug-out conditions
- Control via local I2C bus.
- Supports video resolutions up to 1080p, 60Hz, 12-bit or 720p/1080i, 120Hz, 12-bit
- Built-in adaptive equalizer provides long cable support even at deep color resolutions
- Pre-emphasis in transmitter
- DVI 1.0, HDCP 1.1 and HDMI 1.3 compliant receiver and transmitter

1.12. IC9101 (RH-iXC121WJQZQ)

This IC performs the CPLD (Complex Programmable Logic Device) RESET, I/O and Bus control.

1.13. IC8101 (RH-iXC011WJQZQ)

HIDTVPro-LX Digital AV decoder & Main CPU.

- Master CPU with MMU.
- DDR2 memory up to 256mHz.
- Two Transport stream inputs, DVB compliant.
- Two HD MPEG2 video decoders.
- Demux, supports two TS inputs and one PS input.
- DVB_CI, up to two PCMCIA slots for CAM cards.
- DVB/DES.
- AC3/MPEG2/MP3/AAC · · · audio.
- 1920 x 1080p de-interlacing.
- Graphics engine.
- Two video planes and graphics planes with Alpha blender, overlay, scrolling, flashing, colour key, ARB support.
- Smart-Cards/UART/infrared IR/RTC/two HW timers/interrupt/Key button ADCs.
- Flash/IDE/PCI Host.
- Audio interface: AC97 link/I2S_out/I2S_in/SPDIF and lip-sync.
- Digital 24-bit RGB/YUV inputs.
- Dual port/Single port LVDS output.
- USB2.0 HOST/PHY built with EHCI.
- CVBS/S-video/YCbCr output.
- Two HD, 1920 x 1080p.

1.14. IC8701 (VHiS29GL128-1Q)

128Mbit Flash memory.

3.0V single power supply, page mode flash memory. It memorizes the program and broadcast data area.

1.15. IC8702 (RH-iXC150WJQZY)

The ICS275 field programmable VCXO clock synthesizer generates up to four high-quality, high-frequency clock outputs including multiple reference clocks from a low-frequency crystal input. Using ICS' VersaClockTM software to configure PLLs and outputs, the ICS275 contains a One-Time Programmable (OTP) ROM for field programmability. Programming features include VCXO, eight selectable configuration registers and up to two sets of two low-skew outputs.

Using Phase-Locked Loop (PLL) techniques, the device runs from a standard fundamental mode, inexpensive crystal, or clock.

1.16. IC8301-4 (RH-iXC154WJQZQ)

4M x 16Bit x 4 Banks graphic DDR2 Synchronous DRAM with Differential Data Strobe.

Program, DTV video buffer.

1.17. IC3301 (RH-IXC010WJQZQ)

SVP-WX Video Processor.

- Integrated HDMI Receiver
- Integrated De-interlacing
- Integrated ADC
- SRC (Scan Rate Conversion) Improvement
- PC Auto Tune
- Built-in LVDS Transmitter
- Scaling Engine
- DNR-Digital Noise Reduction Filter
- Advanced Chroma Processing
- Color Management
- RCR (Real Color Reproducer)
- Dynamic Contrast Improvement
- Integrated 3D Digital Comb Video Decoder with Programmable Filter
- Inverse Color Space Conversion (ICSC)
- Frame Rate Conversion
- Fast Blank
- Built-in ADC to decode one FB and two FS signals to support dual SCART solutions
- Teletext
- Memory Interface
- DCR Advanced Image Processing
- Multi Screen Display Mode
- OSD and VBI/Closed Caption
- Advanced OSD Engine

1.18. IC3501-2 (RH-iXC163WJQZQ)

1M x 32Bit x 4 Banks Double Data Rate Synchronous DRA with Bi-directional Data Strobe and DLL.

Video buffer.

1.19. IC2002 (RH-iXB986WJQZQ)

The monitor microprocessor is intended to communicate with the main microprocessor and to operate the system. It also controls power of the entire system.

1.20. IC7801 (9NK2510067610) L6562DTR

Transition-mode PFC (Power Factor Corrector) controller.

The PFC circuit is adopted to improve the power factor of electricity and total harmonic distortion (THD).

- Realised in BCD (Bipolar-CMOS-DMOS) technology.
- Transition-mode control of Pre-Regulators.
- Proprietary multiplier design for minimum THD (Total Harmonic Distortion) of AC input current.
- Very precise adjustable output Over-voltage protection.

1.21. IC7904 (9NK2510293234) TNY264PN

Enhanced, Energy Efficient, Low Power Off-line Switcher.

It supplies a power supply voltage of BU5V.

- Fully integrated auto restart for short circuit and open loop fault protection saves external component costs
- Built-in circuitry practically eliminates audible noise with ordinary varnished transformer
- Programmable line under voltage detect feature prevents power on/off glitches saves external components
- Frequency jittering dramatically reduces EMI (~10 dB)- minimizes EMI filter component costs

1.22. IC7603 (9NK2633003842) DLA001DTR

High voltage resonant controller.

It supplies power supply voltages of INV60V/S15V/UR15V/PNL12V.

- High voltage rail up to 600V.
- CMOS shut down input.
- Under voltage lock out.
- Soft start frequency sgifting timming.
- Sense OP AMP for closed loop control or protection features.
- High accuracy current controlled oscillator.
- Integrated bootstrap diode.
- Clamping ON Vs.

2. Detailed ICs Information

2.1. IC402 (VHiBD9305AF-1Y)

2.1.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	RT	—	Timing resistor external terminal
2	CT	—	Timing capacitor external terminal
3	ENB	I	Control input terminal
4	GD	O	Gate drive output terminal
5	VCC	—	Power terminal
6	GND	—	Ground terminal
7	COMP	O	Error amplifier output terminal
8	FB	I	Error amplifier inversion input terminal

2.2. IC506 (VHiMM3151XQ-1Q)

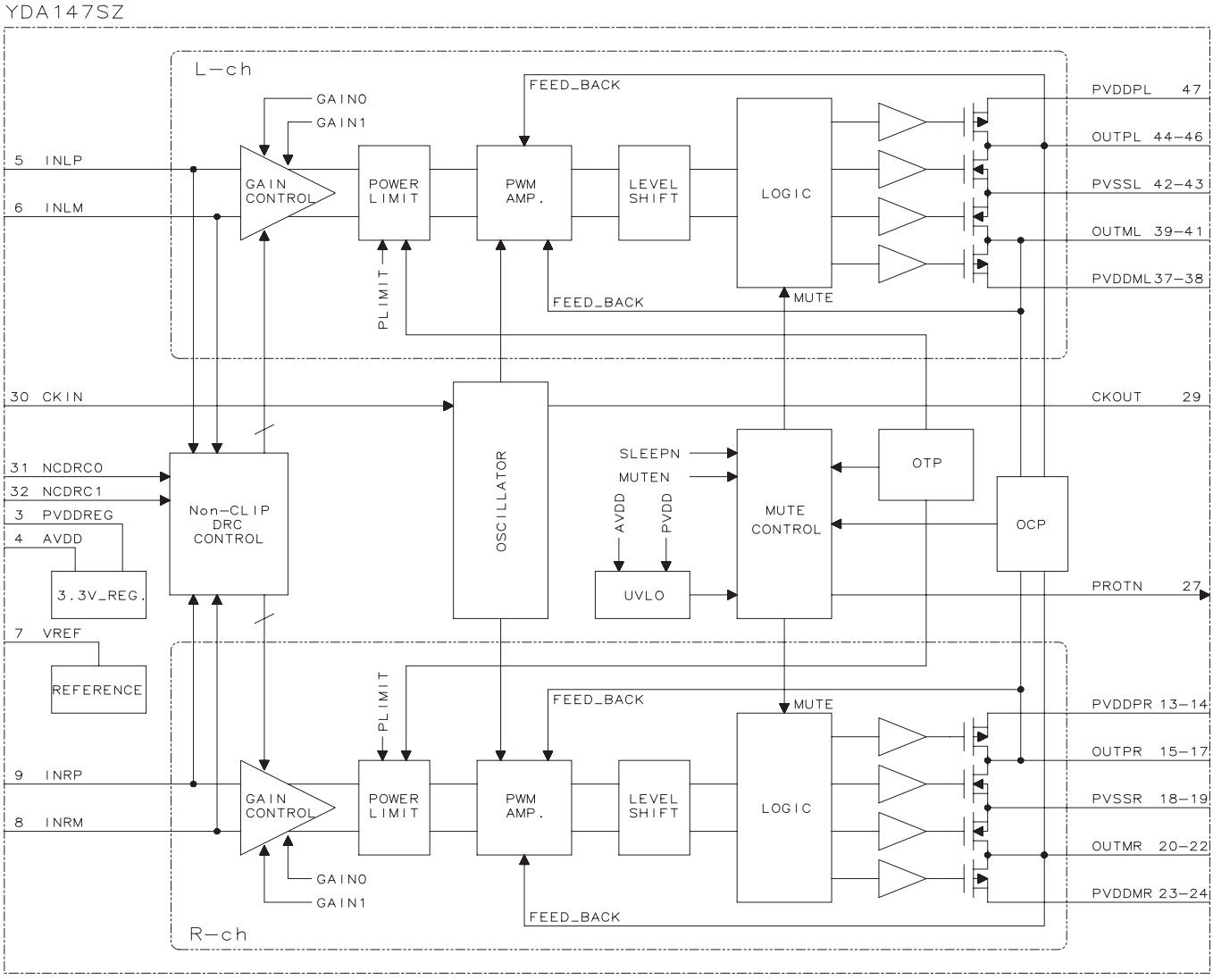
2.2.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
69	C1	I	Chroma signal input
75	C2	I	
1	C3	I	
7	C4	I	
70	S1	I	The terminal which detects the connection state of S-connector.
76	S2	I	
2	S3	I	
65	V1	I	Composite signal input.
71	V2	I	
77	V3	I	
3	V4	I	
9	V5	I	
15	V6	I	
68	S2-1	I	The terminal which detects the aspect ratio information of S-connector.
74	S2-2	I	
80	S2-3/ FS3	I	The terminal which detects the aspect ratio information of S-connector, or which detects the voltage of FS pin of a scart connector.
67	Y1	I	Luminance signal input.
73	Y2	I	
79	Y3	I	
5	Y4	I	
14	ADR	I	Slave address select pin.
16	BIAS	I	BIAS
32	L13	I	The terminal which detects the number of scanning lines information on D-connector.
20	L11/ FS1	I	The terminal which detects the number of scanning lines information on D-connector, or which detects the voltage of FS pin of a scart connector.
26	L12/ FS2	I	
21	CY1	I	Component Y-signal input.
27	CY2	I	
33	CY3	I	
22	L21	I	The terminal which detects the I/P information of D-connector.
28	L22	I	
34	L23	I	
24	L31	I	The terminal which detects the aspect ratio information of D-connector.
30	L32	I	
36	L33	I	
23	PB1	I	Colour difference PB-signal input.
29	PB2	I	
35	PB3	I	
25	PR1	I	Colour difference PR-signal input.
31	PR2	I	
37	PR3	I	
38	SW1	I	The terminal which detects the connection state of D-connector.
40	SW2	I	
42	SW3	I	
45	SDA	I/O	Data I/O of I2C bus
46	SCL	I	Clock input of I2C bus

Pin No.	Pin Name	I/O	Pin Function
49	DCOUT	O	DC output for S-terminal.
51	VOUT3	O	Monitor output (composit signal)
50	COUT3/VOUT6	O	Monitor output (Chroma or composite signal)
52	YOUT3/ VOUT5	O	Monitor output (Luminance or composite signal)
54	PROUT2	O	Colour difference PR-signal output.
58	PROUT1	O	
55	PBOUT2/ COUT2	O	Colour difference PB-signal or chroma signal output.
59	PBOUT1/ COUT1	O	
56	CYOUT2/ YOUT2/ VOUT2	O	Colour difference signal, Luminance or composite signal output.
60	CYOUT1/ YOUT1/ VOUT1	O	
64	O1	O	Output port.
66	O2	O	
72	O3	O	
78	O4	O	
53, 57	VDD1	—	Power supply (+9V)
8, 47	VDD2	—	Power supply (+5V)
18, 44, 62	GND	—	Ground
4, 6, 10, 11, 12, 13, 17, 19, 39, 41, 43, 48, 61, 63	NC	—	Unconnected pins.

2.3. IC1301 (VHiYDA147SZ-1Y)

2.3.1 Block Diagram



2.3.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1, 2, 12, 25, 35, 36	NC	—	No connection
3	PVDDREG	—	Power terminal for regulator (PVDD)
4	AVDD	—	Output terminal for 3.3V regulator
5	INLP	I	Analog input terminal (Lch+)
6	INLM	I	Analog input terminal (Lch-)
7	VREF		VREF terminal
8	INRM	I	Analog input terminal (Rch-)
9	INRP	I	Analog input terminal (Rch+)
10	AVSS	—	GND terminal for analog
11	PLIMIT	I	Power limit setting terminal
13, 14	PVDDPR	—	Power terminal for digital amplifier output (Rch+)
15, 16, 17	OUTPR	O	Digital amplifier output terminal (Rch+)
18, 19	PVSSR	—	Ground terminal for digital amplifier output (Rch)
20, 21, 22	OUTMR	O	Digital amplifier output terminal (Rch-)
23, 24	PVDDMR	—	Power terminal for digital amplifier output (Rch-)
26	SLEEPN	I	Sleep control terminal
27	PROTN	O	Error flag output terminal
28	MUTEN	I	Mute control terminal
29	CKOUT	O	Clock output terminal for synchronization
30	CKIN	I	External clock input terminal
31	NCDRC0	I	Non-clip/DRC1/DRC2 mode selection terminal 0
32	NCDRC1	I	Non-clip/DRC1/DRC2 mode selection terminal 1
33	GAIN0	I	GAIN setting terminal 0
34	GAIN1	I	GAIN setting terminal 1
37, 38	PVDDML	—	Power terminal for digital amplifier output (Lch-)
39, 40, 41	OUTML	O	Digital amplifier output terminal (Lch-)
42, 43	PVSSL	—	Ground terminal for digital amplifier output (Lch)
44, 45, 46	OUTPL	O	Digital amplifier output terminal (Lch+)
47, 48	PVDDPL	—	Power terminal for digital amplifier output (Lch+)

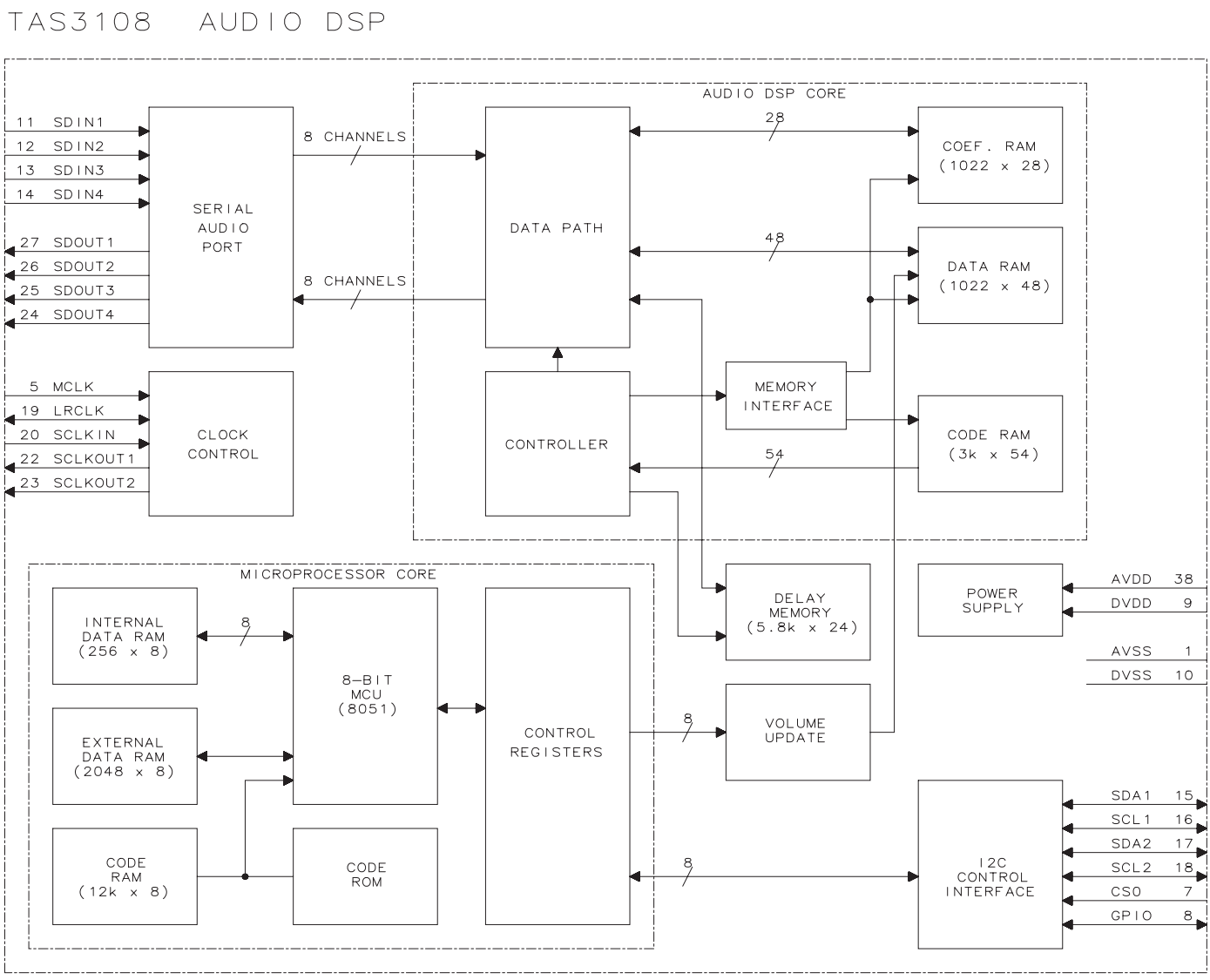
2.4. IC1402 (VHiR2S15502-1Y)

2.4.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	AVSS	—	0V Power Supply for Analog Core
2	AVDD	—	3.3V Power Supply for Analog Core
3	SIF	I	Sound IF Input
4	VREF1	—	ADC Voltage Reference 1
5	VREF2	—	ADC Voltage Reference 2
6	TEST	I	Test pin
7	XI	I	Crystal Oscillator Input
8	XO	O	Crystal Oscillator Output
9	IVDD	—	3.3V Power Supply for I/O Buffer
10	IVSS	—	0V Power Supply for I/O Buffer
11	DVSS	—	0V Power Supply for Logic Core
12	DVDD	—	1.5V Power Supply for Logic Core
13	DACCLK	I/O	DAC Clock
14	BCK	I/O	Bit Clock
15	LRCK	I/O	LR Clock
16	SD0	O	Digital Output for External DAC
17	SDI	I	Digital Input for Internal DAC
18	SDA	I/O	I2C bus Serial Data
19	SCL	I	I2C bus Serial Clock
20	STATUS	I/O	PLL Setting / Status Signal
21	RESET	I	Hardware Reset (Active low)
22	ROUT	O	Rch Analog Output
23	VCOM	—	DAC Voltage Reference
24	LOUT	O	Lch Analog Output

2.5. IC1403 (VHiTAS3108D-1Y)

2.5.1 Block Diagram



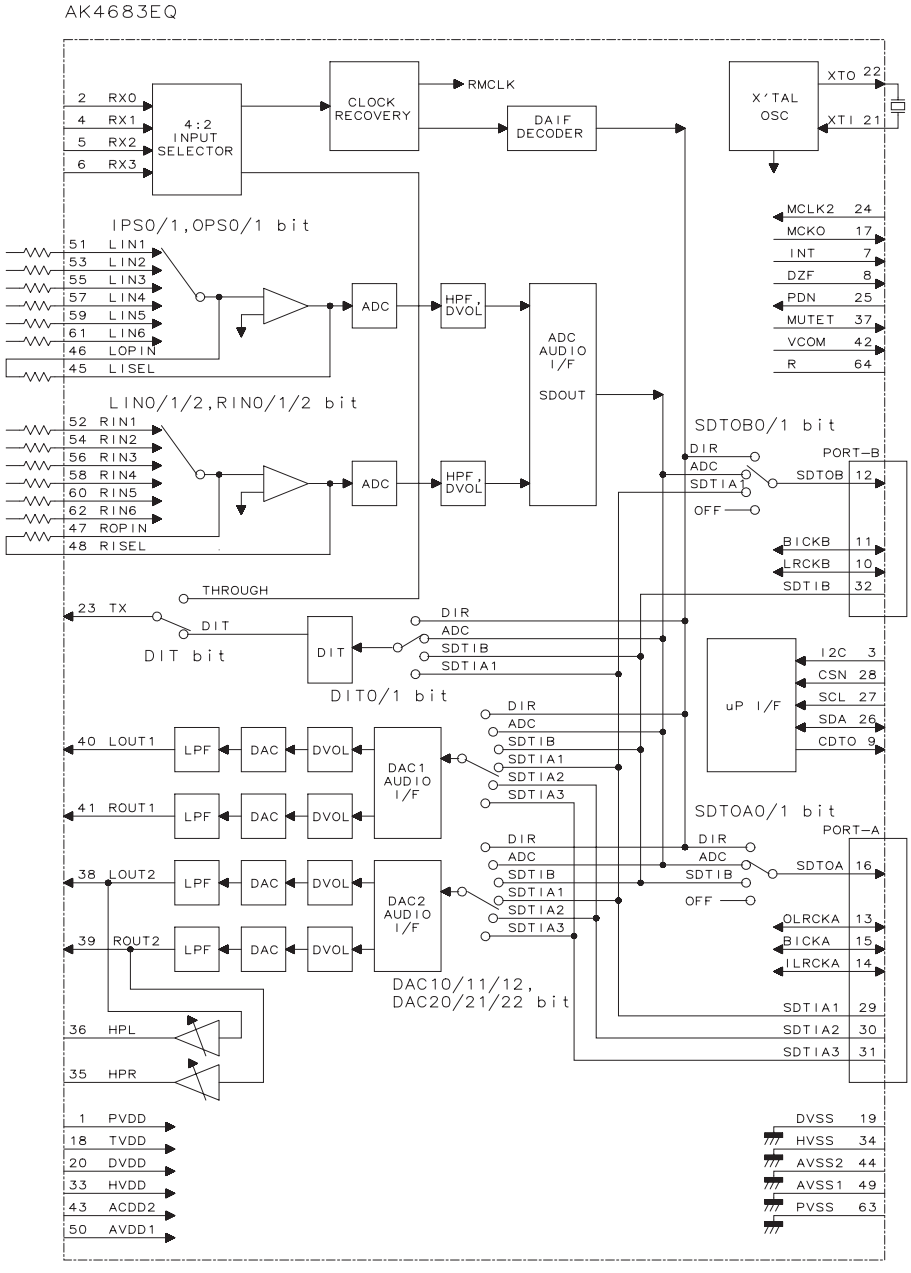
2.5.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
38	AVDD	—	Analog power-supply input (3.3V)
1	AVSS	—	Analog ground
7	CS0	I	Pull-down Chip select
9, 30	DVDD	—	Digital power-supply input (3.3V)
10, 29	DVSS	—	Digital ground
8	GPIO	I/O	Pull-up GPIO control pin (user programmable)
19	LRCLK	I/O	Pull-down Sample rate clock (fS) input or output
5	MCLKIN	I	Master clock input (Connect to ground when not in use.)
21	MCLKO	O	Master clock output
6	MICROCLK_DIV	I	Pull-down Internal microprocessor clock divide control
31	PDN	I	Pull-up Powers down all logic and stops all clocks, active-low. Coefficient memory remains stable through power-down cycle.
34	PLL0	I	Pull-up PLL control 0
35	PLL1	I	Pull-down PLL control 1
36	PLL2	I	Pull-down PLL control 2
33, 37	RESERVED	—	Connect to ground
32	RESET	I	Pull-up Reset, active-low
16	SCL1	I/O	I2C port #1 clock (always a slave)
18	SCL2	I/O	I2C port #2 clock (always a slave)
20	SCLKIN	I	Pull-down Bit clock input

Pin No.	Pin Name	I/O	Pin Function
22	SCLKOUT1	O	Bit clock #1 out. Used to receive input serial data.
23	SCLKOUT2	O	Bit clock #2 out. Used to clock output serial data.
15	SDA1	I/O	I2C port #1 data (always a slave)
17	SDA2	I/O	I2C port #2 data (always a slave)
11	SDIN1	I	Pull-down Serial data input 1
12	SDIN2	I	Pull-down Serial data input 2
13	SDIN3	I	Pull-down Serial data input 3
14	SDIN4	I	Pull-down Serial data input 4
27	SDOUT1	O	Serial data output 1
26	SDOUT2	O	Serial data output 2
25	SDOUT3	O	Serial data output 3
24	SDOUT4	O	Serial data output 4
2	VR_PLL	—	Internal regulator. This pin must not be used to power external devices.
3	XTALI	I	Oscillator input (connect to ground when not in use)
4	XTALO	O	Oscillator output
28	VR_DIG	---	Internal regulator. This pin must not be used to power external devices.

2.6. IC1404 (VHiAK4683EQ-1Q)

2.6.1 Block Diagram



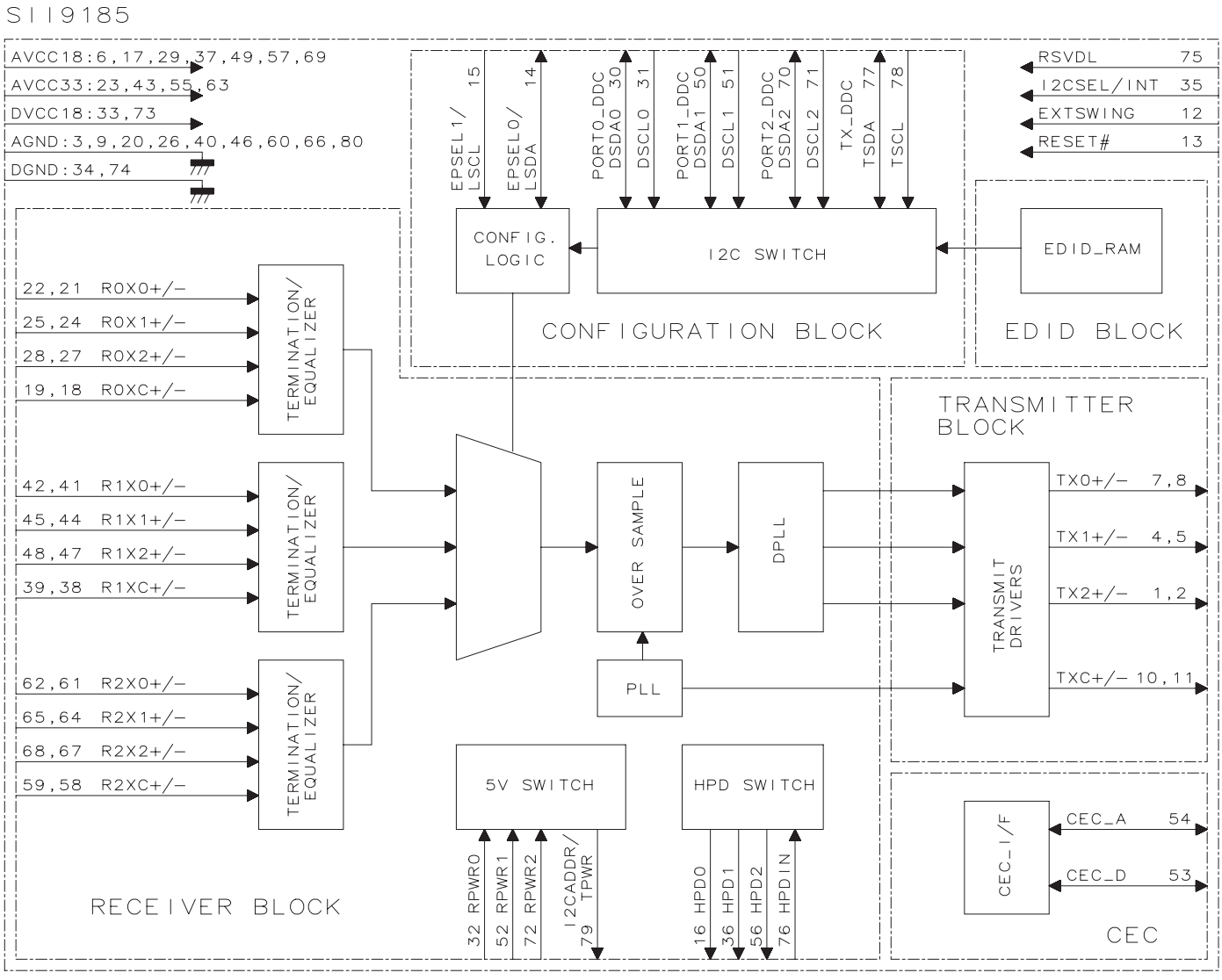
2.6.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	PVDD	—	PLL Power supply, 4.5V~5.5V.
2	RX0	I	Receiver Channel 0 (Internal biased pin. Internally biased at PVDD/2).
3	I2C	I	Control Mode Select. “L”: 4-wire Serial, “H”: I2C Bus
4	RX1	I	Receiver Channel 1.
5	RX2	I	Receiver Channel 2.
6	RX3	I	Receiver Channel 3.
7	INT	O	Interrupt
8	DZF	O	Zero Input Detect. When the input data of DAC follow total 8192 LRCK cycles with “0” input data, this pin goes to “H”. And when RSTN1 bit is “0”, PWDA bit is “0”, this pin goes to “H”
9	CDTO	O	Control Data Output in Serial Mode and I2C pin = “L”.
10	LRCKB	I/O	Channel Clock B
11	BICKB	I/O	Audio Serial Data Clock B
12	SDTOB	O	Audio Serial Data Output B
13	OLRCKA	I/O	Output Channel Clock A
14	ILRCKA	I/O	Input Channel Clock A
15	BICKA	I/O	Audio Serial Data Clock A
16	SDTOA	O	Audio Serial Data Output A
17	MCKO	O	Master Clock Output
18	TVDD	—	Output Buffer Power Supply, 2.7V~5.5V
19	DVSS	—	Digital Ground
20	DVDD	—	Digital Power Supply, 4.5V~5.5V
21	XTI	I	X’tal Input
22	XTO	O	X’tal Output
23	TX	O	Transmit Channel Output When DIT bit = “0”, RX0~3 Through. When DIT bit = “1”, Internal DIT Output.
24	MCLK2	I	Master Clock Input
25	PDN	I	Power-Down Mode & Reset When “L”, the AK4683 is powered-down, all registers are reset. And then all digital output pins go “L”. The AK4683 must be reset once upon power-up.
26	SDA	I/O	Control Data in Serial Mode and I2C pin = “H”.
27	SCL	I	Control Data Clock in Serial Mode and I2C pin = “H”.
28	CSN	I	Chip Select in Serial Mode and I2C pin = “L”.
29	SDTIA1	I	Audio Serial Data Input A1
30	SDTIA2	I	Audio Serial Data Input A2
31	SDTIA3	I	Audio Serial Data Input A3
32	SDTIB	I	Audio Serial Data Input B
33	HVDD	—	HP Power Supply, 4.5V~5.5V
34	HVSS	—	HP Ground
35	HPR	O	HP Rch Output.
36	HPL	O	HP Lch Output.
37	MUTET	—	HP Common Voltage Output
38	LOUT2	O	DAC2 Lch Positive Analog Output
39	ROUT2	O	DAC2 Rch Positive Analog Output
40	LOUT1	O	DAC1 Lch Positive Analog Output
41	ROUT1	O	DAC1 Rch Positive Analog Output
42	VCOM	—	DAC/ADC Common Voltage Output
43	AVDD2	—	DAC Power Supply, 4.5V~5.5V
44	AVSS2	—	DAC Ground
45	LISEL	O	Lch Feedback Resistor Output
46	LOPIN	O	Lch Feedback Resistor Input. 0.5 x AVDD1.
47	ROPIN	O	Rch Feedback Resistor Input. 0.5 x AVDD1.
48	RISEL	O	Rch Feedback Resistor Output
49	AVSS1	—	ADC Ground
50	AVDD1	—	ADC Power Supply, 4.5V~5.5V
51	LIN1	I	Lch Input 1
52	RIN1	I	Rch Input 1
53	LIN2	I	Lch Input 2
54	RIN2	I	Rch Input 2
55	LIN3	I	Lch Input 3
56	RIN3	I	Rch Input 3

Pin No.	Pin Name	I/O	Pin Function
57	LIN4	I	Lch Input 4
58	RIN4	I	Rch Input 4
59	LIN5	I	Lch Input 5
60	RIN5	I	Rch Input 5
61	LIN6	I	Lch Input 6
62	RIN6	I	Rch Input 6
63	PVSS	—	PLL Ground
64	R	—	External Resistor

2.7. IC1507 (VHiSii9185+-1Q)

2.7.1 Block Diagram



2.7.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
System Switching Pins			
30, 50, 70	DSDA0, DSDA1, DSDA2	I/O	DDC I2C Data for respective port.
31, 51, 71	DSCL0, DSCL1, DSCL2	I	DDC I2C Clock for respective port.
32, 52, 72	RPWR0, RPWR1, RPWR2	I	5V Port detection input for respective port. Connect to 5V signal from HDMI input connector.
16, 36, 56	HPD0, HDP1, HPD2	O	Hot Plug Detect Output for respective port. Connect to HOTPLUG of HDMI input connector.
76	HPDIN	I	Hot Plug Detect Input.
78	TSCL	O	Master DDC I2C Clock (Open Drain Output) to HDMI receiver. I2C transactions required for HDCP operation are performed over this I2C bus.
77	TSDA	I/O	Master DDC Data (Open drain output.) to HDMI receiver. I2C transactions required for HDCP operation are performed over this I2C bus.
Configuration Pins			
79	I2CADDR/TPWR	I/O	I2C Slave Address input / Transmit Power Sense output pin. When RESET# is low, this pin is used as an input to latch the I2C sub-address. The level on this pin is latched when the RESET# pin transitions from low to high. When RESET# is high, this pin is used as the TPWR output, indicating that the selected Rx-port has 5V present. When none of the Rx ports are selected, this signal is low.
35	I2CSEL/INT#	I/O	I2C Selection input / Interrupt output pin. When RESET# is low, this pin is used as an input to latch the External Port Detection signal. The level on this pin is latched when the RESET# pin transitions from low to high. When this pin is low during reset, the external pins EPSEL1/LSCL and EPSEL0/LSDA are used to select the Rx-port as EPSEL[1:0]. When this pin is high during reset, the internal local I2C register is used to select the Rx-port.
75	RSVDL	I	Reserved for use by Silicon Image and must be tied low.
Control Pins			
13	RESET#	I	Reset Pin (Active LOW). Certain configuration inputs are latched when RESET# transitions from low to high.
15	LSCL/EPSEL1	I	Local I2C Clock / External Port Select 1. When I2CSEL is high, this becomes the Local I2C bus clock pin, LSCL. When I2CSEL is low, this becomes the external port select pin, EPSEL1. True open drain, so does not pull to ground if power not applied. An external pull-up is required.
14	LSDA/EPSEL0	I/O	Local I2C Data / External Port Select 0. When I2CSEL is high, this becomes the Local I2C bus data pin, LSDA. When I2CSEL is low, this becomes the external port select pin, EPSEL0. True open drain, so does not pull to ground if power not applied. An external pull-up is required.
CEC Pins			
54	CEC_A	I/O	HDMI compliant CEC I/O used to interface to CEC devices. CEC electrically compliant signal. This pin connects to the CEC signal of all HDMI connectors in the system. As an input, the pad acts as a LVTTL Schmitt triggered input and is 5V tolerant. As an output, the pad acts as an NMOS driver with resistive pull-up. This pin has an internal pull-up resistor.
53	CEC_D	I/O	CEC interface to local system. True open-drain. An external pull-up is required. This pin typically connects to the local CPU.
Differential Signal Data Pins			
22	R0X0+	I	TMDS input Port 0 data pairs.
21	R0X0-	I	
25	R0X1+	I	
24	R0X1-	I	
28	R0X2+	I	
27	R0X2-	I	
19	R0C+	I	TMDS input Port 0 clock pair.
18	R0C-	I	
42	R1X0+	I	TMDS input Port 1 data pairs.
41	R1X0-	I	
45	R1X1+	I	
44	R1X1-	I	
48	R1X2+	I	
47	R1X2-	I	
39	R1C+	I	TMDS input Port 1 clock pair.
38	R1C-	I	

Pin No.	Pin Name	I/O	Pin Function
62	R2X0+	I	TMDS input Port 2 data pairs.
61	R2X0-	I	
65	R2X1+	I	
64	R2X1-	I	
68	R2X2+	I	
67	R2X2-	I	
59	R2C+	I	TMDS input Port 2 clock pair.
58	R2C-	I	
7	TX0+	O	TMDS output data pairs.
8	TX0-	O	
4	TX1+	O	
5	TX1-	O	
1	TX2+	O	
2	TX2-	O	
10	TXC+	O	TMDS output clock pair.
11	TXC-	O	
12	EXT_SWING	I	Voltage Swing Adjust. A resistor tied from this pin to AVCC18 determines the amplitude of the voltage swing. The recommended value is 750Ω.
Power and Ground Pins			
23, 43, 55, 63	AVCC33	—	Analog VCC. Connect to 3.3V supply.
6, 17, 29, 37, 49, 57, 69	AVCC18	—	Analog VCC. Connect to 1.8V supply.
3, 9, 20, 26, 40, 46, 60, 66, 80	AGND	—	Analog GND.
33, 73	DVCC18	—	Digital VCC. Connect to 1.8V supply.
34, 74	DGND	—	Digital GND.

2.8. IC2002 (RH-iXB986WJN8Q)

2.8.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	SHIP_EN	O	SHIP (CSI) processing enabled/disabled selection signal
2	CS_CPLD	O	CPLD chip select
3	N_SRESET	O	Reset
4	PM_REQ	O	Request signal (Communication request at H)
5	IR_PASS	O	Remote control signal external through switching
6	Vc1	—	Internal voltage drop power terminal
7	X2	I	Sub clock (32.768kHz)
8	X1	O	Sub clock (32.768kHz)
9	N_RESET	I	System reset
10	OSC2	O	System clock (20.00MHz)
11	Vss	—	GND
12	OSC1	I	System clock (20.00MHz)
13	Vcc	—	Power supply (+3.3V)
14	N_NMI	I	For FLASH rewrite
15	WAKE_UP	I	For WAIT mode return
16	AC_DET	I	For instantaneous blackout detection
17	POW_SW	I	Power SW
18	FRAME	O	Panel controller control (50/60 setting)
19	ROMSEL0	O	For test pattern control
20	O_S_SET	O	Panel controller control ON/OFF
21	TEMP1	O	Panel controller control, temperature information 1
22	TEMP2	O	Panel controller control, temperature information 2
23	TEMP3	O	Panel controller control, temperature information 3
24	L_R	O	Panel controller control, flip horizontal
25	U_D	O	Panel controller control, flip vertical
26	UARXD_M	I	Serial for MAIN CPU communication (To TXD of MAIN CPU)
27	UATXD_M	O	Serial for MAIN CPU communication (To RXD of MAIN CPU)
28	TXD	O	For debugger (E8) connection
29	RXD	I	For debugger (E8) connection
30	SCLD	I	For debugger (E8) connection
31	BUSY	I	For debugger (E8) connection
32	LED_R	O	Power LED, red
33	LED_G	O	Power LED, green
34	LED_OPC	O	OPC LED

Pin No.	Pin Name	I/O	Pin Function
35	LED_SLEEP	O	SLEEP_LED
36	AV_LINK_O	O	AV_LINK output
37	ANT_POW	O	Antenna power control
38	EXE_LED	O	Microprocessor operation check LED
39	I2C_GATE	O	I2C bus SW
40	N_SYSRST_IN	I	SYSTEM RESET switch detection
41	RS_ON	O	RS232C power control
42	STB	O	Backlight control.
43	ERR_PNL	I	Lamp error detection (L: error)
44	AV_LINK_I	I	AV_LINK input
45	SYNC_DET	O	PC power management setting
46	VSYNC	I	VSYNC interrupt
47	CEC_O	O	CEC output
48	CEC_I	I	CEC input
49	RC	I	Remote control signal input.
50	I2C1_SCL	O	I2C CH1
51	I2C1_SDA	I/O	I2C CH1
52	W_PROT_M	O	EEP write protection
53	P16	—	For debugger (E8) connection
54	DVIA_DET	I	DVI analog detection (for PC power management)
55	MUTE_A_ALL	O	Audio mute
56	DET_6V	I	6V detection
57	DET_10V	I	10V detection
58	DET_PNL12V	I	Panel 12V detection
59	DER_D3V3	I	D3.3V detection
60	DET_3V3	I	3.3V detection
61	EU_POW	O	Digital system power control
62	LINK_POW	O	i.Link power control
63	PNL_POW	O	5V ON/OFF SW for panel
64	D_POW	O	Main power ON/OFF control
65	SMPOW	O	Power control
66	PSIZ_L	I	Panel size discrimination terminal (Mounting discrimination)
67	PSIZ_H	I	Panel size discrimination terminal (Mounting discrimination)
68	QSTEMP	I	Thermistor input (Panel temperature)
69	KEY1	I	Main unit key input 1
70	KEY2	I	Main unit key input 2
71	AREA1	I	Panel size discrimination terminal (Mounting discrimination)
72	PNL_TYPE	I	Panel manufacturer discrimination (Mounting discrimination)
73	OPC	I	Brightness sensor input
74	AFT/AGC	I	Tuner AFT/ACG input
75	Avss	—	Analog GND for A/D
76	LNBSHORT	I	Antenna short detection (Low: OK, High: NG)
77	Vref	—	A/D converter reference voltage
78	Avcc	—	Analog power for A/D
79	PNL_TYPE	I	Panel solution discrimination (Mounting discrimination)
80	ILLUMI	O	Illumination LED

2.9. IC3301 (RH-iXC010WJQZQ)

2.9.1 Pin Connections and short description

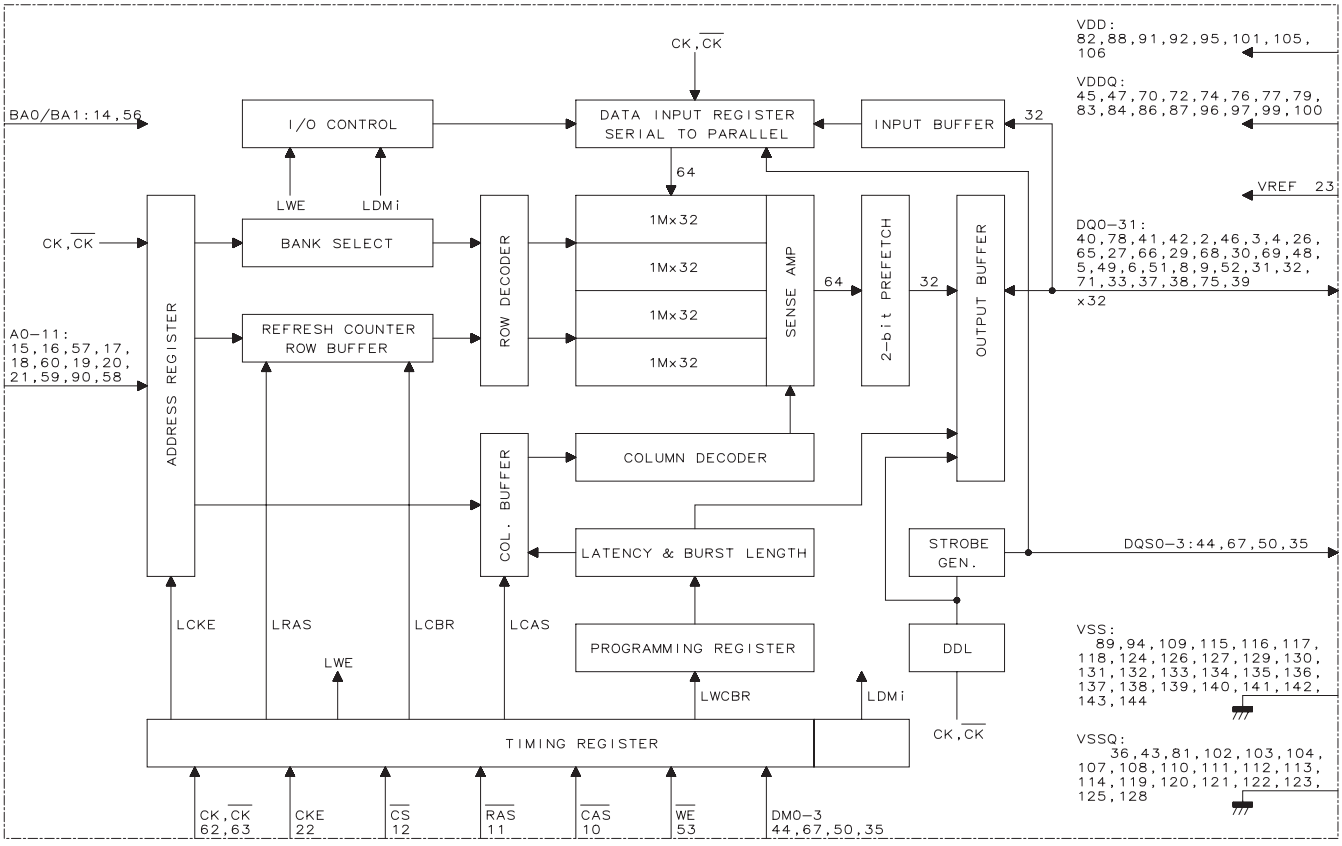
Pin No.	Pin Name	I/O	Pin Function
Ball Assignments for CPU Host Interface.			
K20, K19, K18, K17, L20, L19, L18, L17	A_D[7:0]	I/O	Multiplexed address and data bus powered by VDDH/VSS.
M17, M18, M119, M20, N20, N19, N18, N17	ADDR[7:0]	I	CPU Address. (Not connected)
J18	ALE	I	Address latch enables.
J19	WR#	I	CPU Write.
J20	RD#	I	CPU Read.
H17	SDA	I/O	I2C data.
H18	SCL	I	I2C clock.
J17	CPU_CS	I	UX chip select pin from MCU. Active Low.
Ball Assignments for Analog Support Interface.			
W1	XTALI	I	Input for Clock Synthesizer. Supports 24MHz Oscillator or crystal powered by analog PLL.
Y1	XTALO	O	Used in conjunction with XTALI for 24MHz crystal output powered by analog PLL.
U2	MLF1	I	Low pass filter node for memory clock PLL powered by analog PLL.
R4	PLF2	I	Low pass filter node for video clock PLL powered by analog PLL.
Ball Assignments for Analog Input Interface.			
Y4	CVBS1	I	Composite video input 1.
V6	Y_G1	I	Y input 1 of component or G input 1 of PC RGB.
W6	Y_G2	I	Y input 2 of component or G input 2 of PC RGB.
Y6	Y_G3	I	Y input 3 of component or G input 3 of PC RGB.
W2	CVBS_OUT1	I	CVBS Output 1. (Not connected)
V2	CVBS_OUT2	I	CVBS Output 2. (Not connected)
V9	C	I	C input of S-Video.
W9	PB_B1	I	PB input 1 of component.
Y9	PB_B2	I	PB input 2 of component.
Y10	PB_B3	I	PB input 3 of component.
Y8	PR_R1	I	PR input 1 of component.
W8	PR_R2	I	PR input 2 of component.
V8	PR_R3	I	PR input 3 of component.
W4, V4	FS2, FS1	I	SCART function select 2, 1.
U4, Y5	FB2, FB1	I	SCART FB input for Port 2, Port 1.
V10	AIN_H	I	Hsync input (PC RGB input)
U10	AIN_V	I	Vsync input (PC RGB input)
U8	PC_R	I	PC Red input.
Y7	PC_G	I	PC Green input.
W10	PC_B	I	PC Blue INPUT.
Ball Assignments for Capture Interface (TV & RGB).			
U18, U19, U20, T20, T18, T17, R19, R20	DPB[15:8] (DP_B[15:8])	I/O	Digital input port [15:8] (Output reserved)
Y12, U13, V13, W13, Y13, Y14, W14, V14, U14, U15, V15, W15, Y16, W16, V16, U16, U17, V17, W17, Y17, Y18, W18, V18, W19	DPA[23:0] (DP_A[23:0])	I/O	Digital input/output port [23:0]
T19	DPB_CLK (CLK_B)	I/O	Digital port B CLK input/output. (Not connected)
Y15	DPA_CLK (CLK_A)	I/O	Digital port A CLK input/output.
W20	DPE_DE (DE_B)	I/O	DE input/output of Digital port B.
Y20	DPA_VS (VS_A)	I/O	Vsync input/output of Digital port A.
Y19	DPA_HS (HS_A)	I/O	Hsync input/output of Digital port A.
V20	DPB_VS (VS_B)	I/O	Vsync input/output of Digital port B. (Not connected)
V19	DPB_HS (HS_B)	I/O	Hsync input/output of Digital port B. (Not connected)
P19	HS	I/O	Hsync output for Digital port.
P17	VS	I/O	Vsync output for Digital port.

Pin No.	Pin Name	I/O	Pin Function
Ball Assignments for Frame Buffer Memory.			
D3, C3, C2, C1, A1, A2, A3, C5, A4, B5, A5, D6, A7, B7, C7, D7, D8, C8, B8, A8, D9, D10, C10, B10, A10, A11, B11, C11, D12, A13, B13, C13	MD[31:0]	I/O	Memory data.
F1, F2, F3, F4, G4, G3, G2, G1, H1, H2, H3, H4	MA[11-0]	I/O	Memory Address.
J2	RAS#	O	RAS# signal powered by VDDH/VSS.
J1	CAS#	O	CAS# signal powered by VDDH/VSS.
K1	WE#	O	WE#, write enable signal powered by VDDH/VSS.
J3	CS1#	O	Chip select 0 for the first 2/4 Mbyte of SGRAM/SDRAM powered by VDDH/VSS.
J4	CS0#	O	Chip select 1 for the first 2/4 Mbyte of SGRAM/SDRAM powered by VDDH/VSS.
D1	MCK0	O	Memory clock+.
E1	MCK0#	O	Memory clock-.
B1, A6, A9, A12	DQM[3:0]	O	Read/Write bytes enable powered by VDDH/VSS.
K2	CLKE	O	Memory clock enable.
B2, B6, B9, B12	DQS[3:0]	I/O	Memory data strobe.
E3	MVREF	—	DDR voltage reference.
K3	BA0	O	Bank address select.
K4	BA1	O	Bank address select.
Ball Assignments for Power and Ground.			
C14, C15, D13, D14, D15, E13, E14, E15, G16, H5, H16, J5, J16, K5, K16, R16, T14, T15	VDDC	—	1.2V Digital core power.
E4, E7	VSSR	—	Digital memory reference Ground.
E2, E8	VDDR	—	2.5V Digital power for Memory.
B4, C4, D4, D5, D11, E5, E6, E9, E10, E11, E12, F5, G5	VDDM	—	2.5V Memory interface power. Output driver.
L16, M16, N16, P16, T12, T13, R17, R18	VDDH	—	3.3V Digital I/O power.
B3, C6, C9, C12, D2, H8, H9, H10, H11, H12, H13, J8, J9, J10, J11, J12, J13, K8, K9, K10, K11,K12, K13, L5, L8, L9, L10, L11, L12, L13, M8, M9, M10, M11, M12, M13, N8, N9, N10, N11, N12, N13, P18, T16, H20	VSS	—	Core and Digital IO ground.
W3	AVSS_BG_ASS	—	ADC ground.
V3	AVDD3_BG_ASS	—	3.3V ADC power.
T3	PAVDD1	—	3.3V power for MCLK PLL.
T2	PAVSS1	—	Ground for MCLK PLL.
R3	PAVSS2	—	Ground for PCLK PLL.
T4	PAVDD2	—	3.3V power for PCLK PLL.
U6, T8, U7, U5	AVDD_ADC[4, 3, 2, 1]	—	1.2V power for analog ADC.
T6, T9, T7, T5	AVSS_ADC[4, 3, 2, 1]	—	Ground for analog ADC.
U9, Y3	AVDD3_ADC[2, 1]	—	3.3V ADC power.
U3	AVDD3_OUTBUF	—	3.3V power for output buffer.
Y2	AVSS_OUTBUF	—	3.3V ground for output buffer.
C18, C19	LVDS_VSSO	—	LVDS out buffer ground.
C16	LVDS_VSSD	—	LVDS Digital ground.
E16	LVDS_VSSA	—	LVDS analog ground.
E18	LVDS_VSSP	—	LVDS PLL GND.
D18	LVDS_VDDP	—	LVDS PLL VDD.
E17	LVDS_VDDA	—	LVDS analog VDD.
D16	LVDS_VDDD	—	LVDS Digital VDD.
C17, D17	LVDS_VDDO	—	LVDS out buffer VDD.
P20	NC	—	Not connected.
U1	AVDDAPLL	—	1.2V analog PLL power.
V1	AVSSAPLL	—	1.2V analog GND.
R2	AVDDLLPLL	—	1.2V Line Lock PLL power.

Pin No.	Pin Name	I/O	Pin Function
T1	AVSSLLPLL	—	1.2V Line Lock PLL GND.
Miscellaneous Ball Assignments.			
F18	RESET	I	System reset forces the chip to a known state. Active High.
G18	INTN	I/O	Interrupt signal (active low).
G17	PWM0	I/O	PWM I/O. (Not connected)
F16	V5SF	I	5V reference voltage (must be connected to 5V even in standby mode, when CPU I/O is 5V)
F17	TESTMODE	I	Reserved (Connected to ground).
LVDS Output Ball Assignments.			
A14	TA1P	O	LVDS 1st Channel Differential positive data out.
B14	TA1M	O	LVDS 1st Channel Differential negative data out.
A15	TB1P	O	LVDS 1st Channel Differential positive data out.
B15	TB1M	O	LVDS 1st Channel Differential negative data out.
A16	TC1P	O	LVDS 1st Channel Differential positive data out.
B16	TC1M	O	LVDS 1st Channel Differential negative data out.
A18	TD1P	O	LVDS 1st Channel Differential positive data out.
B18	TD1M	O	LVDS 1st Channel Differential negative data out.
A19	TE1P	O	LVDS 1st Channel Differential positive data out.
B19	TE1M	O	LVDS 1st Channel Differential negative data out.
B17	TCLK1M	O	LVDS 1st Channel Differential positive CLK out.
A17	TCLK1P	O	LVDS 1st Channel Differential negative CLK out.
F19	TCLK2M	O	LVDS 2st Channel Differential positive CLK out.
E20	TCLK2P	O	LVDS 2st Channel Differential negative CLK out.
H19	TE2P	O	LVDS 2st Channel Differential positive data out.
G20	TE2M	O	LVDS 2st Channel Differential negative data out.
G19	TD2P	O	LVDS 2st Channel Differential positive data out.
F20	TD2M	O	LVDS 2st Channel Differential negative data out.
E19	TC2P	O	LVDS 2st Channel Differential positive data out.
D20	TC2M	O	LVDS 2st Channel Differential negative data out.
B20	TB2P	O	LVDS 2st Channel Differential positive data out.
A20	TB2M	O	LVDS 2st Channel Differential negative data out.
D19	TA2P	O	LVDS 2st Channel Differential positive data out.
C20	TA2M	O	LVDS 2st Channel Differential negative data out.
HDMI Interface Ball Assignments.			
L4	PVCC	—	TMDS PLL supply voltage.
M5	ANTSTO	O	Test pin. (Not connected)
M4, N4, N5, P4	AVCC	—	TMDS analog supply voltage.
L2	RXC-	I	TMDS differential CLK-.
L1	RXC+	I	TMDS differential CLK+.
L3, M3, N3, P3, R1	TMDS_GND	—	TMDS GND.
M2	RX0-	I	HDMI Differential input pair 0-
M1	RX0+	I	HDMI Differential input pair 0+
N2	RX1-	I	HDMI Differential input pair 1-
N1	RX1+	I	HDMI Differential input pair 1+
P2	RX2-	I	HDMI Differential input pair 2-
P1	RX2+	I	HDMI Differential input pair 2+
R5	REGVCC	—	ACR PLL Regulator supply voltage.
P5	DGND	—	ACR PLL GND.
T10	PWR5V	I	TMDS port Transmitter Detect (5V tolerant).
T11	DSCL	I/O	DDC I2C clock for DDC (5V tolerant).
U11	DSDA	I/O	DDC I2C data for DDC (5V tolerant).
U12	WS	O	I2S Word select output.
V11	SCDT	O	Indicates Active video at HDMI input port.
V12	SD0	O	I2S serial data output.
W11	AUDIOCLK	I	Audio master clock input reference.
W12	SPDIF	O	S/PDIF audio output.
Y11	SCK	O	I2S serial clock output.
Pin Assignments for Reference Voltage.			
V5	VREFN1	—	ADC1 voltage reference-.
W5	VREFP1	—	ADC1 voltage reference+.
V7	VREFN2	—	ADC2 voltage reference-.
W7	VREFP2	—	ADC2 voltage reference+.

2.10. IC3501-2 (RH-iXC163WJQZQ)

2.10.1 Block Diagram



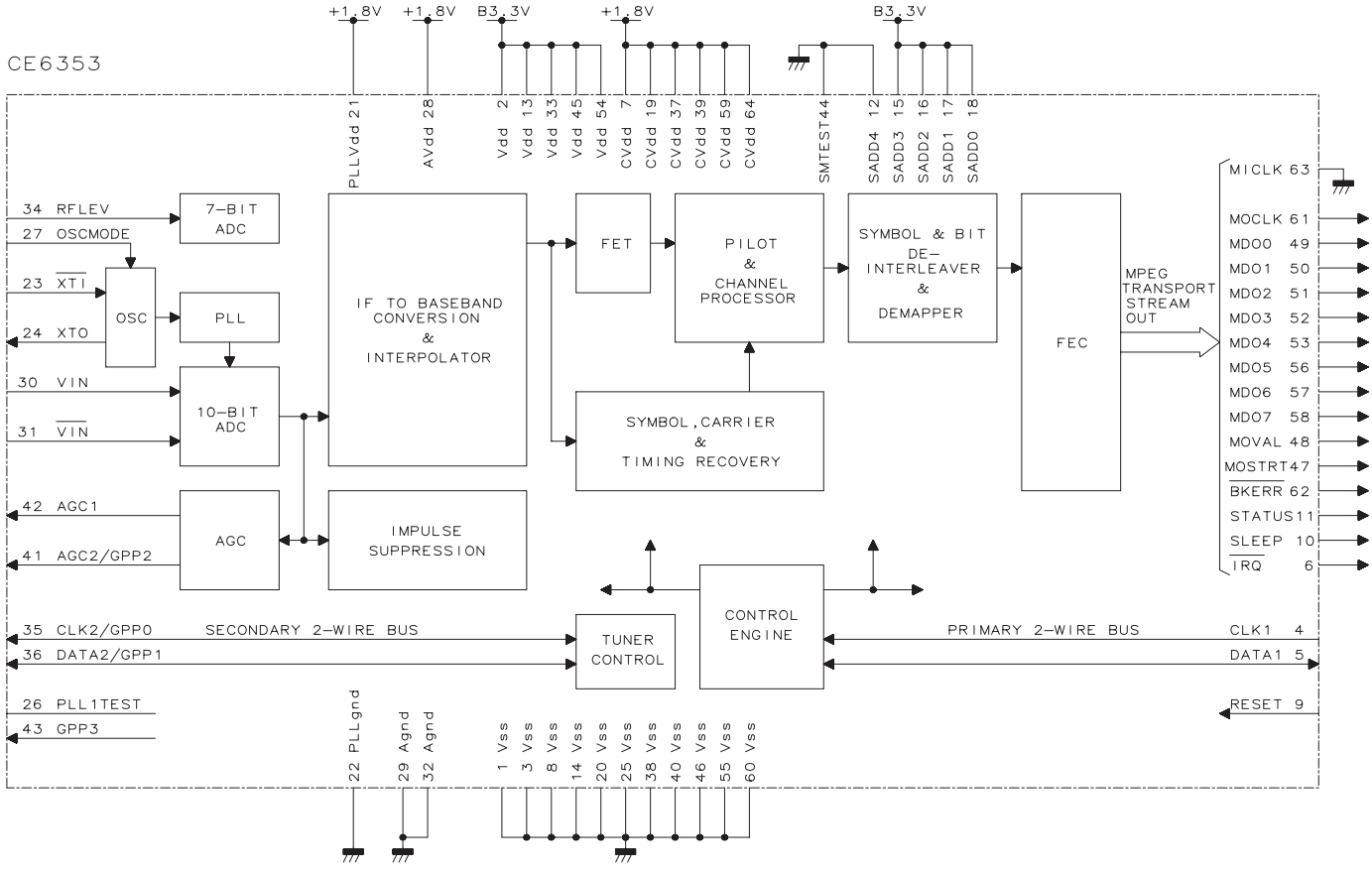
2.10.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
62, 63	CK, $\overline{CK}$	I	The differential system clock Input. All of the inputs are sampled on the rising edge of the clock except DQ's and DM's that are sampled on both edges of the DQS.
22	CKE	I	Activates the CK signal when high and deactivates the CK signal when low. By deactivating the clock, CKE low indicates the Power down mode or Self refresh mode.
12	$\overline{CS}$	I	$\overline{CS}$ enables the command decoder when low and disabled the command decoder when high. When the command decoder is disabled, new commands are ignored but previous operations continue.
11	$\overline{RAS}$	I	Latches row addresses on the positive going edge of the CK with $\overline{RAS}$ low. Enables row access & precharge.
10	$\overline{CAS}$	I	Latches column addresses on the positive going edge of the CK with $\overline{CAS}$ low. Enables column access.
53	$\overline{WE}$	I	Enables write operation and row precharge. Latches data in starting from $\overline{CAS}$, $\overline{WE}$ active.
1, 28, 7, 34	DQS0-3	I/O	Data input and output are synchronized with both edge of DQS.
44, 67, 50, 35	DM0-3	I	Data In mask. Data In is masked by DM Latency=0 when DM is high in burst write. DM0 for DQ0 ~ DQ7, DM1 for DQ8 ~ DQ15, DM2 for DQ16 ~ DQ23, DM3 for DQ24 ~ DQ31.
40, 78, 41, 42, 2, 46, 3, 4, 26, 65, 27, 66, 29, 68, 30, 69, 48, 5, 49, 6, 51, 8, 9, 52, 31, 32, 71, 33, 37, 38, 75, 39	DQ0-31	I/O	Data inputs/Outputs are multiplexed on the same pins.
14, 56	BA0, BA1	I	Selects which bank is to be active.
15, 16, 57, 17, 18, 60, 19, 20, 21, 59, 90, 58	A0-11	I	Row/Column addresses are multiplexed on the same pins. Row addresses: RA0 ~ RA11, Column addresses: CA0 ~ CA7. Column address CA8 is used for auto precharge.
82, 88, 91, 92, 95, 101, 105, 106	VDD	—	Power for the input buffers and core logic.

Pin No.	Pin Name	I/O	Pin Function
89, 94, 109, 115, 116, 117, 118, 124, 126, 127, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144	VSS	—	Ground for the input buffers and core logic.
45, 47, 70, 72, 74, 76, 77, 79, 83, 84, 86, 87, 96, 97, 99, 100	VDDQ	—	Isolated power supply for the output buffers to provide improved noise immunity.
36, 43, 81, 102, 103, 104, 107, 108, 110, 111, 112, 113, 114, 119, 120, 121, 122, 123, 125, 128	VSSQ	—	Isolated ground for the output buffers to provide improved noise immunity.
23	VREF	—	Reference voltage for inputs, used for SSTL interface.
93, 61	RFU1/RFU2	—	Reserved for Future Use.
13, 24, 25, 54, 55, 64, 73, 80, 85, 98	NC	—	No Connection.

2.11. IC7507 (VHiCE6353++-1Q)

2.11.1 Block Diagram



2.11.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
MPEG pins			
47	MOSTRT	O	MPEG packet start
48	MOVAL	O	MPEG data valid
49-53, 56-58	MDO[0:4]/ MDO[5:7]	O	MPEG data bus
61	MOCLK	O	MPEG clock out
62	BKERR	O	Block error
63	MICLK	I	MPEG clock in
11	STATUS	O	Status output
6	IRQ	O	Interrupt output
Control pins			
4	CLK1	I	Serial clock
5	DATA1	I/O	Serial data
23	XTI	I	Low phase noise oscillator
24	XTO	O	
10	SLEEP	I	Device power down
12, 15-18	SADD[4:0]	I	Serial address set
44	SMTEST	I	Production test (only set low)
35	CLK2/GPP0	I/O	Serial clock tuner
36	DATA2/GPP1	I/O	Serial data tuner
42	AGC1	O	Primary AGC
41	AGC2/GPP2	I/O	Secondary AGC
43	GPP3	I/O	General purpose I/O
9	RESET	I	Device reset
27	OSCMODE	I	Crystal oscillator mode
26	PLLTEST	O	PLL analog test
Analog inputs			
30	VIN	I	positive input
31	VIN	I	negative input
34	RFLEV	I	RF level
Supply pins			
21	PLLVdd	—	PLL supply
22	PLLGND	—	GND
7, 19, 37, 39, 59, 64	CVdd	—	Core logic power
2, 13, 45, 54	Vdd	—	I/O ring power
1, 3, 8, 14, 20, 25, 38, 40, 46, 55, 60	Vss	—	Core and I/O ground
28	Avdd	—	ADC analog supply
29, 32	AGnd	—	GND
33	Vdd	—	2nd ADC supply

2.12. IC7603 (9NK2633003842)

2.12.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	Css	I	Soft start timing capacitor.
2	Rfstart	—	Soft start frequency setting-low impedance voltage source-see also Cf.
3	Cf	—	Oscillator frequency setting-see also Rfmin, Rfstart.
4	Rfmin	I	Minimum oscillation frequency setting-low impedance voltage source-see also Cf.
5	OPOUT	O	Sense OP Amp output-low impedance.
6	OPIN-	I	Sense OP Amp inverting input-high impedance.
7	OPIN+	I	Sense OP Amp non inverting input-high impedance.
8	EN1	I	Half bridge latched enable.
9	EN2	I	Half bridge unlatched enable.
10	GND	—	Ground.
11	LVG	O	Low side driver output.
12	Vss	—	Supply voltage with internal zener clamp.
13	N.C.	—	Not connected.
14	OUT	O	High side driver reference.
15	HVG	O	High side driver output.
16	VBOOT	I	Bootstrapped supply voltage.

2.13. IC7801 (9NK2510067610)

2.13.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	INV	I	Inverting input of the error amplifier. The information on the output voltage of the PFC preregulator is fed into the pin through a resistor divider.
2	COMP	O	Output of the error amplifier. A compensation network is placed between this pin and INV (pin #1) to achieve stability of the voltage control loop and ensure high power factor and low THD.
3	MULT	I	Main input to the multiplier. This pin is connected to the rectified mains voltage via a resistor divider and provides the sinusoidal reference to the current loop.
4	CS	I	Input to the PWM comparator. The current flowing in the MOSFET is sensed through a resistor, the resulting voltage is applied to this pin and compared with an internal sinusoidal-shaped reference, generated by the multiplier, to determine MOSFET's turn-off.
5	ZCD	I	Boost inductor's demagnetization sensing input for transition-mode operation. A negative-going edge triggers MOSFET's turn-on.
6	GND	—	Ground. Current return for both the signal part of the IC and the gate driver.
7	GD	O	Gate driver output. The totem pole output stage is able to drive power MOSFET's and IGBT's with a peak current of 600 mA source and 800 mA sink. The high-level voltage of this pin is clamped at about 12V to avoid excessive gate voltages in case the pin is supplied with a high Vcc.
8	VCC	—	Supply Voltage of both the signal part of the IC and the gate driver. The supply voltage upper limit is extended to 22V min. to provide more headroom for supply voltage changes.

2.14. IC7904 (9NK2510293234)

2.14.1 Pin Connections and short description

Pin No.	Pin Name	Pin Function
5	DRAIN (D) Pin:	Power MOSFET drain connection. Provides internal operating current for both start-up and steady-state operation.
1	BYPASS (BP) Pin:	Connection point for a 0.1 μF external bypass capacitor for the internally generated 5.8 V supply.
4	ENABLE/UNDER-VOLTAGE (EN/UV) Pin:	This pin has dual functions: enable input and line under-voltage sense. During normal operation, switching of the power MOSFET is controlled by this pin. MOSFET switching is terminated when a current greater than 240 μA is drawn from this pin. This pin also senses line under-voltage conditions through an external resistor connected to the DC line voltage. If there is no external resistor connected to this pin, TinySwitch-II detects its absence and disables the line undervoltage function.
2,3	SOURCE (S) Pin:	Control circuit common, internally connected to output MOSFET source.

2.15. IC8101 (RH-iXC011WJQZQ)

2.15.1 Pin Connections and short description

Ref No.	Pin Name	I/O	Pin Function
DAC Interface			
AD2	VDDZ_DAC	—	Digital power for DAC (+3.3V).
AD3	VSSZ_DAC	—	Digital ground for DAC.
AD1	DAC_VS	I/O	DAC vsync.
AE1	DAC_HS	I/O	DAC hsync.
AE2	DAC_CLK	I/O	DAC clock
AE4	DAC_DE	I/O	DAC DE
AE3	DAC_FLD	I/O	DAC field.
AA5	AVSS51	—	Analog ground for DAC (for bias circuit).
AB5	COMP	—	Bias for DAC coupling capacitor.
AB4	IRSET	I	Bias for DAC current source.
AB3	CVBS_B	I	DAC blue or PB (Not used).
AB2	ADVSS2	—	Analog ground for DAC (for DAC's AVSS52).
AB1	ADVDD2	—	Analog power for DAC (+3.3V).
AC1	C_G	I	DAC green or Y (Not used).
AC2	AVSS50	—	Digital ground for DAC.
AC3	AVDD50	—	Analog power for DAC (+3.3V).
AC4	Y_R	I	DAC red or PR (Not used).
AC5	ADVSS2	—	Analog ground for DAC (for DAC's AVSS52).
AD5	ADVDD2	—	Analog power for DAC (+3.3V).
AD4	VM	I	DAC VM
ADC Interface			
N2	AVDD	—	ADC power +3.3V.
N3	VIN1	I	VRADC INPUT1 (Not used)
N4	VIN2	I	VRADC INPUT2 (Not used)
N5	AVSS	—	ADC ground.
USB Interface			
R3	USB_PPON_PP	O	USB Power on control.
R2	USB_OC_PP	I	USB over current control.
P5	VDDA	—	Analog core +3.3V supply.
P4	DN	O	Negative output channel.
P3	DP	O	Positive output control.
P2	VSSA	—	Analog core ground.
P1	RREFEXT	—	External resistor connection for current reference.
R5	VSSP	—	PLL ground pin Double Bond.
R4	VDDP	—	PLL +1.2V supply Double Bond.
LVDS Interface			
AJ5	LVDS_VSSP	—	LVDS PLL Ground.
AJ3	LVDS_VDDP	—	LVDS PLL Power supply (+3.3V).
AK5	LVDS_VSSO	—	LVDS Output buffer VSS (Long pad)
AK4	LVDS_VDDO	—	LVDS Output buffer VDD (+3.3V).
AK1	TF2P	O	LVDS Positive Output. (Not used)
AK2	TF2M	O	LVDS Negative Output. (Not used)
AL1	TE2P	O	LVDS Positive Output. (Not used)
AL2	TE2M	O	LVDS Negative Output. (Not used)
AM1	TD2P	O	LVDS Positive Output. (Not used)
AM2	TD2M	O	LVDS Negative Output. (Not used)
AN1	TCLK2P	O	LVDS Positive clock Output. (Not used)
AN2	TCLK2M	O	LVDS Negative clock Output. (Not used)
AP1	TC2P	O	LVDS Positive Output. (Not used)
AP2	TC2M	O	LVDS Negative Output. (Not used)
AM4	LVDS_VDDO	—	LVDS Output buffer VDD (+3.3V).
AP3	TB2P	O	LVDS Positive Output. (Not used)
AN3	TB2M	O	LVDS Negative Output. (Not used)
AP4	TA2P	O	LVDS Positive Output. (Not used)
AN4	TA2M	O	LVDS Negative Output. (Not used)
AJ6	LVDS_VSSO	—	LVDS Output buffer VSS.
AP5	TF1P	O	LVDS Positive Output. (Not used)
AN5	TF1M	O	LVDS Negative Output. (Not used)
AP6	TE1P	O	LVDS Positive Output. (Not used)
AN6	TE1M	O	LVDS Negative Output. (Not used)

Ref No.	Pin Name	I/O	Pin Function
AP7	TD1P	O	LVDS Positive Output. (Not used)
AN7	TD1M	O	LVDS Negative Output. (Not used)
AP8	TCLK1P	O	LVDS Positive clock Output. (Not used)
AN8	TCLK1M	O	LVDS Negative clock Output. (Not used)
AP9	TC1P	O	LVDS Positive Output. (Not used)
AN9	TC1M	O	LVDS Negative Output. (Not used)
AJ4	LVDS_VDDO	—	LVDS Output buffer VDD (+3.3V).
AP10	TB1P	O	LVDS Positive Output. (Not used)
AN10	TB1M	O	LVDS Negative Output. (Not used)
AP11	TA1P	O	LVDS Positive Output. (Not used)
AN11	TA1M	O	LVDS Negative Output. (Not used)
AL5	LVDS_VSSO	—	LVDS Output buffer VSS.
AM5	LVDS_VDDO	—	LVDS Output buffer VDD (+3.3V).
AL3	LVDS_VSSA	—	LVDS Analog VSS.
AL4	LVDS_VDDA	—	LVDS Analog VDD (+3.3V).
AK3	LVDS_VSSD	—	LVDS Digital VSS.
AM3	LVDS_VDDD	—	LVDS Digital VDD (+3.3V).
PLL Interface			
B7	DVSS22	—	PLL ground related to DVDD22; supply for VCO circuit.
A7	DVDD22	—	PLL power= 1.2V; supply for VCO circuit.
A6	DVSS21	—	PLL ground related to DVDD21; supply for digital circuit.
B6	DVDD21	—	PLL power= 1.2V; supply for digital circuit.
C6	AVSS7	—	PLL ground related to AVDD7.
D6	MCLK2LF	—	Low pass filter for MCLK2PLL.
E6	AVDD7	—	PLL analog power= 3.3V; supply for MCLK2PLL.
D5	AVSS6	—	PLL ground related to AVSS6.
C5	MPEGCLK2LF	—	Low pass filter for MPEGCLK2PLL.
B5	AVDD6	—	PLL analog power= 3.3V; supply for MPEGCLK2PLL.
A5	AVSS5	—	PLL ground related to AVSS5.
A4	MPEGCLK1LF	—	Low pass filter for MPEGCLK1PLL.
B4	AVDD5	—	PLL analog power= 3.3V; supply for MPEGCLK1PLL.
C4	AVSS2	—	PLL ground related to AVSS2.
D4	PLF	—	Low pass filter for PCLKPLL.
C3	AVDD2	—	PLL analog power= 3.3V; supply for PCLKPLL.
B3	AVSS1	—	PLL ground related to AVSS1.
A3	MLF	—	Low pass filter for MCLKPLL.
A2	AVDD1	—	PLL analog power= 3.3V; supply for MCLKPLL.
B2	AVSS4	—	PLL ground related to AVSS4.
A1	IDELF	—	Low pass filter for IDECLKPLL.
B1	AVDD4	—	PLL analog power= 3.3V; supply for IDECLKPLL.
C1	AVDD3	—	PLL analog power= 3.3V; supply for CK48MPLL.
C2	CK48MLF	—	Low pass filter for CK48MPLL.
D3	AVSS3	—	PLL ground related to AVSS3.
D2	XTLI	—	24MHz_PLL crystal input.
D1	XTLO	—	24MHz_PLL crystal output.
E1	DVSS12	—	PLL ground related to DVDD12; supply for VCO circuit.
E2	DVDD12	—	PLL power= 1.2V; supply for VCO circuit.
E3	DVSS11	—	PLL ground related to DVDD11; supply for digital circuit.
E4	DVDD11	—	PLL power= 1.2V; supply for digital circuit.
FLASH Interface			
E25	AD30_FRA14	I/O	Flash address 14/PCI AD bus bit 30.
D24	AD28_FRA12	I/O	Flash address 12/PCI AD bus bit 28.
E24	AD26_FRA10	I/O	Flash address 10/PCI AD bus bit 26.
A23	AD29_FRA13	I/O	Flash address 13/PCI AD bus bit 29.
B23	AD31_FRA15	I/O	Flash address 15/PCI AD bus bit 31.
D23	AD24_FRA8	I/O	Flash address 8/PCI AD bus bit 24.
E23	AD22_FRA6	I/O	Flash address 6/PCI AD bus bit 22.
A22	CBE3#_FRA19	I/O	Flash address 19/PCI CBE#[3].
B22	AD25_FRA9	I/O	Flash address 9/PCI AD bus bit 25.
C22	AD27_FRA11	I/O	Flash address 11/PCI AD bus bit 27.
D22	AD20_FRA4	O	Flash address 4/PCI AD bus bit 20/POD host interface Card access register selection.
E22	AD18_FRA2	O	Flash address 2/PCI AD bus bit 18/POD host interface Card I/O output enable.
A21	AD19_FRA3	O	Flash address 3/PCI AD bus bit 19/POD host interface Card I/O Write enable.
B21	AD21_FRA5	O	Flash address 5/PCI AD bus bit 21.

Ref No.	Pin Name	I/O	Pin Function
C21	AD23_FRA7	O	Flash address 7/PCI AD bus bit 23.
D21	AD16_FRA0	O	Flash address 0/PCI AD bus bit 16/POD host interface Card I/O output enable.
A20	IRDY_PCAS	I/O	PCI bus IRDY# signal/M68K CPU interface address strobe signal.
B20	CBE2#_FRA18	O	Flash address 18/PCI CBE#[2].
C20	AD17_FRA1	O	Flash address 1/PCI AD bus bit 17/POD host interface Card I/O Write enable.
A19	CBE1#_FRA17	O	Flash address 17/PCI CBE#[1].
E19	AD15_FRD15	I/O	Flash Data bus bit 15/PCI AD bus bit 15.
A18	AD7_FRD7	I/O	Flash Data bus 7/PCI AD bus bit 7.
B18	AD10_FRD10	I/O	Flash Data bus bit 10/PCI AD bus bit 10/POD host interface address bit 2.
C18	AD12_FRD12	I/O	Flash Data bus bit 12/PCI AD bus bit 12/POD host interface address bit 10.
D18	AD13_FRD13	I/O	Flash Data bus bit 13/PCI AD bus bit 13/POD host interface address bit 13.
E18	AD11_FRD11	I/O	Flash Data bus bit 11/PCI AD bus bit 11/POD host interface address bit 3.
A17	AD8_FRD8	I/O	Flash Data bus bit 8/PCI AD bus bit 8/POD host interface address bit 0.
B17	AD14_FRD14	I/O	Flash Data bus bit 14/PCI AD bus bit 14/POD host interface address bit 12.
C17	AD9_FRD9	I/O	Flash Data bus bit 9/PCI AD bus bit 9/POD host interface address bit 1.
D17	AD6_FRD6	I/O	Flash Data bus bit 6/PCI AD bus bit 6/POD host interface Data bus bit 6.
E17	CBE0#_FRA16	O	Flash address 16/PCI CBE#[0].
A16	AD5_FRD5	O	Flash Data bus bit 5/PCI AD bus bit 5/POD host interface Data bus bit 5.
B16	AD1_FRD1	I/O	Flash Data bus bit 1/PCI AD bus bit 1/POD host interface Data bus bit 1.
C16	AD3_FRD3	I/O	Flash Data bus bit 3/PCI AD bus bit 3/POD host interface Data bus bit 3.
D16	AD2_FRD2	I/O	Flash Data bus bit 2/PCI AD bus bit 2/POD host interface Data bus bit 2.
E16	AD4_FRD4	I/O	Flash Data bus bit 4/PCI AD bus bit 4/POD host interface Data bus bit 4.
E15	AD0_FRD0	I/O	Flash Data bus bit 0/PCI AD bus bit 0/POD host interface Data bus bit 0.
D15	FRA25	I/O	Flash address bit 25.
C15	FRA24	I/O	Flash address bit 24.
B15	FRA23	I/O	Flash address bit 23.
A15	FRA22	I/O	Flash address bit 22.
A14	FRA21	I/O	Flash address bit 21.
B14	FRA20	I/O	Flash address bit 20.
C14	GCS3	I/O	Flash chip select (0:Active).
D14	GCS2	I/O	Flash chip select (0:Active).
E14	GCS1	I/O	Flash chip select (0:Active).
E13	GCS0	I/O	Flash chip select (0:Active).
D13	BOOTCS	O	EPPROM chip select (0:Active).
C13	FWE#	O	Write enable signal of Flash Rom.
B13	FOE#	O	Read enable signal of Flash Rom.
A13	NAND_CE#	O	Chip select signal of NAND Flash Rom.
A12	NAND_RDY	I	Ready signal of NAND Flash Rom.
PCI Interface			
A27	INTA	I	PCI interrupt A.
C25	INTB	I	PCI interrupt B.
B27	INTC	I	PCI interrupt C.
B25	INTD	I	PCI interrupt D.
D27	GNT0	O	PCI gnt signal. (Not used)
D26	GNT1	O	PCI gnt signal. (Not used)
E26	GNT2	O	PCI gnt signal. (Not used)
D25	GNT3	O	PCI gnt signal. (Not used)
C27	PCIRST#	O	PCIRSTN/68K clock output.
A25	PCICLK	O	PCI clock.
C24	REQ0	I	PCI req signal.
B24	REQ1	I	PCI req signal.
A24	REQ2	I	PCI req signal.
C23	REQ3	I	PCI req signal.
E21	FRAME#_SIZI	I/O	PCI bus FRAME# signal/68K Transfer size bit 1. (analog with Transfer size bit 0 to indicate the number byte to be transferred during a bus cycle M68K CPU bus.)
A20	IRDY_PCAS	I/O	PCI bus IRDY# signal/68K address strobe signal.
B20	CBE2#_FRA18	I/O	PCI bus CBE#[2]/Flash address bit 18.
D20	TRDY#_SIZ0	I/O	PCI bus TRDY# signal/68K Transfer size bit 0.
B19	SEPR#_DSACK1	I/O	PCI bus SERR# signal/68K Data and Size acknowledge signal bit 1.
C19	DVSEL_PCDS	I/O	PCI bus DEVSEL# signal/68K Data Strobe signal.
D19	PAR_DSACK0	I/O	PCI bus PAR signal/68K Data and Size acknowledge signal bit 0.
E20	STOP#_PCRW	I/O	Flash, 3.3V CMOS IF, 16mA output pad.
POD Interface			
B12	POD_ITX	I	POD OOB TXI Channel.
C12	POD_WAIT	I	POD WAIT# signal to expand bus cycle.

Ref No.	Pin Name	I/O	Pin Function
D12	POD_CE1	O	Card enable.
E12	POD_CTX	O	POD OOB TX Gapped Symbol clock.
A11	POD_DRX	O	POD OOB RX data.
B11	POD_CD1	I	Card Detect.
C11	POD_IREQ	I	Ready/IRQ
D11	POD_CRX	O	POD OOB RX Gapped clock.
E11	POD_RESET	O	POD Card reset signal.
A10	POD_QTX	I	POD OOB TX Q Channel.
B10	POD_VS1	I	Card voltage Sense.
C10	POD_ETX	I	POD OOB TX enable.
D10	POD_CD2	I	Card Detect.
E10	POD_CE2	O	Card enable.
A9	POD_VPP_EN	O	Slot VPP enable.
B9	POD_OVERLOAD	I	Current overload detect.
C9	POD_VPP_EN#	O	Slot VPP enable.
D9	POD_VCC_EN#	O	Slot VCC enable.
E9	POD_VCC_EN	O	Slot VCC enable.
A8	POD_A9	O	POD Host interface address bit 9.
B8	POD_A8	O	POD Host interface address bit 8.
C8	POD_A7	I/O	POD Host interface address bit 7.
D8	POD_A6	I/O	POD Host interface address bit 6.
D7	POD_A5	I/O	POD Host interface address bit 5.
C7	POD_A4	O	POD Host interface address bit 4.
VDA Interface			
AP13, AN13, AM13, AL13, AK13, AP14, AN14, AM14, AL14, AK14	VDA_R[9:0]	I	Video input, R channel. (Not used)
AP15, AN15, AM15, AL15, AK15, AM16, AL16, AK16, AP17, AN17	VDA_B[9:0]	I	Video input, B channel. (Not used)
AM17, AL17, AK17, AP18, AN18, AM18, AL18, AK18, AP19, AN19	VDA_G[9:0]	I	Video input, G channel. (Not used)
AP16	VDA_CLK	I	Video input, Clock. (Not used)
AM19	VDA_VS	I	Video input, Vertical sync. (Not used)
AL19	VDA_HS	I	Video input, Horizontal sync. (Not used)
AK19	VDA_DE	I	Video input, Data enable. (Not used)
VDB Interface, EJTAG, IDE and POD2 share with VDB			
AK20	VDB_DE	I/O	Video input/output; data enable; IDE: IDE bus interrupt. EJTAG: NOP POD2: POD_CE2B#, the second POD Card enable.
AL20	VDB_HS	I/O	Video input/output; Horizontal sync; IDE: PDLAGCBLID, Passed diagnostics, cable assembly type identifier. EJTAG: TDI2, TDI EJTAG input of slave CPU. POD2: POD_A_B5, the second POD host interface address bit 5.
AM20	VDB_VS	I/O	Video input/output; Vertical sync; IDE: DMAREQ, IDE bus DMA request. EJTAG: NOP POD2: POD_A_B4, the second POD host interface address bit 4.
AN20	VDB_G0	I/O	Video input/output; Green channel bit 0; IDE: IDE data bus bit 0. EJTAG: TDO2, TDO EJTAG input of slave CPU CPU. POD2: POD_A_B6, the second POD host interface address bit 6.
AP20	VDB_G1	I/O	Video input/output; Green channel bit 1; IDE: IDE data bus bit 1. EJTAG: TMS2, TMS EJTAG input of slave CPU CPU. POD2: POD_A_B7, the second POD host interface address bit 7.
AK21	VDB_G2	I/O	Video input/output; Green channel bit 2; IDE: IDE data bus bit 2. EJTAG: TCK2, TCK EJTAG input of slave CPU CPU. POD2: POD_A_B8, the second POD host interface address bit 8.
AL21	VDB_G3	I/O	Video input/output; Green channel bit 3; IDE: IDE data bus bit 3. EJTAG: DCLK EJTAG output of both CPU CPUs. POD2: POD_A_B8, the second POD host interface address bit 9.

Ref No.	Pin Name	I/O	Pin Function
AM21	VDB_G4	I/O	Video input/output; Green channel bit 4; IDE: IDE data bus bit 4. EJTAG: TPC[0], output as EJTAG PC Trace bus, bit 0. POD2: POD_CD2B#, the second POD interface card detect.
AN21	VDB_G5	I/O	Video input/output; Green channel bit 5; IDE: IDE data bus bit 5. EJTAG: TPC[1], output as EJTAG PC Trace bus, bit 1. POD2: POD_CD1B#, the second POD interface card detect.
AP21	VDB_G6	I/O	Video input/output; Green channel bit 6; IDE: IDE data bus bit 6. EJTAG: TPC[2], output as EJTAG PC Trace bus, bit 2. POD2: POD_RSTB, the second POD host interface reset.
AK22	VDB_G7	I/O	Video input/output; Green channel bit 7; IDE: IDE data bus bit 7. EJTAG: TPC[3], output as EJTAG PC Trace bus, bit 3. POD3: POD_A_B14, the second POD host interface address bit 14.
AL22	VDB_G8	I/O	Video input/output; Green channel bit 8; IDE: IDE data bus bit 8. EJTAG: TPC[4], output as EJTAG PC Trace bus, bit 4. POD3: POD2_TS2_D0, the second POD_TS2 data[0].
AM22	VDB_G9	I/O	Video input/output; Green channel bit 9; IDE: IDE data bus bit 9. EJTAG: TPC[5], output as EJTAG PC Trace bus, bit 5. POD3: POD2_TS2_D2, the second POD_TS2 data[1].
AN22	VDB_B0	I/O	Video input/output; Blue channel bit 0; IDE: IDE data bus bit 10. EJTAG: TPC[6], output as EJTAG PC Trace bus, bit 6. POD3: POD2_TS2_D2, the second POD_TS2 data[2].
AP22	VDB_B1	I/O	Video input/output; Blue channel bit 1; IDE: IDE data bus bit 11. EJTAG: TPC[7], output as EJTAG PC Trace bus, bit 7. POD3: POD2_TS2_D3, the second POD_TS2 data[3].
AK23	VDB_B2	I/O	Video input/output; Blue channel bit 2; IDE: IDE data bus bit 12. EJTAG: PCST[0], output as EJTAG PC Trace bus, bit 0. POD3: POD2_TS2_D4, the second POD_TS2 data[4].
AL23	VDB_B3	I/O	Video input/output; Blue channel bit 3; IDE: IDE data bus bit 13. EJTAG: PCST[1], output as EJTAG PC Trace bus, bit 1. POD3: POD2_TS2_D5, the second POD_TS2 data[5].
AM23	VDB_B4	I/O	Video input/output; Blue channel bit 4; IDE: IDE data bus bit 14. EJTAG: PCST[2], output as EJTAG PC Trace bus, bit 2. POD3: POD2_TS2_D6, the second POD_TS2 data[6].
AP23	VDB_CLK	I/O	Video input/output; Clock; IDE: IDE data bus IO access complete. EJTAG: NOP POD3: POD_CE1B#, the second POD interface card enable.
AK24	VDB_B5	I/O	Video input/output; Blue channel bit 5; IDE: IDE data bus bit 15. EJTAG: PCST[3], output as EJTAG PC Trace bus, bit 3. POD3: POD2_TS2_D7, the second POD_TS2 data[7].
AL24	VDB_B6	I/O	Video input/output; Blue channel bit 6; IDE: Chip Select 0 for IDE interface. EJTAG: PCST[4], output as EJTAG PC Trace bus, bit 4. POD3: POD2_TS2_DEN, the second POD_TS2 data valid.
AM24	VDB_B7	I/O	Video input/output; Blue channel bit 7; IDE: Chip Select 1 for IDE interface. EJTAG: PCST[5], output as EJTAG PC Trace bus, bit 5. POD2: POD2_TS2_CLK, the second POD_TS2 clock.
AN24	VDB_B8	I/O	Video input/output; Blue channel bit 8; IDE: IDE address bus bit 0. EJTAG: PCST[6], output as EJTAG PC Trace bus, bit 6. POD2: POD2_TS2_SYNC, the second POD_TS2 SYNC.
AP24	VDB_B9	I/O	Video input/output; Blue channel bit 9; IDE: IDE address bus bit 1. EJTAG: PCST[7], output as EJTAG PC Trace bus, bit 7. POD2: POD2_TS1_D0, the second POD_TS1 data[0].

Ref No.	Pin Name	I/O	Pin Function
AK25	VDB_R0	I/O	Video input/output; Red channel bit 0; IDE: IDE address bus bit 2. EJTAG: PCST[8], output as EJTAG PC Trace bus, bit 8. POD2: POD2_TS1_D1, the second POD_TS1 data[1].
AL25	VDB_R1	I/O	Video input/output; Red channel bit 1; IDE: IDE bus DMA acknowledge. EJTAG: PCST[9], output as EJTAG PC Trace bus, bit 9. POD2: POD2_TS1_D2, the second POD_TS1 data[2].
AM25	VDB_R2	I/O	Video input/output; Red channel bit 2; IDE: IDE bus IO Read Strobe signal. EJTAG: PCST[10], output as EJTAG PC Trace bus, bit 10. POD2: POD2_TS1_D3, the second POD_TS1 data[3].
AN25	VDB_R3	I/O	Video input/output; Red channel bit 3; IDE: IDE bus IO Write Strobe signal. EJTAG: PCST[11], output as EJTAG PC Trace bus, bit 11. POD2: POD2_TS1_D4, the second POD_TS1 data[4].
AP25	VDB_R4	I/O	Video input/output; Red channel bit 4; IDE: NOP EJTAG: S1=0, select DCLK/TPC[7:0]/PCST[11:0] of host CPU as output. S1=1, select DCLK/TPC[7:0]/PCST[11:0] of slave CPU as output. POD2: POD2_TS1_D5, the second POD_TS1 data[5].
AK26	VDB_R5	I/O	Video input/output; Red channel bit 5; IDE: NOP EJTAG: S1=0, two EJTAG are separately used. S1=1, two EJTAG are used in a daisy chain style. POD2: POD2_TS1_D6, the second POD_TS1 data[6].
AL26	VDB_R6	I/O	Video input/output; Red channel bit 6; IDE: NOP EJTAG: TDI1, TDI EJTAG input of host CPU CPU. POD2: POD2_TS1_D7, the second POD_TS1 data[7].
AM26	VDB_R7	I/O	Video input/output; Red channel bit 7; IDE: NOP EJTAG: TDO1, TDO EJTAG input of host CPU CPU. POD2: POD2_TS1_DEN, the second POD_TS1 data valid.
AN26	VDB_R8	I/O	Video input/output; Red channel bit 8; IDE: NOP EJTAG: TMS1, TMS EJTAG input of host CPU CPU. POD2: POD2_TS1_CLK, the second POD_TS1 clock.
AP26	VDB_R9	I/O	Video input/output; Red channel bit 9; IDE: NOP EJTAG: TCK1, TCK EJTAG input of host CPU CPU. POD2: POD2_TS1_SYNC, the second POD_TS1 SYNC.
IEEE1394 Interface, 8051 and 656 share with 1394			
AM7, AL7, AK7, AK8, AL8, AM8, AK9, AL9	HSD[7:0]	I/O	1394: Parallel data. Video 656 port; 656D[9:2], data[9:2] 8051: AD[7:0], AD bus.
AM9	HSDCLK	I/O	1394: clock. Video 656 port; 656CLK, clock. 8051: RD, ALE, address latch enable.
AM10	HSDRW	I/O	1394: Not used. Video 656 port; 656CHS, horizontal sync. 8051: RD, read signal, low active.
AL10	HSDSYNC	I/O	1394: Packet synchronization. Video 656 port; 656VS, vertical sync. 8051: WR, write signal, low active.
AK10	HSDAV	I/O	1394: Not used. Video 656 port; data[1]. 8051: NOP
AM11	HSDEN	I/O	1394: Data valid. Video 656 port; data[0]. 8051: CS, chip select.
Transport Stream Interface			
G4, G5, F1, F2, F3, F4, F5, E5	TS2_D[7:0]	I	Transport Stream 2, data bus.
G3	TS2_DEN	I	Transport Stream 2, data enable.
G2	TS2_SYNC	I	Transport Stream 2, sync signal.
G1	TS2_CLK	I	Transport Stream 2, clock.

Ref No.	Pin Name	I/O	Pin Function
J3, J2, J1, H1, H2, H3, H4, H5	TS1_D[7:0]	I	Transport Stream 1, data bus.
J4	TS1_DEN	I	Transport Stream 1, data enable.
J5	TS1_SYNC	I	Transport Stream 1, sync signal.
K1	TS1_CLK	I	Transport Stream 1, clock.
Memory Interface			
AM30	DRVIMP	I	Driving strength impedance match reference pin.
AP29	MD0	I/O	Memory data bus.
AP30	MD1	I/O	Memory data bus.
AN30	MD2	I/O	Memory data bus.
AN31	MD3	I/O	Memory data bus.
AM33	DQM0	O	Memory data write mask enable for byte 0.
AM32	DQS0	I/O	Data strobe for memory data bus MD[7:0].
AL32	DQS0N	I/O	Data strobe for memory data bus MD[7:0].
AK30	MD4	I/O	Memory data bus.
AK31	MD5	I/O	Memory data bus.
AJ29	MD6	I/O	Memory data bus.
AJ30	MD7	I/O	Memory data bus.
AP32	MD8	I/O	Memory data bus.
AP33	MD9	I/O	Memory data bus.
AN33	MD10	I/O	Memory data bus.
AN34	MD11	I/O	Memory data bus.
AM34	DQM1	O	Memory data write mask enable for byte 1.
AL33	DQS1	I/O	Data strobe for memory data bus MD[15:8].
AL34	DQS1N	I/O	Data strobe for memory data bus MD[15:8].
AK33	MD12	I/O	Memory data bus.
AK34	MD13	I/O	Memory data bus.
AJ32	MD14	I/O	Memory data bus.
AJ33	MD15	I/O	Memory data bus.
AH33	MCLK0	O	Memory clock for MD[31:0].
AH34	MCLK0N	O	Memory clock for MD[31:0] - active LOW.
AG29	MD16	I/O	Memory data bus.
AG30	MD17	I/O	Memory data bus.
AF30	MD18	I/O	Memory data bus.
AF31	MD19	I/O	Memory data bus.
AE33	DQM2	O	Memory data write mask enable for byte 2.
AE32	DQS2	I/O	Data strobe for memory data bus MD[23:16].
AD32	DQS2N	I/O	Data strobe for memory data bus MD[23:16].
AC30	MD20	I/O	Memory data bus.
AC31	MD21	I/O	Memory data bus.
AB29	MD22	I/O	Memory data bus.
AB30	MD23	I/O	Memory data bus.
AG32	MD24	I/O	Memory data bus.
AG33	MD25	I/O	Memory data bus.
AF33	MD26	I/O	Memory data bus.
AF34	MD27	I/O	Memory data bus.
AE34	DQM3	O	Memory data write mask enable for byte 3.
AD33	DQS3	I/O	Data strobe for memory data bus MD[31:24].
AD34	DQS3N	I/O	Data strobe for memory data bus MD[31:24].
AC33	MD28	I/O	Memory data bus.
AC34	MD29	I/O	Memory data bus.
AB32	MD30	I/O	Memory data bus.
AB33	MD31	I/O	Memory data bus.
Y33	ODT	O	ODT
W34	CAS	O	Column Access Strobe of Port A or SCAN data input.
W33	RAS	O	Row Access Strobe of Port A or SCAN data input.
W31	WE	O	Write Enable of Port A or SCAN data input.
W30	CKE	O	Clock enable.
V34	CS0	O	Chip select for Ext Mem.
Y32	CS1	O	Chip select for Ext Mem.
U33	MAA10	O	Memory Address line of Port A or SCAN data input.
U32	BA1	O	Internal Bank Address Select for SDRAM.
U30	BA0	O	Internal Bank Address Select for SDRAM.
T34	MAA0	O	Memory Address line of Port A or SCAN data output.
T31	MAA1	O	Memory Address line of Port A or SCAN data output.

Ref No.	Pin Name	I/O	Pin Function
T33	MAA2	O	Memory Address line of Port A or SCAN data output.
T30	MAA3	O	Memory Address line of Port A or SCAN data output.
R32	MAA4	O	Memory Address line of Port A or SCAN data output.
R30	MAA5	O	Memory Address line of Port A or SCAN data output.
R33	MAA6	O	Memory Address line of Port A or SCAN data output.
R29	MAA7	O	Memory Address line of Port A or SCAN data output.
P34	MAA11	O	Memory Address line of Port A or SCAN data output.
P33	MAA8	O	Memory Address line of Port A or SCAN data output.
P30	MAA9	O	Memory Address line of Port A or SCAN data output.
N29	MD32	I/O	Memory data bus.
N30	MD33	I/O	Memory data bus.
M30	MD34	I/O	Memory data bus.
M31	MD35	I/O	Memory data bus.
L33	DQM4	O	Memory data write mask enable for byte 4.
L32	DQS4	I/O	Data strobe for memory data bus MD[39:32].
K32	DQS4N	I/O	Data strobe for memory data bus MD[39:32].
J30	MD36	I/O	Memory data bus.
J31	MD37	I/O	Memory data bus.
H29	MD38	I/O	Memory data bus.
H30	MD39	I/O	Memory data bus.
N32	MD40	I/O	Memory data bus.
N33	MD41	I/O	Memory data bus.
M33	MD42	I/O	Memory data bus.
M34	MD43	I/O	Memory data bus.
L34	DQM5	O	Memory data write mask enable for byte 5.
K33	DQS5	I/O	Data strobe for memory data bus MD[47:40].
K34	DQS5N	I/O	Data strobe for memory data bus MD[47:40].
J33	MD44	I/O	Memory data bus.
J34	MD45	I/O	Memory data bus.
H32	MD46	I/O	Memory data bus.
H33	MD47	I/O	Memory data bus.
G33	MCLK1	O	Memory clock for MD[63:32].
G34	MCLK1N	O	Memory clock for MD[63:32] - active LOW.
F29	MD48	I/O	Memory data bus.
F30	MD49	I/O	Memory data bus.
E30	MD50	I/O	Memory data bus.
E31	MD51	I/O	Memory data bus.
D33	DQM6	O	Memory data write mask enable for byte 6.
D32	DQS6	I/O	Data strobe for memory data bus MD[55:48].
C32	DQS6N	I/O	Data strobe for memory data bus MD[55:48].
B30	MD52	I/O	Memory data bus.
B31	MD53	I/O	Memory data bus.
A29	MD54	I/O	Memory data bus.
A30	MD55	I/O	Memory data bus.
F32	MD56	I/O	Memory data bus.
F33	MD57	I/O	Memory data bus.
E33	MD58	I/O	Memory data bus.
E34	MD59	I/O	Memory data bus.
D34	DQM7	O	Memory data write mask enable for byte 7.
C33	DQS7	I/O	Data strobe for memory data bus MD[63:56].
C34	DQS7N	I/O	Data strobe for memory data bus MD[63:56].
B33	MD60	I/O	Memory data bus.
B34	MD61	I/O	Memory data bus.
A32	MD62	I/O	Memory data bus.
A33	MD63	I/O	Memory data bus.
CPU Interface			
B26	MASTSEL	I	Lexra bus master select, H:I2C, L:1x5180.
Interrupt Interface			
T1	INT1	I	External interrupt, low active Edge or level.
I2C Interface			
W5	SCLMAST2	I/O	I2C master 2 clock.
Y5	SDAMAST2	I/O	I2C master 2 data.
AE5	SCLMAST1	I/O	I2C master 1 clock.
AF5	SDAMAST1	I/O	I2C master 1 data.

Ref No.	Pin Name	I/O	Pin Function
I2S Interface			
T3	SCKIN	O	I2S: SCK of I2S input port. (Not used) AC Link: SDATA_OUT POD2: POD_DRXB, the second POD OOB RX data.
T4	WSI2S	I	I2S: WS of I2S input port. (Not used) AC Link: ACLINK_RSTN POD2: POD_CRXB, the second POD OOB RX gapped clock.
T5	SDI2S	I	I2S: SD of I2S input port. (Not used) AC Link: SYNC POD2: POD_QTXB, the second POD OOB TXQ channel.
U1	WS	O	I2S: WS of I2S output port. AC Link: SDATA_IN_2
U2	SCK	O	I2S: SCK of I2S output port. AC Link: SDATA_IN_3
U3	SD1	O	I2S: SD of I2S output port. AC Link: BIT_CLK
U4	SD2	O	I2S: SD of I2S output port. (Not used) AC Link: SDATA_IN_0
U5	SD3	O	I2S: SD of I2S output port. (Not used) AC Link: SDATA_IN_1
V5	I2SCLK	O	I2S: 1, 2, 4, 8 times of SCK of I2S output port, used by D/A chip.
V4	SD4	I	I2S: SCK of second I2S input port. (Not used) POD2: POD_ETXB, the second POD OOB TX enable.
V3	SD5	I	I2S: WS of second I2S input port. (Not used) POD2: POD_ITXB, the second POD OOB TXI channel.
V2	SD6	I	I2S: SD of second I2S input port. (Not used) POD2: POD_CTXB, the second POD OOB TX gapped symbol clock.
SPDIF Interface			
T2	SPDIF	I/O	SPDIF output.
UART Interface			
Y4	TXD	O	Data output for UART.
Y3	RTS	O	Request to send output for UART (8mA output pad).
Y2	DTR	O	Data terminal Ready output for UART (8mA output pad, 5V TTL interface 25PF, 6ns rise timing).
Y1	RXD	I	Data input for UART.
AA1	CTS	I	Clear to send input for UART.
AA2	DSR	I	Data set ready for UART.
AA3	DCD	I	Receive line signal detect for UART. (Not used)
AA4	RI	I	Ring indicator for UART. (Not used)
Smart card Interface			
V1	SCRST	I	Smart card reset 0, 8mA open-drain output pad. (Not used)
W1	SCPFET	I	Smart card power FET control output, 8mA open-drain output. The smart card reader interface requires this pin to drive an external power FET to supply the current for the Smart Card (65mA typical, 100mA short to ground). (Not used)
W2	SCIO	I/O	Smart card serial data, 8mA open-drain in out pad. (Not used)
W3	SCCLK	O	Smart card clock, 8mA open-drain output pad (7.1M to 3.5M) (Not used)
W4	SCPRES	I	Smart card present detect. (Not used)
CIR, RTC Interface			
M1	VCCH12	—	1.2V RTC power for logic.
N1	VSSH12	—	RTC ground for logic.
L1	WDOG	O	Watch dog reset.
L2	VCCH33	—	3.3V RTC power for logic.
L3	CK32	I	32.768 kHz crystal oscillator input.
L4	CK32E	O	32.768 kHz crystal oscillator output.
L5	VSSH33	—	RTC ground for logic.
M5	CRX0	I	CIR0, receive data for CIRo interface.
M4	PWRON	O	Main power, power On control signal, low active, 4mA output pad. (Not used)
M3	PWRBT	I	Power switch button.
M2	VCCHRST	I	VCCH RST
K4	VCCH12	—	1.2V RTC power for logic.
K5	VSSH12	—	RTC ground for logic.
R1	CTX0	O	Transmission data for CIR interface.
Program IO			
AF4	GP15	I/O	Program IO. PWM: Pulse-Width Modulation. POD: OVERLOAD, the second POD interface current overload.

Ref No.	Pin Name	I/O	Pin Function
AF3	GP14	I/O	Program IO. PWM: Pulse-Width Modulation. POD: VS1, the second POD interface voltage sense.
AF2	GP13	I/O	Program IO. PWM: Pulse-Width Modulation. POD: VPP_EN#, the second POD interface slot VPP enable.
AF1	GP12	I/O	Program IO. PWM: Pulse-Width Modulation. POD: VPP_EN, the second POD interface slot VPP enable.
AG1	GP11	I/O	Program IO. PWM: Pulse-Width Modulation. POD: VCC_EN#, the second POD interface slot VCC enable.
AG2	GP10	I/O	Program IO. PWM: Pulse-Width Modulation. POD: VCC_EN, the second POD interface slot VCC enable.
AG3	GP9	I/O	Program IO. PWM: Pulse-Width Modulation. POD: WAIT#, WAIT# signal to expend bus cycle.
AG4	GP8	I/O	Program IO. PWM: Pulse-Width Modulation. POD: Ready and IREQ.
AG5	GP7	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C1_SDA, I2C bus SDA.
AH5	GP6	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C1_SCL, I2C bus SCL.
AH4	GP5	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C1_DEVID, I2C bus DEVID.
AH3	GP4	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C2_SDA, I2C bus SDA.
AH2	GP3	I/O	Program IO. PWM: Pulse-Width Modulation.
AH1	GP2	I/O	Program IO. PWM: Pulse-Width Modulation.
AJ1	GP1	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C2_SCL, I2C bus SCL.
AJ2	GP0	I/O	Program IO. PWM: Pulse-Width Modulation. POD: SI2C2_DEVID, I2C bus DEVID.
Power and ground pins			
A26, AJ20, Y6	V5SF	—	5V safe power.
AA13, AA22, AB13, AB14, AB21, AB22, AD6, AE6, AF6, AG6, AH6, AJ8, AJ9, AJ10, AJ11, AJ12, AJ16, AJ17, AJ18, AJ19, AK11, AK12, AL11, AL12, AM12, AN12, AP12, E7, E8, F6, F7, F8, F9, G6, H6, J6, N13, N14, N21, N22, P13, P22, T6, U6, V6, W6	VDDC	—	Core power supply= 1.2V
A28, B28, C28, C29, D28, D29, E27, E28, F16, F17, F18, F19, F23, F24, F25, F26, F27, F28, K6, L 6, M6	VDDF	—	Power supply= 3.3V
AE31, AM31, C31, L31	VDDI33	—	3.3V power for DDR IO input buffer.
AA29, AA30, AA31, AA32, AA33, AA34, AD29, AD30, AE29, AE30, AH29, AH30, AH31, AJ27, AJ28, AK27, AK28, AL27, AL28, AM27, AM28, AM29, AN27, AN28, AP27, AP28, G29, G30, G31, K29, K30, L29, L30, V31, V32, W29, Y29, Y30	VDDM	—	2.5V supply ring for memory interface (Long PAD).

Ref No.	Pin Name	I/O	Pin Function
—	VSS	—	IO ground related to VDDF./Core ground related to VDDC.
			A31, A34, AA6, AA14, AA15, AA16, AA17, AA18, AA19, AA20, AA21, AB6, AB15, AB16, AB17, AB18, AB19, AB20, AB31, AB34, AC6, AC29, AC32, AD31, AF29, AF32, AG31, AG34, AH32, AJ13, AJ14, AJ15, AJ21, AJ23, AJ24, AJ25, AJ26, AJ31, AJ34, AK32, AL31, AN16, AN23, AN29, AN32, AP31, AP34, B32, D31, E29, E32, F10, F11, F12, F13, F14, F15, F20, F21, F22, F31, F34, G32, H31, H34, J29, J32, K31, M29, M32, N6, N15, N16, N17, N18, N19, N20, N31, N34, P6, P14, P15, P16, P17, P18, P19, P20, P21, P29, P32, R6, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R31, R34, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T29, T32, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U31, V13, V14, V15, V16, V17, V18, V19, V20, V21, V22, V33, W13, W14, W15, W16, W17, W18, W19, W20, W21, W22, W32, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y22, Y31, Y34
AL29, V29, C30	MVREF	—	Memory interface voltage reference.
AL30, V30, D30	VDDR	—	1.8V input buffer reference power.
AK29	VSSR	—	Ground of input buffer reference power.
OTHER			
C26	RESET#	I	System reset input, high active.
AJ7	FULL_EJTAG	I	1: Full EJTAG, 0:simple EJTAG.
K3	VCOTP	O	DEMUX output.
K2	CLK27M	I	DEMUX input.
AM6	PCMOD	I	1: PC MODE (Not used)
AL6	TESTCON	I	Test mode control.
AK6	TESTMOD	I	Test mode input.

2.16. IC8301-4 (RH-iXC154WJQZQ)

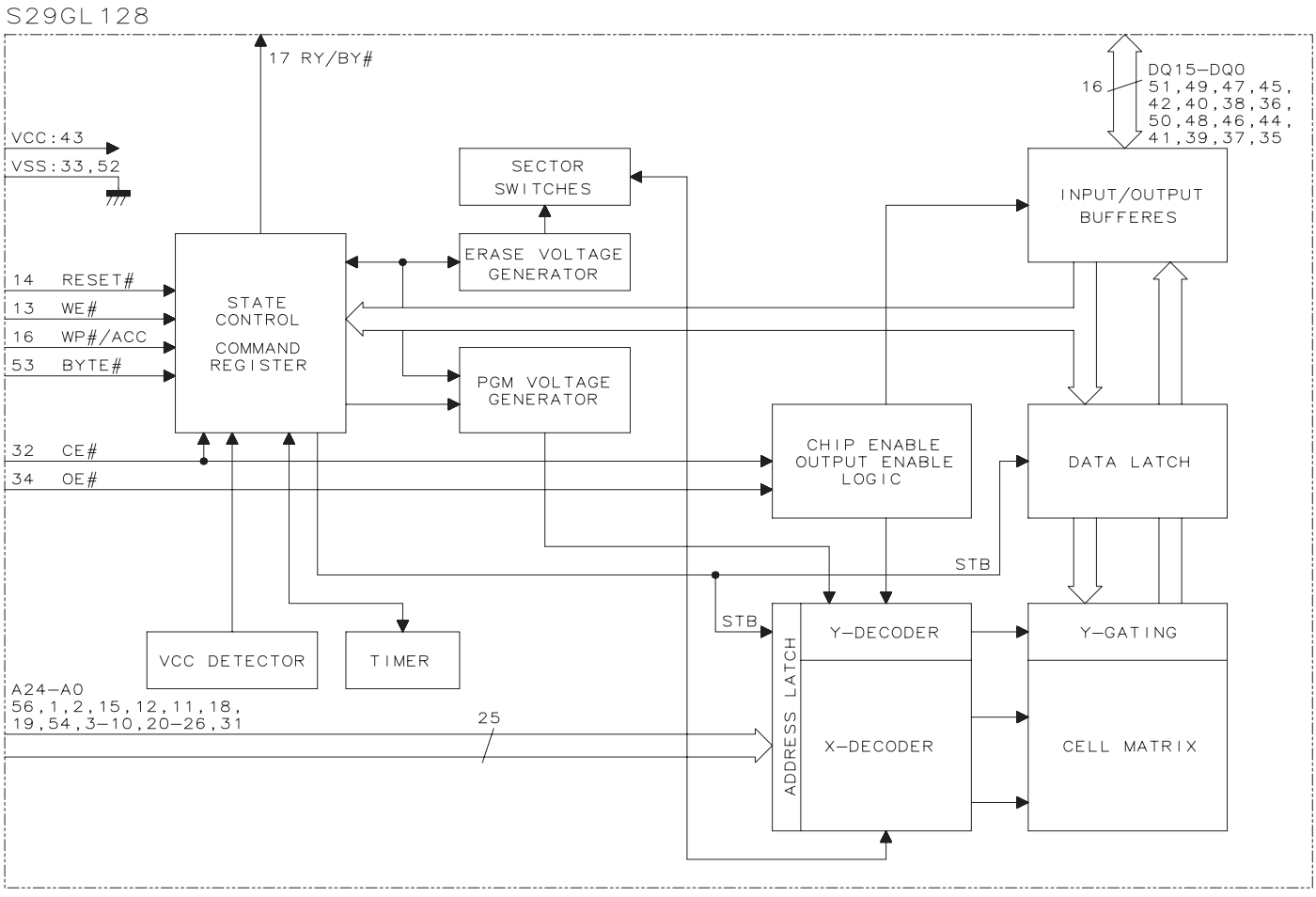
2.16.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
53, 52	CK, $\overline{CK}$	I	Clock: CK and $\overline{CK}$ are differential clock inputs. CMD, ADD inputs are sampled on the crossing of the positive edge of CK and negative edge of $\overline{CK}$. Output (read) data is referenced to the crossings of CK and $\overline{CK}$ (both directions of crossing).
41	CKE	I	Clock Enable: CKE HIGH activates, and CKE Low deactivates, internal clock signals and device input buffers and output drivers. Taking CKE Low provides Precharge Power-Down and Self Refresh operation (all banks idle), or Active Power-Down (row Active in any bank). CKE is synchronous for power down entry and exit, and for self refresh entry. CKE is asynchronous for self refresh exit. CKE must be maintained high throughout read and write accesses. Input buffers, excluding $\overline{CK}$, and CKE are disabled during powerdown. Input buffers, excluding CKE, are disabled during self refresh.
51	$\overline{CS}$	I	Chip Select: All commands are masked when CS is registered HIGH. CS provides for external bank selection on systems with multiple banks. $\overline{CS}$ is considered part of the command code.
19	ODT	I	On Die Termination: ODT (registered HIGH) enables termination resistance internal to the gDDR2 SDRAM. When enabled, ODT is only applied to each DQ, UDQS/$\overline{UDQS}$, LDQS/$\overline{LDQS}$, UDM, and LDM signal for x16 configurations. The ODT pin will be ignored if the Extended Mode Register (EMRS) is programmed to disable ODT.
77, 76, 70	$\overline{RAS}$, $\overline{CAS}$, $\overline{WE}$	I	Command Inputs: RAS, CAS and WE (along with CS) define the command being entered.
66, 62	(L) UDM	I	Input Data Mask: DM is an input mask signal for write data. Input data is masked when DM is sampled HIGH coincident with that input data during a Write access. DM is sampled on both edges of DQS. Although DM pins are input only, the DM loading matches the DQ and DQS loading.
42, 71	BA0 - BA1	I	Bank Address Inputs: BA0 and BA1 define to which bank an Active, Read, Write or Precharge command is being applied. BA0 also determines if the mode register or extended mode register is to be accessed during a MRS or EMRS cycle.
50, 72, 75, 44, 49, 73, 74, 45, 48, 46, 43, 47, 13	A0 - A12	I	Address Inputs: Provided the row address for Active commands and the column address and Auto Precharge bit for Read/Write commands to select one location out of the memory array in the respective bank. A10 is sampled during a Precharge command to determine whether the Precharge applies to one bank (A10 LOW) or all banks (A10 HIGH). If only one bank is to be precharged, the bank is selected by BA0, BA1. The address inputs also provide the op-code during Mode Register Set commands.
	DQ	I/O	Data Input/ Output: Bi-directional data bus.
81, 57, 61, 29	LDQS, ($\overline{LDQS}$) UDQS, ($\overline{UDQS}$)	I/O	Data Strobe: output with read data, input with write data. Edge-aligned with read data, centered in write data. LDQS corresponds to the data on DQ0-DQ7; UDQS corresponds to the data on DQ8-DQ15. The data strobes LDQS and UDQS may be used in single ended mode or paired with optional complementary signals LDQSand UDQS to provide differential pair signaling to the system during both reads and writes. An EMRS (1) control bit enables or disables all complementary data strobe signals.
10, 14, 15, 16, 32, 36,	NC/RFU	—	No Connect: No internal electrical connection is present.
3, 7, 22, 24, 26, 28, 63, 67, 80, 84	VDDQ	—	DQ Power Supply: 1.8V ± 0.1V.

Pin No.	Pin Name	I/O	Pin Function
33, 35, 37, 39, 54, 56, 58, 60, 82	VSSQ	—	DQ Ground.
9	VDDL	—	DLL Power Supply: 1.8V ± 0.1V.
78	VSSL	—	DLL Ground.
5, 12, 18, 20	VDD	—	Power Supply: 1.8V ± 0.1V.
11. 17, 65, 69	VSS	—	Ground.
40	VREF	—	Reference voltage.

2.17. IC8451 (VHiS29GL128-1Q)

2.17.1 Block Diagram

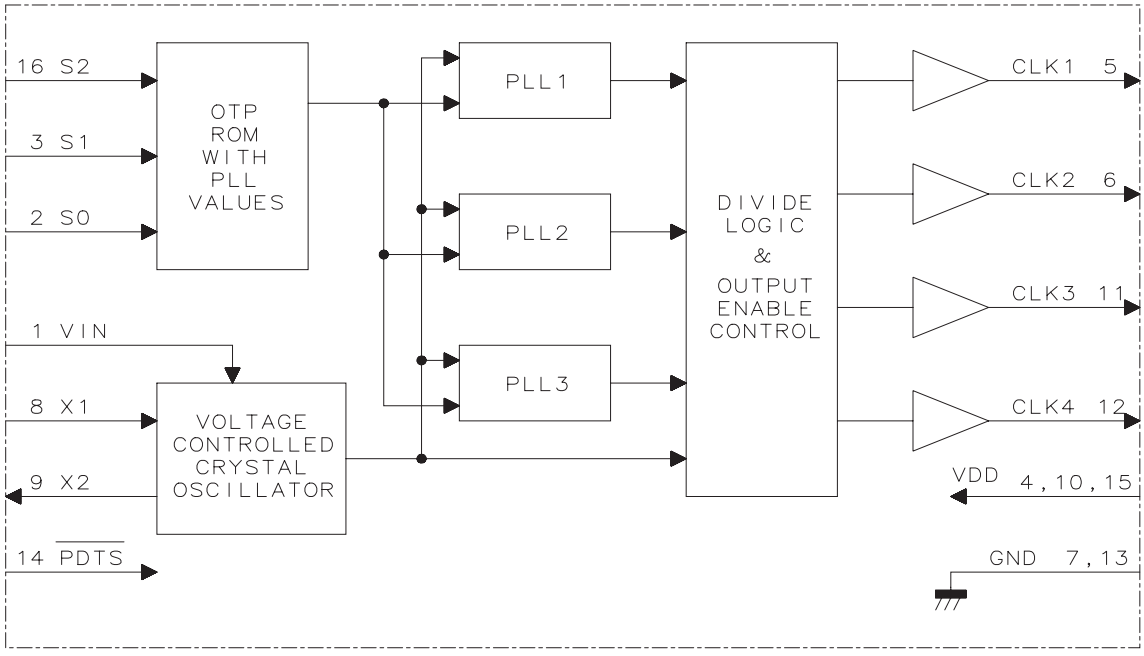


2.17.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
2	A22	I	23 Address inputs
15	A21	I	
12	A20	I	
11	A19	I	
18	A18	I	
19	A17	I	
54	A16	I	
3	A15	I	
4	A14	I	
5	A13	I	
6	A12	I	
7	A11	I	
8	A10	I	
9	A9	I	
10	A8	I	
20	A7	I	
21	A6	I	
22	A5	I	
23	A4	I	
24	A3	I	
25	A2	I	
26	A1	I	
31	A0	I	
51	DQ15/A-1	I/O	DQ15 (Data input/output, word mode), A-1(LSB Address input, byte mode)
49	DQ14	I/O	15 Data inputs/outputs
47	DQ13	I/O	
45	DQ12	I/O	
42	DQ11	I/O	
40	DQ10	I/O	
38	DQ9	I/O	
36	DQ8	I/O	
50	DQ7	I/O	
48	DQ6	I/O	
46	DQ5	I/O	
44	DQ4	I/O	
41	DQ3	I/O	
39	DQ2	I/O	
37	DQ1	I/O	
35	DQ0	I/O	
32	CE#	I	Chip Enable input
34	OE#	I	Output Enable input
13	WE#	I	Write Enable input
16	WP#/ACC	I	Hardware Write Protect input/Programming Acceleration input
14	RESET#	I	Hardware Reset Pin input
53	BYTE#	I	Selects 8-bit or 16-bit mode
17	RY/BY#	O	Ready/Busy output
43	VCC	—	3.0 volt-only single power supply
29	VIO	O	Output Buffer power.
33, 52	VSS	—	Device Ground
1, 27, 28, 30, 55, 56	N.C	—	Pin not Connected Internally.

2.18. IC8702 (RH-iXC0150WJQZY)

2.18.1 Block Diagram



2.18.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	VIN	I	Voltage input to VCXO. Zero to 3.3V signal which controls the VCXO frequency.
2	S0	I	Select pin 0. Internal pull-up resistor.
3	S1	I	Select pin 1. Internal pull-up resistor.
4	VDD	—	Connect to +3.3 V.
5	CLK1	O	Output clock 1. Weak internal pull-down when tri-state.
6	CLK2	O	Output clock 2. Weak internal pull-down when tri-state.
7	GND	—	Connect to ground.
8	X1	I	Crystal input. Connect this pin to a crystal.
9	X2	O	Crystal Output. Connect this pin to a crystal.
10	VDD	—	Connect to +3.3 V.
11	CLK3	O	Output clock 3. Weak internal pull-down when tri-state.
12	CLK4	O	Output clock 4. Weak internal pull-down when tri-state.
13	GND	—	Connect to ground.
14	PDTS	I	Power-down tri-state. Powers down entire chip and tri-states clock outputs when low. Internal pull-up resistor.
15	VDD	—	Connect to +3.3 V.
16	S2	I	Select pin 2. Internal pull-up resistor.

2.19. IC9101 (RH-iXC121WJN8Q)

2.19.1 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	D3.3V	—	Power supply(+3.3V)
2	N_CPLD_CS0	I	HiDTV CS0 ··· Flash
3	XERE	I	HiDTV PCI_BUS OE#
4	ROM_CE	I	BOOT ROM CE input
5	N_CPLD_CS1	I	HiDTV CS1 ··· CPLD
6	XEWE	I	HiDTV PCI_BUS WE#
7	NC	O	HiDTV PCI_BUS ACK#
8	D3.3V	—	Power supply (+3.3V)
9	FRDA_0	I/O	For HiDTV PCI_BUS DATA0/CPLD control
10	FRDA_1	I/O	For HiDTV PCI_BUS DATA1/CPLD control
11	FRDA_2	I/O	For HiDTV PCI_BUS DATA2/CPLD control
12	FRDA_3	I/O	For HiDTV PCI_BUS DATA3/CPLD control
13	FRDA_4	I/O	For HiDTV PCI_BUS DATA4/CPLD control
14	FRDA_5	I/O	For HiDTV PCI_BUS DATA5/CPLD control
15	FRDA_6	I/O	For HiDTV PCI_BUS DATA6/CPLD control
16	FRDA_7	I/O	For HiDTV PCI_BUS DATA7/CPLD control
17	FRAA_0	I	HiDTV PCI_BUS ADDRESS0
18	GND_B	—	Ground
19	FRAA_1	I	For HiDTV PCI_BUS ADDRESS1/CPLD control
20	FRAA_2	I	For HiDTV PCI_BUS ADDRESS2/CPLD control
21	FRAA_3	I	For HiDTV PCI_BUS ADDRESS3/CPLD control
22	FRAA_4	I	For HiDTV PCI_BUS ADDRESS4/CPLD control
23	FRAA_5	I	For HiDTV PCI_BUS ADDRESS5/CPLD control
24	N_CPLD2_CNF_DONE	I	FPGA Config
25	FRAA_6	I	For HiDTV PCI_BUS ADDRESS6/CPLD control
26	FRAA_22	I	HiDTV PCI_BUS ADDRESS22
27	FRAA_23	I	HiDTV PCI_BUS ADDRESS23
28	FRAA_24	I	HiDTV PCI_BUS ADDRESS24
29	GND_B	—	Ground
30	SBCLK_27M	I	HiDTV PCI_BUS CLOCK (27MHz)
31	3.3V_DPOW_DETECT	I	DPOW system 3.3V detection
32	NACE_N	I	NAND-FLASH CE output
33	CODEC_RST	O	CODEC reset
34	N_VCCH_RST	O	HiDTV standby reset
35	N_COLD_RST	O	HiDTV main reset
36	GND_B	—	Ground
37	D3.3V	—	Power supply (+3.3V)
38	CPLD_33M	I	System clock (33MHz)
39	N_FLS_RST	O	On-Board Flash reset
40	N_EXT_RST	O	External Flash reset
41	N_EXT_BOOT	I	Flash start-up discrimination (H = On-Board, L = External)
42	D3.3V	—	Power supply(+3.3V)
43	ROM_ADD22	O	On-Board/External Flash ADDRESS22
44	ROM_ADD23	O	On-Board/External Flash ADDRESS23
45	ROM_ADD24	O	On-Board/External Flash ADDRESS24
46	N_ROM_OE	O	On-Board/External Flash OE#
47	GND_B	—	Ground
48	N_ROM_WE	O	On-Board/External Flash WE#
49	N_EXT_CE	O	External Flash CE#
50	N_FLS_CS0	O	On-Board Flash CE0#
51	N_CPLD_INT0	O	HiDTV (Level interrupt, Active Low)
52	N_CPLD_INT1	O	SVP_WX (Level interrupt, Active Low)
53	DSP_RST	O	DSP reset
54	N_TUNER_INT	INT	CE6353 (Level interrupt, Active Low)
55	D3.3V	—	Power supply (+3.3V)
56	VON	O	Inverter ON/OFF control
57	PE	O	PANEL controller control signal
58	A_MUTE_ADIF	I	HDMI_MUTE control signal
59	BUS_SPLIT	O	Slow bus/video bus enable (Isplation supported)
60	I2C_EXT	O	I2C bus enable (Isolation supported)
61	STB	O	Inverter ON/OFF control

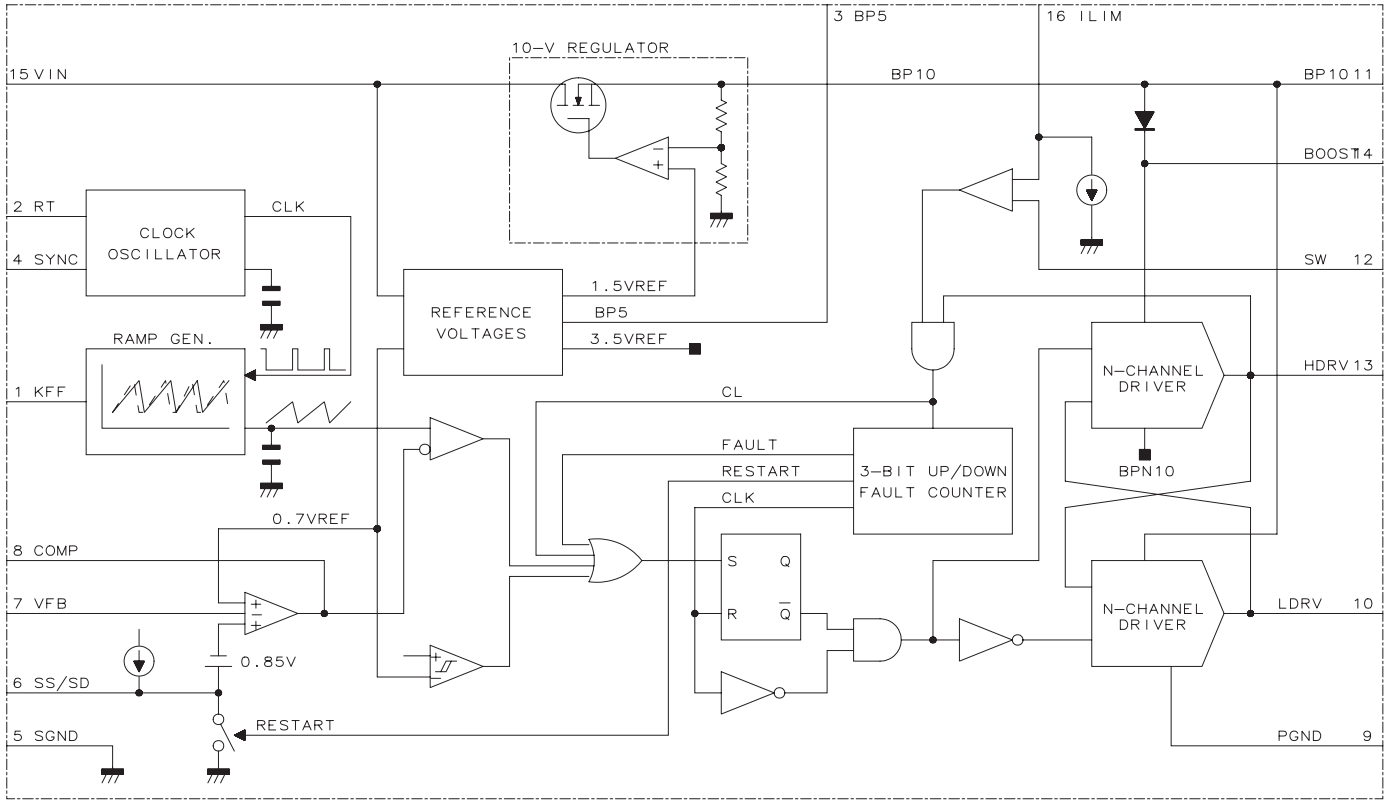
Pin No.	Pin Name	I/O	Pin Function
62	GND_B	—	Ground
63	CPLD_TDI	I	
64	PNL_WP	O	VCOM Write Protect control signal
65	CPLD_TMS	O	
66	FE_RST	O	CE6353 reset
67	CPLD_TCK	O	
68	FEPG0_COMP	O	Sleep signal
69	FEPG1_LOCK	I	Signal LOCK detection
70	FERR_UNCOR	I	Error flag
71	N_TS1_DEMORST	O	TS1 demodulator reset
72	GND_B	—	Ground
73	D3.3V	—	Power supply (+3.3V)
74	EXTRG	O	Partner
75	DRSTMSK	O	Partner
76	N_IRS_INT	I	IrSS interrupt request
77	CLON_RC	O	For controlling clone remote control
78	DTM_RST	O	Reset signal for DTM
79	N_IRS_RST	O	IrSS reset signal
80	DTM_GPIO0	I	Control signal for DTM (GPIO0)
81	DTM_GPIO1	O	Control signal for DTM (GPIO1)
82	DTM_UART_INT	I	Interrupt request of UART-I2C conversion IC for DTM
83	DTM_UART_RST	O	Reset of UART-I2C conversion IC for DTM
84	D3.3V	—	Power supply (+3.3V)
85	AGC_SEL	O	Digital/Analog AGC switching control
86	HP_MUTE	O	HP audio mute control
87	HP_PLUG	I	HP connection detection
88	CION	O	VCC/ON signal for PCMCIA
89	GND_B	—	Ground
90	GND_B	—	Ground
91	SC2_MUTE	O	SCART2 audio mute control
92	SPDIF_MUTE	O	SPDIF audio mute control
93	SC_MUTE	O	SCART1 audio mute control
94	S_STBY	O	Audio AMP shutdown control
95	DU_LINK_ACK0	I	ACK from IEEE1394 chip
96	SIF_SW	O	I2C line SW control of sound multiplex decoder
97	DU_LINK_IRQ	I	IEEE1394 chip interrupt request
98	CNVSS	O	Monitor microprocessor write mode control
99	GND_B	—	Ground
100	N_PCI_RST	O	PCI reset
101	RS_BUF_CNT	O	Monitor microprocessor UART mode switching
102	PNL_I2C_EN	O	VCOM/I2C switch control
103	AUDIO_SEL2	O	DTV/HDMI analog audio switching control 2
104	PCHD_AUDIO_SEL	O	PC/HDMI external audio input switching
105	N_DVOUT_EN	O	DTV/AD YPbPr switching
106	MSP_RESET	O	MSP reset
107	HDMI_RESET	O	HDMI-TMDS_SW reset
108	GND_B	—	Ground
109	D3.3V	—	Power supply(+3.3V)
110	SVP_RESET	O	SVP_WX reset
111	N_PHY_RESET	O	i.Link PHY reset
112	N_LINK_RESET	O	i.Link LINK reset
113	FL_VPP0	O	Flash WP
114	GND_B	—	Ground
115	AREA_4	I	Destination setting (L: Europe/H: Asia)
116	DIG_AD	I	DTV add-on Unit presence/absence setting
117	HDMI_SEL1	O	HDMI_Select_1
118	HDMI_SEL2	O	HDMI_Select_2
119	HDMI_SEL3	O	HDMI_Select_3
120	HDMI_HPG1	I	HDMI_HotPlug_1
121	HDMI_HPG2	I	HDMI_HotPlug_2
122	CPLD_TDO	O	
123	GND_B	—	Ground
124	HDMI_HPG3	I	HDMI_HotPlug_3 (for temporary insertion)
125	HDMI_SW_EMP	O	HDMI output waveform adjustment

Pin No.	Pin Name	I/O	Pin Function
126	HDMI_PLG_EN	O	HDMI output control
127	D3.3V	—	Power supply(+3.3V)
128	MUTE_HDMI	O	HDMI_MUTE initial value Low
129	HPLUGOUT_A	I	HDMI Plug Out detection
130	HDMIKEY_WP	O	EDIT_Write Protect
131	N_CPLD2_RST	O	CPLD2 reset
132	PNL_POW	O	Panel power control
133	HDMI_SW_INT	INT	HDMI SW IC interrupt request
134	HDELAY_DOUT	O	HDMI Data Delay Serial_Data_OUTPUT
135	N_MICOM_FLSW	O	Monitor microprocessor write control
136	N_MICOM_RST	O	Monitor microprocessor reset control
137	SMPOWHOLD	O	Power holding signal
138	PM_REQ	INT	Panel Maicon REQ
139	N_DBOOTS	I	Microprocessor write request
140	CBOOTS	I	SD card activation detection
141	D3.3V	—	Power supply(+3.3V)
142	N_DBG_RST	I	Debugger (Partner) reset
143	N_SRESET	I	System reset
144	GND_B	—	Ground

2.20. IC9601, 9603, 9604, 9606 (VHiTPS40055-1Y)

2.20.1 Block Diagram

TPS40055

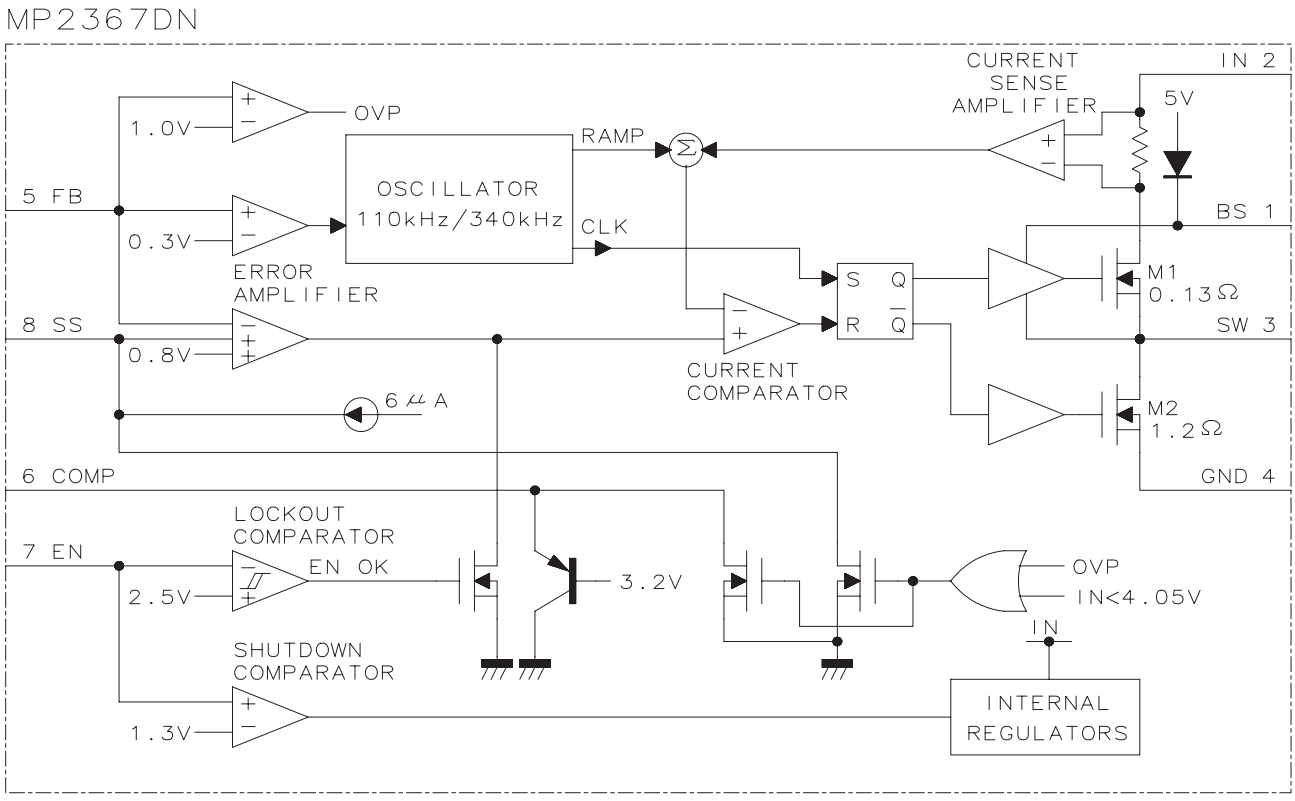


2.20.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
14	BOOST	O	Gate drive voltage for the high side N-channel MOSFET. The BOOST voltage is 9 V greater than the input voltage. A 0.1-μF ceramic capacitor should be connected from this pin to the drain of the lower MOSFET.
3	BP5	O	5-V reference. This pin should be bypassed to ground with a 0.1-μF ceramic capacitor. This pin may be used with an external DC load of 1 mA or less.
11	BP10	O	10-V reference used for gate drive of the N-channel synchronous rectifier. This pin should be bypassed by a 1-μf ceramic capacitor. This pin may be used with an external DC load of 1 mA or less.
8	COMP	O	Output of the error amplifier, input to the PWM comparator. A feedback network is connected from this pin to the VFB pin to compensate the overall loop. The comp pin is internally clamped above the peak of the ramp to improve large signal transient response.
13	HDRV	O	Floating gate drive for the high-side N-channel MOSFET. This pin switches from BOOST (MOSFET on) to SW (MOSFET off).
16	ILIM	I	Current limit pin, used to set the overcurrent threshold. An internal current sink from this pin to ground sets a voltage drop across an external resistor connected from this pin to VCC. The voltage on this pin is compared to the voltage drop (VIN-SW) across the high side MOSFET during conduction.
1	KFF	I	A resistor is connected from this pin to VIN to program the amount of voltage feed-forward. The current fed into this pin is internally divided and used to control the slope of the PWM ramp.
10	LDRV	O	Gate drive for the N-channel synchronous rectifier. This pin switches from BP10 (MOSFET on) to ground (MOSFET off).
9	PGND	—	Power ground reference for the device. There should be a low-impedance path from this pin to the source (s) of the lower MOSFET (s).
2	RT	I	A resistor is connected from this pin to ground to set the internal oscillator and switching frequency.
5	SGND	—	Signal ground reference for the device.
6	SS/SD	I	Soft-start programming pin. A capacitor connected from this pin to ground programs the soft-start time. The capacitor is charged with an internal current source of 2.3 μA. The resulting voltage ramp on the SS pin is used as a second non-inverting input to the error amplifier. The output voltage begins to rise when VSS/SD is approximately 0.85 V. The output continues to rise and reaches regulation when VSS/SD is approximately 1.55 V. The controller is considered shut down when VSS/SD is 125 mV or less. All internal circuitry is inactive. The internal circuitry is enabled when VSS/SD is 210 mV or greater. When VSS/SD is less than approximately 0.85 V, the outputs cease switching and the output voltage (VOUT) decays while the internal circuitry remains active.
12	SW	I	This pin is connected to the switched node of the converter and used for overcurrent sensing.
4	SYNC	I	Syncronization input for the device. This pin can be used to synchronize the oscillator to an external master frequency. If synchronization is not used, connect this pin to SGND.
7	VFB	I	Inverting input to the error amplifier. In normal operation the voltage on this pin is equal to the internal reference voltage, 0.7 V.
15	VIN	I	Supply voltage for the device.

2.21. IC9602 (VHiMP2367DN-1Y)

2.21.1 Block Diagram



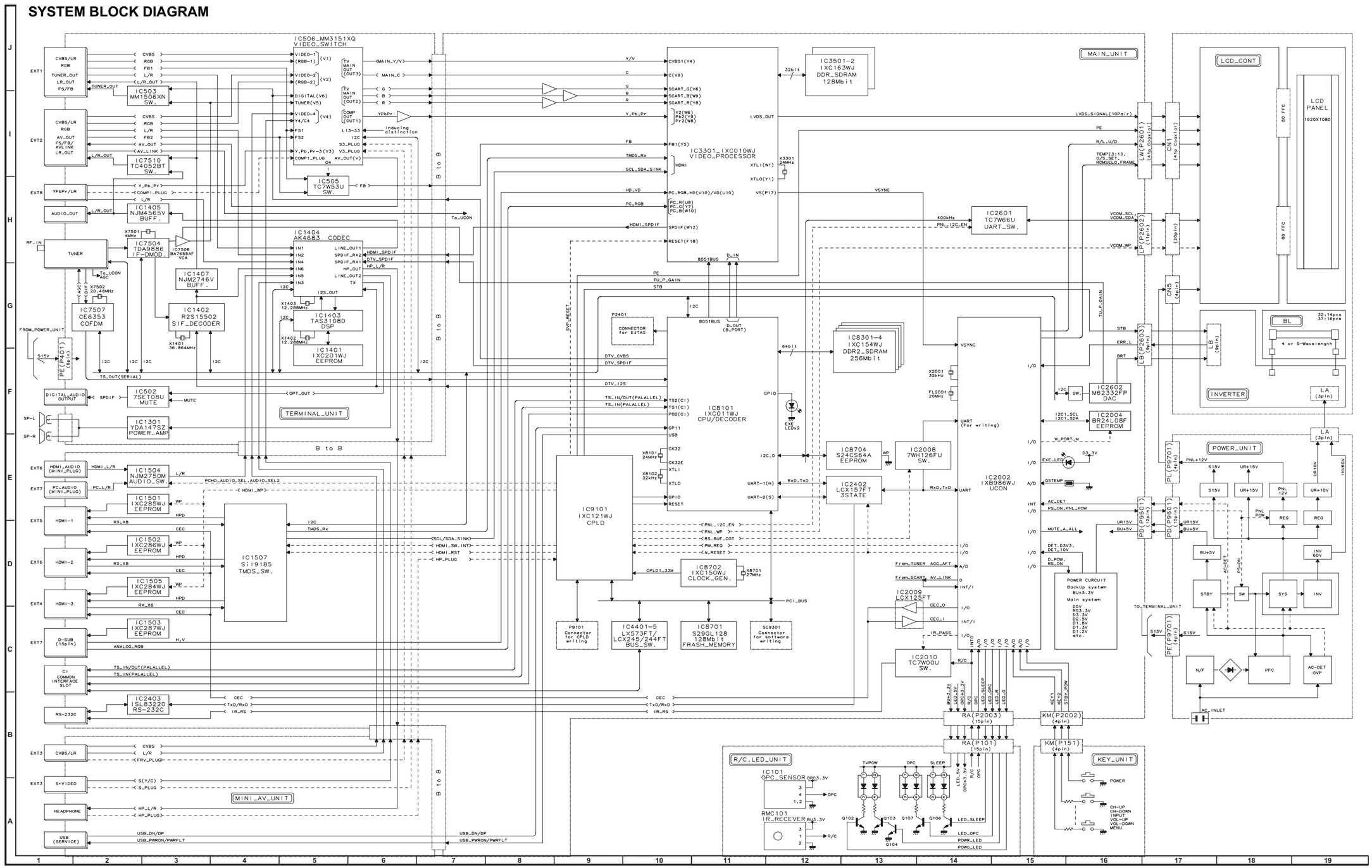
2.21.2 Pin Connections and short description

Pin No.	Pin Name	I/O	Pin Function
1	BS	I	High-Side Gate Drive Boost Input. BS supplies the drive for the high-side N-Channel MOSFET switch. Connect a 0.01μF or greater capacitor from SW to BS to power the high side switch.
2	IN	I	Power Input. IN supplies the power to the IC, as well as the step-down converter switches.
3	SW		Drive IN with a 4.45V to 28V power source. Bypass IN to GND with a suitably large capacitor to eliminate noise on the input to the IC.
4	GND		Ground.
5	FB		Feedback Input. FB senses the output voltage to regulate that voltage. Drive FB with a resistive voltage divider from the output voltage. The feedback reference voltage is 0.8V.
6	COMP		Compensation Node. COMP is used to compensate the regulation control loop. Connect a series RC network from COMP to GND to compensate the regulation control loop. In same cases, an additional capacitor from COMP to GND is required.
7	EN		Enable Input. EN is a digital input that turns the regulator on or off. Drive EN high to turn on the regulator, drive it low to turn it off.
8	SS		Soft-start Control Input. SS controls the soft-start period. Connect a capacitor from SS to GND to set the soft-start period.

CHAPTER 6. BLOCK DIAGRAM/WIRING DIAGRAM

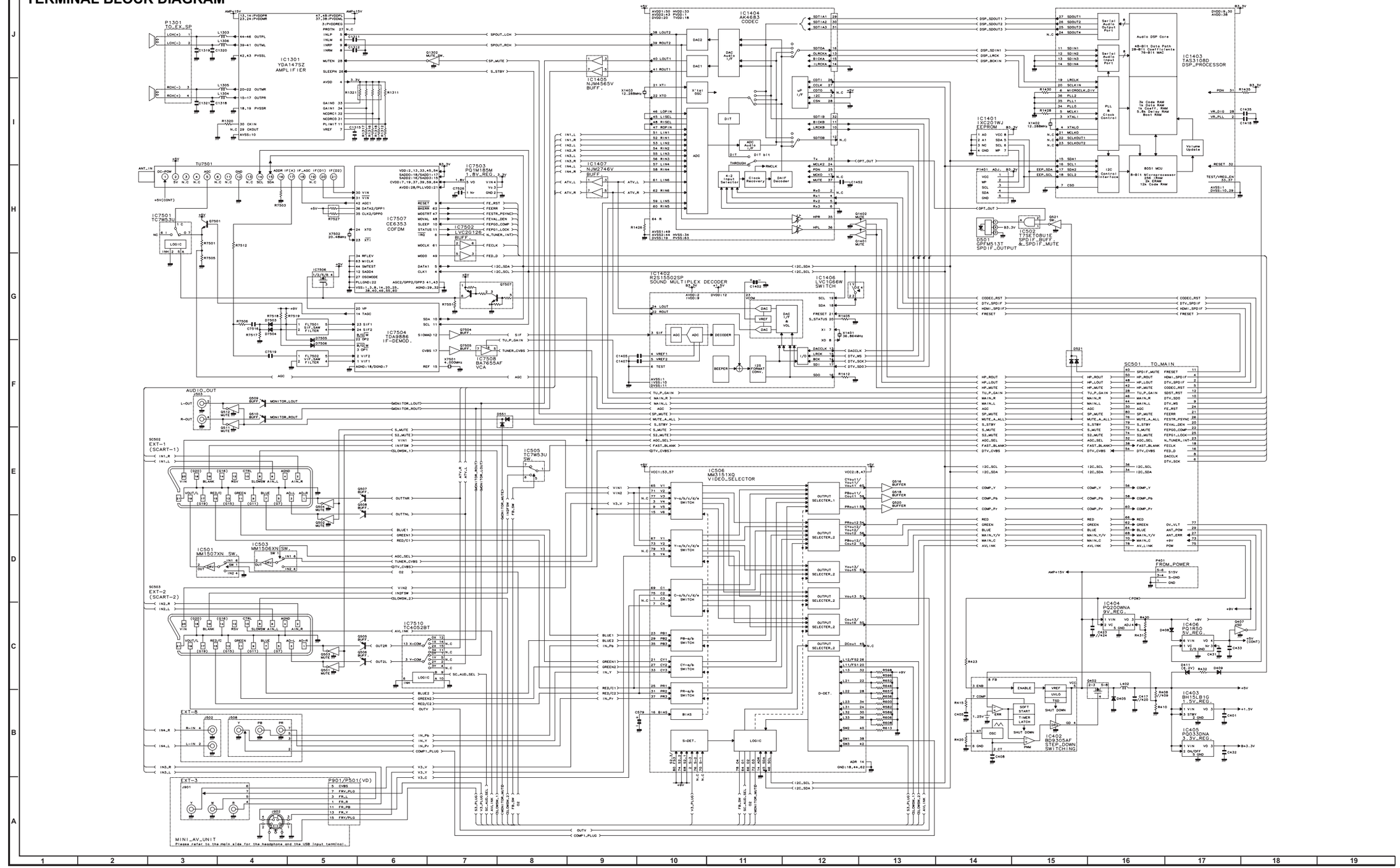
[1] SYSTEM BLOCK DIAGRAM

SYSTEM BLOCK DIAGRAM



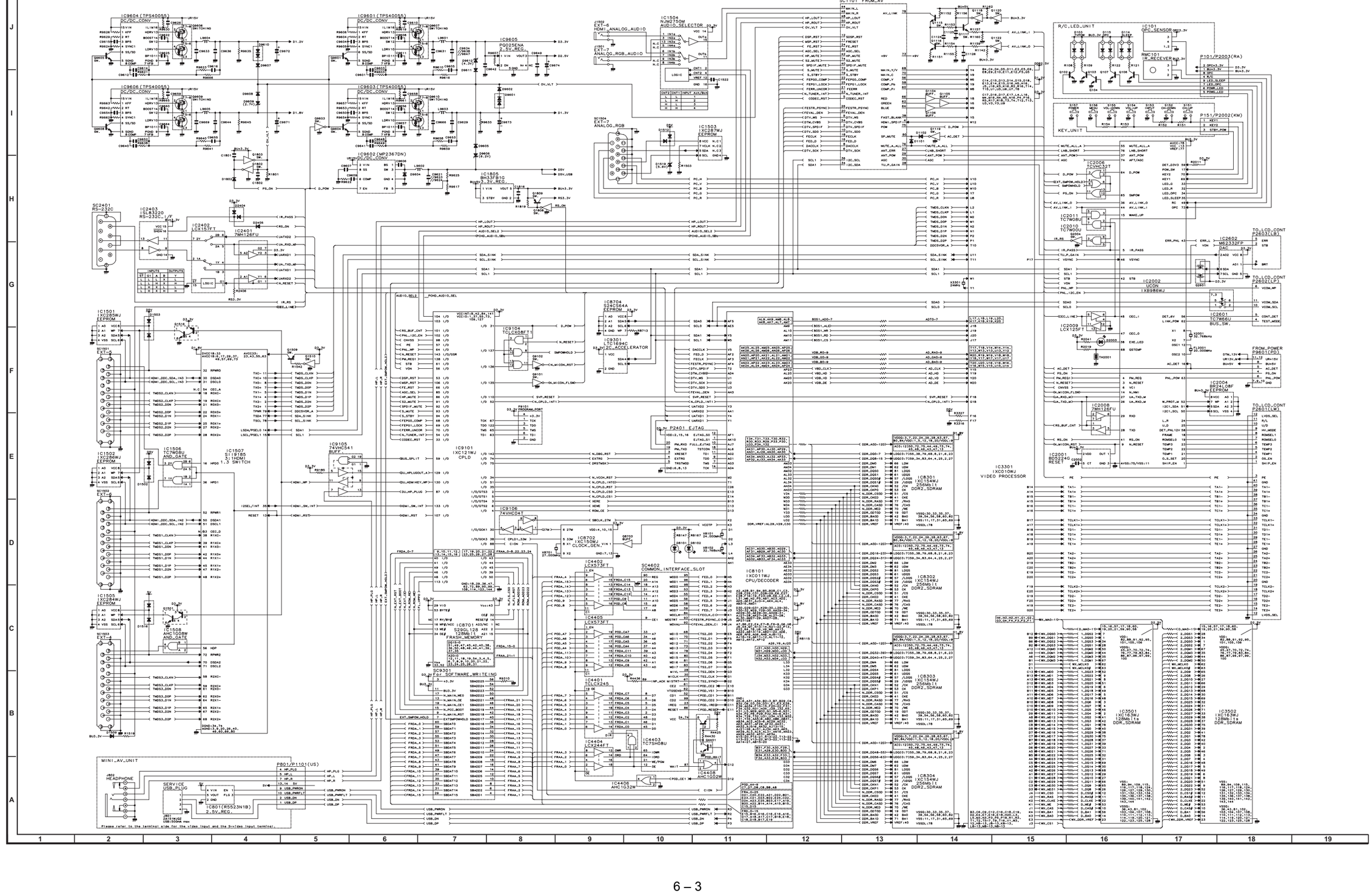
[2] TERMINAL BLOCK DIAGRAM

TERMINAL BLOCK DIAGRAM



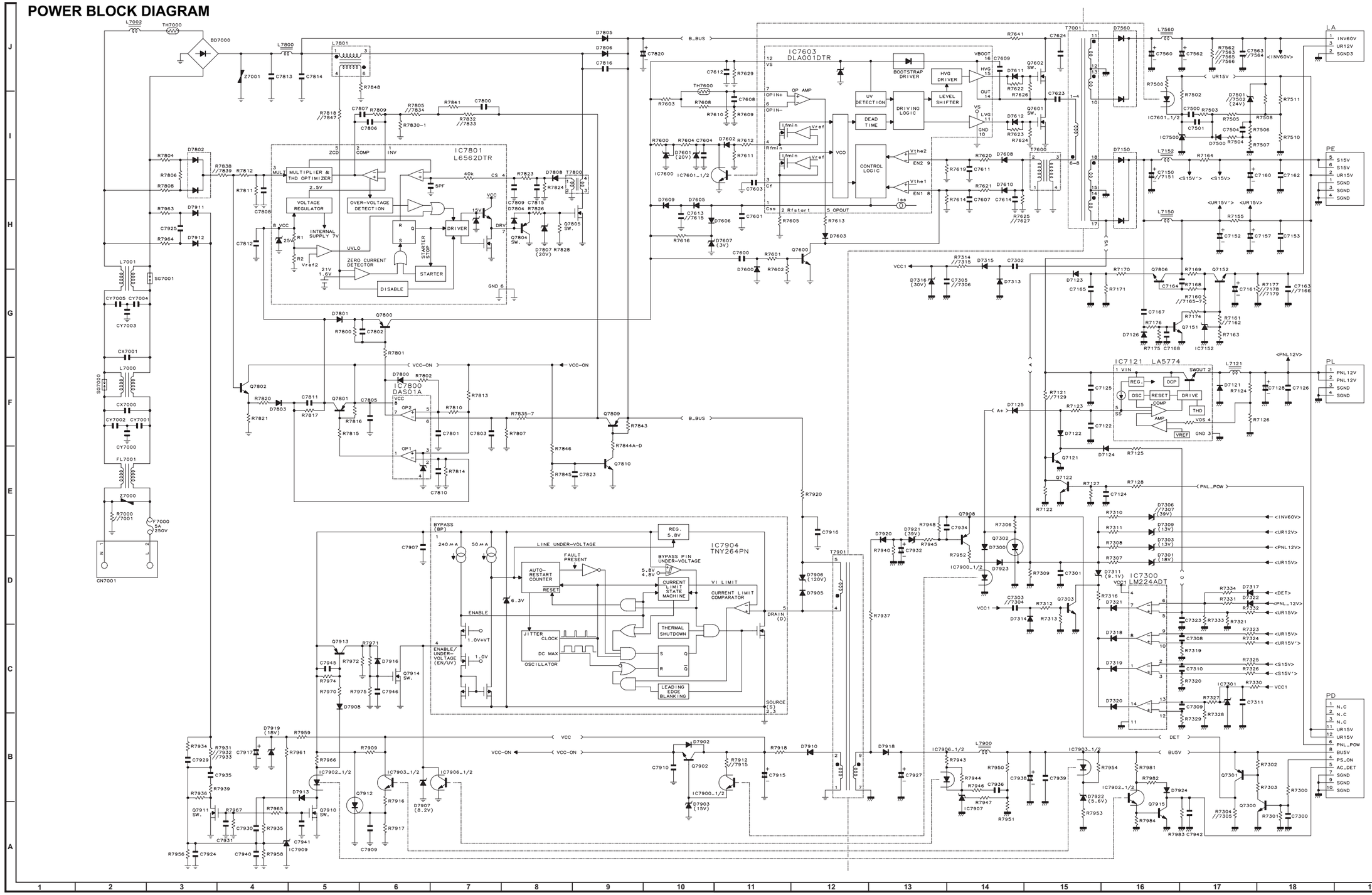
[3] MAIN BLOCK DIAGRAM

MAIN BLOCK DIAGRAM


IC9604 (TPS40055) DC/DC_CONV
IC9601 (TPS40055) DC/DC_CONV
IC9606 (TPS40055) DC/DC_CONV
IC9603 (TPS40055) DC/DC_CONV
IC9602 (MP2367DN) DC/DC_CONV
IC9605 P2025ENA 2.5V_REG.
IC1805 BH33FB1G 3.3V_REG.
IC1503 IXC287WJ EEPROM
IC1504 NJM2750M AUDIO_SELECTOR
IC2403 ISL8320 RS-232C_I/F
IC2402 LCX157T
IC2401 7WH126FU
IC2405 LCX573T
IC2402 LCX573T
IC2404 LCX573T
IC4402 LCX573T
IC4405 LCX573T
IC4401 TCLCX245
IC4404 LCX245T
IC4403 TC7SH08FU
IC4406 AHC1G32W
IC4408 AHC1G02W
IC8704 S24CS64A EEPROM
IC9301 LTC1694C 2WIRE_ACCELERATOR
IC9104 TCLCX08FT1
IC9105 74VHC541 BUFF
IC9106 74VHC04
IC9101 IXC121WJ CPLD
IC8702 IXC150WJ CLOCK_GEN
IC8701 S29GL128 128MBit FLASH_MEMORY
IC9302 For SOFTWARE_WRITE
IC1501 IXC285WJ EEPROM
IC1502 IXC286WJ EEPROM
IC1505 IXC284WJ EEPROM
IC1506 7W08U AND_GATE
IC1507 SII1985 3:1HDMI 1.3 SWITCH
IC1508 AHC1G08W AND_GATE
SC4602 COMMON_INTERFACE_SLOT
SC1101 FROM_AV
SC1504 EXT-7 ANALOG_RGB
J1502 EXT-6 HDMI_ANALOG_AUDIO
J1501 EXT-7 ANALOG_RGB_AUDIO
SC2401 RS-232C
SC1501 EXT-5
SC1502 EXT-6
SC1503 EXT-4
SC1504 EXT-7
J802 HEADPHONE
MINI_AV_UNIT
P801/P1101(US)
IC8101 IXC011WJ CPU/DECODER
IC3301 IXC010WJ VIDEO PROCESSOR
IC8301 IXC154WJ 256MBit DDR2_SDRAM
IC8302 IXC154WJ 256MBit DDR2_SDRAM
IC8303 IXC154WJ 256MBit DDR2_SDRAM
IC8304 IXC154WJ 256MBit DDR2_SDRAM
IC3501 IXC163WJ 128MBit DDR_SDRAM
IC3502 IXC163WJ 128MBit DDR_SDRAM
IC2006 TC7MC32T
IC2011 TC7W08U
IC2010 TC7W01U
IC2009 LCX125FT
IC2008 7WH126FU
IC2002 UCON IX8986WJ
IC2003 M62332FP DAC
IC2601 TC7W66U BUS_SW.
IC2004 BR24L08F EEPROM
IC2001 BD5224G RESET
IC101 OPC_SENSOR
R/C,LED_UNIT
KEY_UNIT
P101/P2003(RA)
P151/P2002(KM)
FROM_POWER P9601(PD)
TO_LCD_CONT P2603(LB)
TO_LCD_CONT P2602(LF)
TO_LCD_CONT P2601(LW)
IC1101 IXC121WJ CPLD
P9101 PROGRAM_PORT
P2401 EJTAG
IC1522
IC1523
IC1524
IC1525
IC1526
IC1527
IC1528
IC1529
IC1530
IC1531
IC1532
IC1533
IC1534
IC1535
IC1536
IC1537
IC1538
IC1539
IC1540
IC1541
IC1542
IC1543
IC1544
IC1545
IC1546
IC1547
IC1548
IC1549
IC1550
IC1551
IC1552
IC1553
IC1554
IC1555
IC1556
IC1557
IC1558
IC1559
IC1560
IC1561

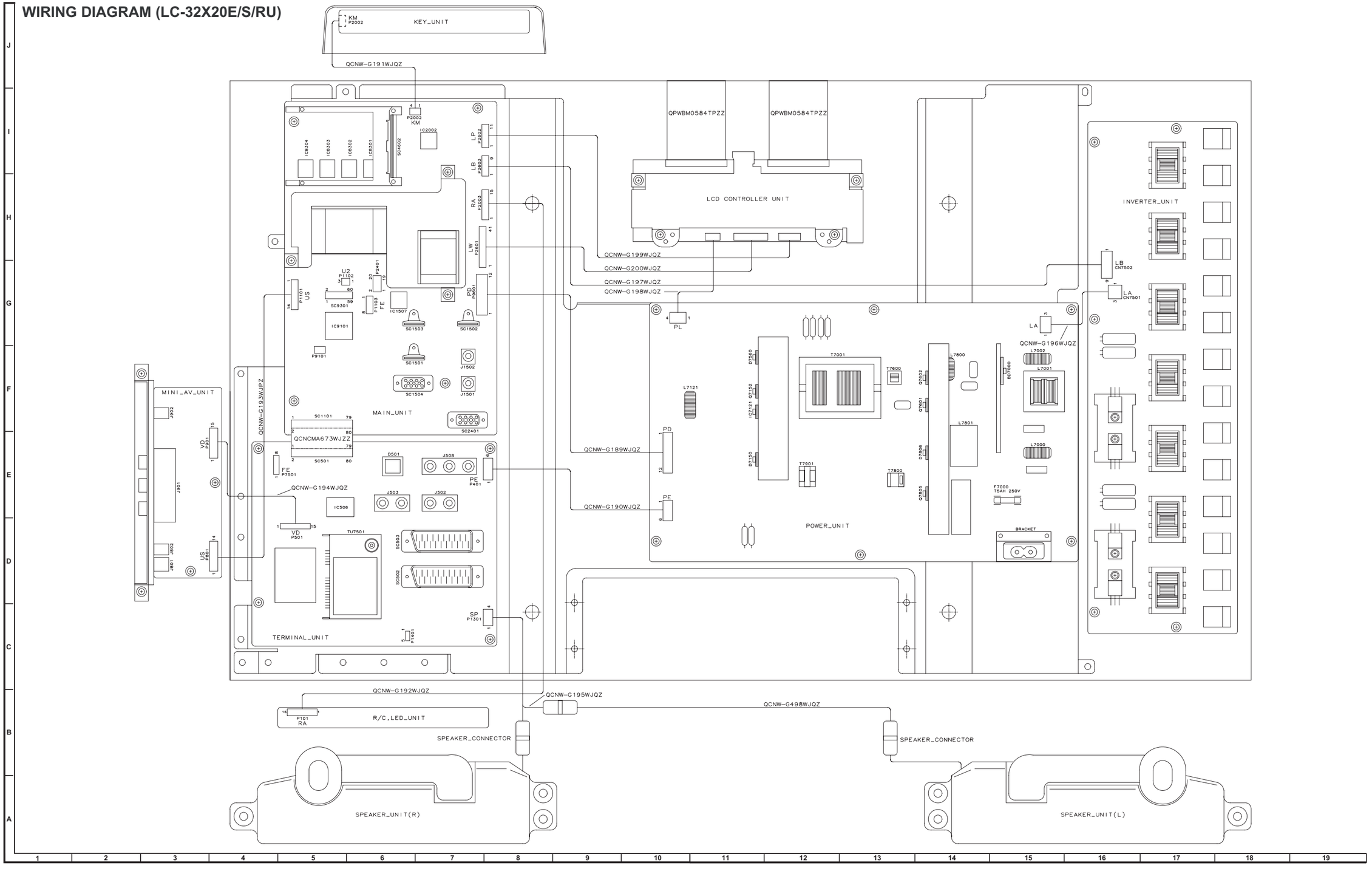
[4] POWER BLOCK DIAGRAM

POWER BLOCK DIAGRAM



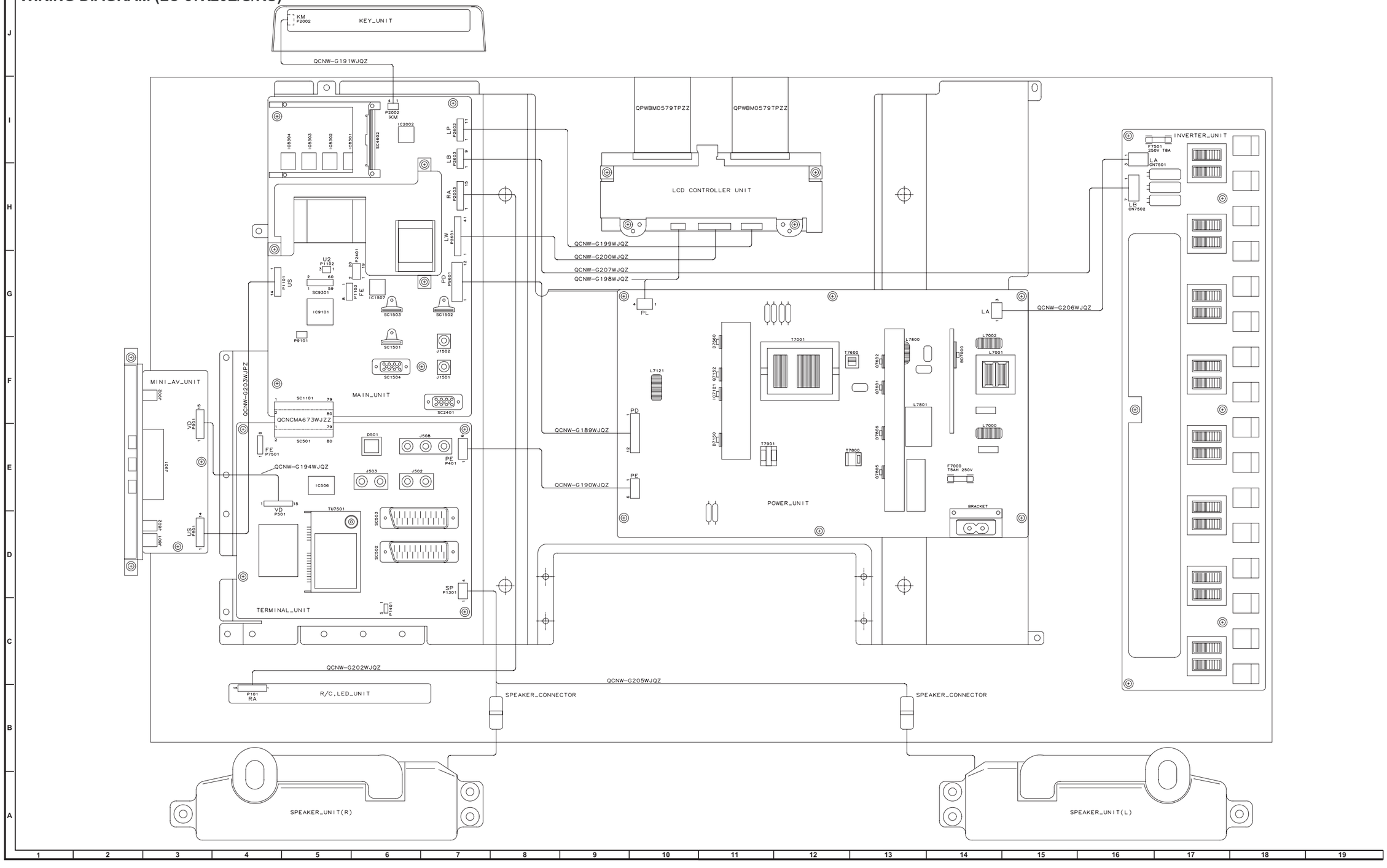
[5] WIRING DIAGRAM (LC-32X20E/S/RU)

WIRING DIAGRAM (LC-32X20E/S/RU)



[6] WIRING DIAGRAM (LC-37X20E/S/RU)

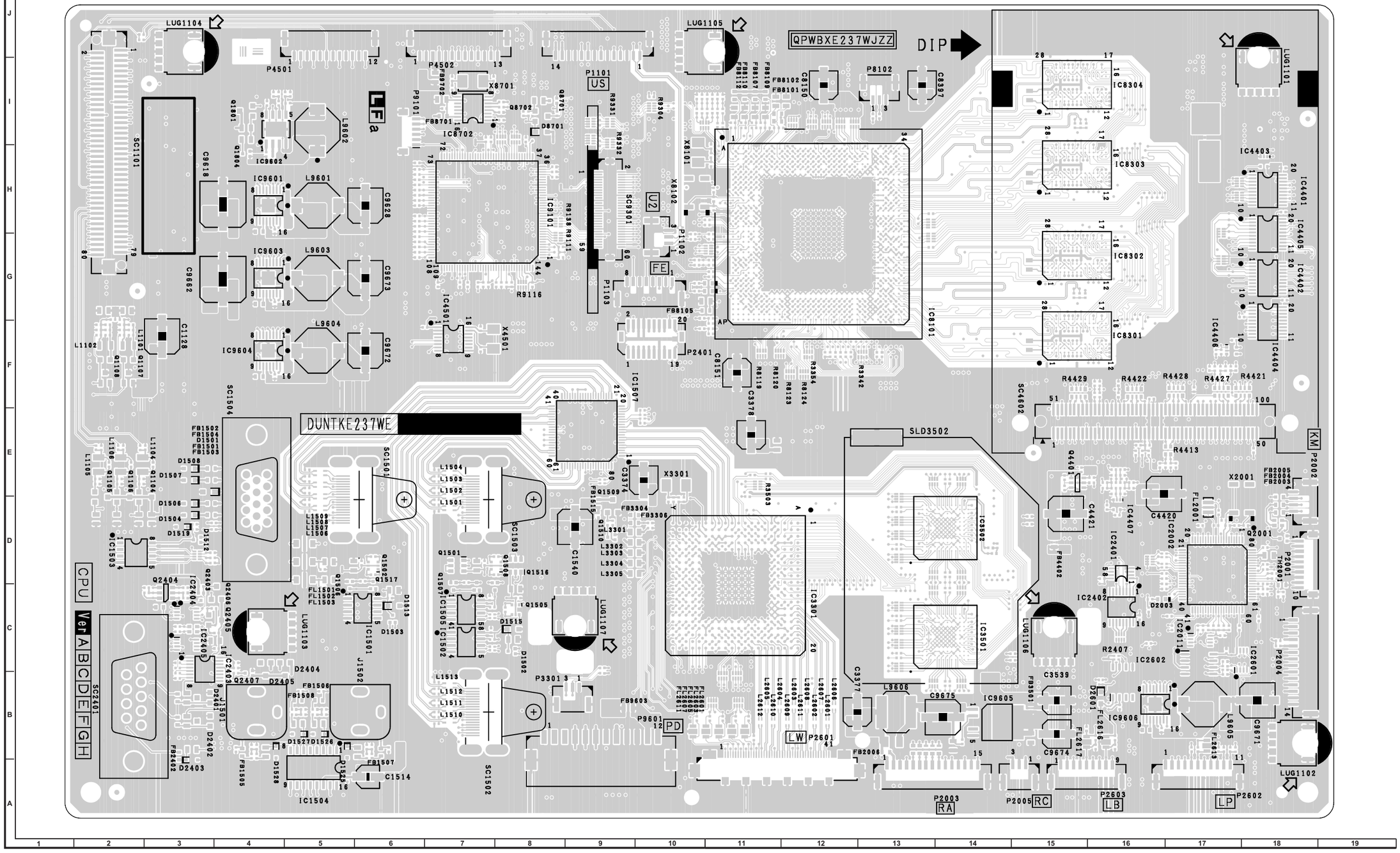
WIRING DIAGRAM (LC-37X20E/S/RU)



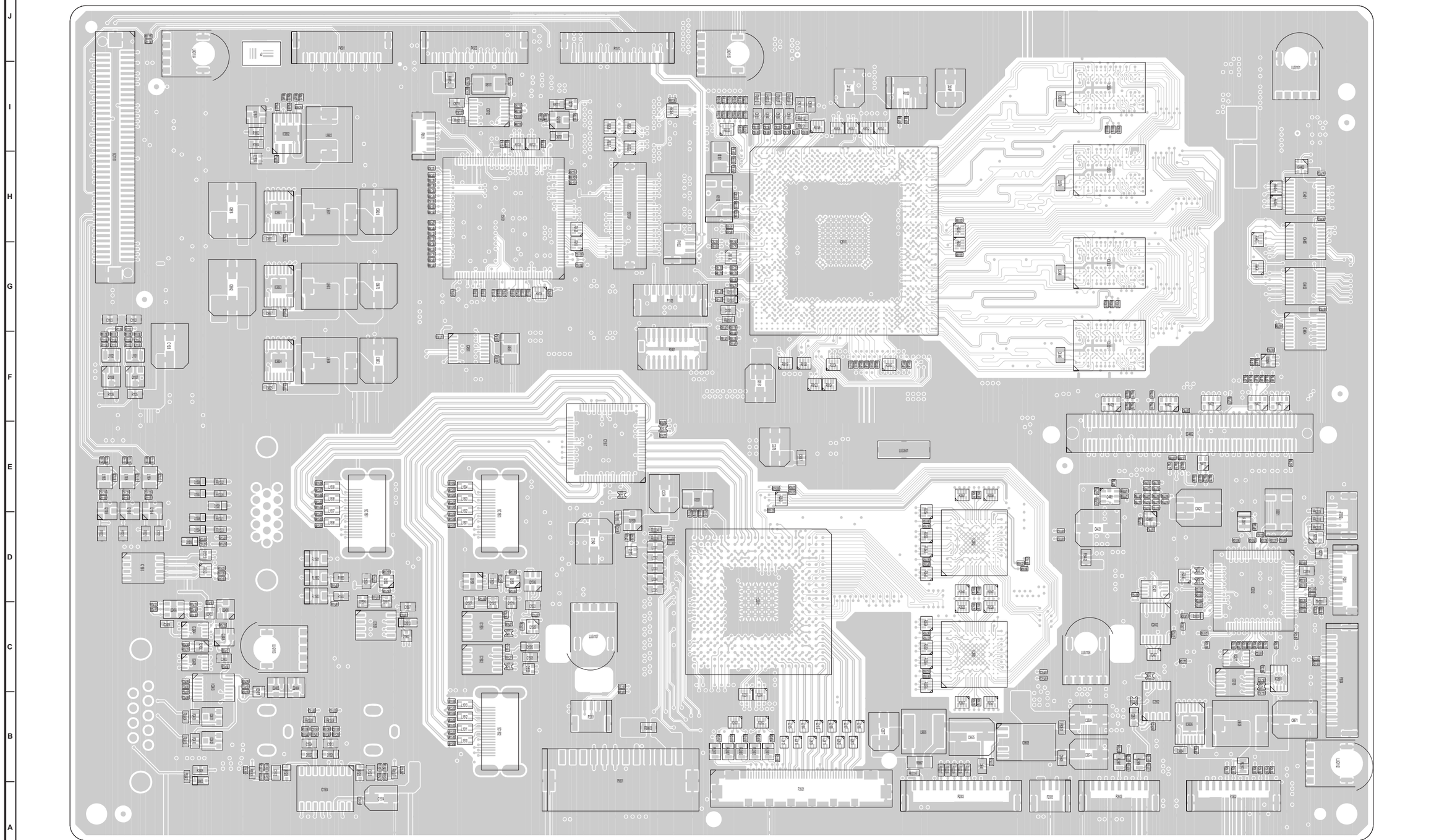
CHAPTER 7. PRINTED WIRING BOARD

[1] MAIN UNIT PRINTED WIRING BOARD

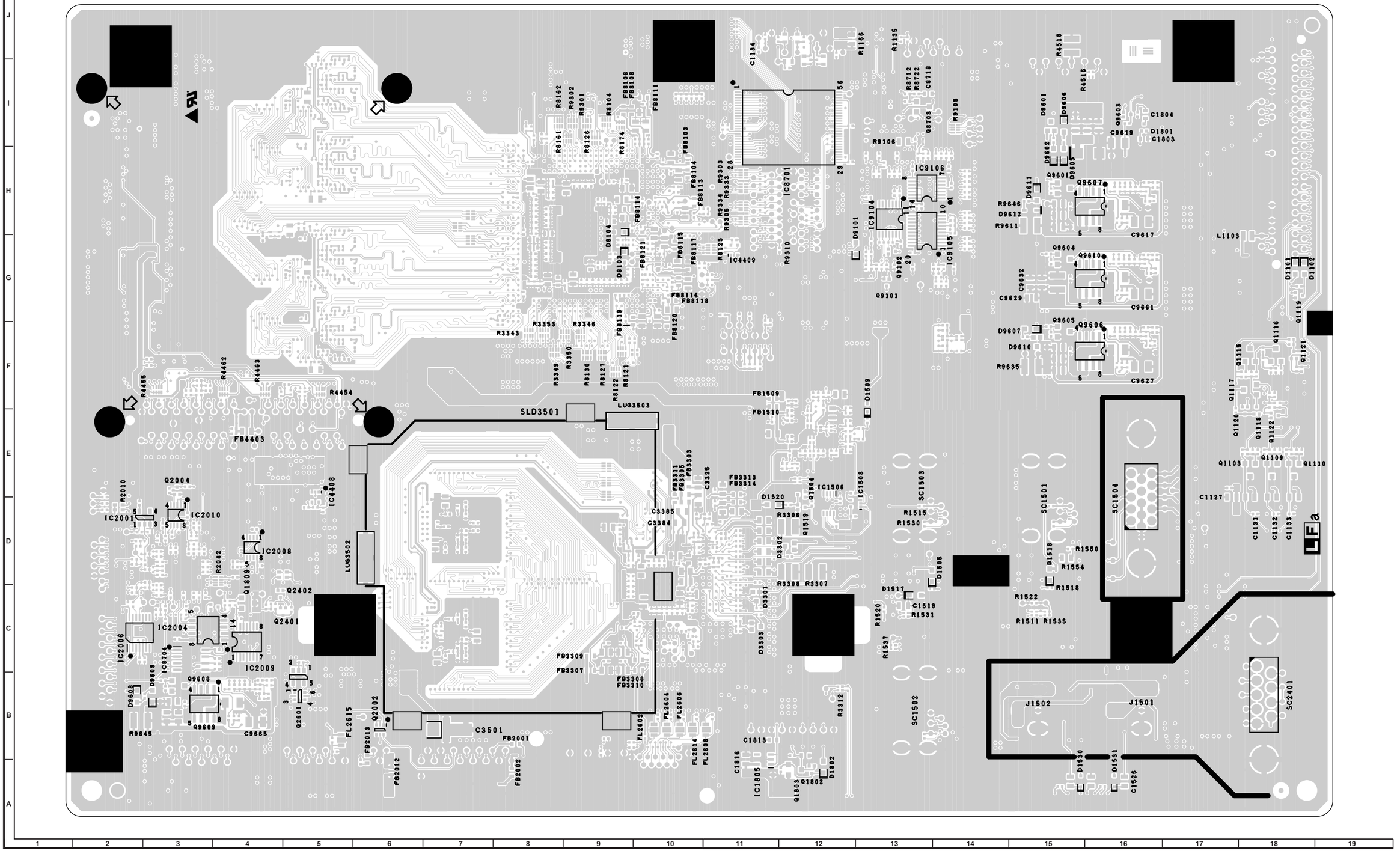
MAIN Unit (Side A)



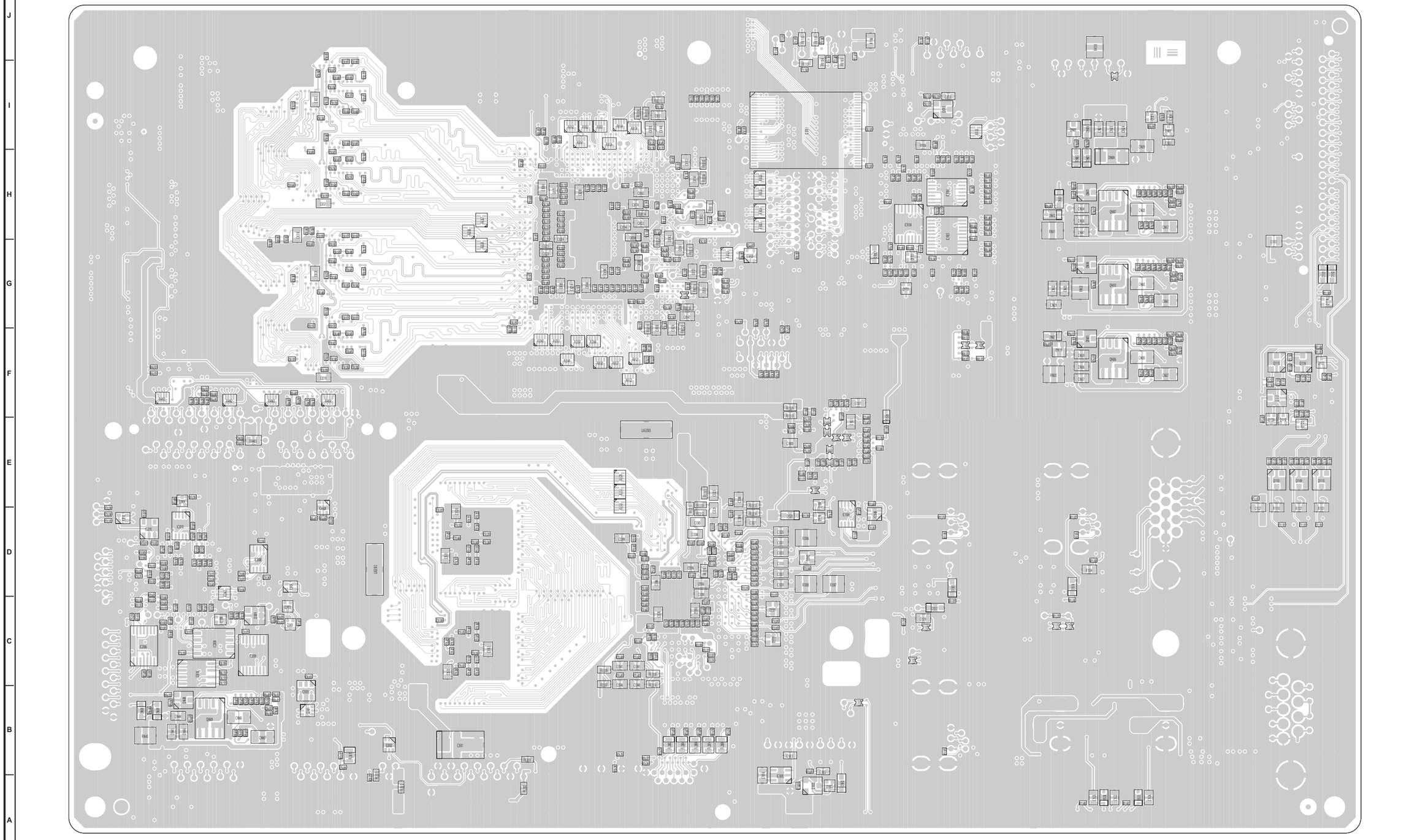
MAIN Unit (Chip Parts Side A)



MAIN Unit (Side B)

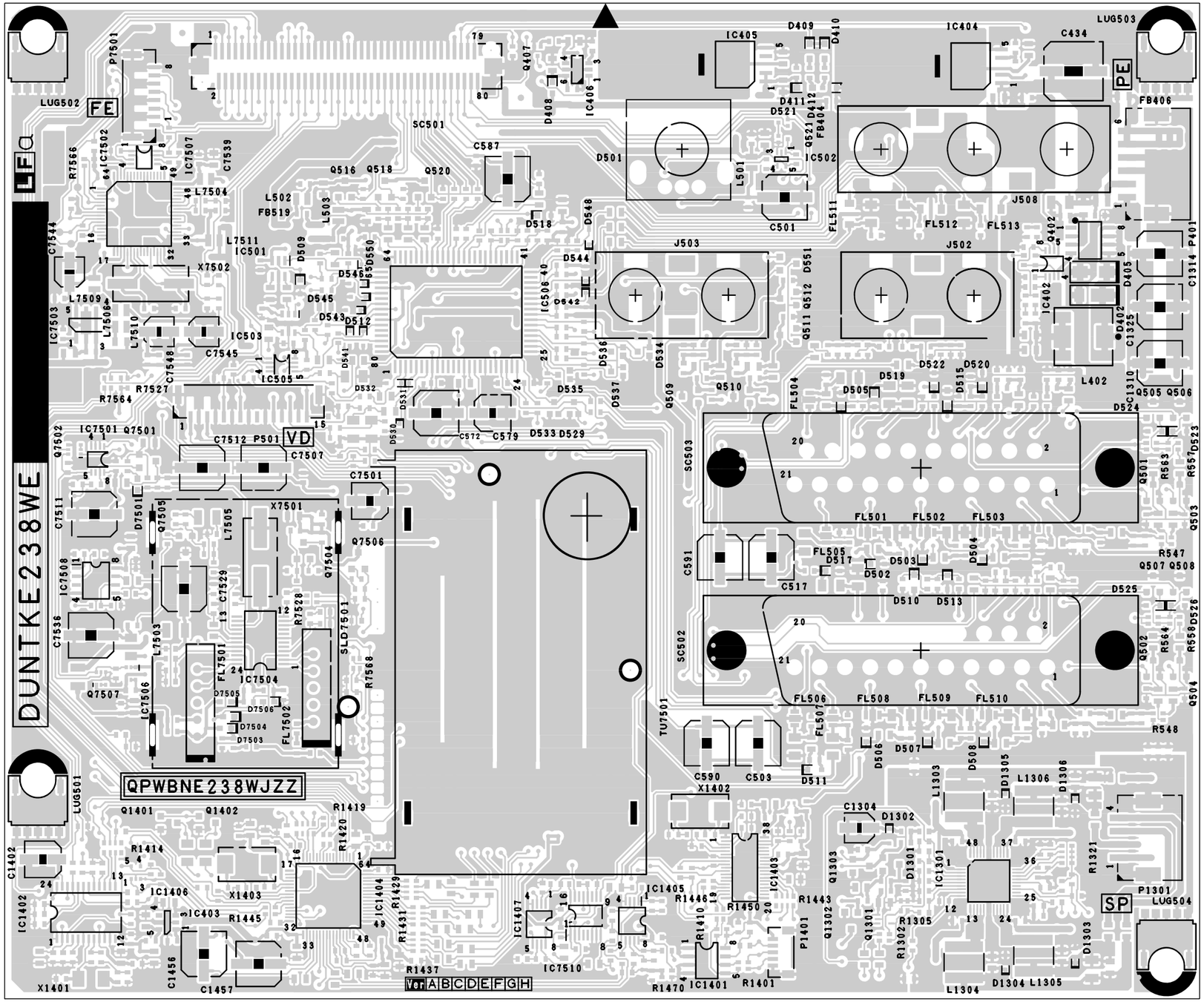


MAIN Unit (Chip Parts Side B)

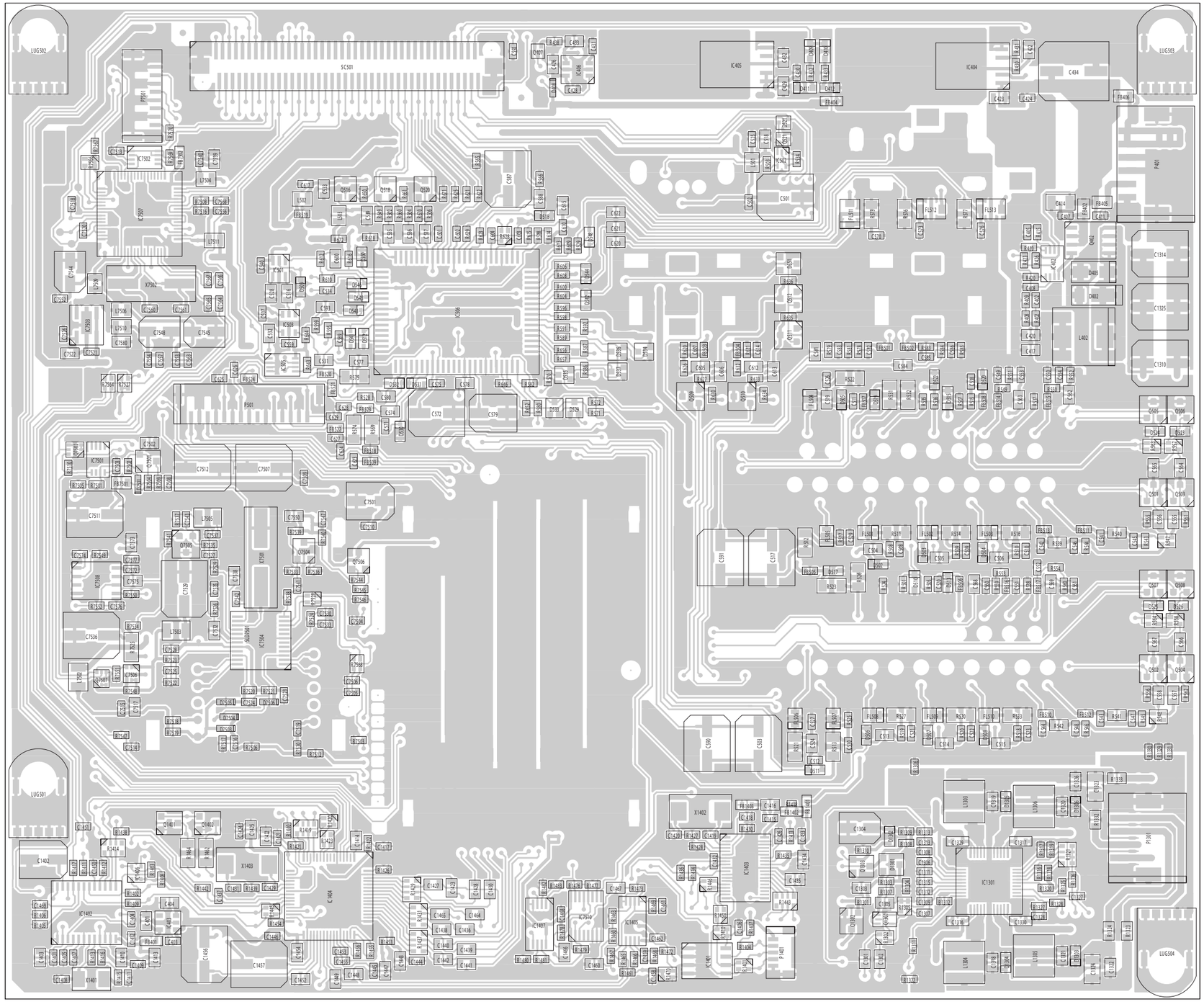


[2] TERMINAL UNIT PRINTED WIRING BOARD

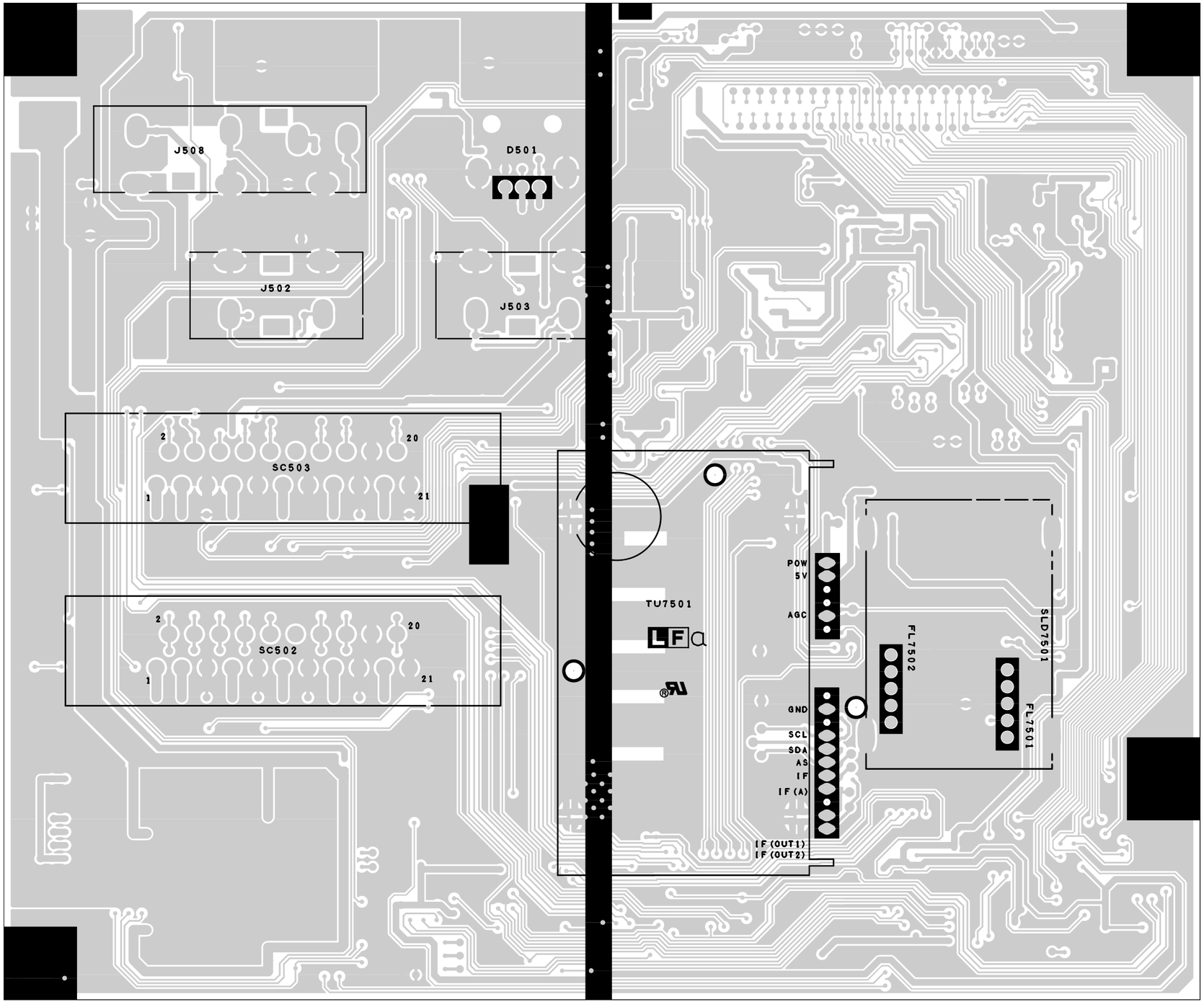
TERMINAL Unit (Side A)



TERMINAL Unit (Chip Parts Side A)

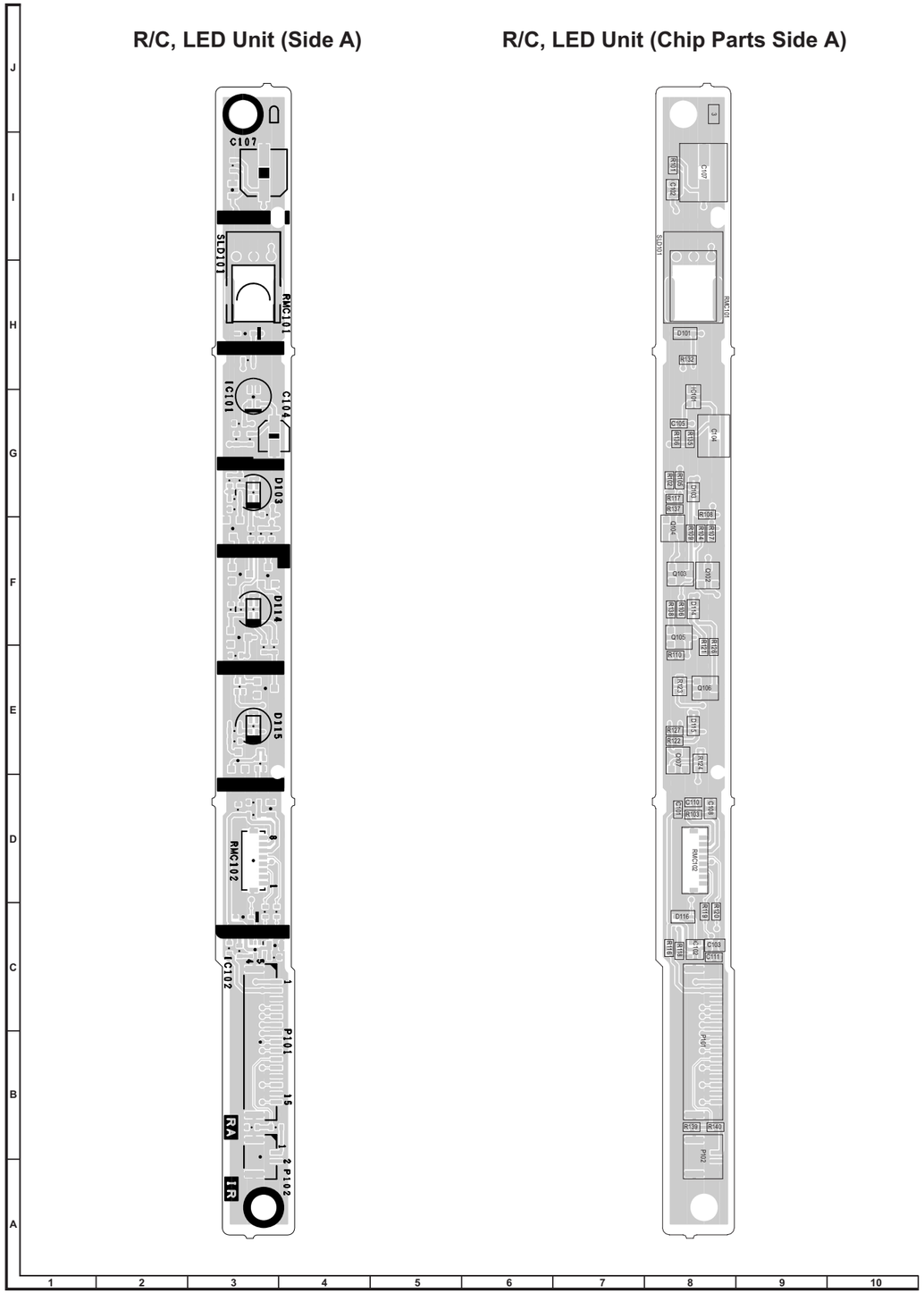


TERMINAL Unit (Side B)



[3] R/C, LED UNIT PRINTED WIRING BOARD

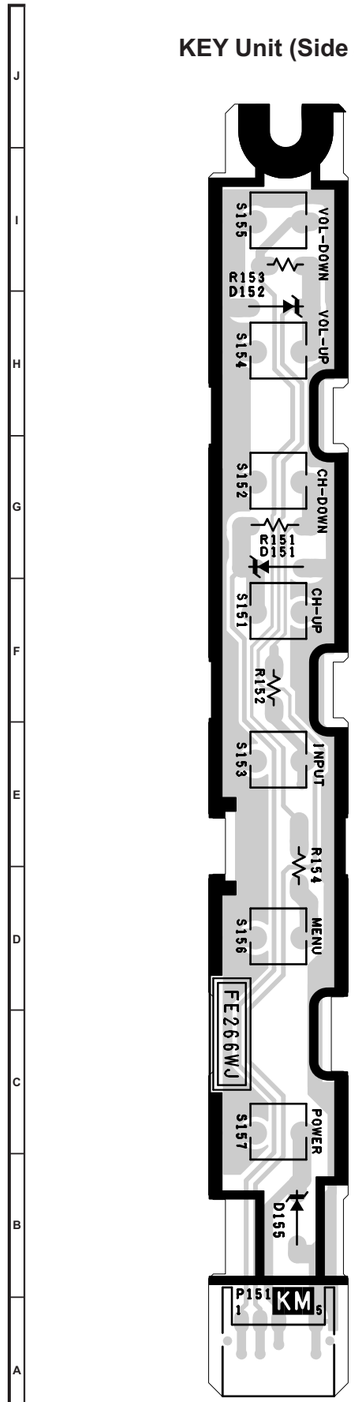
R/C, LED Unit (Side A)



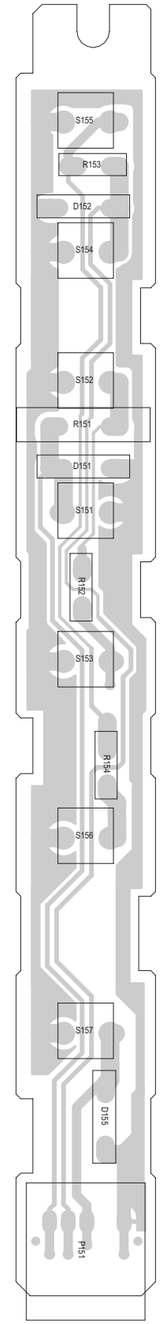
R/C, LED Unit (Chip Parts Side A)

[4] KEY UNIT PRINTED WIRING BOARD

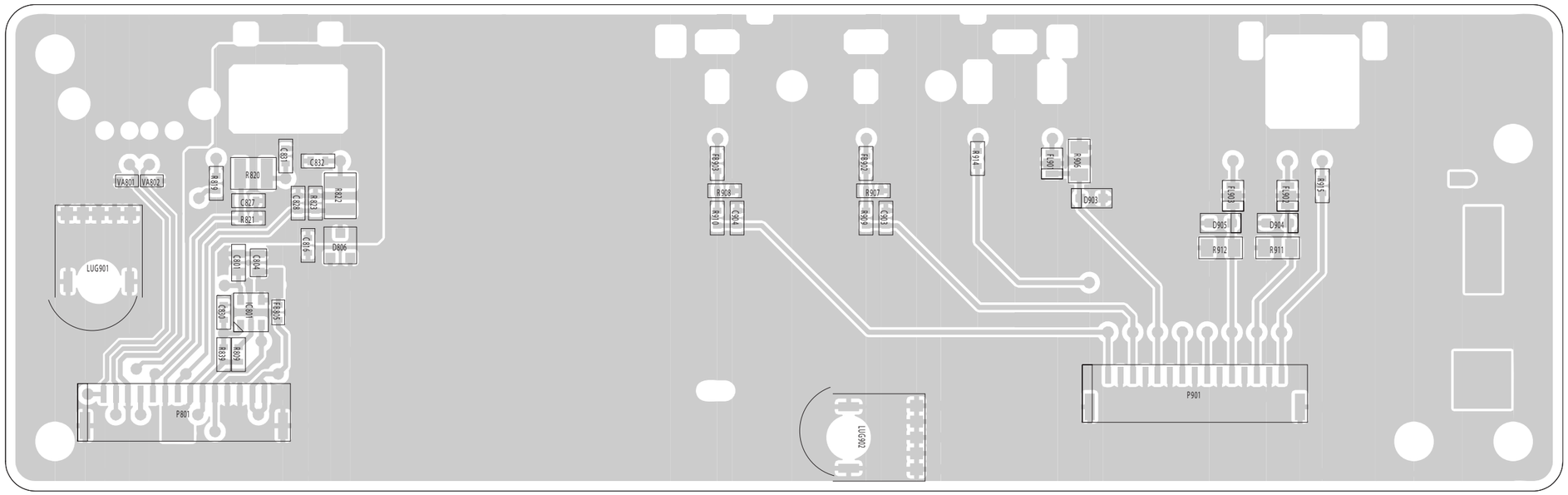
KEY Unit (Side A)



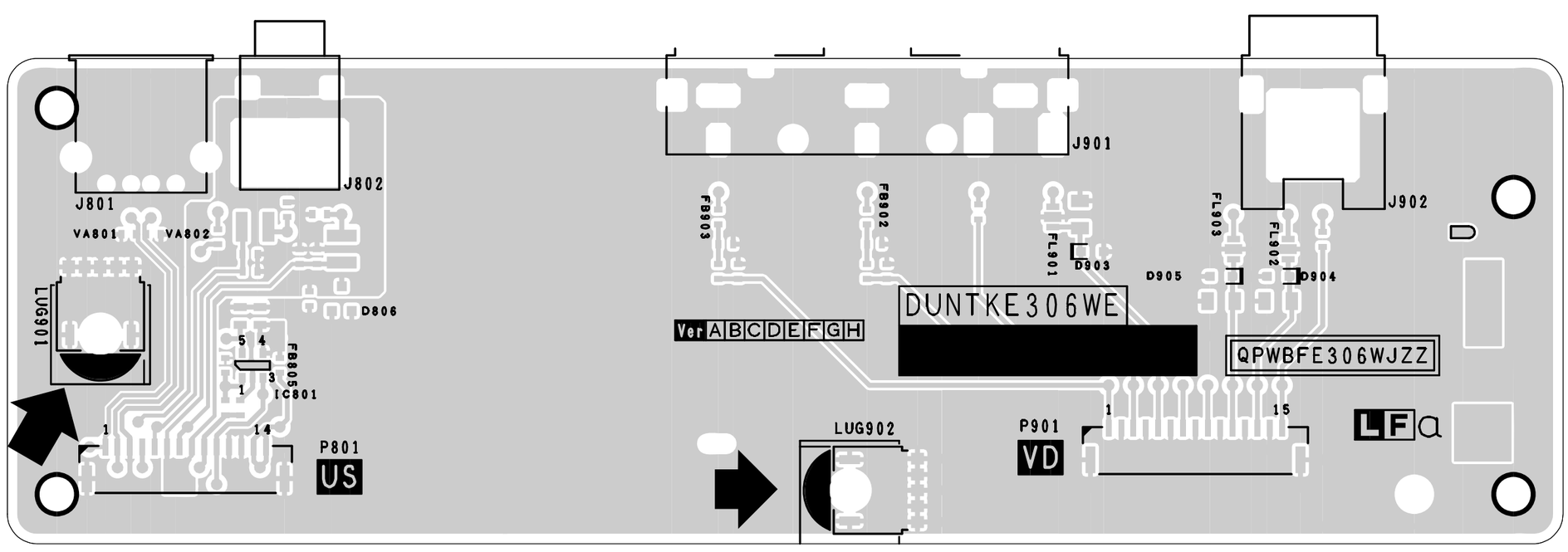
KEY Unit (Chip Parts Side A)



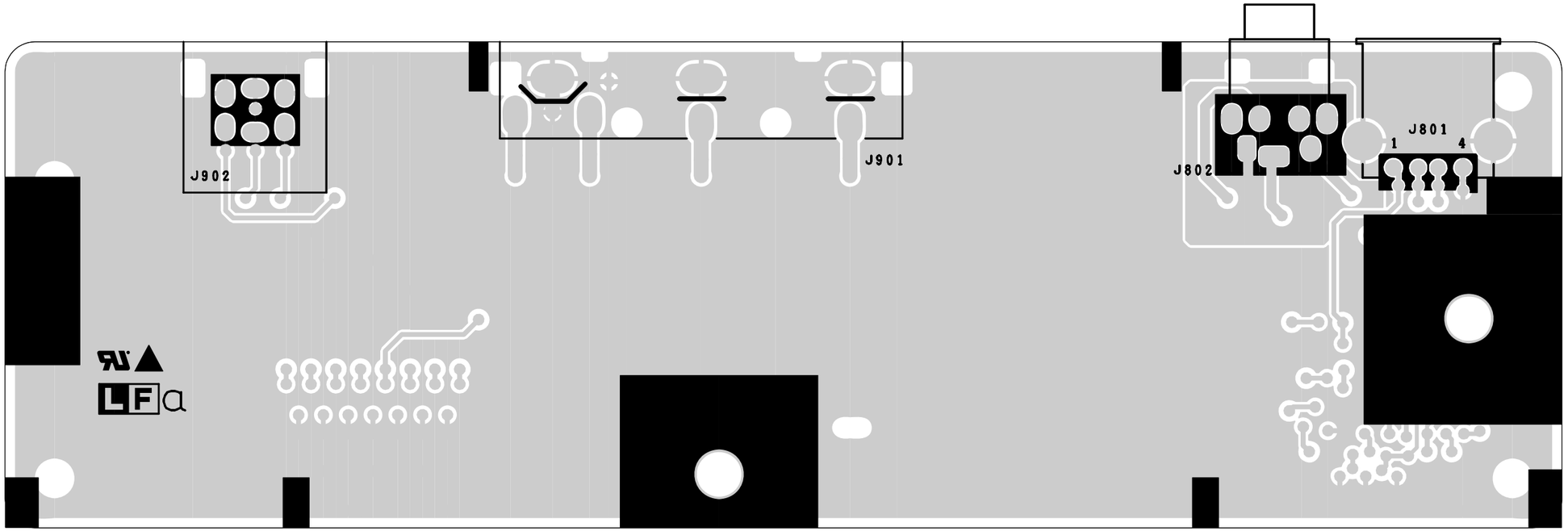
[5] MINI AV UNIT PRINTED WIRING BOARD



MINI AV Unit (Chip Parts Side-A)



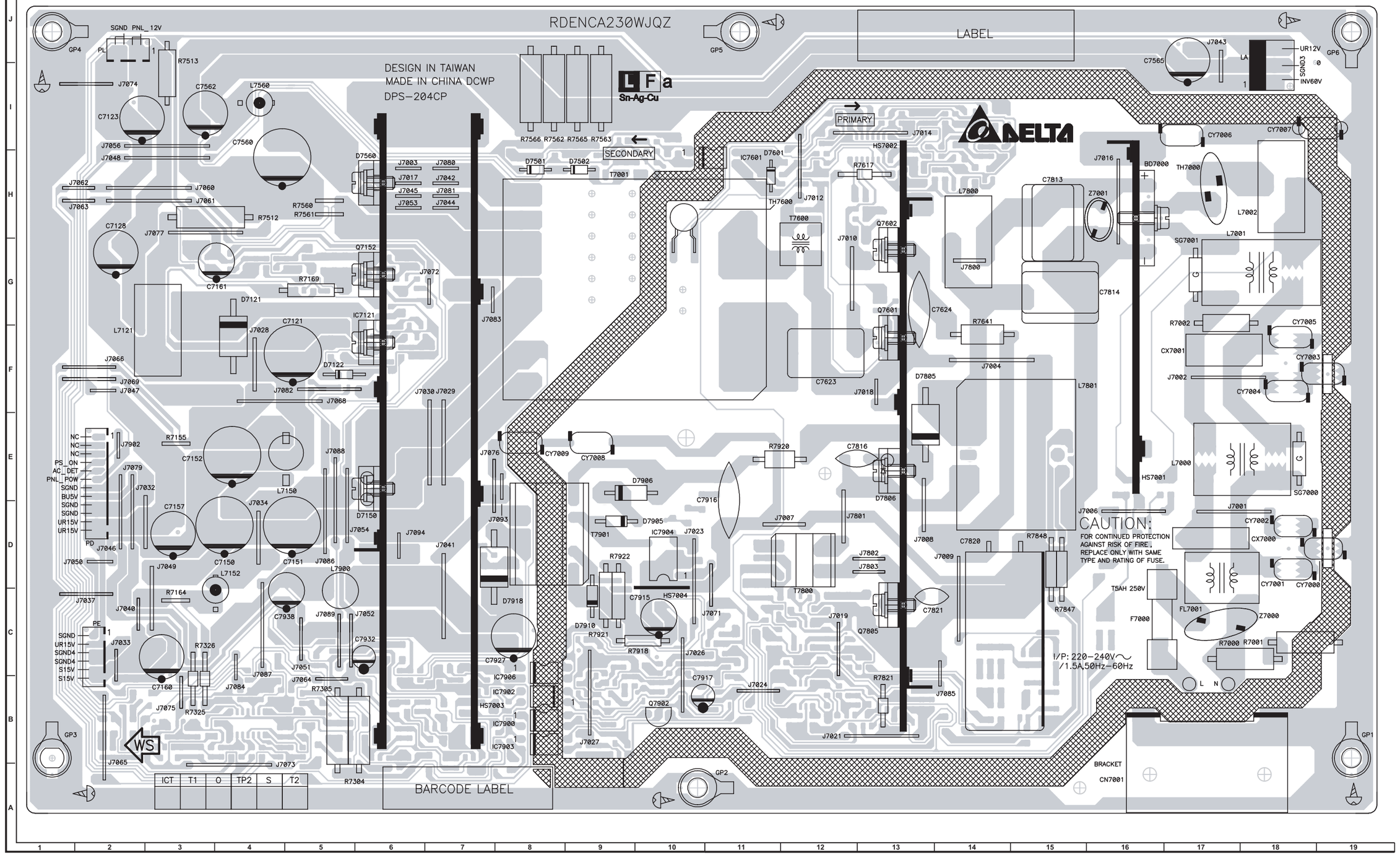
MINI AV Unit (Side-A)



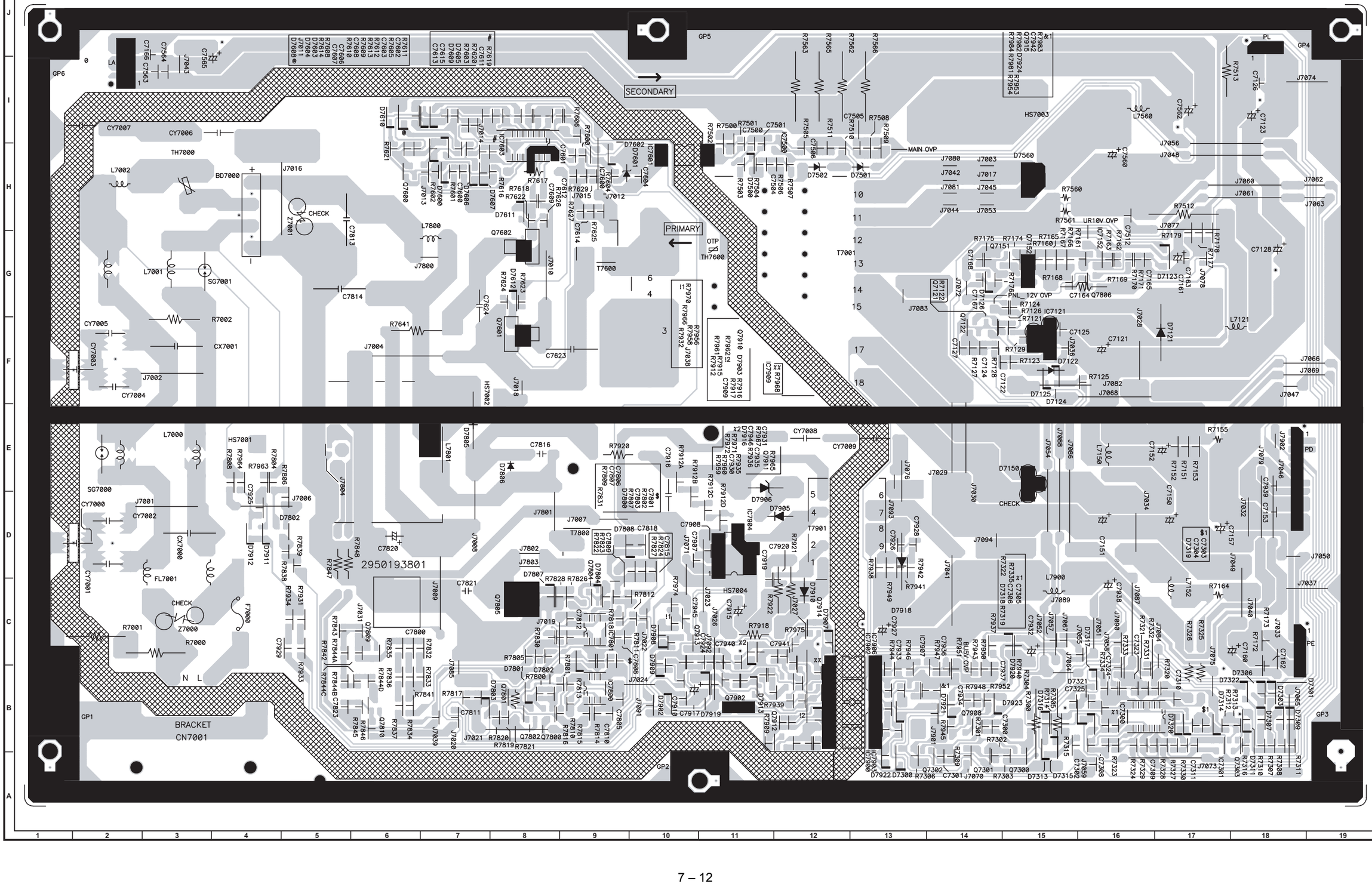
MINI AV Unit (Side-B)

[6] POWER UNIT PRINTED WIRING BOARD

POWER Unit (Side-A)



POWER Unit (Side-B)



CHAPTER 8. SCHEMATIC DIAGRAM

[1] DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on exclusive AC adaptor and the stable supply voltage of AC 230V.
   Signals are fed by a colour 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.
   (K= ± 10%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.

CAPACITOR

1. All capacitors are μF, unless otherwise noted.
   (P=pF=μμF).
2. All capacitors are 50V, unless otherwise noted.

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

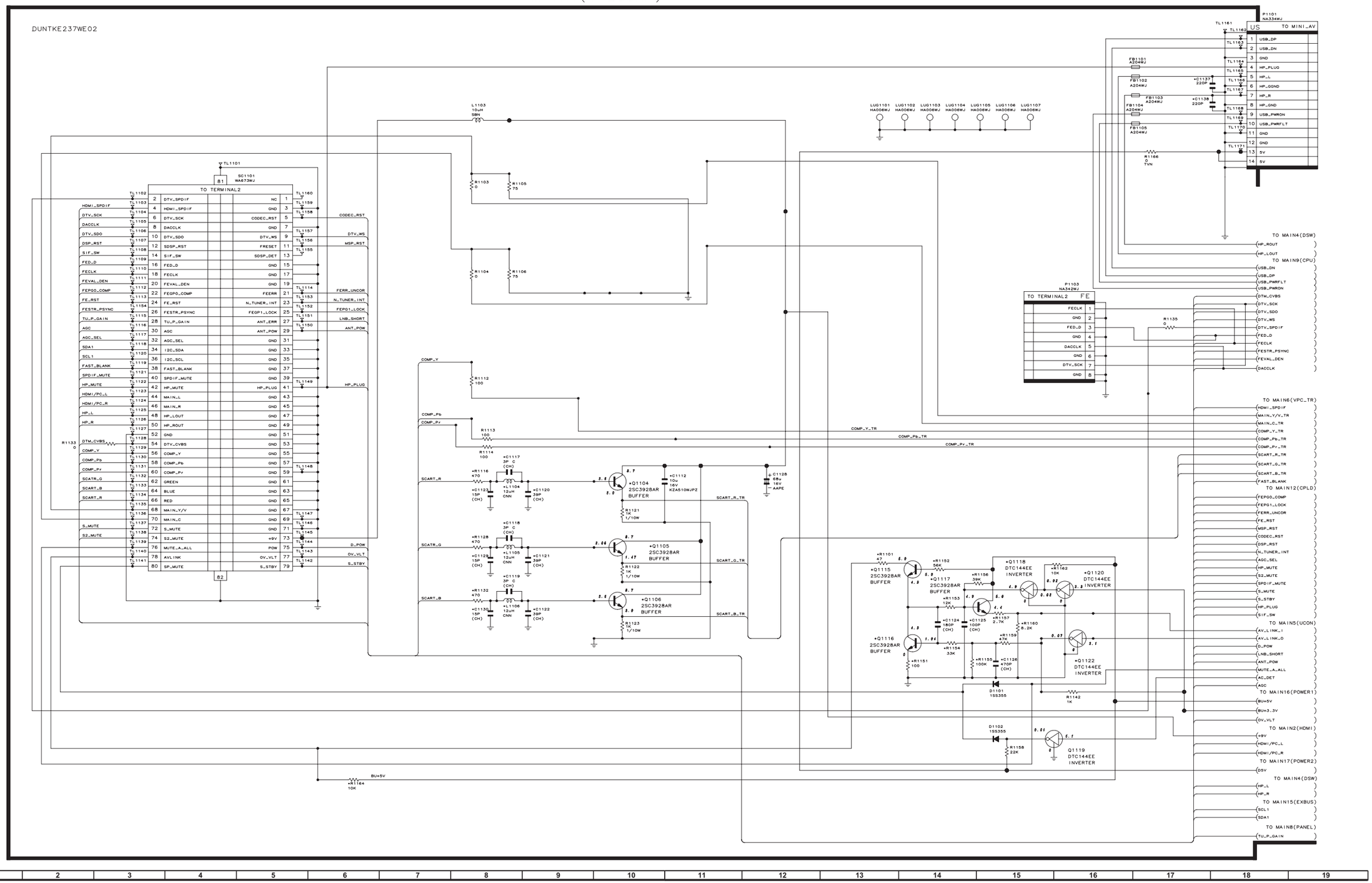
SAFETY NOTES:
1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

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.

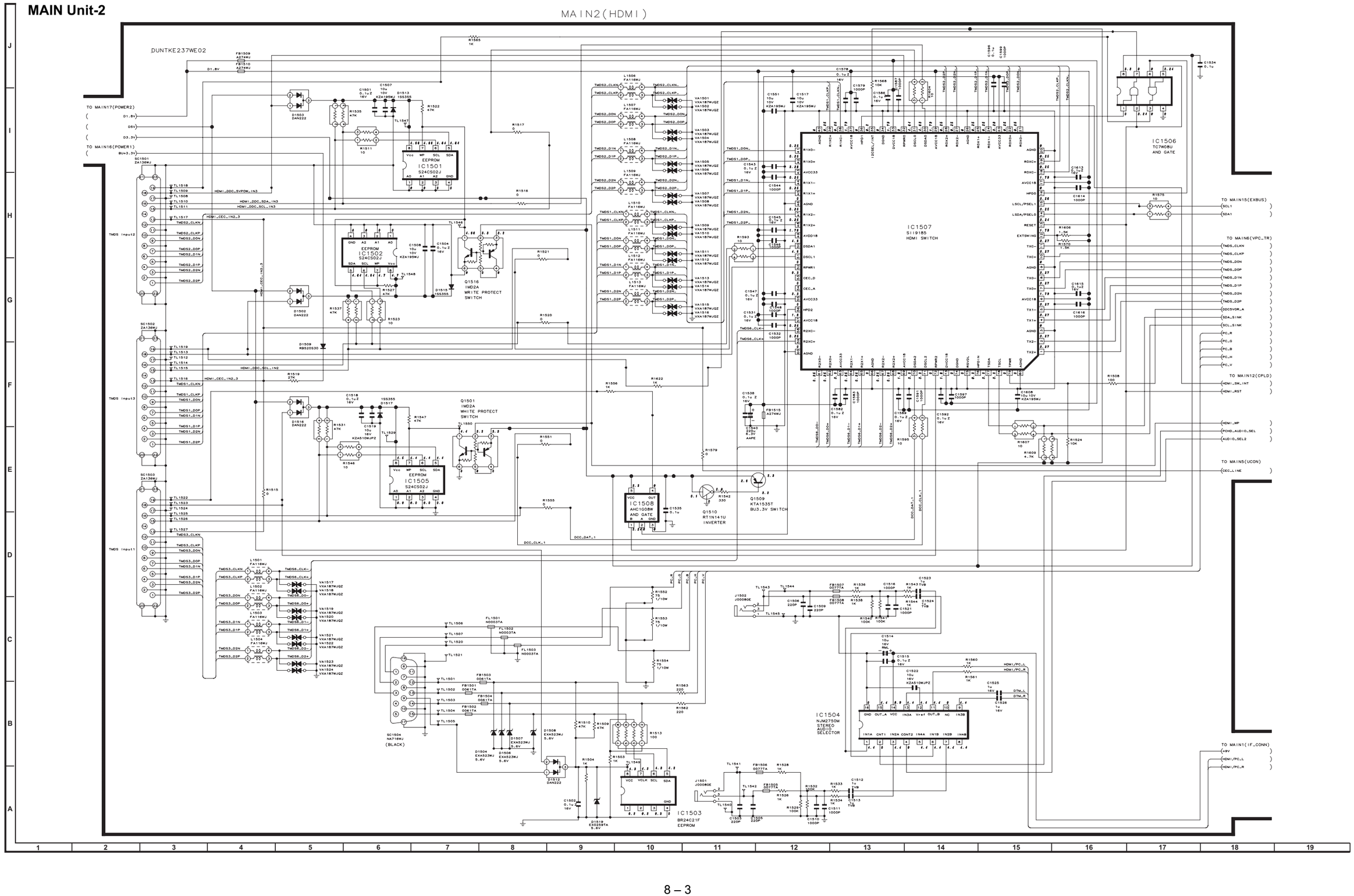
[2] SCHEMATIC DIAGRAM

MAIN Unit-1

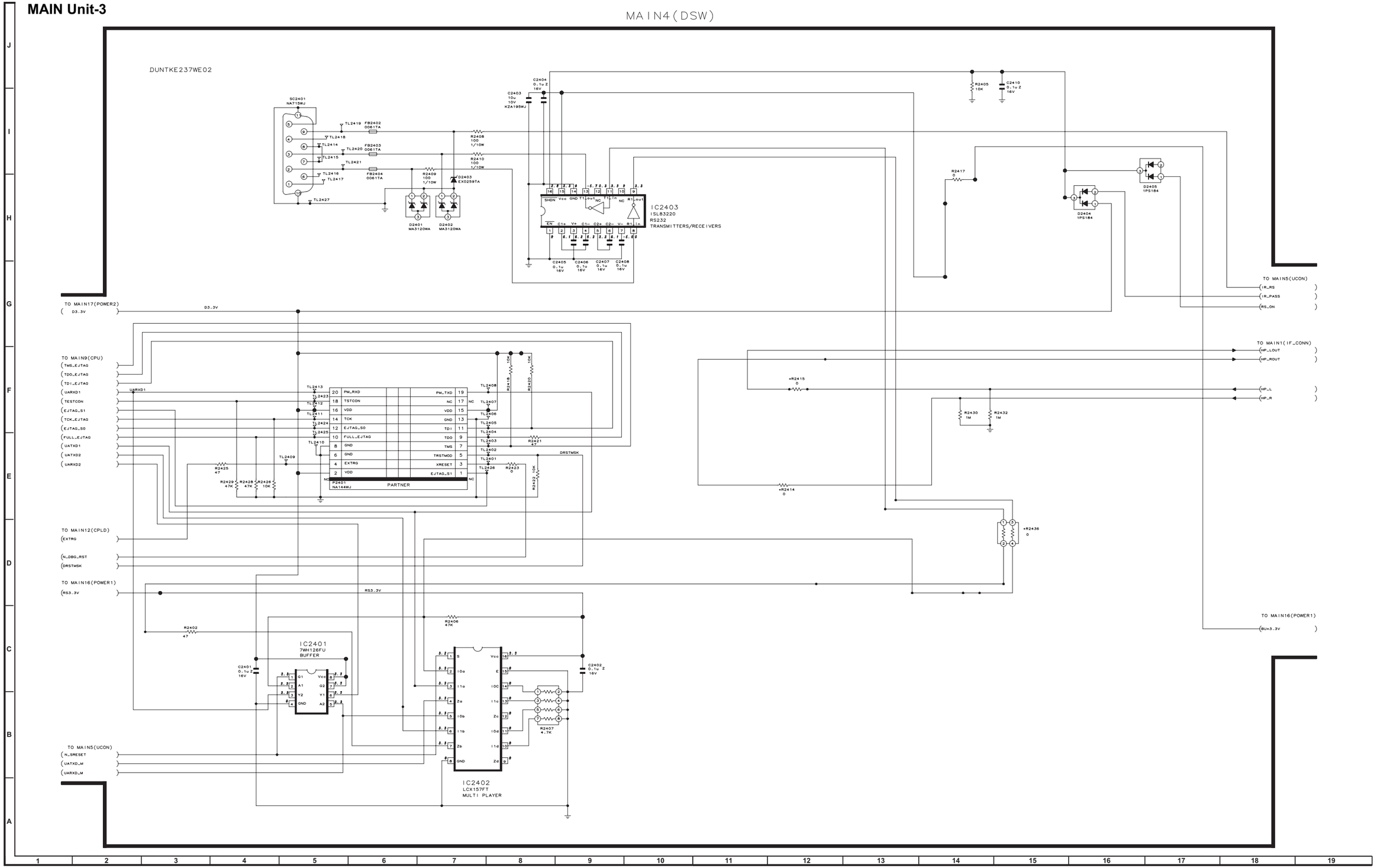
MAIN1(IF_CONN)



MAIN Unit-2

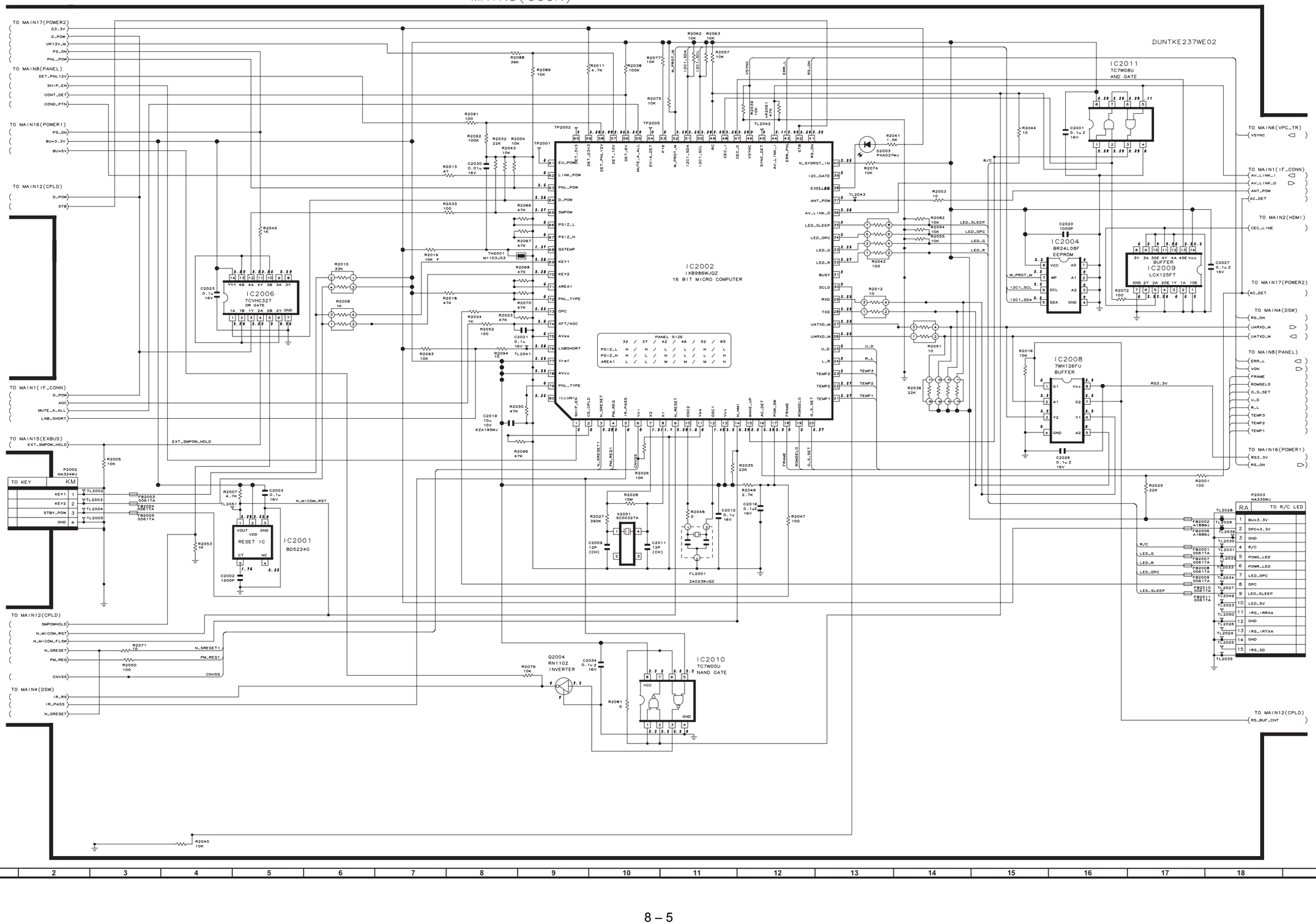

MAIN2(HDMI)
DUNTKE237WE02
IC1507
SII185
HDMI SWITCH
IC1506
TC7W08U
AND GATE
IC1501
S24CS02J
EEPROM
IC1502
S24CS02J
EEPROM
IC1505
S24CS02J
EEPROM
IC1508
AHC1G08W
AND GATE
IC1504
NJM2750M
STEREO
AUDIO
SELECTOR
IC1503
BR24C21F
EEPROM
Q1501
IM02A
WRITE PROTECT
SWITCH
Q1516
IM02A
WRITE PROTECT
SWITCH
Q1509
KTA1535T
BU3.3V SWITCH
Q1510
RT1N141U
INVERTER
TO MAIN17(POWER2)
TO MAIN16(POWER1)
TO MAIN15(EXBUS)
TO MAIN6(VPC_TR)
TO MAIN12(CPLD)
TO MAIN5(UCON)
TO MAIN1(IF_CONN)
TMDS Input2
TMDS Input3
TMDS Input1
(BLACK)

MAIN Unit-3


MAIN4(DSW)
DUNTKE237WE02
SC2401
NA715WJ
TL2419
FB2402
0061TA
TL2418
TL2414
FB2403
0061TA
TL2420
TL2415
TL2421
TL2416
FB2404
0061TA
TL2417
TL2427
R2409
100
1/10W
D2403
EX0259TA
R2408
100
1/10W
R2410
100
1/10W
D2401
MA3120WA
D2402
MA3120WA
C2403
10u
10V
KZA195WJ
C2404
0.1u Z
16V
R2405
10K
C2410
0.1u Z
16V
IC2403
ISL83220
RS232
TRANSMITTERS/RECEIVERS
C2405
0.1u
16V
C2406
0.1u
16V
C2407
0.1u
16V
C2408
0.1u
16V
R2417
0
D2405
1PS184
D2404
1PS184
TO MAIN5(UCON)
(IR_RS
(IR_PASS
(RS_ON
TO MAIN17(POWER2)
(D3.3V
D3.3V
TO MAIN1(IF_CONN)
(HP_LOUT
(HP_ROUT
(HP_L
(HP_R
TO MAIN9(CPU)
(TMS_EJTAG
(TDO_EJTAG
(TDI_EJTAG
(UARXD1
(TESTCON
(EJTAG_S1
(TCK_EJTAG
(EJTAG_S0
(FULL_EJTAG
(UATXD1
(UATXD2
(UARXD2
TL2413
TL2423
TL2412
TL2411
TL2424
TL2425
TL2410
TL2409
R2425
47
R2429
47K
R2428
47K
R2426
10K
P2401
NA144WJ
PARTNER
20 PM_RXD
18 TSTCON
16 VDD
14 TCK
12 EJTAG_SO
10 FULL_EJTAG
8 GND
6 GND
4 EXTRG
2 VDD
PM_TXD 19
NC 17
VDD 15
GND 13
TDI 11
TDO 9
TMS 7
TRSTMOD 5
XRESET 3
EJTAG_S1 1
TL2408
TL2407
TL2406
TL2405
TL2404
TL2403
TL2402
TL2401
TL2426
R2418
10K
R2420
10K
R2421
47
R2423
0
R2422
10K
DRSTMSK
*R2415
0
*R2414
0
R2430
1M
R2432
1M
*R2436
0
TO MAIN12(CPLD)
(EXTRG
(N_DBG_RST
(DRSTMSK
TO MAIN16(POWER1)
(RS3.3V
RS3.3V
R2402
47
R2406
47K
IC2401
7WH126FU
BUFFER
C2401
0.1u 2
16V
C2402
0.1u Z
16V
R2407
4.7K
IC2402
LCX157FT
MULTI PLAYER
TO MAIN5(UCON)
(N_SRESET
(UATXD_M
(UARXD_M
TO MAIN16(POWER1)
(BU+3.3V

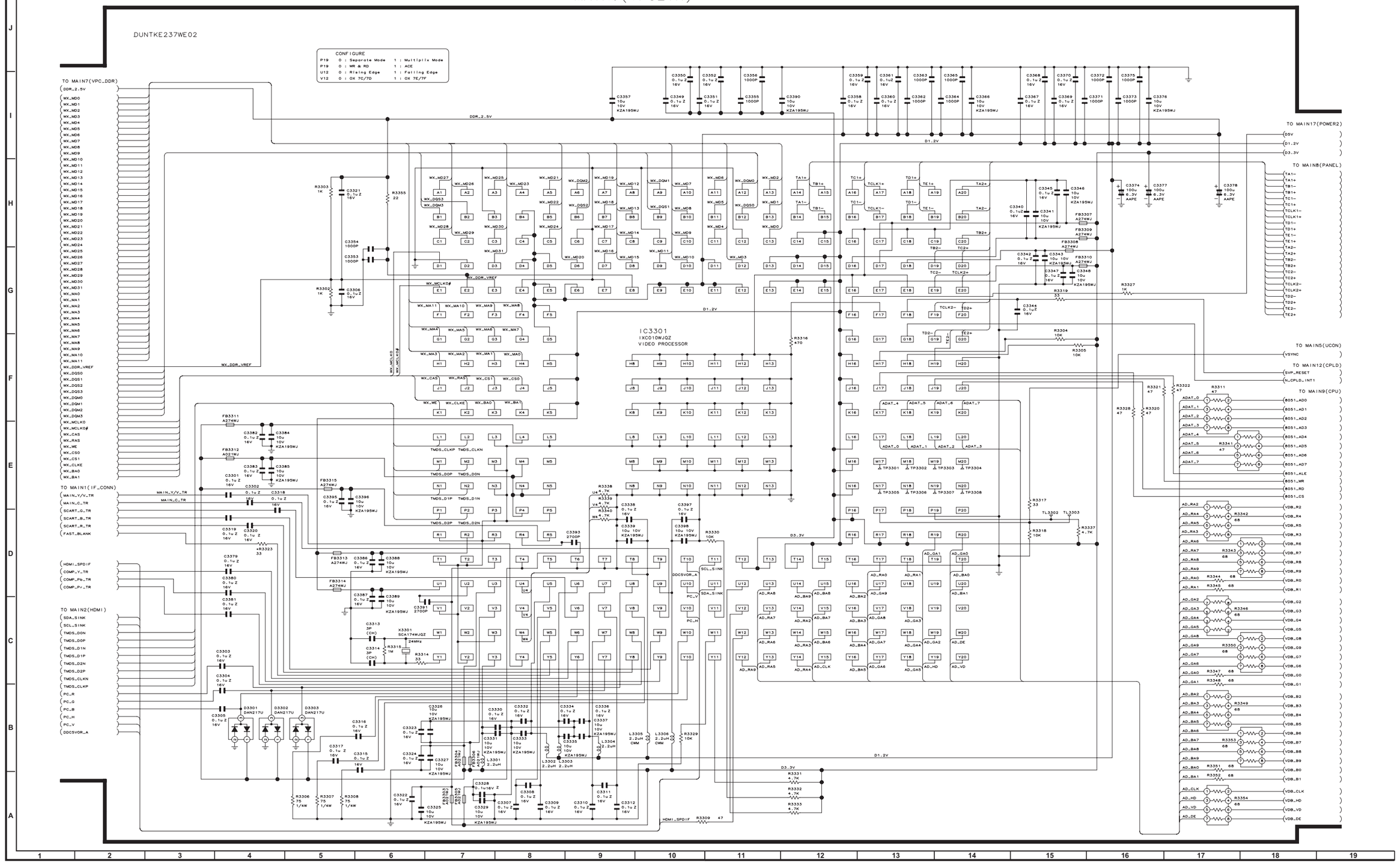
MAIN Unit-4

MAIN5(UCON)



MAIN Unit-5

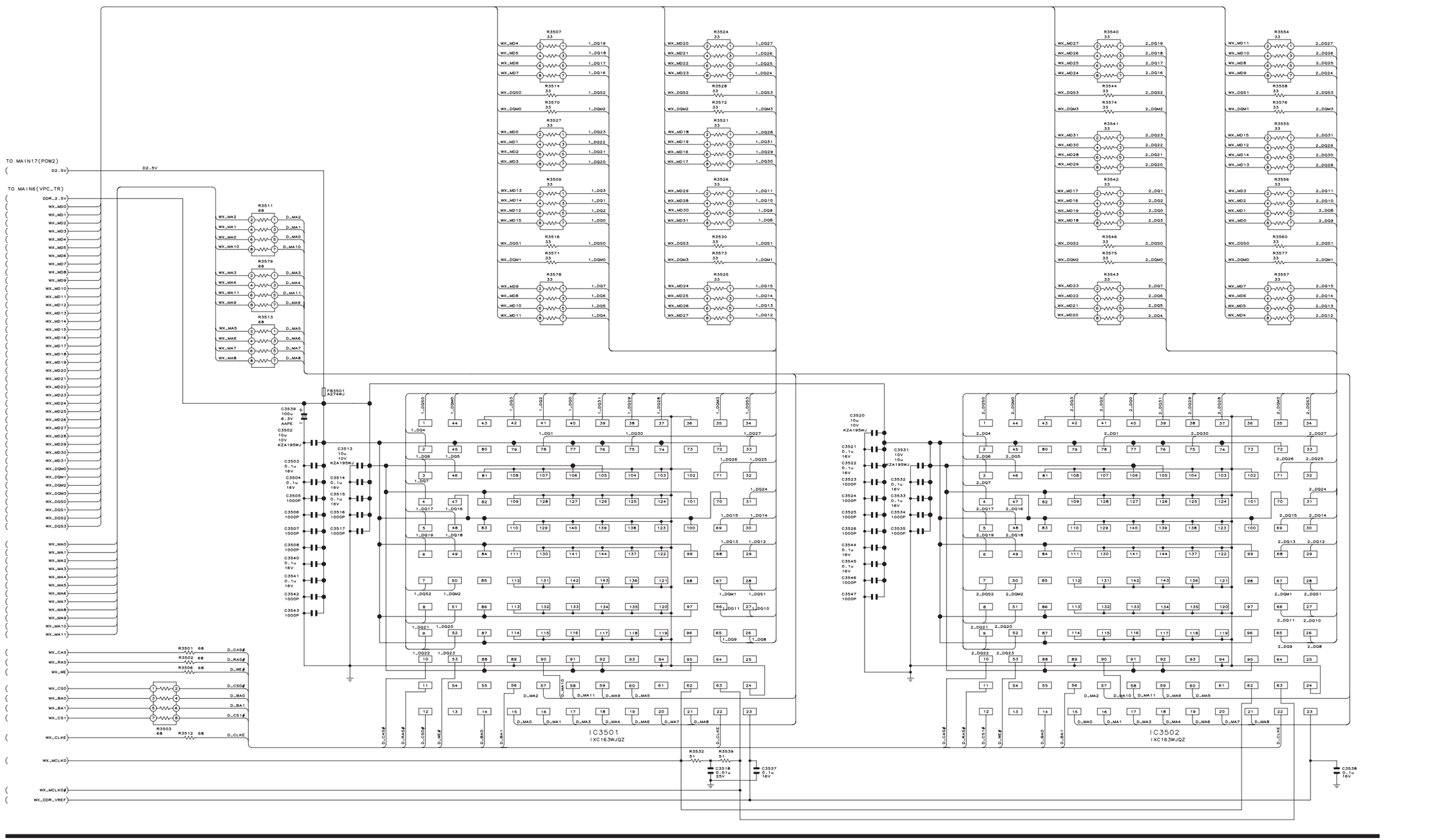
MAIN6(VPC_TR)



MAIN Unit-6

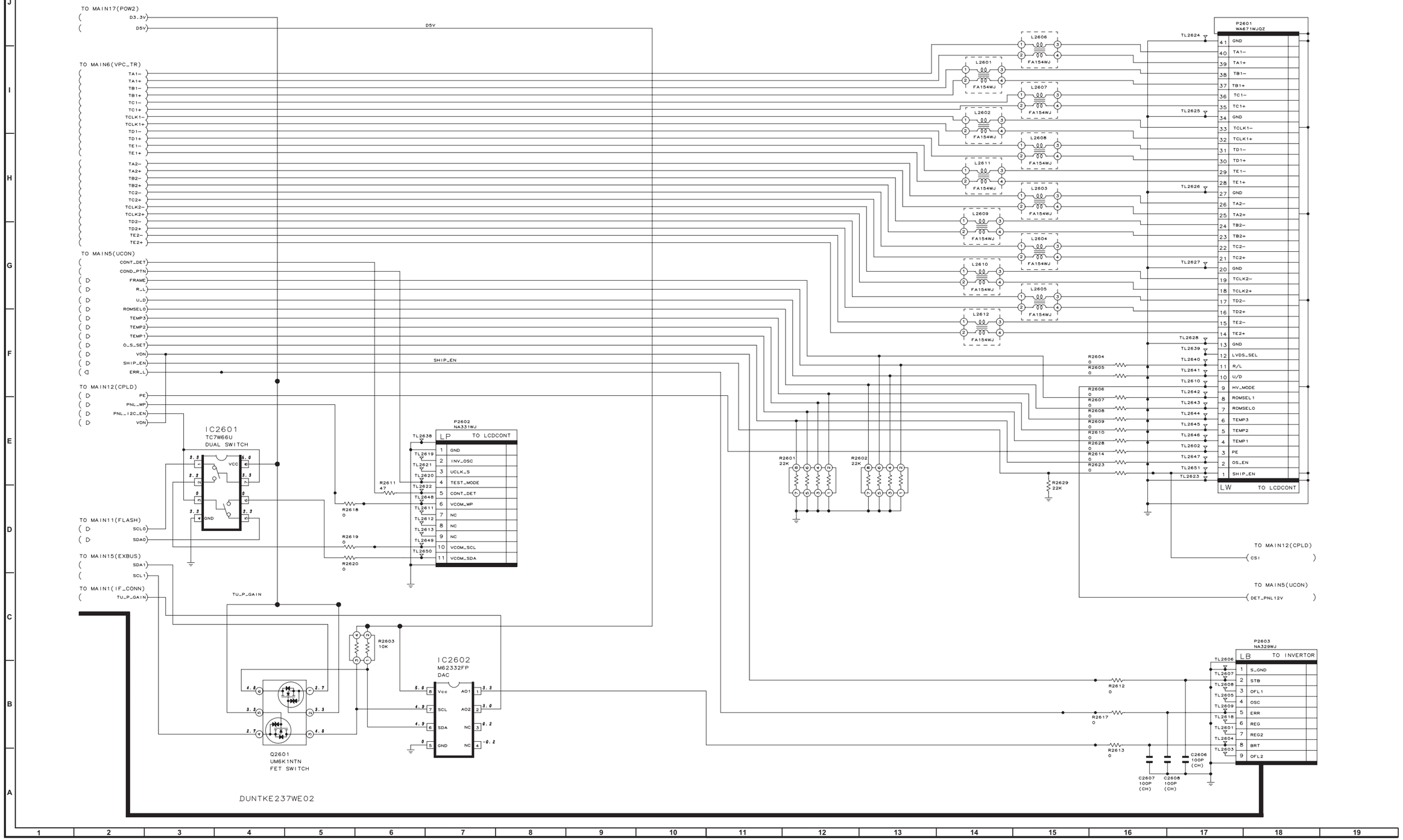
MAIN7(VPC_DDR)

DUNTKE237WE02

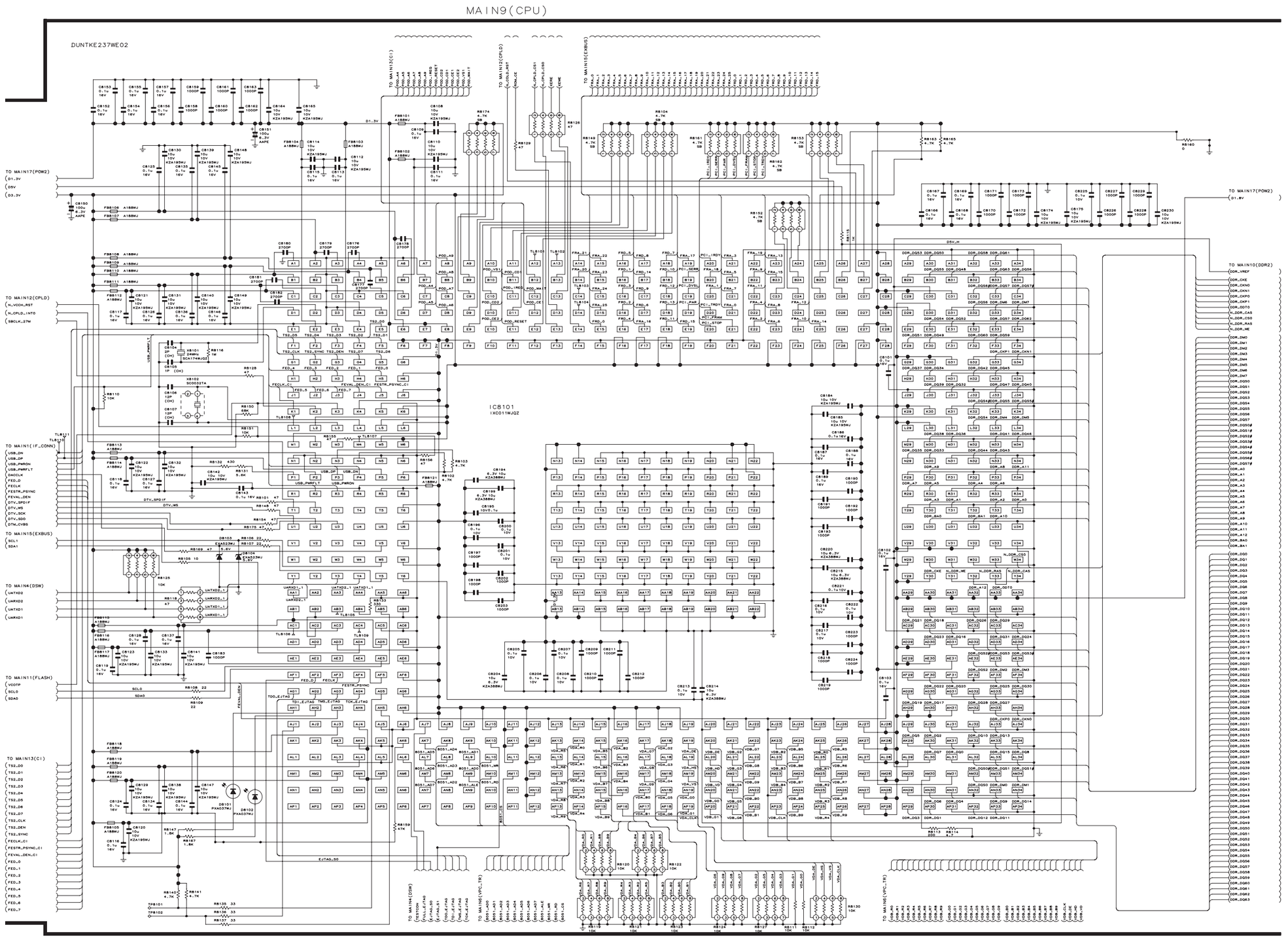


MAIN Unit-7

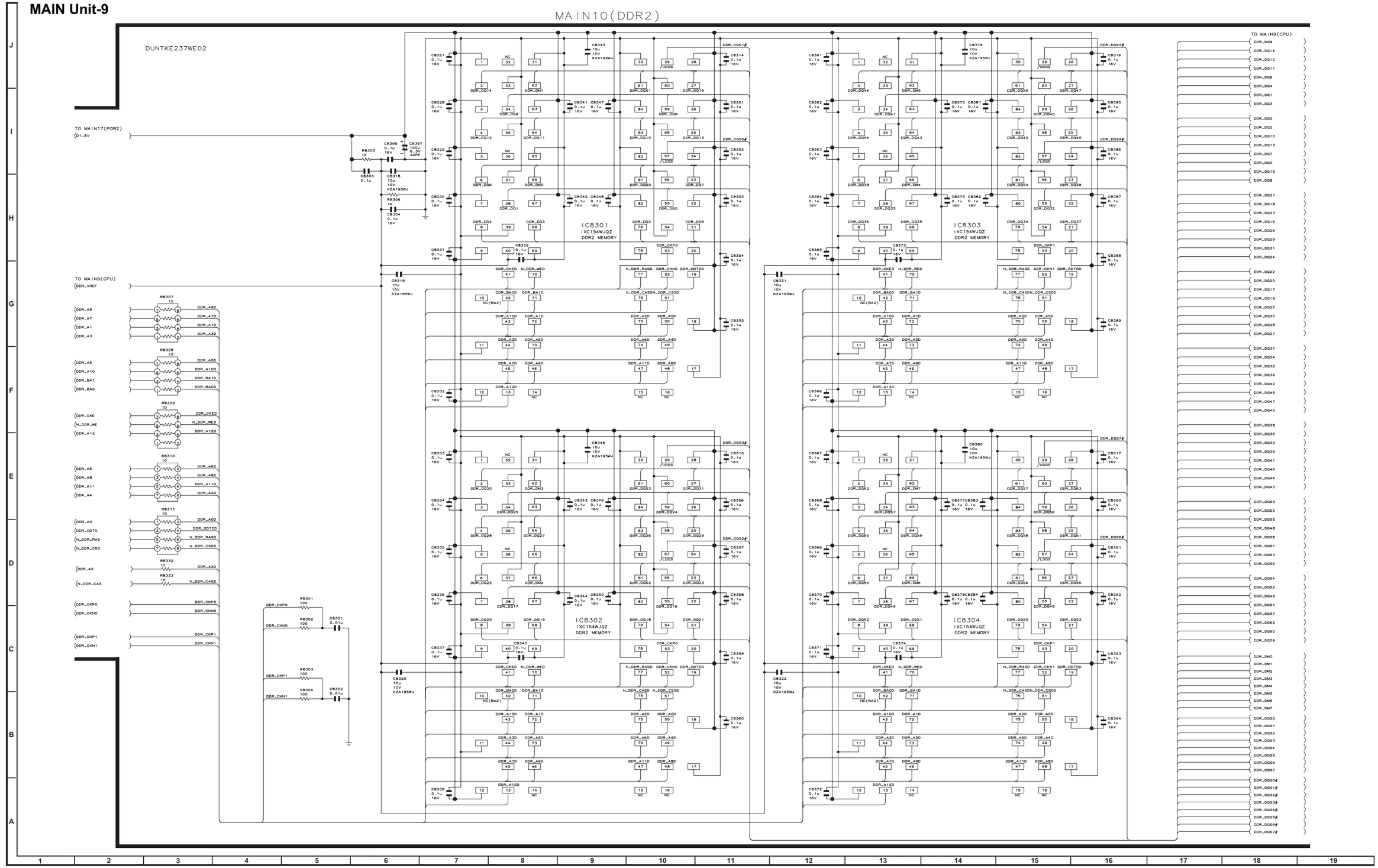
MAIN8(PANEL)



MAIN Unit-8


MAIN9(CPU)
DUNTKE237WE02
IC8101
IXC011WJQZ
TO MAIN17(POW2)
TO MAIN12(CPLD)
TO MAIN1(IF_CONN)
TO MAIN15(EXBUS)
TO MAIN4(DSW)
TO MAIN11(FLASH)
TO MAIN13(CI)
TO MAIN10(DDR2)
TO MAIN6(VPC_TR)
TO MAIN4(DSW)

MAIN Unit-9


MAIN10(DDR2)
DUNTKE237WE02
TO MAIN17(POW2)
(1.8V
TO MAIN9(CPU)
(DDR_VREF
IC8301
IXC154WJQZ
DDR2 MEMORY
IC8302
IXC154WJQZ
DDR2 MEMORY
IC8303
IXC154WJQZ
DDR2 MEMORY
IC8304
IXC154WJQZ
DDR2 MEMORY
TO MAIN9(CPU)
DDR_DQ9
DDR_DQ14
DDR_DQ12
DDR_DQ11
DDR_DQ6
DDR_DQ4
DDR_DQ1
DDR_DQ3
DDR_DQ5
DDR_DQ2
DDR_DQ10
DDR_DQ13
DDR_DQ7
DDR_DQ0
DDR_DQ15
DDR_DQ8
DDR_DQ21
DDR_DQ18
DDR_DQ23
DDR_DQ16
DDR_DQ26
DDR_DQ29
DDR_DQ31
DDR_DQ24
DDR_DQ22
DDR_DQ20
DDR_DQ17
DDR_DQ19
DDR_DQ25
DDR_DQ30
DDR_DQ28
DDR_DQ27
DDR_DQ37
DDR_DQ34
DDR_DQ32
DDR_DQ39
DDR_DQ42
DDR_DQ45
DDR_DQ47
DDR_DQ40
DDR_DQ38
DDR_DQ36
DDR_DQ33
DDR_DQ35
DDR_DQ41
DDR_DQ46
DDR_DQ44
DDR_DQ43
DDR_DQ53
DDR_DQ50
DDR_DQ55
DDR_DQ48
DDR_DQ58
DDR_DQ61
DDR_DQ63
DDR_DQ56
DDR_DQ54
DDR_DQ52
DDR_DQ49
DDR_DQ51
DDR_DQ57
DDR_DQ62
DDR_DQ60
DDR_DQ59
DDR_DM0
DDR_DM1
DDR_DM2
DDR_DM3
DDR_DM4
DDR_DM5
DDR_DM6
DDR_DM7
DDR_DQS0
DDR_DQS1
DDR_DQS2
DDR_DQS3
DDR_DQS4
DDR_DQS5
DDR_DQS6
DDR_DQS7
DDR_DQS0#
DDR_DQS1#
DDR_DQS2#
DDR_DQS3#
DDR_DQS4#
DDR_DQS5#
DDR_DQS6#
DDR_DQS7#

MAIN Unit-10

MAIN11(FLASH)

DUNTKE237WE02

TO MAIN17(POW2)
D3.3V
D8701 180K
TO MAIN12(CPLD)
FL_VPP0
N_FLS_CS0
N_FLS_RST
R8703 47
TL8701
TO MAIN15(EXBUS)
FRDA_0 FRDA_1 FRDA_2 FRDA_3 FRDA_4 FRDA_5 FRDA_6 FRDA_7 FRDA_8 FRDA_9 FRDA_10 FRDA_11 FRDA_12 FRDA_13 FRDA_14 FRDA_15
FRAA_1 FRAA_2 FRAA_3 FRAA_4 FRAA_5 FRAA_6 FRAA_7 FRAA_8 FRAA_9 FRAA_10 FRAA_11 FRAA_12 FRAA_13 FRAA_14 FRAA_15 FRAA_16 FRAA_17 FRAA_18 FRAA_19 FRAA_20 FRAA_21

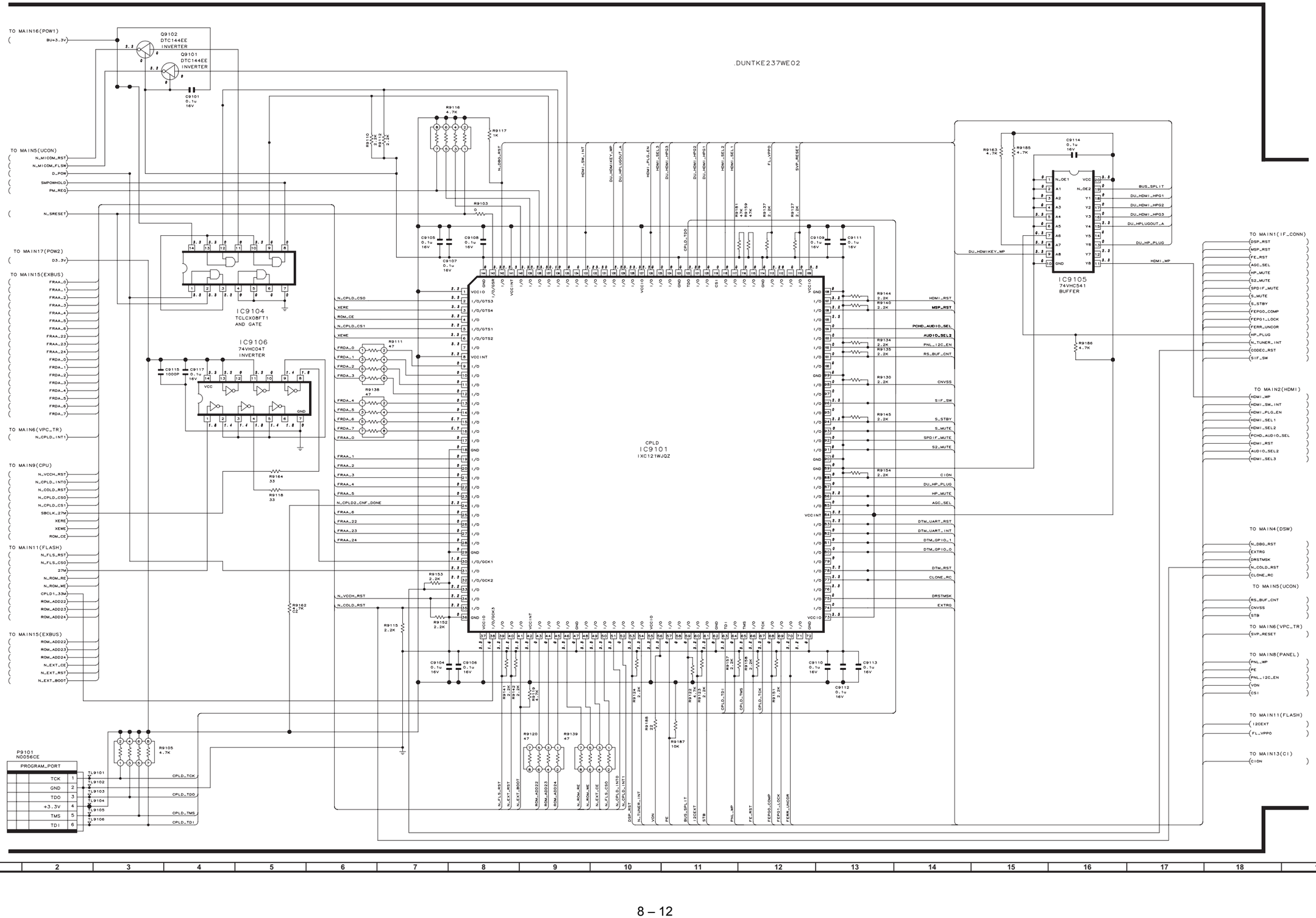
IC8701
S29GL128
FLASH MEMORY 128M
TL8705
NC A24/NC NC A16 BYTE# Vss DQ15 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 Vcc DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 OE# Vss CE# A0 NC VIO
A22 A15 A14 A13 A12 A11 A10 A9 A8 A19 A20 WE# RESET# A21 WP#/ACC RY/BY# A18 A17 A7 A6 A5 A4 A3 A2 A1 NC NC
ROM_ADD23 ROM_ADD22 ROM_ADD19 ROM_ADD24
TL8703
C8702 0.1u 16V
C8703 0.1u 16V
N_ROM_RE N_FLS_CS0

R8730 4.7K
R8718 10
TO MAIN8(PANEL) SCL0 SDA0
TO MAIN9(CPU) SCL0 SDA0 VCOTP
C8709 0.1u 16V
IC8704
S24CS64A
EEPROM
A0 A1 A2 GND VCC WP SCL SDA
R8713 10K
TO MAIN15(EXBUS) N_ROM_WE N_ROM_RE
TO MAIN12(CPLD) N_ROM_RE N_ROM_WE
27M CPLD1_33M ROM_ADD22 ROM_ADD23 ROM_ADD24

FB8701 A274WJ
R8729 47
R8714 47
C8715 10u 10V KZA195WJ
C8704 1P C (CH)
X8701 SCA086WJ 27MHz 10.7pF
C8705 1P C (CH)
R8710 120
C8707 0.1u 16V
TL12 TL11 TL13 TL14
IC8702
IXC150WJQZ
Clock Generator
X1 GND 27M 33M VDD S1 S0 Vin
X2 VDD 74M 33M GND PDTS VDD S2
R8712 6.8K
C8717 68P (CH)
R8723 100K
R8722 1K
C8718 1u 25V KZA114WJ
Q8703
2SC3928AR
CLOCK GENERATOR
CONTROL SWITCH

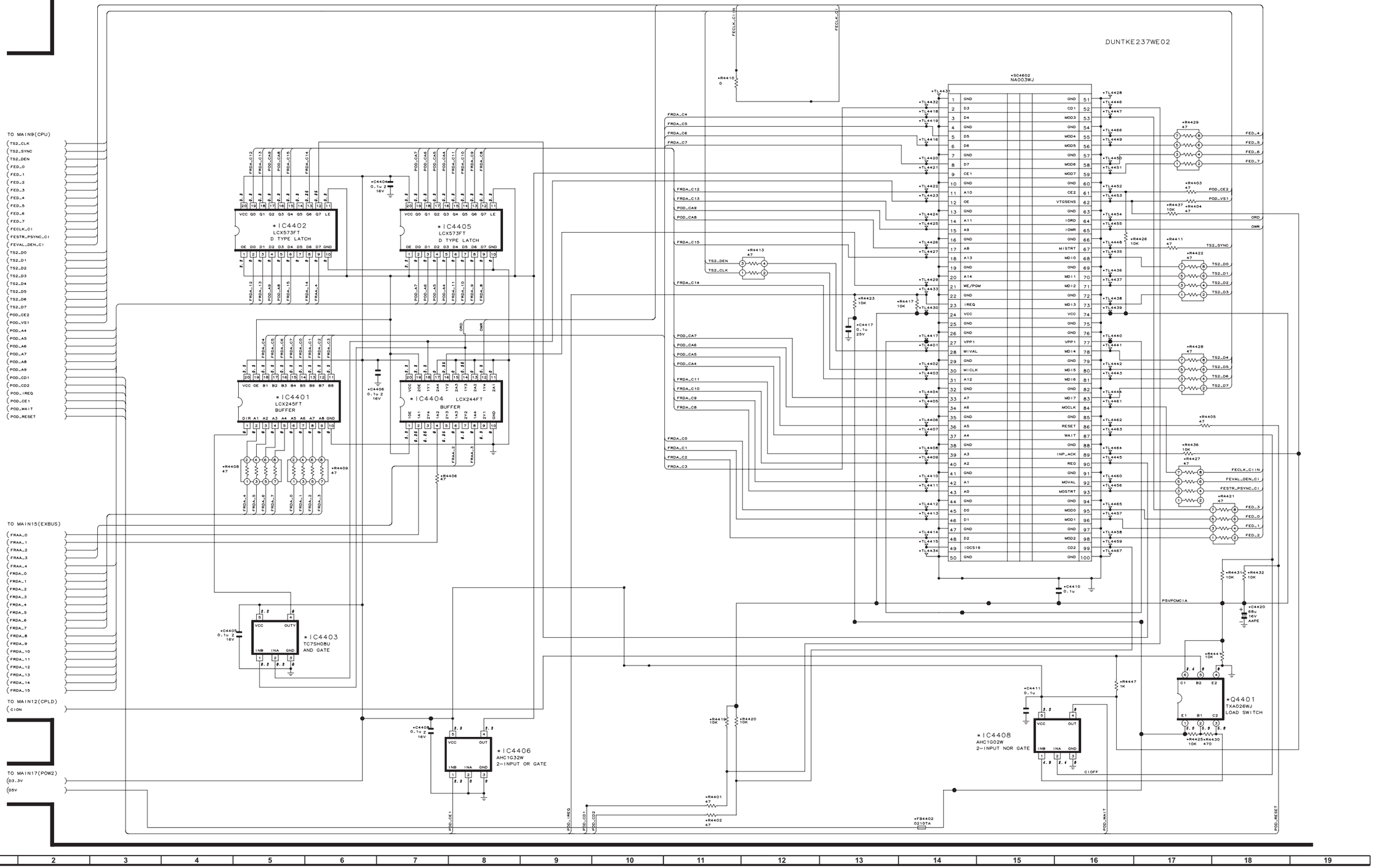
MAIN Unit-11

MAIN12(CPLD)



MAIN Unit-12

MAIN13(CI)



MAIN Unit-13

MAIN15(EXBUS)

DUNTKE237WE02

TO MAIN9(CPU)

TO MAIN13(CI)

CONFIGURE

FRAA_20	COMMON	0 : SLAVER	1 : MASTER
FRAA_21	ENDIAN_SEL_0	0 : DEFAULT	
FRAA_22	ENDIAN_SEL_1	0 : DEFAULT	
FRAA_23	M68K-PCI	0 : PCI	1 : M68K
FRAA_24	8051EN	0 : 8051	1 : I2C
FRAA_25	ROM SIDE	0 : DEFAULT	1 : WIDTH

TO PC-CARD (Flash Memory Card)

WA562WJGZ SC9301

TO MAIN11(FLASH)

TO MAIN13(CI)

TO MAIN12(CPLD)

TO MAIN12(CPLD)

TO MAIN11(FLASH)

TO MAIN16(POW1)

TO MAIN17(POW2)

TO MAIN5(UCON)

TO MAIN12(CPLD)

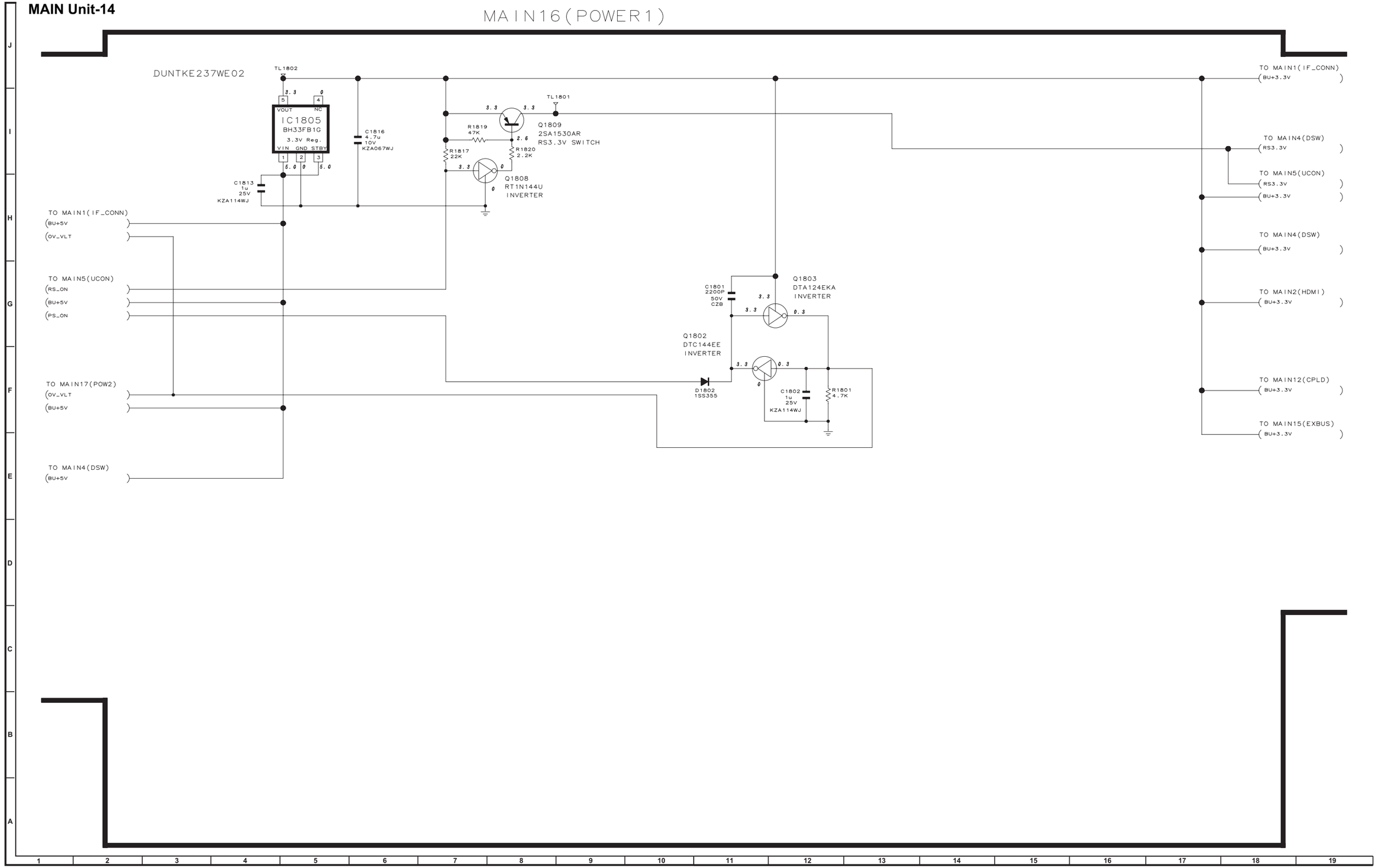
TO MAIN2(HDMI)

TO MAIN6(VPC_TR)

TO MAIN8(PANEL)

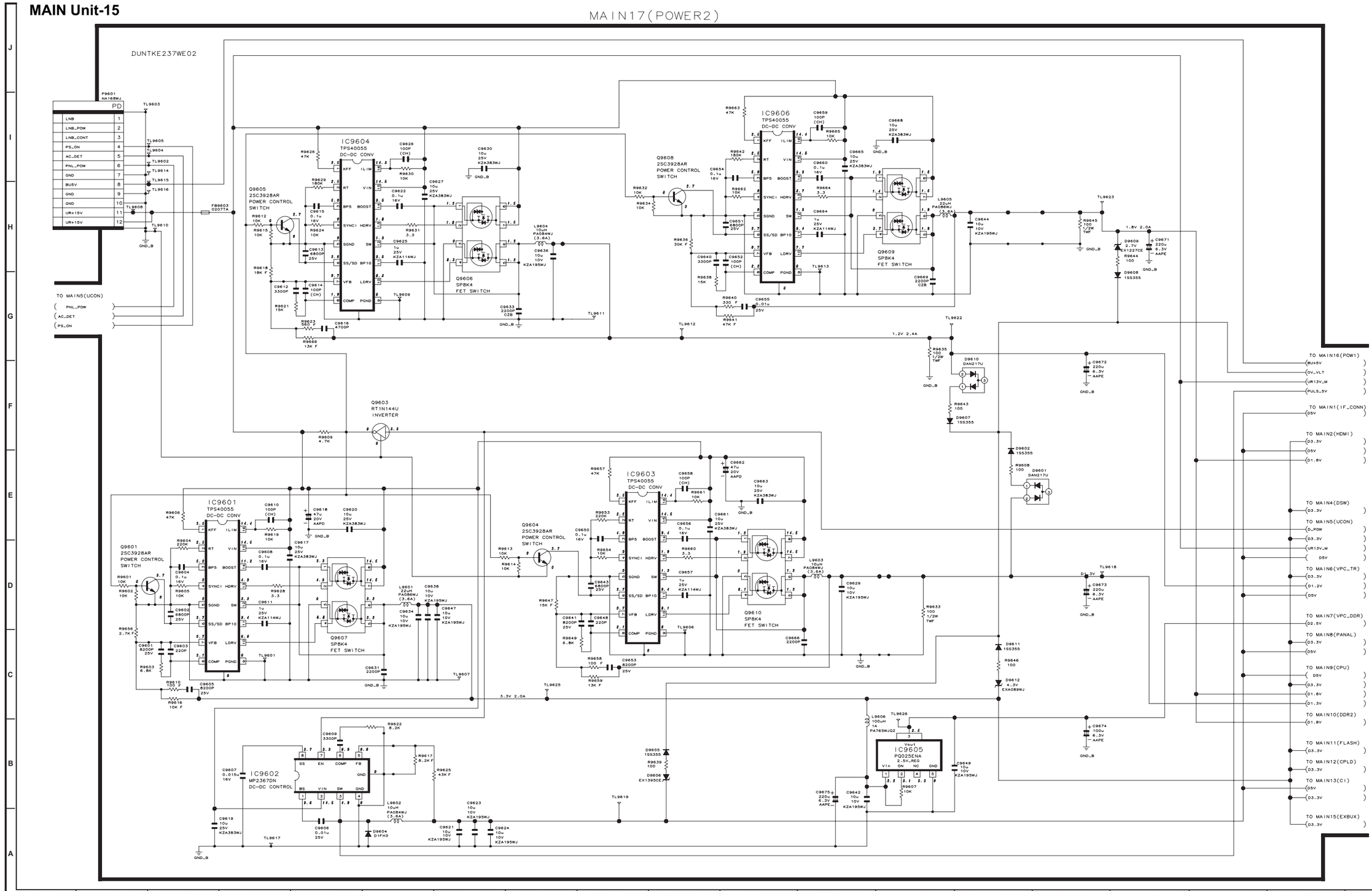
IC9301
LTC1694C
I2C WAVEFORM ADJUSTMENT

MAIN Unit-14


MAIN16(POWER1)
DUNTKE237WE02
TL1802
IC1805
BH33FB1G
3.3V Reg.
VOUT NC
VIN GND STBY
C1816
4.7u
10V
KZA067WJ
C1813
1u
25V
KZA114WJ
TL1801
Q1809
2SA1530AR
RS3.3V SWITCH
R1819
47K
R1817
22K
R1820
2.2K
Q1808
RT1N144U
INVERTER
TO MAIN1(IF_CONN)
BU+5V
OV_VLT
TO MAIN5(UCON)
RS_ON
BU+5V
PS_ON
TO MAIN17(POW2)
OV_VLT
BU+5V
TO MAIN4(DSW)
BU+5V
C1801
2200P
50V
C2B
Q1803
DTA124EKA
INVERTER
Q1802
DTC144EE
INVERTER
D1802
1SS355
C1802
1u
25V
KZA114WJ
R1801
4.7K
TO MAIN1(IF_CONN)
BU+3.3V
TO MAIN4(DSW)
RS3.3V
TO MAIN5(UCON)
RS3.3V
BU+3.3V
TO MAIN4(DSW)
BU+3.3V
TO MAIN2(HDMI)
BU+3.3V
TO MAIN12(CPLD)
BU+3.3V
TO MAIN15(EXBUS)
BU+3.3V

MAIN Unit-15

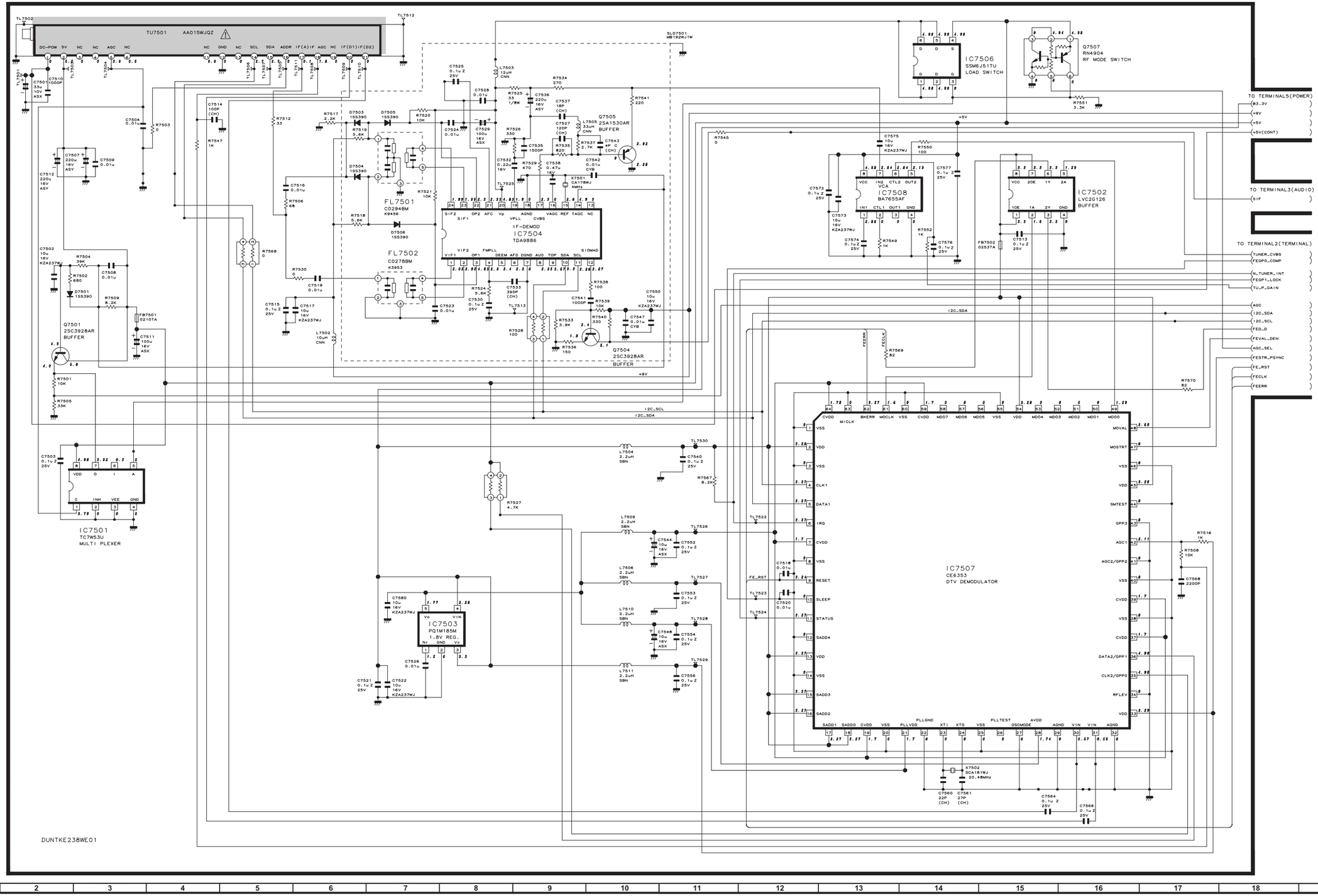
MAIN17(POWER2)



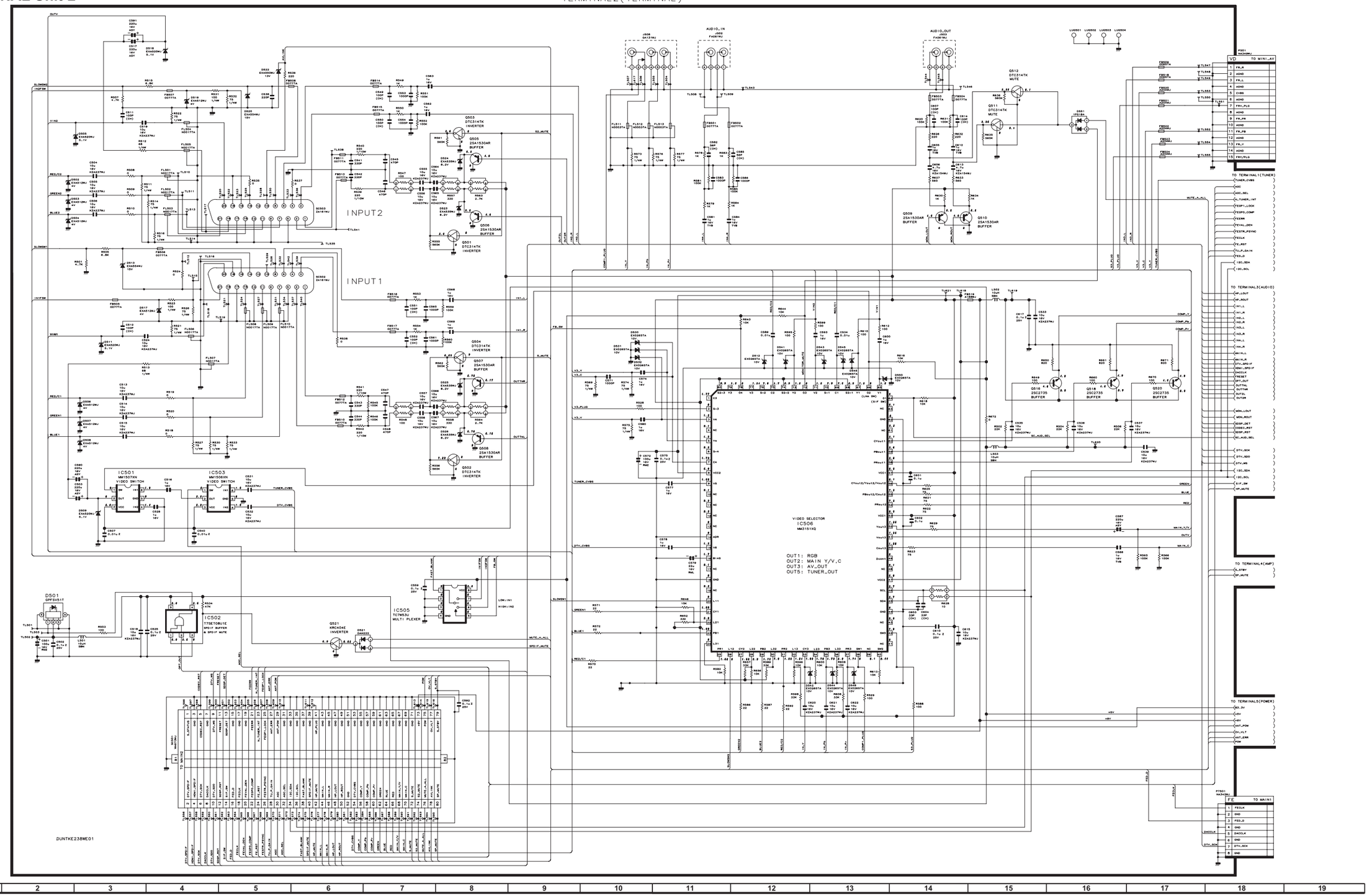
TERMINAL Unit-1

TERMINAL 1 (TUNER)

⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS

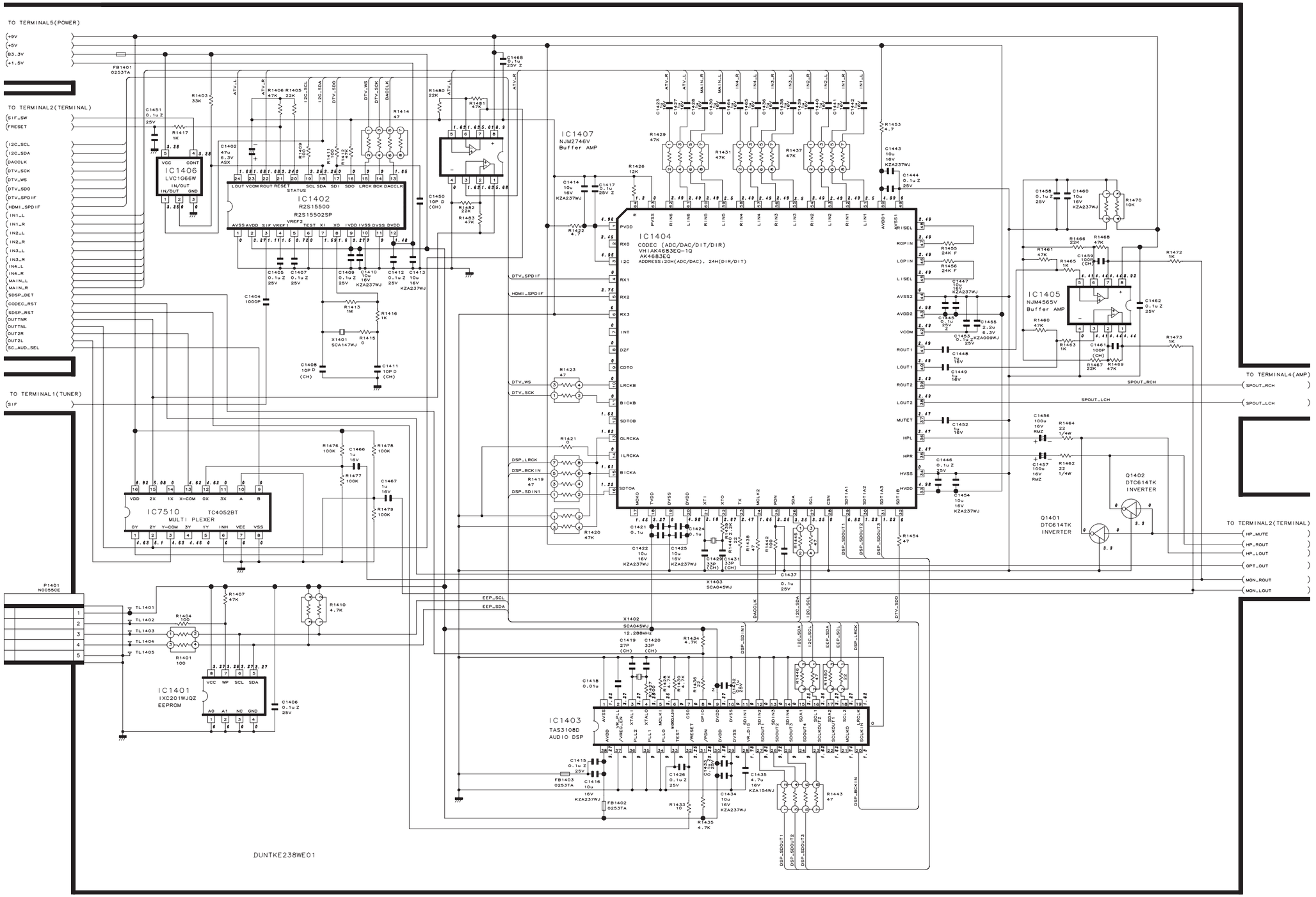


TERMINAL Unit-2

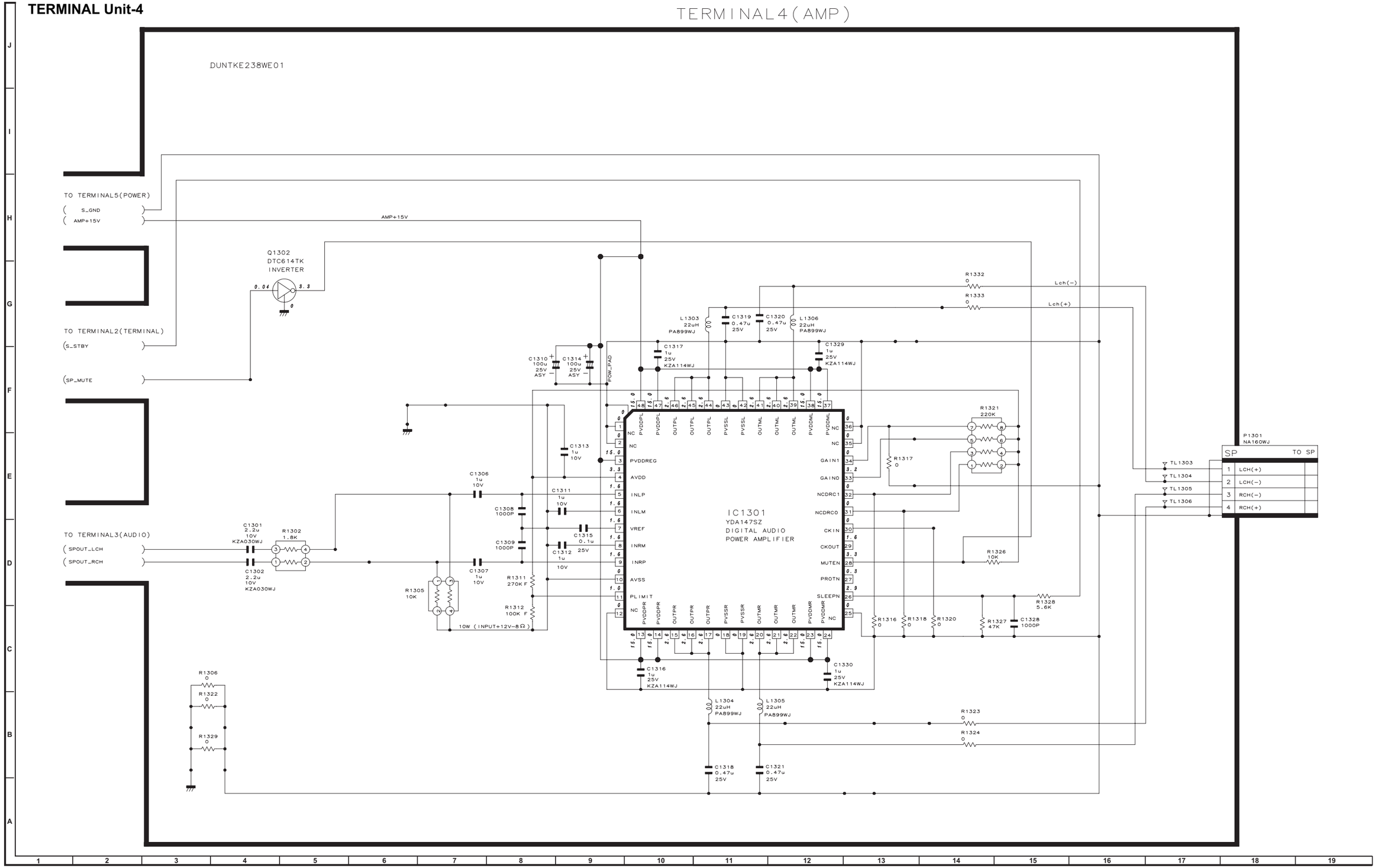


TERMINAL Unit-3

TERMINAL3 (AUDIO)

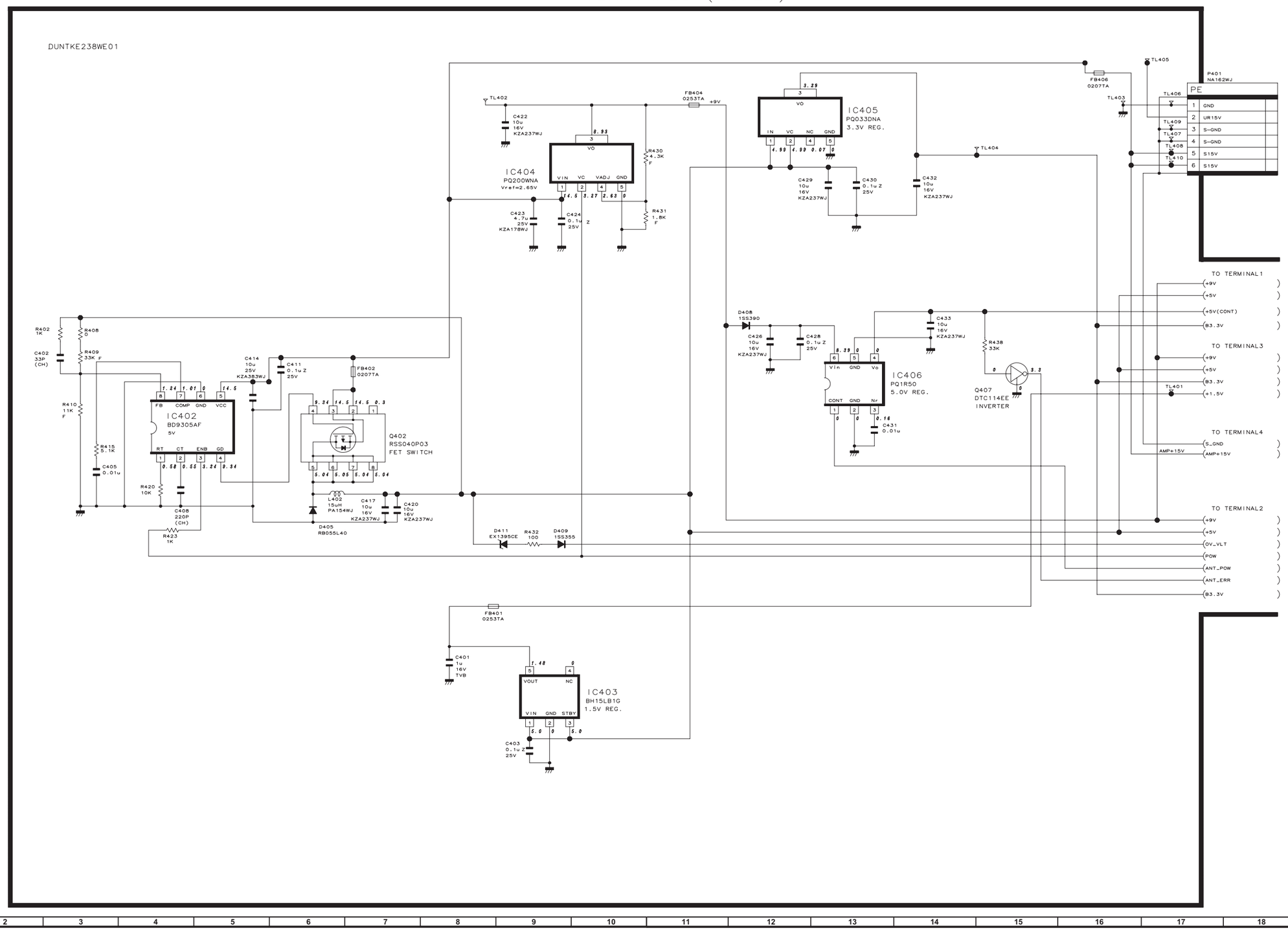


TERMINAL Unit-4

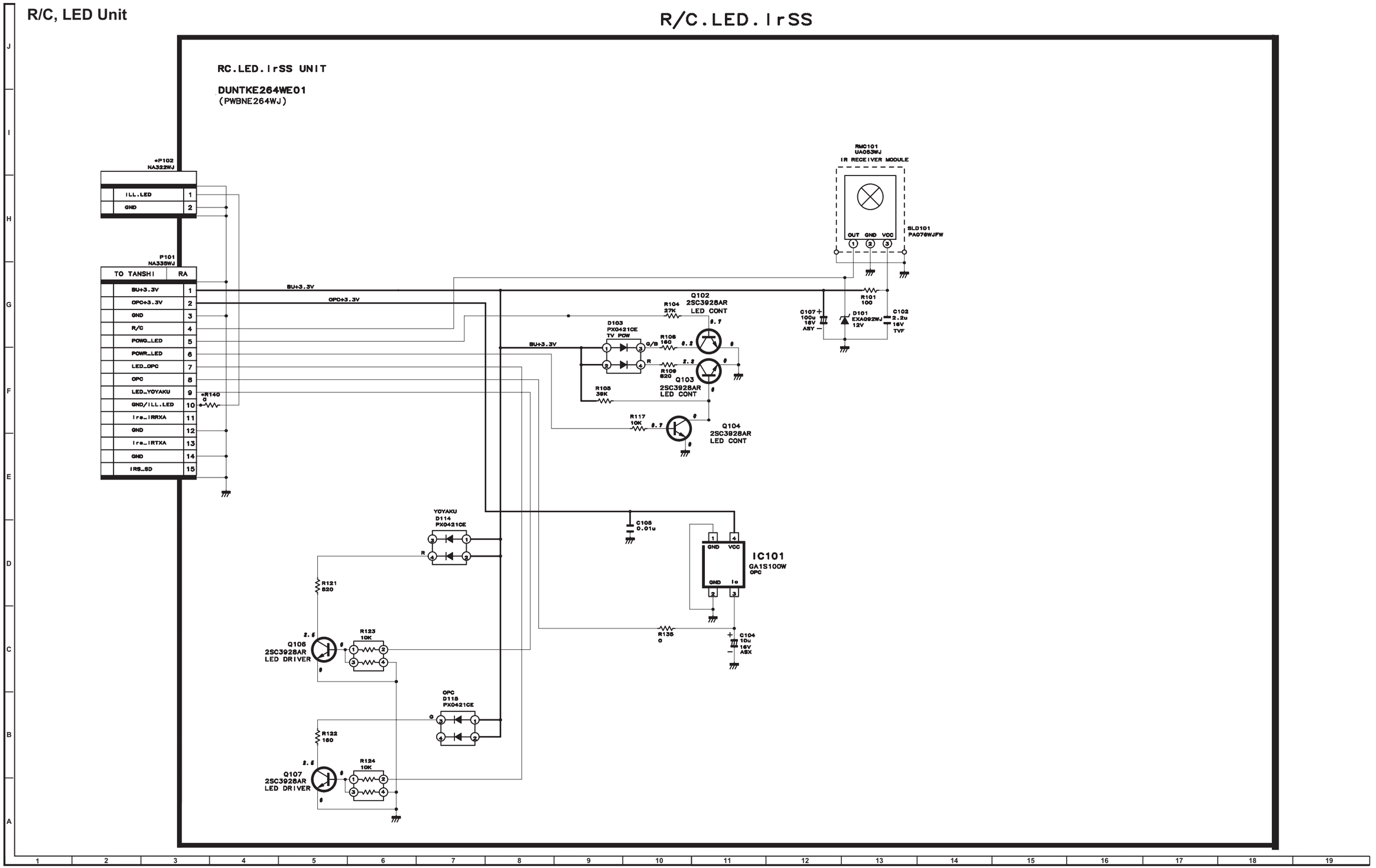


TERMINAL Unit-5

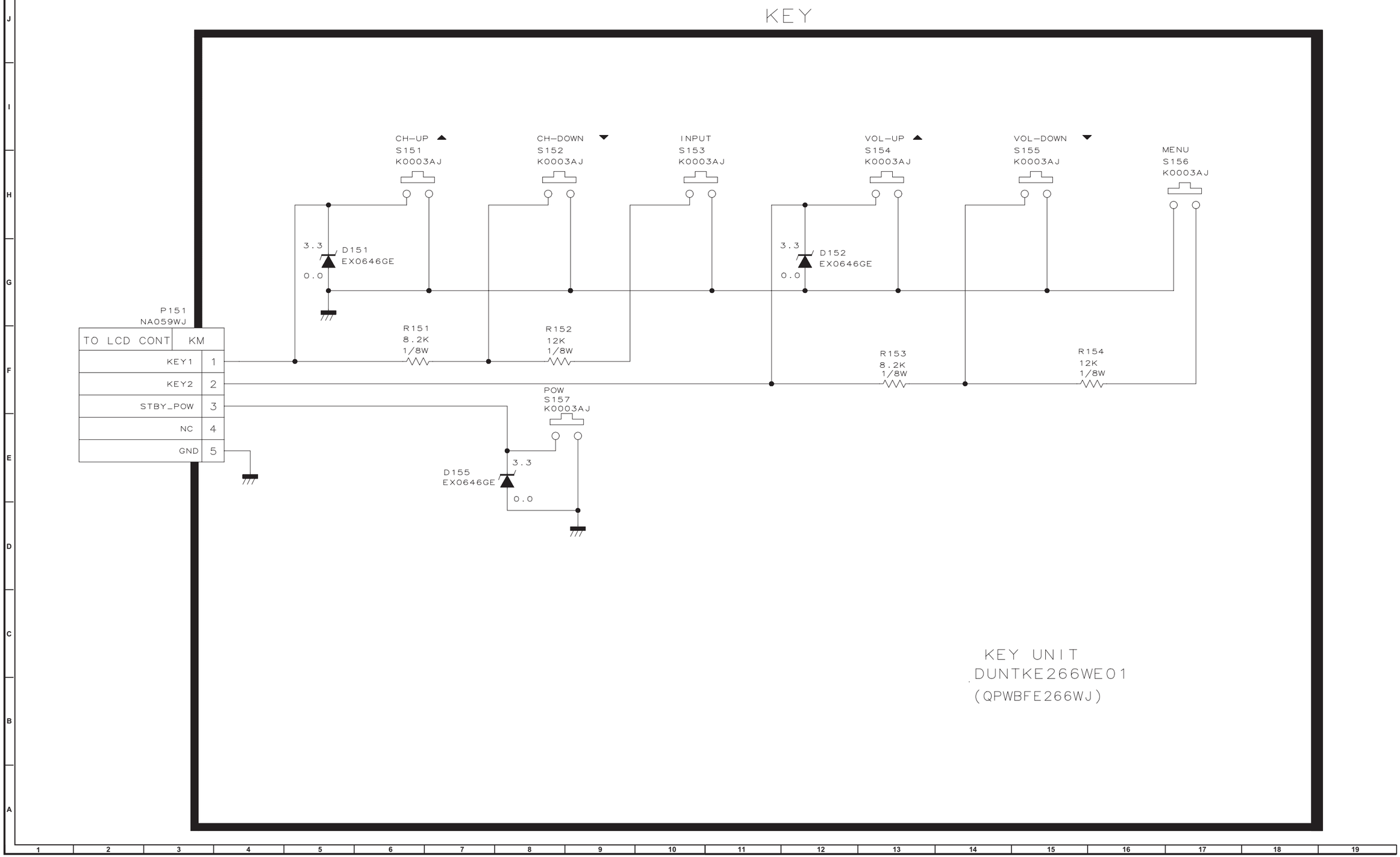
TERMINAL5 (POWER)



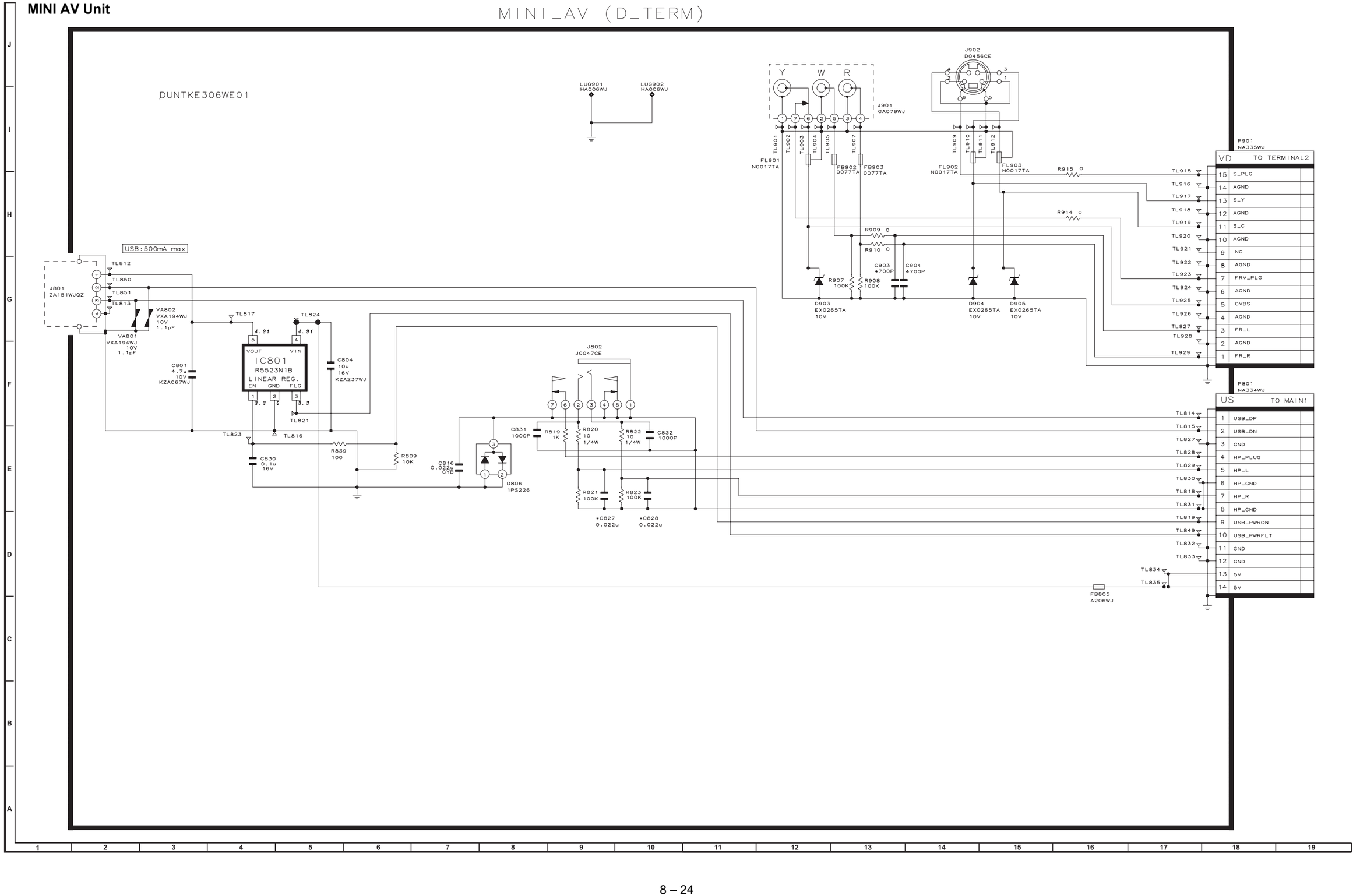
R/C, LED Unit


R/C.LED.IrSS
RC.LED.IrSS UNIT
DUNTKE264WE01
(PWBNE264WJ)
*P102
NA322WJ
ILL.LED 1
GND 2
P101
NA335WJ
TO TANSHI RA
BU+3.3V 1
OPC+3.3V 2
GND 3
R/C 4
POWG_LED 5
POWR_LED 6
LED_OPC 7
OPC 8
LED_YOYAKU 9
GND/ILL.LED 10
Ire_IRRXA 11
GND 12
Ire_IRTXA 13
GND 14
IRS_SD 15
*R140 0
RMC101
UA053WJ
IR RECEIVER MODULE
OUT GND VCC
SLD101
PA076WJFW
R101 100
C107 100u 16V ASY
D101 EXA052WJ 12V
C102 2.2u 16V TVF
Q102 2SC3928AR LED CONT
R104 27K
D103 PX0421CE TV POW
R106 150
R109 820
Q103 2SC3928AR LED CONT
R105 30K
R117 10K
Q104 2SC3928AR LED CONT
C105 0.01u
IC101 GA1S100W OPC
GND VCC GND Io
R135 0
C104 10u 16V ASX
YOYAKU D114 PX0421CE
R121 820
Q106 2SC3928AR LED DRIVER
R123 10K
OPC D115 PX0421CE
R122 150
Q107 2SC3928AR LED DRIVER
R124 10K

KEY Unit


KEY
CH–UP
S151
K0003AJ
CH–DOWN
S152
K0003AJ
INPUT
S153
K0003AJ
VOL–UP
S154
K0003AJ
VOL–DOWN
S155
K0003AJ
MENU
S156
K0003AJ
3.3
D151
EX0646GE
0.0
3.3
D152
EX0646GE
0.0
P151
NA059WJ
TO LCD CONT
KM
KEY1 1
KEY2 2
STBY_POW 3
NC 4
GND 5
R151
8.2K
1/8W
R152
12K
1/8W
R153
8.2K
1/8W
R154
12K
1/8W
POW
S157
K0003AJ
D155
EX0646GE
3.3
0.0
KEY UNIT
DUNTKE266WE01
(QPWBFE266WJ)

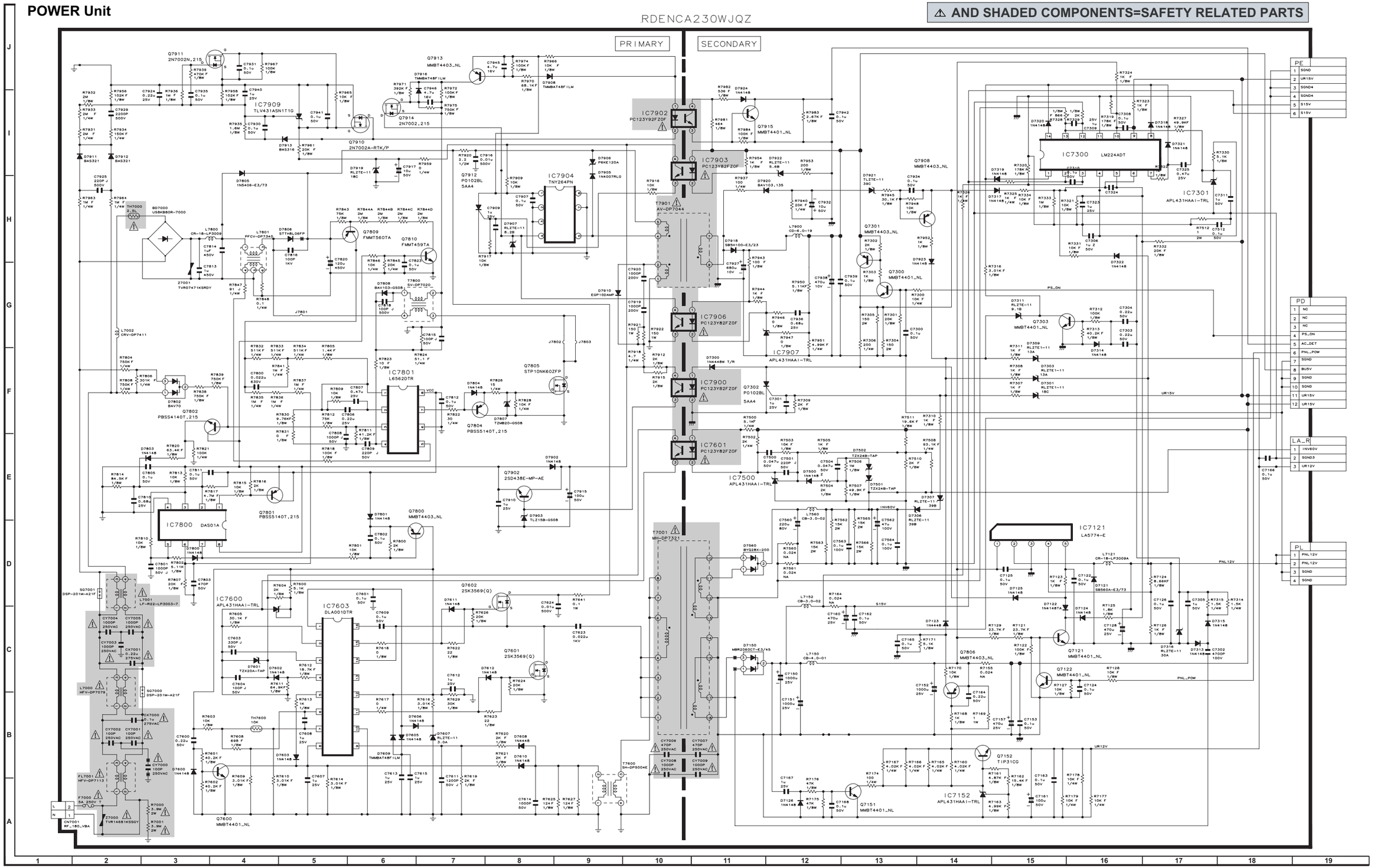
MINI AV Unit


MINI_AV (D_TERM)
DUNTKE306WE01
LUG901 HA006WJ
LUG902 HA006WJ
J902 D0456CE
J901 GA079WJ
Y
W
R
FL901 N0017TA
FL902 N0017TA
FL903 N0017TA
FB902 0077TA
FB903 0077TA
R915 0
R914 0
R909 0
R910 0
C903 4700P
C904 4700P
R907 100K
R908 100K
D903 EX0265TA 10V
D904 EX0265TA 10V
D905 EX0265TA 10V
P901 NA335WJ
VD TO TERMINAL2
15 S_PLG
14 AGND
13 S_Y
12 AGND
11 S_C
10 AGND
9 NC
8 AGND
7 FRV_PLG
6 AGND
5 CVBS
4 AGND
3 FR_L
2 AGND
1 FR_R
USB:500mA max
J801 ZA151WJQZ
VA802 VXA194WJ 10V 1.1pF
VA801 VXA194WJ 10V 1.1pF
C801 4.7u 10V KZA067WJ
IC801 R5523N1B LINEAR REG. EN GND FLG
C804 10u 16V KZA237WJ
C830 0.1u 16V
R839 100
R809 10K
J802 J0047CE
C831 1000P
R819 1K
R820 10 1/4W
R822 10 1/4W
C832 1000P
C816 0.022u CYB
D806 1PS226
R821 100K
R823 100K
*C827 0.022u
*C828 0.022u
FB805 A206WJ
P801 NA334WJ
US TO MAIN1
1 USB_DP
2 USB_DN
3 GND
4 HP_PLUG
5 HP_L
6 HP_GND
7 HP_R
8 HP_GND
9 USB_PWRON
10 USB_PWRFLT
11 GND
12 GND
13 5V
14 5V

POWER Unit

⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS

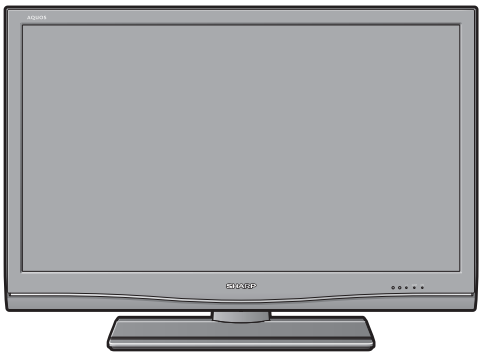
RDENCA230WJQZ


PRIMARY
SECONDARY
IC7902 PC123Y92FZOF
IC7903 PC123Y82FZOF
IC7906 PC123Y82FZOF
IC7900 PC123Y82FZOF
IC7601 PC123Y82FZOF
IC7909 TLV431ASN1T1G
IC7904 TNY264PN
T7901 AV-DP7044
IC7907 APL431HAA1-TRL
IC7500 APL431HAA1-TRL
IC7800 DAS01A
IC7600 APL431HAA1-TRL
IC7603 DLA001DTR
IC7801 L6562DTR
T7001 MH-DP7321
IC7300 LM224ADT
IC7301 APL431HAA1-TRL
IC7121 LA5774-E
IC7152 APL431HAA1-TRL
Q7911 2N7002N,215
Q7910 2N7002A-RTK/P
Q7913 MMBT4403_NL
Q7914 2N7002,215
Q7915 MMBT4401_NL
Q7912 P0102BL 5AA4
Q7908 MMBT4403_NL
Q7301 MMBT4403_NL
Q7300 MMBT4401_NL
Q7303 MMBT4401_NL
Q7302 P0102BL 5AA4
Q7805 STP10NK60ZFP
Q7804 PBSS5140T,215
Q7902 2SD438E-MP-AE
Q7903 TL215B-GS08
Q7802 PBSS4140T,215
Q7801 PBSS5140T,215
Q7800 MMBT4403_NL
Q7602 2SK3569(Q)
Q7601 2SK3569(Q)
Q7600 MMBT4401_NL
Q7810 FMMT560TA
Q7809 FMMT459TA
Q7806 MMBT4403_NL
Q7121 MMBT4401_NL
Q7122 MMBT4401_NL
Q7151 MMBT4401_NL
Q7152 TIP31CG
PE
PD
PL
LA_R
PS_ON
AC_DET
PNL_POW
BUSV
S15V
UR15V
PNL12V
INV60V
SGND
SGND4
IC7308 0.1u 50V
IC7309 25V 1u
IC7324 0.1u 50V
IC7325 0.47u 25V
IC7326 1K F 1/8W
IC7330 5.1K 1/8W
IC7331 1u Z 50V
IC7332 20K F 1/8W
IC7333 1M 1/8W
IC7334 10K F 1/8W
IC7311 1u 50V
IC7512 0.1u 50V
IC7304 0.22u 50V
IC7303 0.22u 50V
IC7166 0.1u 50V
IC7305 1u 50V
IC7306 1u Z 50V
IC7307 1u 50V
IC7308 1K F 1/8W
IC7309 1K F 1/8W
IC7310 1K F 1/8W
IC7311 1K F 1/8W
IC7312 100K 1/8W
IC7313 40.2K F 1/8W
IC7314 1.5K 1/4W
IC7315 1.5K 1/4W
IC7316 3.01K F 1/8W
IC7317 1K F 1/4W
IC7318 49.9K F 1/8W
IC7319 178K F 1/8W
IC7320 178K F 1/8W
IC7321 1u 50V
IC7322 1K F 1/8W
IC7323 1u 25V
IC7327 49.9K F 1/8W
IC7328 866 F 1/8W
IC7329 2K F 1/8W
IC7122 0.1u 50V
IC7123 1K F 1/8W
IC7124 8.66KF 1/8W
IC7125 1.8K 1/8W
IC7126 1K F 1/8W
IC7127 10K 1/8W
IC7128 10K F 1/8W
IC7129 23.7K F 1/8W
IC7130 23.7K F 1/8W
IC7131 100K F 1/8W
IC7132 0.1u 50V
IC7133 0.22u 50V
IC7134 0.1u 50V
IC7135 0.68u 25V
IC7136 0.1u 50V
IC7137 1K F 1/8W
IC7138 1K F 1/8W
IC7139 1K F 1/8W
IC7140 1K F 1/8W
IC7141 1K F 1/8W
IC7142 1K F 1/8W
IC7143 1K F 1/8W
IC7144 1K F 1/8W
IC7145 1K F 1/8W
IC7146 1K F 1/8W

— MEMO —

SHARP PARTS GUIDE

No. S97S9LC32X20E



LCD COLOUR TELEVISION

MODELS LC-32X20E/S/RU LC-37X20E/S/RU

CONTENTS

[1] PRINTED WIRING BOARD ASSEMBLIES

[2] LCD PANEL AND TUNER (NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.)

[3] DUNTKE237FM02 (MAIN Unit)

[4] DUNTKE238FM01 (TERMINAL Unit)

[5] DUNTKE264FM01 (R/C, LED Unit)

[6] DUNTKE266FM01 (KEY Unit)

[7] DUNTKE306FM01(MINI AV UNIT)

[8] CABINET PARTS (LC-32X20E/S/RU)

[9] CABINET PARTS (LC-37X20E/S/RU)

[10] SUPPLIIED ACCSESSORIES

[11] PACKING PARTS

[12] SERVICE JIGS

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.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[1] PRINTED WIRING BOARD ASSEMBLIES					
N	DUNTKE237FM02		N	R	MAIN Unit
N	DUNTKE238FM01		N	R	TERMINAL Unit
N	DUNTKE264FM01	AS	N	R	R/C, LED Unit
N	DUNTKE266FM01	AR	N	R	KEY Unit
N	DUNTKE306FM01		N	R	MINI AV Unit
N	RDENCA230WJQZ			R	Power Unit
[2] LCD PANEL AND TUNER (NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.)					
N	R1LK315D3LZ20Y		N	J	32" LCD Panel Module
N	R1LK370D3LZ60Y		N	J	37" LCD Panel Module
⚠ TU7501	RTUDAA015WJQZ		N	P	Tuner
[3] DUNTKE237FM02 (MAIN Unit)					
C1112	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C1117	VCCCCZ1HH3R0CY	AA		J	Capacitor 30p 50V Ceramic
C1118	VCCCCZ1HH3R0CY	AA		J	Capacitor 30p 50V Ceramic
C1119	VCCCCZ1HH3R0CY	AA		J	Capacitor 30p 50V Ceramic
C1120	VCCCCZ1HH390JY	AB		J	Capacitor 39p 50V Ceramic
C1121	VCCCCZ1HH390JY	AB		J	Capacitor 39p 50V Ceramic
C1122	VCCCCZ1HH390JY	AB		J	Capacitor 39p 50V Ceramic
C1123	VCCCCZ1HH150JY	AB		J	Capacitor 15p 50V Ceramic
C1124	VCCCCZ1HH181JY	AB		J	Capacitor 180p 50V Ceramic
C1125	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1126	VCCCCZ1HH471JY	AA		J	Capacitor 470p 50V Ceramic
C1128	VCAAPE1CJ686MY	AE		J	Capacitor 68 16V Electrolytic
C1129	VCCCCZ1HH150JY	AB		J	Capacitor 15p 50V Ceramic
C1130	VCCCCZ1HH150JY	AB		J	Capacitor 15p 50V Ceramic
C1134	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C1135	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic
C1136	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1137	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1138	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1139	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1140	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1141	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C1501	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1502	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1503	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1504	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1505	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1506	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1507	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C1508	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C1509	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C1510	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1511	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1512	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1513	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1514	VCERML1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C1515	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1516	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1517	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C1518	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1519	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C1521	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1522	RC-KZA510WJPZY	AB		J	Capacitor 10 16V Ceramic
C1523	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1524	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1525	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1526	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1531	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1532	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1534	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1535	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1538	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1540	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C1543	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1544	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1545	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1546	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1547	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1548	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1551	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C1578	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1579	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1582	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1583	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1586	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1587	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1589	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1591	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1592	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1596	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C1597	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1599	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1608	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C1613	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1614	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1615	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C1616	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C1801	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C1802	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1813	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1816	RC-KZA067WJZZY	AB		J	Capacitor 4.7 10V Ceramic
C2001	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2002	VCKYCZ1HB152KY	AB		J	Capacitor 1500p 50V Ceramic
C2003	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2009	VCCCCZ1HH120JY	AB		J	Capacitor 12p 50V Ceramic
C2011	VCCCCZ1HH120JY	AB		J	Capacitor 12p 50V Ceramic
C2012	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2016	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2019	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C2020	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C2021	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2023	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2026	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2027	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2030	VCKYCZ1CB103KY	AB		J	Capacitor 0.01 16V Ceramic
C2034	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2401	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2402	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2403	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C2404	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2405	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2406	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2407	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2408	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2410	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C2606	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2607	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2608	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C3301	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3302	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3303	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3304	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3305	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3306	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3307	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3308	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3309	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3310	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3311	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3312	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3313	VCCCCZ1HH3R0CY	AA		J	Capacitor 30p 50V Ceramic
C3314	VCCCCZ1HH3R0CY	AA		J	Capacitor 30p 50V Ceramic
C3315	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3316	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3317	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3318	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3319	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3320	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3321	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3322	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3323	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3324	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3325	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3326	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3327	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3328	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3329	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3330	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3331	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3332	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3333	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3334	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3335	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3336	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3337	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3338	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3339	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3340	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3341	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3342	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3343	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3344	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3345	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3346	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3347	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C3348	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3349	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3350	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3351	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3352	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3353	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3354	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3355	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3356	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3357	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3358	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3359	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3360	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3361	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3362	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3363	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3364	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3365	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3366	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3367	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3368	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3369	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3370	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3371	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3372	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3373	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3374	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C3375	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3376	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3377	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C3378	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C3379	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3380	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3381	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3382	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3383	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3384	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3385	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3386	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3387	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3388	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3389	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3390	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3391	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C3393	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C3395	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3396	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3397	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3398	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3502	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3503	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3504	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3505	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3506	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3507	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3508	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3513	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3514	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3515	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3516	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3517	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3518	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C3520	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3521	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3522	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3523	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3524	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3525	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3526	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3531	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C3532	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3533	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3534	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3535	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3537	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3538	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3539	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C3540	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3541	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3542	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3543	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3544	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3545	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C3546	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C3547	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C4404	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4405	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4406	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4408	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4410	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4411	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C4417	VCKYCZ1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C4420	VCAAPE1CJ686MY	AE		J	Capacitor 68 16V Electrolytic
C8101	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8102	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8103	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8104	VCCCCZ1HH2R0CY	AA		J	Capacitor 20p 50V Ceramic
C8105	VCCCCZ1HH1R0CY	AB		J	Capacitor 10p 50V Ceramic
C8106	VCCCCZ1HH120JY	AB		J	Capacitor 12p 50V Ceramic
C8107	VCCCCZ1HH120JY	AB		J	Capacitor 12p 50V Ceramic
C8108	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8109	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8110	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8111	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8112	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8113	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8114	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8115	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8116	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8117	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8118	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8119	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8120	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8121	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8122	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8123	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8124	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8125	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8126	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8127	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8128	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8129	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8130	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8131	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8132	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8133	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8134	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8135	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8136	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8137	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8138	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8139	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8140	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8141	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8142	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8143	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8144	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8145	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8146	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8147	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8148	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8149	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8150	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C8151	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C8152	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8153	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8154	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8155	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8156	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8157	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8158	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8159	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8160	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8161	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8162	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8163	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8164	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8165	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8166	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8167	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8168	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8169	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8170	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8171	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8172	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8173	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8174	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8175	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8176	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8177	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C8178	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8179	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8180	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8181	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8182	VCKYCZ1HB272KY	AA		J	Capacitor 2700p 50V Ceramic
C8183	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8184	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8185	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8186	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8187	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8188	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8189	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8190	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8191	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8192	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8193	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8194	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8195	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8196	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8197	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8198	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8199	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8200	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8201	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8202	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8203	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8204	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8205	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8206	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8207	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8208	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8209	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8210	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8211	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8212	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8213	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8214	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8215	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8216	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8217	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8218	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8219	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8220	RC-KZA388WJZZY	AC		J	Capacitor 10 6.3V Ceramic
C8221	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8222	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8223	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8224	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8225	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C8226	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8227	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8228	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8229	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C8230	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8301	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C8302	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C8303	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8304	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8314	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8315	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8316	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8317	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8318	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8319	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8320	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8321	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8322	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8327	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8328	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8329	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8330	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8331	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8332	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8333	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8334	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8335	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8336	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8337	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8338	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8339	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8340	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8341	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8342	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8343	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8344	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8345	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C8346	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8347	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8348	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8349	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8350	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8351	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8352	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8353	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8354	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8355	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8356	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8357	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8358	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8359	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8360	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8361	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8362	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8363	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8364	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8365	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8366	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8367	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8368	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8369	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8370	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8371	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8372	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8373	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8374	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8375	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8376	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8377	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8378	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8379	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8380	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8381	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8382	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8383	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8384	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8385	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8386	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8387	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8388	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8389	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8390	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8391	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8392	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8393	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8394	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8395	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8397	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C8702	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8703	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8704	VCCCCZ1HH1R0CY	AB		J	Capacitor 10p 50V Ceramic
C8705	VCCCCZ1HH1R0CY	AB		J	Capacitor 10p 50V Ceramic
C8707	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8709	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C8715	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C8717	VCCCCZ1HH680JY	AB		J	Capacitor 68p 50V Ceramic
C8718	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C9101	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9104	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9105	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9106	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9107	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9108	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9109	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9110	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9111	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9112	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9113	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9114	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9115	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic
C9117	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9301	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9601	VCKYCZ1EB822KY	AA		J	Capacitor 8200p 25V Ceramic
C9602	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C9603	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C9604	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9605	VCKYCZ1EB822KY	AA		J	Capacitor 8200p 25V Ceramic
C9606	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C9607	VCKYCZ1CB153KY	AB		J	Capacitor 0.015 16V Ceramic
C9608	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9609	VCKYCZ1HB332KY	AA		J	Capacitor 3300p 50V Ceramic
C9610	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
C9611	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C9612	VCKYCZ1HB332KY	AA		J	Capacitor 3300p 50V Ceramic
C9613	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C9614	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C9615	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9616	VCKYCZ1HB472KY	AA		J	Capacitor 4700p 50V Ceramic
C9617	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9618	VCAAPD1DJ476MY	AF		J	Capacitor 47 20V Electrolytic
C9619	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9620	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9621	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9622	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9623	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9624	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9625	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C9626	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C9627	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9629	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9630	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9631	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C9633	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C9634	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9636	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9638	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9640	VCKYCZ1HB332KY	AA		J	Capacitor 3300p 50V Ceramic
C9641	VCKYCZ1EB822KY	AA		J	Capacitor 8200p 25V Ceramic
C9642	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9643	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C9644	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9647	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9648	VCKYCZ1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C9649	RC-KZA195WJZZY	AB		J	Capacitor 10 10V Ceramic
C9650	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9651	VCKYCZ1EB682KY	AB		J	Capacitor 6800p 25V Ceramic
C9652	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C9653	VCKYCZ1EB822KY	AA		J	Capacitor 8200p 25V Ceramic
C9654	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9655	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic
C9656	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9657	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C9658	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C9659	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C9660	VCKYCZ1CF104ZY	AA		J	Capacitor 0.1 16V Ceramic
C9661	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9662	VCAAPD1DJ476MY	AF		J	Capacitor 47 20V Electrolytic
C9663	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9664	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C9665	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9666	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C9668	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C9669	VCKYCZ1HB222KY	AB		J	Capacitor 2200p 50V Ceramic
C9671	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C9672	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C9673	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
C9674	VCAAPE0JJ107MY	AE		J	Capacitor 100 6.3V Electrolytic
C9675	VCAAPE0JJ227MY	AE		J	Capacitor 220 6.3V Electrolytic
D1101	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1102	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1502	VHDDAN222//-1Y	AA		J	Diode DAN222TL
D1503	VHDDAN222//-1Y	AA		J	Diode DAN222TL
D1504	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML
D1506	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML
D1507	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML
D1508	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML
D1509	VHDRB520S30-1Y	AC		J	Diode RB520S-30TE61
D1512	VHDDAN222//-1Y	AA		J	Diode DAN222TL
D1513	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1515	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1516	VHDDAN222//-1Y	AA		J	Diode DAN222TL
D1517	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D1519	RH-EX0259TAZZY	AB		J	Zener Diode PDZ5.6B,115
D1802	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D2003	RH-PXA037WJZZY	AB		J	Diode SML-310MTT86
D2401	VHDMA3120WA-1Y	AD		J	Diode MAZ3120D0L
D2402	VHDMA3120WA-1Y	AD		J	Diode MAZ3120D0L
D2403	RH-EX0259TAZZY	AB		J	Zener Diode PDZ5.6B,115
D2404	VHD1PS184++-1Y	AB		J	Diode 1PS184,115
D2405	VHD1PS184++-1Y	AB		J	Diode 1PS184,115
D3301	VHDDAN217U+-1Y	AB		J	Diode DAN217UT106
D3302	VHDDAN217U+-1Y	AB		J	Diode DAN217UT106
D3303	VHDDAN217U+-1Y	AB		J	Diode DAN217UT106
D8101	RH-PXA037WJZZY	AB		J	Diode SML-310MTT86
D8102	RH-PXA037WJZZY	AB		J	Diode SML-310MTT86
D8103	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML
D8104	RH-EXA523WJZZY	AB	N	J	Zener Diode MAZ8056GML

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
D9601	VHDDAN217U+-1Y	AB		J	Diode DAN217UT106
D9602	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D9604	VHDD1FH3+++-1Y	AD		J	Diode D1FH3
D9605	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D9606	RH-EX1395CEZZY	AC		J	Zener Diode UDZSNPTE-176.2B
D9607	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D9608	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D9609	RH-EX1227CEZZY	AB		J	Zener Diode HZU2.7B1TRF-E
D9610	VHDDAN217U+-1Y	AB		J	Diode DAN217UT106
D9611	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D9612	RH-EXA089WJZZY	AB		J	Zener Diode UDZSNPTE-174.3B
FB1101	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1102	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1103	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1104	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1105	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1501	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1502	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1503	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1504	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB1505	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1506	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1507	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1508	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB1509	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB1510	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB1515	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB2001	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2002	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB2003	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2004	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2005	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2006	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB2007	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2008	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2009	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2010	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2011	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2402	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2403	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB2404	RBLN-0061TAZZY	AD		J	Balun BLN-0061TA
FB3303	RBLN-A021WJZZY	AA		J	Balun BLN-A021WJ
FB3304	RBLN-A021WJZZY	AA		J	Balun BLN-A021WJ
FB3305	RBLN-A021WJZZY	AA		J	Balun BLN-A021WJ
FB3306	RBLN-A021WJZZY	AA		J	Balun BLN-A021WJ
FB3307	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3308	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3309	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3310	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3311	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3312	RBLN-A021WJZZY	AA		J	Balun BLN-A021WJ
FB3313	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3314	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3315	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB3501	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB4402	RBLN-0210TAZZY	AB		J	Balun BLN-0210TA
FB8101	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8102	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8103	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8104	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8105	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8106	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8107	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8108	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8109	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8110	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8111	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8112	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8113	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8114	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8115	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8116	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8117	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8118	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8119	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8120	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8121	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB8701	RBLN-A274WJZZY	AB		J	Balun BLN-A274WJ
FB9603	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FL1501	RFiLN0003TAZZY	AD		J	Filter
FL1502	RFiLN0003TAZZY	AD		J	Filter
FL1503	RFiLN0003TAZZY	AD		J	Filter
FL2001	RFiLZA023WJQZY	AD		J	Filter
IC1501	RH-iXC285WJQZS	AL		J	IC HDMI_EXT5
IC1502	RH-iXC286WJQZS	AL		J	IC HDMI_EXT6

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
IC1503	RH-iXC287WJQZS	AH		J	IC RGB (PC)_EXT7
IC1504	VHiNJM2750M-1Y	AH		J	IC NJM2750M(TE2)
IC1505	RH-iXC284WJQZS	AL		J	IC HDMI_EXT4
IC1506	VHiTC7W08U/-1Y	AD		J	IC TC7W08FU(TE12L,F)
IC1507	VHiSii9185+-1Q	AP		J	IC SII9185CTU
IC1508	VHiAHC1G08W-1Y	AD		J	IC 74AHC1G08GW/G,125
IC1805	VHiBH33FB1G-1Y	AD		J	IC BH33FB1WG-TR
IC2001	VHiBD5224G+-1Y	AD		J	IC BD5224G-TR
IC2002	RH-iXB986WJN8Q	AW		J	IC Monitor Microcomputer
IC2004	VHiBR24L08F-1Y	AE		J	IC BR24L08F-WE2
IC2006	VHiTCVHC32T-1Y	AE		J	IC TC74VHC32FT(EL)
IC2008	VHi7WH126FU-1Y	AE		J	IC TC7WH126FU(TE12L,F)
IC2009	VHiLCX125FT-1Y	AD		J	IC TC74LCX125FT(EL,K)
IC2010	VHiTC7W00U/-1Y	AE		J	IC TC7W00FU(TE12L,F)
IC2011	VHiTC7W08U/-1Y	AD		J	IC TC7W08FU(TE12L,F)
IC2401	VHi7WH126FU-1Y	AE		J	IC TC7WH126FU(TE12L,F)
IC2402	VHiLCX157FT-1Y	AD		J	IC TC74LCX157FT(EKJ)
IC2403	VHiiSL83220-1Y	AQ		J	IC ISL83220ECVZ-T
IC2601	VHiTC7W66U/-1Y	AE		J	IC TC7W66FU(TE12L,F)
IC2602	VHiM62332FP-1Y	AL		J	IC M62332FPCF5J
IC3301	RH-iXC010WJQZQ	BU		J	IC SVP-WX68(7568W-LF)
IC3501	RH-iXC163WJQZQ	AZ		J	IC K4D263238-VC40
IC3502	RH-iXC163WJQZQ	AZ		J	IC K4D263238-VC40
IC4401	VHiLCX245FT-1Y	AD		J	IC TC74LCX245FT(EKJ)
IC4402	VHiLCX573FT-1Y	AF		J	IC TC74LCX573FT(EKJ)
IC4403	VHiTC7SH08U-1Y	AF		J	IC TC7SH08FU(TE85L,JF)
IC4404	VHiLCX244FT-1Y	AE		J	IC TC74LCX244FT(EL,K)
IC4405	VHiLCX573FT-1Y	AF		J	IC TC74LCX573FT(EKJ)
IC4406	VHiAHC1G32W-1Y	AD		J	IC 74AHC1G32GW,125
IC4408	VHiAHC1G02W-1Y	AD		J	IC 74AHC1G02GW,125
IC8101	RH-iXC011WJQZQ	BU		J	IC HiDTVPro-LX66(8166LF)
IC8301	RH-iXC154WJQZQ	AZ		J	IC K4N56163QI-ZC2A
IC8302	RH-iXC154WJQZQ	AZ		J	IC K4N56163QI-ZC2A
IC8303	RH-iXC154WJQZQ	AZ		J	IC K4N56163QI-ZC2A
IC8304	RH-iXC154WJQZQ	AZ		J	IC K4N56163QI-ZC2A
IC8701	VHiS29GL128-1Q	AZ		J	IC S29GL128N90TFIR20H
IC8702	RH-iXC150WJQZY	AQ		J	IC ICS475GI-14LFT
IC8704	VHiS24CS64A-1Y	AF		J	IC S-24CS64AOI-J8T1G
IC9101	RH-iXC121WJQZQ	AX		J	IC XC95288XL-10TQG144C
IC9104	VHiTCLCX08FT1Y	AD		J	IC TC74LCX08FT(EL,K)
IC9105	VHi74VHC541-1Y	AE		J	IC TC74VHC541FT(EKJ)
IC9106	VHi74VHC04T-1Y	AD		J	IC TC74VHC04FT(EL,K)
IC9301	VHiLTC1694C-1Y	AM		J	IC LTC1694CS5#TRPBF
IC9601	VHiTPS40055-1Y	AN		J	IC TPS40055PWPR
IC9602	VHiMP2367DN-1Y	AH		J	IC MP2367DN-LF-Z
IC9603	VHiTPS40055-1Y	AN		J	IC TPS40055PWPR
IC9604	VHiTPS40055-1Y	AN		J	IC TPS40055PWPR
IC9605	VHiPQ025ENA-1Y	AE		J	IC PQ025ENA1ZPH
IC9606	VHiTPS40055-1Y	AN		J	IC TPS40055PWPR
J1501	QJAKJ0008GEZZ	AD		J	Jack
J1502	QJAKJ0008GEZZ	AD		J	Jack
L1103	VPSBN100J1R2NY	AB		J	Coil Peaking 10μH
L1104	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH
L1105	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH
L1106	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH
L1501	RCiLFA116WJZZY	AE		J	Coil
L1502	RCiLFA116WJZZY	AE		J	Coil
L1503	RCiLFA116WJZZY	AE		J	Coil
L1504	RCiLFA116WJZZY	AE		J	Coil
L1506	RCiLFA116WJZZY	AE		J	Coil
L1507	RCiLFA116WJZZY	AE		J	Coil
L1508	RCiLFA116WJZZY	AE		J	Coil
L1509	RCiLFA116WJZZY	AE		J	Coil
L1510	RCiLFA116WJZZY	AE		J	Coil
L1511	RCiLFA116WJZZY	AE		J	Coil
L1512	RCiLFA116WJZZY	AE		J	Coil
L1513	RCiLFA116WJZZY	AE		J	Coil
L2601	RCiLFA154WJZZY	AC		J	Coil
L2602	RCiLFA154WJZZY	AC		J	Coil
L2603	RCiLFA154WJZZY	AC		J	Coil
L2604	RCiLFA154WJZZY	AC		J	Coil
L2605	RCiLFA154WJZZY	AC		J	Coil
L2606	RCiLFA154WJZZY	AC		J	Coil
L2607	RCiLFA154WJZZY	AC		J	Coil
L2608	RCiLFA154WJZZY	AC		J	Coil
L2609	RCiLFA154WJZZY	AC		J	Coil
L2610	RCiLFA154WJZZY	AC		J	Coil
L2611	RCiLFA154WJZZY	AC		J	Coil
L2612	RCiLFA154WJZZY	AC		J	Coil
L3301	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH
L3302	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH
L3303	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH
L3304	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH
L3305	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH
L3306	VPCWM2R2MR10NY	AC		J	Coil Peaking 2.2μH

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
L9601	RCiLPA086WJZZY	AE		J	Coil
L9602	RCiLPA084WJZZY	AE		J	Coil
L9603	RCiLPA084WJZZY	AE		J	Coil
L9604	RCiLPA084WJZZY	AE		J	Coil
L9605	RCiLPA086WJZZY	AE		J	Coil
L9606	RCiLPA765WJQZY	AE	N	J	Coil
LUG1101	QLUGHA006WJZZY	AC		J	Lug
LUG1102	QLUGHA006WJZZY	AC		J	Lug
LUG1103	QLUGHA006WJZZY	AC		J	Lug
LUG1104	QLUGHA006WJZZY	AC		J	Lug
LUG1105	QLUGHA006WJZZY	AC		J	Lug
LUG1106	QLUGHA006WJZZY	AC		J	Lug
LUG1107	QLUGHA006WJZZY	AC		J	Lug
P1101	QPLGNA334WJZZY	AD		J	Plug 14Pin(US)
P1103	QPLGNA342WJZZY	AD		J	Plug 8Pin(FE)
P2002	QPLGNA324WJZZY	AC		J	Plug 4Pin(KM)
P2003	QPLGNA335WJZZY	AD		J	Plug 15Pin(RA)
P2401	QPLGNA144WJZZY	AF		J	Plug 20Pin
P2601	QCNCWA671WJQZY	AH		J	Plug 41Pin(LW)
P2602	QPLGNA331WJZZY	AD		J	Plug 11Pin(LP)
P2603	QPLGNA329WJZZY	AD		J	Plug 9Pin(LB)
P9101	QPLGN0056CEZZY	AD		J	Plug 6Pin(Program Port)
P9601	QPLGNA168WJZZY	AF		J	Plug 12Pin(PD)
Q1104	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1105	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1106	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1115	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1116	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1117	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q1118	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q1119	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q1120	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q1122	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q1501	VSiMD2A////-1Y	AC		J	Transistor IMD2AT108
Q1509	VSKTA1535T+-1Y	AC		J	Transistor KTA1535T-RTK/P
Q1510	VSRT1N141U/-1Y	AB		J	Transistor RT1N141U-T111-1
Q1516	VSiMD2A////-1Y	AC		J	Transistor IMD2AT108
Q1802	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q1803	VSDTA124EKA-1Y	AB		J	Transistor DTA124EKAT146
Q1808	VSRT1N144U/-1Y	AB		J	Transistor RT1N144U-T111-1
Q1809	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q2004	VSRN1102///-1Y	AB		J	Transistor RN1102(TE85L,F)
Q2601	VSUM6K1NTN+-1Y	AC		J	Transistor UM6K1N TN
Q4401	RH-TXA026WJZZY	AD		J	Transistor PBLS2001D,115
Q8703	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q9101	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q9102	VSDTC144EE/-1Y	AA		J	Transistor DTC144EETL
Q9601	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q9603	VSRT1N144U/-1Y	AB		J	Transistor RT1N144U-T111-1
Q9604	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q9605	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q9606	VSSP8K4++++-1Y	AF		J	Transistor SP8K4TB
Q9607	VSSP8K4++++-1Y	AF		J	Transistor SP8K4TB
Q9608	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q9609	VSSP8K4++++-1Y	AF		J	Transistor SP8K4TB
Q9610	VSSP8K4++++-1Y	AF		J	Transistor SP8K4TB
R1101	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1103	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1104	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1105	VRS-CZ1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R1106	VRS-CZ1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R1112	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1113	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1114	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1116	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R1121	VRS-TV1JD102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1122	VRS-TV1JD102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1123	VRS-TV1JD102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1128	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R1132	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R1133	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1135	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1142	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1151	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1152	VRS-CZ1JF563JY	AA		J	Resistor 56k 1/16W Metal Oxide
R1153	VRS-CZ1JF123JY	AA		J	Resistor 12k 1/16W Metal Oxide
R1154	VRS-CZ1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R1155	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1156	VRS-CZ1JF393JY	AA		J	Resistor 39k 1/16W Metal Oxide
R1157	VRS-CZ1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R1158	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1159	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1160	VRS-CZ1JF822JY	AA		J	Resistor 8.2k 1/16W Metal Oxide
R1162	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1164	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R1166	VRS-TV1JD000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1503	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1504	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1508	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1509	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1510	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1511	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1513	VRK-SB1FF101JY	AA		J	Resistor 100 1/32W Metal Composition
R1515	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1516	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1517	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1519	VRS-CZ1JF273JY	AA		J	Resistor 27k 1/16W Metal Oxide
R1520	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1521	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1522	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1523	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1524	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1526	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1527	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1528	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1529	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1531	VRK-SA1JF473JY	AC		J	Resistor 47k 1/16W Metal Composition
R1532	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1533	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1534	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1535	VRK-SA1JF473JY	AC		J	Resistor 47k 1/16W Metal Composition
R1536	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1537	VRK-SA1JF473JY	AC		J	Resistor 47k 1/16W Metal Composition
R1538	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1540	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1541	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1542	VRS-CZ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R1543	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1544	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1546	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1547	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1551	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1552	VRS-TV1JD750JY	AA		J	Resistor 75 1/16W Metal Oxide
R1553	VRS-TV1JD750JY	AA		J	Resistor 75 1/16W Metal Oxide
R1554	VRS-TV1JD750JY	AA		J	Resistor 75 1/16W Metal Oxide
R1555	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1556	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1560	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1561	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1562	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1563	VRS-CZ1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R1565	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1568	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1570	VRS-CZ1JF152JY	AA		J	Resistor 1.5k 1/16W Metal Oxide
R1575	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1579	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1593	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1595	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1604	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1606	VRS-CZ1JF152JY	AA		J	Resistor 1.5k 1/16W Metal Oxide
R1607	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R1609	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R1622	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1801	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1817	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1819	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1820	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R2001	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2003	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R2004	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2005	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2007	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2008	VRS-CJ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2010	VRS-CJ1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R2011	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R2012	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R2013	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R2016	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2018	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2019	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R2023	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2024	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2025	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R2026	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2027	VRS-CZ1JF394JY	AA		J	Resistor 390k 1/16W Metal Oxide
R2028	VRS-CZ1JF106JY	AA		J	Resistor 10M 1/16W Metal Oxide
R2030	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2032	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R2033	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2035	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R2036	VRK-SB1FF223JY	AA		J	Resistor 22k 1/32W Metal Composition
R2038	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R2039	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2040	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2041	VRS-CZ1JF152JY	AA		J	Resistor 1.5k 1/16W Metal Oxide
R2042	VRK-SB1FF101JY	AA		J	Resistor 100 1/32W Metal Composition
R2043	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2044	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R2045	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2047	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2048	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2049	VRS-CZ1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R2050	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2051	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R2052	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2053	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R2054	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2055	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2057	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2061	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2062	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2063	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2066	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2067	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2068	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2070	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2071	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R2072	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2074	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2075	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2077	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2079	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2081	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2082	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2088	VRS-CZ1JF393JY	AA		J	Resistor 39k 1/16W Metal Oxide
R2089	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2091	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2092	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R2093	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2094	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R2096	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2402	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R2405	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2406	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2407	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R2408	VRS-TV1JD101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2409	VRS-TV1JD101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2410	VRS-TV1JD101JY	AA		J	Resistor 100 1/16W Metal Oxide
R2414	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2415	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2417	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2418	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2420	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2421	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R2422	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2423	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2425	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R2426	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R2428	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2429	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R2430	VRS-CZ1JF105JY	AA		J	Resistor 1.0M 1/16W Metal Oxide
R2432	VRS-CZ1JF105JY	AA		J	Resistor 1.0M 1/16W Metal Oxide
R2436	VRS-CJ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2601	VRK-SB1FF223JY	AA		J	Resistor 22k 1/32W Metal Composition
R2602	VRK-SB1FF223JY	AA		J	Resistor 22k 1/32W Metal Composition
R2603	VRK-SA1JF103JY	AB		J	Resistor 10k 1/16W Metal Composition
R2604	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2605	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2606	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2607	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2608	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2609	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2610	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2611	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R2612	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2613	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2614	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2617	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2618	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2619	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2620	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2623	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2628	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2629	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R3302	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R3303	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R3304	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R3305	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R3306	VRS-TW2ED750JY	AA		J	Resistor 75 1/4W Metal Oxide
R3307	VRS-TW2ED750JY	AA		J	Resistor 75 1/4W Metal Oxide
R3308	VRS-TW2ED750JY	AA		J	Resistor 75 1/4W Metal Oxide
R3309	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3311	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3314	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3315	VRS-CZ1JF105JY	AA		J	Resistor 1.0M 1/16W Metal Oxide
R3316	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R3317	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3318	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R3319	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3320	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3321	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3322	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3323	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3327	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R3328	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3329	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R3330	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R3331	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3332	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3333	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3337	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3338	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3339	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3340	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R3341	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3342	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3343	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3344	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3345	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3346	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3347	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3348	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3349	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3350	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3351	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3352	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3353	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3354	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3355	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R3501	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3502	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3503	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3506	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3507	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3509	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3511	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3512	VRS-CZ1JF680JY	AB		J	Resistor 68 1/16W Metal Oxide
R3513	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R3514	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3516	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3521	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3524	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3525	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3526	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3527	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3528	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3530	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3532	VRS-CZ1JF510JY	AA		J	Resistor 51 1/16W Metal Oxide
R3539	VRS-CZ1JF510JY	AA		J	Resistor 51 1/16W Metal Oxide
R3540	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3541	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3542	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3543	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3544	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3546	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3554	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3555	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3556	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3557	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition
R3558	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3560	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3570	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3571	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3572	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3573	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3574	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3575	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3576	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3577	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R3578	VRK-SB1FF330JY	AA		J	Resistor 33 1/32W Metal Composition

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R3579	VRK-SB1FF680JY	AA		J	Resistor 68 1/32W Metal Composition
R4401	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4402	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4403	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4404	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4405	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4406	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4408	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R4409	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R4410	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R4411	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4413	VRS-CJ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4417	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4419	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4420	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4421	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4422	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4423	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4425	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4426	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4427	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4428	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4429	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R4430	VRS-CZ1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R4431	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4432	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4436	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4437	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4441	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R4447	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8101	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8102	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8103	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8104	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8105	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R8106	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R8107	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R8108	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R8109	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R8110	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8111	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8112	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8113	VRS-CZ1JF201JY	AA		J	Resistor 200 1/16W Metal Oxide
R8114	VRS-CZ1JF4R7JY	AA		J	Resistor 4.7 1/16W Metal Oxide
R8115	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8116	VRS-CZ1JF105JY	AA		J	Resistor 1.0M 1/16W Metal Oxide
R8118	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R8119	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8120	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8121	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8122	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8123	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8124	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8125	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8126	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R8127	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8128	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8129	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8130	VRK-SB1FF103JY	AA		J	Resistor 10k 1/32W Metal Composition
R8131	VRS-CZ1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R8132	VRS-CZ1JF431JY	AA		J	Resistor 430 1/16W Metal Oxide
R8133	VRS-CZ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R8135	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R8136	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R8137	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R8140	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8141	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8147	VRS-CZ1JF182JY	AA		J	Resistor 1.8k 1/16W Metal Oxide
R8148	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8149	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8150	VRS-CZ1JF683JY	AA		J	Resistor 68k 1/16W Metal Oxide
R8151	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8152	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8153	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8154	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8155	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8156	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8159	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R8160	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R8161	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8162	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8163	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8165	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R8167	VRS-CZ1JF182JY	AA		J	Resistor 1.8k 1/16W Metal Oxide
R8169	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R8174	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R8175	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8301	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8302	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8303	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8304	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R8305	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8306	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8307	VRK-SB1FF100JY	AA		J	Resistor 10 1/32W Metal Composition
R8308	VRK-SB1FF100JY	AA		J	Resistor 10 1/32W Metal Composition
R8309	VRK-SB1FF100JY	AA		J	Resistor 10 1/32W Metal Composition
R8310	VRK-SB1FF100JY	AA		J	Resistor 10 1/32W Metal Composition
R8311	VRK-SB1FF100JY	AA		J	Resistor 10 1/32W Metal Composition
R8332	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R8333	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R8702	VRS-CZ1JF184JY	AA		J	Resistor 180k 1/16W Metal Oxide
R8703	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8710	VRS-CZ1JF121JY	AA		J	Resistor 120 1/16W Metal Oxide
R8712	VRS-CZ1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R8713	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R8714	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8718	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition
R8722	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R8723	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R8729	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R8730	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R9103	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R9105	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R9110	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9111	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9112	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9115	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9116	VRK-SB1FF472JY	AA		J	Resistor 4.7k 1/32W Metal Composition
R9117	VRS-CZ1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R9118	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R9119	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9120	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9122	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9123	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9124	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9127	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9130	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9134	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9135	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9137	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9138	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9139	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9140	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9141	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9142	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9144	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9145	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9151	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9152	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9153	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9154	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9157	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9158	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R9159	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9162	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9163	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9164	VRS-CZ1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R9181	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9185	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9186	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9187	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9188	VRS-CZ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R9301	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9302	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9303	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9304	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9305	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9308	VRK-SA1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Composition
R9310	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9311	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9314	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R9316	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R9318	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R9320	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R9321	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9323	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R9324	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R9325	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9326	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9327	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
R9328	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9329	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9330	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9331	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9332	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9333	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9334	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9335	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R9601	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9602	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9603	VRS-CZ1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R9604	VRS-CZ1JF224JY	AA		J	Resistor 220k 1/16W Metal Oxide
R9605	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9606	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9607	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9608	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R9609	VRS-CZ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R9610	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R9612	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9613	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9614	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9615	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9616	VRS-CZ1JF103FY	AB		J	Resistor 10k 1/16W Metal Oxide
R9617	VRS-CZ1JF822FY	AA		J	Resistor 8.2k 1/16W Metal Oxide
R9618	VRS-CZ1JF183FY	AA		J	Resistor 18k 1/16W Metal Oxide
R9619	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9621	VRS-CZ1JF153JY	AA		J	Resistor 15k 1/16W Metal Oxide
R9622	VRS-CZ1JF822JY	AA		J	Resistor 8.2k 1/16W Metal Oxide
R9623	VRS-CZ1JF561FY	AA		J	Resistor 560 1/16W Metal Oxide
R9624	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9625	VRS-CZ1JF433FY	AA		J	Resistor 43k 1/16W Metal Oxide
R9626	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9628	VRS-CZ1JF3R3JY	AA		J	Resistor 3.3 1/16W Metal Oxide
R9629	VRS-CZ1JF184JY	AA		J	Resistor 180k 1/16W Metal Oxide
R9630	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9631	VRS-CZ1JF3R3JY	AA		J	Resistor 3.3 1/16W Metal Oxide
R9632	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9633	VRS-TW2HF101JY	AA		J	Resistor 100 1/2W Metal Oxide
R9634	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9635	VRS-TW2HF101JY	AA		J	Resistor 100 1/2W Metal Oxide
R9636	VRS-CZ1JF303FY	AA		J	Resistor 30k 1/16W Metal Oxide
R9638	VRS-CZ1JF153JY	AA		J	Resistor 15k 1/16W Metal Oxide
R9639	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R9640	VRS-CZ1JF331FY	AA		J	Resistor 330 1/16W Metal Oxide
R9641	VRS-CZ1JF473FY	AA		J	Resistor 47k 1/16W Metal Oxide
R9642	VRS-CZ1JF184JY	AA		J	Resistor 180k 1/16W Metal Oxide
R9643	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R9644	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R9645	VRS-TW2HF101JY	AA		J	Resistor 100 1/2W Metal Oxide
R9646	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R9647	VRS-CZ1JF153FY	AA		J	Resistor 15k 1/16W Metal Oxide
R9649	VRS-CZ1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R9653	VRS-CZ1JF224JY	AA		J	Resistor 220k 1/16W Metal Oxide
R9654	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9656	VRS-CZ1JF272FY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R9657	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9658	VRS-CZ1JF101FY	AA		J	Resistor 100 1/16W Metal Oxide
R9659	VRS-CZ1JF133FY	AA		J	Resistor 13k 1/16W Metal Oxide
R9660	VRS-CZ1JF3R3JY	AA		J	Resistor 3.3 1/16W Metal Oxide
R9661	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9662	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9663	VRS-CZ1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R9664	VRS-CZ1JF3R3JY	AA		J	Resistor 3.3 1/16W Metal Oxide
R9665	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R9666	VRS-CZ1JF133FY	AA		J	Resistor 13k 1/16W Metal Oxide
SC1101	QCNCWA673WJZZY	AF		J	Connector 82Pin
SC1501	QSOCZA136WJZZQ	AG		J	Sccket 23Pin(TMDS Input 2)
SC1502	QSOCZA136WJZZQ	AG		J	Sccket 23Pin(TMDS Input 3)
SC1503	QSOCZA136WJZZQ	AG		J	Sccket 23Pin(TMDS Input 1)
SC1504	QSOCNA716WJZZ	AM	N	R	Socket 17Pin(Black)
SC2401	QSOCNA715WJZZ	AL	N	R	Socket 11Pin
SC4602	QSOCNA003WJZZY	AM		J	Socket, 100Pin
SC9301	QCNCWA562WJQZY	AF		J	Connector 60Pin(To PC Card)
SLD3501	PSLDMB235WJFW	AD		J	Shield
TH2001	VHHM1103J03-1Y	AC		J	Thermistor
VA1501	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1502	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1503	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1504	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1505	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1506	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1507	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1508	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1509	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1510	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKE237FM02 (MAIN Unit)					
VA1511	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1512	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1513	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1514	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1515	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1516	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1517	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1518	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1519	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1520	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1521	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1522	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1523	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
VA1524	RH-VXA187WJQZY	AB		J	Varistor EZAEG2A50AX
X2001	RCRSC0032TAZZY	AG		J	Crystal, 32.768kHz
X3301	RCRSCA174WJQZY	AG		J	Crystal
X8101	RCRSCA174WJQZY	AG		J	Crystal
X8102	RCRSC0032TAZZY	AG		J	Crystal, 32.768kHz
X8701	RCRSCA086WJZZY	AG		J	Crystal 27MHz
N	PSHEPA540WJZZ	AD		J	Sheet
N	QCNCMA225WJSA	AY		J	Card Slot
N	QCNWNA883AWPZ	AD		J	Connecting Cord (DDR1 G_G)
N	XBPSN20P14JS0	AB		J	Screw (Card Slot), x4
[4] DUNTKE238FM01 (TERMINAL Unit)					
C401	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C402	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C403	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C405	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C408	VCCCCY1HH221JY	AA		J	Capacitor 220p 50V Ceramic
C411	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C414	RC-KZA383WJZZY	AC		J	Capacitor 10 25V Ceramic
C417	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C420	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C422	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C423	RC-KZA178WJZZY	AC		J	Capacitor 4.7 25V Ceramic
C424	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C426	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C428	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C429	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C430	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C431	VCKYCY1HF103ZY	AA		J	Capacitor 0.01 50V Ceramic
C432	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C433	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C501	VCERMZ1CN107MY	AD		J	Capacitor 100 16V Electrolytic
C502	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C503	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C504	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C505	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C506	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C507	VCKYCY1HF103ZY	AA		J	Capacitor 0.01 50V Ceramic
C511	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C512	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C513	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C514	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C515	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C516	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C517	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C518	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C519	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C524	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C525	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C528	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C531	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C532	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C533	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C534	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C535	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C536	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C537	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C538	VCKYCY1HB221KY	AA		J	Capacitor 220p 50V Ceramic
C539	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C540	VCKYCY1HF103ZY	AA		J	Capacitor 0.01 50V Ceramic
C541	VCKYCY1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C542	VCKYCY1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C543	VCKYCY1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C544	VCKYCY1HB331KY	AA		J	Capacitor 330p 50V Ceramic
C545	VCKYCY1HB471KY	AA		J	Capacitor 470p 50V Ceramic
C546	VCKYCY1HB471KY	AA		J	Capacitor 470p 50V Ceramic
C547	VCKYCY1HB471KY	AA		J	Capacitor 470p 50V Ceramic
C548	VCKYCY1HB471KY	AA		J	Capacitor 470p 50V Ceramic
C549	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C550	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C551	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C552	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
C553	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C554	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C555	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C556	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C557	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C558	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C559	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C560	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C561	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C562	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C563	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C564	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C565	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C566	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C567	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C568	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C569	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C571	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C572	VCERMZ1CN107MY	AD		J	Capacitor 100 16V Electrolytic
C574	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C575	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C577	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C578	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C579	VCERML1CN226MY	AC		J	Resistor 220 1/16W Metal Oxide
C580	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C581	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C582	VCCCCY1HH560JY	AB		J	Capacitor 56p 50V Ceramic
C583	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C584	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C585	VCCCCY1HH560JY	AB		J	Capacitor 56p 50V Ceramic
C586	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C587	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C588	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C589	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C590	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C591	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C592	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C593	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C594	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C595	VCCCCY1HH181JY	AA		J	Capacitor 180p 50V Ceramic
C596	VCCCCY1HH331JY	AA		J	Capacitor 330p 50V Ceramic
C600	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C601	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C602	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C603	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C604	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C605	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C606	RC-KZA154WJZZY	AB		J	Capacitor 4.7 16V Ceramic
C607	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C610	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C612	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C613	RC-KZA154WJZZY	AB		J	Capacitor 4.7 16V Ceramic
C614	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C615	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C617	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C620	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C621	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C622	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C623	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C624	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C625	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C626	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C627	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C628	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C629	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C1301	RC-KZA030WJZZY	AB		J	Capacitor 2.2 10V Ceramic
C1302	RC-KZA030WJZZY	AB		J	Capacitor 2.2 10V Ceramic
C1306	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C1307	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C1308	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1309	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1310	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C1311	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C1312	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C1313	VCKYCY1AB105KY	AB		J	Capacitor 1 10V Ceramic
C1314	VCEASY1EN107MY	AC		J	Capacitor 100 25V Electrolytic
C1315	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1316	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1317	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1318	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C1319	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C1320	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C1321	VCKYTV1EB474KY	AC		J	Capacitor 0.47 25V Ceramic
C1328	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1329	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
C1330	RC-KZA114WJZZY	AB		J	Capacitor 1 25V Ceramic
C1402	VCEASX0JN476MY	AC		J	Capacitor 47 6.3V Electrolytic
C1404	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C1405	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1406	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1407	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1408	VCCCCY1HH100DY	AA		J	Capacitor 10p 50V Ceramic
C1409	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1410	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1411	VCCCCY1HH100DY	AA		J	Capacitor 10p 50V Ceramic
C1412	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1413	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1414	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1415	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1416	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1417	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1418	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C1419	VCCCCY1HH270JY	AA		J	Capacitor 27p 50V Ceramic
C1420	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C1421	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1422	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1423	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1424	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1425	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1426	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1427	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1428	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1429	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C1430	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1431	VCCCCY1HH330JY	AA		J	Capacitor 33p 50V Ceramic
C1432	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1433	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1434	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1435	RC-KZA154WJZZY	AB		J	Capacitor 4.7 16V Ceramic
C1436	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1437	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1438	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1439	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1440	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1441	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1442	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1443	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1444	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1445	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1446	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1447	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1448	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1449	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1450	VCCCCY1HH100DY	AA		J	Capacitor 10p 50V Ceramic
C1451	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1452	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1453	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1454	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1455	RC-KZA009WJZZY	AB		J	Capacitor 2.2 6.3V Ceramic
C1456	VCERMZ1CN107MY	AD		J	Capacitor 100 16V Electrolytic
C1457	VCERMZ1CN107MY	AD		J	Capacitor 100 16V Electrolytic
C1458	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1459	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C1460	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C1461	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C1462	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C1464	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1465	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1466	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1467	VCKYTV1CB105KY	AC		J	Capacitor 1 16V Ceramic
C1468	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7501	VCEASX1AN336MY	AC		J	Capacitor 33 10V Electrolytic
C7502	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7503	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7504	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7507	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C7508	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7509	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7510	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C7511	VCEASX1CN107MY	AC		J	Capacitor 100 16V Electrolytic
C7512	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C7513	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7514	VCCCCY1HH101JY	AA		J	Capacitor 100p 50V Ceramic
C7515	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7516	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7517	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7518	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7519	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7520	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7521	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
C7522	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7523	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7524	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7525	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7526	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7527	VCCCCY1HH121JY	AA		J	Capacitor 120p 50V Ceramic
C7528	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7529	VCEASX1CN107MY	AC		J	Capacitor 100 16V Electrolytic
C7530	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7532	VCKYTV1CB224KY	AB		J	Capacitor 0.22 16V Ceramic
C7533	VCCCCY1HH391JY	AB		J	Capacitor 390p 50V Ceramic
C7535	VCKYCY1HB152KY	AA		J	Capacitor 1500p 50V Ceramic
C7536	VCEASY1CN227MY	AC		J	Capacitor 220 16V Electrolytic
C7537	VCCCCY1HH180JY	AA		J	Capacitor 18p 50V Ceramic
C7538	VCKYTV1CB474KY	AC		J	Capacitor 0.47 16V Ceramic
C7540	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7541	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C7542	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7543	VCCCCY1HH4R0CY	AA		J	Capacitor 40p 50V Ceramic
C7544	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C7547	VCKYCY1HB103KY	AA		J	Capacitor 0.01 50V Ceramic
C7548	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C7550	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7552	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7553	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7554	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7556	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7560	VCCCCY1HH220JY	AA		J	Capacitor 22p 50V Ceramic
C7561	VCCCCY1HH270JY	AA		J	Capacitor 27p 50V Ceramic
C7564	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7566	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7568	VCKYCY1HB222KY	AA		J	Capacitor 2200p 50V Ceramic
C7572	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7573	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7574	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7575	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C7576	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7577	VCKYCY1EF104ZY	AA		J	Capacitor 0.1 25V Ceramic
C7580	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
D405	VHDRB055L40-1Y	AC		J	Diode RB055L-40TE25
D408	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D409	VHD1SS355//-1Y	AB		J	Diode 1SS355TE-17
D411	RH-EX1395CEZZY	AC		J	Zener Diode UDZSNPTE-176.2B
D501	VHPGPFSV51T-1	AF		J	Photodiode
D502	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D503	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D504	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D505	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D506	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D507	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D508	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D509	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D511	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D512	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D513	RH-EXA554WJZZY	AB		J	Zener Diode MAZ8150GML
D517	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D518	RH-EXA520WJZZY	AB		J	Zener Diode MAZ8051GML
D519	RH-EXA512WJZZY	AB		J	Zener Diode MAZ8039GHL
D520	RH-EXA554WJZZY	AB		J	Zener Diode MAZ8150GML
D521	VHDDAN222//-1Y	AA		J	Diode DAN222TL
D522	RH-EXA550WJZZY	AB		J	Zener Diode MAZ8130GML
D523	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D524	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D525	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D526	RH-EXA535WJZZY	AM		J	Zener Diode MAZ8082GML
D530	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D531	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D532	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D541	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D542	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D543	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D544	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D545	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D546	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D548	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D550	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D551	VHD1PS184++-1Y	AB		J	Diode 1PS184,115
D7501	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D7503	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D7504	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D7505	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
D7506	VHD1SS390++-1Y	AB		J	Diode 1SS390TE61
FB401	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA
FB402	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FB404	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
FB406	RBLN-0207TAZZY	AB		J	Balun BLN-0207TA
FB501	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB502	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB503	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB504	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB505	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB506	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB507	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB508	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB509	RBLN-0065TAZZY	AA		J	Balun BLN-0065TA
FB510	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB511	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB512	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB513	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB514	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB515	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB516	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB517	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB518	RBLN-0065TAZZY	AA		J	Balun BLN-0065TA
FB519	RBLN-A188WJZZY	AA		J	Balun BLN-A188WJ
FB520	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB521	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB522	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB523	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB524	RBLN-A204WJZZY	AA		J	Balun BLN-A204WJ
FB1401	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA
FB1402	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA
FB1403	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA
FB7501	RBLN-0210TAZZY	AB		J	Balun BLN-0210TA
FB7502	RBLN-0253TAZZY	AA		J	Balun BLN-0253TA
FL501	RFiLN0017TAZZY	AC		J	Filter
FL502	RFiLN0017TAZZY	AC		J	Filter
FL503	RFiLN0017TAZZY	AC		J	Filter
FL504	RFiLN0017TAZZY	AC		J	Filter
FL505	RFiLN0017TAZZY	AC		J	Filter
FL506	RFiLN0017TAZZY	AC		J	Filter
FL507	RFiLN0017TAZZY	AC		J	Filter
FL508	RFiLN0017TAZZY	AC		J	Filter
FL509	RFiLN0017TAZZY	AC		J	Filter
FL510	RFiLN0017TAZZY	AC		J	Filter
FL511	RFiLN0003TAZZY	AD		J	Filter
FL512	RFiLN0003TAZZY	AD		J	Filter
FL513	RFiLN0003TAZZY	AD		J	Filter
FL7501	RFiLC0294BMZZ	AR		J	Filter
FL7502	RFiLC0278BMZZ	AM		J	Filter
IC402	VHiBD9305AF-1Y	AK		J	IC BD9305AFVM-TR
IC403	VHiBH15LB1G-1Y	AD		J	IC BH15LB1WG-TR
IC404	VHiPQ200WNA-1Y	AG		J	IC PQ200WNA1ZPH
IC405	VHiPQ033DNA-1Y	AE		J	IC PQ033DNA1ZPH
IC406	VHiPQ1R50//-1Y	AF		J	IC PQ1R50J0000H
IC501	VHiMM1507XN-1Y	AD		J	IC MM1507XNRE
IC502	VHiT7SET08U1EY	AC		J	IC TC7SET08FU(5L,JF,T
IC503	VHiMM1506XN-1Y	AD		J	IC MM1506XNRE
IC505	VHiTC7W53U/-1Y	AF		J	IC TC7W53FU(TE12L,F)
IC506	VHiMM3151XQ-1Q	AT		J	IC MM3151XQ
IC1301	VHiYDA147SZ-1Y	AM		J	IC YDA147-SZE2
IC1401	RH-iXC201WJQZY	AQ		J	IC 24LC256-I/SN-G-GW1130T
IC1402	VHiR2S15500-1Y	AW		J	IC R2S15500SP
IC1403	VHiTAS3108D-1Y	AS		J	IC TAS3108DCPR
IC1404	VHiAK4683EQ-1Q	AR		J	IC AK4683EQ
IC1405	VHiNJM4565V-1Y	AF		J	IC NJM4565V-TE1
IC1406	VHiLVC1G66W-1Y	AC		J	IC 74LVC1G66GW,125
IC1407	VHiNJM2746V-1Y	AG	N	J	IC NJM2746V(TE1)
IC7501	VHiTC7W53U/-1Y	AF		J	IC TC7W53FU(TE12L,F)
IC7502	VHiLVC2G126-1Y	AD		J	IC 74LVC2G126DP,125
IC7503	VHiPQ1M185M-1Y	AD		J	IC PQ1M185M2SPQ
IC7504	VHiTDA9886+-1Y	AV		J	IC TDA9886TS/V4
IC7506	VSSSM6J51TU-1Y	AF		J	IC Transistor IC SSM6J51TU
IC7507	VHiCE6353++-1Q	AY		J	IC WJCE6353 882206
IC7508	VHiBA7655AF-1Y	AG		J	IC BA7655AF-T1
IC7510	VHiTC4052BT-1Y	AF		J	IC TC4052BFT(EL,N,M)
J502	QJAKFA061WJZZ		N	R	Jack
J503	QJAKFA061WJZZ		N	R	Jack
J508	QJAKGA131WJZZ		N	R	Jack
L402	RCiLPA154WJZZY	AE		J	Coil
L501	VPSBN100J1R2NY	AB		J	Coil Peaking 10μH
L502	VPSBN100J1R2NY	AB		J	Coil Peaking 10μH
L503	VPSBN100J1R2NY	AB		J	Coil Peaking 10μH
L504	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
L1303	RCiLPA899WJZZY	AC	N	R	Coil Peaking 22μH
L1304	RCiLPA899WJZZY	AC	N	R	Coil Peaking 22μH
L1305	RCiLPA899WJZZY	AC	N	R	Coil Peaking 22μH
L1306	RCiLPA899WJZZY	AC	N	R	Coil Peaking 22μH
L7502	VPCNN100J1R6NY	AB		J	Coil Peaking 10μH
L7503	VPCNN120J1R9NY	AB		J	Coil Peaking 12μH

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
L7504	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
L7505	VPCNN330J4R2NY	AC		J	Coil Peaking 33μH
L7506	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
L7509	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
L7510	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
L7511	VPSBN2R2JR54NY	AB		J	Coil Peaking 2.2μH
LUG501	QLUGHA009WJZZY	AC		J	Lug
LUG502	QLUGHA009WJZZY	AC		J	Lug
LUG503	QLUGHA009WJZZY	AC		J	Lug
LUG504	QLUGHA009WJZZY	AC		J	Lug
P401	QPLGNA162WJZZY	AE		J	Plug 15Pin(VD)
P501	QPLGNA349WJZZY	AE		J	Plug 15Pin(RA)
P1301	QPLGNA160WJZZY	AD		J	Plug 4Pin(SP)
P1401	QPLGN0055CEZZY	AD		J	Plug 5Pin
P7501	QPLGNA342WJZZY	AD		J	Plug 8Pin(FE)
Q402	VSRSS040P03-1Y	AE		J	Transistor RSS040P03 TB
Q407	VSDTC114EE//-1Y	AB		J	Transistor DTC114EETL
Q501	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q502	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q503	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q504	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q505	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q506	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q507	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q508	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q509	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q510	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q511	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q512	VSDTC314TK//-1Y	AC		J	Transistor DTC314TKT146
Q516	VS2SC2735//-1Y	AB		J	Transistor 2SC2735JC21TL
Q518	VS2SC2735//-1Y	AB		J	Transistor 2SC2735JC21TL
Q520	VS2SC2735//-1Y	AB		J	Transistor 2SC2735JC21TL
Q521	VSKRC404E++-1Y	AB		J	Transistor KRC404E
Q1302	VSDTC614TK+-1Y	AB		J	Transistor DTC614TKT146
Q1401	VSDTC614TK+-1Y	AB		J	Transistor DTC614TKT146
Q1402	VSDTC614TK+-1Y	AB		J	Transistor DTC614TKT146
Q7501	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q7504	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q7505	VS2SA1530AR-1Y	AB		J	Transistor 2SA1530A-T112-1R
Q7507	VSRN4904//-1Y	AB		J	Transistor RN4904
R402	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R408	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R409	VRS-CY1JF333FY	AA		J	Resistor 33k 1/16W Metal Oxide
R410	VRS-CY1JF113FY	AA		J	Resistor 11k 1/16W Metal Oxide
R415	VRS-CY1JF512JY	AA		J	Resistor 5.1k 1/16W Metal Oxide
R420	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R423	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R430	VRS-CY1JF432FY	AA		J	Resistor 4.3k 1/16W Metal Oxide
R431	VRS-CY1JF182FY	AA		J	Resistor 1.8k 1/16W Metal Oxide
R432	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R438	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R501	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R502	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R503	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R504	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R505	VRS-CY1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R506	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R507	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R508	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R509	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R510	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R511	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R512	VRS-TQ2EF680JY	AA		J	Resistor 68 1/4W Metal Oxide
R513	VRS-TQ2EF680JY	AA		J	Resistor 68 1/4W Metal Oxide
R514	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R515	VRS-CY1JF682JY	AA		J	Resistor 6.8k 1/16W Metal Oxide
R516	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R518	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R519	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R520	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R521	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R522	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R523	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R524	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R526	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R527	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R528	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R529	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R530	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R531	VRS-TQ2EF101JY	AA		J	Resistor 100 1/4W Metal Oxide
R532	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R533	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R534	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R535	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R536	VRS-CY1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide

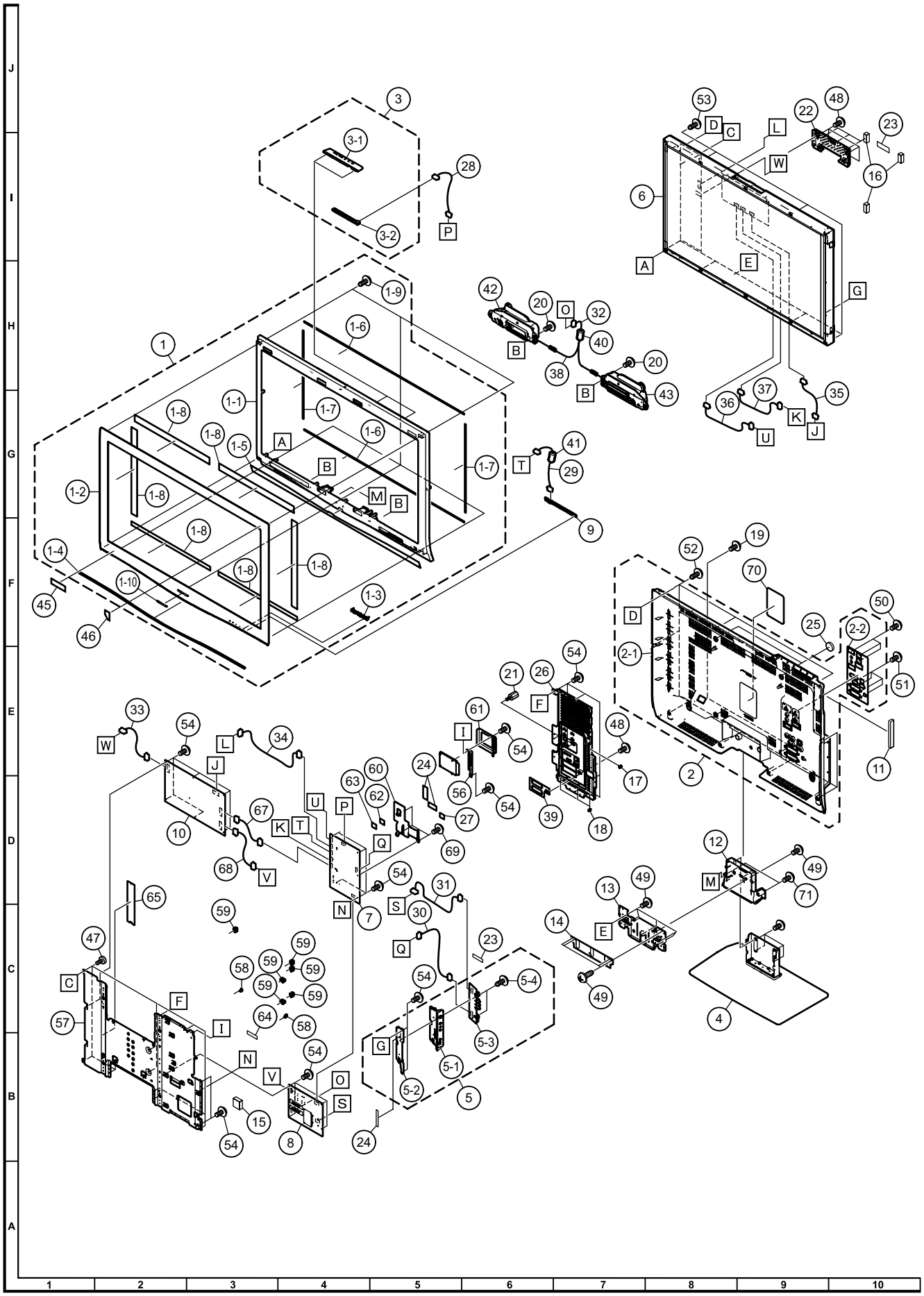
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
R537	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R538	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R539	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R540	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R541	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R542	VRS-TV1JD221JY	AA		J	Resistor 220 1/16W Metal Oxide
R545	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R546	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R547	VRS-CJ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R548	VRS-CJ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R549	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R550	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R551	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R552	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R553	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R554	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R555	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R556	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R557	VRS-CJ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R558	VRS-CJ1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R559	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R560	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R561	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R562	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R563	VRS-CJ1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R564	VRS-CJ1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R565	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R566	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R567	VRS-TQ2EF680JY	AA		J	Resistor 68 1/4W Metal Oxide
R569	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R570	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R571	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R572	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R573	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R574	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R575	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R576	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R577	VRS-TQ2EF750JY	AA		J	Resistor 75 1/4W Metal Oxide
R578	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R579	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R581	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R582	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R583	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R584	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R585	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R586	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R587	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R588	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R589	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R592	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R595	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R596	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R598	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R599	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R600	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R606	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R608	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R610	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R612	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R613	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R616	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R618	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R620	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R621	VRS-CY1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R622	VRS-CY1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R623	VRS-CY1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R625	VRS-CY1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R626	VRS-CY1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R627	VRS-CY1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R628	VRS-CJ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R629	VRS-CY1JF750JY	AA		J	Resistor 75 1/16W Metal Oxide
R630	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R631	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R632	VRS-CY1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R633	VRS-CY1JF561JY	AA		J	Resistor 560 1/16W Metal Oxide
R634	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R635	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R636	VRS-CY1JF564JY	AA		J	Resistor 560k 1/16W Metal Oxide
R643	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R644	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R646	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R649	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R650	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R652	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R656	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
R657	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R660	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R661	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R670	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R671	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R672	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1302	VRS-CJ1JF182JY	AA		J	Resistor 1.8k 1/16W Metal Oxide
R1305	VRS-CJ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1306	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1311	VRS-CY1JF274FY	AA		J	Resistor 270k 1/16W Metal Oxide
R1312	VRS-CY1JF104FY	AA		J	Resistor 100k 1/16W Metal Oxide
R1316	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1317	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1318	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1320	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1321	VRS-CH1JF224JY	AA		J	Resistor 220k 1/16W Metal Oxide
R1322	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1323	VRS-TV1JD000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1324	VRS-TV1JD000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1326	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1327	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1328	VRS-CY1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R1329	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1332	VRS-TV1JD000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1333	VRS-TV1JD000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1401	VRS-CJ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1403	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R1404	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1405	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1406	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1407	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1409	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1410	VRS-CJ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1411	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1412	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1413	VRS-CY1JF105JY	AA		J	Resistor 1M 1/16W Metal Oxide
R1414	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1415	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1416	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1417	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1419	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1420	VRS-CJ1JF473JY	AB		J	Resistor 47k 1/16W Metal Oxide
R1421	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R1422	VRS-CY1JF4R7JY	AA		J	Resistor 4.7 1/16W Metal Oxide
R1423	VRS-CJ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1426	VRS-CY1JF123JY	AA		J	Resistor 12k 1/16W Metal Oxide
R1427	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1428	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1429	VRS-CH1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1430	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1431	VRS-CH1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1433	VRS-CY1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R1434	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1435	VRS-CY1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R1436	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1437	VRS-CH1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1438	VRS-CY1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1439	VRS-CY1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R1440	VRS-CY1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1442	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R1443	VRS-CH1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1445	VRS-CJ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1446	VRS-CJ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1450	VRS-CJ1JF220JY	AA		J	Resistor 22 1/16W Metal Oxide
R1453	VRS-CY1JF4R7JY	AA		J	Resistor 4.7 1/16W Metal Oxide
R1454	VRS-CY1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R1455	VRS-CY1JF243FY	AA		J	Resistor 24k 1/16W Metal Oxide
R1456	VRS-CY1JF243FY	AA		J	Resistor 24k 1/16W Metal Oxide
R1460	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1461	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1462	VRS-TQ2EF220JY	AA		J	Resistor 22 1/4W Metal Oxide
R1463	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1464	VRS-TQ2EF220JY	AA		J	Resistor 22 1/4W Metal Oxide
R1465	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1466	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1467	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1468	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1469	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1470	VRS-CJ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R1472	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1473	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R1476	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1477	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1478	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R1479	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE238FM01 (TERMINAL Unit)					
R1480	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1481	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R1482	VRS-CY1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide
R1483	VRS-CY1JF473JY	AA		J	Resistor 47k 1/16W Metal Oxide
R7501	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R7502	VRS-CY1JF681JY	AA		J	Resistor 680 1/16W Metal Oxide
R7503	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R7504	VRS-CY1JF393JY	AA		J	Resistor 39k 1/16W Metal Oxide
R7505	VRS-CY1JF333JY	AA		J	Resistor 33k 1/16W Metal Oxide
R7506	VRS-CY1JF680JY	AA		J	Resistor 68 1/16W Metal Oxide
R7508	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R7509	VRS-CY1JF822JY	AA		J	Resistor 8.2k 1/16W Metal Oxide
R7512	VRS-CY1JF330JY	AA		J	Resistor 33 1/16W Metal Oxide
R7516	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R7517	VRS-CY1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide
R7518	VRS-CY1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R7519	VRS-CY1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R7520	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R7521	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R7524	VRS-CY1JF562JY	AA		J	Resistor 5.6k 1/16W Metal Oxide
R7525	VRS-TQ2BD330JY	AA		J	Resistor 33 1/8W Metal Oxide
R7526	VRS-CY1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R7527	VRS-CJ1JF472JY	AA		J	Resistor 4.7k 1/16W Metal Oxide
R7528	VRS-CJ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R7529	VRS-CY1JF471JY	AA		J	Resistor 470 1/16W Metal Oxide
R7530	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R7533	VRS-CY1JF392JY	AA		J	Resistor 3.9k 1/16W Metal Oxide
R7534	VRS-CY1JF271JY	AA		J	Resistor 270 1/16W Metal Oxide
R7535	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R7536	VRS-CY1JF151JY	AA		J	Resistor 0 1/16W Metal Oxide
R7537	VRS-CY1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R7538	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R7539	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R7540	VRS-CY1JF331JY	AA		J	Resistor 330 1/16W Metal Oxide
R7541	VRS-CY1JF221JY	AA		J	Resistor 220 1/16W Metal Oxide
R7545	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R7547	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R7549	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R7550	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R7551	VRS-CY1JF332JY	AA		J	Resistor 3.3k 1/16W Metal Oxide
R7552	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R7567	VRS-CY1JF822JY	AA		J	Resistor 8.2k 1/16W Metal Oxide
R7568	VRS-CJ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R7569	VRS-CY1JF820JY	AA		J	Resistor 82 1/16W Metal Oxide
R7570	VRS-CY1JF820JY	AA		J	Resistor 82 1/16W Metal Oxide
SC501	QCNCWA673WJZZY	AF		J	Connector 82Pin
SC502	QSOCZA161WJZZ		N	R	Socket 21Pin (INPUT 1)
SC503	QSOCZA161WJZZ		N	R	Socket 21Pin (INPUT 2)
SLD7501	PSLDMB192WJ1W		N	R	Shield
X1401	RCRSCA147WJZZY	AG		J	Crystal
X1402	RCRSCA045WJZZY	AG		J	Crystal 12.228MHz
X1403	RCRSCA045WJZZY	AG		J	Crystal 12.228MHz
X7501	RCRSCA178WJZZY	AG		J	Crystal 4MHz
X7502	RCRSCA181WJZZY	AG		J	Crystal 20.48MHz
[5] DUNTKE264FM01 (R/C, LED Unit)					
C102	VCKYTV1CF225ZY	AB		J	Capacitor 2.2 16V Ceramic
C104	VCEASX1CN106MY	AC		J	Capacitor 10 16V Electrolytic
C105	VCKYCY1HF103ZY	AA		J	Capacitor 0.01 50V Ceramic
C107	VCEASY1CN107MY	AC		J	Capacitor 100 16V Electrolytic
D101	RH-EXA092WJZZY	AB		J	Zener Diode UDZSTE-1712B, 12V
D103	RH-PX0421CEZZY	AD		J	Diode CL-165HR/YG-D-T, YOYAKU
D114	RH-PX0421CEZZY	AD		J	Diode CL-165HR/YG-D-T, YOYAKU
D115	RH-PX0421CEZZY	AD		J	Diode CL-165HR/YG-D-T, YOYAKU
IC101	VHiGA1S100W-1Y	AE	N	J	IC GA1A1S100WP
P101	QPLGNA335WJZZY	AD		J	Plug 15Pin(RA)
P102	QPLGNA322WJZZY	AC		J	Plug 2Pin
Q102	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q103	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q104	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q106	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
Q107	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R
R101	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R104	VRS-CY1JF273JY	AA		J	Resistor 27k 1/16W Metal Oxide
R105	VRS-CY1JF393JY	AA		J	Resistor 39k 1/16W Metal Oxide
R108	VRS-CY1JF161JY	AA		J	Resistor 160 1/16W Metal Oxide
R109	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R117	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R121	VRS-CY1JF821JY	AA		J	Resistor 820 1/16W Metal Oxide
R122	VRS-CY1JF161JY	AA		J	Resistor 160 1/16W Metal Oxide
R123	VRS-CJ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R124	VRS-CJ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R135	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R140	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
RMC101	RRMCUA053WJZZ	AE		J	Remote Receiver

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[5] DUNTKE264FM01 (R/C, LED Unit)					
SLD101	PSLDPA076WJFW	AD		J	Shield
[6] DUNTKE266FM01 (KEY Unit)					
D151	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
D152	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
D155	RH-EX0646GEZZY	AA		J	Zener Diode MTZJT-7215B
P151	QPLGNA059WJZZ	AC		J	Plug 5Pin(KM)
R151	VRD-RA2BE822JY	AA		J	Resistor 8.2k 1/8W Carbon
R152	VRD-RA2BE123JY	AA		J	Resistor 12k 1/8W Carbon
R153	VRD-RA2BE822JY	AA		J	Resistor 8.2k 1/8W Carbon
R154	VRD-RA2BE123JY	AA		J	Resistor 12k 1/8W Carbon
S151	QSW-K0003AJZZ+	AA		J	Switch CH UP
S152	QSW-K0003AJZZ+	AA		J	Switch CH DOWN
S153	QSW-K0003AJZZ+	AA		J	Switch CH INPUT
S154	QSW-K0003AJZZ+	AA		J	Switch VOL UP
S155	QSW-K0003AJZZ+	AA		J	Switch VOL DOWN
S156	QSW-K0003AJZZ+	AA		J	Switch CH MENU
S157	QSW-K0003AJZZ+	AA		J	Switch CH POWER
[7] DUNTKE306FM01 (MINI AV UNIT)					
C801	RC-KZA067WJZZY	AB		J	Capacitor 4.7 10V Ceramic
C804	RC-KZA237WJZZY	AB		J	Capacitor 10 16V Ceramic
C816	VCKYCY1HB223KY	AA		J	Capacitor 0.022 50V Ceramic
C827	VCKYCY1HB223KY	AA		J	Capacitor 0.022 50V Ceramic
C828	VCKYCY1HB223KY	AA		J	Capacitor 0.022 50V Ceramic
C830	VCKYCY1CB104KY	AB		J	Capacitor 0.1 16V Ceramic
C831	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C832	VCKYCY1HB102KY	AA		J	Capacitor 1000p 50V Ceramic
C903	VCKYCY1HB472KY	AA		J	Capacitor 4700p 50V Ceramic
C904	VCKYCY1HB472KY	AA		J	Capacitor 4700p 50V Ceramic
D806	VHD1PS226++-1Y	AB		J	Diode 1PS226,115
D903	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D904	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
D905	RH-EX0265TAZZY	AB		J	Zener Diode PDZ10B,115
FB805	RBLN-A206WJZZY	AA		J	Balun BLN-A206WJ
FB902	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FB903	RBLN-0077TAZZY	AB		J	Balun BLN-0077TA
FL901	RFiLN0017TAZZY	AC		J	Filter
FL902	RFiLN0017TAZZY	AC		J	Filter
FL903	RFiLN0017TAZZY	AC		J	Filter
IC801	VHiR5523N1B-1Y	AE		J	IC R5523N001B-TR-F
J801	QSOCZA151WJQZ	AF		J	Socket 4Pin(USB)
J802	QJAKJ0047CEZZ	AD		J	Jack
J901	QJAKGA079WJZZ	AD		J	Jack
J902	QSOCD0456CEZZ	AE		J	Socket
LUG901	QLUGHA006WJZZY	AC		J	Lug
LUG902	QLUGHA006WJZZY	AC		J	Lug
P801	QPLGNA334WJZZY	AD		J	Plug 14Pin(US)
P901	QPLGNA335WJZZY	AD		J	Plug 15Pin(RA)
R809	VRS-CY1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide
R819	VRS-CY1JF102JY	AA		J	Resistor 1k 1/16W Metal Oxide
R820	VRS-TW2ED100JY	AA		J	Resistor 10 1/4W Metal Oxide
R821	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R822	VRS-TW2ED100JY	AA		J	Resistor 10 1/4W Metal Oxide
R823	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R839	VRS-CY1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R907	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R908	VRS-CY1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide
R909	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R910	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R914	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R915	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
VA801	RH-VXA194WJZZY	AC	N	R	Varistor AVRL161A1R1NTB
VA802	RH-VXA194WJZZY	AC	N	R	Varistor AVRL161A1R1NTB

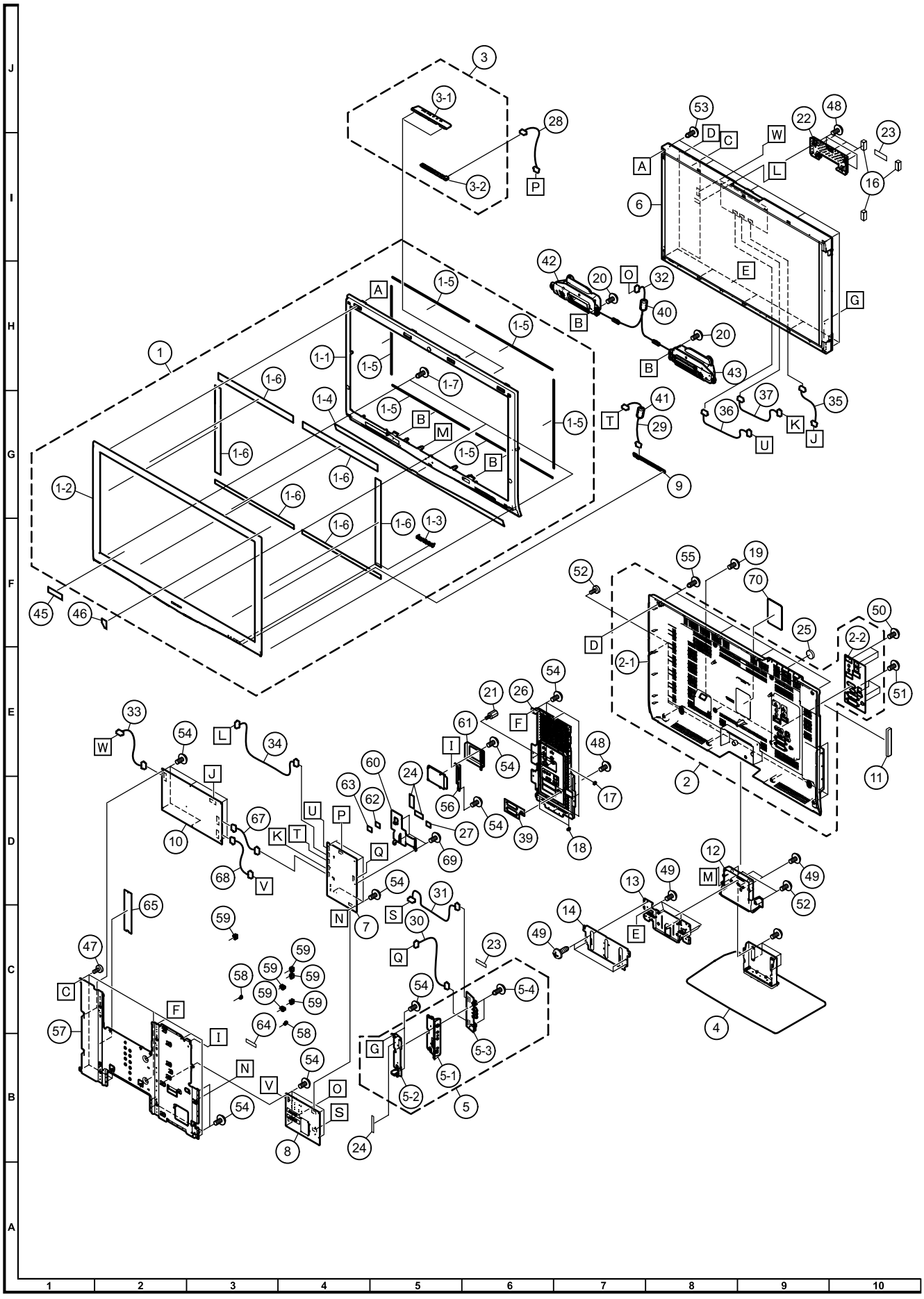
[8] CABINET PARTS (LC-32X20E/S/RU)



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[8] CABINET PARTS (LC-32X20E/S/RU)					
1	CCABAB825WJ11		N	P	Front Cabinet Ass'y
1-1	Not Available	−		−	Front Cabinet
1-2	Not Available	−		−	Front Cover
1-3	HDECQA777WJ1A	AC	N	J	LED Cover
1-4	Not Available	−		−	Shine Trim
1-5	HPNLSA149WJ1A		N	P	Speaker Net
1-6	Not Available	−		−	Mask Himelon, x2 (T-B)
1-7	Not Available	−		−	Mask Himelon, x2 (SIDE)
1-8	Not Available	−		−	Front Cover Tape, x6
1-9	XJPS730P08WS0	AA		J	Screw, x5 (Front Mask)
1-10	Not Available	−		−	SHARP Badge
2	CCABBB129WJ11		N	P	Rear Cabinet Ass'y
2-1	Not Available	−		−	Rear Cabinet
2-2	HiNDPC570WJSA		N	P	Terminal Label
3	CCOVAC335WE01		N	P	Key Cover Ass'y
3-1	Not Available	−		−	Key Cover Ass'y
3-2	DUNTKE266FM01	AR	N	R	KEY Unit
4	CDAi-A380WJ12		N	P	Stand Unit
5	CCOVAC334WE01		N	P	MINI AV Cover Unit
5-1	Not Available	−		−	MINI AV Cover
5-2	Not Available	−		−	MINI AV Angle
5-3	DUNTKE306FM01		N	R	MINI AV Unit
5-4	XJPS730P08WS0	AA		J	Screw, x2 (MINI AV Unit)
6	R1LK315D3LZ20Y		N	J	32" LCD Panel Module
7	DUNTKE237FM02		N	R	MAIN Unit
8	DUNTKE238FM01		N	R	TERMINAL Unit
9	DUNTKE264FM01	AS	N	R	R/C, LED Unit
10	RDENCA230WJQZ		N	R	Power Unit
11	GCOVAB586WJKA			P	PC Card Cover
12	GCOVAC337WJ1A		N	P	Bottom Cover
13	LANGKB171WJFW		N	P	Stand Angle
14	LANGKB302WJFW		N	P	Stand Suppoort Angle
15	LHLDW1123GEZZ	AB		J	Wire Holder
16	LHLDW1173CEZZ	AD		J	Wire Holder, x6 (FOR SP-WIRE_1/OTHER_5)
17	LHLDWA048WJKZ	AB		J	Wire Holder
18	LHLDWA092WJZZ	AB		J	Wire Holder, x2
19	LX-BZA170WJF9			P	Screw, x2 (CAB-B)
20	LX-HZA003WJFN	AC		J	Screw, x2 (Speaker)
21	NSFTZA237WJFN	AC	N	J	Shaft, x4
22	PCOVP2610WJZZ	AG		J	LCD Control Cover
23	PFLT-A072WJZZ			P	Felt, x2
24	PMLT-A255WJZZ	AD		J	Molt Spacer, x3
25	PSHEPA543WJZZ			P	Sheet, x2 (for Boss)
26	PSLDMB198WJFW		N	P	Main Shield
27	PSPAZB313WJKZ	AC		J	Spacer (COOL_20*20_T2.0)
28	QCNW-G191WJQZ		N	P	Connecting Cord (KM:MIAN-KEY)
29	QCNW-G192WJQZ		N	P	Connecting Cord (RA:MAIN-LED)
30	QCNW-G193WJPZ		N	P	Connecting Cord (US:MAIN-MINI_AV)
31	QCNW-G194WJQZ		N	P	Connecting Cord (VD:TERMINAL-MINI_AV)
32	QCNW-G195WJQZ		N	P	Connecting Cord (SP:TERMINAL-SP)
33	QCNW-G196WJQZ		N	P	Connecting Cord (LA:POWER-INV)
34	QCNW-G197WJQZ		N	P	Connecting Cord (LB:MAIN-POWER)
35	QCNW-G198WJQZ		N	P	Connecting Cord (PL:POWER-LCDCTL)
36	QCNW-G199WJQZ		N	P	Connecting Cord (LP:MAIN-LCD)
37	QCNW-G200WJQZ		N	P	Connecting Cord (LW:MAIN-LCDCTL)
38	QCNW-G498WJQZ		N	P	Connecting Cord (SPE:SPL-SP)
39	QEARPA273WJFW		N	P	Earth Plate
40	RCORF0103CEZZ	AK		J	Core (SP Wire)
41	RCORFA023WJZZ	AK		J	Core (RA Wire)
42	RSP-ZA259WJZZ	AZ	N	J	Speaker (L)
43	RSP-ZA260WJZZ	AZ	N	J	Speaker (R)
45	TLABZB631WJZZ		N	P	POP Label (LC-32X20E/S)
45	TLABZB632WJZZ		N	P	POP Label (LC-32X20RU)
46	TLABZB674WJZZ		N	P	POP Label
47	XBBS830P06000	AA		J	Screw, x14 (TRAY)
48	XBBS930P04000	AA		J	Screw, x5 (TUNER FIX_1/CNTL COV FIX_4)
49	XBPS730P06WS0	AA		J	Screw, x10 (STAND ANGLE)
50	XBPS830P06000	AA		J	Screw, x3 (HDMI)
51	XEBS930P08000	AA		J	Screw, x4 (TERMINAL)
52	LX-EZA030WJF8			P	Screw, x9 (CAB-B)
53	XEBSN40P10000	AB		J	Screw, x6 (LCD UNIT)
54	XJPS730P06WS0	AB		J	Screw, x26 (SHIELD FIX_8/MINI-AV FIX_Y_2/OBON PWB FIX_16)
56	LANGKB174WJSA		N	R	CI Angle
57	LCHSMA387WJFW		N	R	Chassis Tray
58	LHLDWA048WJKZ	AB		J	Wire Holder, x2
59	LHLDWA143WJKZ	AC		J	Wire Holder, x6
60	PRDARA491WJFW		N	R	Main Radiator
61	PSHEPA544WJZZ		N	R	Terminal Sheet
62	PSPAZB312WJKZ	AD	N	J	Spacer (COOL_25*25_T2.0)
63	PSPAZB313WJKZ	AC		J	Spacer (COOL_20*20_T2.0)
64	PSPAZB658WJKZ		N	R	Spacer (COOL_12*40_T3.0)
65	PZETKA245WJKZ		N	P	Insulator
67	QCNW-G189WJQZ		N	P	Connecting Cord1 (PD:MAIN-POWER)
68	QCNW-G190WJQZ		N	P	Connecting Cord1 (PE:TERMINAL-POWER)
69	XEBS930P10000	AA		J	Screw, x3 (RADIATOR FIX)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[8] CABINET PARTS (LC-32X20E/S/RU)					
70	TLABNC117WJZZ			P	Model Label
71	XEBS940P16000			P	Screw, x2 (Bottom Cover)

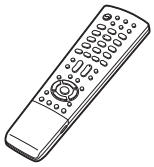
[9] CABINET PARTS (LC-37X20E/S/RU)



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[9] CABINET PARTS (LC-37X20E/S/RU)					
1	CCABAB824WJ11		N	P	Front Cabinet Ass'y
1-1	Not Available	–		–	Front Cabinet
1-2	Not Available	–		–	Front Cover Ass'y
1-3	HDECQA777WJ1A	AC	N	J	LED Cover
1-4	HPNLSA148WJ1A		N	P	Speaker Net
1-5	Not Available	–		–	Mask Himelon, x6
1-6	Not Available	–		–	Front Cover tape, x6
1-7	XJPS730P08WS0	AA		J	Screw, x3 (Front Mask)
2	CCABBB128WJ11		N	P	Rear Cabinet Ass'y
2-1	Not Available	–		–	Rear Cabinet
2-2	HiNDPC570WJSA		N	P	Terminal Label
3	CCOVAC335WE01		N	P	Key Cover Ass'y
3-1	Not Available	–		–	Key Cover Ass'y
3-2	DUNTKE266FM01	AR	N	R	KEY Unit
4	CDAi-A380WJ12		N	P	Stand Unit
5	CCOVAC334WE02		N	P	NINI AV Cover Ass'y
5-1	Not Available	–		–	MINI AV Cover
5-2	Not Available	–		–	MINI AV Angle
5-3	DUNTKE306FM01		N	R	MINI AV Unit
5-4	XJPS730P08WS0	AA		J	Screw, x2 (MINI AV Unit)
6	R1LK370D3LZ60Y		N	J	37" LCD Panel Module
7	DUNTKE237FM02		N	R	MAIN Unit
8	DUNTKE238FM01		N	R	TERMINAL Unit
9	DUNTKE264FM01	AS	N	R	R/C, LED Unit
10	RDENCA230WJQZ		N	R	Power Unit
11	GCOVAB586WJKA			P	PC Card Cover
12	GCOVAC337WJ1A		N	P	Bottom Cover
13	LANGKB268WJFW	AS	N	J	Stand Angle
14	LANGKB301WJFW	AL	N	J	Stand Support Angle
16	LHLDW1173CEZZ	AD		J	Wire Holder, x8
17	LHLDWA048WJKZ	AB		J	Wire Holder
18	LHLDWA092WJZZ	AB		J	Wire Holder, x2
19	LX-BZA170WJF9			P	Screw, x2 (CAB-B)
20	LX-HZA003WJFN	AC		J	Screw, x2 (Speaker)
21	NSFTZA237WJFN	AC	N	J	Shaft, x4
22	PCOVP2610WJZZ	AG		J	LCD Control Cover
23	PFLT-A072WJZZ			P	Felt, x2
24	PMLT-A255WJZZ	AD		J	Molt Spacer, x3
25	PSHEPA543WJZZ			P	Sheet, x2 (for Boss)
26	PSLDMB198WJFW		N	P	Main Shield
27	PSPAZB313WJKZ	AC		J	Spacer (COOL_20*20_T2.0)
28	QCNW-G191WJQZ		N	P	Connecting Cord (KM:MAIN-KEY)
29	QCNW-G202WJQZ		N	P	Connecting Cord (RA:MAIN-LED)
30	QCNW-G203WJPZ		N	P	Connecting Cord (US:MAIN-MINI-AV)
31	QCNW-G194WJQZ		N	P	Connecting Cord (VD:TERMINAL-MINI_AV)
32	QCNW-G205WJQZ		N	p	Connecting Cord (SP:TERMINAL-SP)
33	QCNW-G206WJQZ		N	P	Connecting Cord (LA:POWER-INV)
34	QCNW-G207WJQZ		N	P	Connecting Cord (LB:MAIN-POWER)
35	QCNW-G198WJQZ		N	P	Connecting Cord (PL:POWER-LCDCTL)
36	QCNW-G199WJQZ		N	P	Connecting Cord (LP:MAIN-LCD)
37	QCNW-G200WJQZ		N	P	Connecting Cord (LW:MAIN-LCDCTL)
39	QEARPA273WJFW		N	P	Earth Plate
40	RCORF0103CEZZ	AK		J	Core (SP Wire)
41	RCORFA023WJZZ	AK		J	Core (RA Wire)
42	RSP-ZA259WJZZ	AZ	N	J	Speaker (L)
43	RSP-ZA260WJZZ	AZ	N	J	Speaker (R)
45	TLABZB631WJZZ		N	P	POP Label (LC-37X20E/S)
45	TLABZB632WJZZ		N	P	POP Label (LC-37X20US)
46	TLABZB675WJZZ		N	P	POP Label
47	XBBS830P06000	AA		J	Screw, x16 (TRAY,MINI-AV)
48	XBBS930P04000	AA		J	Screw, x5 (TUNER FIX_1/CNTL COV FIX_4)
49	XBPS730P06WS0	AA		J	Screw, x10 (STAND ANGLE)
50	XBPS830P06000	AA		J	Screw, x3 (HDMI)
51	XEBS930P08000	AA		J	Screw, x4 (TERMINAL)
52	XEBS940P16000	AB		J	Screw, x8 (CAB-B/BTM COV)
53	XEBSN40P10000	AB		J	Screw, x9 (LCD/CAB-A FIX)
54	XJPS730P06WS0	AB		J	Screw, x25 (SHIELD FIX_8/OTHER_1/OBON PWB FIX_16)
55	LX-BZA204WJF7			P	Screw, x4 (CAB-A/B FIX)
56	LANGKB174WJSA		N	R	CI Angle
57	LCHSMA387WJFW		N	R	Chassis Tray
58	LHLDWA048WJKZ	AB		J	Wire Holder, x4
59	LHLDWA143WJKZ	AC		J	Wire Holder, x6
60	PRDARA491WJFW		N	R	Main Radiator
61	PSHEPA544WJZZ		N	R	Terminal Sheet
62	PSPAZB312WJKZ	AD	N	J	Spacer (COOL_25*25_T2.0)
63	PSPAZB313WJKZ	AC		J	Spacer (COOL_20*20_T2.0)
64	PSPAZB658WJKZ		N	R	Spacer (COOL_12*40_T3.0)
65	PZETKA245WJKZ		N	P	Insulator
67	QCNW-G189WJQZ		N	P	Connecting Cord1 (PD:MAIN-POWER)
68	QCNW-G190WJQZ		N	P	Connecting Cord1 (PE:TERMINAL-POWER)
69	XEBS930P10000	AA		J	Screw, x3 (RADIATOR FIX)
70	TLABNC117WJZZ			P	Model Label

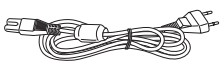
[10] SUPPLIIED ACCSESSORIES

X2 Remote control unit (×1)



X1 AC cord

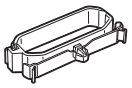
(For Europe, except U.K. and Eire)



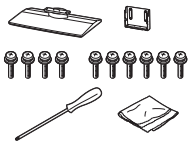
(For U.K. and Eire)

U.K. type 3-pin AC cord is only included with models LC-32X20E and LC-37X20E.

X3 Cable clamp (×1)



X11 Stand unit (×1)

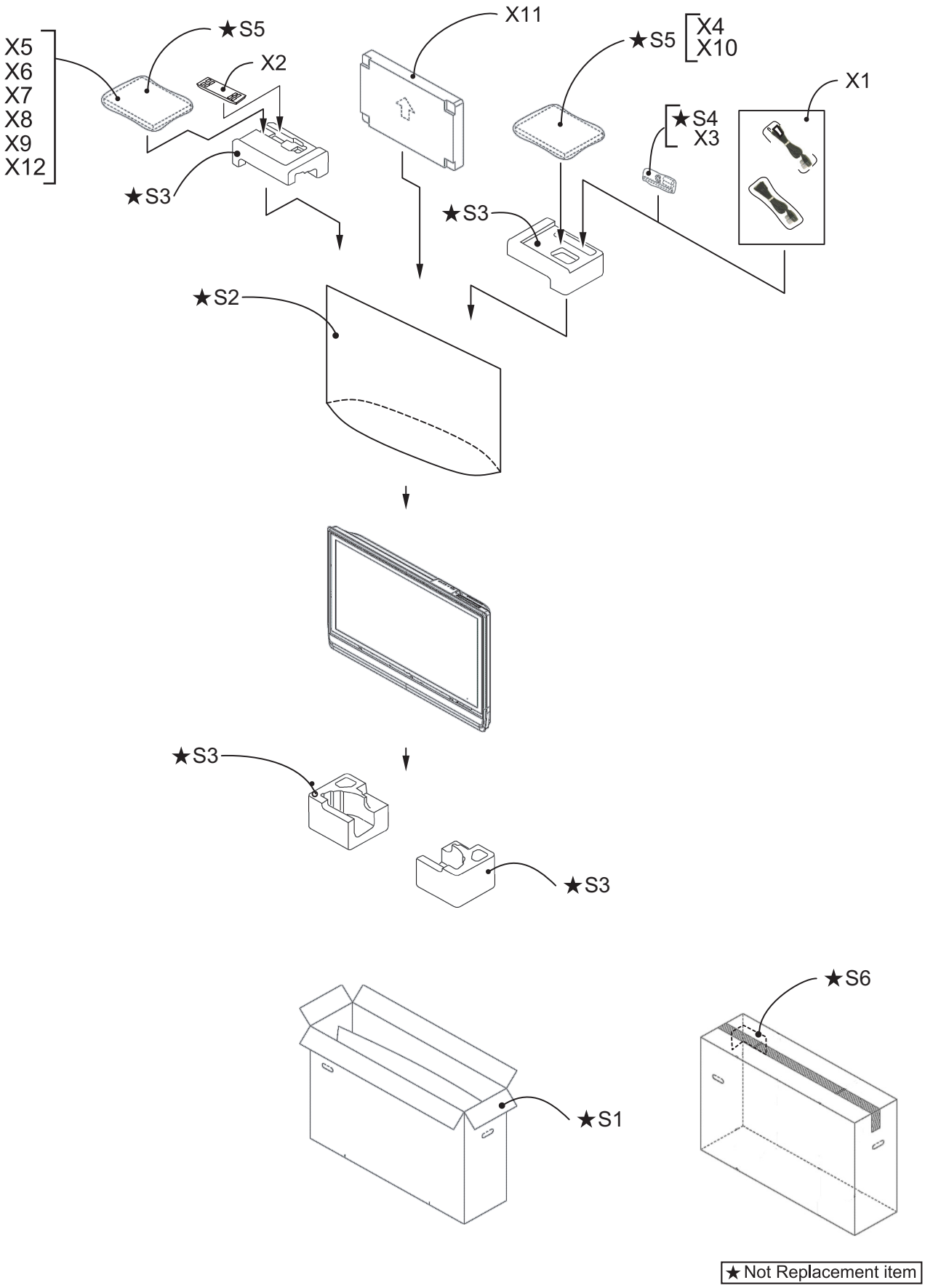


X7 Operation manual (ENGLISH)
X8 Operation manual (SWEDISH)
X9 Operation manual (RUSSIAN)
X10 Operation manual (POLISH)

X4 Guarrantee Card (for RU Models)
X5 Guarrantee Card (for E Models)
X6 AQUOS Care Plan (E only)
X12 ERRATTA Sheet

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
	[10] SUPPLIIED ACCSESSORIES				
⚠ X1	QACCBA073WJPZ	AV		J	AC Cord (for UK and Eire)
⚠ X1	QACCKA021WJPZ			P	AC Cord (for Europe without UK and Eire)
X2	RRMCGA586WJSA	AT	N	P	Remote Control Unit
X3	LHLDWA173WJKZ	AE	N	P	Cable Clamp
X4	TGAN-A077WJZZ	AD		J	Guarrantee Card (for RU models only)
X5	TGAN-A801WJZZ			P	Guarrantee Card (for E models only)
X6	TGAN-A802WJZZ			P	AQUOS Care Plan (E only)
X7	TiNS-D198WJZZ		N	P	Operation Manual (ENGLISH..) (for "E" and "S" models)
X8	TiNS-D199WJZZ		N	P	Operation Manual (SWEDISH..) (for "E" and "S" models)
X9	TiNS-D201WJZZ		N	P	Operation Manual (RUSSIAN..) (for "RU" models)
X10	TiNS-D200WJZZ		N	P	Operation Manual (POLISH..) (for "E" models)
X11	CDAi-A380WJ12		N	P	Stand Ass'y
X12	TCAUHA337WJZZ		N	P	ERRATTA Sheet (for "E" and "S" models)
X12	TCAUHA338WJZZ		N	P	ERRATTA Sheet (for "RU" models)

[11] PACKING PARTS



★ Not Replacement item

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[11] PACKING PARTS					
S1	SPAKCD529WJZZ	–	N	–	Packing Case (LC-32X20E/S)
S1	SPAKCD538WJZZ	–	N	–	Packing Case (LC-32X20RU)
S1	SPAKCD528WJZZ	–	N	–	Packing Case (LC-37X20E/S)
S1	SPAKCD537WJZZ	–	N	–	Packing Case (LC-37X20RU)
S2	SPAKPA382WJZZ	–		–	Wrapping Paper Packing Case (LC-32X20E/S/RU)
S2	SPAKPA338WJZZ	–		–	Wrapping Paper Packing Case (LC-37X20E/S/RU)
S3	SPAKXB541WJZZ	–	N	–	Buffer Material (LC-32X20E/S/RU)
S3	SPAKXB540WJZZ	–	N	–	Buffer Material (LC-37X20E/S/RU)
S4	SSAKAA009WJZZ	–		–	Polyethylene Bag
S5	SSAKAA010WJZZ	–		–	Polyethylene Bag
S6	TLABM5584BMZZ	–		–	Case Label
[12] SERVICE JIGS					
N	QCNW-G440WJQZ	AP	N	J	4-5pins L=1000mm, Main to Key
N	QCNW-G441WJQZ	AW	N	J	15pins L=1000mm, Main to R/C, LED
N	QCNW-G443WJPZ	AY	N	J	14-14/3pins L=1135mm, MiniAV to Main
N	QCNW-G444WJQZ	AY	N	J	15pins L=1000mm, MiniAV to Terminal
N	QCNW-G445WJQZ	AP	N	J	4-2/2pins L=1000mm, Terminal to Speaker
N	QCNW-G446WJQZ	AV	N	J	12pins L=1000mm, Main to Power
N	QCNW-G447WJQZ	AS	N	J	6pins L=1000mm, Terminal to Power
N	QCNW-G448WJQZ	AP	N	J	9pins L=1000mmm, Main to Inverter
N	QCNW-G616WJQZ	BK	N	J	41pins L=1000mm, Main to LCD Controller
N	QCNW-G625WJQZ	AP	N	J	4-4pins L=1000mm, Power to LCD Controller
N	QCNW-G626WJQZ	AS	N	J	11-20pins L=1000mm, Main to LCD Controller

SHARP

COPYRIGHT © 2007 BY SHARP CORPORATION

ALL RIGHTS RESERVED.

No Part of this publication may be reproduced,
stored in a retrieval system, or transmitted in
any from or by any means, electronic, mechanical,
photocopying, recording, or otherwise, without
prior written permission of the publisher.

SHARP CORPORATION
AV Systems Group
CS Promotion Center
Yaita,Tochigi 329-2193, Japan

TQ -S SH. DS