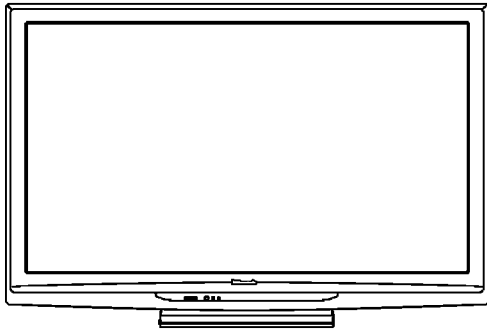


# Service Manual

50 inch Class 720p Plasma HDTV

Model No. **TC-P50C2**


GPH13DU Chassis



## **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

## **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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# 1 Safety Precautions

## 1.1. General Guidelines

1. When conducting repairs and servicing, do not attempt to modify the equipment, its parts or its materials.
2. When wiring units (with cables, flexible cables or lead wires) are supplied as repair parts and only one wire or some of the wires have been broken or disconnected, do not attempt to repair or re-wire the units. Replace the entire wiring unit instead.
3. When conducting repairs and servicing, do not twist the Faston connectors but plug them straight in or unplug them straight out.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
6. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### 1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1Mohm and 5.2Mohm. When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

### 1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kohm, 10 watts resistor, in parallel with a 0.15 $\mu$ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

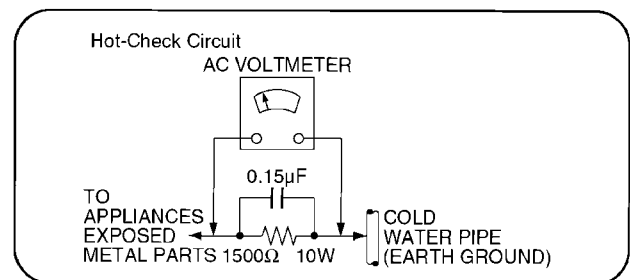


Figure 1

## 2 Warning

### 2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor [chip] components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as [anti-static (ESD protected)] can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

#### Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise ham less motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

## 2.2. About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

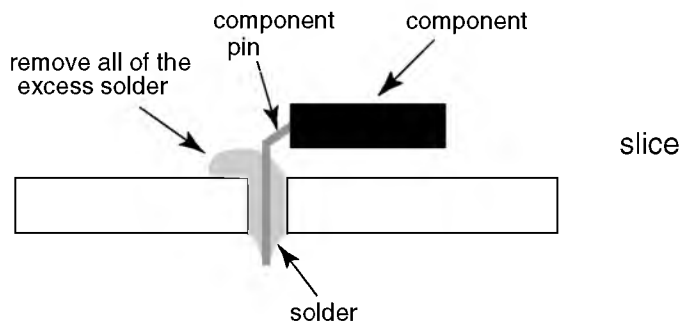
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in its manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol **PbF** stamped on the back of PCB.

### Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40 °C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).  
If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



### Suggested Pb free solder

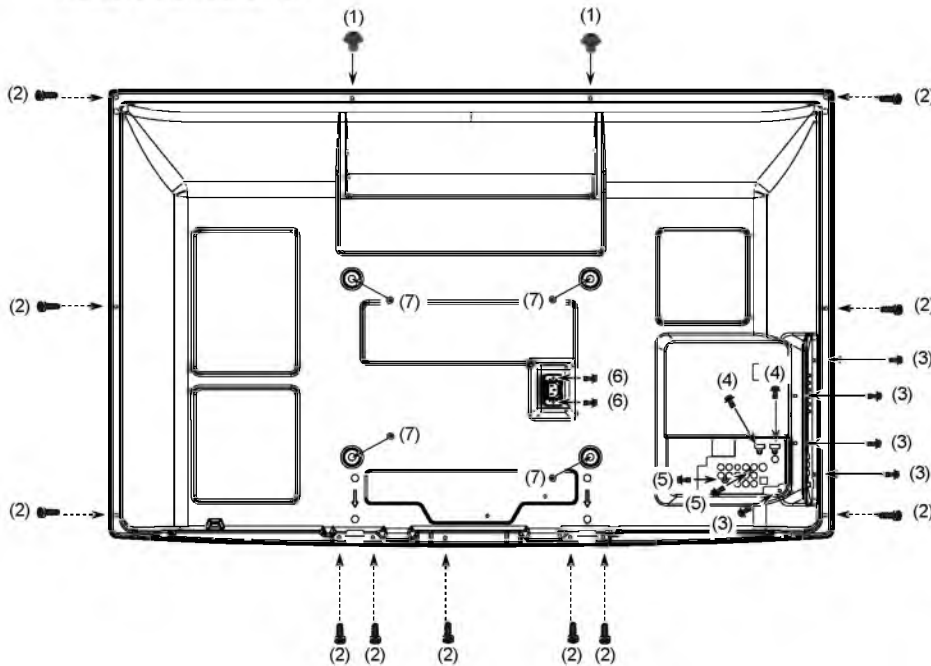
There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.

| 0.3mm X 100g | 0.6mm X 100g | 1.0mm X 100g |
|--------------|--------------|--------------|
|              |              |              |

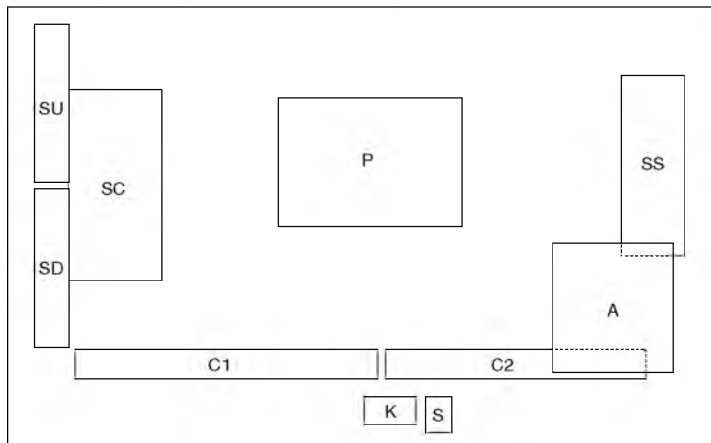
# 3 Service Navigation

## 3.1. Service Hint

Remove the Rear cover



- Remove:
- 2screws (1) THEL052Z
  - 11screws (2) XTB4+12GFJK
  - 5screws (3) THEL0429
  - 2screws (4) XSB3+6FJ
  - 2screws (5) XTV3+10JFJK
  - 2screws (6) XYN3+F10FJK
  - 4screws (7) TKKL5493



| Board Name | Function  | Board Name | Function  |
|------------|---|------------|---|
| P          | Power Supply<br>Non serviceable.<br>P-Board should be exchanged for service.  | C1         | Data Driver (Lower Right)   |
|            |   | C2         | Data Driver (Lower Left)  |
|            |   | SC         | Scan Drive  |
| A          | DC-DC Converter, Tuner<br>Speaker out, AV Terminal, HDMI in, SD Card<br>Digital Signal Processor, Nile-TCON<br>Format Converter, Plasma AI, Sub-Field Processor<br>Key Switch | SS         | Sustain Drive   |
|            |   | SU         | Scan out (Upper)<br>Non serviceable.<br>SU-Board should be exchanged for service. |
|            |   | SD         | Scan out (Lower)<br>Non serviceable.<br>SD-Board should be exchanged for service. |
| K          | Remote receiver, Power LED, C.A.T.S sensor  |            |   |
| S          | Power Switch  |            |   |

## 3.2. Applicable signals

\* Mark: Applicable input signal for Component (Y, PB, PR) and HDMI

|                    | horizontal frequency (kHz) | vertical frequency (Hz) | COMPONENT | HDMI |
|--------------------|----------------------------|-------------------------|-----------|------|
| 525 (480) / 60i    | 15.73                      | 59.94                   | *         | *    |
| 525 (480) /60p     | 31.47                      | 59.94                   | *         | *    |
| 750 (720) /60p     | 45.00                      | 59.94                   | *         | *    |
| 1,125 (1,080) /60i | 33.75                      | 59.94                   | *         | *    |
| 1,125 (1,080)/60p  | 67.43                      | 59.94                   |           | *    |
| 1,125 (1,080)/60p  | 67.50                      | 60.00                   |           | *    |
| 1,125(1,080)/24p   | 26.97                      | 23.98                   |           | *    |
| 1,125(1,080)/24p   | 27.00                      | 24.00                   |           | *    |

### Note

- Signals other than those shown above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.

# 4 Specifications

|  |  |   |
|--|--|---|
| <b>Power Source</b>                        | AC 120 V, 60 Hz  |   |
| <b>Power Consumption</b>                   |  |   |
| <b>Maximum</b>                             | 299 W  |   |
| <b>Standby condition</b>                   | 0.3 W  |   |
| <b>Plasma Display panel</b>                |  |   |
| <b>Drive method</b>                        | AC type  |   |
| <b>Aspect Ratio</b>                        | 16:9   |   |
| <b>Visible screen size</b>                 | 50 inch class (49.9 inches measured diagonally)                                |   |
| <b>(W × H × Diagonal)</b>                  | 43.5 inch × 24.4 inch × 49.9 inch (1,105 mm × 622 mm × 1,268 mm)               |   |
| <b>(No. of pixels)</b>                     | 786,432 (1,024 (W) × 768 (H))[3,072 × 768 dots]                                |   |
| <b>Sound</b>                               |  |   |
| <b>Audio Output</b>                        | 20 W [ 10 W + 10 W ] ( 10 % THD )  |   |
| <b>Channel Capability (Digital/Analog)</b> | VHF/ UHF: 2 - 69, CATV: 1 - 135  |   |
| <b>Operating Conditions</b>                |  |   |
|  | Temperature:   | 32 °F - 104 °F (0 °C - 40 °C)           |
|  | Humidity:  | 20 % - 80 % RH (non-condensing)         |
| <b>Connection Terminals</b>                |  |   |
| <b>VIDEO IN 1-2</b>                        | VIDEO:   | RCA PIN Type × 1 1.0 V [p-p] (75 Ω)     |
|  | AUDIO L-R:   | RCA PIN Type × 2 0.5 V [rms]            |
| <b>COMPONENT INPUT 1-2</b>                 | Y:   | 1.0 V [p-p] (including synchronization) |
|  | PB, PR:  | ±0.35 V [p-p]                           |
|  | AUDIO L-R:   | RCA PIN Type × 2 0.5 V [rms]            |
| <b>HDMI 1-2</b>                            | TYPE A Connector × 2   |   |
|  | This TV supports [HDAVI Control 5] function.                                   |   |
| <b>Card slot</b>                           | SD CARD slot × 1   |   |
| <b>DIGITAL AUDIO OUT</b>                   | PCM / Dolby Digital, Fiber Optic   |   |
| <b>FEATURES</b>                            | 3D Y/C FILTER  |   |
|  | CLOSED CAPTION   | V-Chip                                  |
|  | VIERA IMAGE VIEWER   | HDAVI Control 5                         |
| <b>Dimensions (W × H × D)</b>              |  |   |
| <b>Including pedestal</b>                  | 48.0 inch × 32.2 inch × 14.1 inch (1,218 mm × 817 mm × 357 mm)                 |   |
| <b>TV Set only</b>                         | 48.0inch × 30.3 inch × 3.7 inch (4.1 inch) (1,218 mm × 769 mm × 93 mm (104mm)) |   |
| <b>Mass</b>                                |  |   |
| <b>Including pedestal</b>                  | 72.8 lb. (33.0 kg)   |   |
| <b>TV Set only</b>                         | 70.6 lb. (32.0 kg)   |   |

**Note**

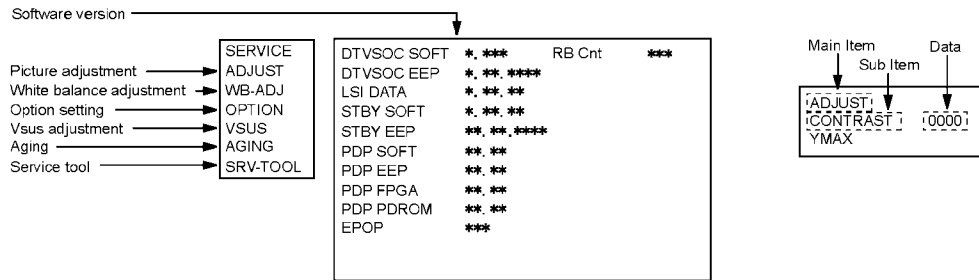
- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.



# 5 Service Mode

## 5.1. How to enter into Service Mode

While pressing [VOLUME (-)] button of the main unit, press [INFO] button of the remote control three times within 2 seconds.



### 5.1.1. Key command

- [1] button...Main items Selection in forward direction
- [2] button...Main items Selection in reverse direction
- [3] button...Sub items Selection in forward direction
- [4] button...Sub items Selection in reverse direction
- [VOL] button...Value of sub items change in forward direction ( + ), in reverse direction ( - )

### 5.1.2. Contents of adjustment mode

- Value is shown as a hexadecimal number.
- Preset value differs depending on models.
- After entering the adjustment mode, take note of the value in each item before starting adjustment.

| Main item                   | Sub item                  | Sample Data   | Remark                                   |
|-----------------------------|---------------------------|---------------|--|
| ADJUST                      | CONTRAST                  | 46            |  |
|                             | COLOR                     | 00            |  |
|                             | TINT                      | 00            |  |
|                             | SUB-BRT                   | 000           |  |
| WB-ADJ                      | R-CUT                     | 80            |  |
|                             | G-CUT                     | 80            |  |
|                             | B-CUT                     | 80            |  |
|                             | R-DRV                     | FD            |  |
|                             | G-DRV                     | FB            |  |
|                             | B-DRV                     | FF            |  |
|                             | ALL-DRV                   | FF            |  |
| OPTION                      | BOOT                      | ROM           | Factory Preset                           |
|                             | STBY-SET                  | --            |  |
|                             | EMERGENCY                 | ON            |  |
|                             | CLK MODE                  | ON            |  |
|                             | CLOCK                     | FFF           |  |
|                             | MIRROR                    | 00 (See next) |  |
|                             | EDID-CLK                  | HIGH          |  |
| VSUS                        |                           |               |  |
| AGING                       | ALL WHITE                 |               | Built-in test patterns can be displayed. |
|                             | AI ALL BLUE + WHITE FLAME |               |  |
|                             | AI ALL GREEN              |               |  |
|                             | AI ALL RED                |               |  |
|                             | LOW STEP WHITE            |               |  |
|                             | LOW STEP BLUE             |               |  |
|                             | LOW STEP GREEN            |               |  |
|                             | LOW STEP RED              |               |  |
|                             | RAMP WHITE                |               |  |
|                             | RAMP RED                  |               |  |
|                             | RAMP GREEN                |               |  |
|                             | RAMP BLUE                 |               |  |
|                             | A-ZONE B-ZONE             |               |  |
|                             | 1% WINDOW                 |               |  |
|                             | COLOR BAR                 |               |  |
|                             | 9 POINT BRIGHTNESS        |               |  |
|                             | WHITE FLAME               |               |  |
|                             | AI ALL BLUE               |               |  |
|                             | TWICE FIXATION 1% WINDOW  |               |  |
|                             | SCROLL                    |               |  |
| ON/OFF OR RGBW              |                           |               |  |
| R/G/B/W AGING MODE          |                           |               |  |
| 0.5 TIME FIXATION ALL WHITE |                           |               |  |
| ALL WHITE WITH COUNT        |                           |               |  |
| SRV-TOOL                    | -                         |               | See next                                 |

### 5.1.3. How to exit

Switch off the power with the [POWER] button on the main unit or the [POWER] button on the remote control.

## 5.2. Option - Mirror

Picture can be reversed left and right or up and down.

00 : Default (Normal picture is displayed)

01 : Picture is reversed left and right.

02 : Picture is reversed up and down.

00



01



02



Hint : If the defective symptom (e.g. Vertical bar or Horizontal bar) is moved by selection of this mirror, the possible cause is in A-board.

## 5.3. Service tool mode

### 5.3.1. How to access

1. Select [SRV-TOOL] in Service Mode.
2. Press [OK] button on the remote control.

|                                   |                               |              |          |
|-----------------------------------|-------------------------------|--------------|----------|
|                                   | SRV-TOOL                      |              |          |
|                                   |                               |              |          |
|                                   |                               |              |          |
|                                   |                               |              |          |
| Display of TD2Microcode version → | TD2Microcode:81c0000e         |              |          |
| Display of Flash ROM maker code → | Flash ROM : 1 - 227E          |              |          |
| Display of SOS History →          | PTCT : 00 . 00 . 00 . 00 . 00 | Time 0000:40 | Count 01 |
|                                   |                               |              |          |

← POWER ON TIME/COUNT  
Press [MUTE] button (3sec)

### 5.3.2. Display of SOS History

SOS History (Number of LED blinking) indication.

From left side; Last SOS, before Last, three occurrence before, 2nd occurrence after shipment, 1st occurrence after shipment.

This indication except 2nd and 1st occurrence after shipment will be cleared by [Self-check indication and forced to factory shipment setting].

### 5.3.3. POWER ON TIME/COUNT

Note : To display TIME/COUNT menu, highlight position, then press MUTE for (3sec).

Time : Cumulative power on time, indicated hour : minute by decimal

Count : Number of ON times by decimal

Note : This indication will not be cleared by either of the self-checks or any other command.

### 5.3.4. Exit

1. Disconnect the AC cord from wall outlet.


## 5.4. Hotel mode

- Purpose  
Restrict a function for hotels.
- Access command to the Hotel mode setup menu  
In order to display the Hotel mode setup menu, please enter the following command (**within 2 second**).  
[TV]: Vol. [Down] + [REMOTE]: INPUT (3 times)

Then, the Hotel mode setup menu is displayed.

### Hotel Mode

|          |       |
|----------|-------|
| Mode     | Off   |
| Input    | -     |
| Channel  | -     |
| Volume   | + 25  |
| Vol. Max | + 100 |
| OSD Ctrl | Off   |
| FP Ctrl  | Off   |
| Pow Ctrl | Off   |



Select  
Change

- To exit the Hotel mode setup menu  
Disconnect AC power cord from wall outlet.
- Explain the Hotel mode setup menu

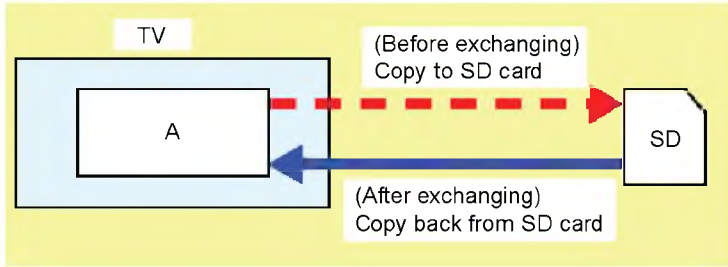
| item     | Function  |
|----------|---|
| Mode     | Select hotel mode ON/OFF  |
| Input    | Select input signal modes.<br>Set the input, when each time power is switched on.<br>Selection:<br>---/RF/HDMI1/HDMI2/COMP1/COMP2/VIDEO1/VIDEO2<br>• OFF: give priority to a last memory. |
| Channel  | Select channel when input signal is RF.<br>Set the channel, each time power is switched on.<br>Selection:<br>Any channel number or [-].<br>[-] means the channel when turns off.          |
| Volume   | Adjust the volume when each time power is switched on.<br>Range:<br>0 to 100  |
| Vol. Max | Adjust maximum volume.<br>Range:<br>0 to 100  |
| OSD Ctrl | Restrict the OSD.<br>Selection:<br>OFF/PATTERN1<br>• OFF: No restriction<br>• PATTERN1: restriction   |
| FP Ctrl  | Select front key conditions.<br>Selection:<br>OFF/ALL/PATTERN1<br>• OFF: altogether valid.<br>• ALL: altogether invalid.<br>• PATTERN1: only input key is valid.                          |
| Pow Ctrl | Select POWER-ON/OFF condition when AC power cord is disconnected and then connected.<br>OFF: The same condition when AC power cord is disconnected.<br>ON: Forced power ON condition.     |

## 5.5. Data Copy by SD Card

### 5.5.1. Purpose

**(a) Board replacement (Copy the data when exchanging A-board):**

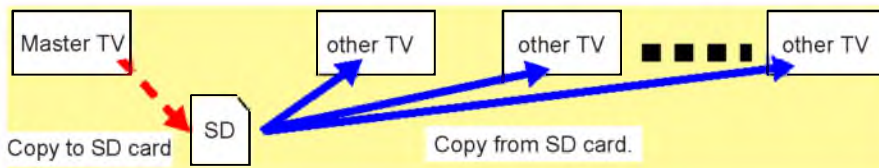
When exchanging A-board, the data in original A-board can be copied to SD card and then copy to new A-board.



Following data can be copied.  
User setting data  
(incl. Hotel mode setting data)  
Channel scan data  
Adjustment and factory preset data

**(b) Hotel (Copy the data when installing a number of units in hotel or any facility):**

When installing a number of units in hotel or any facility, the data in master TV can be copied to SD card and then copy to other TVs.



Following data can be copied.  
User setting data  
(incl. Hotel mode setting data)  
Channel scan data

### 5.5.2. Preparation

Make pwd file as startup file for (a) or (b) in a empty SD card.

1. Insert a empty SD card to your PC.
2. Right-click a blank area in a SD card window, point to New, and then click text document. A new file is created by default (New Text Document.txt).
3. Right-click the new text document that you just created and select rename, and then change the name and extension of the file to the following file name for (a) or (b) and press ENTER.

**File name:**

- (a) For Board replacement : boardreplace.pwd
- (b) For Hotel : hotel.pwd

**Note:**

- Please make only one file to prevent the operation error.
- No any other file should not be in SD card.

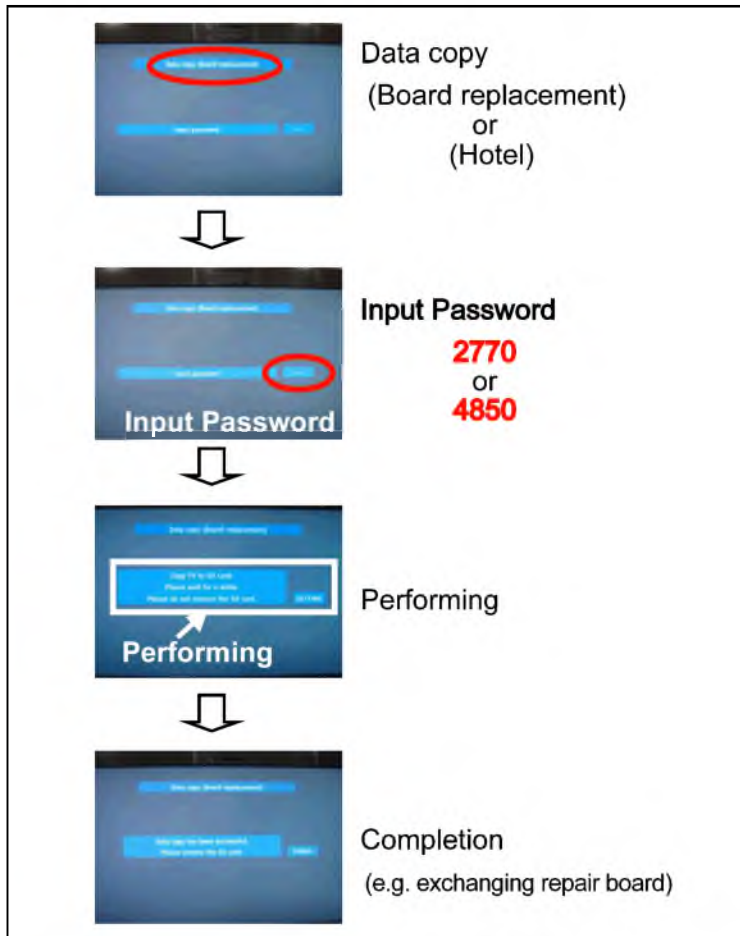
### 5.5.3. Data copy from TV set to SD Card

1. Turn on the TV set.
2. Insert SD card with a startup file (pwd file) to SD slot.  
On-screen Display will be appeared according to the startup file automatically.
3. Input a following password for (a) or (b) by using remote control.
  - (a) For Board replacement : 2770
  - (b) For Hotel : 4850Data will be copied from TV set to SD card.  
It takes around 2 to 6 minutes maximum for copying.
4. After the completion of copying to SD card, remove SD card from TV set.
5. Turn off the TV set.

**Note:**

Following new folder will be created in SD card for data from TV set.

- (a) For Board replacement : user\_setup
- (b) For Hotel : hotel

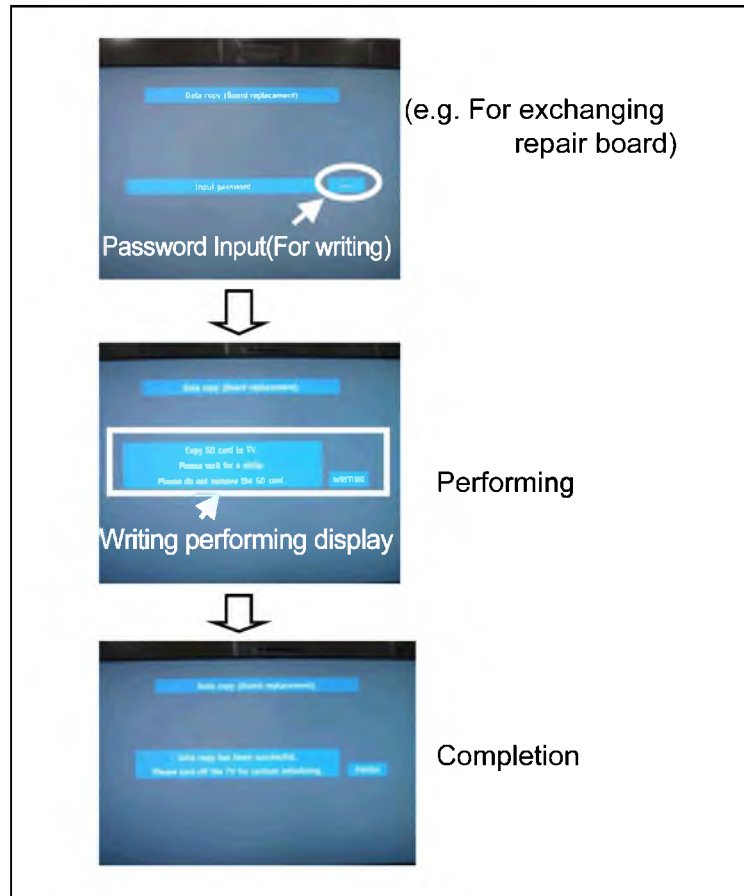


### 5.5.4. Data copy from to SD Card to TV set

1. Turn on the TV set.
2. Insert SD card with Data to SD slot.  
On-screen Display will be appeared according to the Data folder automatically.
3. Input a following password for (a) or (b) by using remote control.  
(a) For Board replacement : 2771  
(b) For Hotel : 4851  
Data will be copied from SD card to TV set.
4. After the completion of copying to SD card, remove SD card from TV set.  
(a) For Board replacement : Data will be deleted after copying (Limited one copy).  
(b) For Hotel : Data will not be deleted and can be used for other TVs.
5. Turn off the TV set.

**Note:**

1. Depending on the failure of boards, function of Data copy for board replacement does not work.
2. This function can be effective among the same model numbers.



## 6 Troubleshooting Guide

Use the self-check function to test the unit.

1. Checking the IIC bus lines
2. Power LED Blinking timing

### 6.1. Check of the IIC bus lines

#### 6.1.1. How to access

Self-check indication only:

Produce TV reception screen, and while pressing [VOLUME (-)] button on the main unit, press [OK] button on the remote control for more than 3 seconds.

Self-check indication and forced to factory shipment setting:

Produce TV reception screen, and while pressing [VOLUME (-)] button on the main unit, press [MENU] button on the remote control for more than 3 seconds.

#### 6.1.2. Exit

Disconnect the AC cord from wall outlet.

#### 6.1.3. Screen display

|                                      |     |                   |                 |
|--------------------------------------|-----|-------------------|-----------------|
| SELF CHECK                           |     | 0.101 - 0.00.0000 |                 |
| DTVSOC                               | 0C  |                   |                 |
| TUN                                  | OK  |                   |                 |
| MEM1                                 | OK  |                   |                 |
| MEM2                                 | OK  |                   |                 |
| TEMP                                 | OK  |                   |                 |
| PANEL                                | OK  |                   |                 |
| AMP                                  | OK  |                   |                 |
| SYSMPU                               | OK  |                   |                 |
| EPOP                                 | 001 |                   |                 |
|                                      |     | ROM CHECK:        | *****           |
|                                      |     | EDID:             | ** ** * * * * * |
| Copyright Panasonic Corporation 2010 |     |                   |                 |

#### 6.1.4. Check Point

Confirm the following parts if NG was displayed.

| DISPLAY | Ref. No. | Description        | P.C.B.  |
|---------|----------|--------------------|---------|
| DTVSOC  | IC8001   | Nile-TCON          | A-Board |
| TUN     | TU8302   | TUNER              | A-Board |
| MEM1    | IC8004   | EEPROM (MPU)       | A-Board |
| MEM2    | IC8503   | EEPROM (Nile)      | A-Board |
| TEMP    | IC4701   | TEMP SENSOR        | A-Board |
| PANEL   | IC9003   | PANEL MICOM        | A-Board |
| AMP     | IC2106   | AUDIO AMP          | A-Board |
| SYSMPU  | IC8001   | SYSMPU (Nile-TCON) | A-Board |



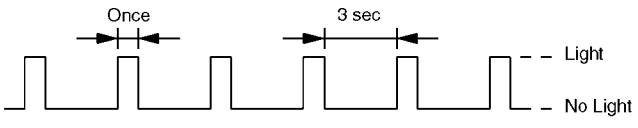
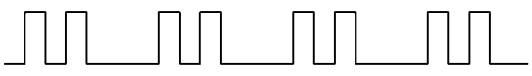


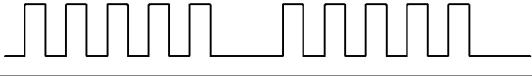
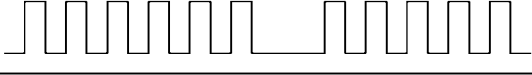





## 6.2. Power LED Blinking timing chart

### 1. Subject

Information of LED Flashing timing chart.

### 2. Contents

When an abnormality has occurred the unit, the protection circuit operates and reset to the stand by mode. At this time, the defective block can be identified by the number of blinks of the Power LED on the front panel of the unit.

| Blinking Times | Blinking timing   | Contents  | Check point                                |
|----------------|---|---|--|
| 1              |    | Unknown SOS   | -  |
|                |   | Panel information SOS<br>PD4 Start SOS                            | -  |
| 2              |    | 15V SOS   | A-Board                                    |
| 3              |    | 3.3V SOS  | A-Board                                    |
| 4              |    | Power SOS   | P-Board                                    |
| 5              |    | 5V SOS  | A-Board                                    |
| 6              |   | Driver SOS1<br>(SC/SS Energy recovery circuit)<br>(A-SC FPC DET)  | SC-Board<br>SS-Board<br>A-SC FPC           |
| 7              |  | Driver SOS2<br>(SU/SD Connector DET)<br>(SU/SD Scan and Logic IC) | SU-Board<br>SD-Board<br>*                  |
| 8              |  | Driver SOS3<br>(SS FPC DET)                                       | SS-Board                                   |
| 9              |  | Discharge Control SOS   | A-Board                                    |
| 10             |  | Sub 5V SOS<br>Sub 3.3V SOS<br>Sub 9V SOS<br>Tuner Power SOS       | A-Board<br>SC-Board<br>SS-Board<br>P-Board |
| 12             |  | Sound SOS   | A-Board<br>Speaker                         |

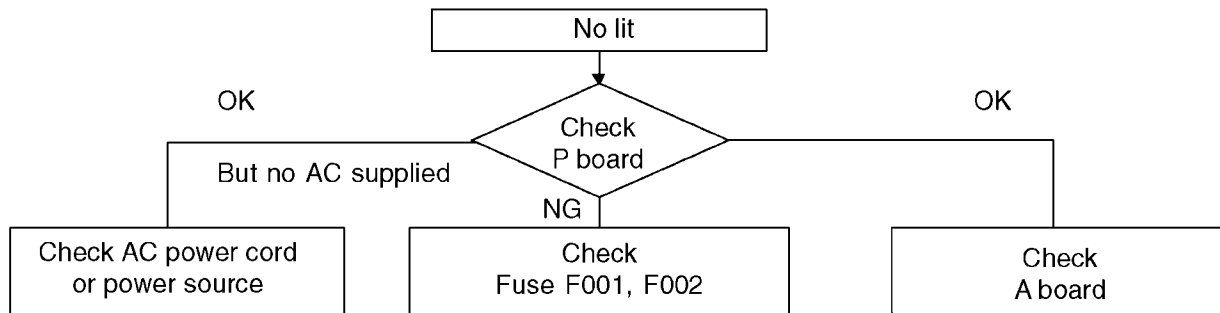
\*Use SC jig to isolate the board.

### 6.3. No Power

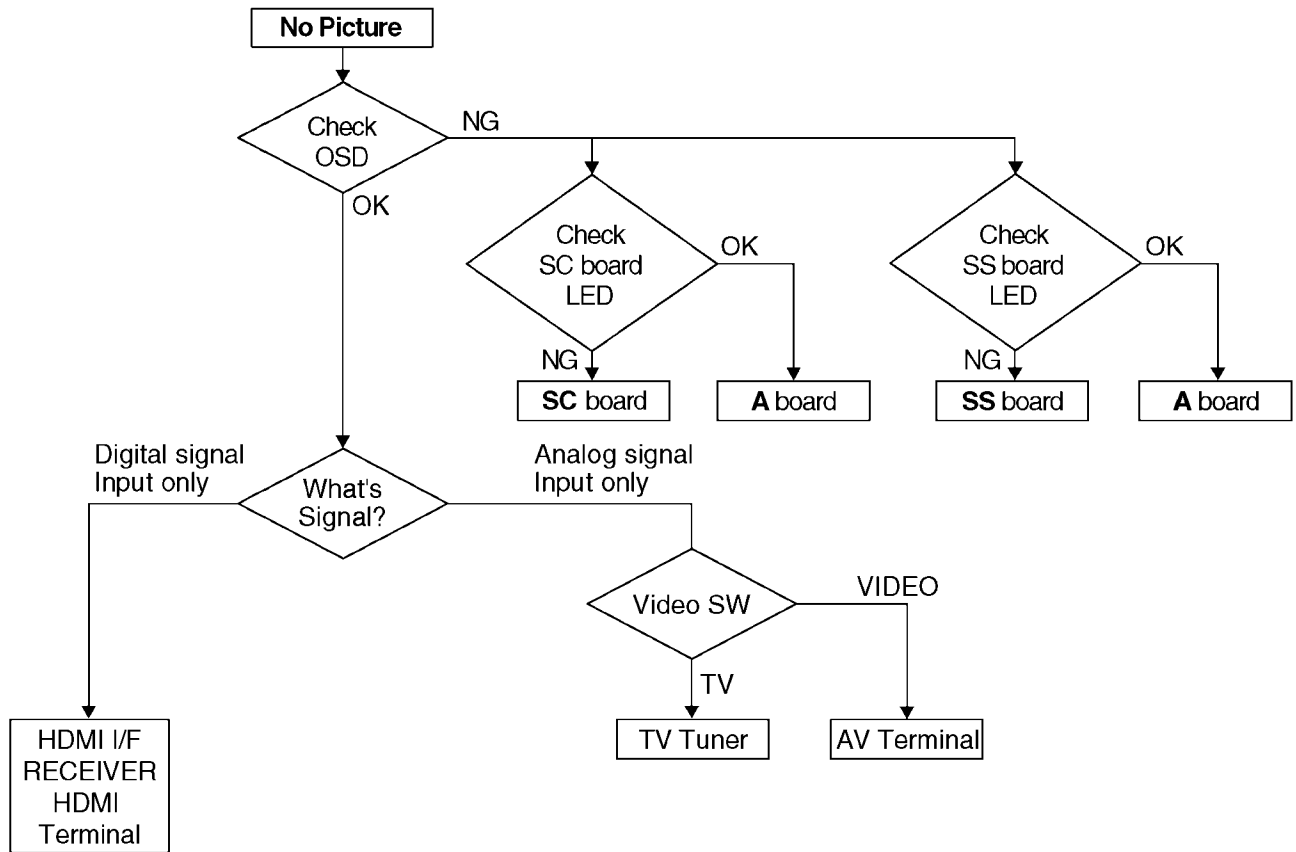
#### First check point

There are following 2 states of No Power indication by power LED.

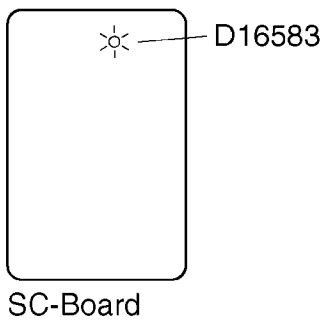
1. No lit
2. Red is lit then turns red blinking a few seconds later. (See 6.2.)



## 6.4. No Picture



Drive circuits LED indicator



## 6.5. Local screen failure

Plasma display may have local area failure on the screen. Fig-1 is the possible defect P.C.B. for each local area.

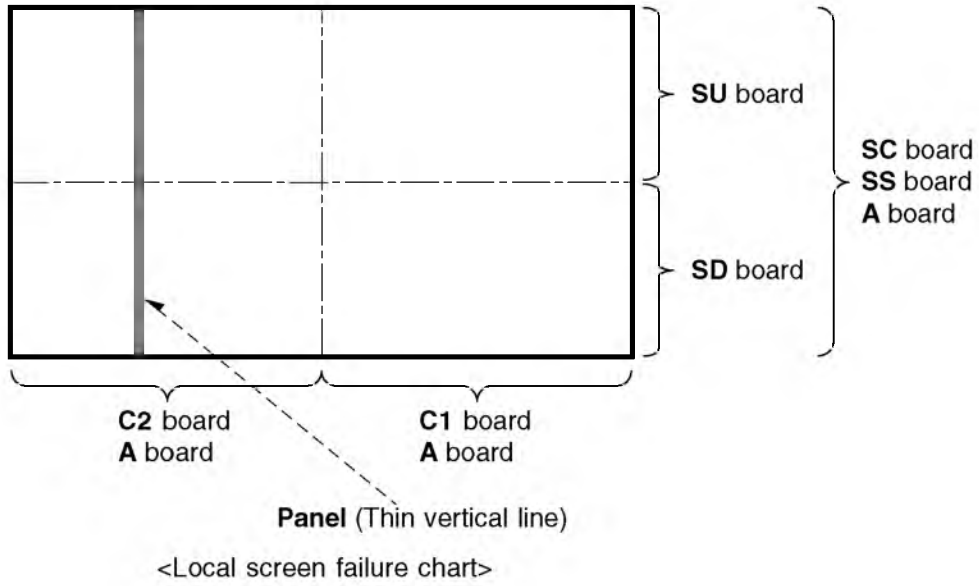


Fig-1

# 7 Service Fixture & Tools

## 7.1. SC jig

**Purpose:**

To find the failure board (SC or SU/SD) when the power LED is blinking 7 times.

**SC jig:**

Jumper connector to connect to SC50 connector on SC board

**Part number:**

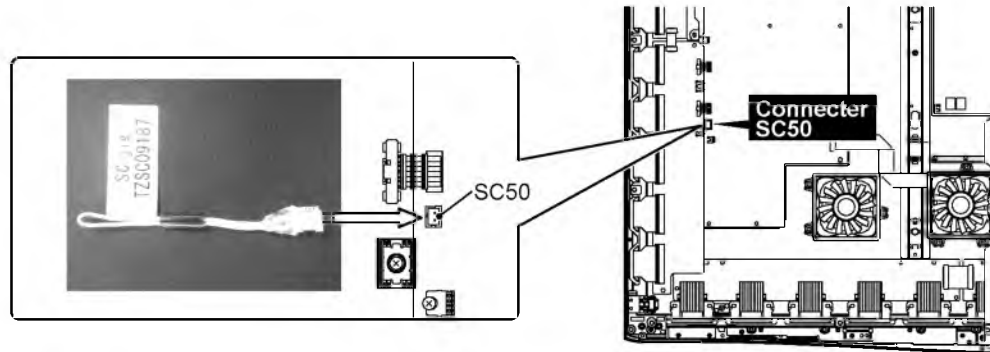
TZSC09187

**How to use:**

**Caution: Remove SC jig from SC board after inspection.**

1. Remove all connector between SC board and SU/SD board to isolate SC board from both SU and SD board electrically.  
Note: The board will be damaged if all connector is not removed (for example; remove connector only for SU board and stay connecting with SD board. The board will be damaged.)
2. Connect SC jig to connector SC50 at left bottom side of SC board
3. Turn of the TV/Display Unit and confirm the power LED blinking.  
LED blinking: Possible cause of failure is in SC board  
No LED blinking (Lighting or no lighting): Possible cause of failure is in SU or SD board
4. After inspection, turn off the TV/Display Unit and wait a few minutes to discharge.
5. Remove SC jig from SC board.

Remark: This SC jig can be used for all 2010 Plasma TV and Plasma Display.



# 8 Disassembly and Assembly Instructions

## 8.1. Remove the Rear cover

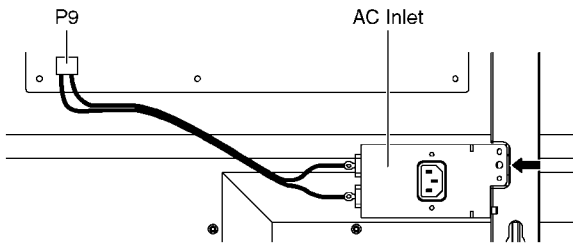
1. See Service Hint (Section 3)

## 8.2. Remove the AC inlet

**Caution:**

To remove P.C.B. wait 1 minute after power was off for discharge from electrolysis capacitors.

1. Unlock the cable claspers to free the cable.
2. Disconnect the connector (P9).
3. Remove the screw (x1 ➡) and remove the AC inlet.

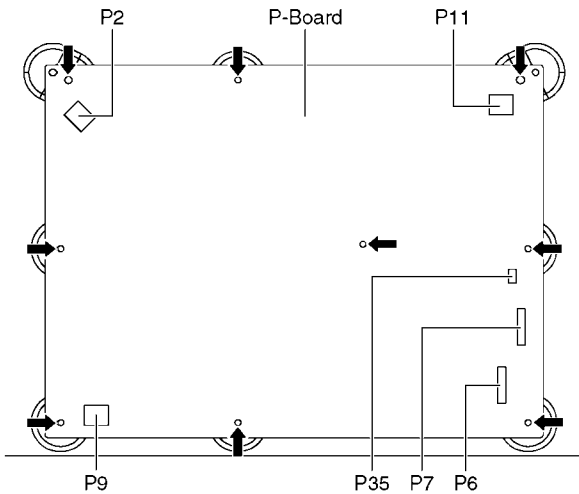


## 8.3. Remove the P-Board

**Caution:**

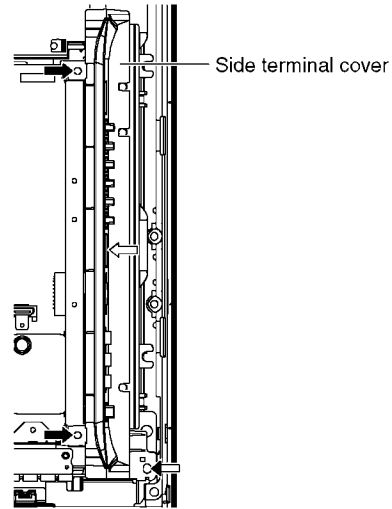
To remove P.C.B. wait 1 minute after power was off for discharge from electrolysis capacitors.

1. Unlock the cable claspers to free the cable
2. Disconnect the connectors (P2, P6, P7, P9, P11 and P35).
3. Remove the screws (x9 ➡) and remove the P-Board.

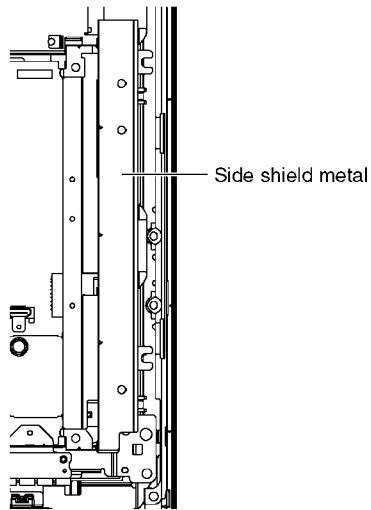


## 8.4. Remove the Side terminal cover and Side shield metal

1. Remove the screws (x2 ➡, x1 ⇨, x1 ⇨).
2. Remove the Side terminal cover.

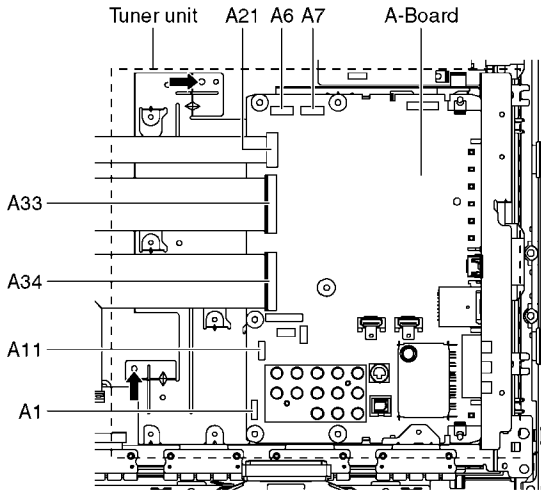


3. Remove the Side shield metal.



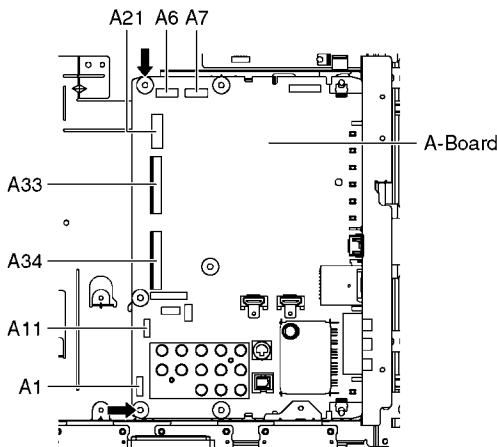
### 8.5. Remove the Tuner unit

1. Unlock the cable clampers to free the cable.
2. Disconnect the connectors (A1, A6, A7 and A11).
3. Disconnect the flexible cables (A21, A33 and A34).
4. Remove the screws (x2 ➡) and remove the Tuner unit.



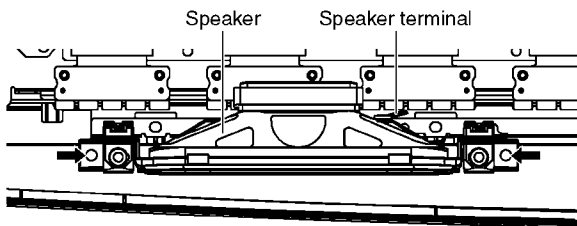
### 8.6. Remove the A-Board

1. Remove the Tuner unit. (See section 8.5.)
2. Remove the screws (x2 ➡) and remove the A-Board.



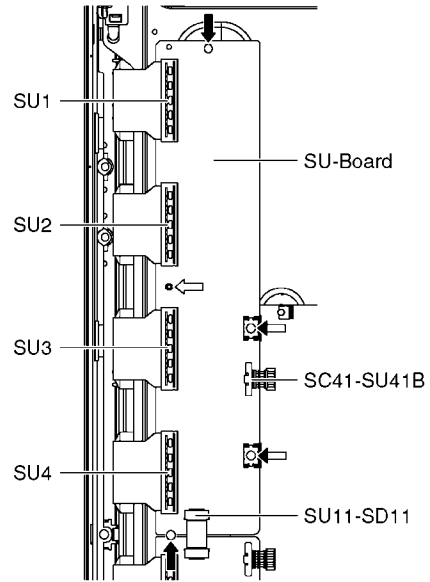
### 8.7. Remove the Speakers

1. Unlock the cable clampers to free the cable.
2. Disconnect the Speaker terminal.
3. Remove the screws (x2 ➡ each) and remove the Speakers (L, R).



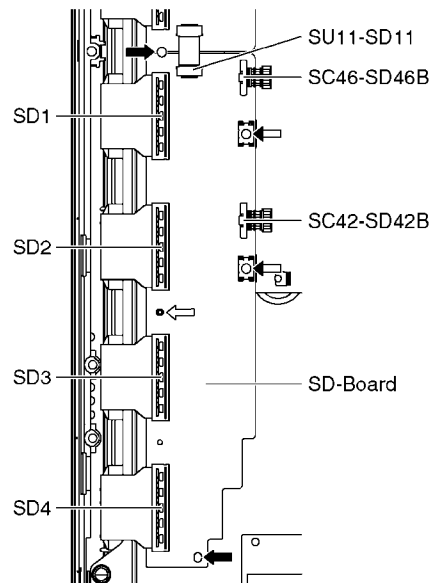
### 8.8. Remove the SU-Board

1. Remove the flexible cables (SU1, SU2, SU3 and SU4) connected to the SU-Board.
2. Remove the flexible cable (SU11-SD11) and the bridge connector (SC41-SU41B).
3. Remove the molding prop (x1 ⇨).
4. Remove the screws (x2 ➡, x2 ⇨) and remove the SU-Board.



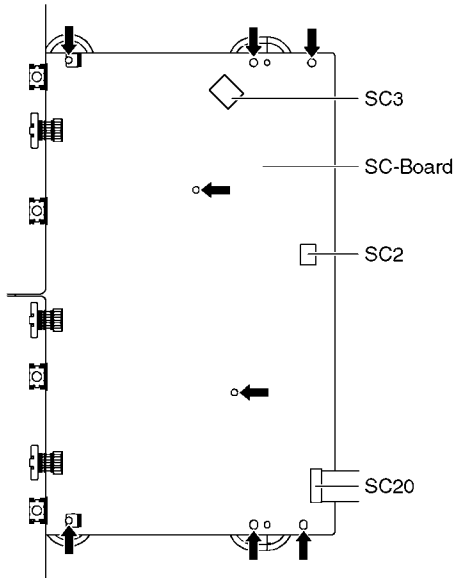
### 8.9. Remove the SD-Board

1. Remove the flexible cables (SD1, SD2, SD3 and SD4) connected to the SD-Board.
2. Remove the flexible cable (SU11-SD11) and the bridge connectors (SC42-SD42B and SC46-SD46B).
3. Remove the molding prop (x1 ⇨).
4. Remove the screws (x2 ➡, x2 ⇨) and remove the SD-Board.



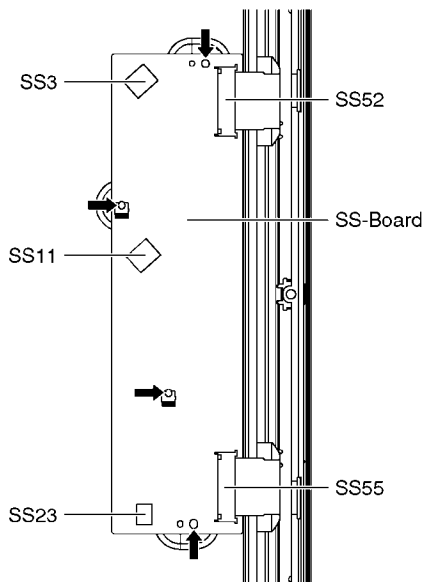
## 8.10. Remove the SC-Board

1. Remove the SU-Board and SD-Board. (See section 8.8. and 8.9.)
2. Unlock the cable clampers to free the cable.
3. Disconnect the connectors (SC2 and SC3).
4. Disconnect the flexible cable (SC20).
5. Remove the screws (×8 ➡) and remove the SC-Board.



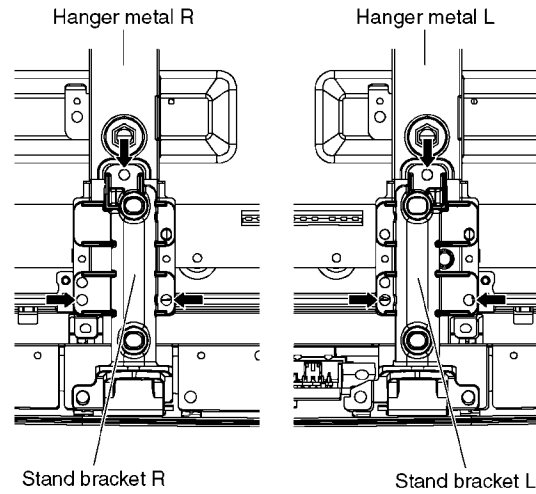
## 8.11. Remove the SS-Board

1. Remove the Tuner unit. (See section 8.5.)
2. Unlock the cable clampers to free the cable.
3. Disconnect the connectors (SS3, SS11 and SS23).
4. Disconnect the flexible cables (SS52 and SS55).
5. Remove the screws (×4 ➡) and remove the SS-Board.

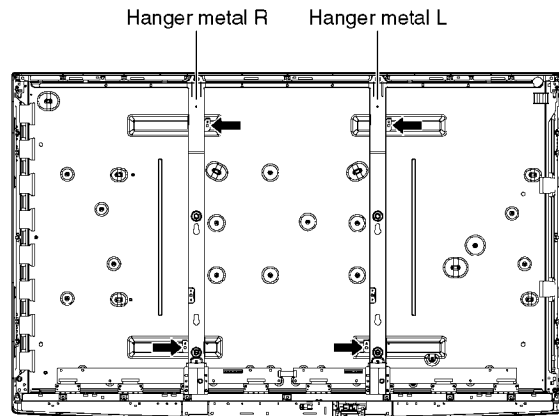


## 8.12. Remove the Hanger metals and the Stand brackets

1. Remove the Plasma panel section from the servicing stand and lay on a flat surface such as a table (covered by a soft cloth) with the Plasma panel surface facing downward.
2. Remove the Stand brackets (L, R) fastening screws (×3 ➡ each) and the Stand brackets (L, R).



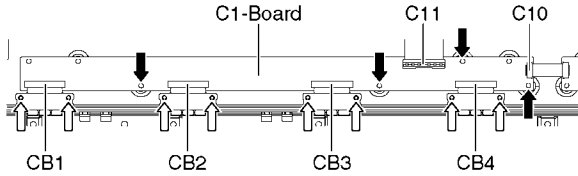
3. Remove the Hanger metals (L, R) fastening screws (×2 ➡ each) and remove the Hanger metals (L, R).





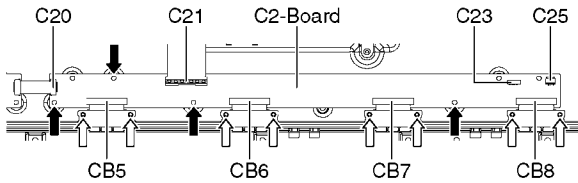
### 8.13. Remove the C1-Board

1. Remove the Hanger metal R and the Stand bracket R. (See section 8.12.)
2. Remove the flexible cables holder fastening screws (×8 ⇨).
3. Disconnect the flexible cables (CB1, CB2, CB3 and CB4).
4. Disconnect the flexible cables (C10 and C11).
5. Remove the screws (×4 ⇨) and remove the C1-Board.



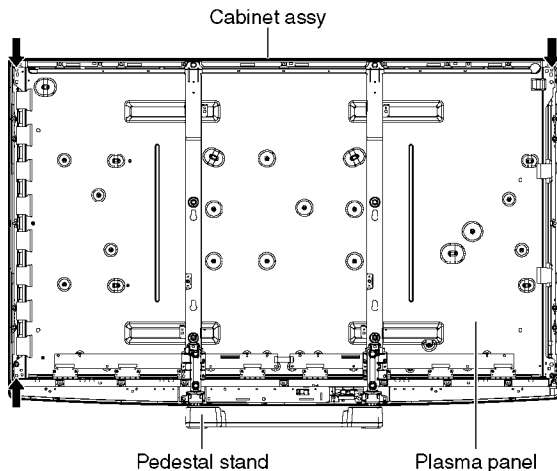
### 8.14. Remove the C2-Board

1. Remove the Tuner unit. (See section 8.5.)
2. Remove the Hanger metal L and the Stand bracket L. (See section 8.12.)
3. Remove the flexible cables holder fastening screws (×8 ⇨).
4. Disconnect the flexible cables (CB5, CB6, CB7 and CB8).
5. Disconnect the flexible cables (C20 and C21).
6. Disconnect the connectors (C23 and C25).
7. Remove the screws (×4 ⇨) and remove the C2-Board.

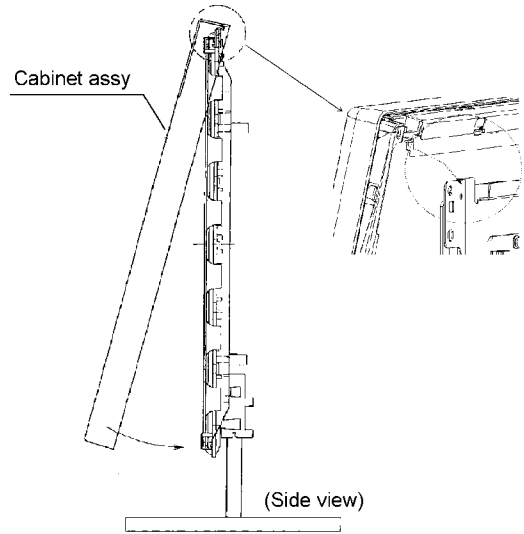


### 8.15. Remove the Plasma panel section from the Cabinet assy (glass)

1. Remove the cabinet assy and the plasma panel fastening screws (×3 ⇨).

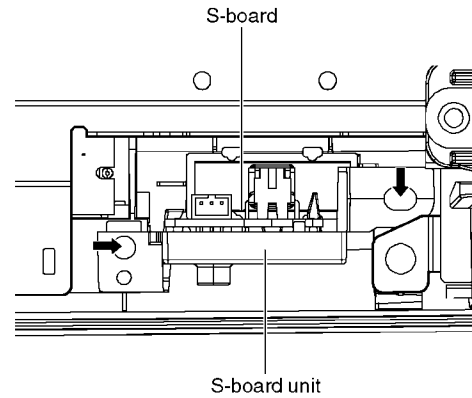


2. For leaving the plasma panel from the front frame, pull the bottom of the cabinet assy forward, lift, and remove.

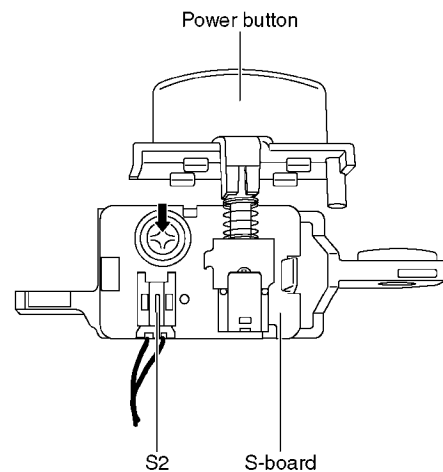


### 8.16. Remove the S-Board

1. Remove the Cabinet assy. (See section 8.15.)
2. Remove the screws (×2 ⇨) and remove the S-Board unit.

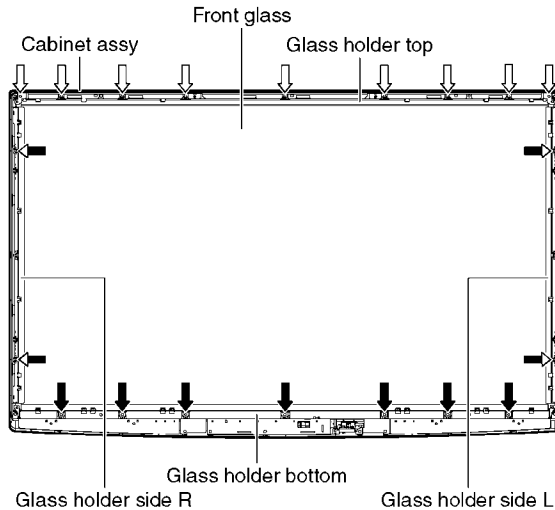


3. Disconnect the connector (S2).
4. Remove the Power Button.
5. Remove the screw (×1 ⇨) and remove the S-Board.



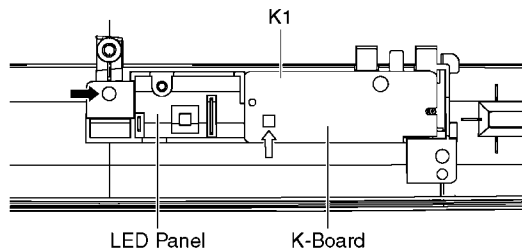
## 8.17. Remove the Glass holders

1. Remove the Cabinet assy. (See section 8.15.)
2. Remove the S-Board. (See section 8.16.)
3. Remove the screws (×4 ➡).
4. Remove the Glass holder side (L, R).
5. Remove the screws (×9 ⇨).
6. Remove the Glass holder top.
7. Remove the screws (×7 ➡).
8. Remove the Glass holder bottom.



## 8.18. Remove the K-Board

1. Remove the Glass holders. (See section 8.17.)
2. Remove the screw (×1 ➡).
3. Remove the claw (×1 ⇨).
4. Disconnect the connector (K1) and Remove the K-Board from LED Panel.



## 8.19. Replace the plasma panel

### Caution:

A new plasma panel itself without Hanger metals is fragile.

To avoid the damage to new plasma panel, carry a new plasma panel taking hold of the Hanger metals after assembling the Hanger metals and the Stand brackets.

1. Place a carton box packed a new plasma panel on the flat surface of the work bench.
2. Open a box and without taking a new plasma panel; Attach the C1-Board and the C2-Board, connect the flexible cables from the plasma panel to the C1-Board and the C2-Board, and fit the flexible cable holders.
3. Attach the Hanger metals and the Stand brackets to the new plasma panel.
4. Place the plasma panel on the servicing stand taking hold of the Hanger metals.
5. Attach the cabinet assy and each P.C. Board and so on, to the new plasma panel.

**\*When fitting the cabinet assy, be careful not to allow any debris, dust or handling residue to remain between the front glass and plasma panel.**

# 9 Measurements and Adjustments

## 9.1. Adjustment

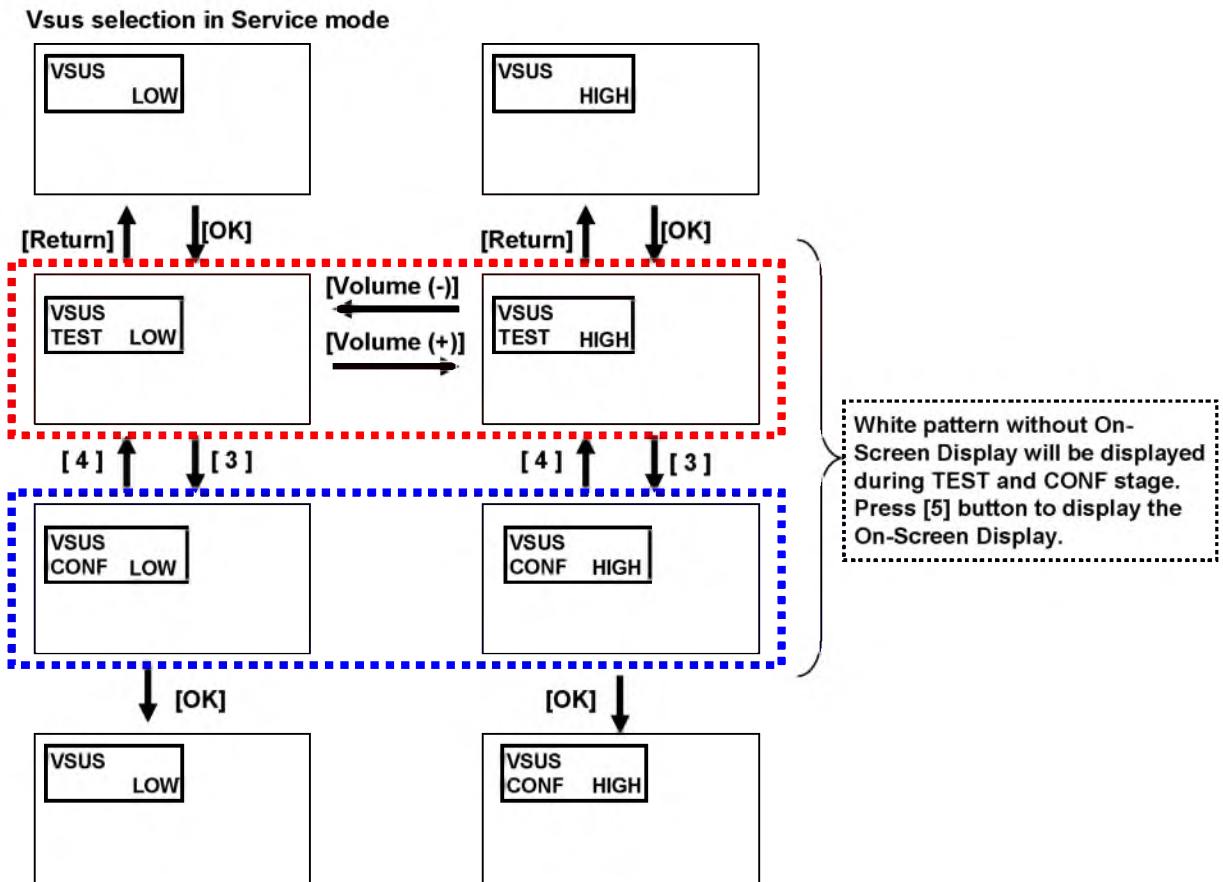
### 9.1.1. Vsus selection

**Caution:**

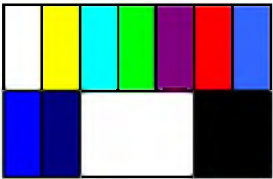
When Plasma panel or A-board is replaced, Vsus should be set to LOW or HIGH.

**Procedure**

1. Go into main item [VSUS] in Service Mode. LOW or HIGH will be displayed.
2. Press [OK] button to go to TEST stage.  
White pattern without On-Screen Display will be displayed during TEST and CONF stage. Press [5] button to display the On-Screen Display.
3. Press [VOL (-)] button to set to LOW.
4. In LOW setting
  - a. If no several dead pixel is visible remarkably in white pattern, press [3] button to go to CONF stage.
  - b. If the several dead pixels are visible remarkably in white pattern, Set to HIGH by press [VOL (+)] button. Press [3] button to go to CONF stage if the symptom is improved.
5. Press [OK] button in CONF stage to store LOW or HIGH.
6. Exit Service Mode by pressing [Power] button.



### 9.1.2. RF video sub contrast adjustment

| Name of measuring instrument   |         | Remarks   |     |      |      |    |      |    |
|--|---------|---|-----|------|------|----|------|----|
| 1. REMOTE TRANSMITTER<br>2. RF analog signal (Sprit color bar. The pattern for adjustment must contain 100% white part.)   |         |   |     |      |      |    |      |    |
| Procedure  |         | Remarks   |     |      |      |    |      |    |
| 1. Receive the sprit color bar with RF analog signal.<br>(ASPECT FULL, Picture menu: Vivid)<br>2. Enter Service mode menu, and select ADJUST -- CONTRAST.<br>Pushing the remote controller [OK] key for about 3 seconds, GAIN is suited to the adjustment value automatically. |         |   |     |      |      |    |      |    |
|  <p style="text-align: center;">(The Sprit Color Bar Pattern)</p>   |         |   |     |      |      |    |      |    |
| EEPROM address (DTVSOIC)   |         |   |     |      |      |    |      |    |
|  |         | <table border="1"> <thead> <tr> <th>adr</th> <th>data</th> </tr> </thead> <tbody> <tr> <td>0150</td> <td>46</td> </tr> <tr> <td>0151</td> <td>00</td> </tr> </tbody> </table> | adr | data | 0150 | 46 | 0151 | 00 |
| adr  | data    |   |     |      |      |    |      |    |
| 0150   | 46      |   |     |      |      |    |      |    |
| 0151   | 00      |   |     |      |      |    |      |    |
| sub_contrast   | RF_NTSC |   |     |      |      |    |      |    |

### 9.1.3. White balance adjustment

| Name of measuring instrument   | Remarks   |
|--|---|
| Color analyzer<br>(Minolta CA-100 or equivalent)<br><b>Note:</b><br>The CA-100 which was calibrated to less than +0.001 with CS-1000.  |   |
| Procedure  | Remarks   |
| <ul style="list-style-type: none"> <li>• Make sure the front panel to be used on the final set is fitted.</li> <li>• Make sure a color signal is not being shown before adjustment.</li> <li>• Put the color analyzer where there is little color variation.</li> </ul> <ol style="list-style-type: none"> <li>1. Set to Service mode menu, WB-ADJ.</li> <li>2. Select [VIVID] for picture menu.</li> <li>3. Select [Cool] for color temperature.</li> <li>4. Push [5] key of remote controller to display window pattern.<br/>           Confirm the brightness within 10 seconds. The following is the confirmation value.<br/>           TC-P50C2 228cd/m2<br/>           In the case of NG for the measurement of the brightness, display black pattern for 30 seconds from turning on the TV set, and after that, display the brightness check pattern and measure the brightness within 2 minutes again.</li> <li>5. Set [R-CUT] [G-CUT] [B-CUT] the values written in table 1.</li> <li>6. Attach the sensor of color analyzer to the center of window pattern.</li> <li>7. Fix G drive at COh and adjust [B-DRV] and [R-DRV] so x, y value of color analyzer become the [Color temperature High] in table 2.</li> <li>8. Increase RGB together so the maximum drive value in RGB becomes [FF].<br/>           That is, set [ALL DRIVE] to [FF].<br/>           Execute adjustment again. When that, the maximum value of R/G/B DRV should be [FF], and either R/G/B DRV should be [FF].</li> </ol> <p><b>Note:</b><br/>           (Note) In procedure 7, all description of data [FF] should be treated as data [FC] when the model is S2/C2/U2/X2 and manual adjustment is performed by service mode menu.</p> <ol style="list-style-type: none"> <li>9. The average of the adjusted values in color temperature Cool, Mid, and Warm is shown in Table 4.<br/>           The setting value for color temperature Mid will be calculated by multiplying the adjusted value of color temperature Cool to the ratio of the value of Cool and Mid in each GBR value in Table 4.<br/>           Write that values to the data area of color temperature Mid in EEPROM (Table 3).</li> <li>10. The setting value for color temperature Warm will be calculated by multiplying the adjusted value of color temperature Cool to the ratio of the value of Cool and Warm in each GBR value in Table 4.<br/>           Write that values to the data area of color temperature Warm in EEPROM (Table 3).</li> </ol> | <p><b>Note :</b><br/>           Adjusted value must be written to both SD data area and HD data area of the EEPROM.</p> |

Table 1: R-CUT,G-CUT,B-CUT setting data

| Color temperatur | R-CUT | G-CUT | B-CUT |
|------------------|-------|-------|-------|
| High(Cool)       | 80    | 80    | 80    |
| Mid              | 80    | 80    | 80    |
| Low(Warm)        | 80    | 80    | 80    |

Table 2: W/B adjustment values

| Color temperature | x     | y     |
|-------------------|-------|-------|
| High(Cool)        | 0.276 | 0.280 |
| Mid               | 0.288 | 0.303 |
| Low(Warm)         | 0.313 | 0.329 |

Table 3: EEPROM data addresses

|                                |   |  |
|--------------------------------|---|--|
| SD<br>Color temperatur<br>High | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 017C<br>017D<br>017E<br>017F<br>0180<br>0181 |
| SD<br>Color temperatur<br>Mid  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 0182<br>0183<br>0184<br>0185<br>0186<br>0187 |
| SD<br>Color temperatur<br>Low  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 0188<br>0189<br>018A<br>018B<br>018C<br>018D |
| HD<br>Color temperatur<br>High | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 018E<br>018F<br>0190<br>0191<br>0192<br>0193 |
| HD<br>Color temperatur<br>Mid  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 0194<br>0195<br>0196<br>0197<br>0198<br>0199 |
| HD<br>Color temperatur<br>Low  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 019A<br>019B<br>019C<br>019D<br>019E<br>019F |

Table 4: EEPROM data addresses

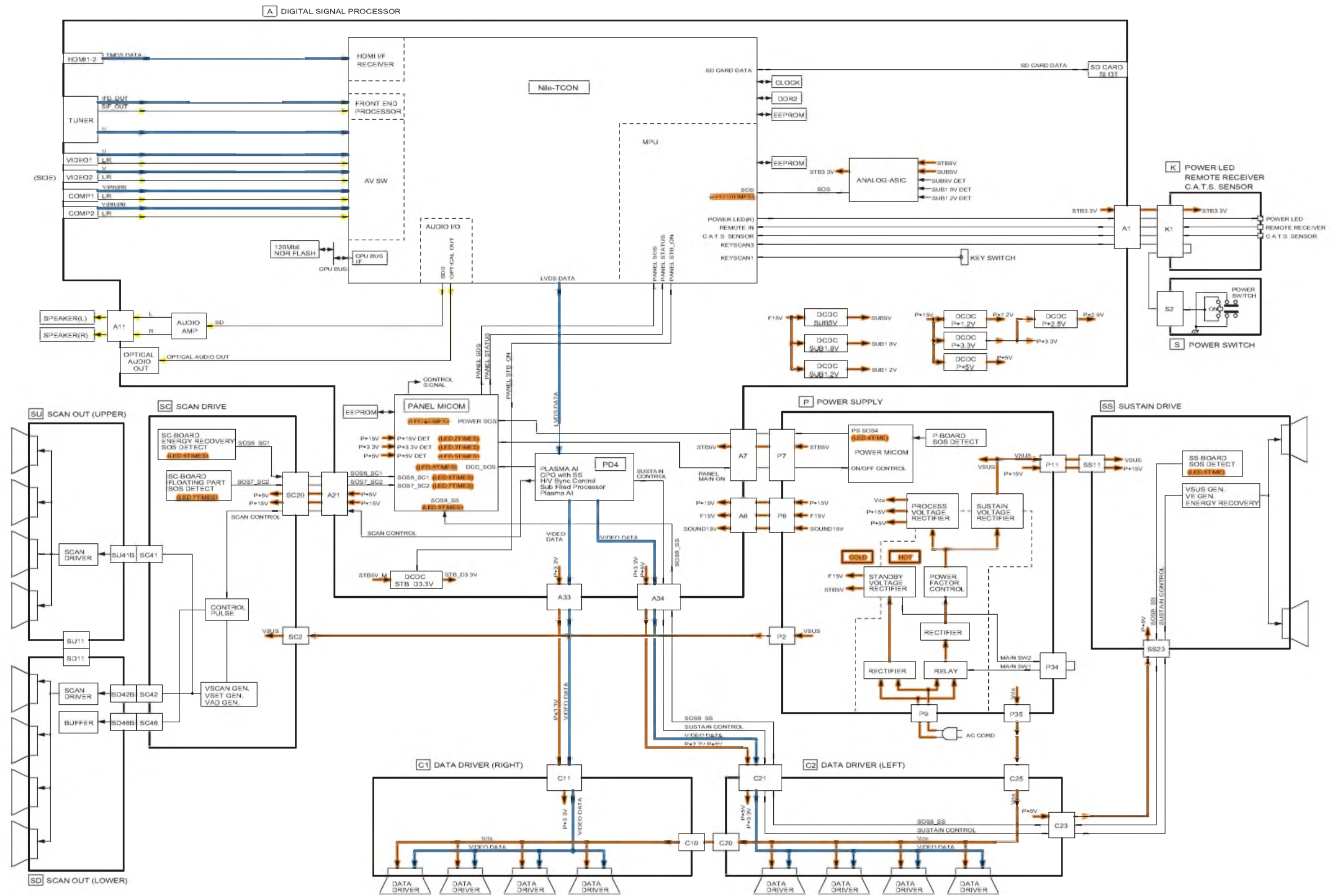
|  |   |  |
|--|---|--|
| SD<br>Color temperatur<br>High<br>DIFF | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01A0<br>01A1<br>01A2<br>01A3<br>01A4<br>01A5 |
| SD<br>Color temperatur<br>Mid<br>DIFF  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01A6<br>01A7<br>01A8<br>01A9<br>01AA<br>01AB |
| SD<br>Color temperatur<br>Low<br>DIFF  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01AC<br>01AD<br>01AE<br>01AF<br>01B0<br>01B1 |
| HD<br>Color temperatur<br>High<br>DIFF | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01B2<br>01B3<br>01B4<br>01B5<br>01B6<br>01B7 |
| HD<br>Color temperatur<br>Mid<br>DIFF  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01B8<br>01B9<br>01BA<br>01BB<br>01BC<br>01BD |
| HD<br>Color temperatur<br>Low<br>DIFF  | R-CUTOFF<br>G-CUTOFF<br>B-CUTOFF<br>R-DRIVE<br>G-DRIVE<br>B-DRIVE | 01BE<br>01BF<br>01C0<br>01C1<br>01C2<br>01C3 |



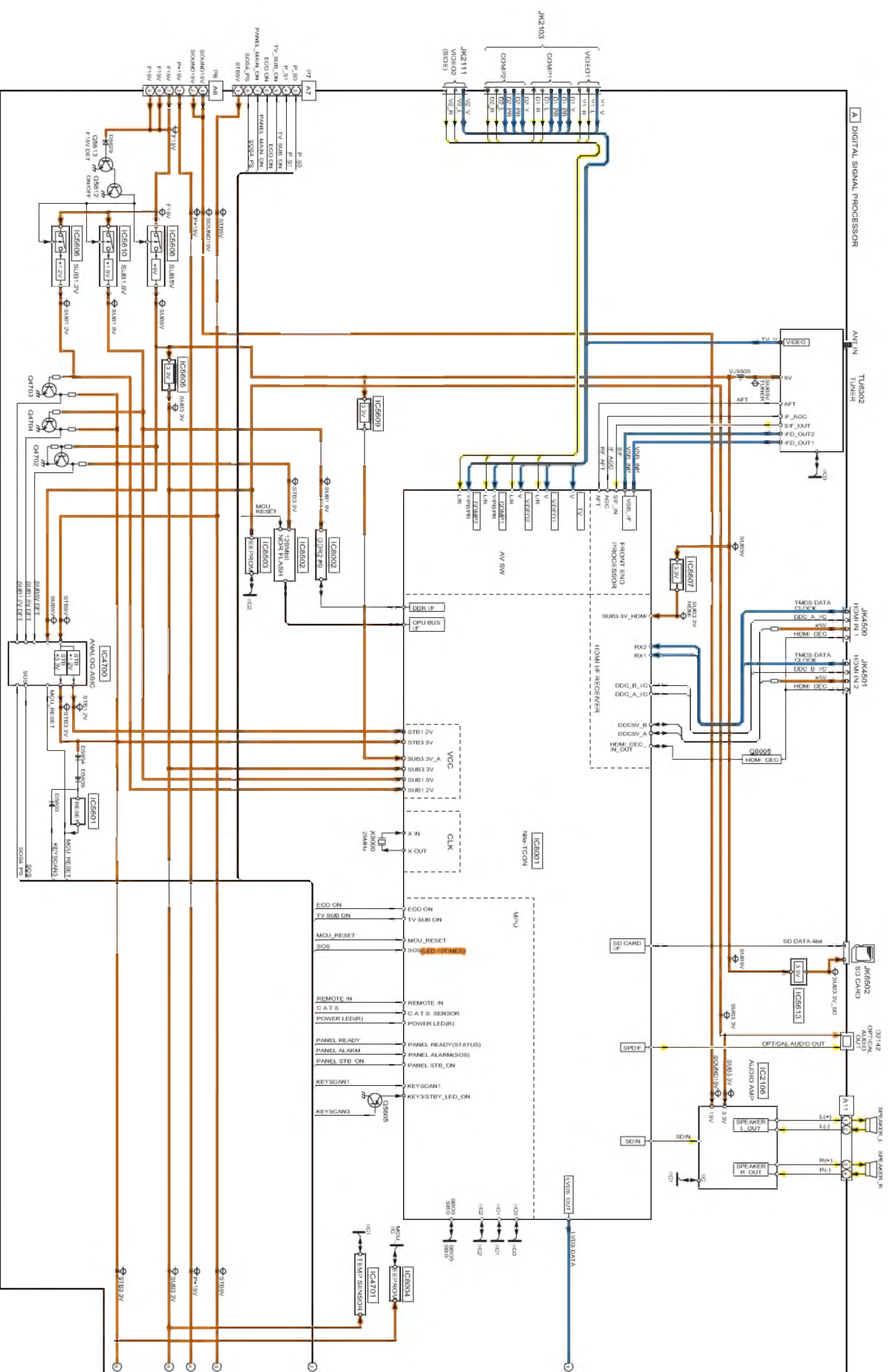


# 10 Block Diagram

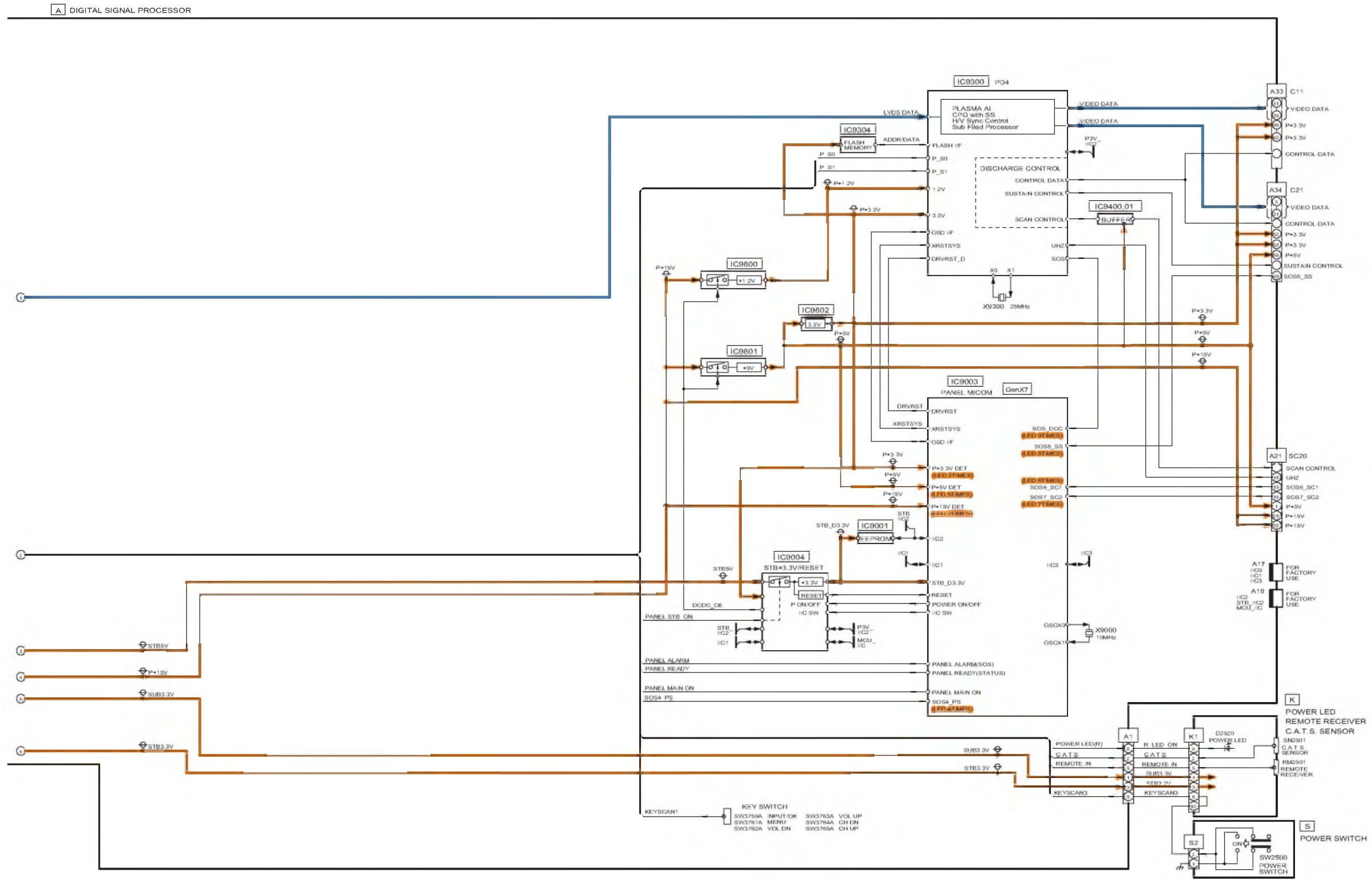
## 10.1. Main Block Diagram



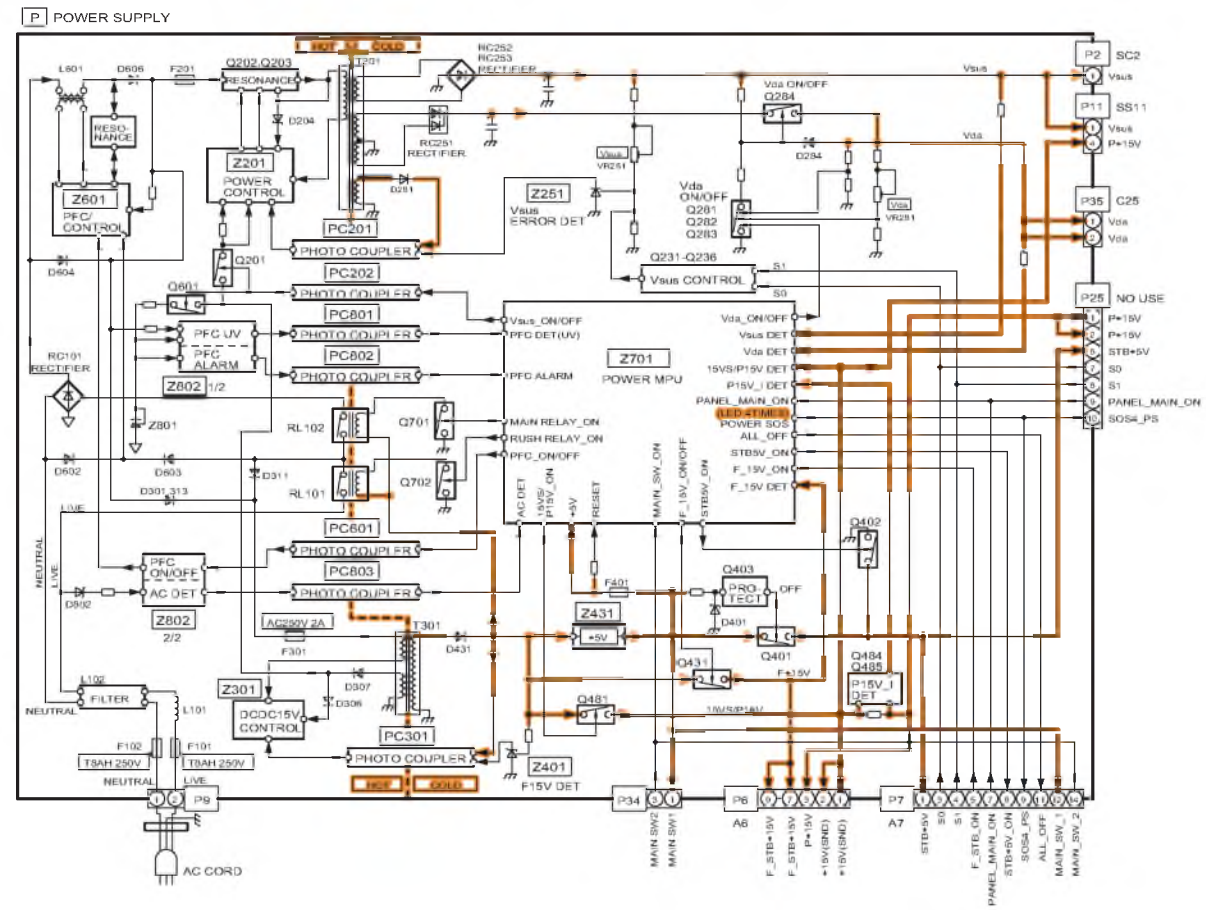
## 10.2. Block (1/4) Diagram



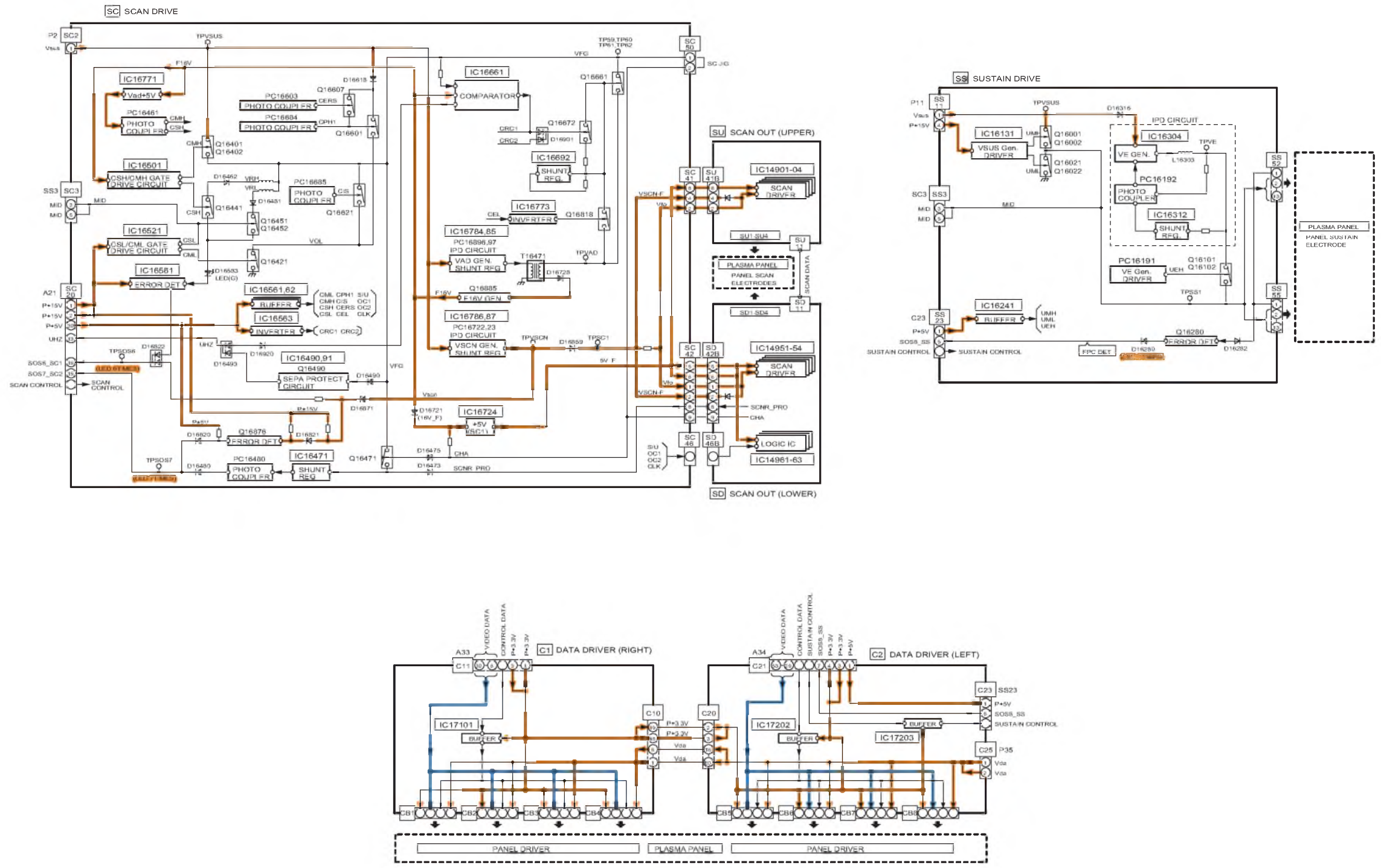
### 10.3. Block (2/4) Diagram



### 10.4. Block (3/4) Diagram



### 10.5. Block (4/4) Diagram



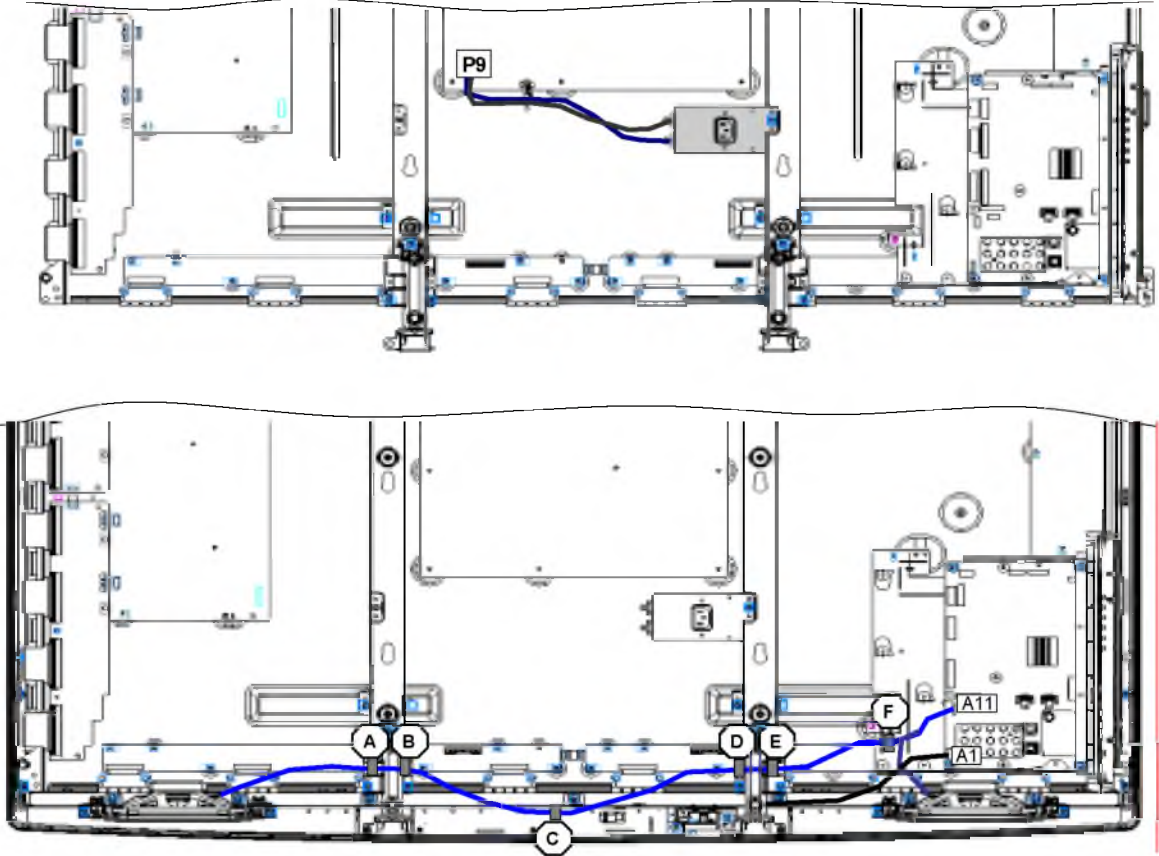


# 11 Wiring Connection Diagram

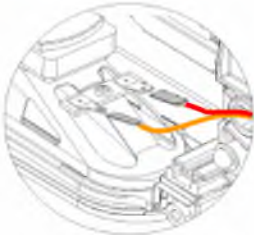
## 11.1. Caution statement.

**Caution:**  
 Please confirm that all flexible cables are assembled correctly.  
 Also make sure that they are locked in the connectors.  
 Verify by giving the flexible cables a very slight pull.

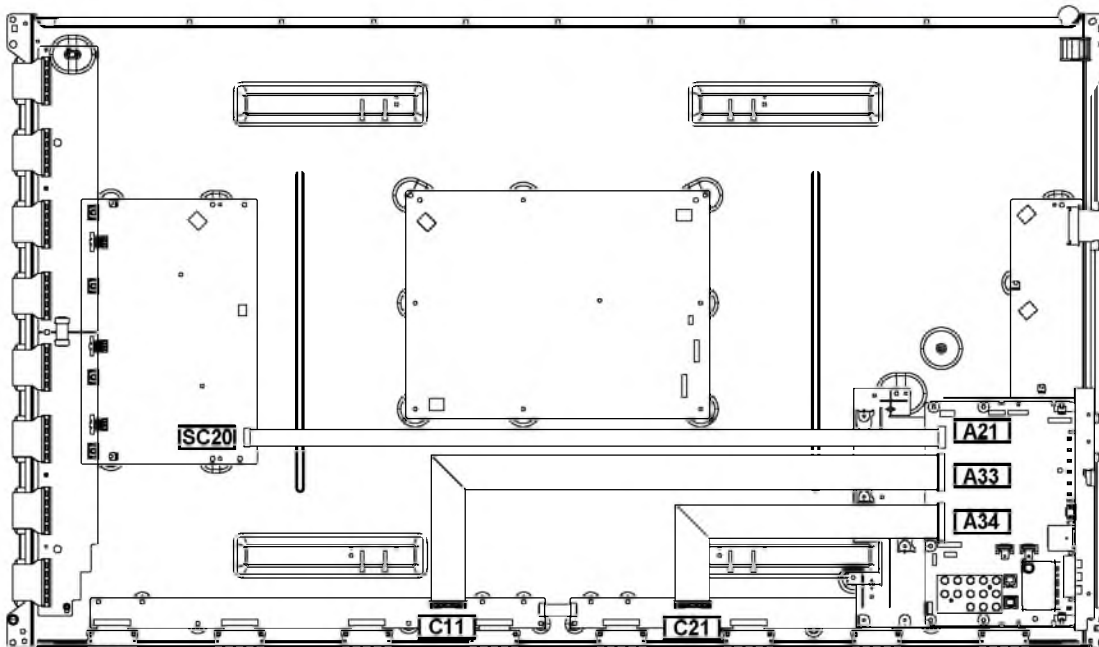
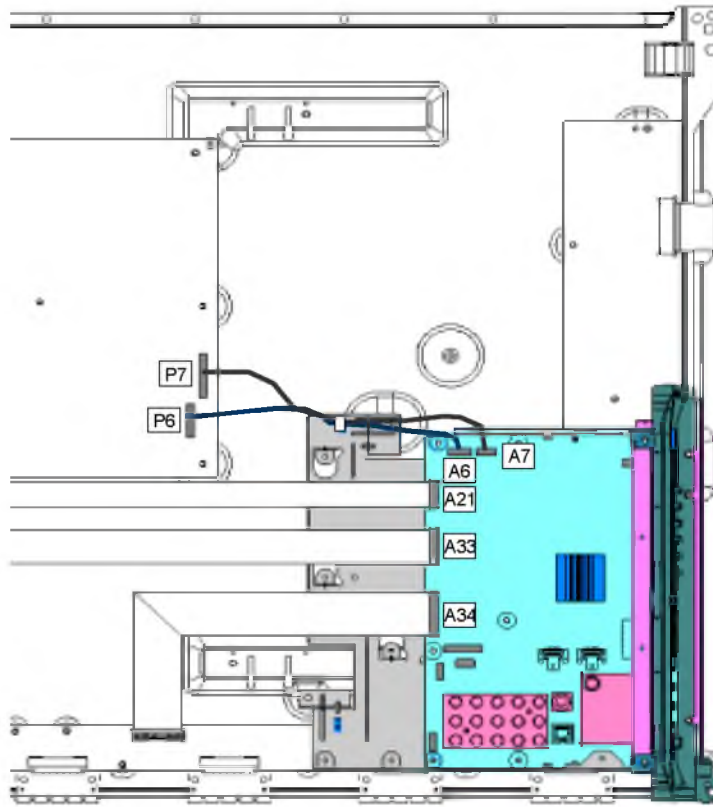
## 11.2. Wiring (1)



| CONNECTOR | A | B | C | D | E | F |
|-----------|---|---|---|---|---|---|
| A11 - SPR | ○ | ○ | ○ | ○ | ○ | ○ |
| A11 - SPL |   |   |   |   |   |   |
| K1 - A1   |   |   |   |   |   |   |

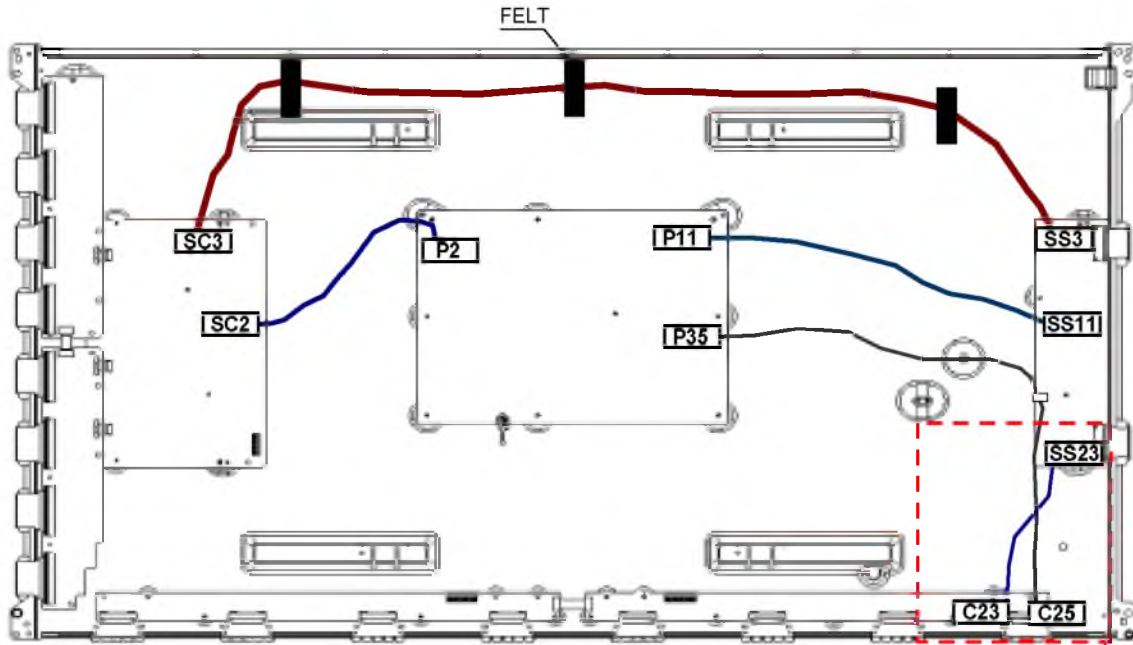


### 11.3. Wiring (2)

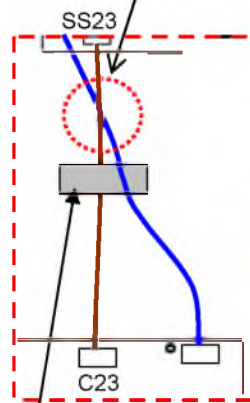




### 11.4. Wiring (3)



Dress the lead wire (P35-C25)  
under the lead wire (SS23-C23).



FELT TAPE







Fix the lead wire (SS23-C23) only to the PDP panel by FELT TAPE at the center of wire.  
Reason: To avoid a contact with A-board fixing metal.



# 12 Schematic Diagram

## 12.1. Schematic Diagram Note

### Notes:

1. **Resistor**  
Unit of resistance is OHM [ $\Omega$ ] (K=1,000, M=1,000,000).
2. **Capacitor**  
Unit of capacitance is  $\mu$ F, unless otherwise noted.
3. **Coil**  
Unit of inductance is H, unless otherwise noted.
4. **Test Point**  
 : Test Point position
5. **Earth Symbol**  
 : Chassis Earth (Cold)       : Line Earth (Hot)
6. **Voltage Measurement**  
Voltage is measured by a DC voltmeter.  
Conditions of the measurement are the following:  
Power Source ..... AC120V, 60Hz  
Receiving Signal ..... Colour Bar signal (RF)  
All customer's controls ..... Maximum positions
7. When arrow mark () is found, connection is easily found from the direction of arrow.
8. Indicates the major signal flow.      : Video       Audio 
9. This schematic diagram is the latest at the time of printing and subject to change without notice.

**Remarks:**

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

All circuits, except the Power Circuit, are cold.

**Precautions**

- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
- b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
- c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.  
Connect the earth of instruments to the earth connection of the circuit being measured.
- d. Make sure to disconnect the power plug before removing the chassis.

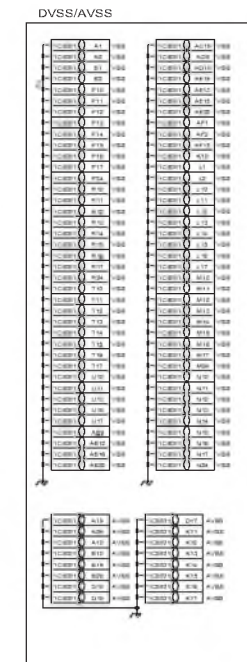
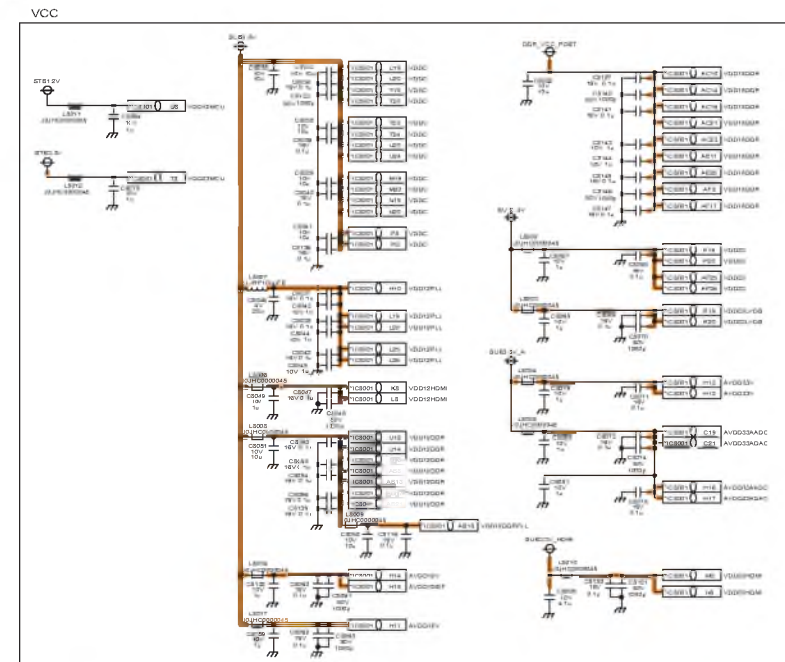
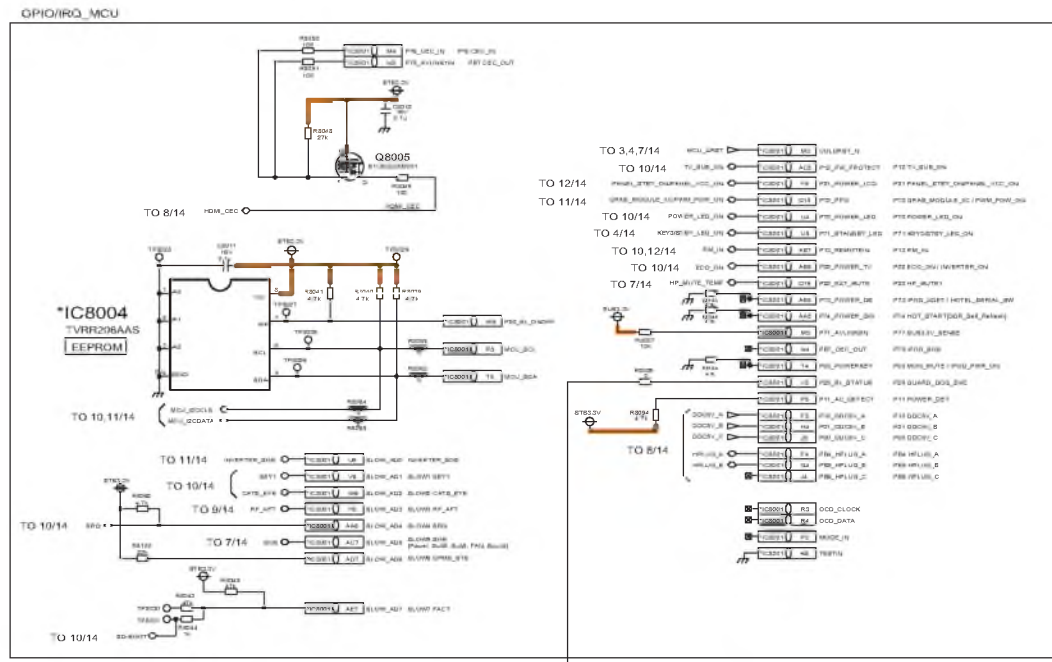
# 12.2. A-Board (1/14) Schematic Diagram

A

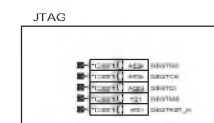
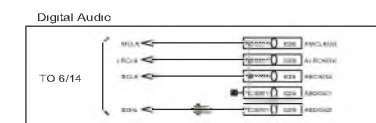
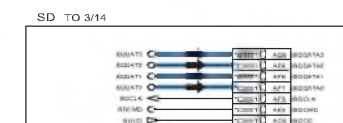
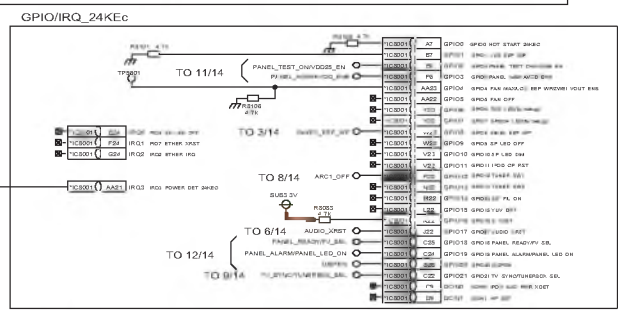
## A-BOARD TXN/A1LNUUS (1/14) Nile-TCO

IC8001  
C1A80003248  
Nile-TCO

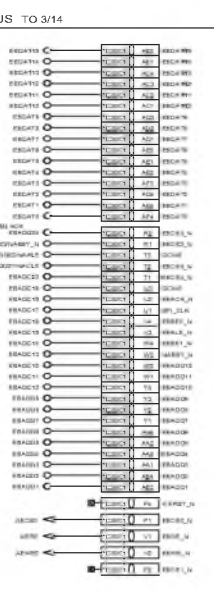
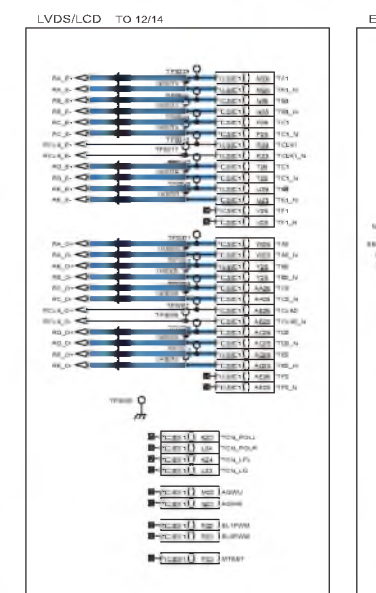
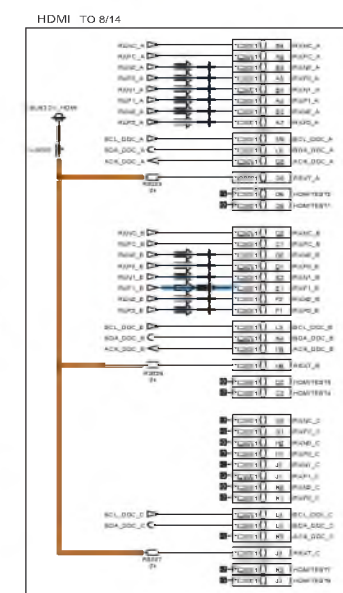
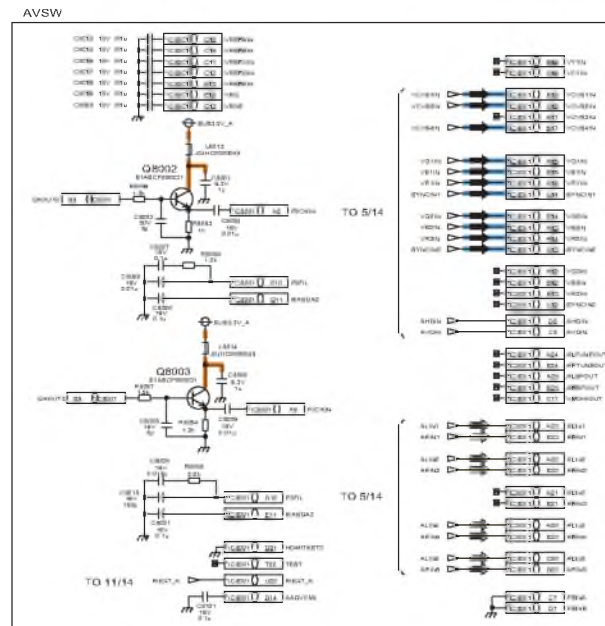
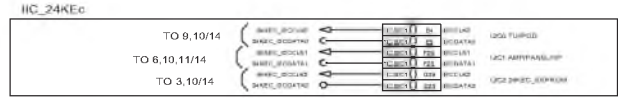
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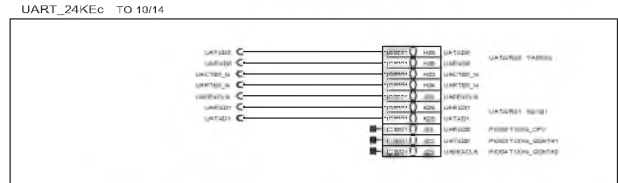
C



D



E



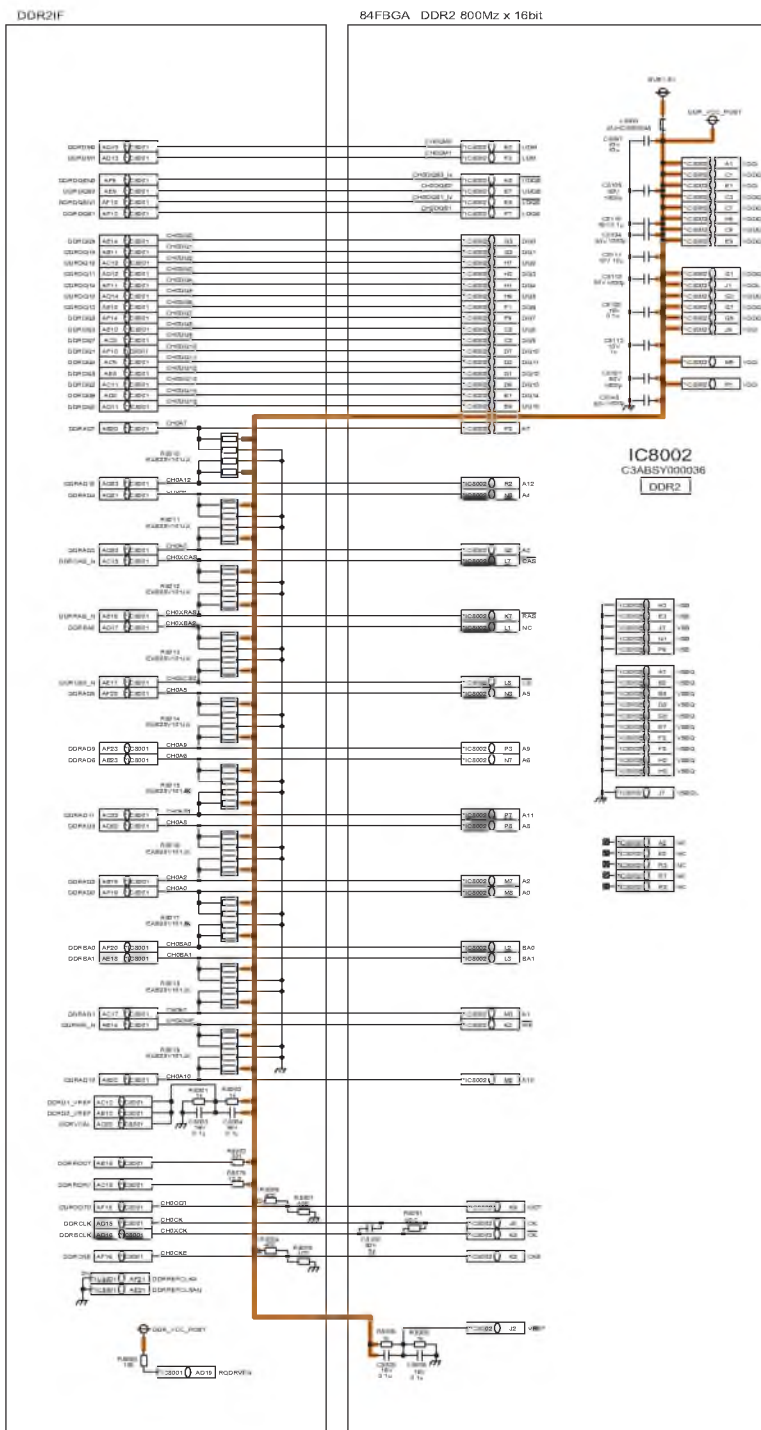
F



1 2 3 4 5 6 7 8 9

# 12.3. A-Board (2/14) Schematic Diagram

 A-BOARD TXN/A1LNUUS (2/14) DDR2



14

15

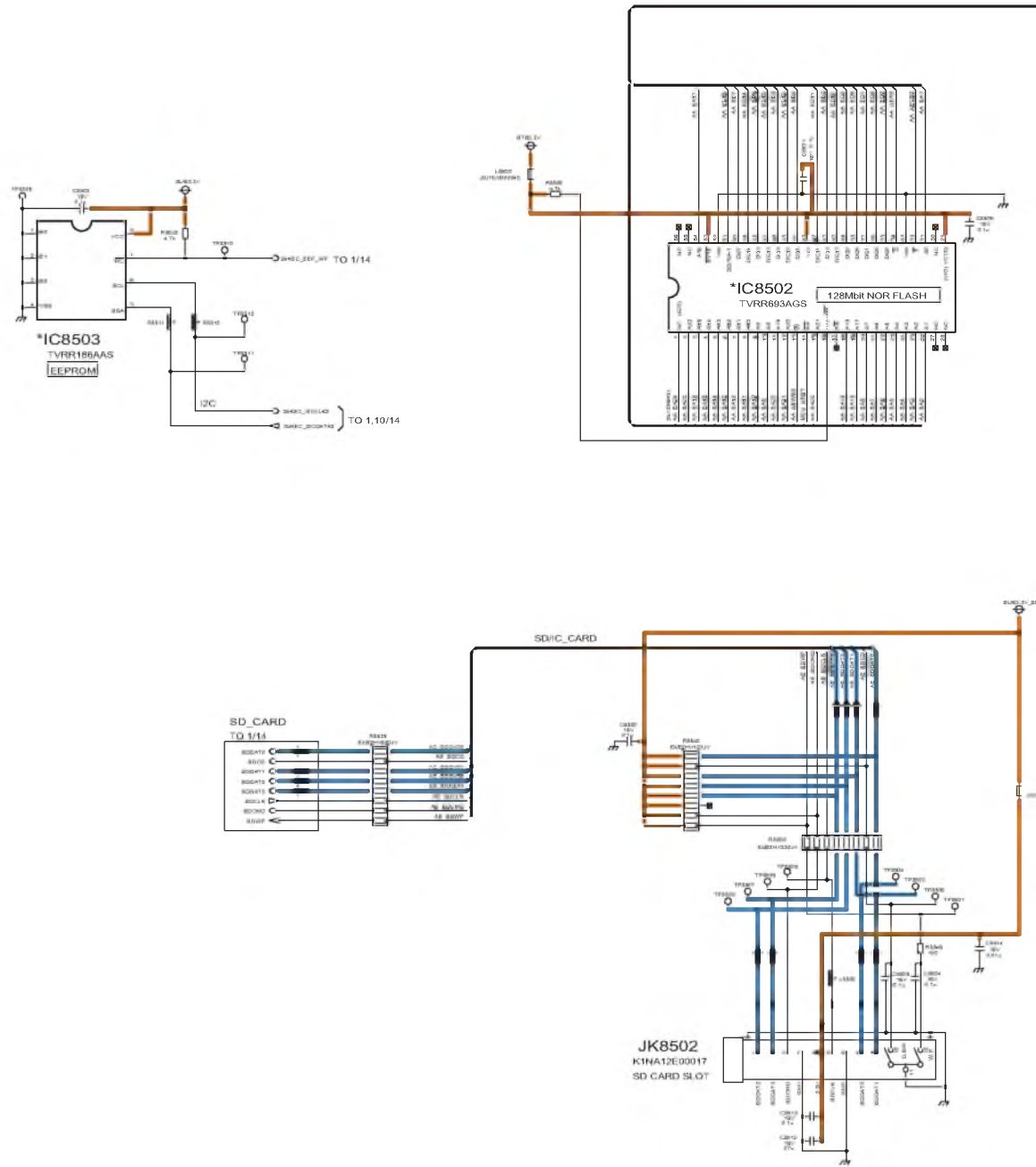
16

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# 12.4. A-Board (3/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (3/14) NOR,SDcard,EEP



19

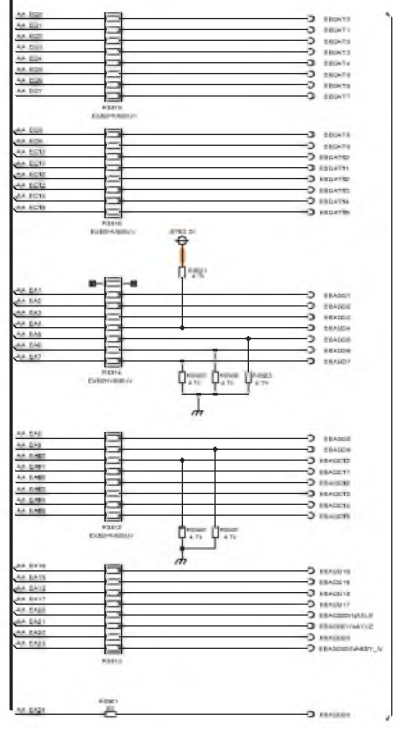
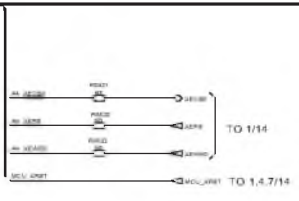
20

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23



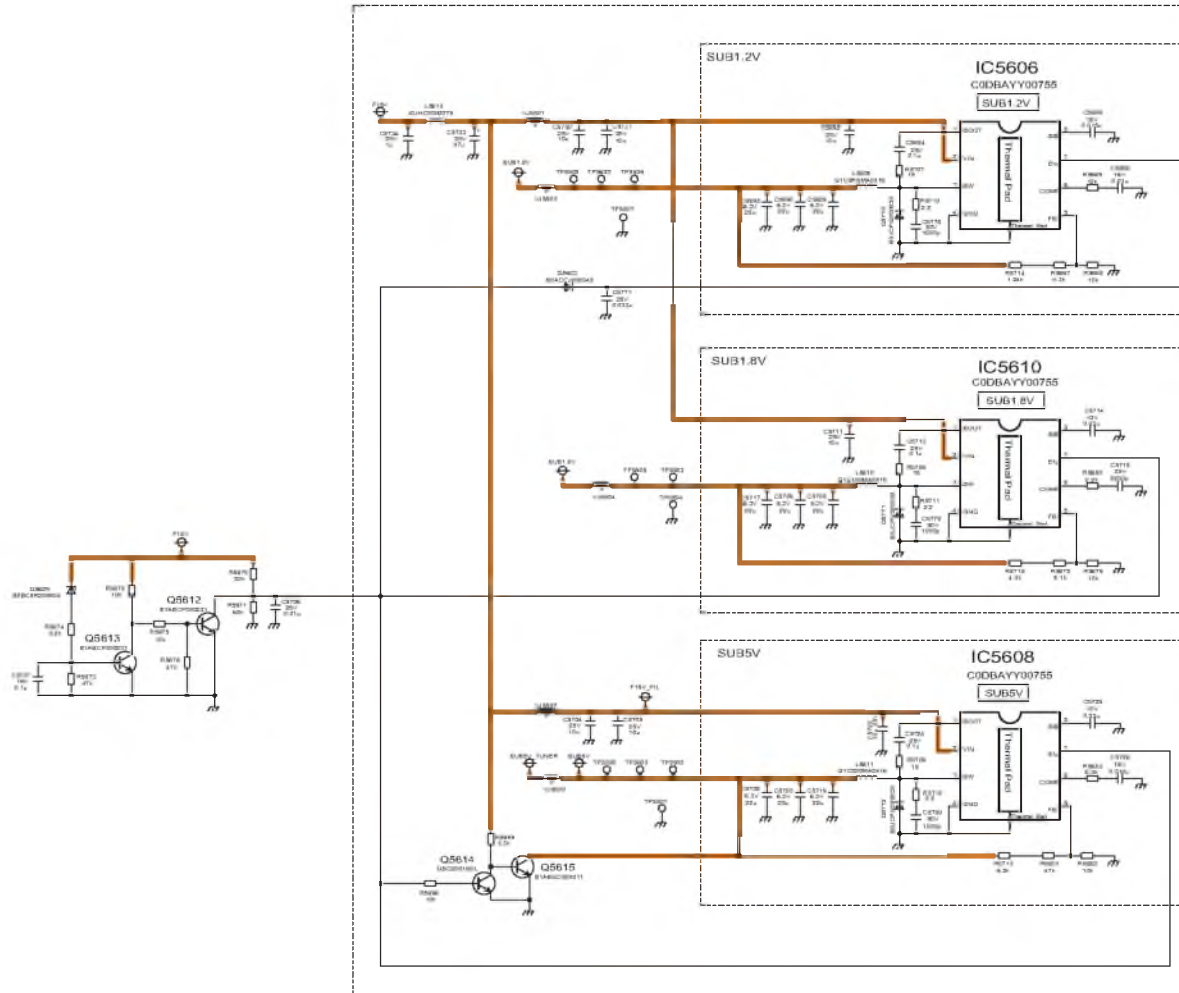


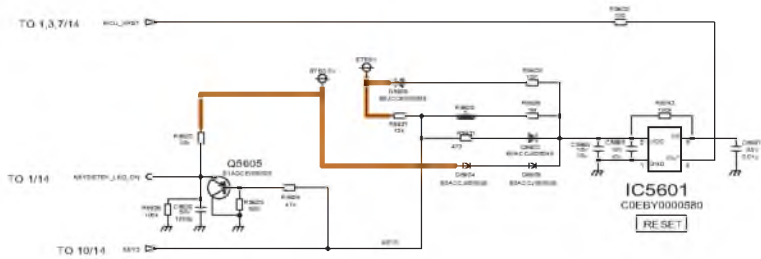
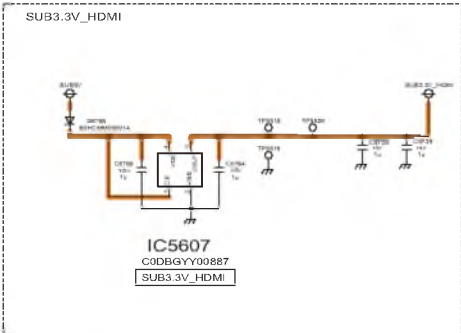
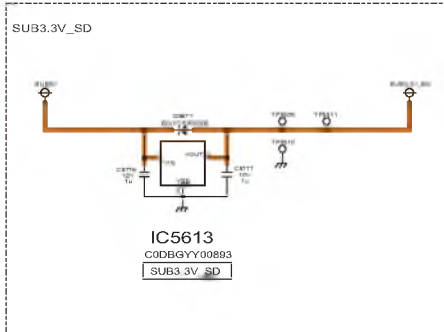
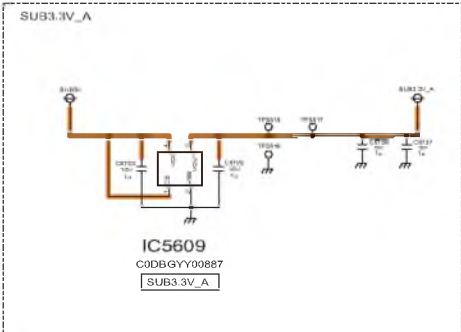
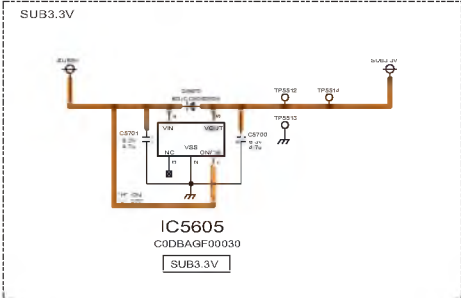
TO 1/14

GREENHILL

## 12.5. A-Board (4/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (4/14) POWER SUPPLY



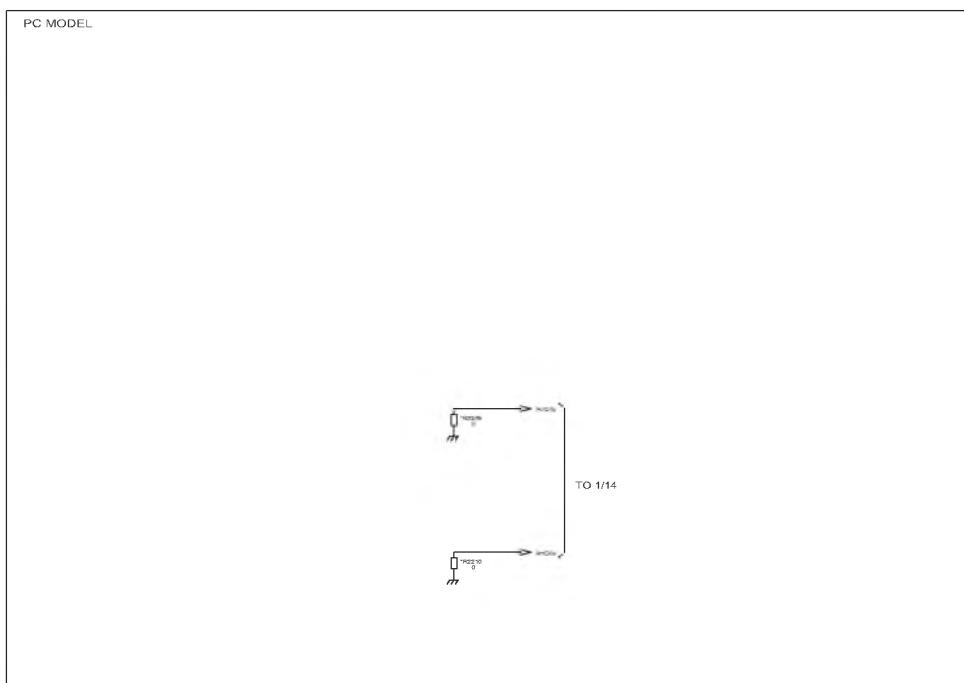


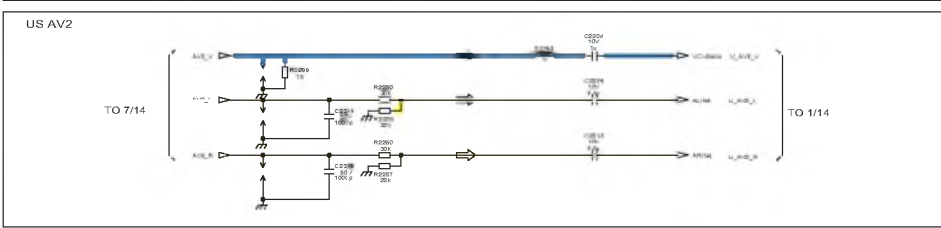
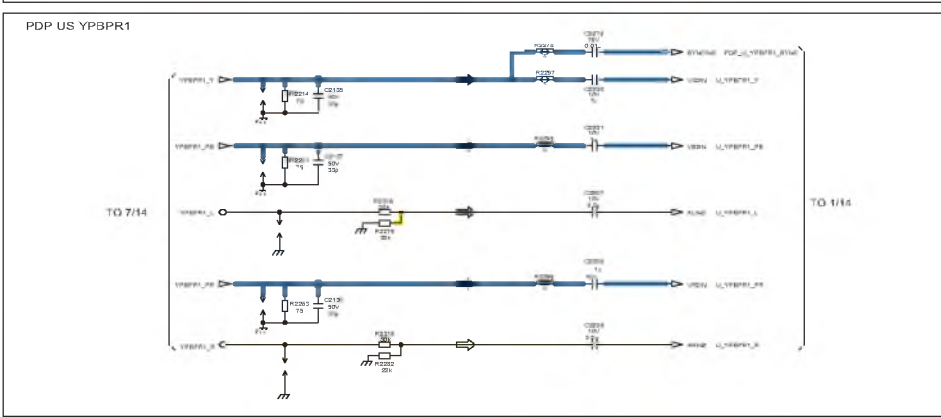
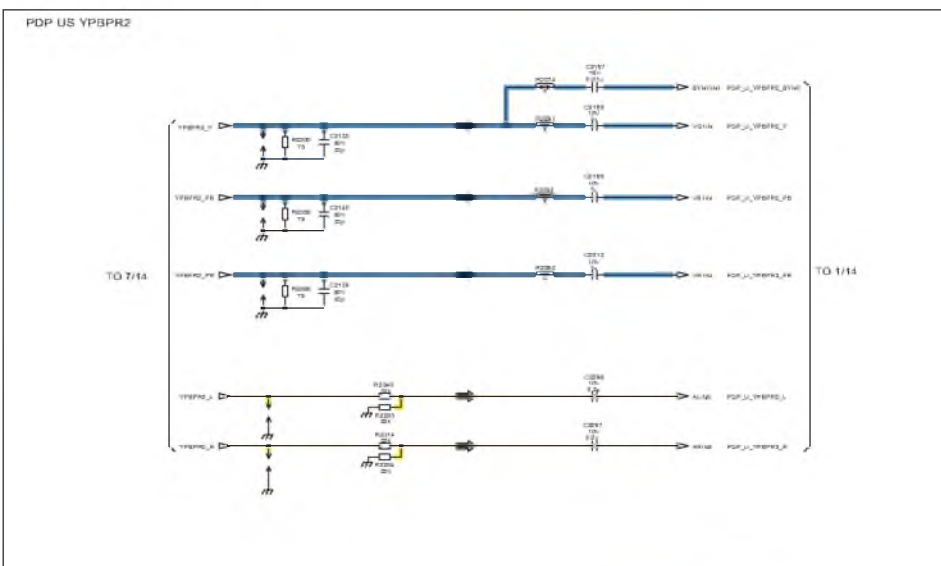
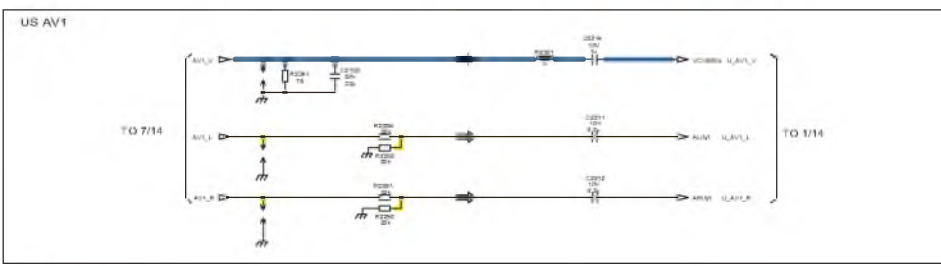
## 12.6. A-Board (5/14) Schematic Diagram



A-BOARD TXN/A1LNUUS (5/14)

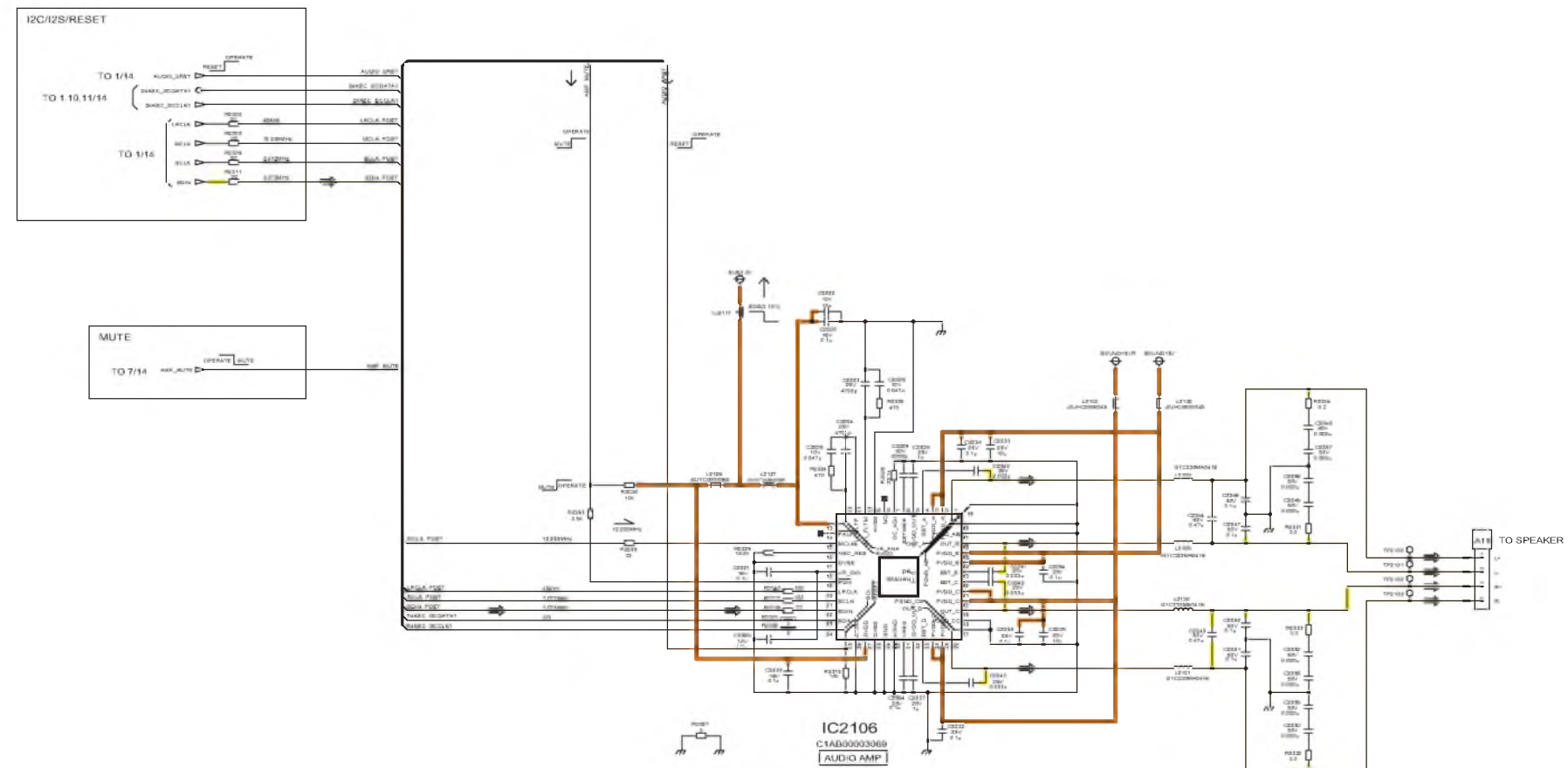
AVSW





## 12.7. A-Board (6/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (6/14) AUDIO AMP

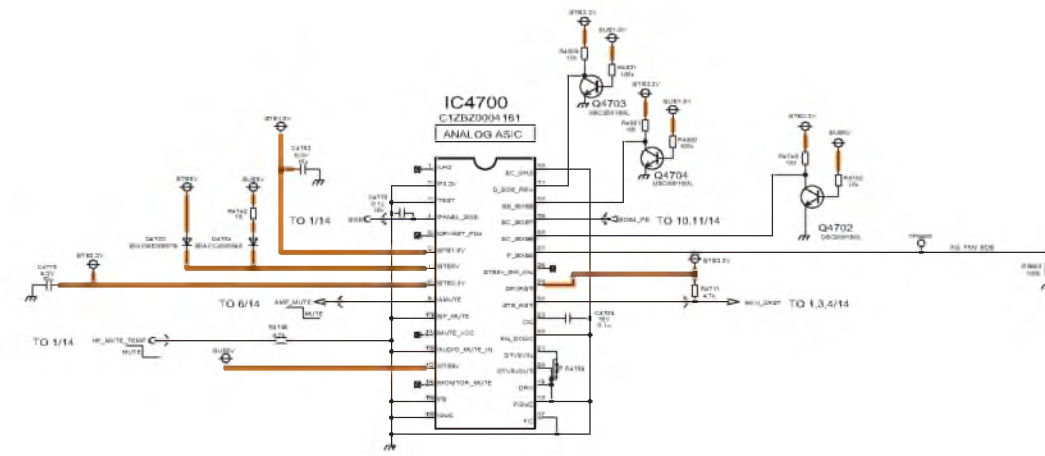
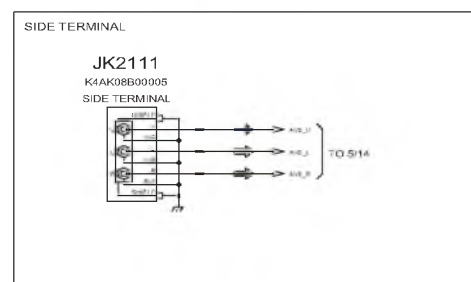
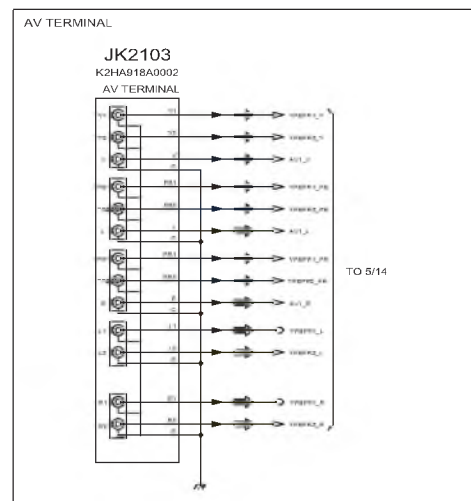


## 12.8. A-Board (7/14) Schematic Diagram



A-BOARD TXN/A1LNUUS (7/14)

AV TERMINAL, ANALOG ASIC



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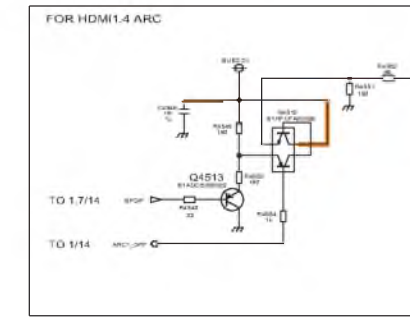
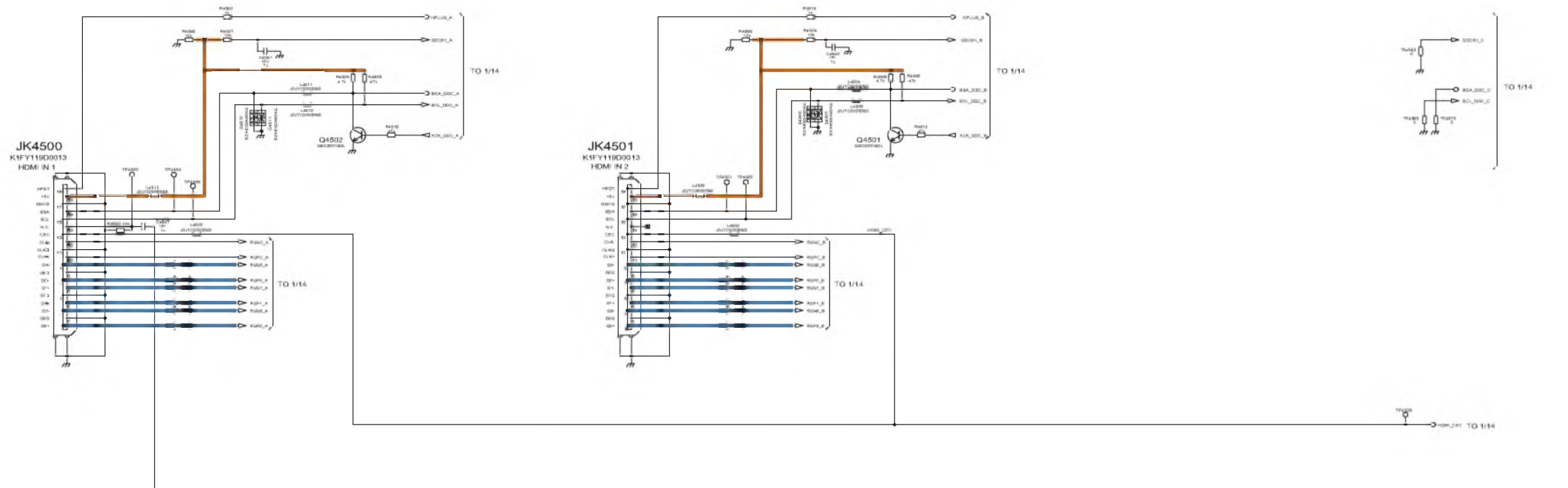
61

62

63

# 12.9. A-Board (8/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (8/14) HDMI

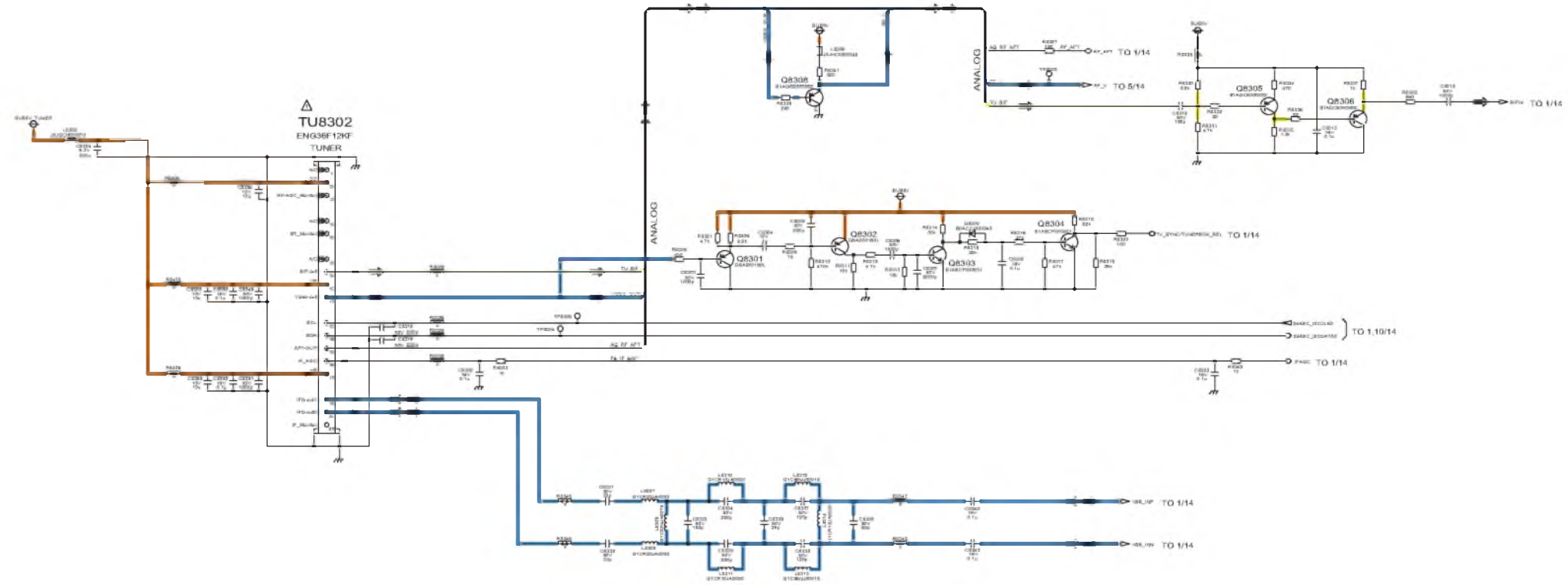


64 65 66 67 68 69 70 71 72



# 12.10. A-Board (9/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (9/14) TUNER



73

74

75

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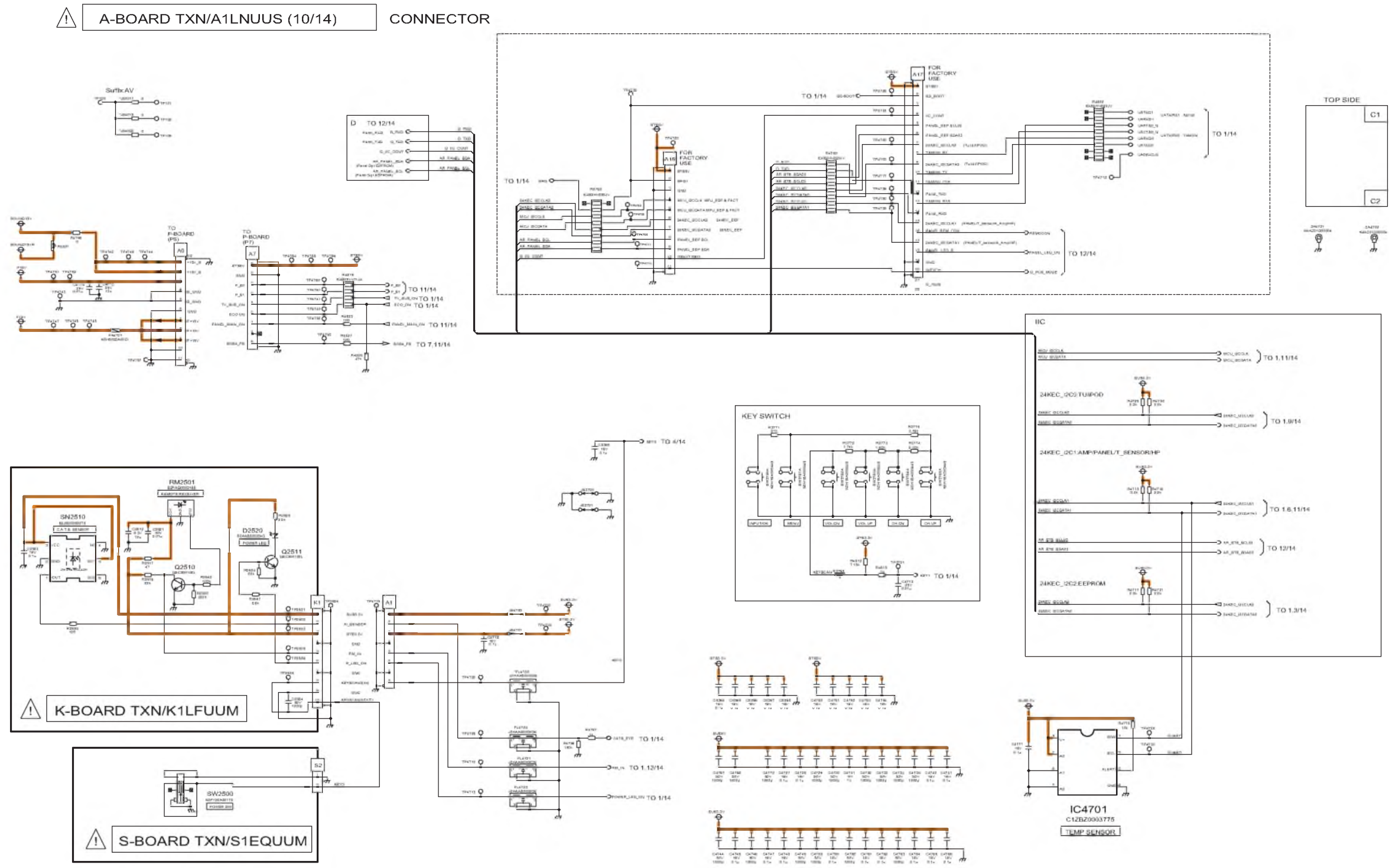
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80

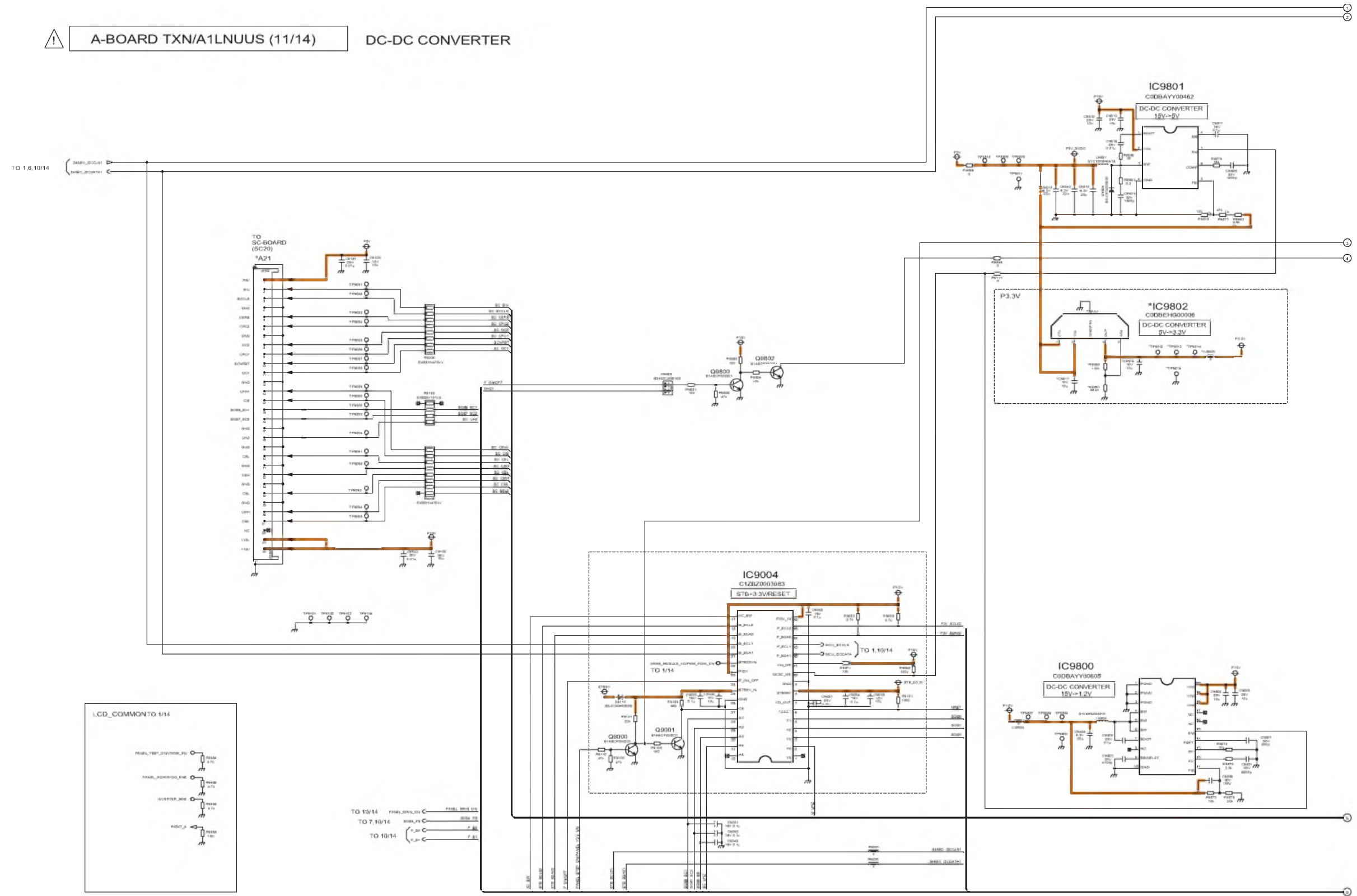
81

# 12.11. A-Board (10/14), K-Board and S-Board Schematic Diagram



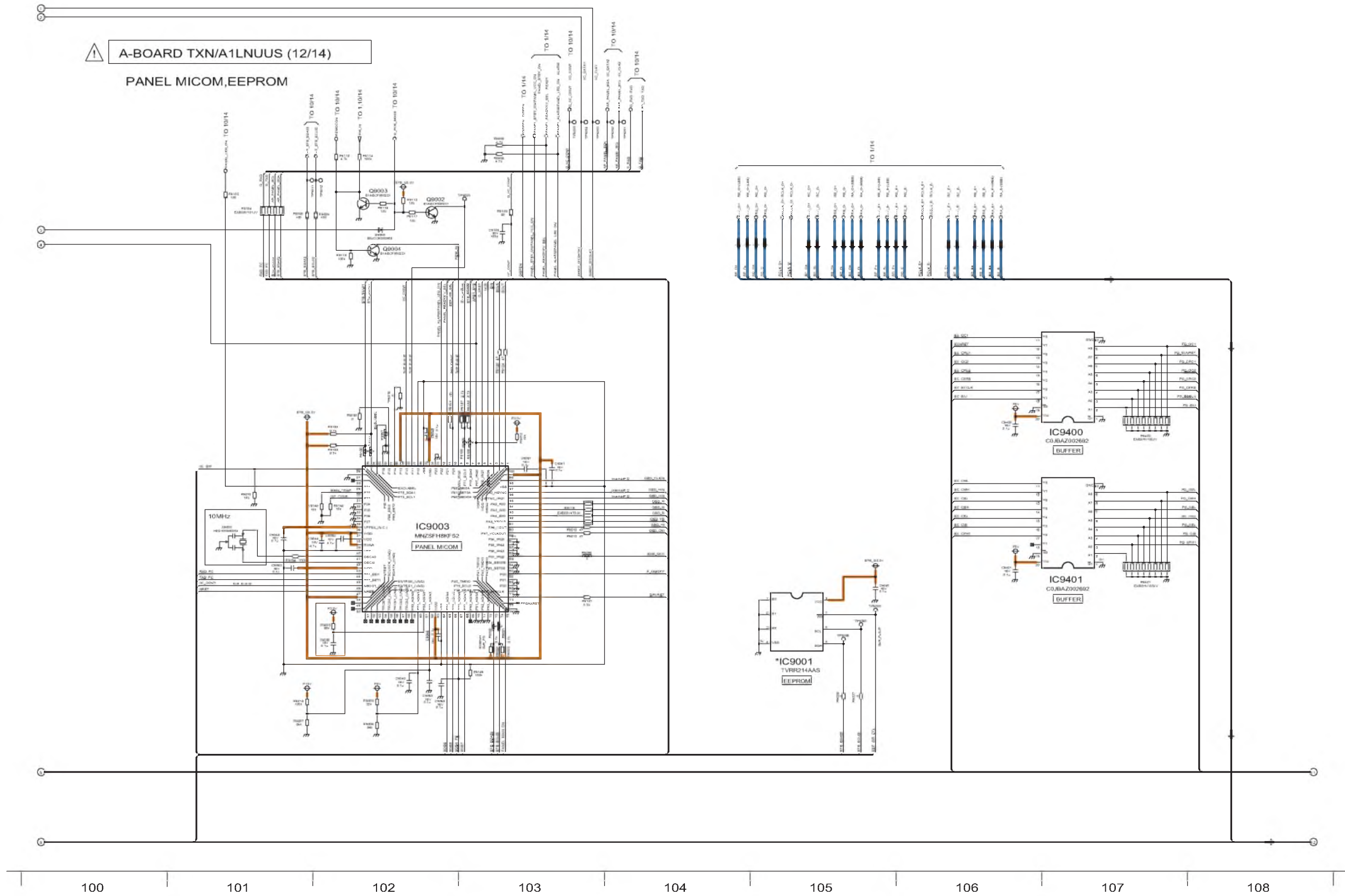
# 12.12. A-Board (11/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (11/14) DC-DC CONVERTER



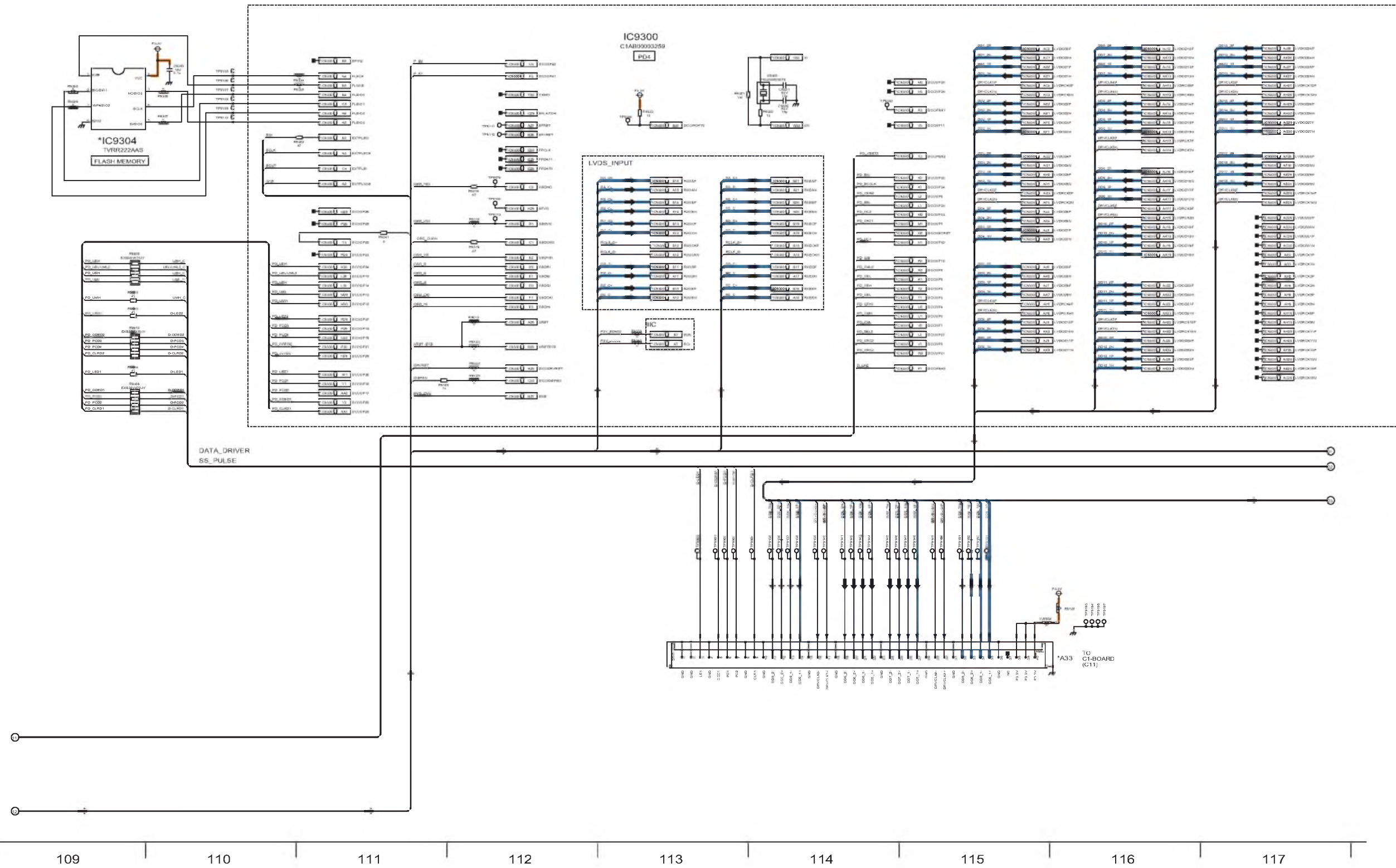
91 92 93 94 95 96 97 98 99

### 12.13. A-Board (12/14) Schematic Diagram




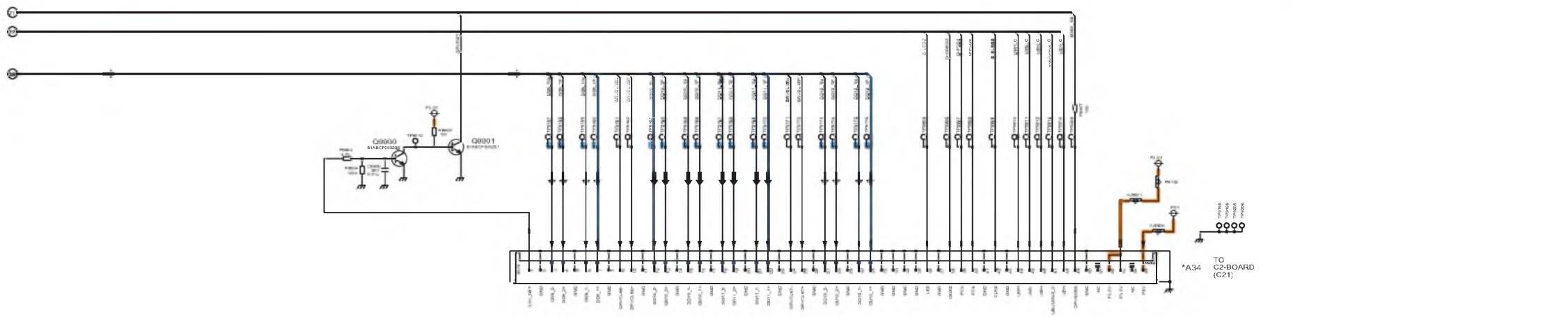
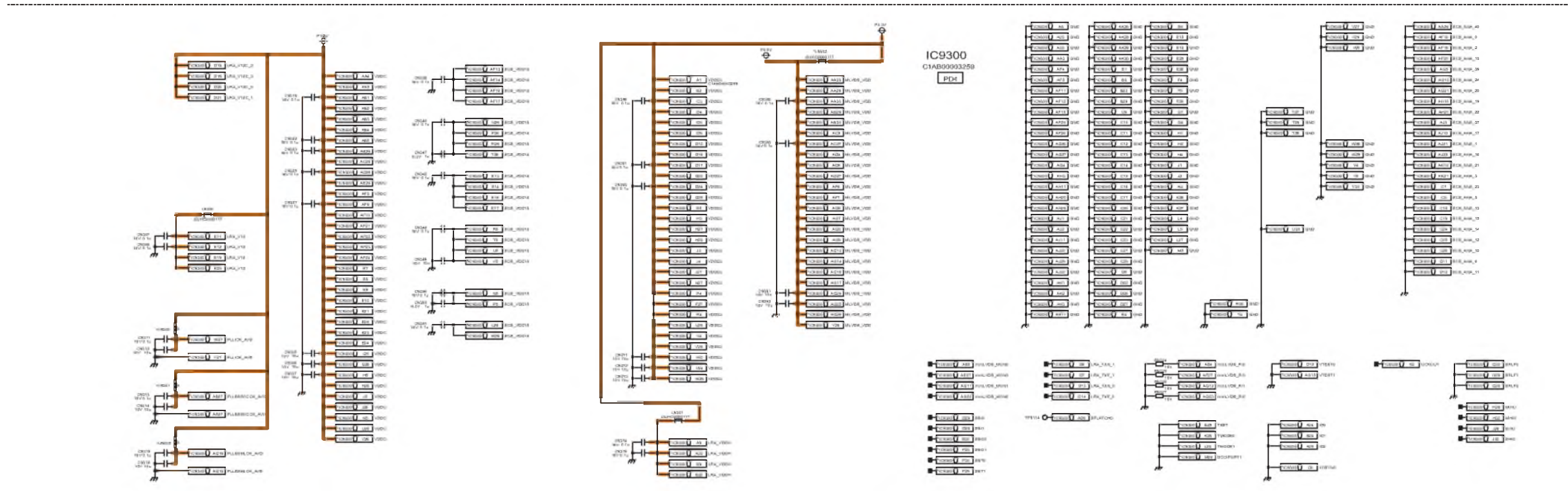
# 12.14. A-Board (13/14) Schematic Diagram

⚠ A-BOARD TXN/A1LNUUS (13/14) PD4



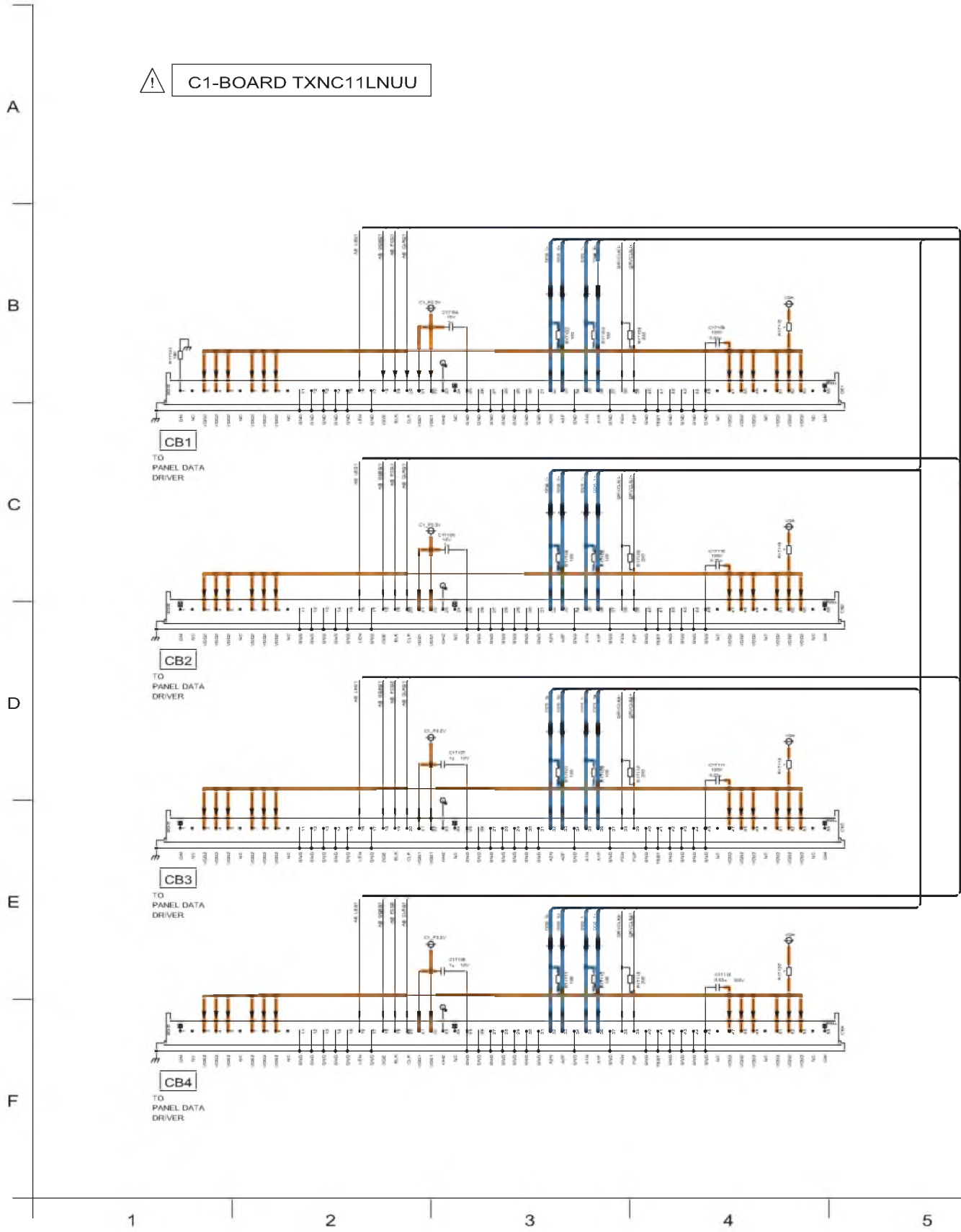
# 12.15. A-Board (14/14) Schematic Diagram

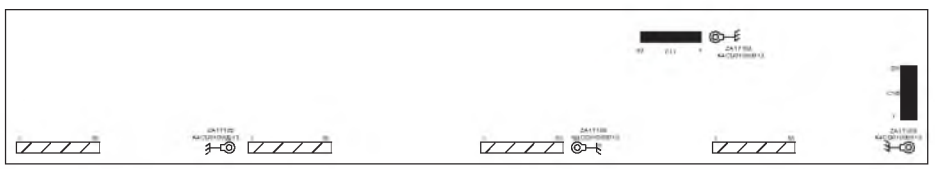
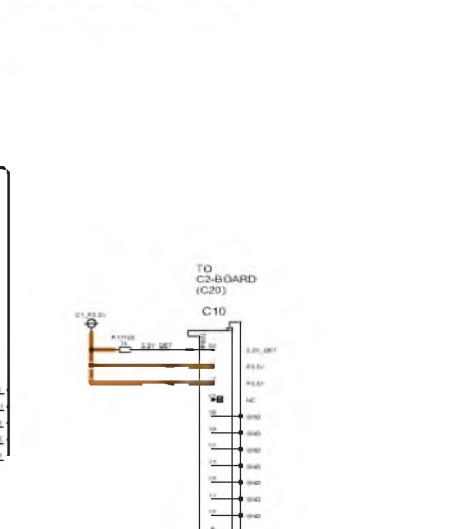
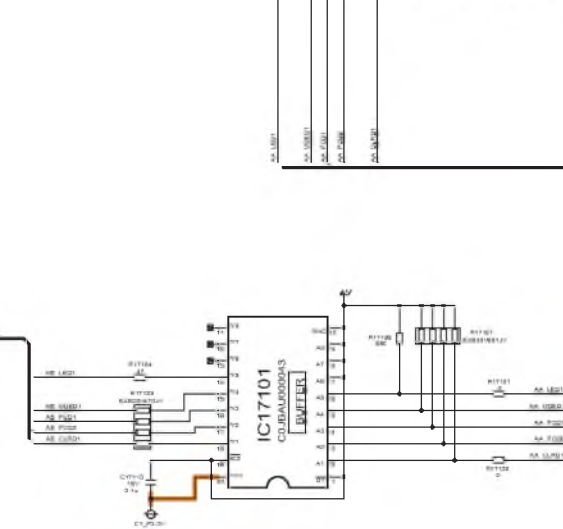
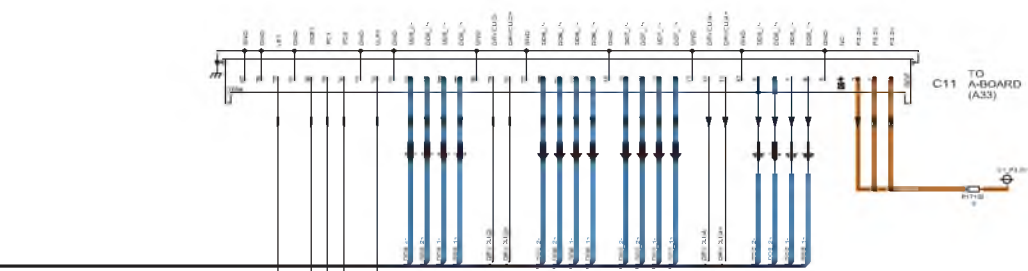
 A-BOARD TXN/A1LNUUS (14/14) PD4



118    119    120    121    122    123    124    126    126

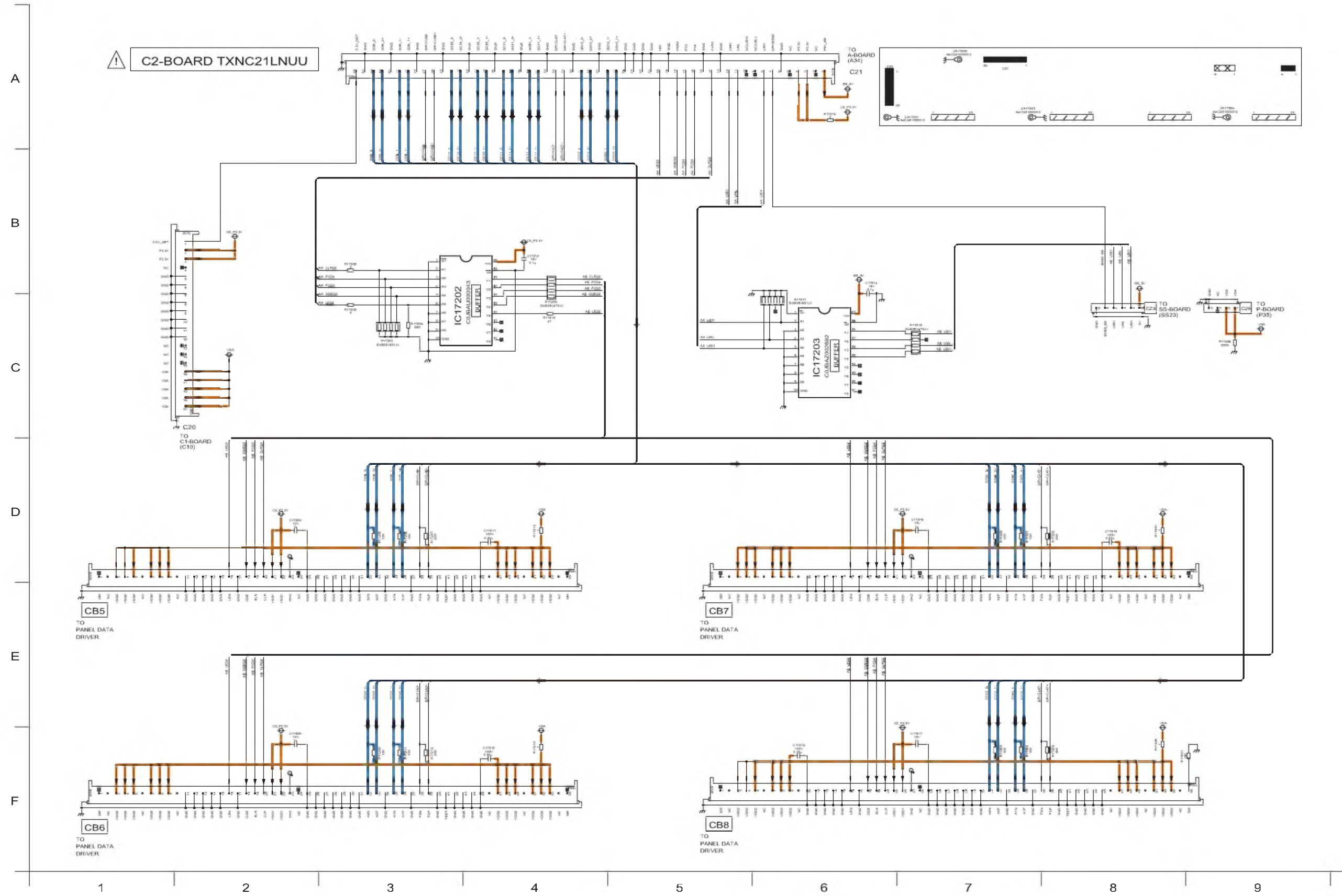
# 12.16. C1-Board Schematic Diagram







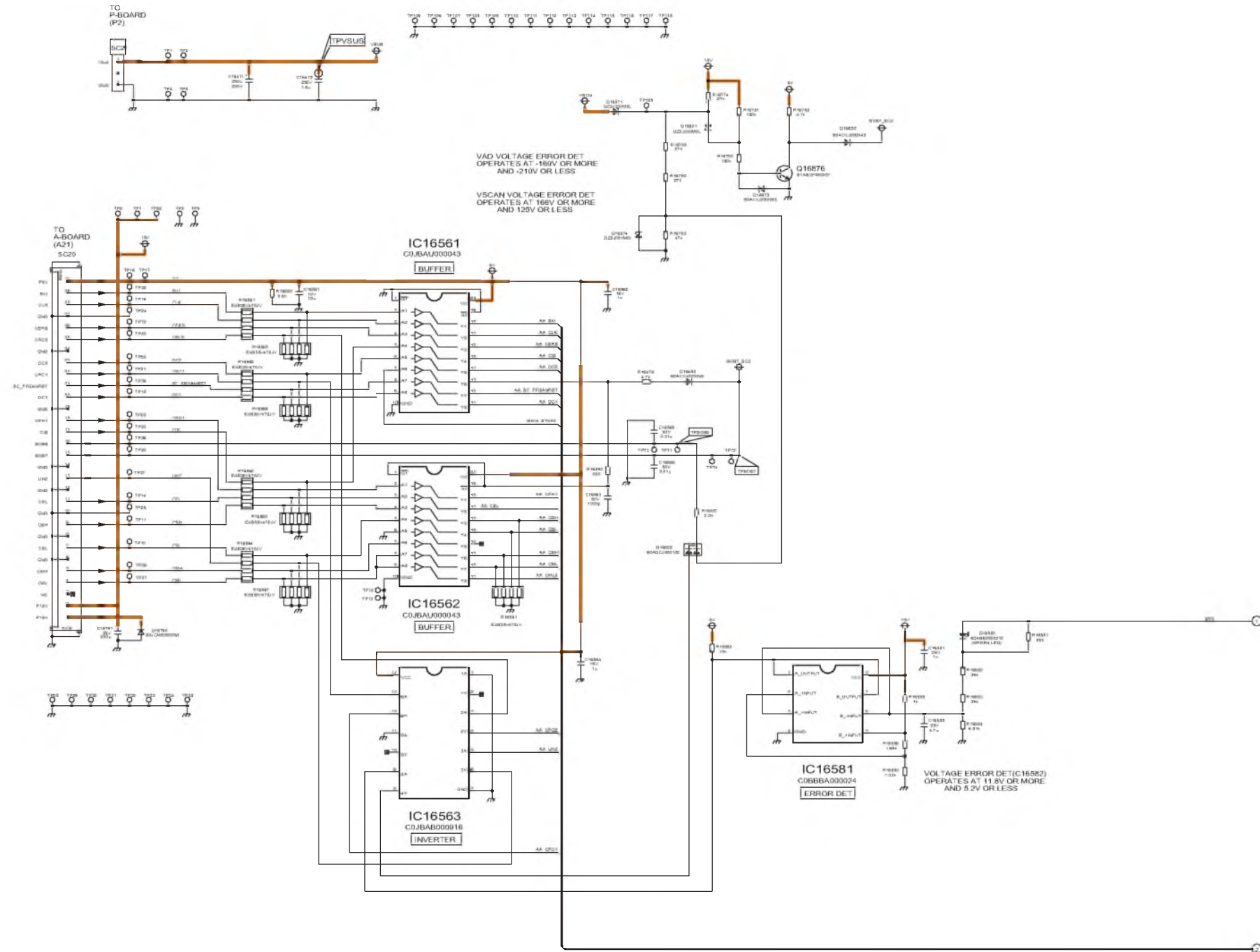
# 12.17. C2-Board Schematic Diagram



# 12.18. SC-Board (1/4) Schematic Diagram

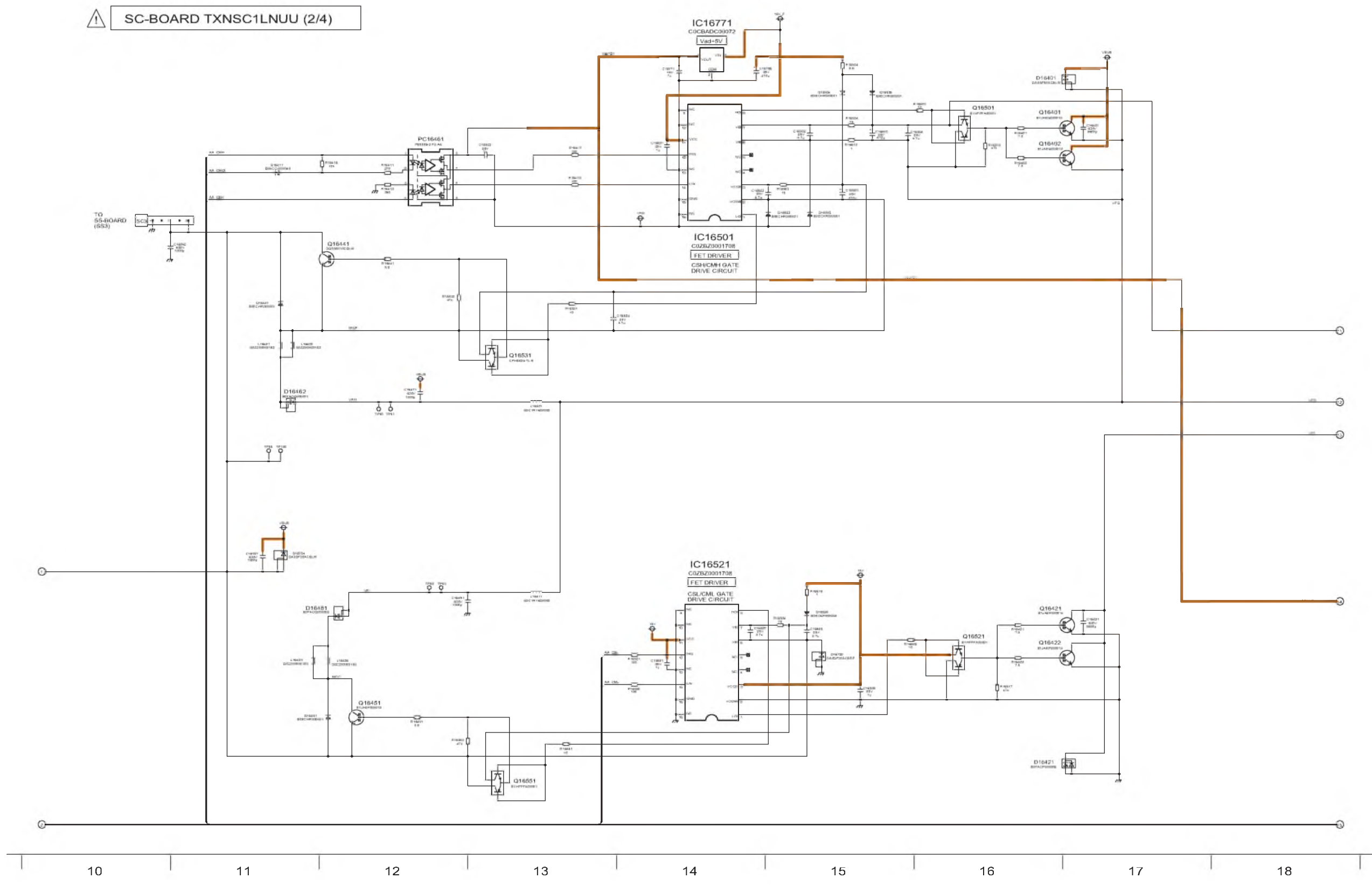
A  
B  
C  
D  
E  
F

⚠ SC-BOARD TXNSC1LNUU (1/4)



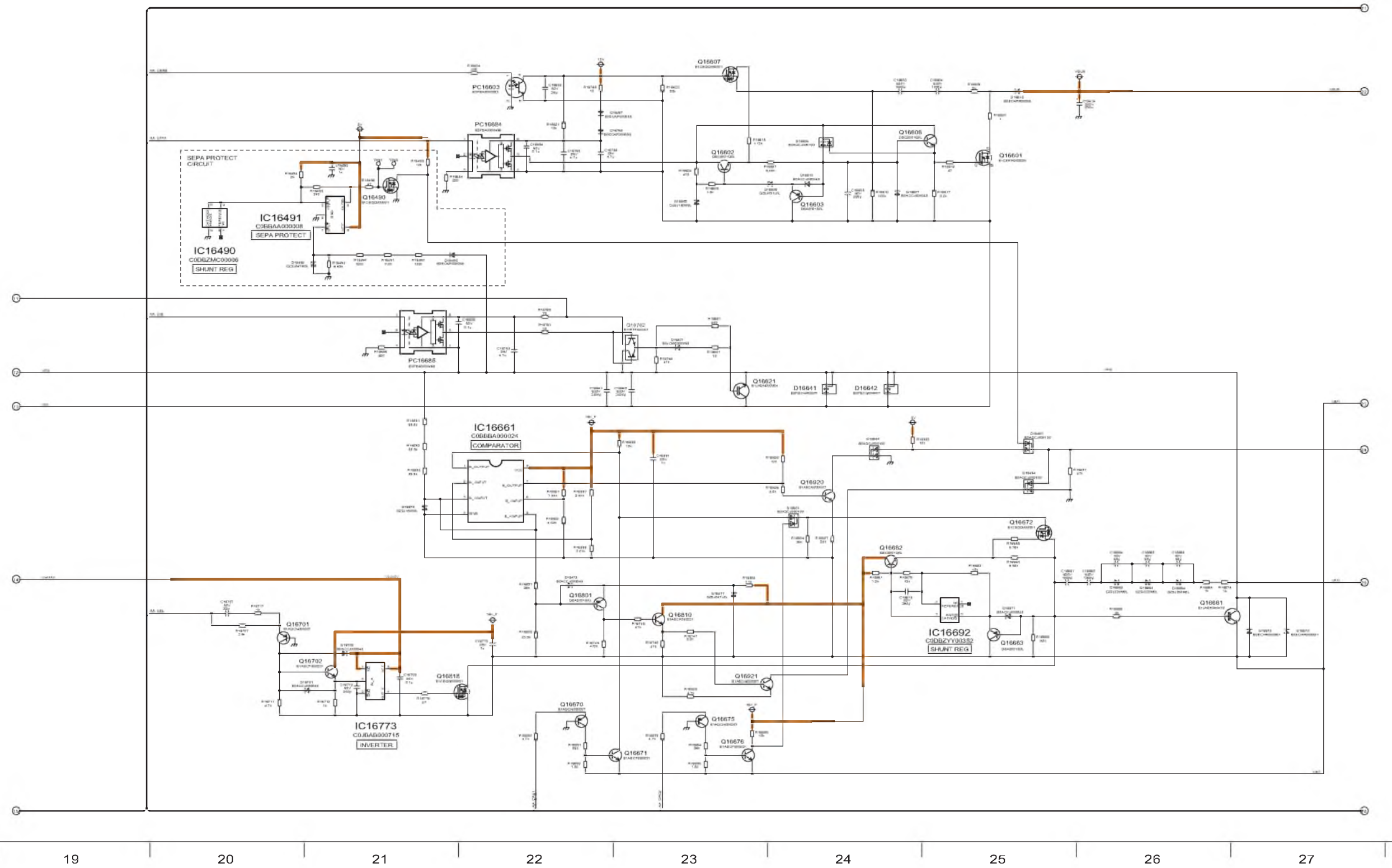
1 2 3 4 5 6 7 8 9

# 12.19. SC-Board (2/4) Schematic Diagram

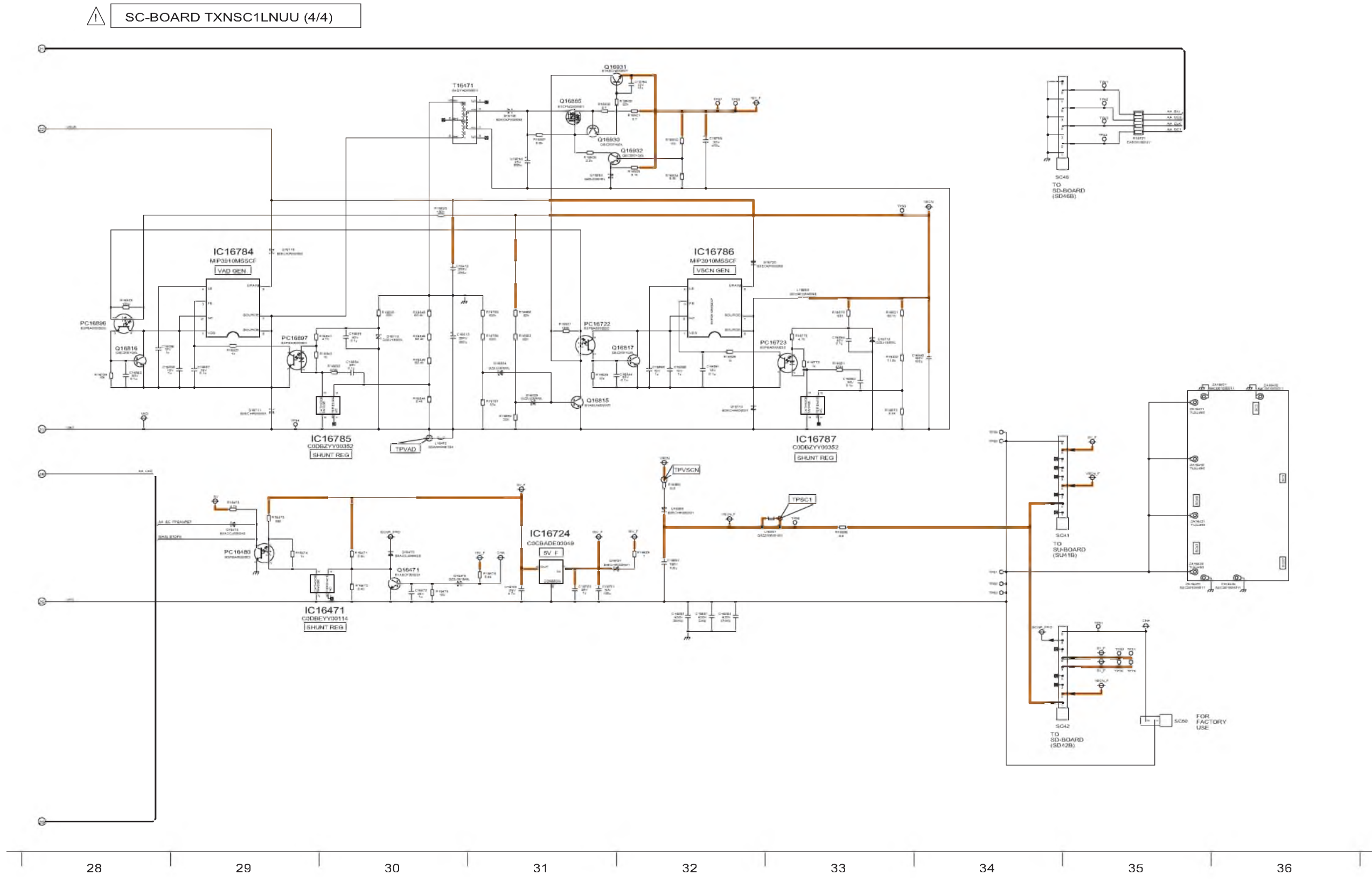


# 12.20. SC-Board (3/4) Schematic Diagram

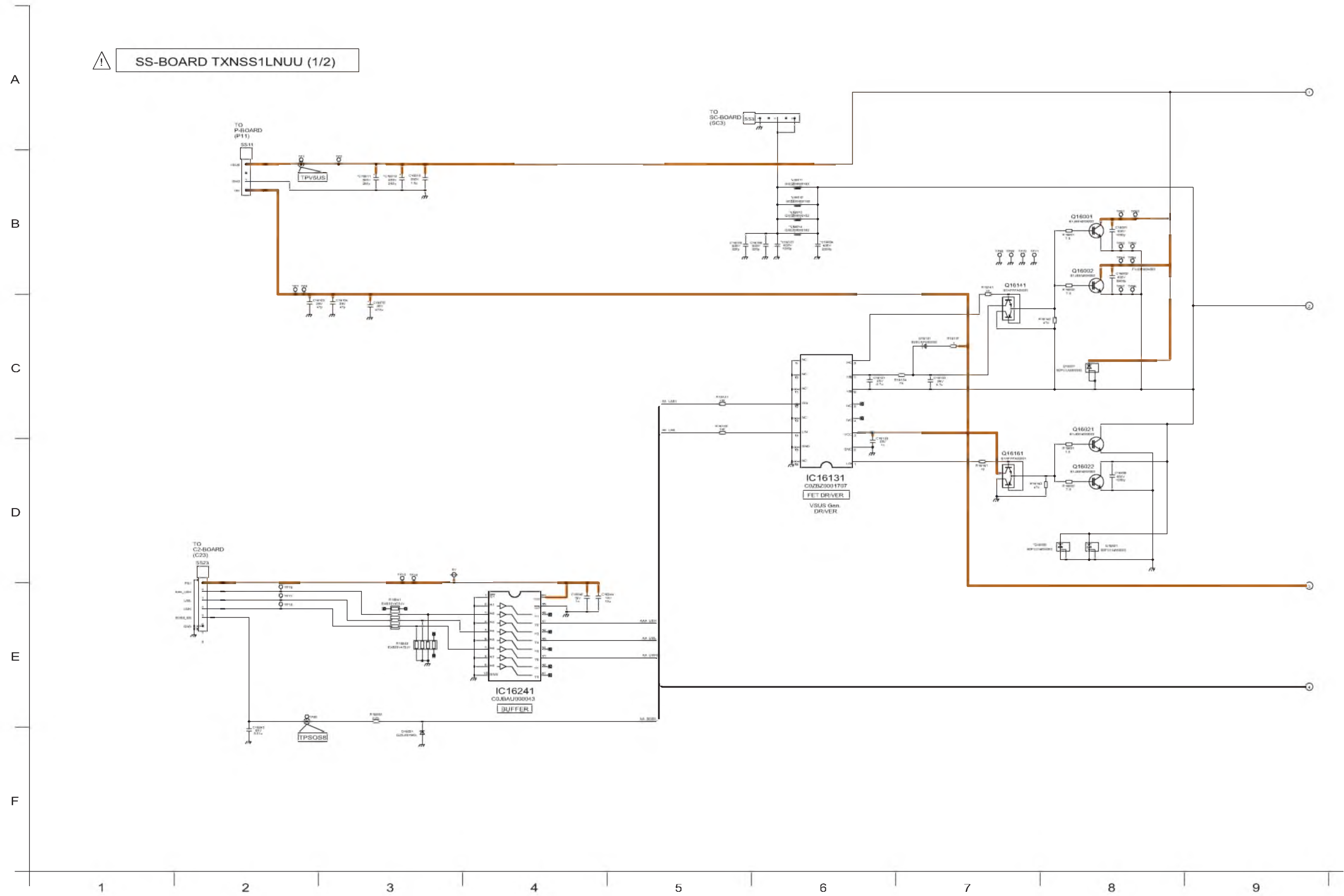
⚠ SC-BOARD TXNSC1LNUU (3/4)



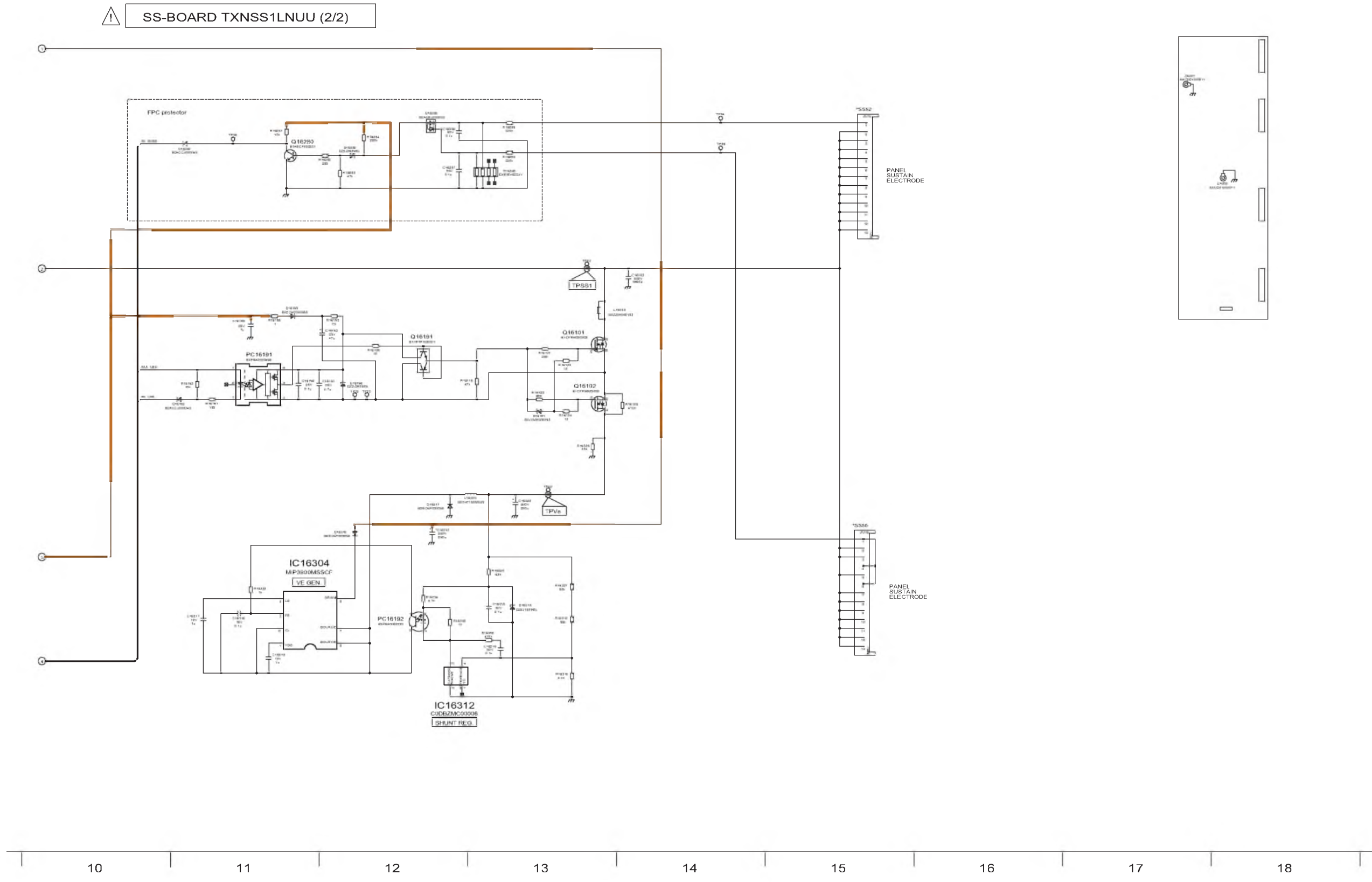
# 12.21. SC-Board (4/4) Schematic Diagram



# 12.22. SS-Board (1/2) Schematic Diagram

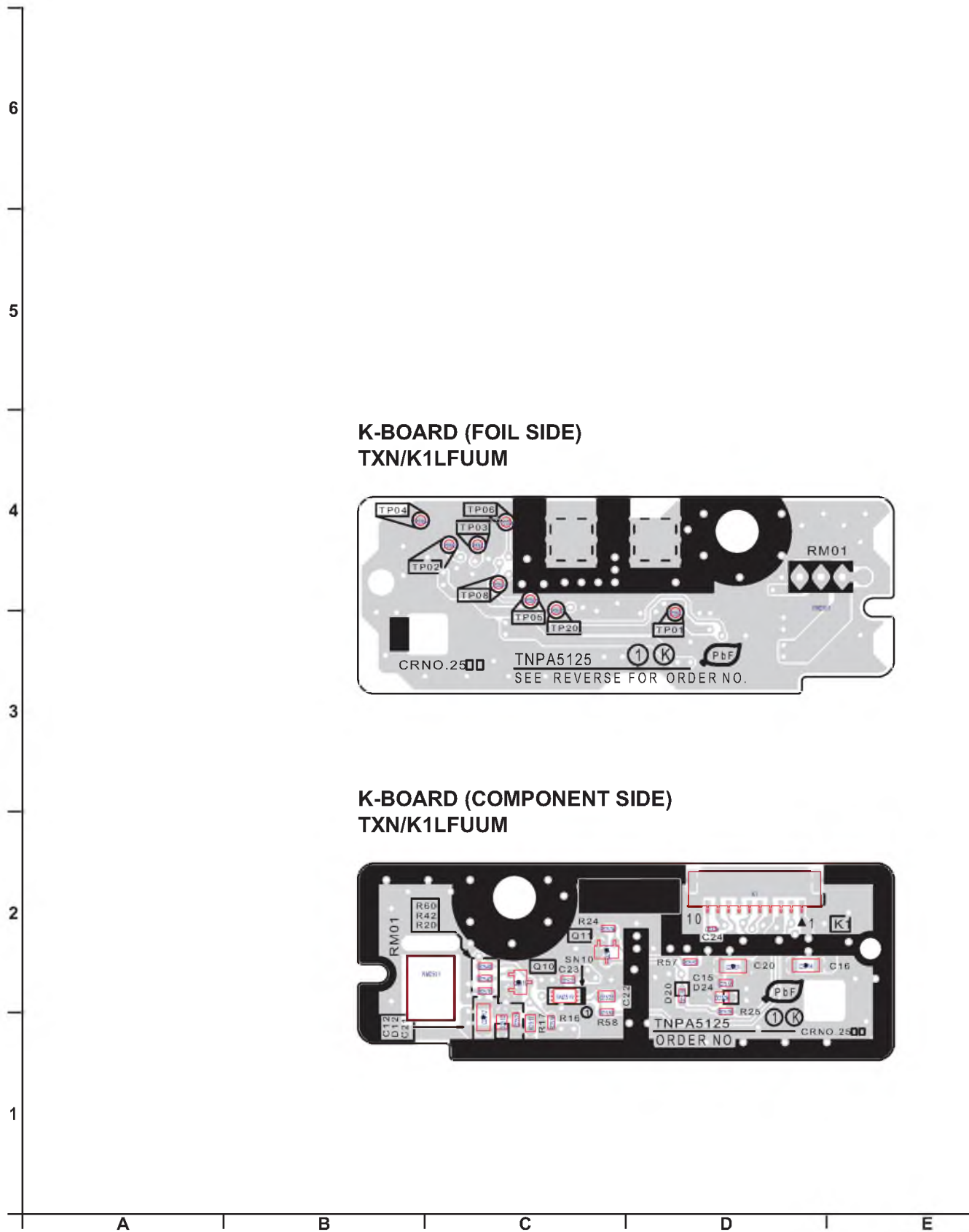


### 12.23. SS-Board (2/2) Schematic Diagram

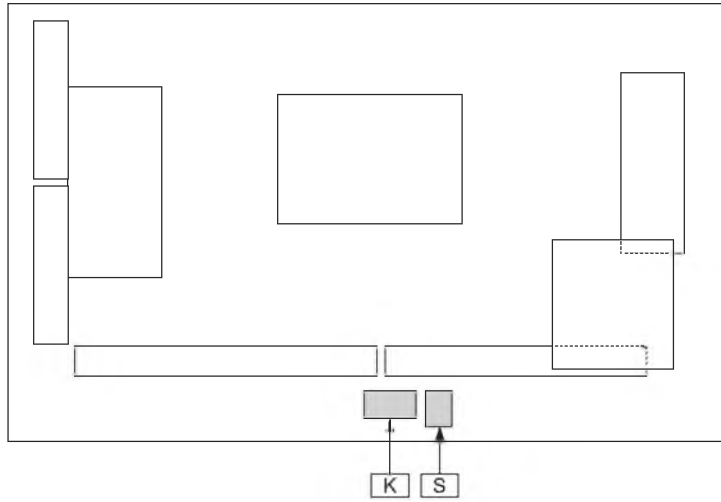


# 13 Printed Circuit Board

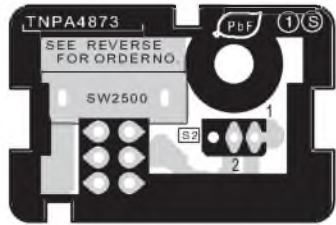
## 13.1. K and S-Board



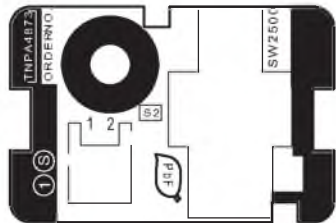




**S-BOARD (FOIL SIDE)  
TXN/S1EQUUM**

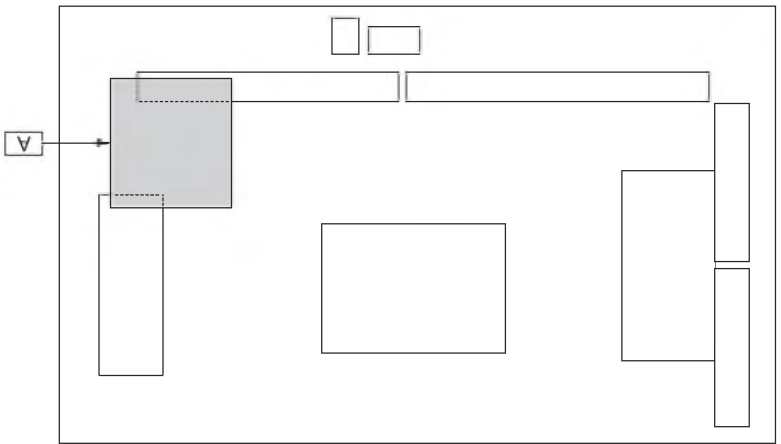
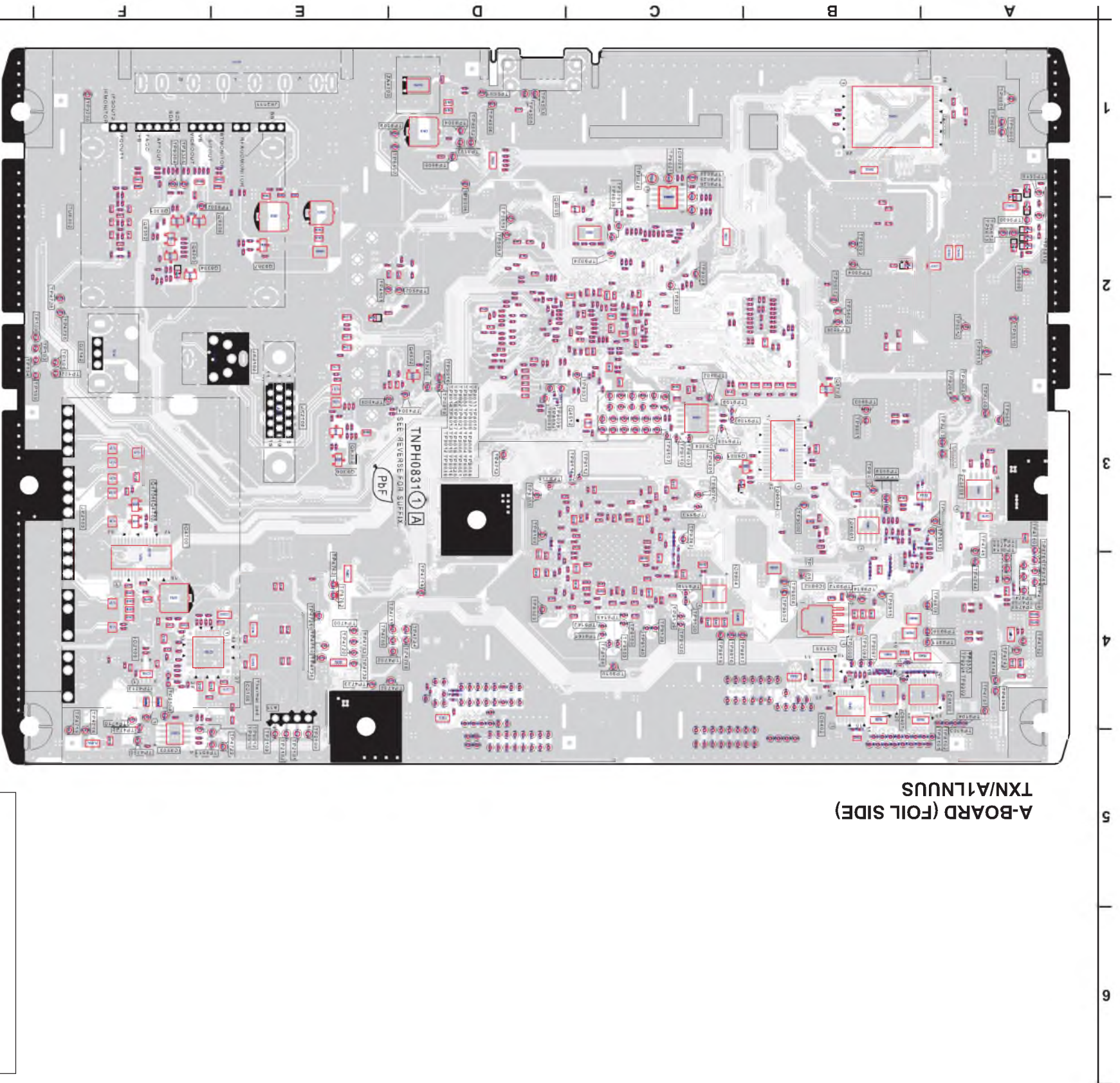


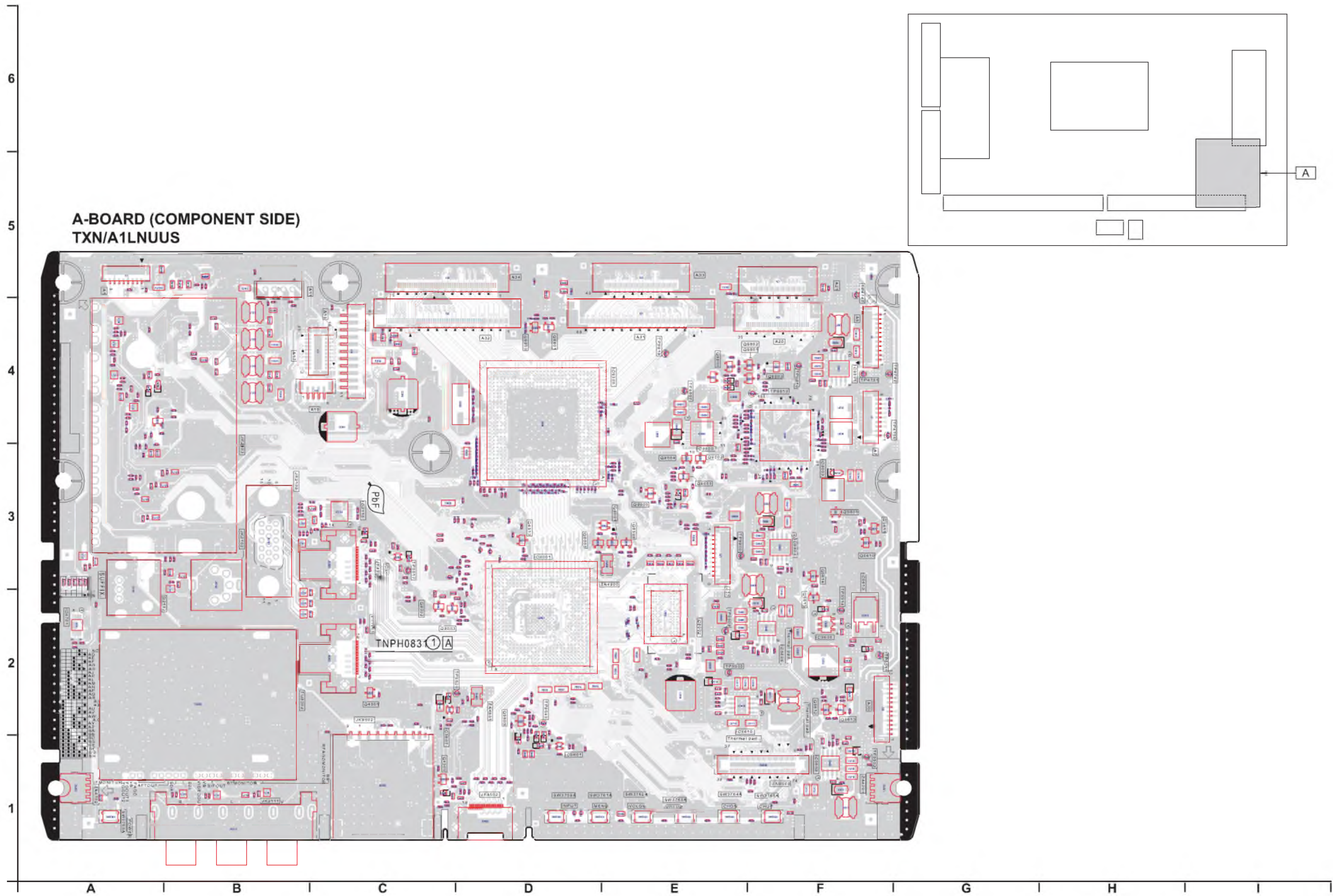
**S-BOARD (COMPONENT SIDE)  
TXN/S1EQUUM**



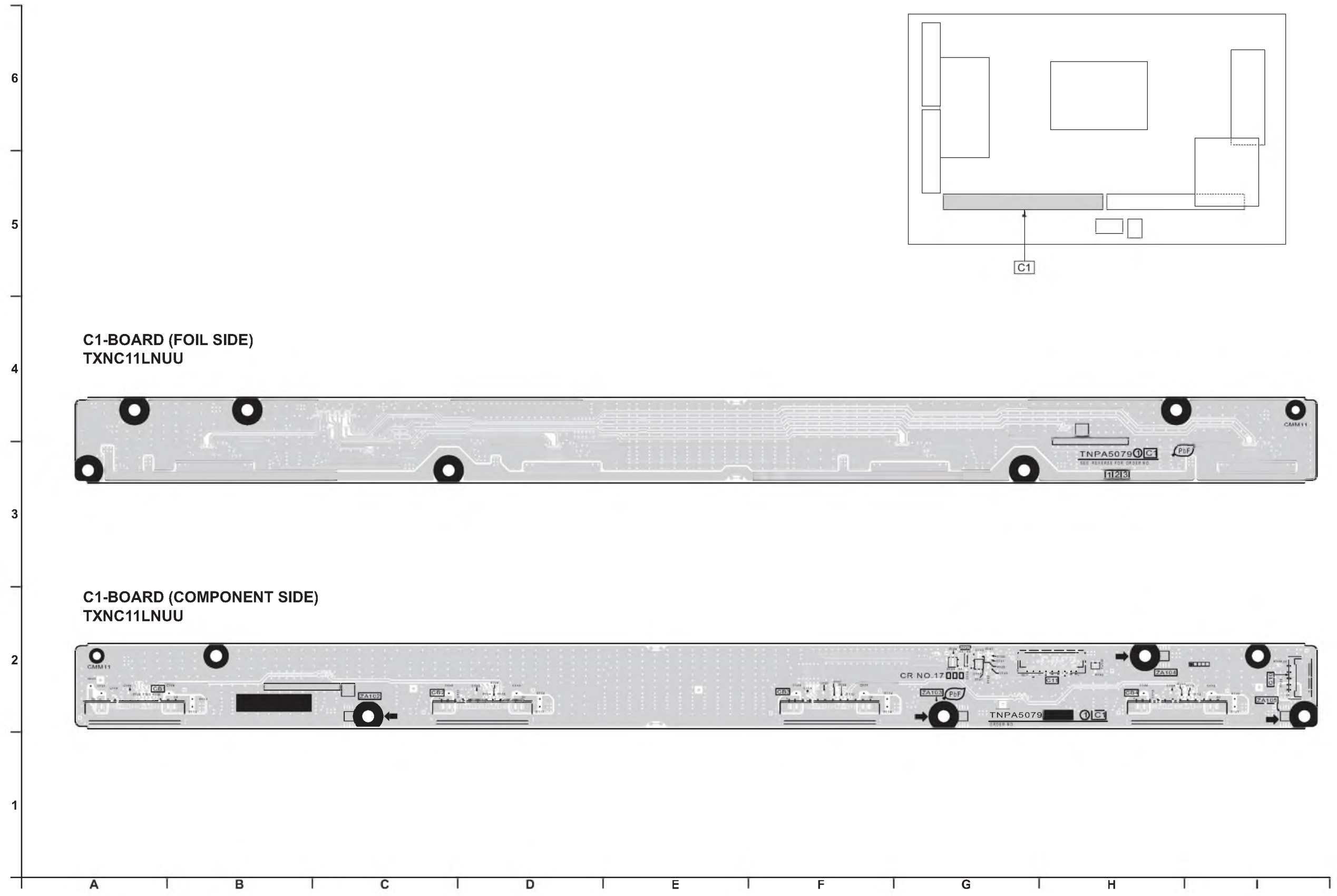
13.2. A-Board

A-BOARD (FOIL SIDE)  
TXN/A1LNUS

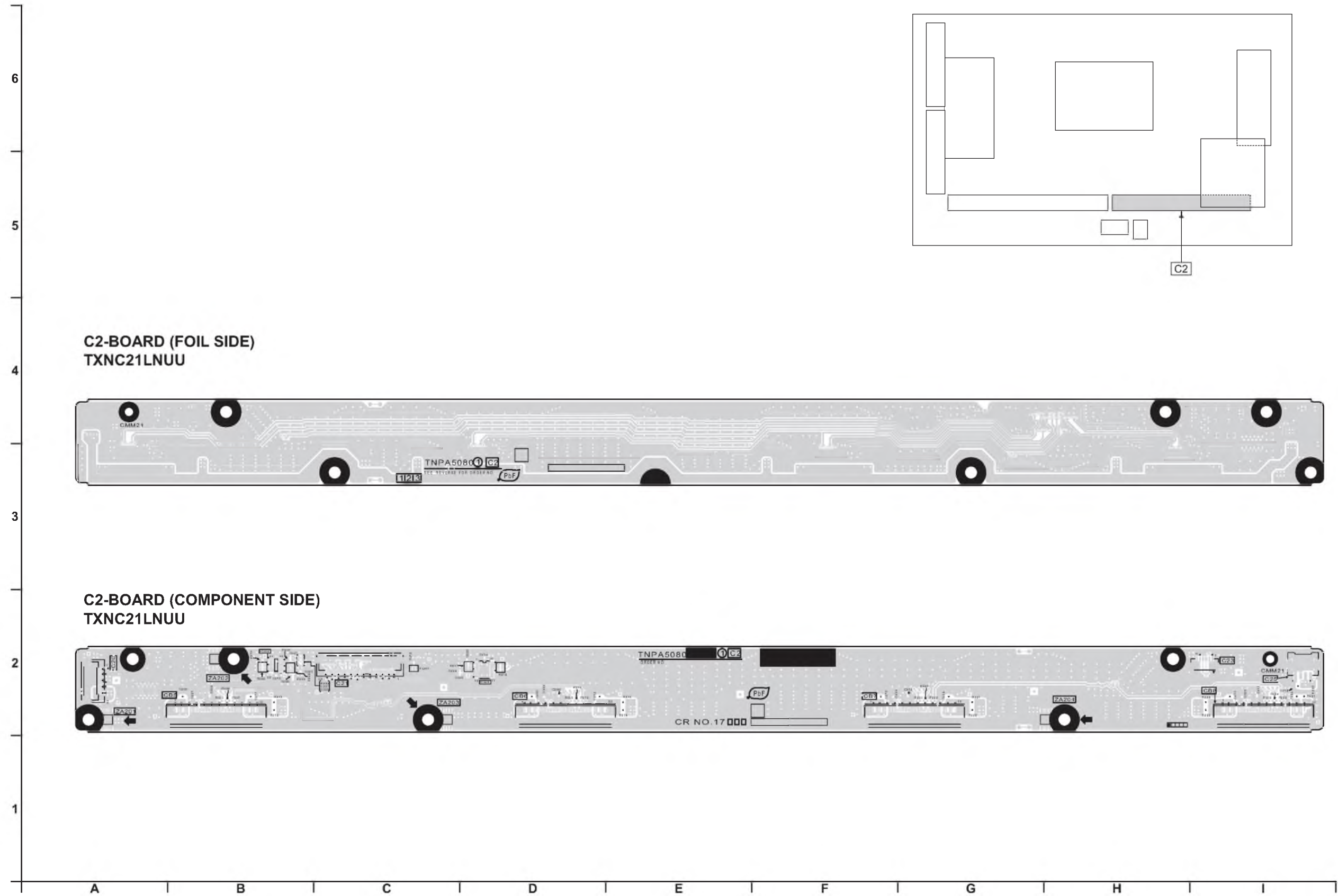




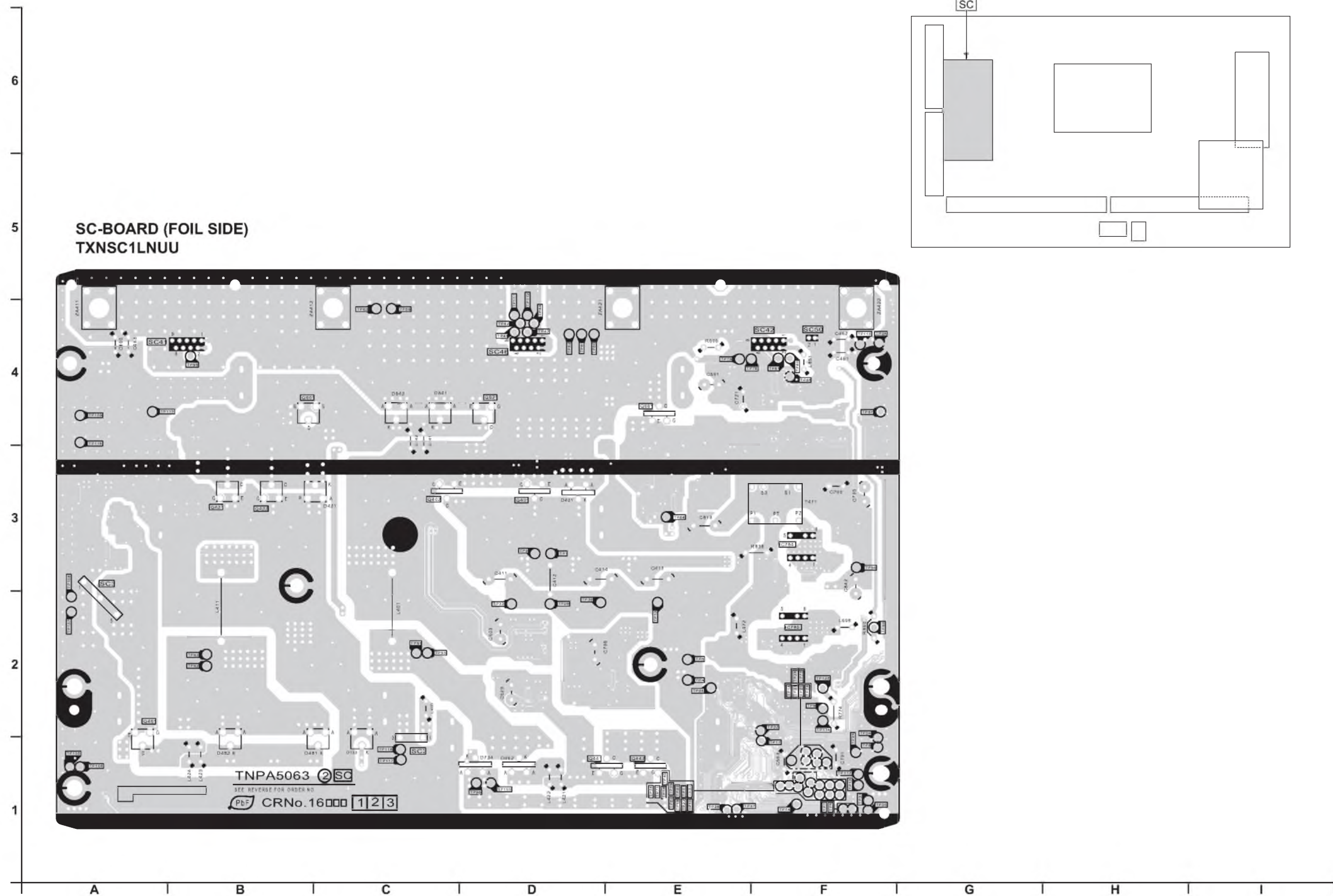
### 13.3. C1-Board



### 13.4. C2-Board

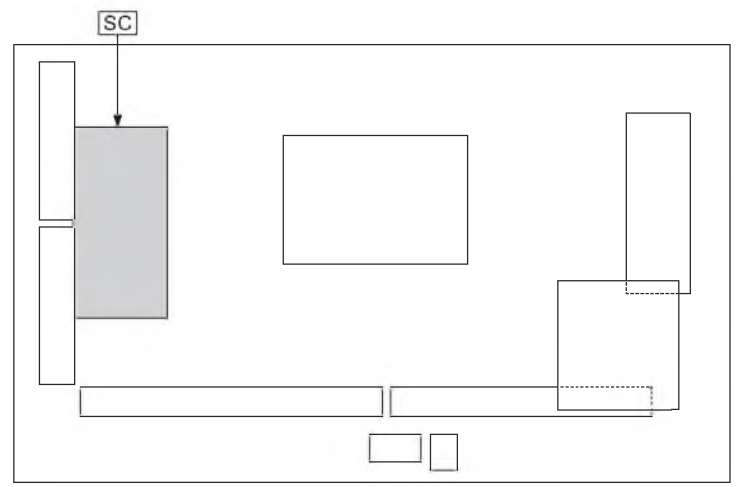
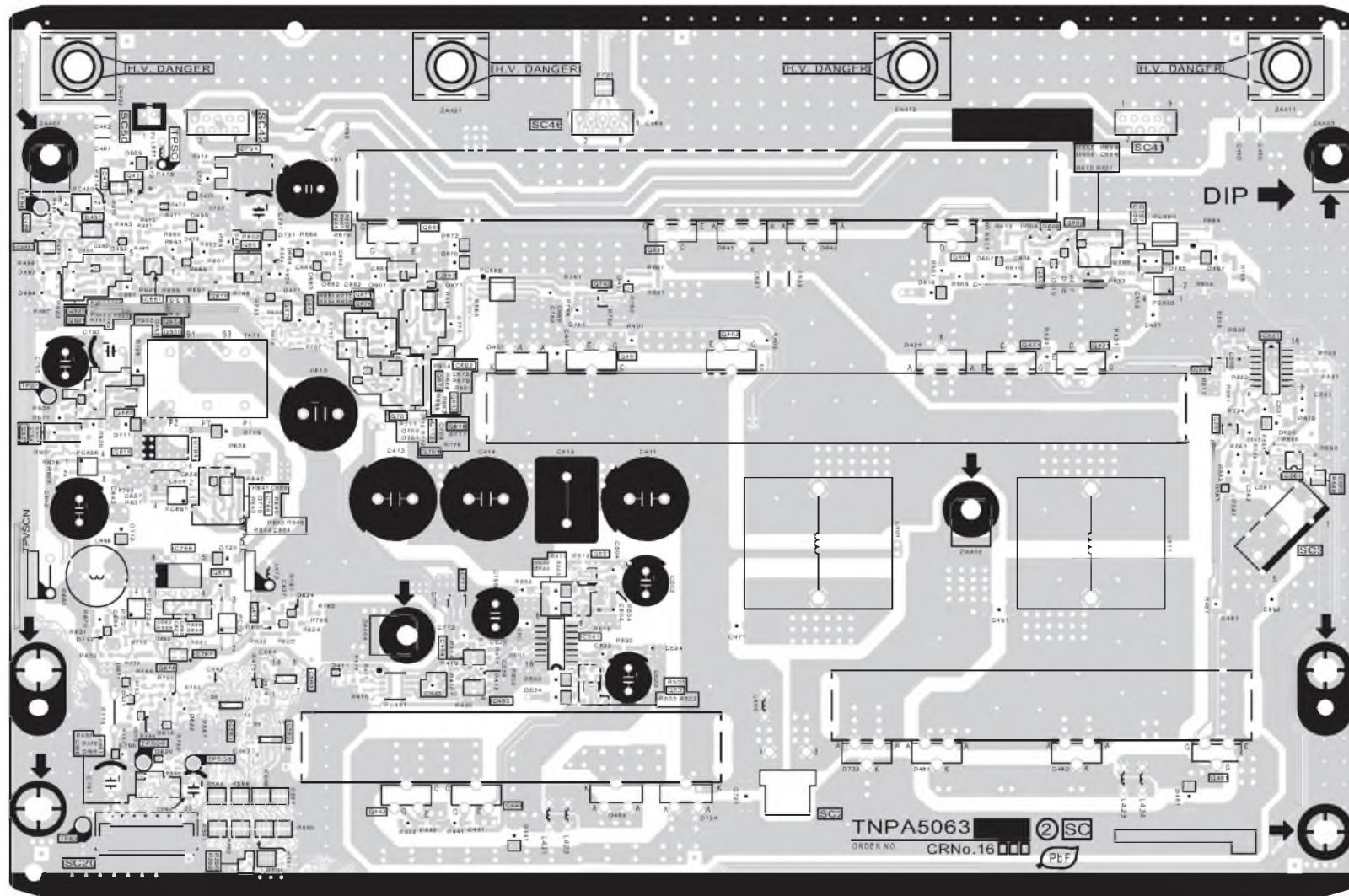


13.5. SC-Board

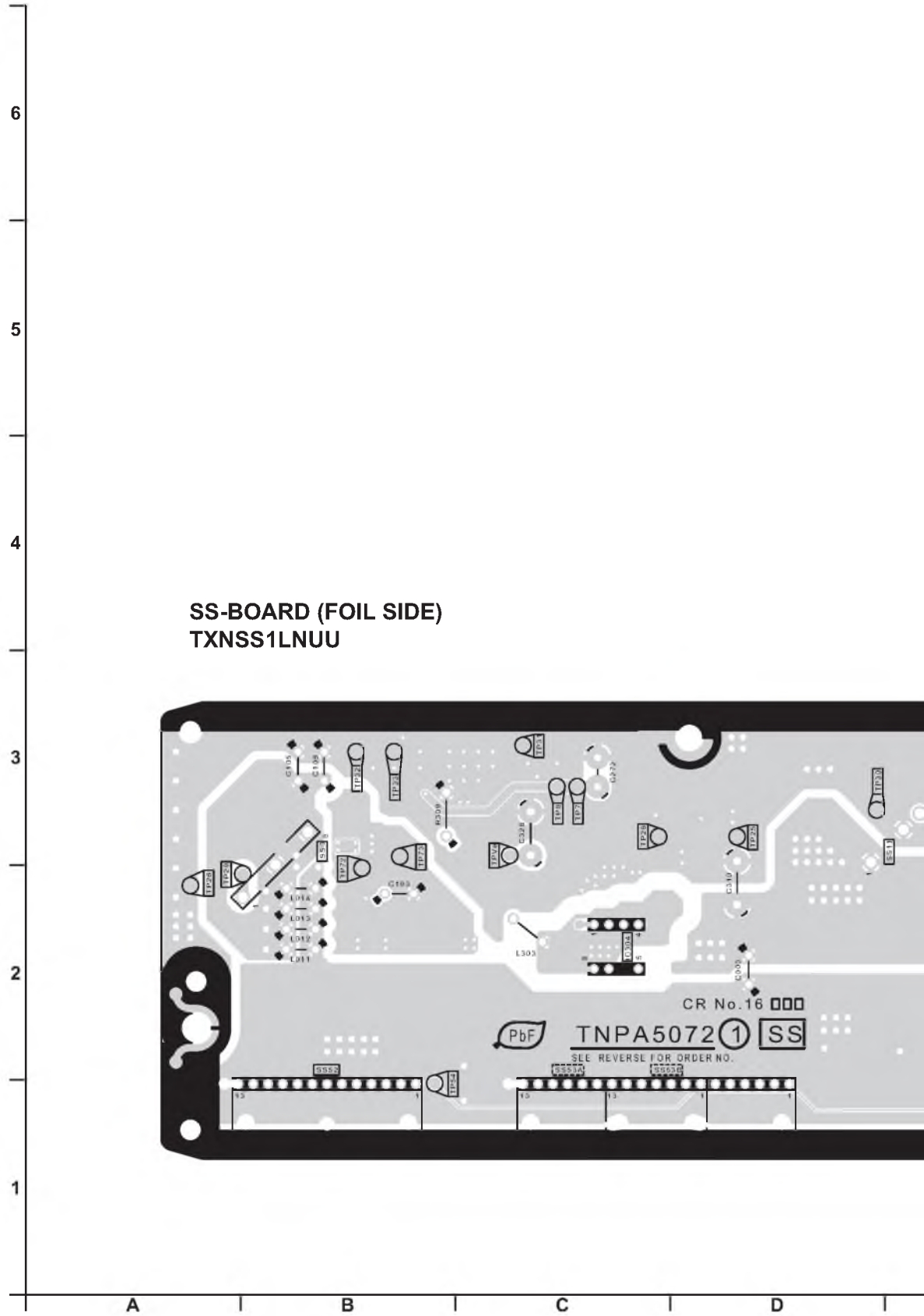


6  
5  
4  
3  
2  
1  
A | B | C | D | E | F | G | H | I

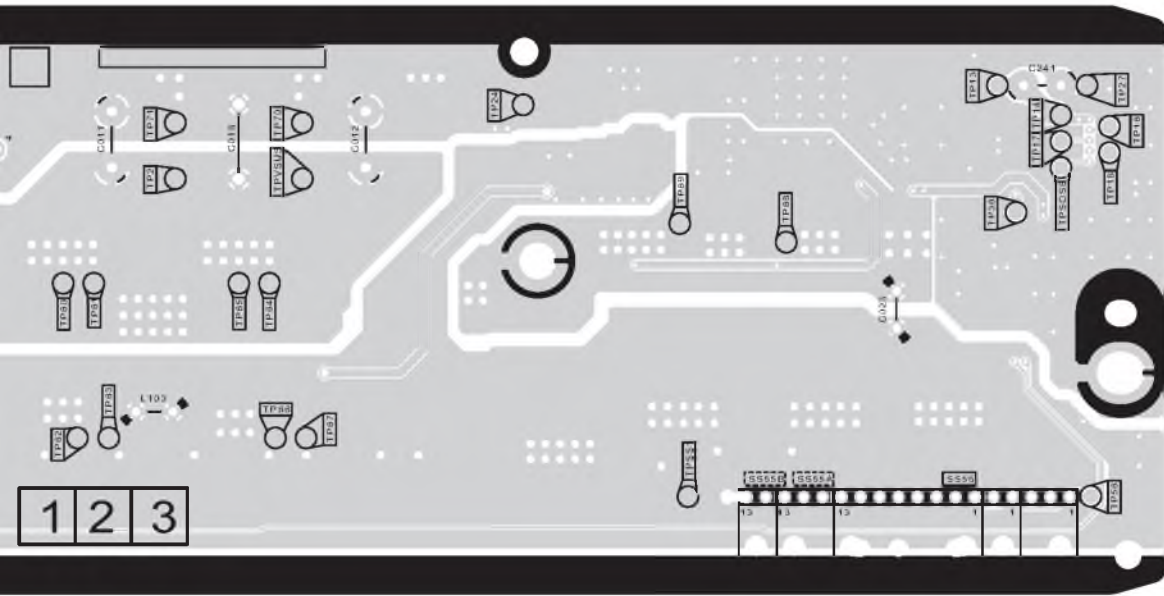
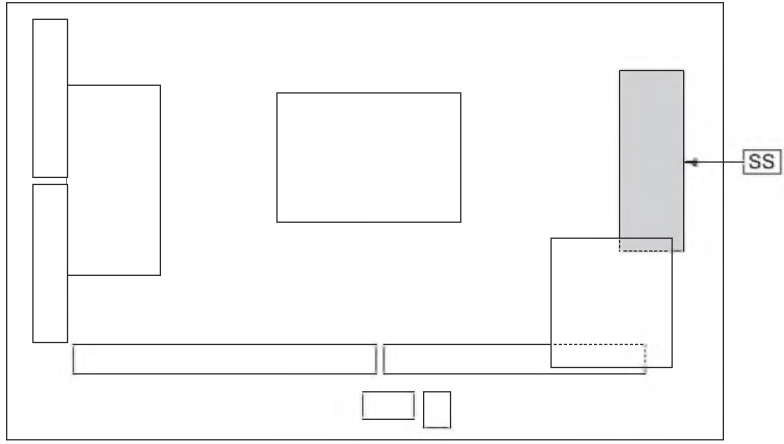
**SC-BEARD (COMPONENT SIDE)  
TXNSC1LNUU**



### 13.6. SS-Board

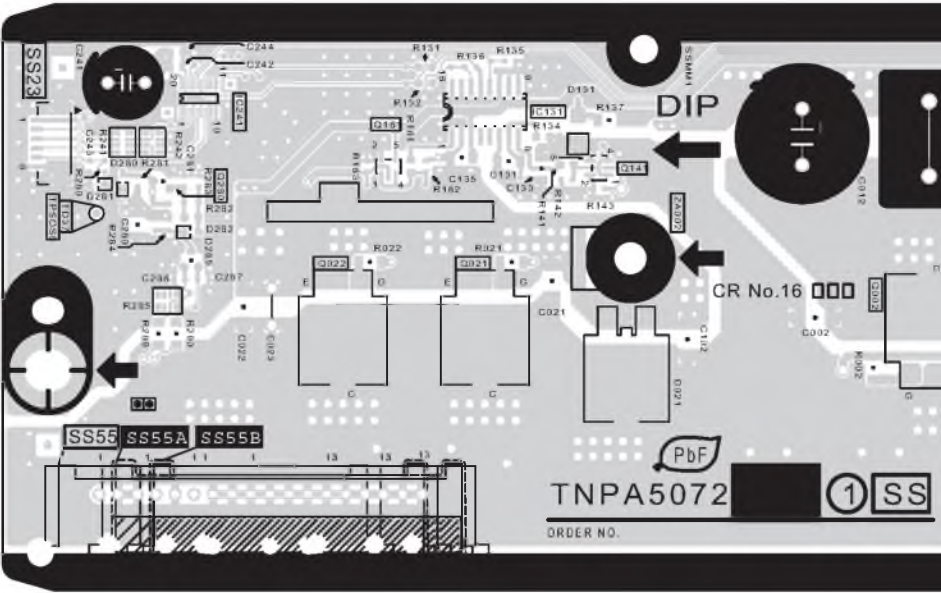






E | F | G | H | | |

### SS-BEARD (COMPONENT SIDE) TXNSS1LNUU



6

5

4

3

2

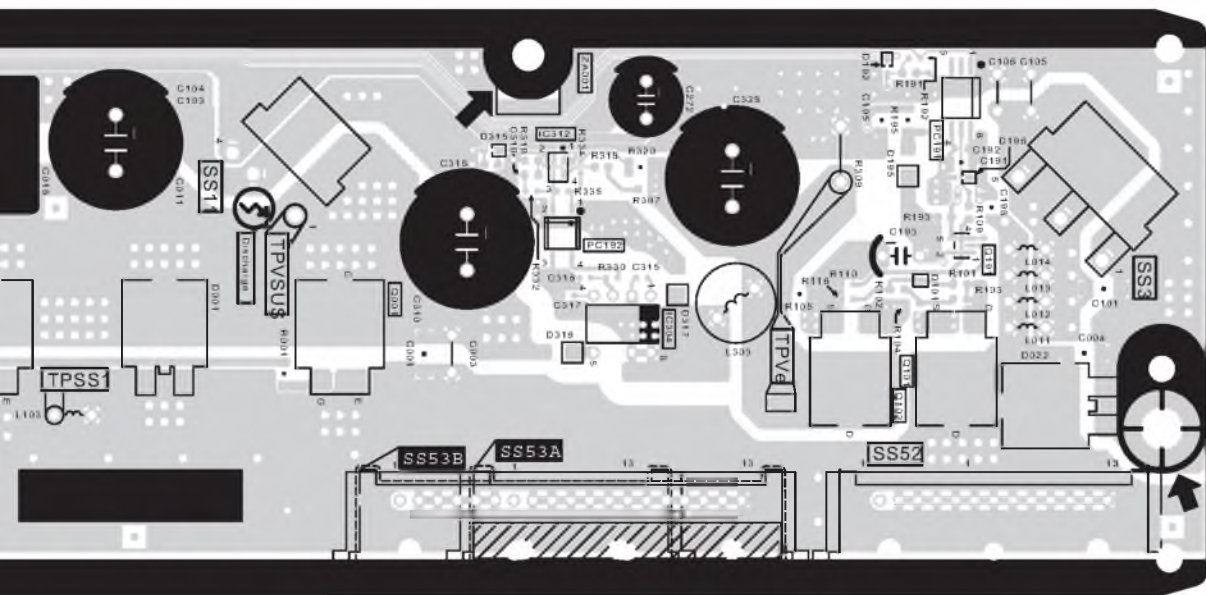
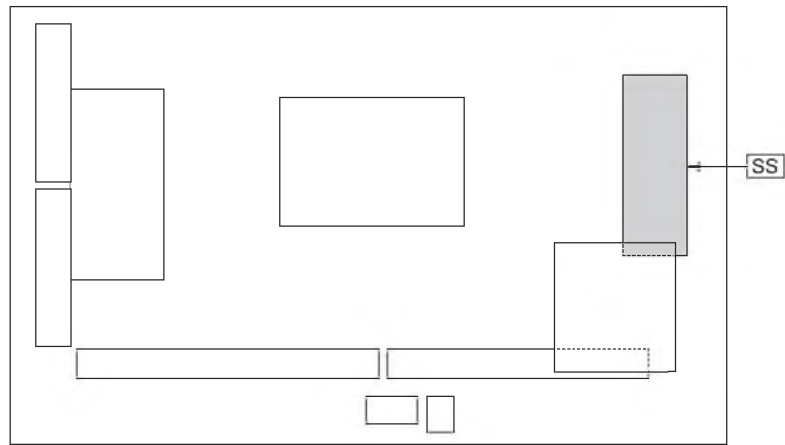
1

A

B

C

D

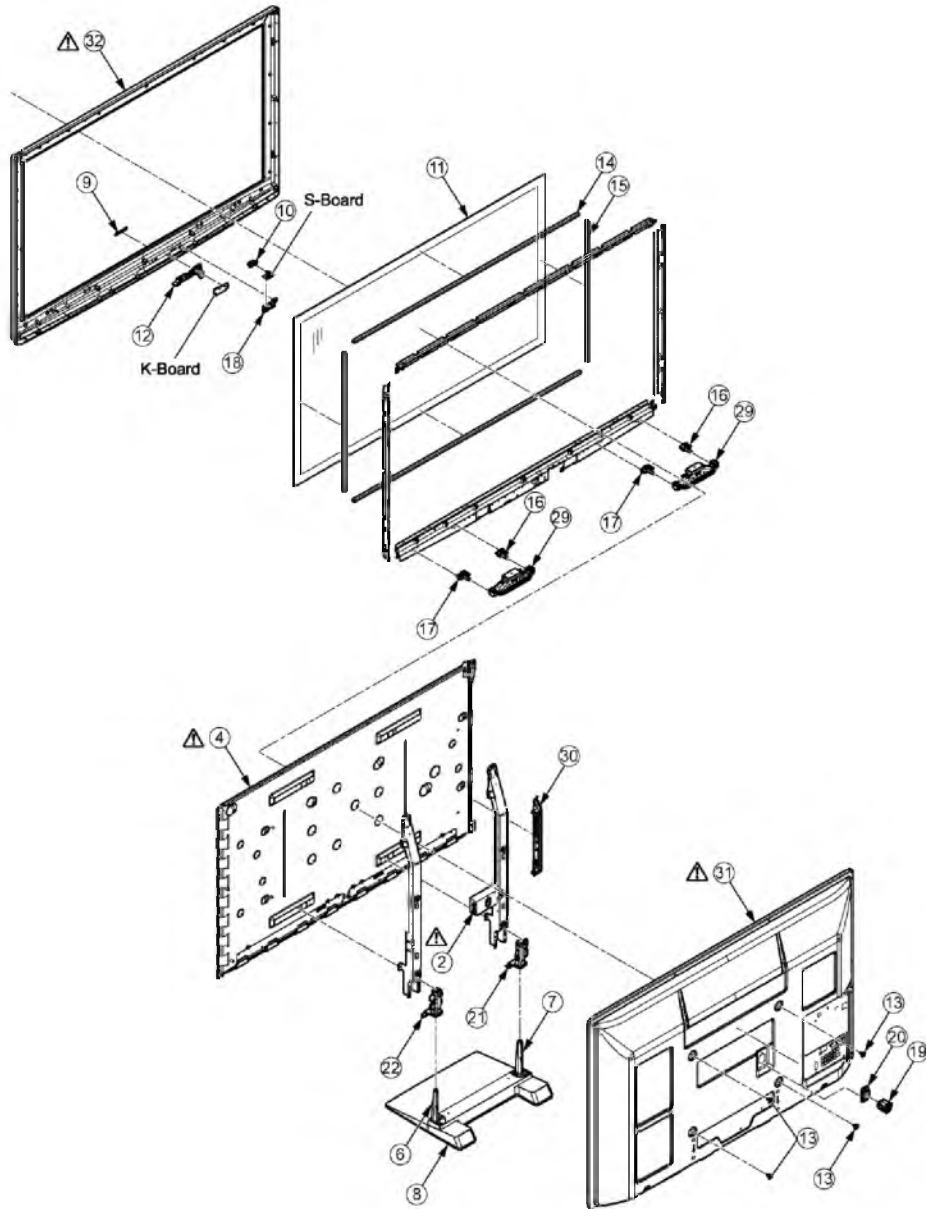


E | F | G | H |

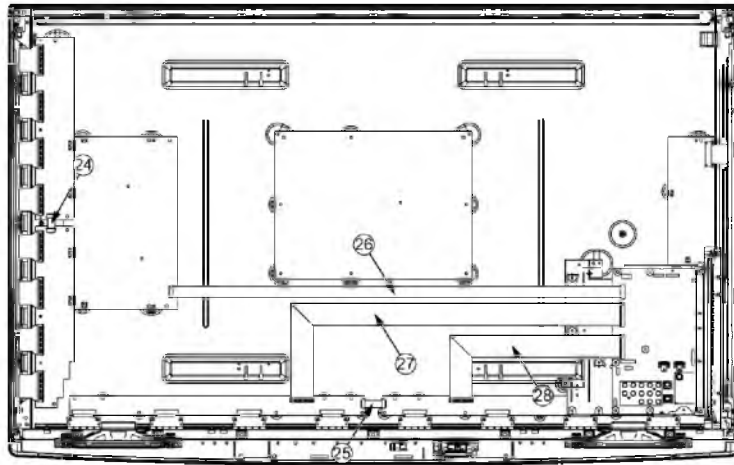
# 14 Exploded View and Replacement Parts List

## 14.1. Exploded View and Mechanical Replacement Parts List

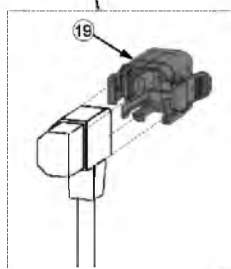
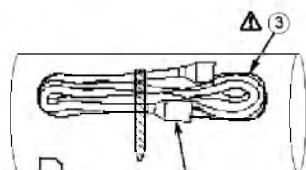
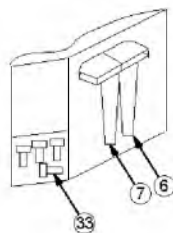
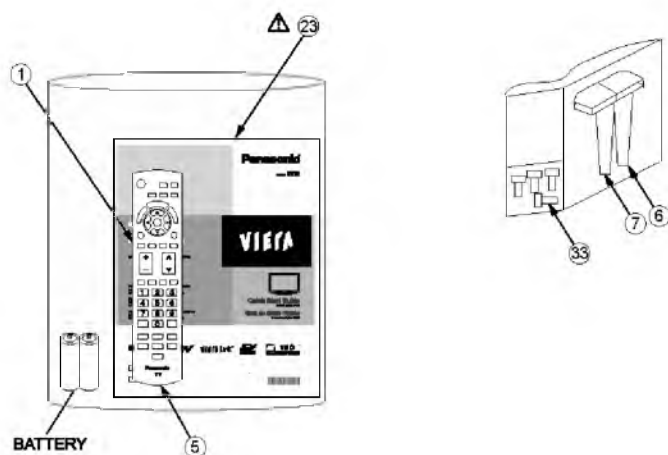
### 14.1.1. Exploded View 1



### 14.1.2. Exploded View 2







### 14.1.3. Accessories





#### 14.1.4. Mechanical Replacement Parts List

**Note:** All parts except parts mentioned [PAVCA] in the Remarks column are supplied by AVC-CSPC.  
Parts mentioned [PAVCA] are supplied by PAVCA.

| Safety  | Ref. No. | Part No.      | Part Name & Description           | Q'ty | Remarks |
|---|----------|---------------|-----------------------------------|------|---------|
|   | 1        | 10030-0047500 | BATTERY COVER                     | 1    | PAVCA   |
|    | 2        | K2AHYH000034  | AC INLET WITH CABLE               | 1    | PAVCA   |
|    | 3        | K2CG3YY00060  | AC CORD(USA)                      | 1    | PAVCA   |
|    | 4        | MD50H13C2A    | PLASMA DISPLAY PANEL              | 1    | PAVCA   |
|   | 5        | N2QAYB000485  | REMOTE CONTROL                    | 1    | PAVCA   |
|   | 6        | TBLA3679      | STAND POLE R                      | 1    |         |
|   | 7        | TBLA3680      | STAND POLE L                      | 1    |         |
|   | 8        | TBLX0135      | PEDESTAL STAND                    | 1    | PAVCA   |
|   | 9        | TBMA339       | PANASONIC SHEET BADGE             | 1    |         |
|   | 10       | TBX2AA5301    | POWER BUTTUN                      | 1    | PAVCA   |
|   |          | THEL0429      | SCREW                             | 5    |         |
|   |          | THEL052Z      | SCREW (BC TOP:4)                  | 2    |         |
|   |          | THEL080N      | PF SCREW (5x30)                   | 4    |         |
|   |          | THTD020J      | SCREW(A-PRINT:4)                  | 6    |         |
|   |          | THTF016J      | SCREW(TU:2)                       | 2    |         |
|   |          | THTF016J      | SCREW(P:9 SC:8 SS:4 SUSD:3)       | 24   |         |
|   |          | THTF016J      | SCREW(DD:16 C:8)                  | 24   |         |
|   | 11       | TKGA5610      | FRONT GLASS                       | 1    | PAVCA   |
|   | 12       | TKK2AA9402    | LED PANEL                         | 1    | PAVCA   |
|   | 13       | TKKL5493      | M8 CAP                            | 4    |         |
|   | 14       | TMK2AG08005   | SPONGE (FRONT GLASS/UPPER/BOTTOM) | 2    | PAVCA   |
|   | 15       | TMK2AG08006   | SPONGE (FRONT GLASS/LEFT/RIGHT)   | 2    | PAVCA   |
|   |          | TMM23417      | CLAMPER                           | 2    |         |
|   |          | TMME331       | CLAMPER (P:1)                     | 1    |         |
|   |          | TMME332       | CLAMPER (HANGER:4)                | 4    |         |
|   |          | TMME332       | CLAMPER (SS:1)                    | 1    |         |
|   |          | TMME332       | CLAMPER                           | 2    |         |
|   |          | TMME332       | CLAMPER                           | 2    |         |
|   |          | TMME341       | CLAMPER                           | 2    |         |
|   | 16       | TMW2AA003     | SP BRACKET L                      | 2    | PAVCA   |
|   | 17       | TMW2AA004     | SP BRACKET R                      | 2    | PAVCA   |
|   | 18       | TMW2AA011     | POWER BUTTON BRACKET              | 1    | PAVCA   |
|   | 19       | TMXX064       | AC CORD CLAMPER A                 | 1    |         |
|   | 20       | TMXX065       | AC CORD CLAMPER B                 | 1    |         |
|   | 21       | TMZ2AX5003    | STAND BRACKET L                   | 1    | PAVCA   |
|   | 22       | TMZ2AX5004    | STAND BRACKET R                   | 1    | PAVCA   |
|   |          | TPD169487     | JOINT                             | 4    |         |
|   |          | TPEB340       | BAG (STAND ACCESSORY)             | 1    |         |
|  | 23       | TQB2AA0572    | INSTRUCTION BOOK(ENG/SPA)         | 1    | PAVCA   |
|   |          | TQZJ203       | SCREW USE HANDBILL                | 1    |         |
|   | 24       | TSXL519       | CABLE (SU11-SD11)                 | 1    |         |
|   | 25       | TSXL927       | CABLE (C10-C20)                   | 1    |         |
|   | 26       | TSXL937       | CABLE (A21-SC20)                  | 1    | PAVCA   |



| Safety  | Ref. No. | Part No.    | Part Name & Description     | Q'ty | Remarks |
|---|----------|-------------|-----------------------------|------|---------|
|   | 27       | TSXL938     | CABLE (C11-A33)             | 1    | PAVCA   |
|   | 28       | TSXL939     | CABLE (C31-A34)             | 1    | PAVCA   |
|   | 29       | TXFEA01XSER | SPEAKER L/R ASSY            | 2    | PAVCA   |
|   | 30       | TXFKP02XSER | SIDE TERMINAL COVER         | 1    | PAVCA   |
|  | 31       | TXFKU02XSER | REAR COVER                  | 1    | PAVCA   |
|  | 32       | TXFKY01LNUU | CABINET ASSY                | 1    | PAVCA   |
|   |          | TXJA11LQUU  | SPEAKER LEAD (A11-SPR/SPL)  | 1    | PAVCA   |
|   |          | XSB3+6FJ    | SCREW (HDMI:3)              | 2    |         |
|   |          | XTB4+12GFJ  | SCREW (GH:20 PW:2 LED:1)    | 23   |         |
|   |          | XTB4+12GFJK | SCREW (BC:11)               | 11   |         |
|   |          | XTB4+12GFN  | SCREW (4*12)                | 6    |         |
|   |          | XTV3+10JFJK | SCREW (REAR AV:2)           | 2    |         |
|   |          | XTW3+10TFJ  | SCREW                       | 1    |         |
|   |          | XYN3+F10FJK | SCREW (BC-AC_INLET:2)       | 2    |         |
|   |          | XYN3+J10FJ  | SCREW                       | 17   |         |
|   |          | XYN4+E6FJ   | SCREW (INLET:1)             | 1    |         |
|   |          | XYN4+F10FJ  | SCREW                       | 6    |         |
|   |          | XYN4+F10FJ  | SCREW (SUSD:4)              | 4    |         |
|   |          | XYN4+F10FJ  | SCREW (HANGER METAL ASSY:4) | 4    |         |
|   |          | XYN4+F10FJ  | SCREW (SP BRKT:4)           | 4    |         |
|   |          | XYN4+F10FJ  | SCREW (AL-GHT:4)            | 4    |         |
|   | 33       | XYN5+F18FN  | SCREW (STAND POLE)          | 4    |         |
|   |          | XZB17X19C03 | POLY BAG (STAND POLE)       | 1    |         |
|   |          | XZB7.5X9D05 | POLY BAG (SCREW)            | 1    |         |

## 14.2. Electrical Replacement Parts List

### 14.2.1. Replacement Parts List Notes

#### RTL (Retention Time Limited)

**Note:** The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Abbreviation of part name and description

#### 1. Resistor

Example:

ERD25TJ104    C 100KOHM, J, 1/4W  
                   Type            Allowance

#### 2. Capacitor

Example:

ECKF1H103ZF    C 0.01UF, Z, 50V  
                   Type            Allowance

| Type                          | Allowance |
|-------------------------------|-----------|
| C : Carbon                    | F : ±1%   |
| F : Fuse                      | G : ±2%   |
| M : Metal Oxide<br>Metal Film | J : ±5%   |
| S : Solid                     | K : ±10%  |
| W : Wire Wound                | M : ±20%  |

| Type             | Allowance      |
|------------------|----------------|
| C : Ceramic      | C : ±0.25pF    |
| E : Electrolytic | D : ±0.5pF     |
| P : Polyester    | F : ±1pF       |
| Polyprop<br>lene | G : ±3pF       |
| T : Tantalum     | J : ±5pF       |
|                  | K : ±10pF      |
|                  | L : ±15pF      |
|                  | M : ±20pF      |
|                  | P : +100%, -0% |
|                  | Z : +80%, -20% |

















| Safety | Ref. No. | Part No.     | Part Name & Description | Pcs | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | R2299    | D1BB75R0A055 | M 75 OHM, 1/10W         | 1   |         |
|        | R2300    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R2303    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R2309    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R2311    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R2314    | D0GA303JA015 | M 30K OHM J 0.063W      | 1   | PAVCA   |
|        | R2315    | D0GA303JA015 | M 30K OHM J 0.063W      | 1   | PAVCA   |
|        | R2316    | D0GA303JA015 | M 30K OHM J 0.063W      | 1   | PAVCA   |
|        | R2324    | D0GA471JA015 | M 470OHM, J,0.063W      | 1   |         |
|        | R2325    | D0GA471JA015 | M 470OHM, J,0.063W      | 1   |         |
|        | R2326    | D1BB2212A055 | M22.1KOHM, 1/10W        | 1   |         |
|        | R2327    | D0GBR00Z0002 | M 0 OHM J 1/10W         | 1   |         |
|        | R2329    | D1BA1822A014 | M18.2KOHM, 1/10W        | 1   |         |
|        | R2330    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R2331    | ERJ8GEYJ3R3V | M 3.3 OHM, J,1/8W       | 1   |         |
|        | R2332    | ERJ8GEYJ3R3V | M 3.3 OHM, J,1/8W       | 1   |         |
|        | R2333    | ERJ8GEYJ3R3V | M 3.3 OHM, J,1/8W       | 1   |         |
|        | R2334    | ERJ8GEYJ3R3V | M 3.3 OHM, J,1/8W       | 1   |         |
|        | R2336    | D0GA330JA015 | M 33 OHM, J,0.063W      | 1   |         |
|        | R2337    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R2343    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R2348    | D0GA303JA015 | M 30K OHM J 0.063W      | 1   | PAVCA   |
|        | R2378    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R2388    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R2391    | D1BB75R0A055 | M 75 OHM, 1/10W         | 1   |         |
|        | R2393    | D0GA392JA015 | M 3.9KOHM, J,0.063W     | 1   |         |
|        | R2516    | ERJ3GEYJ223  | M 22KOHM, J,1/16W       | 1   |         |
|        | R2517    | ERJ6GEYJ470V | M 47 OHM, J,1/10W       | 1   |         |
|        | R2520    | D0GB224JA041 | M 2.2KOHM, J,1/10W      | 1   |         |
|        | R2524    | ERJ3GEYJ223  | M 22KOHM, J,1/16W       | 1   |         |
|        | R2525    | D0GB222JA041 | M 2.2KOHM, J,1/10W      | 1   |         |
|        | R2542    | D0GB104JA041 | M 100KOHM J 1/10W       | 1   |         |
|        | R2557    | D0GB562JA041 | M 5.6KOHM, J,1/10W      | 1   |         |
|        | R2558    | ERJ3GEYJ101  | M 100 OHM, J,1/16W      | 1   |         |
|        | R3771    | ERJ2RKF2102X | M 2.1KOHM, 0.063W       | 1   | PAVCA   |
|        | R3772    | ERJ2RKF1741X | M 1.74KOHM, 0.063W      | 1   | PAVCA   |
|        | R3773    | ERJ2RKF1621X | M 1.62KOHM, 0.063W      | 1   | PAVCA   |
|        | R3774    | ERJ2RKF2321X | M 2.32KOHM, 0.063W      | 1   | PAVCA   |
|        | R3775    | ERJ2RKF3161X | M 3.16KOHM, 0.063W      | 1   | PAVCA   |
|        | R4502    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R4504    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4505    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R4507    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4512    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Pcs | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | R4516    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R4519    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R4520    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R4525    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R4526    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R4548    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R4549    | D0GA151JA015 | M 150 OHM, J,0.063W     | 1   |         |
|        | R4550    | D0GA151JA015 | M 150 OHM, J,0.063W     | 1   |         |
|        | R4551    | D0GA151JA015 | M 150 OHM, J,0.063W     | 1   |         |
|        | R4552    | D0GA560JA015 | M 56 OHM, J,0.063W      | 1   |         |
|        | R4553    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4554    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R4565    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4566    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4568    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R4569    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R4570    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R4711    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R4715    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4716    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4717    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4729    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4730    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4731    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R4742    | ERJ6GEYJ150V | M 15 OHM, J,1/10W       | 1   |         |
|        | R4748    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4753    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4755    | ERJ6GEY0R00V | M 0 OHM J 1/10W         | 1   |         |
|        | R4756    | D0GA154JA015 | M 150KOHM J 0.063W      | 1   |         |
|        | R4757    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R4762    | EXB2HV220JV  | RESISTOR ARRAY          | 1   |         |
|        | R4778    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4780    | EXB2HV220JV  | RESISTOR ARRAY          | 1   |         |
|        | R4788    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R4802    | EXB2HV220JV  | RESISTOR ARRAY          | 1   |         |
|        | R4805    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R4809    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4812    | ERJ2RKF7151X | M 7.15KOHM, 0.063W      | 1   | PAVCA   |
|        | R4815    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R4819    | EXB28V101JX  | RESISTOR ARRAY          | 1   |         |
|        | R4821    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R4823    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R4827    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R4830    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R4831    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R5623    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |



| Safety | Ref. No. | Part No.     | Part Name & Description | Pcs | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | R8312    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8313    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R8314    | D0GA333JA015 | M 33KOHM, J,0.063W      | 1   |         |
|        | R8315    | D0GA223JA015 | M 22K OHM J 0.063W      | 1   |         |
|        | R8316    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8317    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8318    | D0GA223JA015 | M 22K OHM J 0.063W      | 1   |         |
|        | R8319    | D0GA393JA015 | M 39KOHM, J,0.063W      | 1   |         |
|        | R8320    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R8321    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8330    | D0GA222JA015 | M 2.2KOHM, J,0.063W     | 1   |         |
|        | R8331    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8332    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R8333    | D0GA122JA015 | M 1.2KOHM, J,0.063W     | 1   |         |
|        | R8334    | D0GA471JA015 | M 470OHM, J,0.063W      | 1   |         |
|        | R8336    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R8337    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R8339    | ERJ2GEJ221   | M 220 OHM, J,0.063W     | 1   |         |
|        | R8341    | ERJ6GEYG821  | M 820 OHM, J,1/10W      | 1   |         |
|        | R8342    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R8501    | D0GA680JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8502    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8512    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8513    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8514    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8515    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8516    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8521    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8522    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8523    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8528    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8530    | EXB2HV330JV  | RESISTOR ARRAY          | 1   |         |
|        | R8531    | D0GA680JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8532    | D0GA680JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8533    | D0GA680JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R8538    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8539    | EXB2HV680J   | RESISTOR ARRAY          | 1   |         |
|        | R8543    | EXB2HV103JV  | RESISTOR ARRAY          | 1   |         |
|        | R8546    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R8557    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R8560    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R9022    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9023    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9026    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R9027    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Pcs | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | R9028    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R9029    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R9030    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R9070    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9072    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9100    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R9101    | D0GA333JA015 | M 33KOHM, J,0.063W      | 1   |         |
|        | R9102    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R9103    | D0GA101JA015 | M 100 OHM, J,0.063W     | 1   |         |
|        | R9104    | EXB38V101JV  | RESISTOR ARRAY          | 1   |         |
|        | R9105    | ERJ2GEJ220   | M 22 OHM, J,0.063W      | 1   |         |
|        | R9107    | D0GA332JA015 | M 3.3KOHM, J,0.063W     | 1   |         |
|        | R9110    | D0GA473JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R9111    | D0GAR00Z0001 | C 0 OHM, 0.063W         | 1   |         |
|        | R9112    | D0GA472JA015 | M 4.7KOHM, J,0.063W     | 1   |         |
|        | R9113    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9114    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R9116    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9117    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9118    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R9119    | EXB28V470JX  | RESISTOR ARRAY          | 1   |         |
|        | R9121    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R9124    | D0GA470JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R9125    | ERJ2GEJ102X  | M 1K OHM J 1/4W         | 1   |         |
|        | R9129    | D0GA683JA015 | M 68KOHM, J,0.063W      | 1   |         |
|        | R9130    | D0GA470JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R9149    | ERJ2GEJ104   | M 100KOHM, J,0.063W     | 1   |         |
|        | R9152    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9153    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9154    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9155    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9164    | ERJ2GEJ103   | M 10KOHM, J,0.063W      | 1   |         |
|        | R9187    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9188    | D0GA272JA015 | M 2.7KOHM, J,0.063W     | 1   |         |
|        | R9194    | D0GA331JA015 | M 330 OHM, J,0.063W     | 1   |         |
|        | R9198    | EXB28V101JX  | RESISTOR ARRAY          | 1   |         |
|        | R9203    | D0GA223JA015 | M 22K OHM J 0.063W      | 1   |         |
|        | R9205    | D0GA333JA015 | M 33KOHM, J,0.063W      | 1   |         |
|        | R9206    | D0GA563JA015 | M 56KOHM, J,0.063W      | 1   |         |
|        | R9207    | D0GA243JA015 | M 24K OHM J 0.063W      | 1   | PAVCA   |
|        | R9208    | EXB2HV470JV  | RESISTOR ARRAY          | 1   |         |
|        | R9209    | EXB2HV470JV  | RESISTOR ARRAY          | 1   |         |
|        | R9212    | D0GA470JA015 | M 47 OHM, J,0.063W      | 1   |         |
|        | R9213    | D0GA470JA015 | M 47 OHM, J,0.063W      | 1   |         |







| Safety | Ref. No. | Part No.     | Part Name & Description | Pcs | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | R17220   | D0GB101JA041 | M 100 OHM,J,1/10W       | 1   |         |
|        | R17221   | D0GB101JA041 | M 100 OHM,J,1/10W       | 1   |         |
|        | R17222   | D0GB201JA041 | M 200 OHM,J,1/10W       | 1   | PAVCA   |
|        | R17223   | D0GB101JA041 | M 100 OHM,J,1/10W       | 1   |         |
|        | R17224   | D0GB101JA041 | M 100 OHM,J,1/10W       | 1   |         |
|        | R17225   | D0GB201JA041 | M 200 OHM,J,1/10W       | 1   | PAVCA   |
|        | R17226   | ERJ6GGEYJ224 | M 220KOHM,J,1/10W       | 1   |         |
|        | R17227   | ERJT14J1R0U  | C1.0 OHM, J,1/4W        | 1   |         |
|        | R17229   | ERJT14J1R0U  | C1.0 OHM, J,1/4W        | 1   |         |
|        | R17231   | ERJT08J151V  | M150 OHM,F,0.33W        | 1   |         |
|        | R17232   | D0GBR00Z0002 | M 0 OHM J 1/10W         | 1   |         |
|        | R17233   | D0GBR00Z0002 | M 0 OHM J 1/10W         | 1   |         |
|        |          |              |                         |     |         |
|        | RM2501   | B3RAD0000168 | REMOTE SENSOR           | 1   |         |
|        |          |              |                         |     |         |
|        | S2       | K1KA02BA0061 | 2P CONNECTOR            | 1   |         |
|        |          |              |                         |     |         |
|        | SC2      | K1KY02B00012 | 2P CONNECTOR            | 1   |         |
|        | SC3      | K1KA03A00596 | 3P CONNECTOR            | 1   |         |
|        | SC20     | K1MY30BA0345 | 30P CONNECTOR           | 1   | PAVCA   |
|        | SC41     | K1KA09AA0707 | 9P CONNECTOR            | 1   |         |
|        | SC42     | K1KA09AA0707 | 9P CONNECTOR            | 1   |         |
|        | SC46     | K1KA09AA0707 | 9P CONNECTOR            | 1   |         |
|        | SC50     | K1KA02AA0193 | 2P CONNECTOR            | 1   |         |
|        |          |              |                         |     |         |
|        | SN2510   | B3JB00000078 | IC                      | 1   | PAVCA   |
|        |          |              |                         |     |         |
|        | SS3      | K1KY03BA0236 | 3P CONNECTOR            | 1   |         |
|        | SS11     | K1KY03B00006 | 3P CONNECTOR            | 1   |         |
|        | SS23     | K1KY06AA0719 | 6P CONNECTOR            | 1   |         |
|        | SS52     | K1MY13BA0376 | 13P CONNECTOR           | 1   | PAVCA   |
|        | SS55     | K1MY13BA0376 | 13P CONNECTOR           | 1   | PAVCA   |
|        |          |              |                         |     |         |
|        | SW2500   | K0F122A00172 | SWITCREMOTE CONTROLH    | 1   |         |
|        | SW3759A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        | SW3761A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        | SW3762A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        | SW3763A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        | SW3764A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        | SW3765A  | K0H1BA000445 | SWITCH                  | 1   |         |
|        |          |              |                         |     |         |
|        | T16471   | G4DYA0000201 | TRANSFORMER             | 1   | PAVCA   |
|        |          |              |                         |     |         |
|        | △ TU8302 | ENG36F12KF   | TUNER                   | 1   | PAVCA   |
|        |          |              |                         |     |         |
|        | X8000    | H0J250500094 | CRYSTAL                 | 1   | PAVCA   |
|        | X9000    | H2D100500004 | CRYSTAL                 | 1   |         |
|        | X9300    | H0J200500076 | CRYSTAL                 | 1   |         |
|        |          |              |                         |     |         |
|        | ZA001    | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA002    | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA4700   | K4CC01000001 | TERMINAL                | 1   |         |
|        | ZA4701   | K4AZ01D00004 | TERMINAL                | 1   |         |
|        | ZA4702   | K4AZ01D00004 | TERMINAL                | 1   |         |
|        | ZA16401  | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA16402  | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA16403  | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA16404  | K4CD01000011 | AV TERMINAL             | 1   |         |
|        | ZA17102  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17103  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17104  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17105  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17201  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17202  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17203  | K4CD01000013 | AV TERMINAL             | 1   |         |
|        | ZA17204  | K4CD01000013 | AV TERMINAL             | 1   |         |