

Service Manual

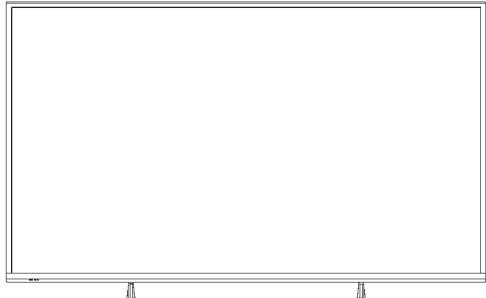
LED TV

Model No. TH-43CS630S

TH-49CS630S

Chassis: KM28

Destination: SINGAPORE



⚠ 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 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.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.
4. When conducting repairs and servicing, do not attempt to modify the equipment, its parts or its materials.
5. 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.
6. When conducting repairs and servicing, do not twist the Faston connectors but plug them straight in or unplug them straight out.

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 8.5Mohm to 13Mohm.
- When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

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.

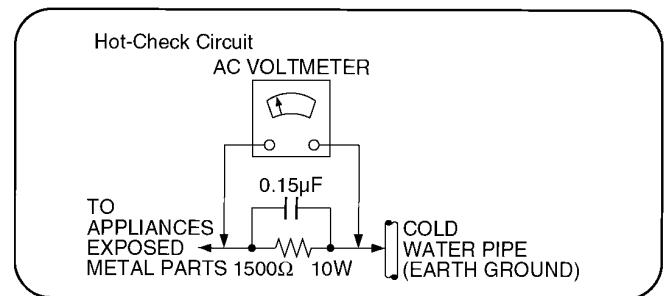


Figure 1

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).

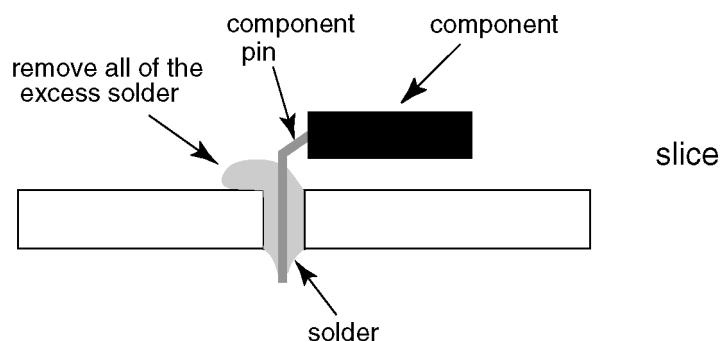
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in it's 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.

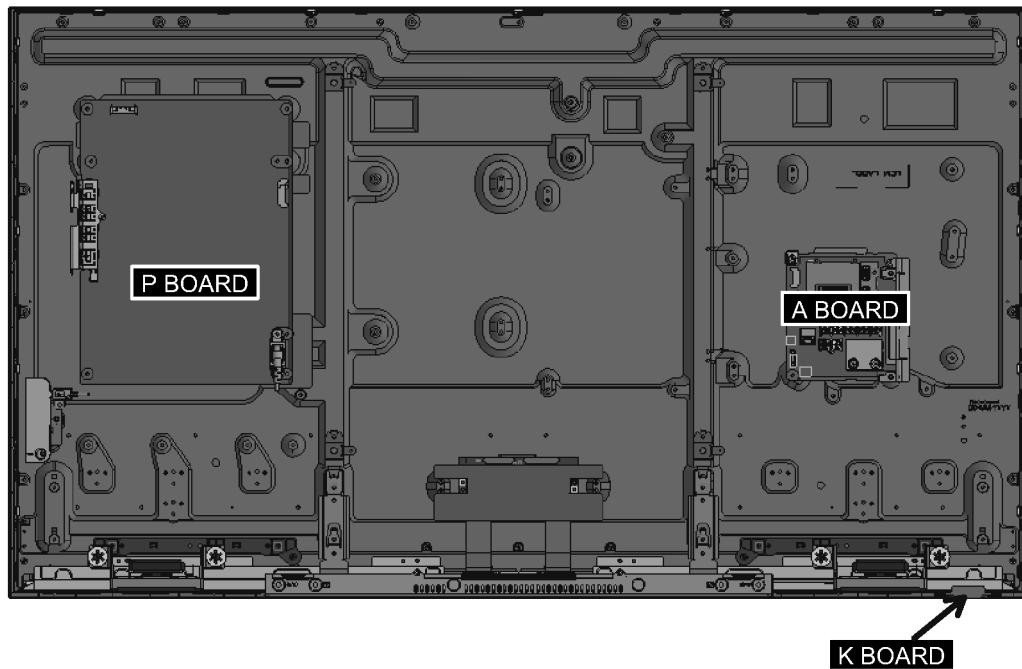
Caution

- 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)



3 Service Navigation

3.1. Service Hint



Board Name	Main Device	Remarks
A BOARD	TUN, OFDM, ADV, sLD8A, STBY EEP	Repairable
P BOARD	Power Supply, LED Driver, SW	Repairable
K BOARD	LED/ RM/ CATSR	Repairable

4 Specifications

Dimensions (W × H × D)	[43-inch model] 974 mm × 618 mm × 194 mm (With Pedestal) 974 mm × 569 mm × 63 mm (TV only) [49-inch model] 1 106 mm × 693 mm × 235 mm (With Pedestal) 1 106 mm × 644 mm × 63 mm (TV only)
Mass	[43-inch model] 14.0 kg Net (With Pedestal) 12.0 kg Net (TV only) [49-inch model] 16.0 kg Net (With Pedestal)) 14.0 kg Net (TV only)
Power source	AC Single 220-240 V, 50 / 60 Hz
Rated power consumption	[43-inch model] 105 W [49-inch model] 122 W
Standby power consumption	0.2 W
Visible screen size (diagonal)	[43-inch model] 108 cm [49-inch model] 123 cm
Display resolution	1 920 (W) × 1 080 (H)
Panel	LED backlight Liquid Crystal Display
Sound	20 W (10 W + 10 W)
Speaker output	
Connection terminals	
AV IN (COMPONENT / VIDEO)	VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω) AUDIO L - R RCA PIN Type × 2 0.5 V[rms] Y 1.0 V[p-p] (including synchronisation) P_B/C_B, P_R/C_R ±0.35 V[p-p]
HDMI 1 / 2 / 3 input	TYPE A Connectors HDMI1 / 3: Content Type HDMI2: Content Type, Audio Return Channel • This TV supports 'HDAVI Control 5' function.
ETHERNET	10BASE-T / 100BASE-TX
USB 1 / 2	DC 5 V, Max. 500 mA [Hi-Speed USB (USB 2.0)]
DIGITAL AUDIO OUT	PCM / Dolby Digital / DTS, Fibre optic
AUDIO OUT	M3 (3.5 mm) stereo mini Jack × 1
Receiving systems / Band name	17 SYSTEMS FUNCTION
	1 PAL B, G, H 2 PAL I 3 PAL D, K 4 SECAM B, G 5 SECAM D, K 6 SECAM K1 7 NTSC M (NTSC 3.58 / 4.5 MHz)
	8 NTSC 4.43 / 5.5 MHz 9 NTSC 4.43 / 6.0 MHz 10 NTSC 4.43 / 6.5 MHz
	11 NTSC 3.58 / 5.5 MHz 12 NTSC 3.58 / 6.0 MHz 13 NTSC 3.58 / 6.5 MHz 14 SECAM I
	15 PAL 60 Hz / 5.5 MHz 16 PAL 60 Hz / 6.0 MHz 17 PAL 60 Hz / 6.5 MHz
Digital TV	7 MHz VHF / 8 MHz UHF free-to-air TV broadcast reception
Receiving channels (Analogue TV)	
VHF BAND	2 - 12 (PAL / SECAM B, K1) 0 - 12 (PAL B AUST.) 1 - 9 (PAL B N.Z.) 1 - 12 (PAL / SECAM D)

	1 - 12 (NTSC M Japan) 2 - 13 (NTSC M USA)
UHF BAND	21 - 69 (PAL G, H, I / SECAM G, K, K1) 28 - 69 (PAL B AUST.) 13 - 57 (PAL D, K) 13 - 62 (NTSC M Japan) 14 - 69 (NTSC M USA)
CATV	S1 - S20 (OSCAR) 1 - 125 (USA CATV) C13 - C49 (JAPAN) S21 - S41 (HYPER) Z1 - Z37 (CHINA) 5A, 9A (AUST.)
Aerial input	VHF / UHF
Operating Conditions	Temperature : 0°C - 40°C Humidity : 20 % - 80 % RH (non-condensing)
Built-in wireless LAN	Standard compliance and Frequency range* IEEE802.11a/n 5.15 GHz -5.35 GHz, 5.47 GHz -5.85 GHz IEEE802.11b/g/n 2.40 GHz -2.4835 GHz Security WPA2-PSK (TKIP/AES) WPA-PSK (TKIP/AES) WEP (64 bit/128 bit)

*: The frequency and channel differ depending on the country.

- Note**
- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.
 - For the information of the open source software, refer to [eHELP] (Support > Licence).

5 Service Mode

5.1. How to enter into Service Mode

5.1.1. Purpose

After exchange parts, check and adjust the contents of adjustment mode.

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

Software version	Peakes SOFT	4.a04	OPTION 1	00
Picture adjustment	Peakes EEP	01.00.0357	OPTION 2	e7
White balance adjustment	LSI PACKAGE	0.03e	OPTION 3	09
Option setting	LSI DATA	0.00.07	OPTION 4	02
Service tool	STBY SOFT	2.00.00	Model ID	0c
USB Drive check	STBY EEP	1.00.0021		0300039d
	STBY ROMCOR	0.00.00		00000200
	Ajax_CE	0.74.15	R/E Cnt	000/000/000
			INV Cnt	0000
			AVSW	-

5.1.2. 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 (-)

5.1.3. How to exit

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

5.1.4. 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
ADJUST	CONTRAST	252
	COLOUR	2A
	TINT	00
	SUB-BRT	800
	BACKLGT	FFF
	H POS	0
	H AMP	0
	V POS	0
	V AMP	0
	VCOM	000
WB-ADJ	R-GAIN	80
	G-GAIN	AE
	B-GAIN	5C
	R-CENT	6C
	G-CENT	80
	B-CENT	A0

Main item	Sub item	Sample Data
OPTION	Boot	ROM
	STBY-SET	00
	EMERGENCY	ON
	CLK MODE	00
	CLOCK	000
	Y/C DELAY	0
	OPT 1	00000000
	OPT 2	11100110
	OPT 3	00001001
	OPT 4	00000000
SRV-TOOL	EDID-CLK	HIGH
		00
	DRV CHECK	USB HDD CHECK

5.1.5. 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].

5.1.6. Exit

1. Disconnect the AC cord from wall outlet.

5.1.7. Hotel Mode

1. Purpose

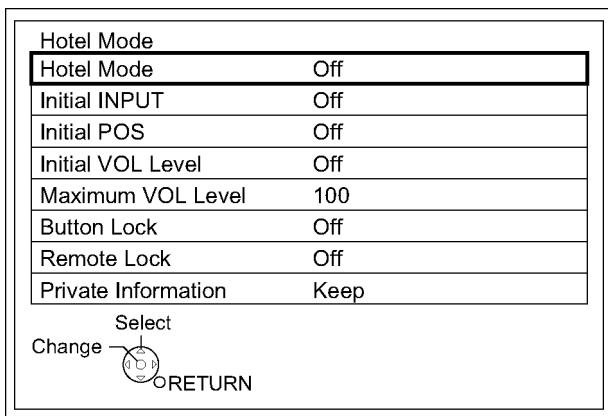
Restrict a function for hotels.

2. Access command to the Hotel mode setup menu.

In order to display the Hotel mode setup menu:

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

Then, the Hotel mode setup menu is displayed.



3. To exit the Hotel mode setup menu

Disconnect AC power cord from wall outlet.

4. Explain the Hotel mode setup menu

Item	Function
Hotel Mode	Select hotel mode On/Off
Initial INPUT	Select input signal modes. Set the input, when each time power is switched on. Selection : Off,Analogue,DVB-C,DVB-T,AV1,AV2,HDMI1, HDMI2 • Off: give priority to a last memory. However, Euro model is compulsorily set to TV.
Initial POS	Select programme number. Selection : Off/0 to 99 • Off: give priority to a last memory.
Initial VOL Level	Adjust the volume when each time power is switched on. Selection Range : Off/0 to 100 • Off: give priority to a last memory.
Maximum Vol Level	Adjust maximum volume. Range : 0 to 100
Button Lock	Select local key conditions. Selection : Off/SETUP/MENU/ALL • OFF: altogether valid • SETUP: only F-key is invalid (Tuning guide (menu) can not be selected.) • MENU: only F-key is invalid (only Volume/Mute can be selected.) • ALL: altogether invalid.
Remote Lock	Select remote control key conditions. Selection : Off/SETUP/MENU • OFF: altogether valid. • SETUP: only Setup menu is invalid. • MENU: Picture/Sound/Setup menu are invalid.
Private Information	Select private information for VIERA Cast is Keep or Reset if Hotel mode is set to [On] when TV power on Selection : Keep/Reset • Keep: private information for VIERA Cast is keep • Reset: private information for VIERA Cast is reset

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

6.1.2. 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.

6.1.3. 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.

6.1.4. Exit

Disconnect the AC cord from wall outlet.

6.1.5. Screen display

43FHD		SELF CHECK COMPLETE		
H14TUN	OK	PEAKS-SOFT	4.a04	
H90STBY	OK	PEAKS-EEP	01.00.0367	
H92MEM1	OK	LSI-PACKAGE	0.03e	
H91MEM2	OK	LSI-RELEASE	0.07	
H17LAN	OK	STBY-SOFT	2.00.00	
H00FE	OK	STBY-EEP	1.00.0021	
H71TC-DAC	OK			
H96ID	OK			
H97ID2	OK			
H42WiFi	OK			
		MODEL ID	0c	
			0300039d	
			00000200	

(For example 43-inch model)

6.2. Power LED Blinking timing chart

1. Subject

Information of LED Flashing timing chart.

2. Contents

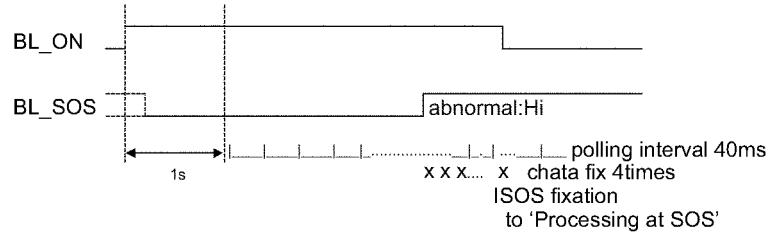
When an abnormality occurs, the protection circuit will operate and reset the unit to stand by mode. During this time, the defective block can be identified by the number of blinking times of the Power LED on the front panel of the unit as follow:

Blinking times	Contents & Check point
1	BL_SOS
7	SUB_3.3V/1.2V
8	SOS
9	SOUND_SOS
12	BE(sLD8/PRO4) SOS
13	Emergency SOS

6.3. Method of detecting SOS

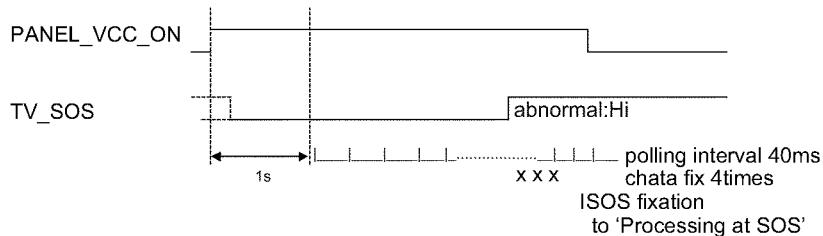
1. BL_SOS

Detection beginning after one second pass from 'BL_ON'=ON



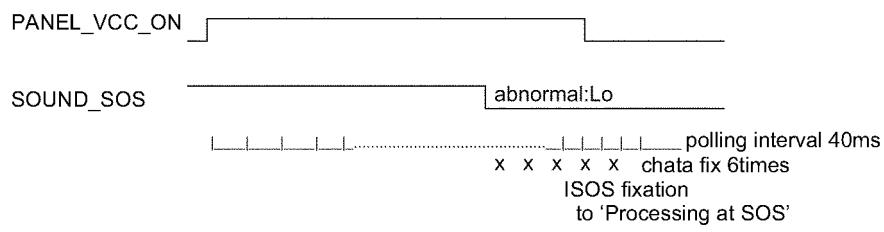
2. TV_SOS

Detection beginning after one second pass from 'PANEL_VCC_ON'=ON



3. SOUND_SOS

Detection beginning 'PANEL_VCC_ON'=ON



6.4. LCD Panel test mode

Purpose:

To find the possible failure point where in LCD Panel or Printed Circuit Board when the abnormal picture is displayed.

How to Enter:

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

How to Exit:

Disconnect AC plug from wall outlet.

How to confirm:

If the abnormal picture is displayed, go into LCD Panel test mode to display the several test patterns.

And then, judge by the following method.

Still abnormal picture is displayed: The cause must be in LCD Panel.

Normal picture is displayed: The cause must be in A board.

Remarks:

The test pattern is created by the circuit in LCD Panel.

In LCD Panel test mode, this test pattern is displayed unaffected by signal processing for RF or input signal.

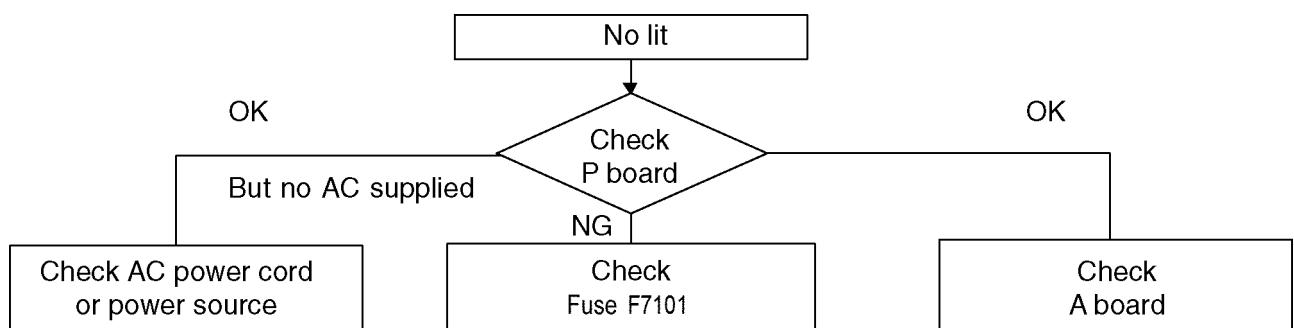
If the normal picture is displayed, LCD Panel must be okay and the cause of failure must be in A board.

6.5. 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.)

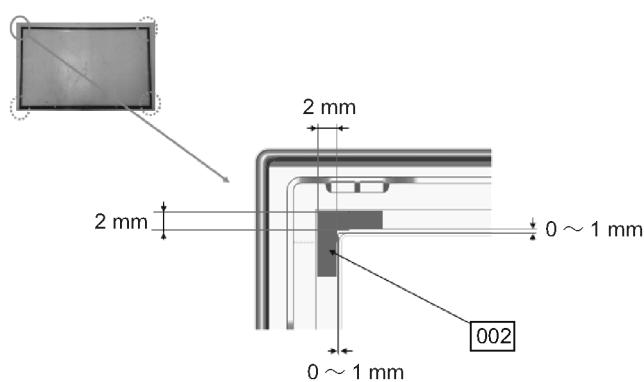


7 Disassembly and Assembly Instructions

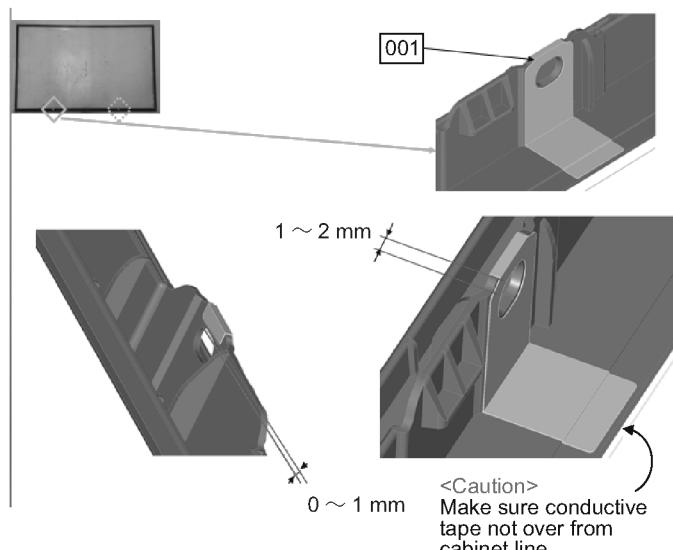
7.1. Cabinet Preparation

1. Stick all conductive tape and AL tape follow the position and tolerance given below.
2. Sequence arrangement procedure follow this method [1]→[2]→[3]

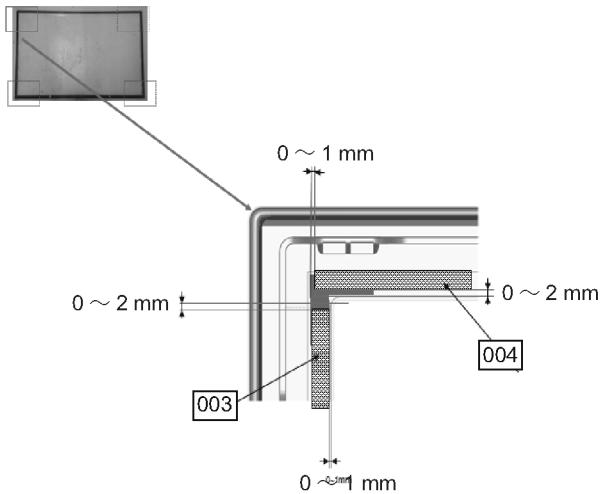
[1]



[2]



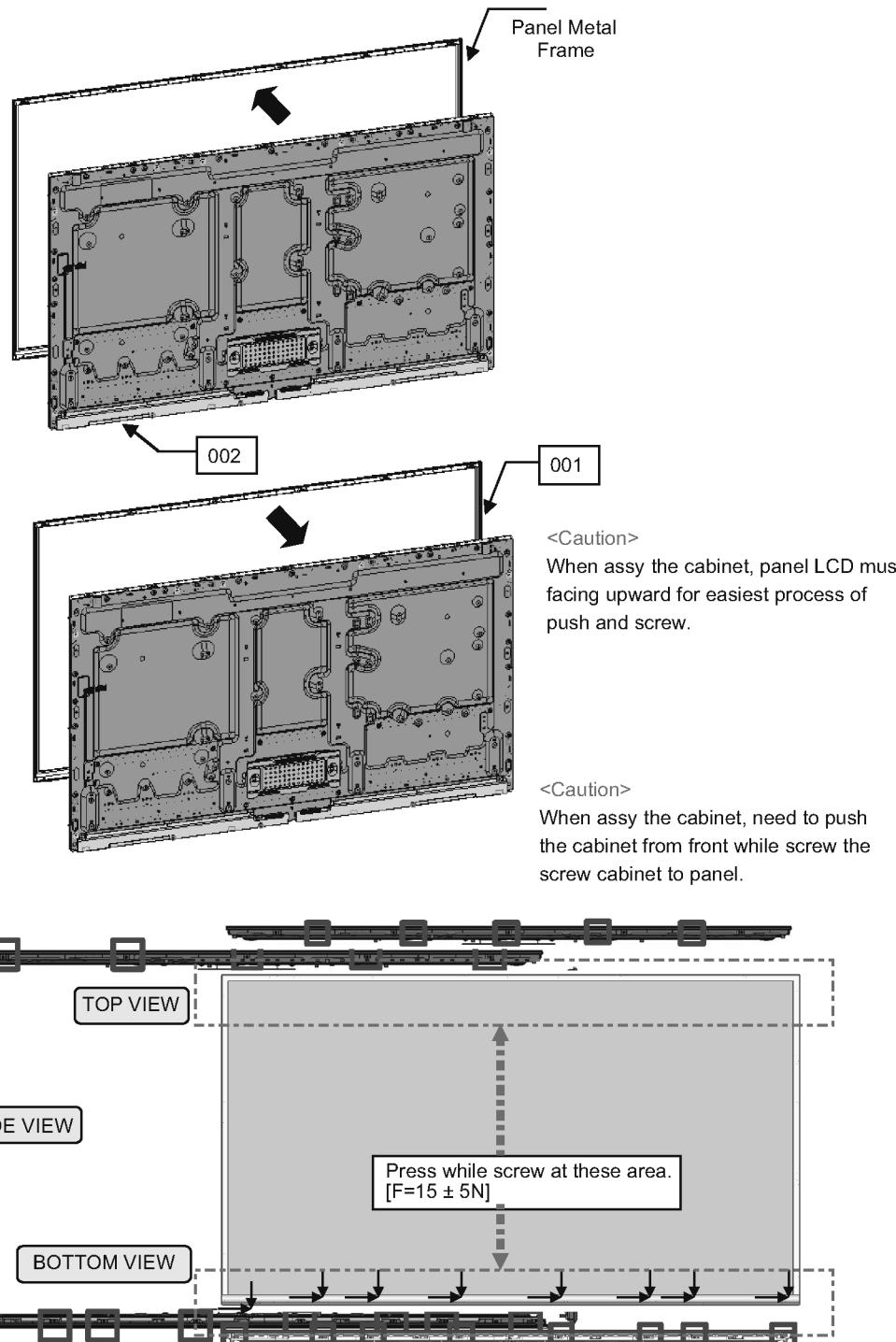
[3]



No	Description	Qty	UOM	Remarks
001	AL TAPE (BOTTOM)	2	PC	
002	AL TAPE (CORNER)	4	PC	
003	CONDUCTIVE TAPE	2	PC	
004	CONDUCTIVE TAPE	2	PC	

7.2. Cabinet Ass'y(49 Inch)

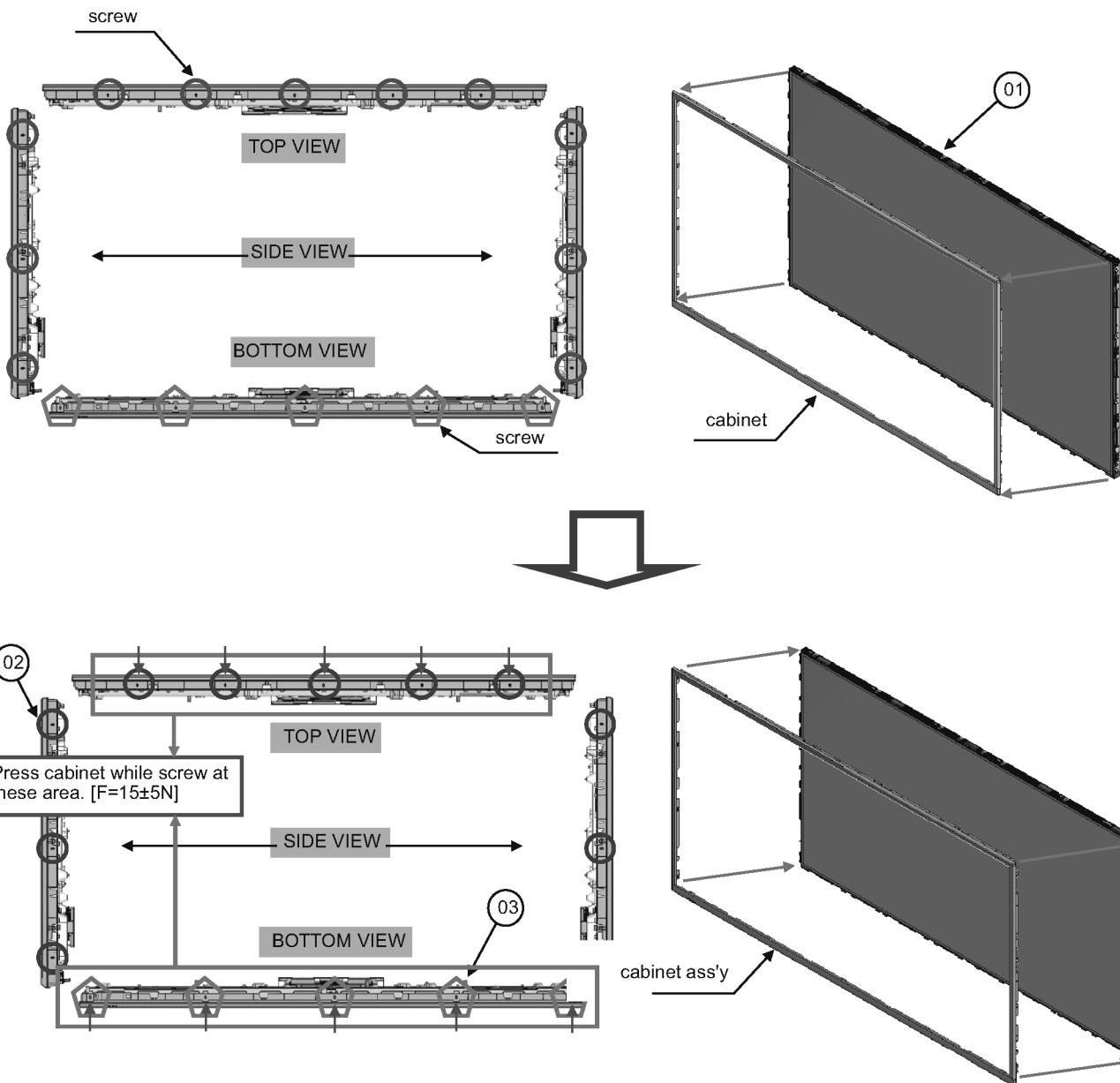
1. PANEL METAL FRAME need to remove from panel by unscrew all around frame.
2. Panel must fit to CABINET first before screw.
3. Screw all around CABINET position follow the torque given.
4. TOP and BOTTOM area must need to push during screw to prevent from gap uneven.



No	Description	Qty	UOM	Remarks
001	CABINET ASSY	1	PC	
002	LCD PANEL	1	PC	
003	SCREW(PANEL)	21	PC	5-7Kgf.cm

7.3. Cabinet Ass'y(43 Inch)

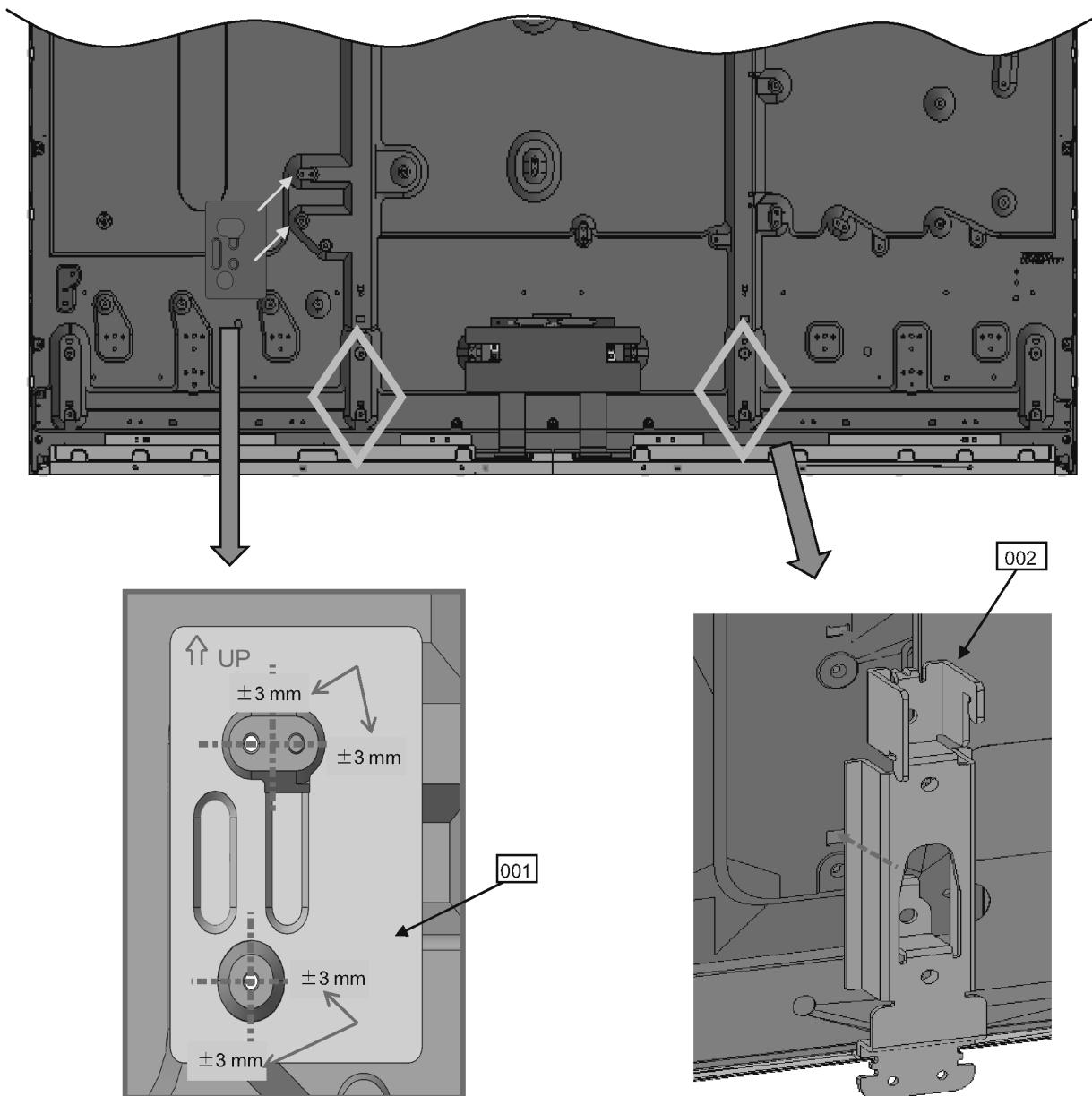
1. Open and remove screws (16 pcs) from each side of panel.
2. Remove attached cabinet frame from panel.
3. Install new cabinet ass'y and fix with new screws.



No	Description	Qty	UOM	Remarks
01	LCD PANEL	1	PC	
02	SCREW	11	PC	6±1kgf.cm
03	SCREW	5	PC	6±1kgf.cm

7.4. Barrier(Bottom) & Bottom Metal (49 Inch Only)

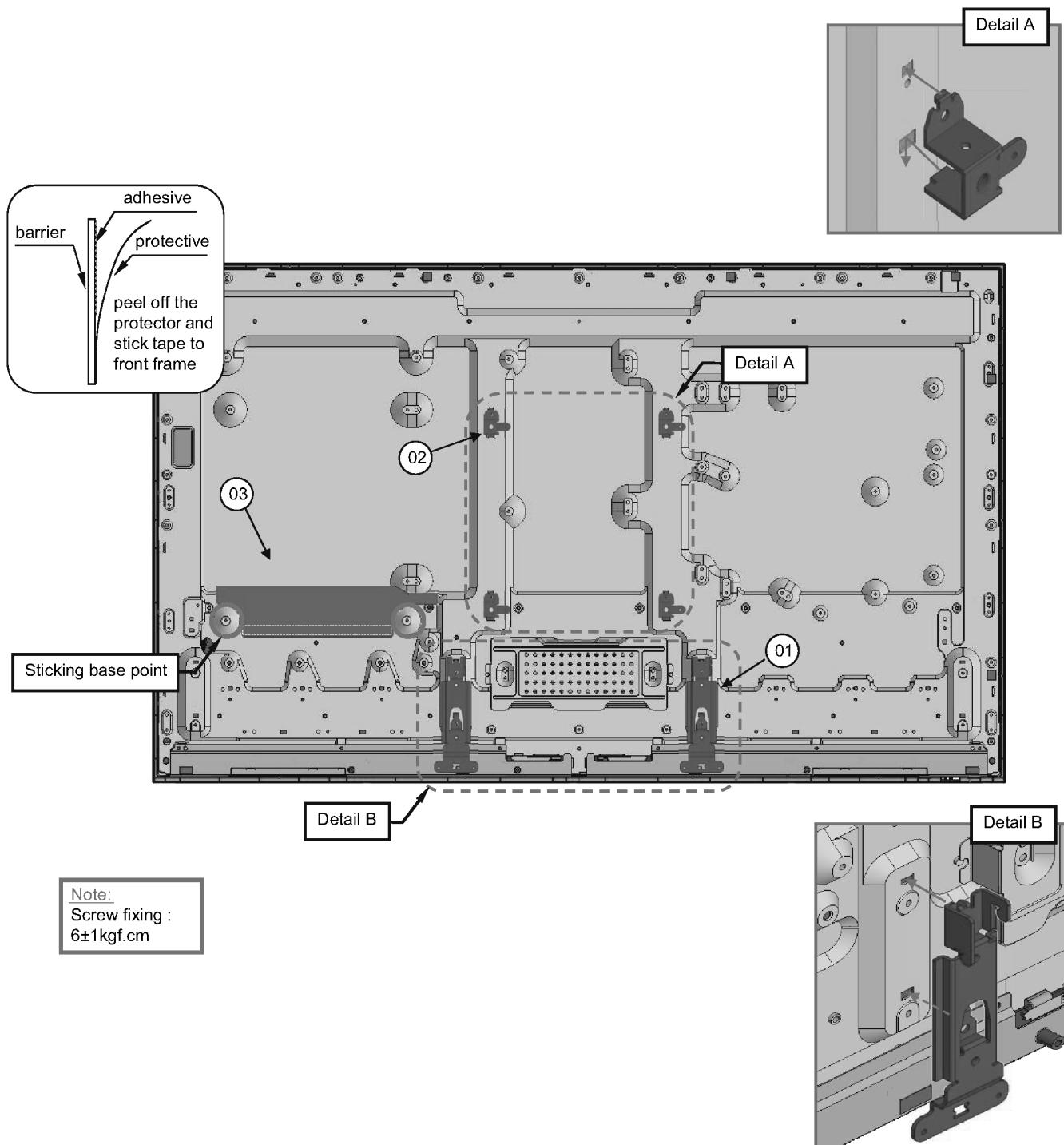
1. Stick BARRIER follow according the picture.
2. Fix BTM METAL to panel.



No	Description	Qty	UOM	Remarks
001	BARRIER(BOTTOM)	1	PC	
002	BOTTOM METAL	2	PC	

7.5. Vesa & Bottom Metal Ass'y(43 Inch Only)

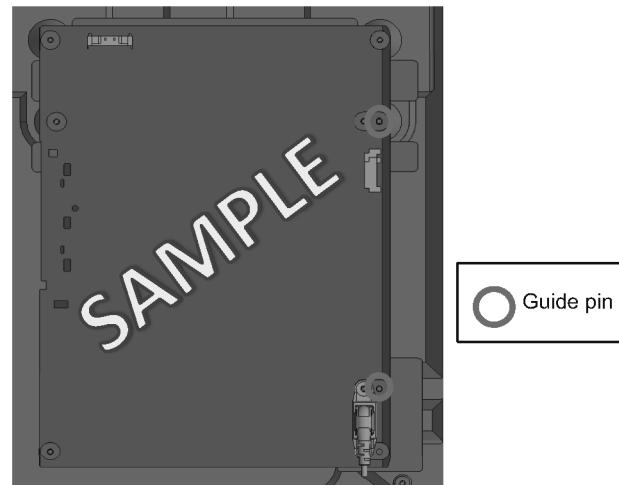
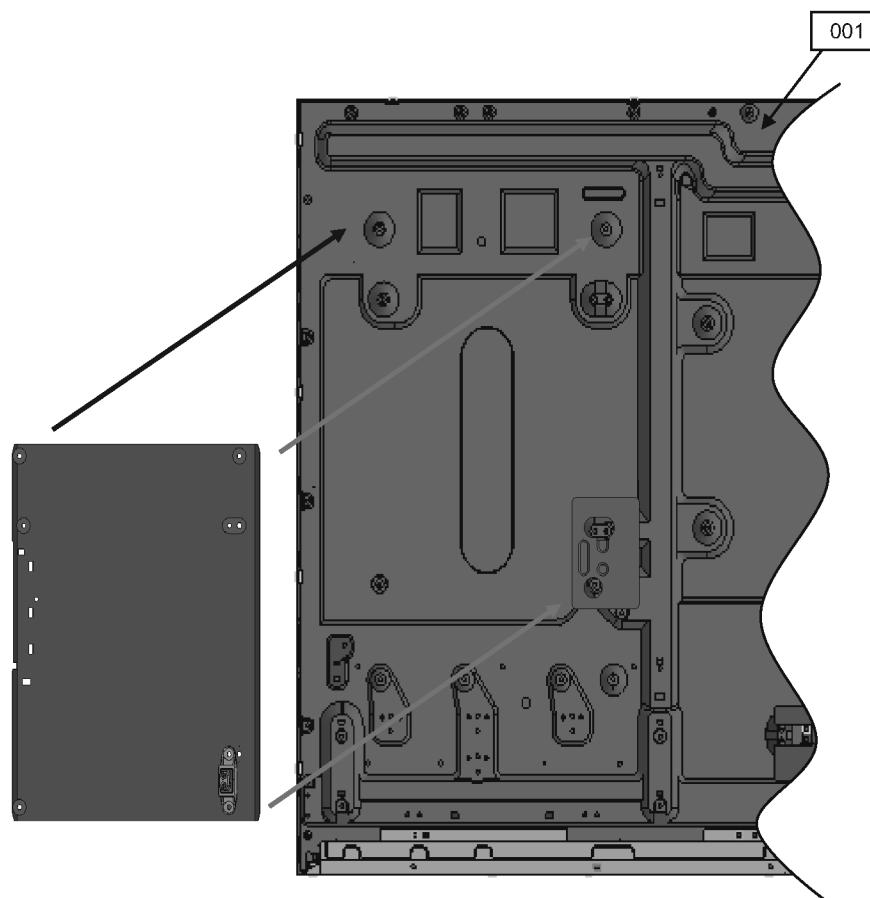
1. Fix barrier.
2. Install vesa metal & bottom metal.



No	Description	Qty	UOM	Remarks
01	BOTTOM METAL	2	PC	
02	VESEA METAL	4	PC	
03	P-PCB BARRIER	1	PC	

7.6. P-Print Assy

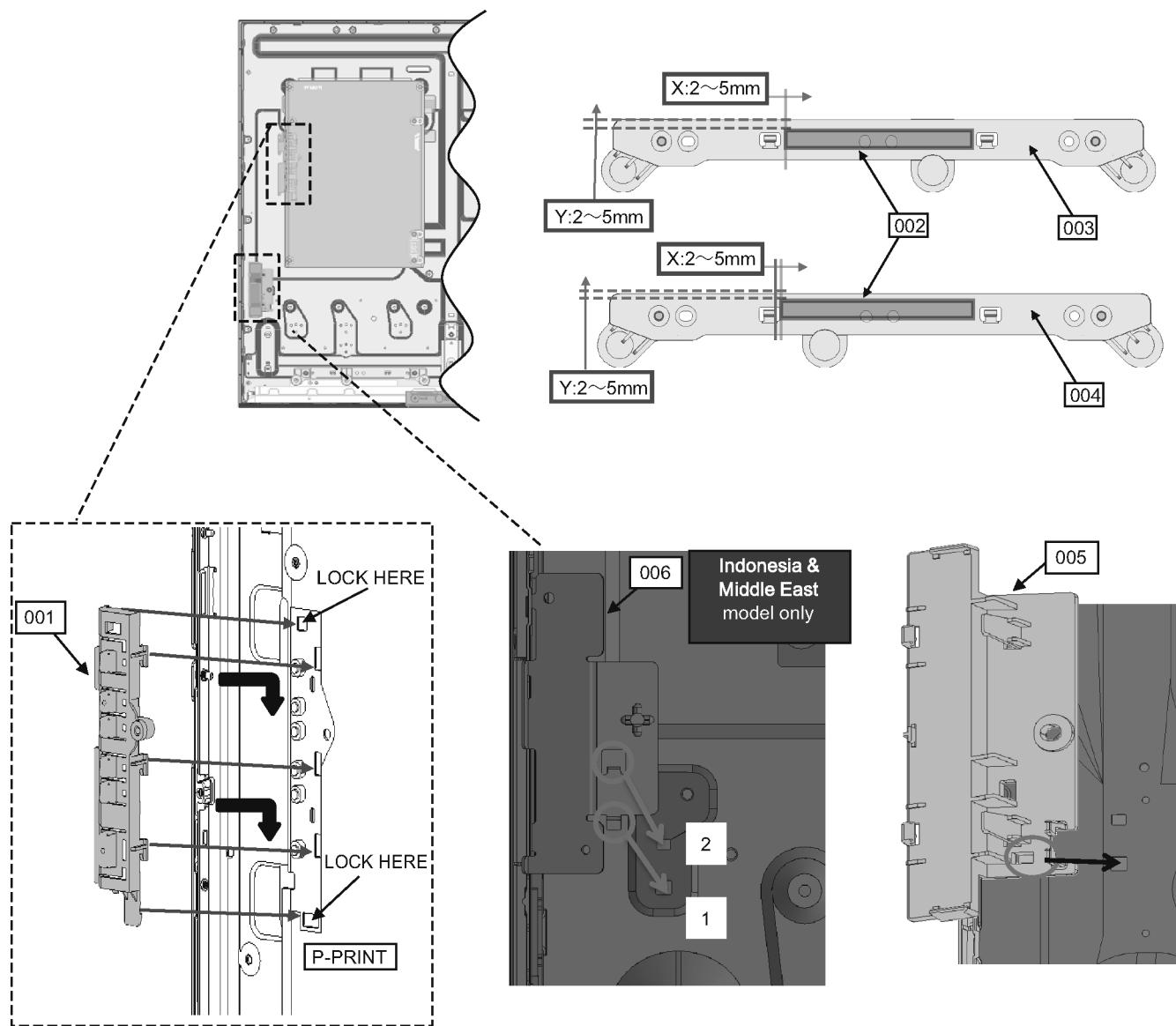
1. Fixing P-PRINT to panel.
2. Make sure hole are fully insert by guide pin.



No	Description	Qty	UOM	Remarks
001	LCD PANEL ASSY	1	PC	

7.7. Fix Ctrl Button Assy

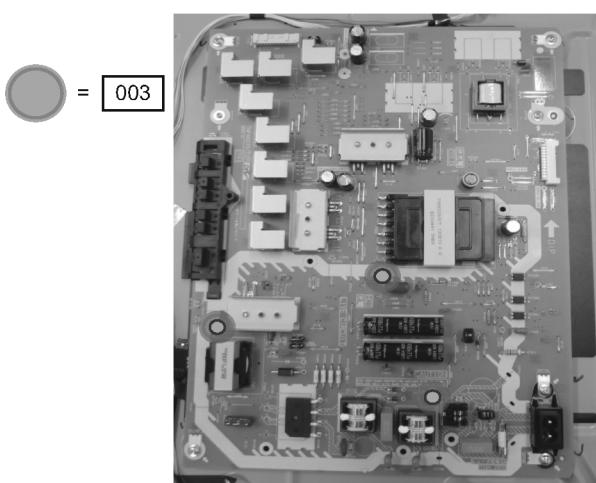
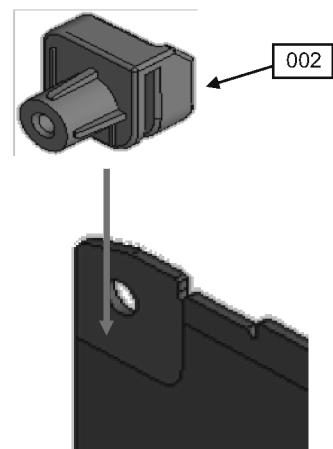
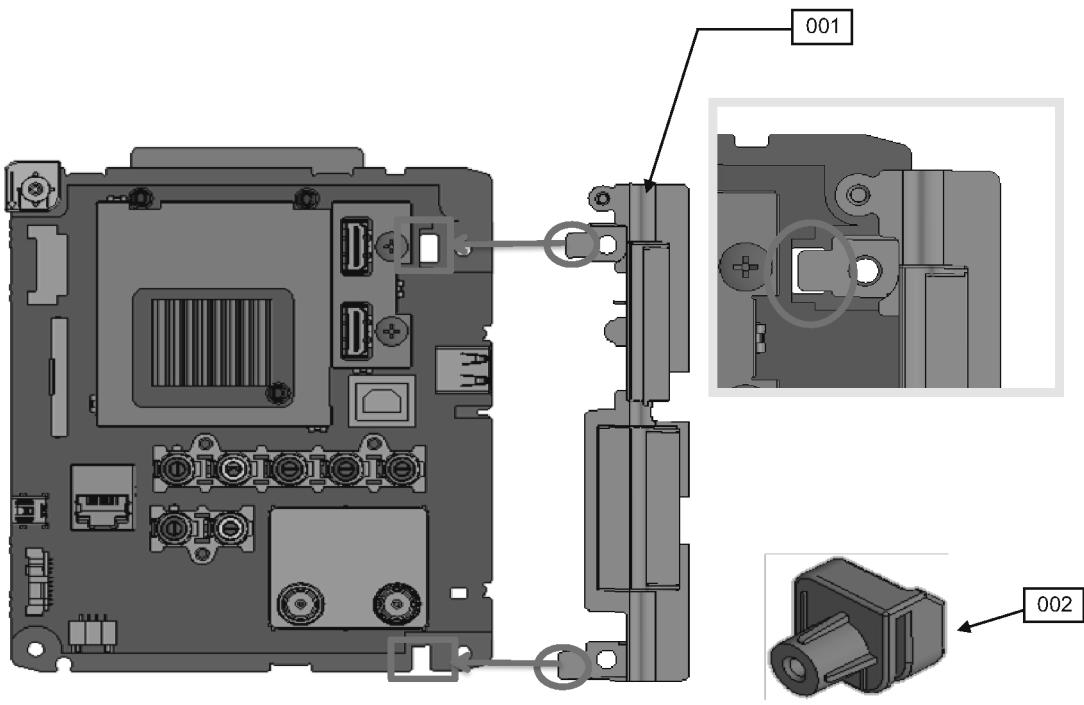
1. Fix KEY BUTTON BRACKET to P-PRINT.
2. Insert WIFI BRACKET to panel.



No	Description	Qty	UOM	Remarks
001	KEY BUTTON BRACKET	1	PC	
002	FELT (W10xL70xT0.35)	2	PC	
003	SP BRACKET(L)	1	PC	
004	SP BRACKET(R)	1	PC	
005	WIFI BRACKET	1	PC	

7.8. A-Print Assembly

- Fixing SIDE AV BRACKET to A-Print follow guide pin and rib hole.
- Fix A-PCB BRACKET to A-Print follow the picture below.



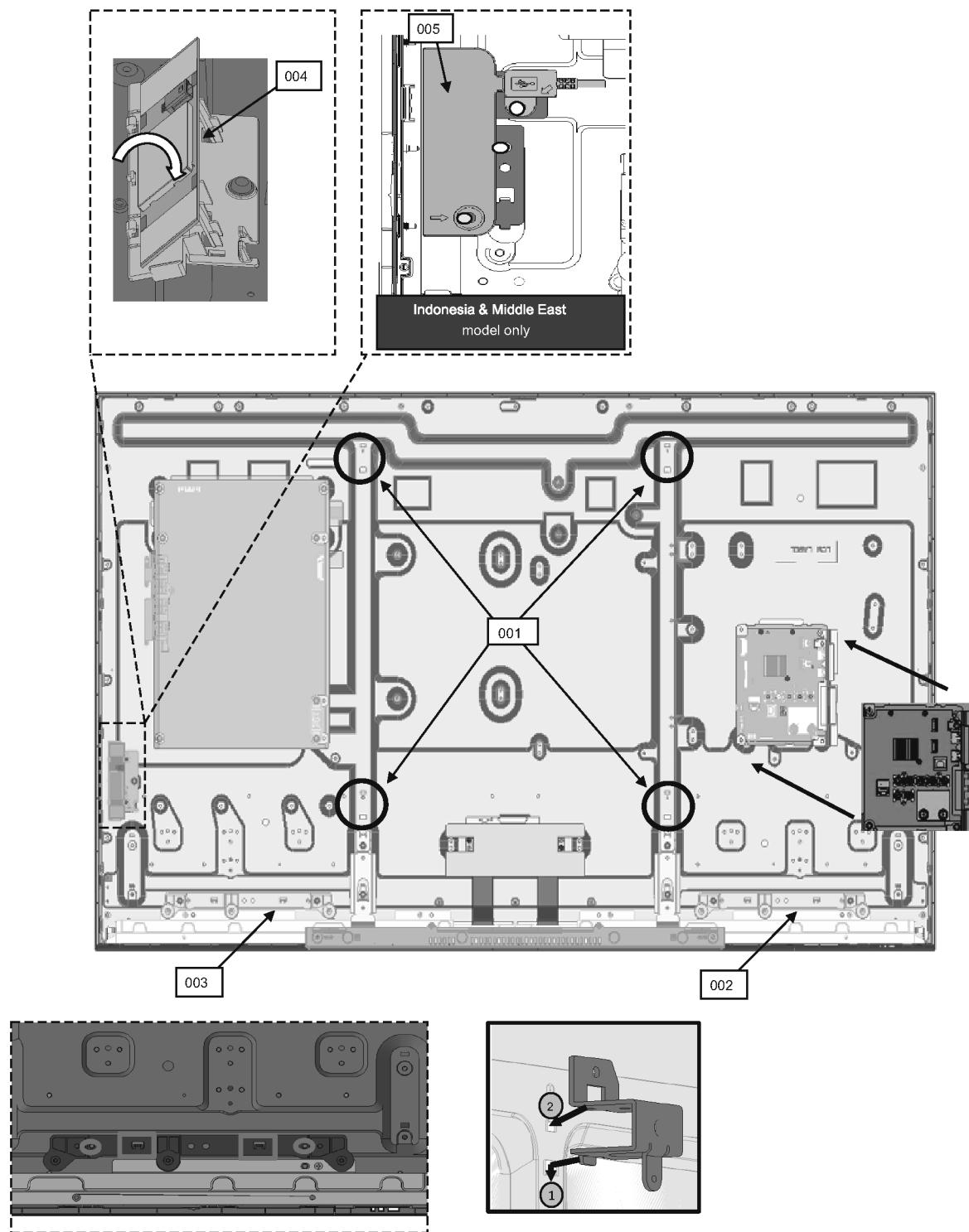
<Caution>
These spacer must have to fully insert from solder side.



No	Description	Qty	UOM	Remarks
001	SIDE_AV_BRACKET	1	PC	
002	A-PCB BRACKET	1	PC	
003	SPACER P-PCB	3	PC	

7.9. WiFi Dongle Fixing

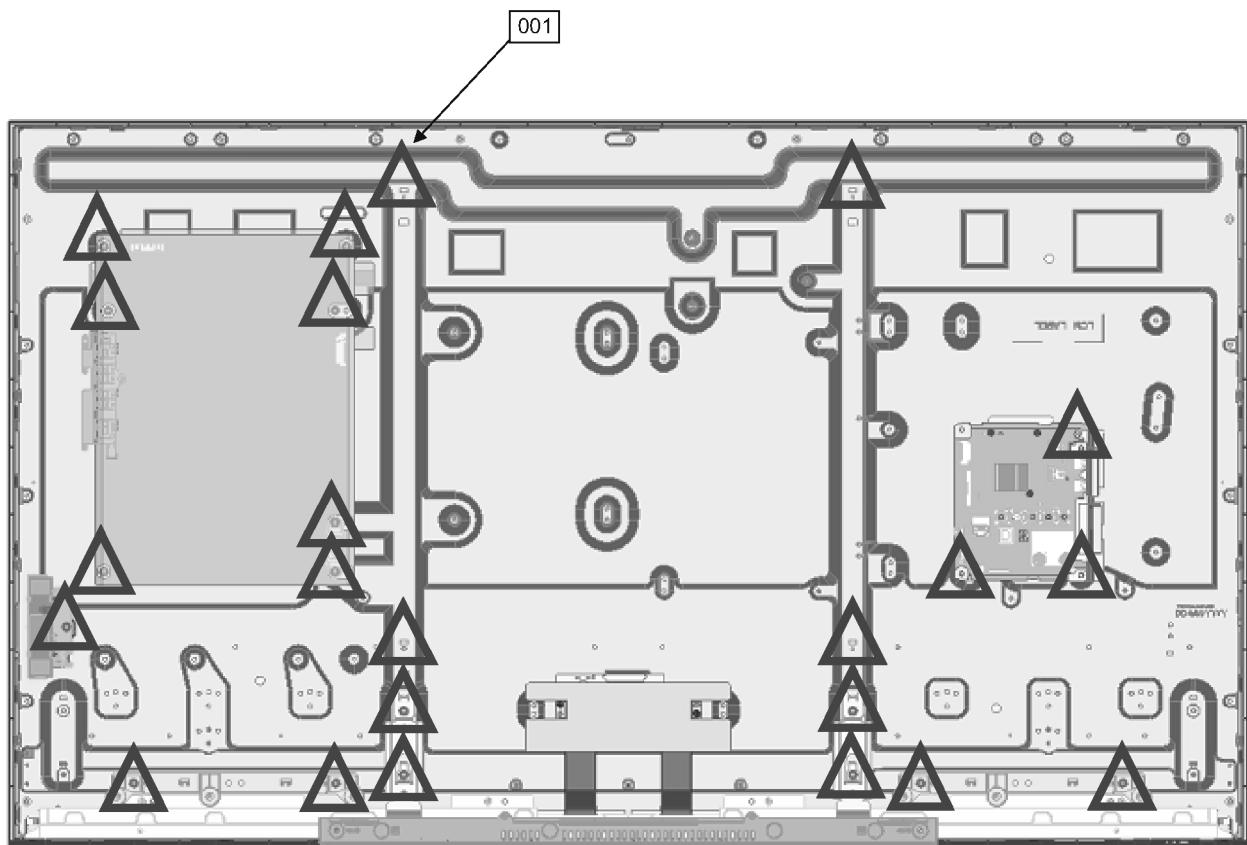
1. Insert VESA METAL to panel follow the step diagram as below.
2. Put A-Print to panel and make sure guide pin at boss is lock to A-Print.



No	Description	Qty	UOM	Remarks
001	VESA METAL	4	PC	
002	SP BRACKET(L)	1	PC	
003	SP BRACKET(R)	1	PC	
004	WIFI MODULE	1	PC	

7.10. Tightening Screw(49 Inch Only)

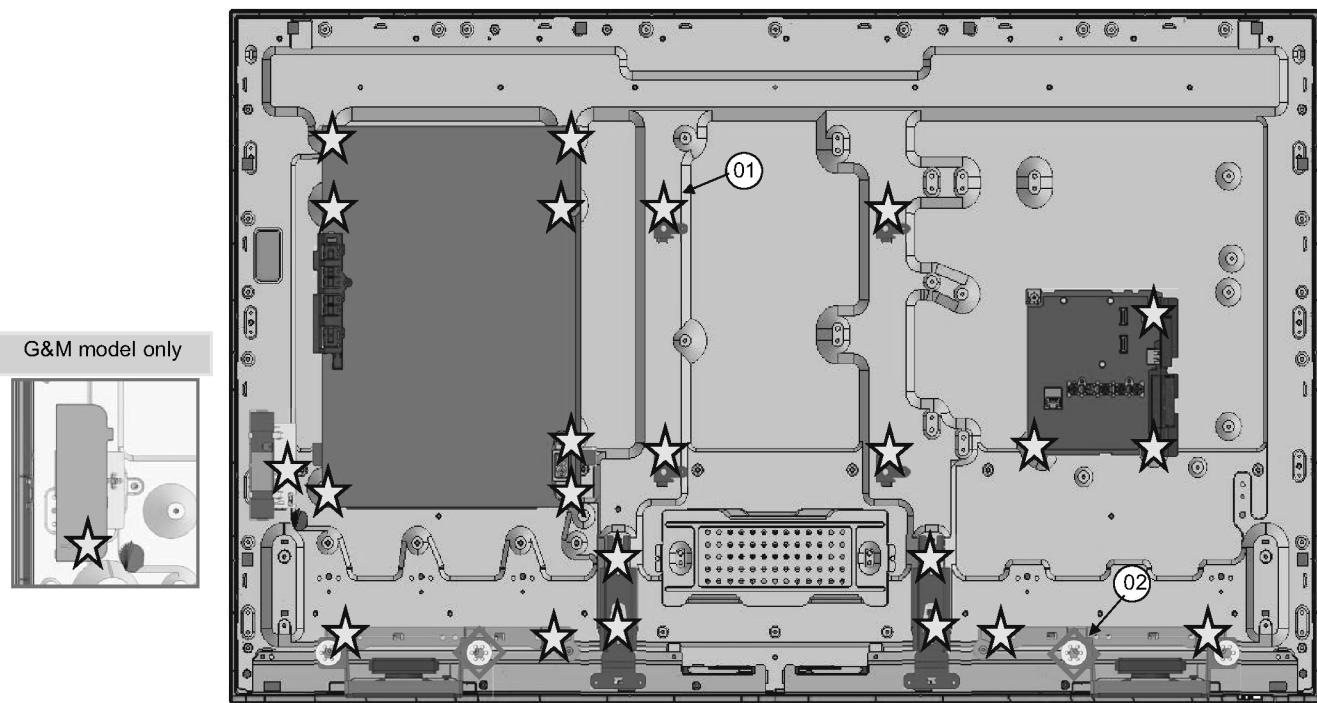
- Screw all part follow the picture shown below.



No	Description	Qty	UOM	Remarks
001	SC(A3/P7/VESA4/SP4/M4/WIFI2/ BTC2)	23	PC	5-7 Kgf.cm

7.11. Tightening Screw(43 Inch Only)

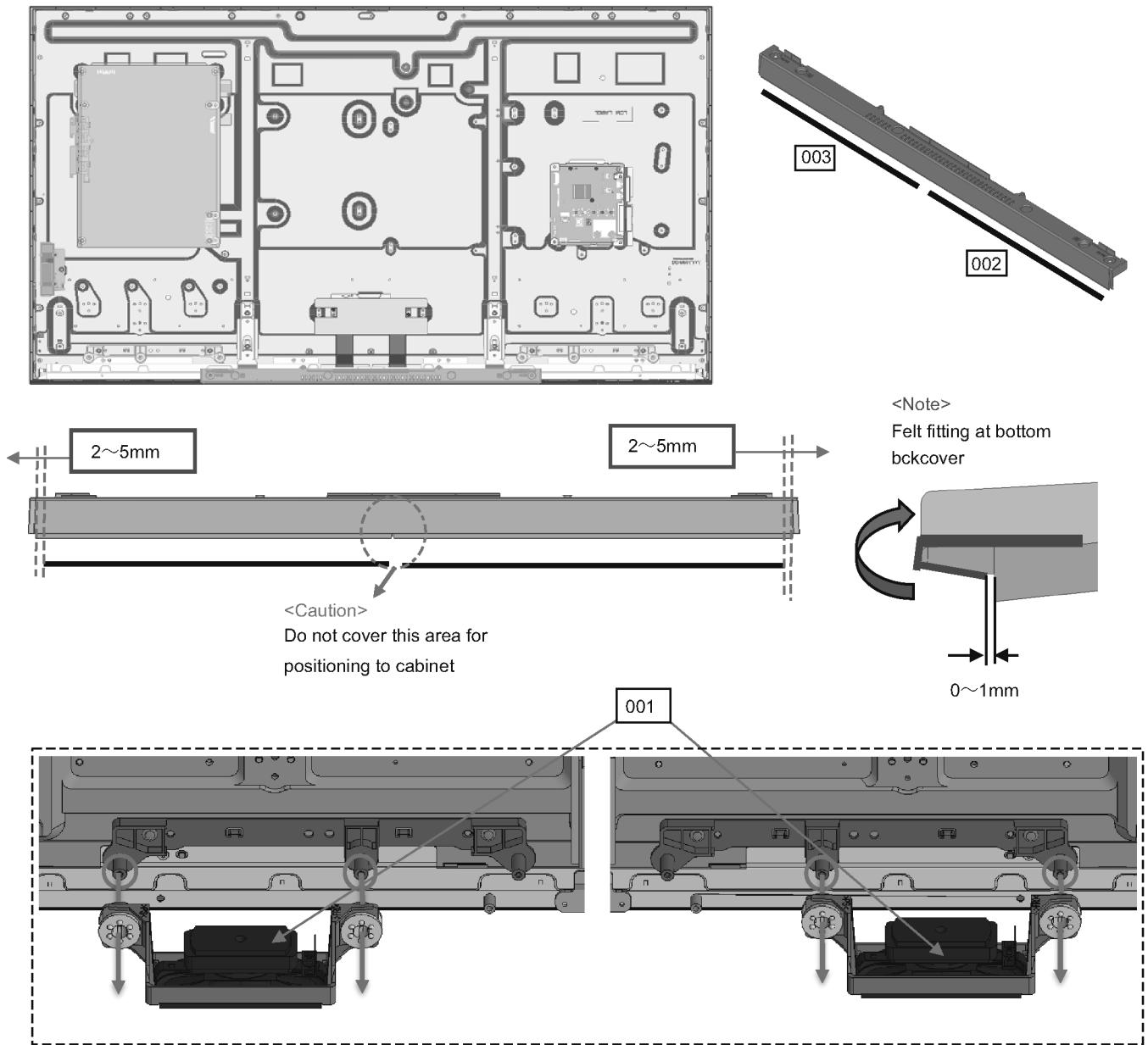
- Fix screws with torque given.



No	Description	Qty	UOM	Remarks
01	SC(A3/P7/VESA4/SP4/M4/WIFI2/BTC2)	23	PC	6±1kgf.cm
02	SCREW(SP2)	2	PC	6±1kgf.cm

7.12. SP Assy & Felt Sticking

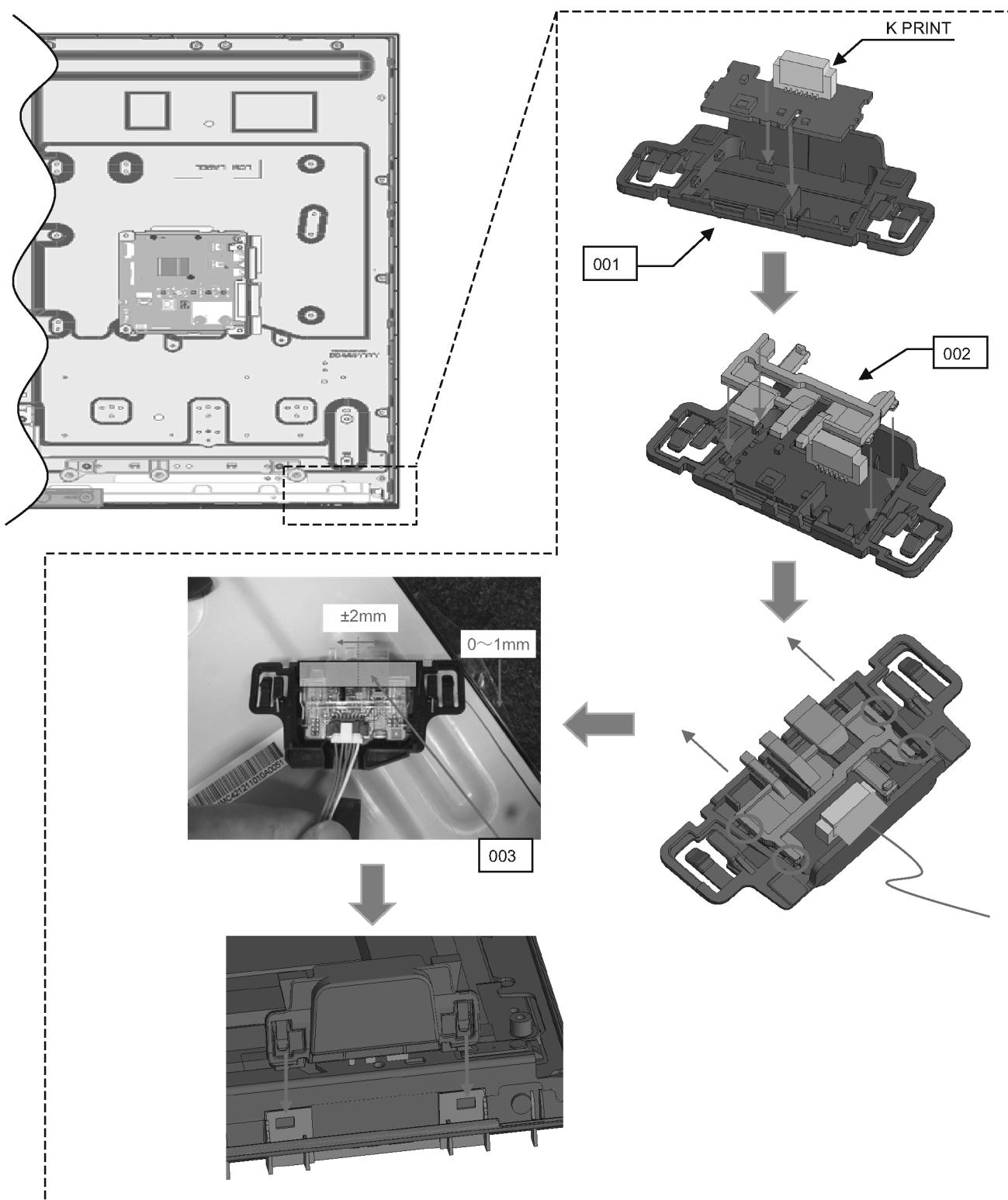
1. Insert P-Print and A-Print board at Panel.
2. Fixing all screw at panel, bracket and metal part.



No	Description	Qty	UOM	Remarks
001	SPEAKER UNIT	2	PC	
002	FELT (W10xL270xT0.35)	1	PC	
003	FELT (W10xL240xT0.35)	1	PC	

7.13. LED Panel Assy

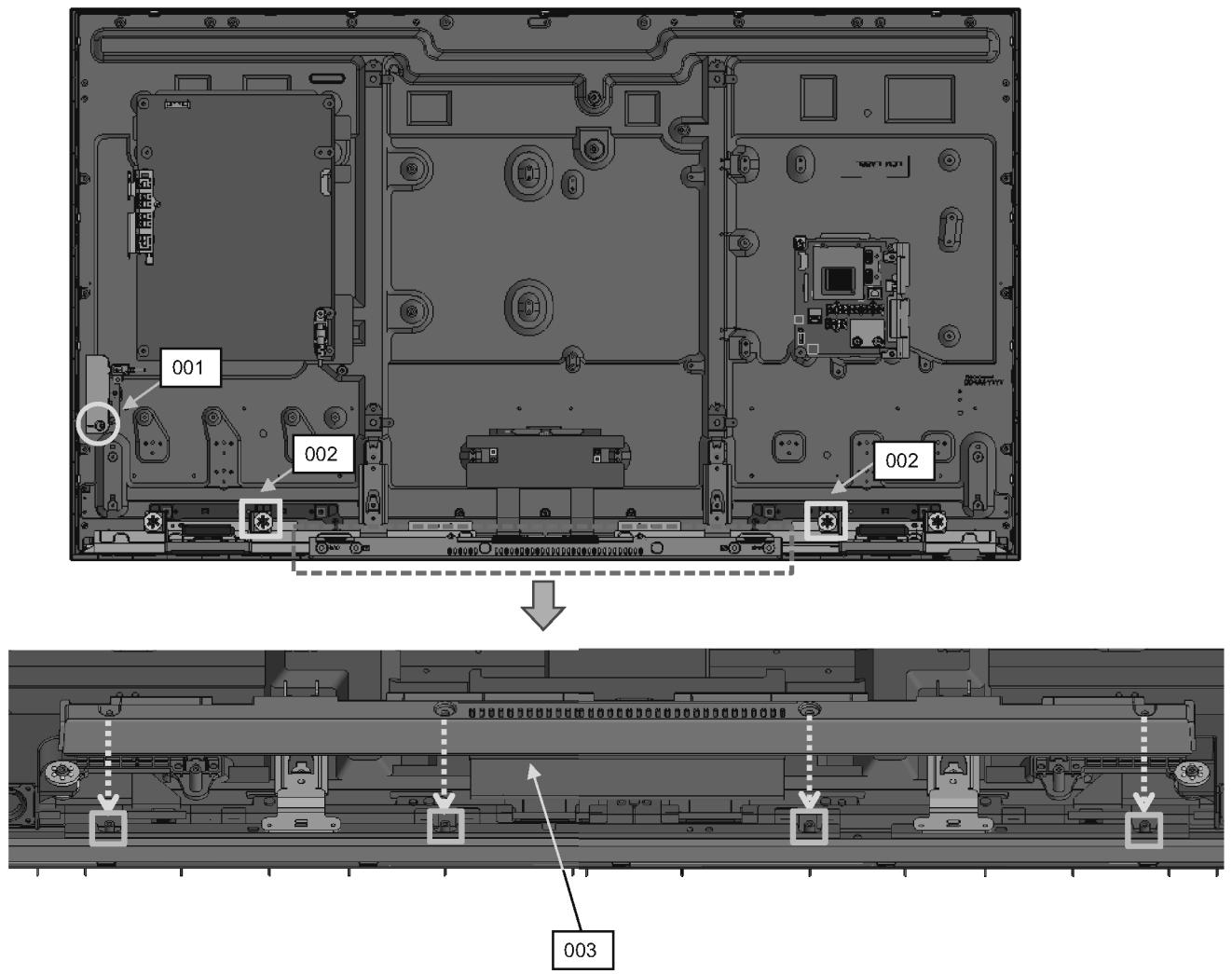
1. Attach K-PRINT on LED PANEL CASE.
2. Attach LED PANEL.
3. Slide LED PANEL & confirm fitting of click.
4. Stick the SPONGE to LED PANEL ASSY.
5. Attach to CABINET & confirm click of fitting.



No	Description	Qty	UOM	Remarks
001	LED PANEL CASE	1	PC	
002	LED PANEL	1	PC	
003	SPONGE(LED)	1	PC	

7.14. Bottom Back Cover

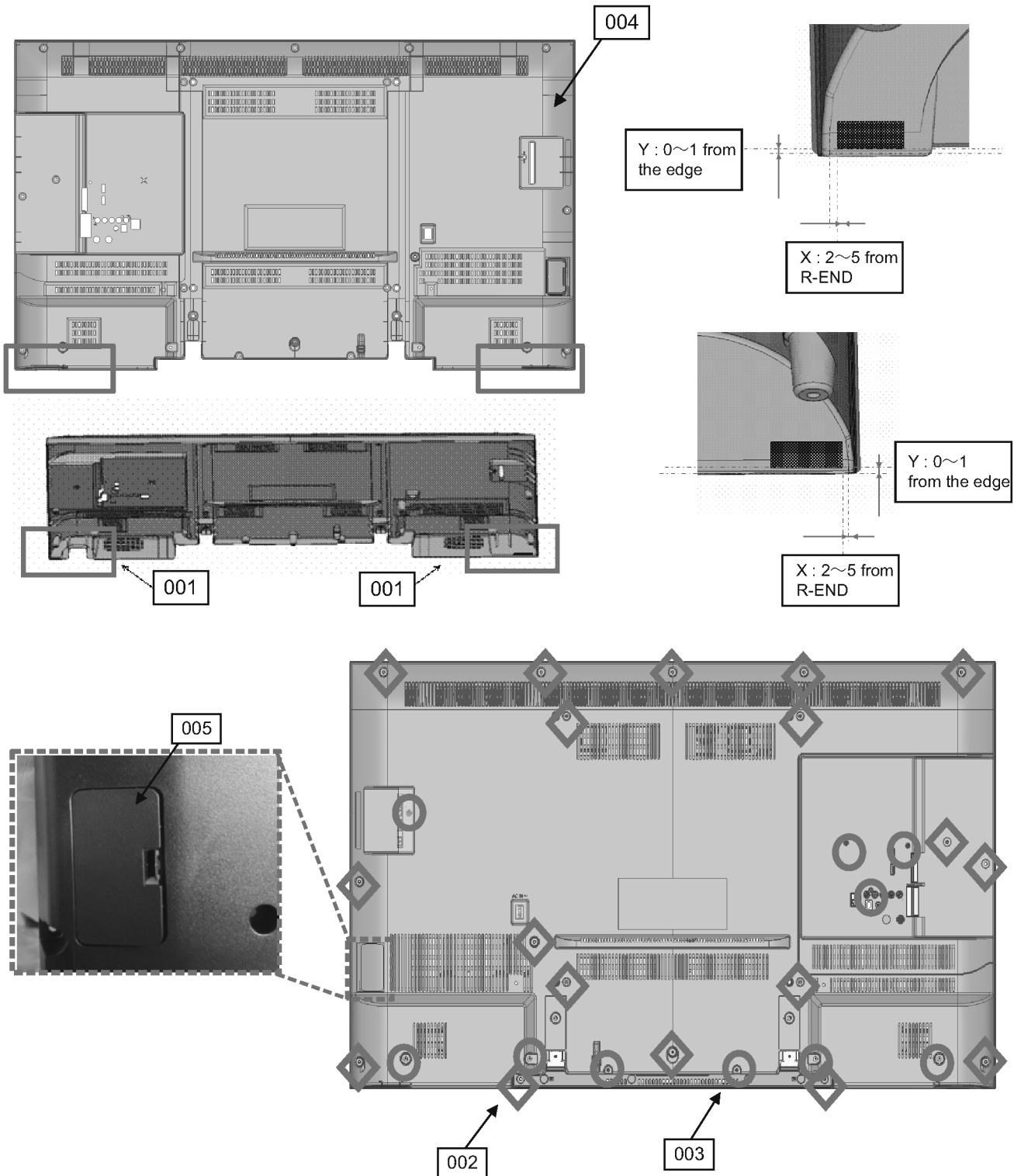
- Fix screw to all part follow below display.



No	Description	Qty	UOM	Remarks
001	SC(A3/P7/VESA4/SP4/M4/WIFI1)	1	PC	5-7 Kgf.cm
002	SCREW(SP2)	2	PC	5-7 Kgf.cm
003	BOTTOM BACK COVER	1	PC	

7.15. Back Cover Assy(49 Inch Only)

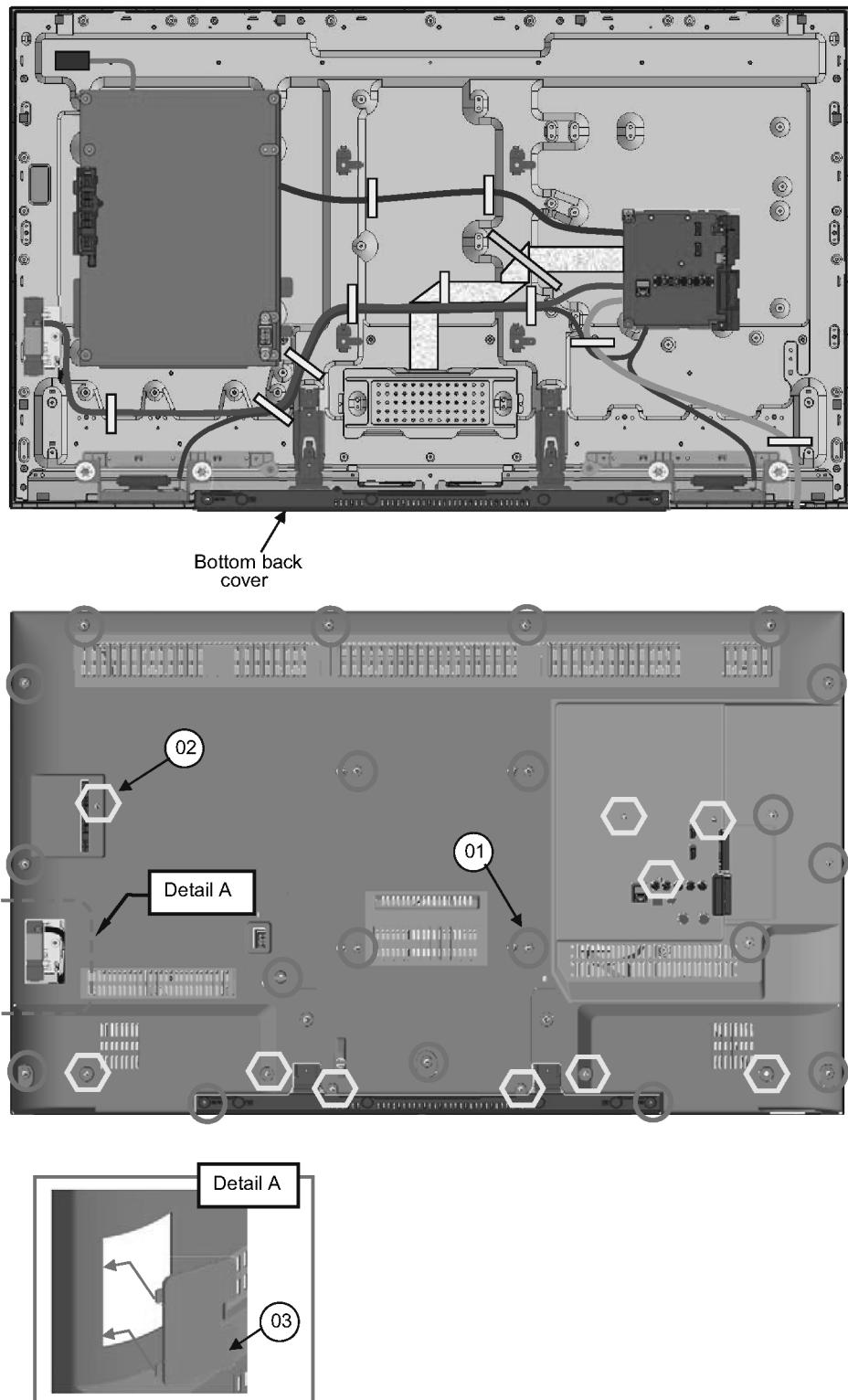
1. Stick felt follow the tolerance given as below.
2. Tight all screw (2 types) follow the torque given.
3. Only Indonesian model will have dongle cover at backcover.



No	Description	Qty	UOM	Remarks
001	FELT (W10xL15xT0.35)	2	PC	
002	SCREW(VESA4/BC14)	18	PC	5-7 Kgf.cm
003	SCREW(SP4/KEY1/AV3/BTMcvr2)	10	PC	5-7 Kgf.cm
004	BACK COVER	1	PC	
005	DONGLE COVER	1	PC	

7.16. Back Cover Assy(43 Inch Only)

1. Install bottom b/cover and backcover and fix with screws.
2. Install dongle cover.



No	Description	Qty	UOM	Remarks
01	SCREW(BC16/VESA4)	20	PC	6±1kgf.cm
02	SCREW(SP4/KEY1/AV3/BTMCVR2)	10	PC	6±1kgf.cm
03	DONGLE COVER	1	PC	

7.17. Handling SPEC

■ Moving the LCD module

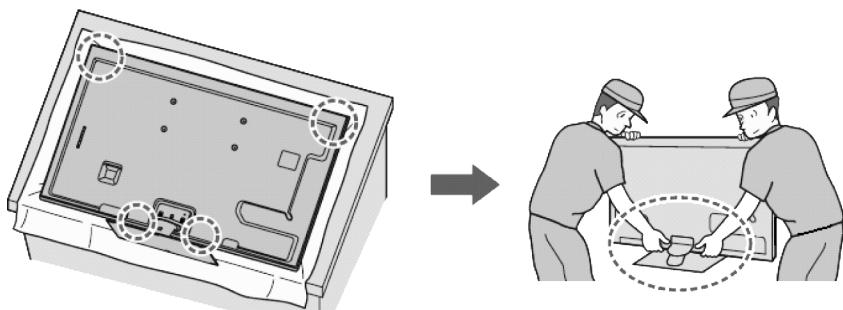
The module should be handle by two people and hold on that top and bottom long side by both hands without module warping. Never handle the module with keeping horizontal position when moving the module in order to avoid internal damage and deformation. Never drop or hit the module.

■ About the work table

When tightening a screw, retention structures are required not to deform the LCD module.

■ Moving the TV (Case with a stand)

Hold the specified parts as shown to stand the TV up and move it with two people.



8 Measurements and Adjustments

8.1. Voltage chart of A-board

Set A-Board to a dummy set and check the satisfaction with the specified voltage as following table.

Power Supply Name	Measurement Point	Specification
PANEL12V	TP4097	11.3V - 13V
SUB3.3V	TP5400	3.16V - 3.48V
SUB5V	TP5420	4.98V - 5.25V
SUB1.5V	TP8101	1.45V - 1.57V
SUB1.1V	TP8100	1.14V - 1.26V
STB5V	TP5200	4.9V - 5.4V
STB3.3V	TP5002	3.14V - 3.46V
HDMI3.3V	TP8000	3.14V - 3.46V

8.2. Voltage chart of P-board

Set P-Board to a dummy load and check the satisfaction with the specified voltage as following table.

Output	Test Point	Specification	
		Step 1	Step 2
40V	TP7407	<1V	40 ± 3.5V
16V	TP7410	<1V	15.7 ± 0.6V
5VS	TP7501	5.2 ± 0.2V	5.2 ± 0.2V
PFC	TP7201 or TP7202	<340V	390V ± 15V

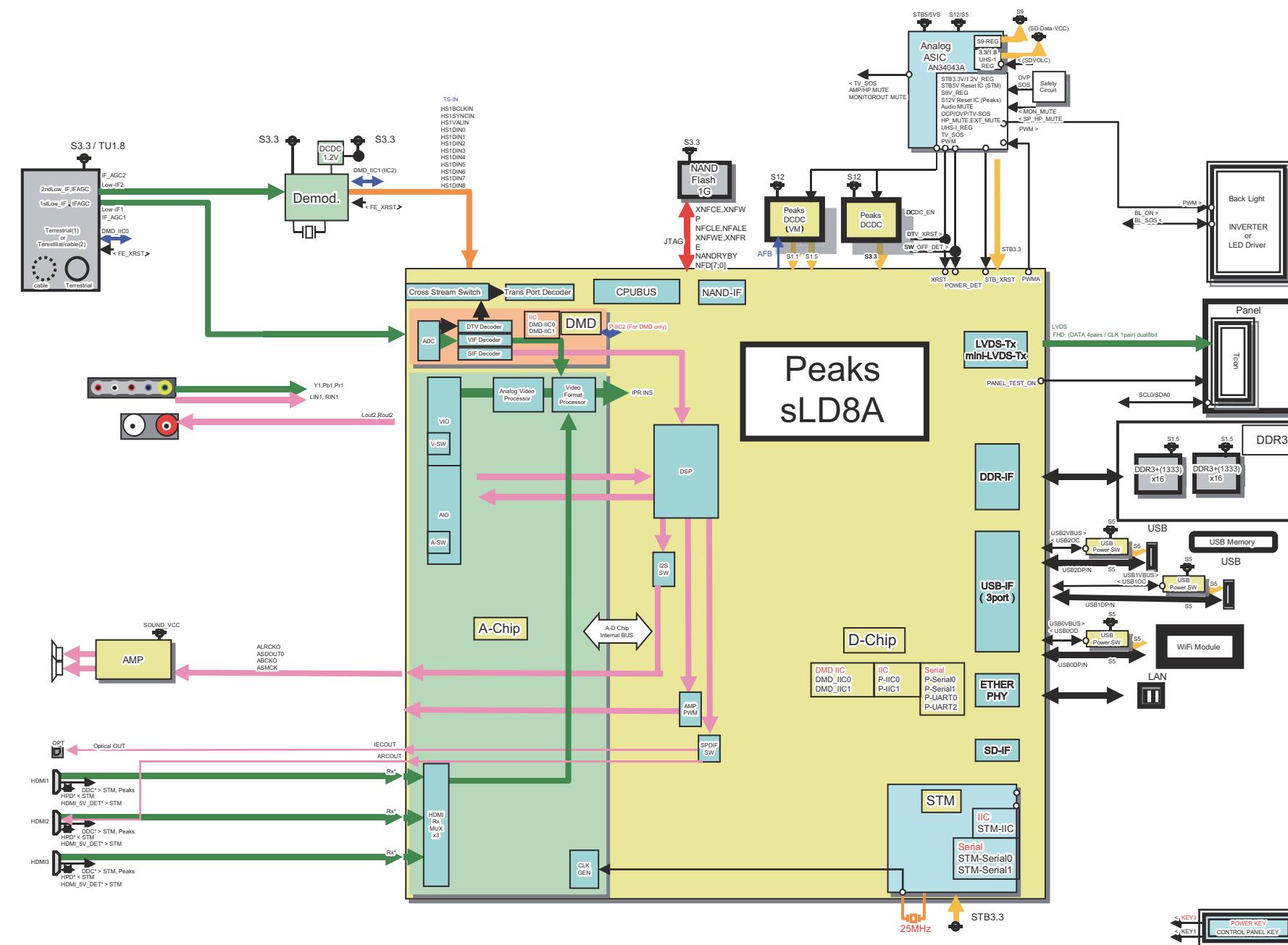
*HOT

Step 1 Supply AC 110V/230V to JK7101 connector in the P-Board. Main power button is OFF.

Step 2 Supply DC 2.5V to TV_SUB_ON P2 connector - pin 9 (TNPA6070: TP7416), displayed as SWITCH.

NOTE : TNPA6070BA,BB,BE > AC supply is 110V
TNPA6070EA,ED,DH,EE,EF,DJ,EP,EQ,DP > AC supply is 230V

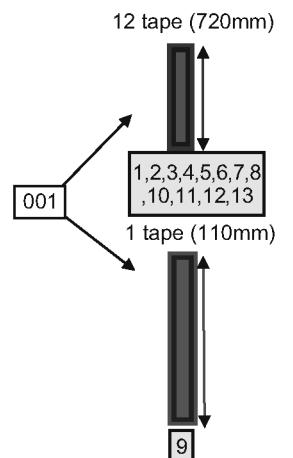
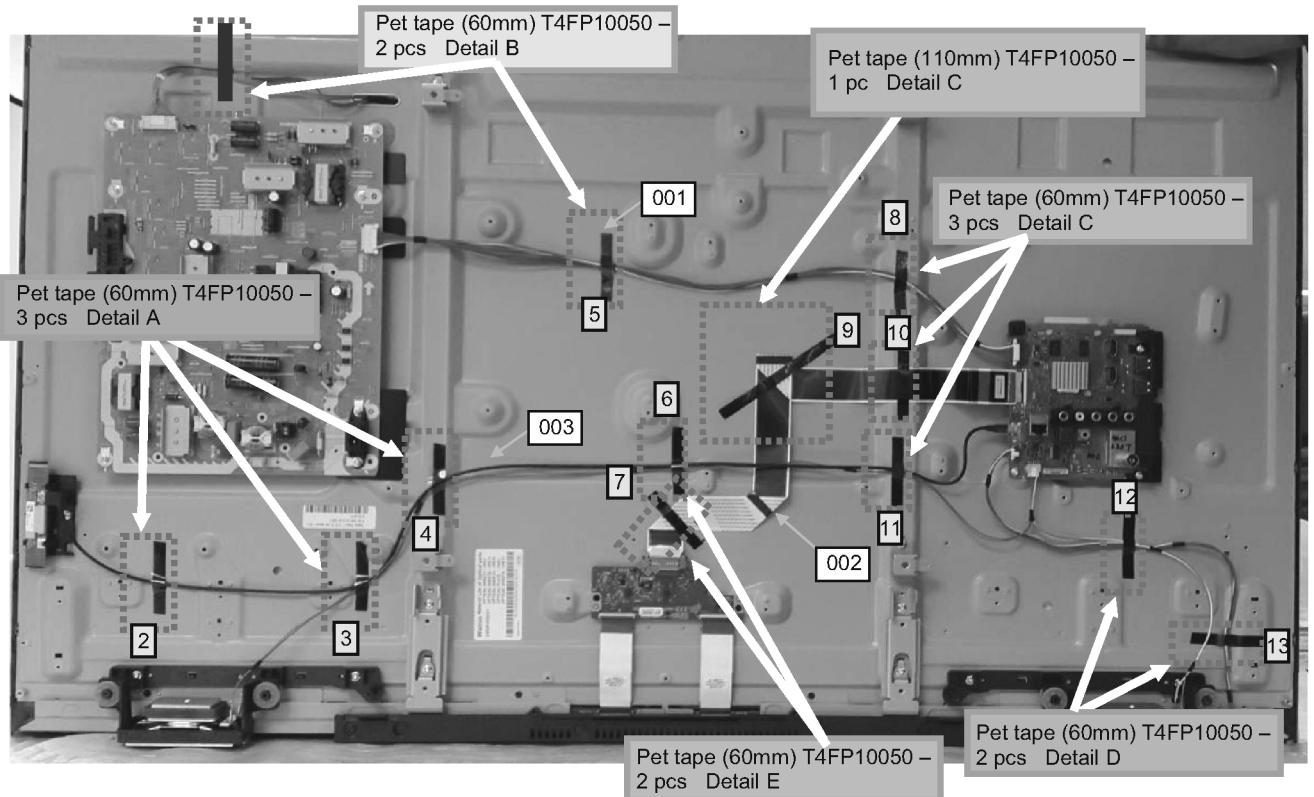
9 Block Diagram



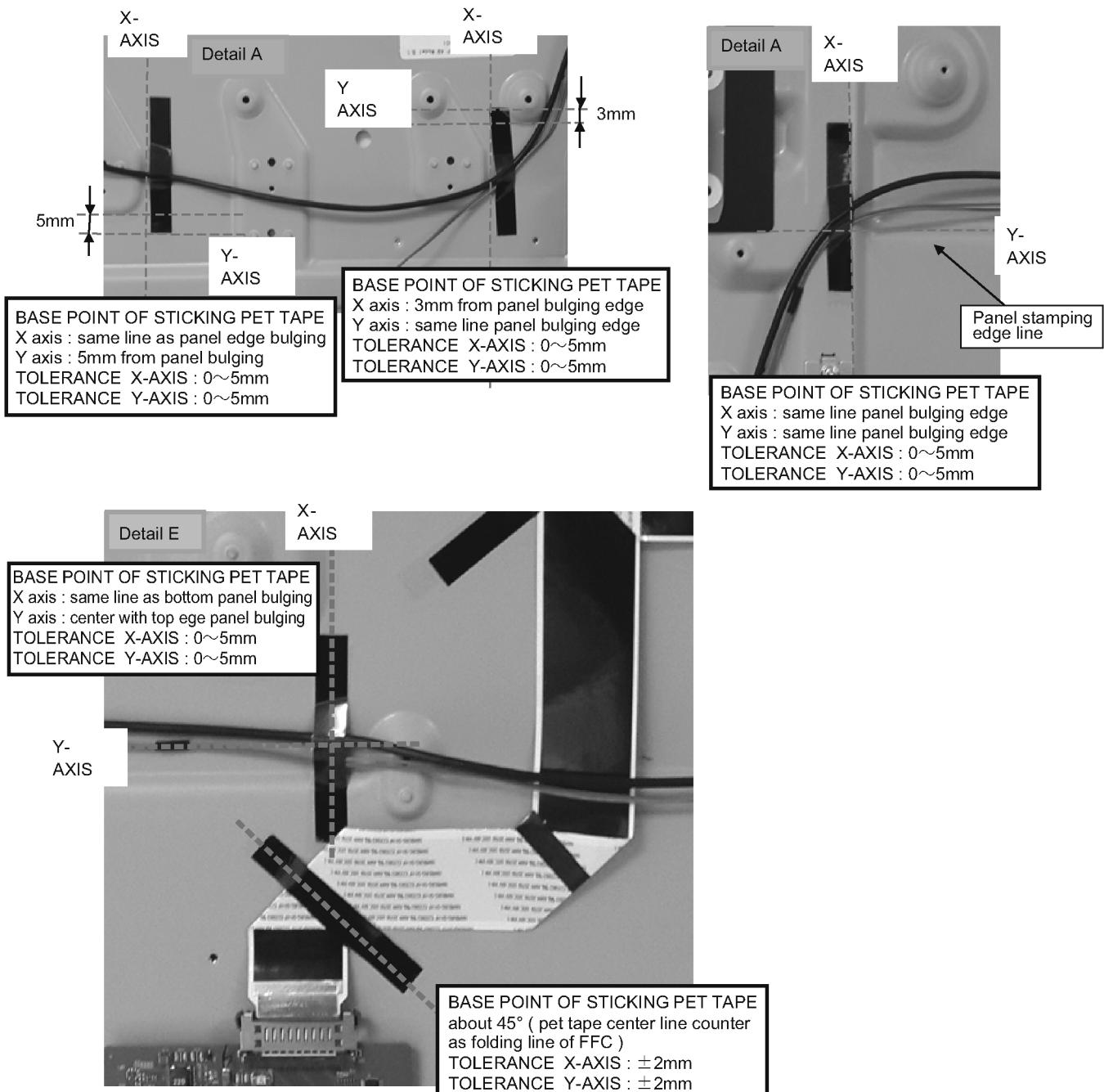
10 Wiring Connection Diagram

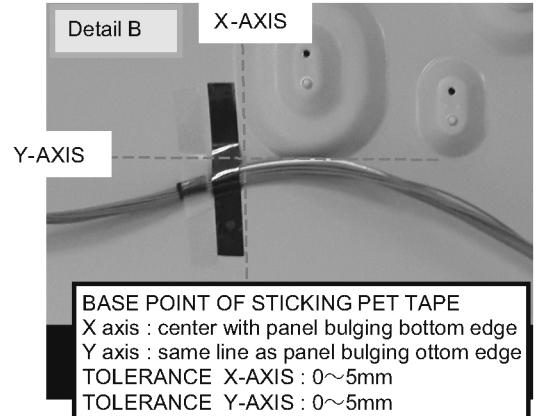
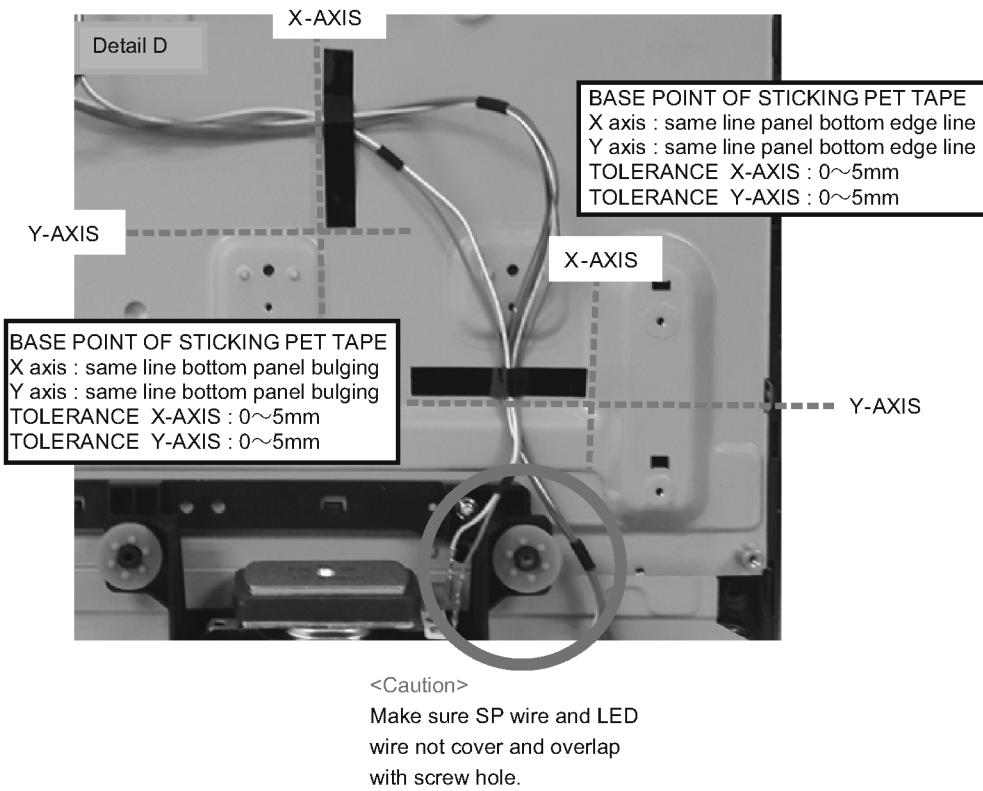
10.1. Wire Dressing (49 Inch Only)

1. Connect all WIRE.
2. Fix all PET TAPE.



No	Description	Qty	UOM	Remarks
001	PET TAPE	0.82	MT	
002	LVDS CABLE	1	PC	
003	WIFI USB CABLE	1	PC	





CAUTION POINT :
PLEASE DO NOT STICK ONTO
THE A BOARD -P BOARD WIRE.
STICK DIRECTLY ON PANEL
SURFACE

Detail E

X-AXIS

BASE POINT OF STICKING PET TAPE
X axis : same line as top panel bulging edge
Y axis : same line as panel bulging bottom edge
TOLERANCE X-AXIS : 0~5mm
TOLERANCE Y-AXIS : 0~5mm

Y-AXIS

BASE POINT OF STICKING PET TAPE
about 45° (pet tape center line counter
as folding line of FFC)
TOLERANCE X-AXIS : ±2mm
TOLERANCE Y-AXIS : ±2mm

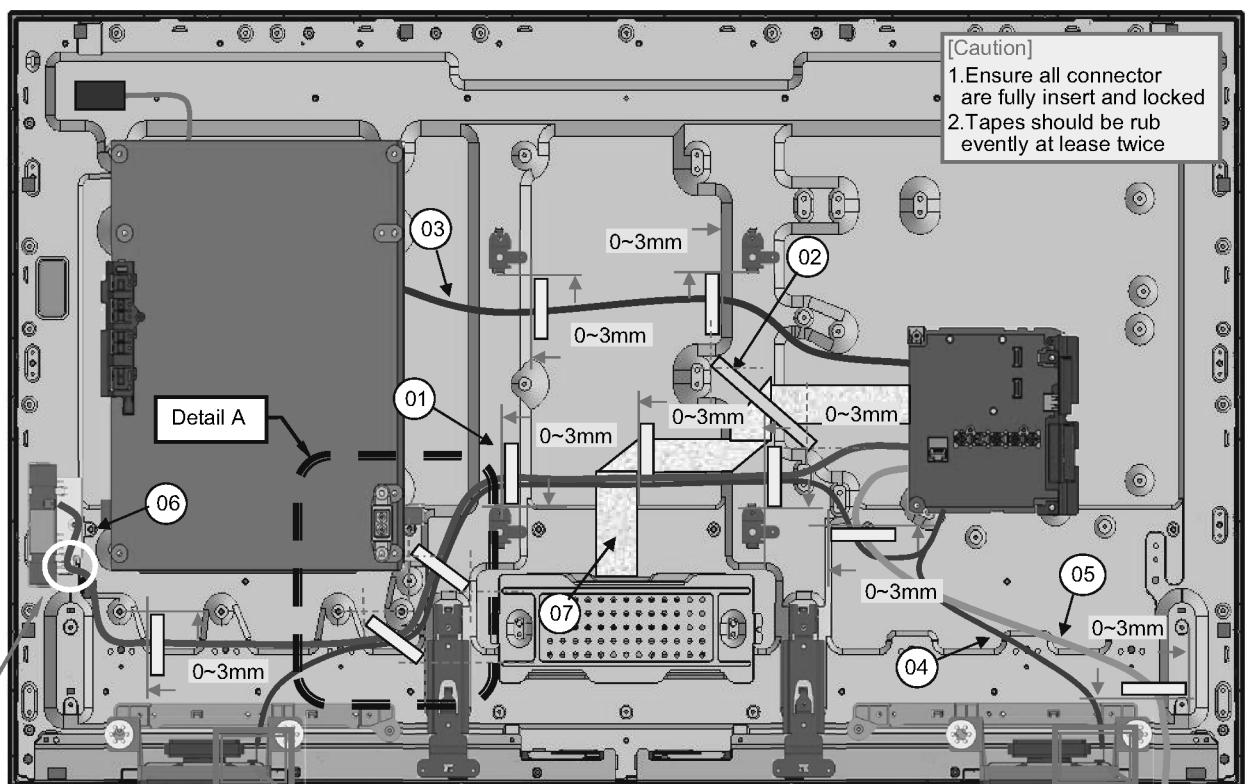
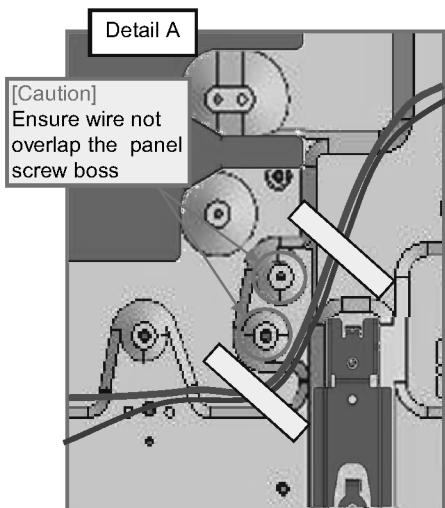
Y-AXIS

Y-AXIS

BASE POINT OF STICKING PET TAPE
X axis : same line as top panel bulging edge
Y axis : same line as panel bulging bottom edge
TOLERANCE X-AXIS : 0~5mm
TOLERANCE Y-AXIS : 0~5mm

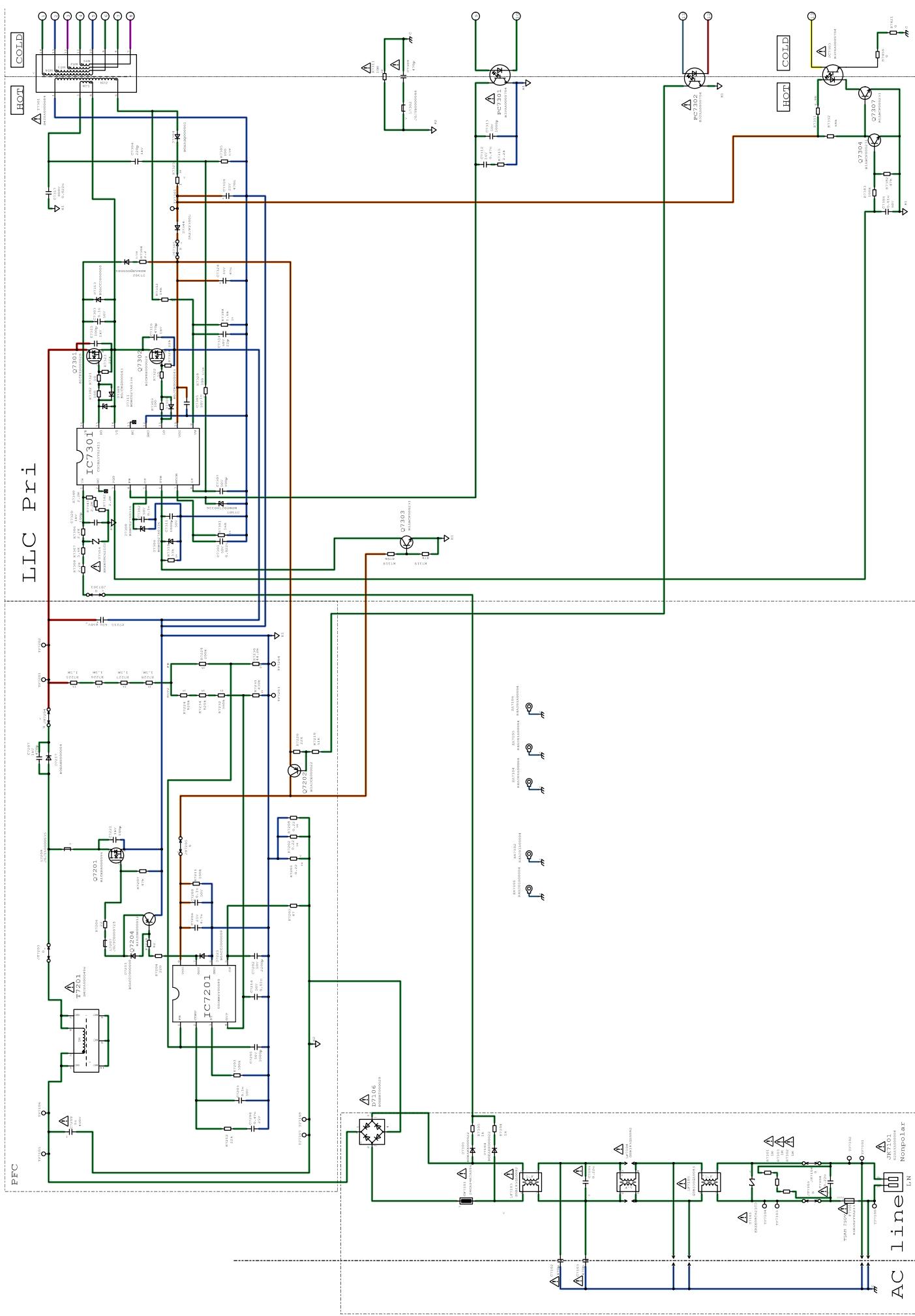
10.2. Wire Dressing (43 Inch Only)

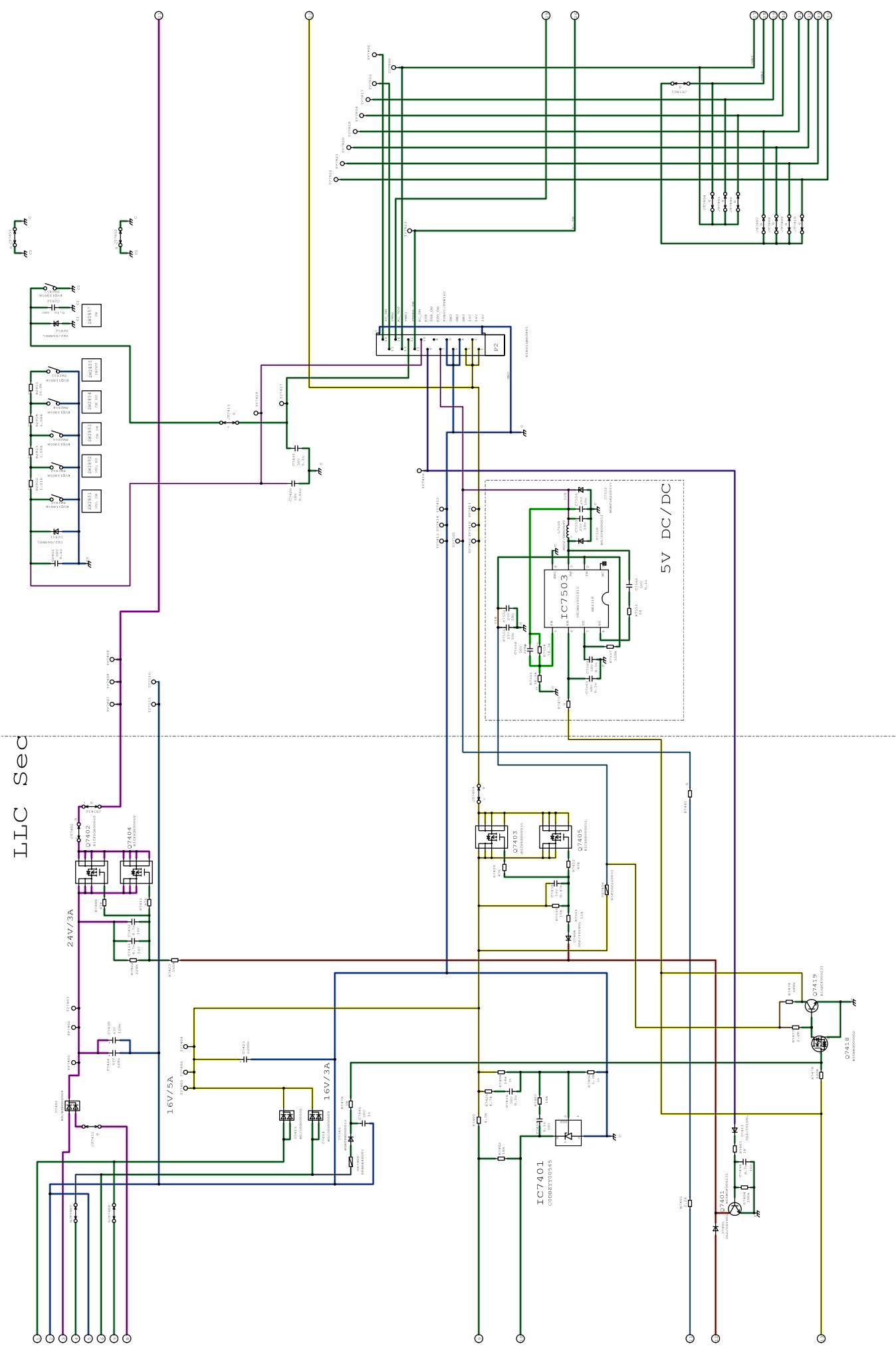
1. Connect all WIRE.
2. Fix all PET TAPE.

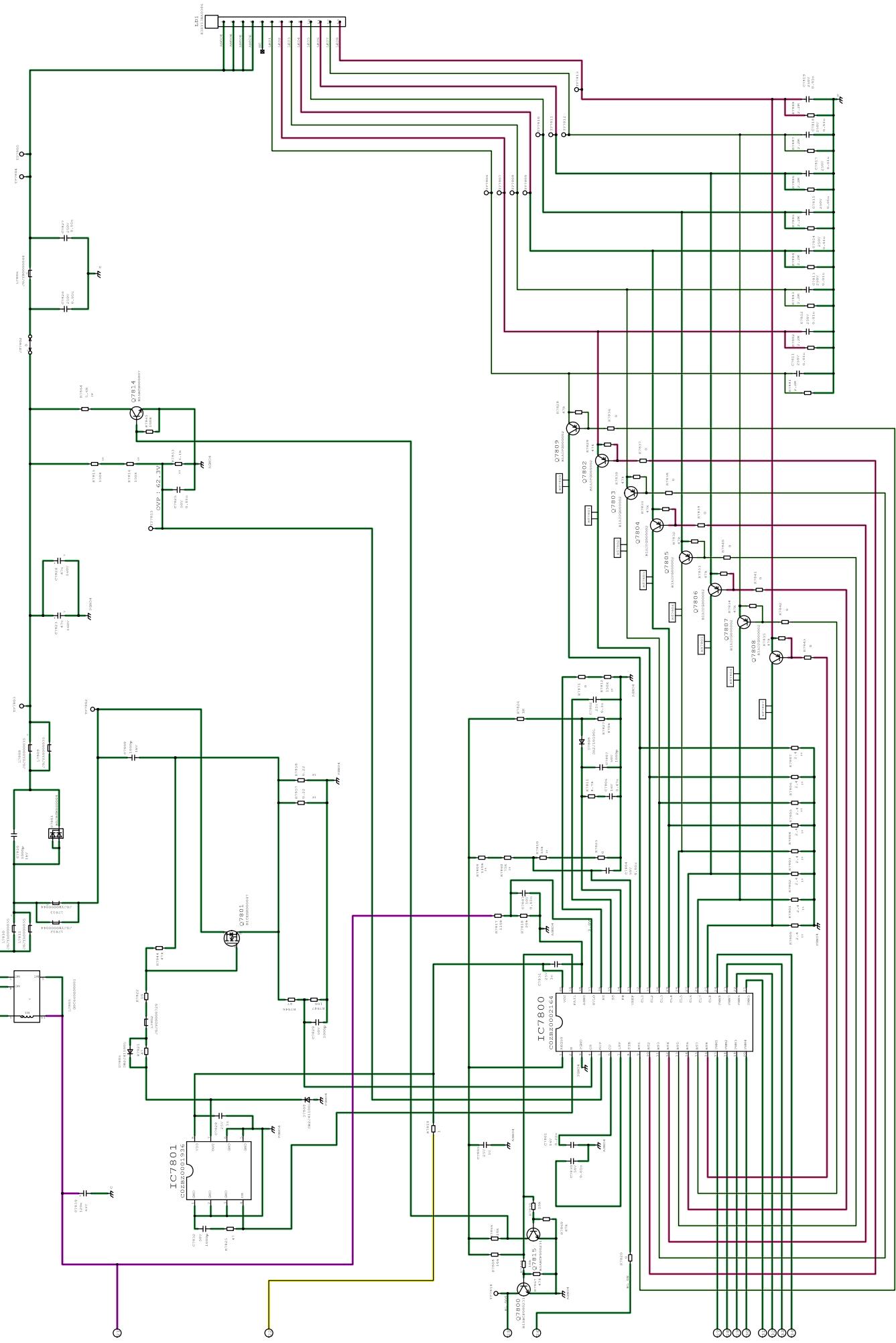


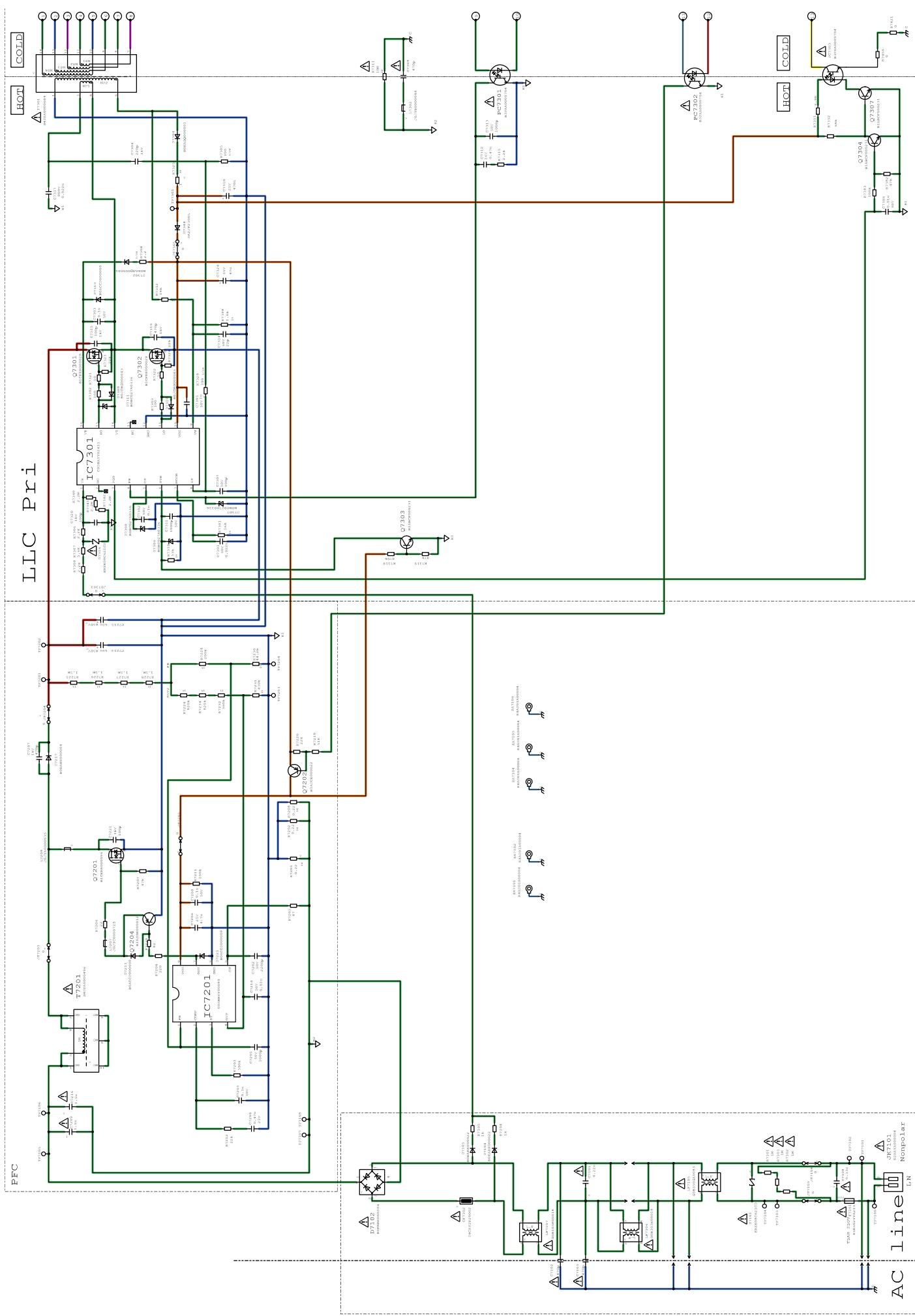
[Note]
wire should be inserted into module brackets hook

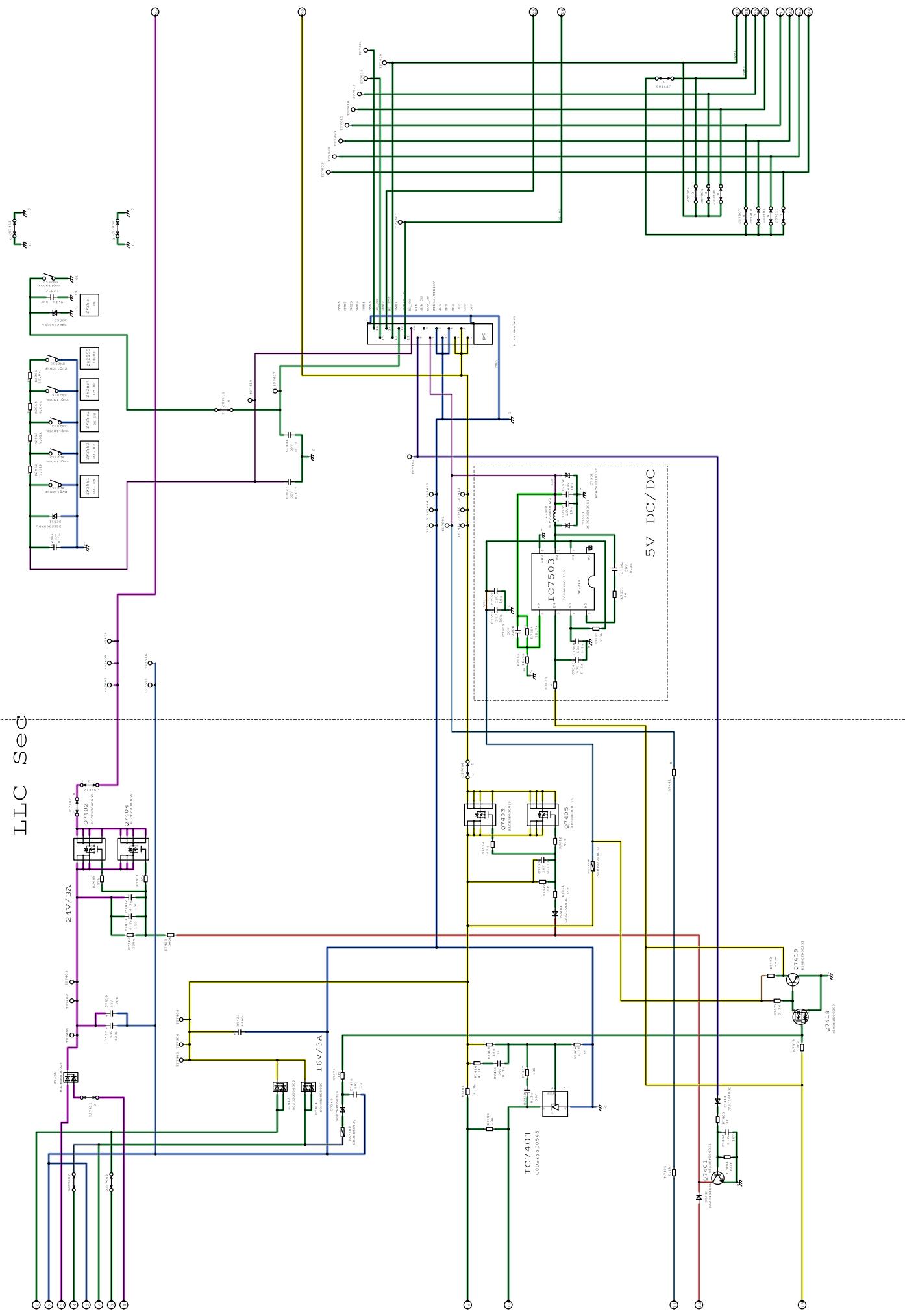
No	Description	Qty	UOM	Remarks
01	PET TAPE	0.71	WT	60mm x 10
02				110mm x 1
03	WIRE(A02-P2)	1	PC	
04	WIRE(A12-SPL/SPR)	1	PC	
05	WIRE(A10-K10/BT)	1	PC	
06	WIFI USB CABLE	1	PC	
07	TSCKF0170183 LVDS CABLE	1	PC	

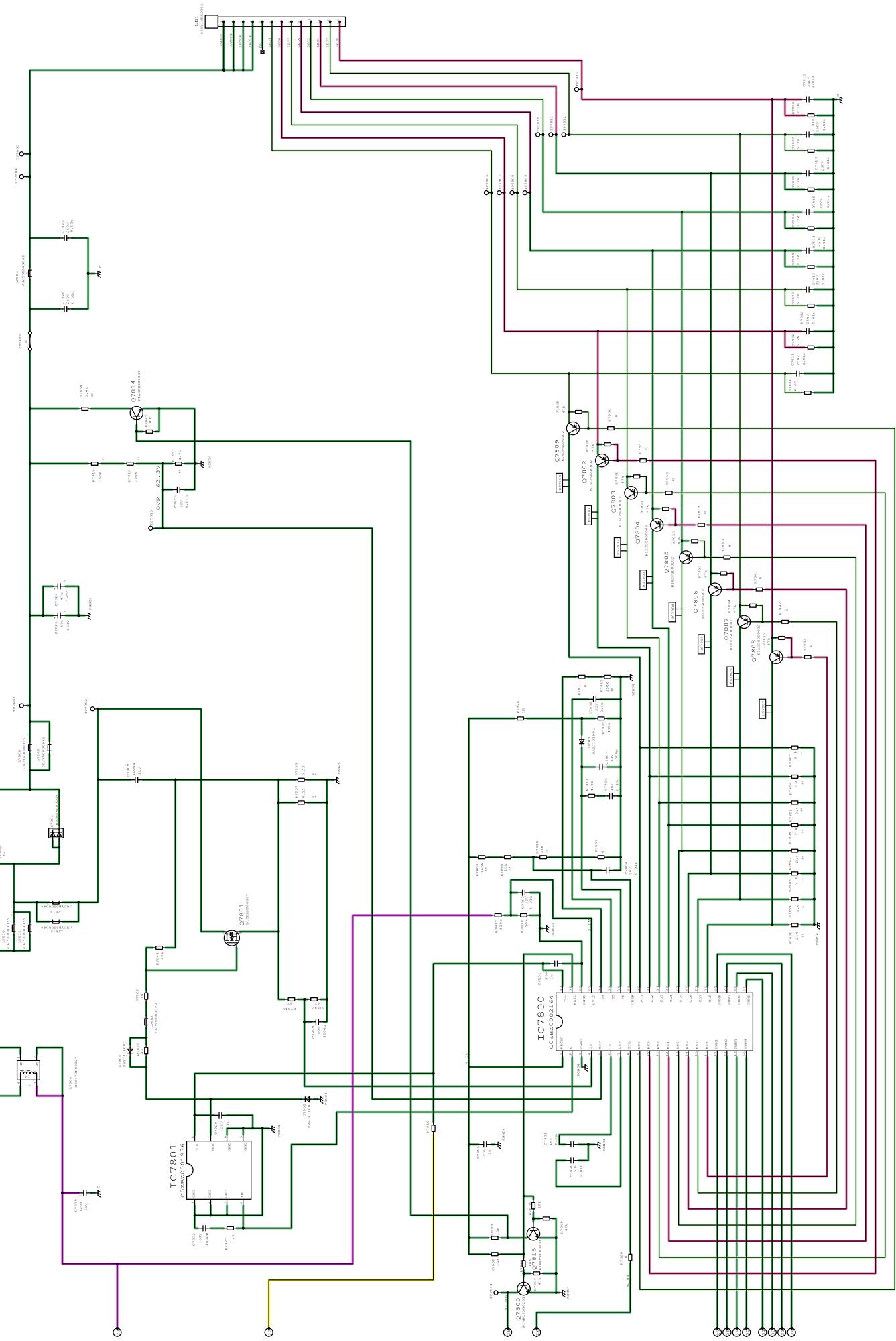








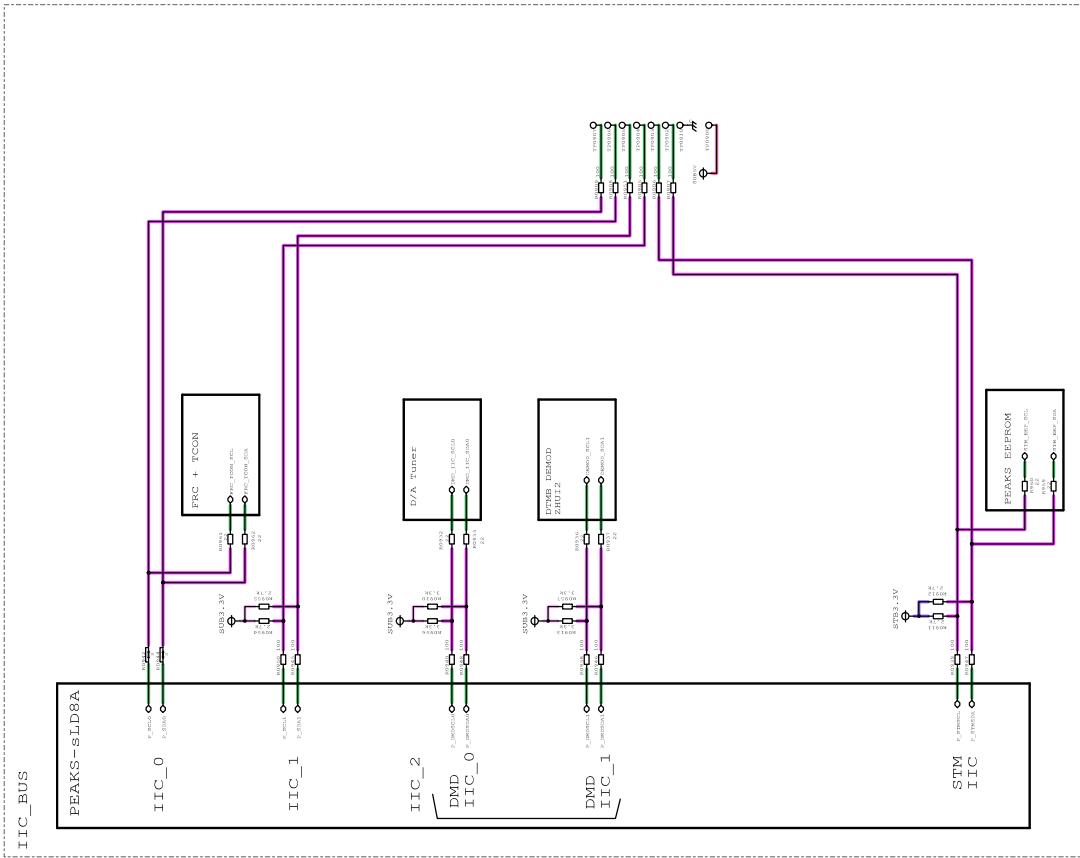
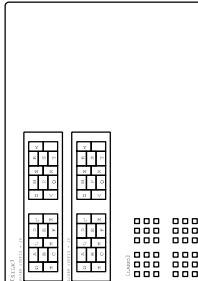




Information (Suffix)

REF No. 0000 - 0049

49CS630S only
43CS630S only

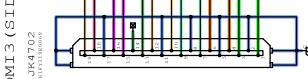


HDMI

REF NO. 4500 - 4749

SymV
HDMI_SVA

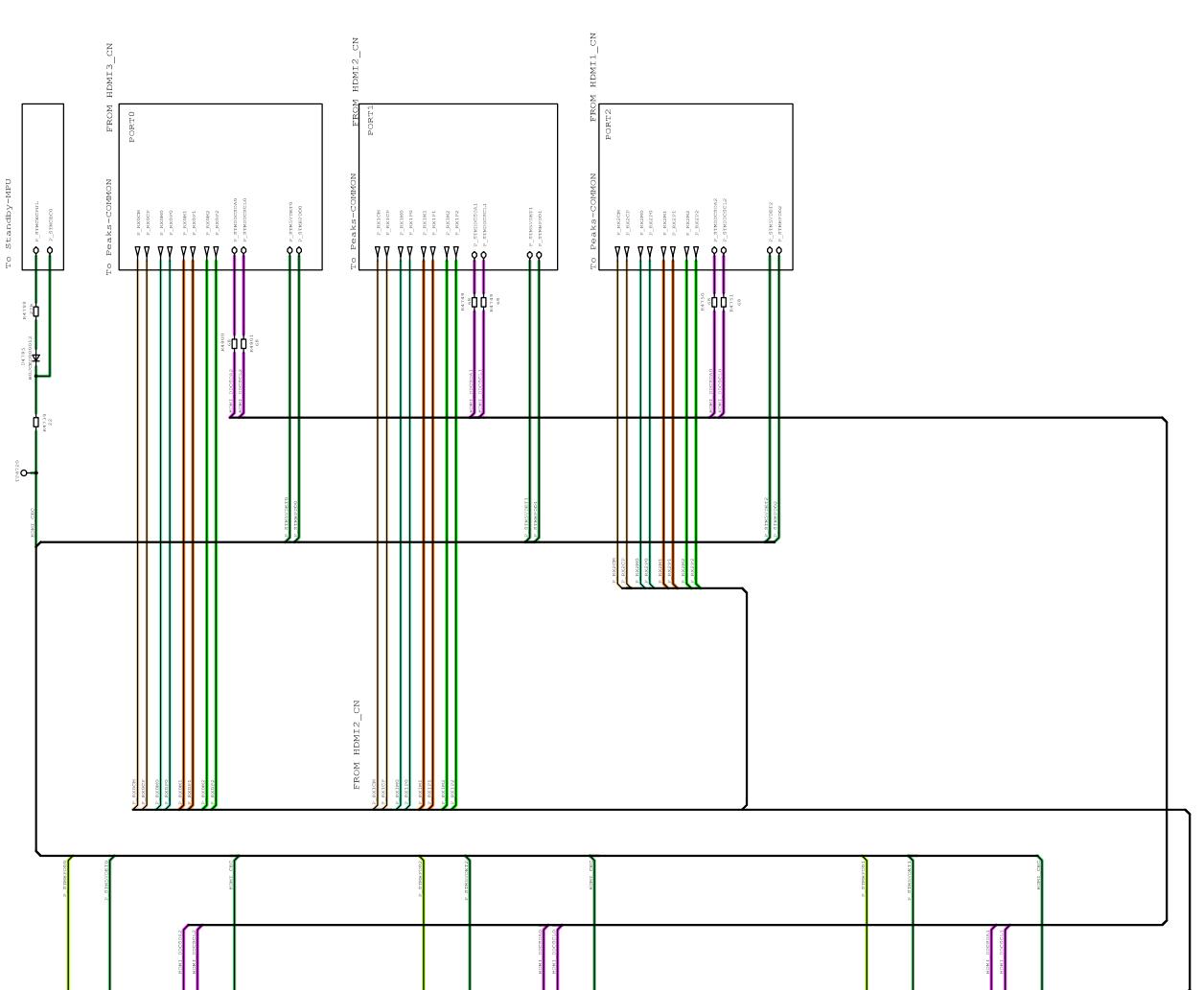
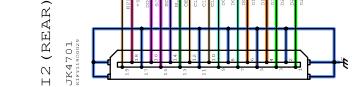
HDMI3 (SIDE)
J4702
R13131W005



HDMI1 (REAR)
J4700
R13131W005



HDMI2 (REAR)
J4702
R13131W005



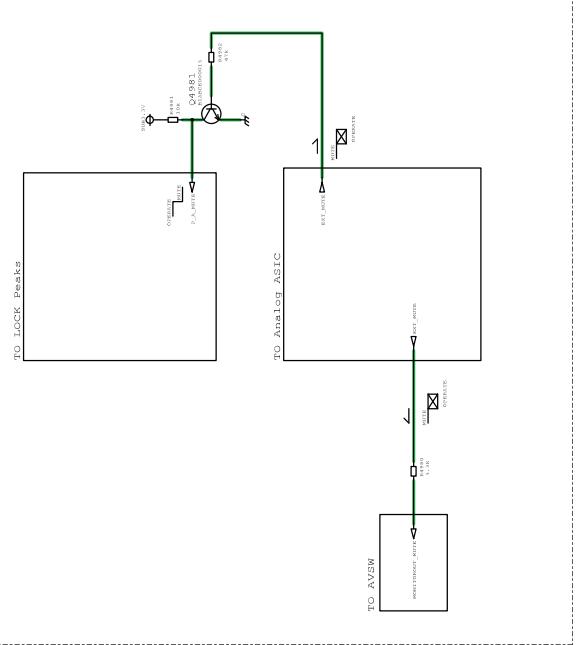
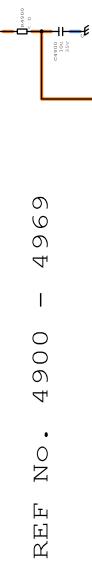
Audio-AMP

REF No. 4900 - 4969

Mute

REF No. 4970 - 4999

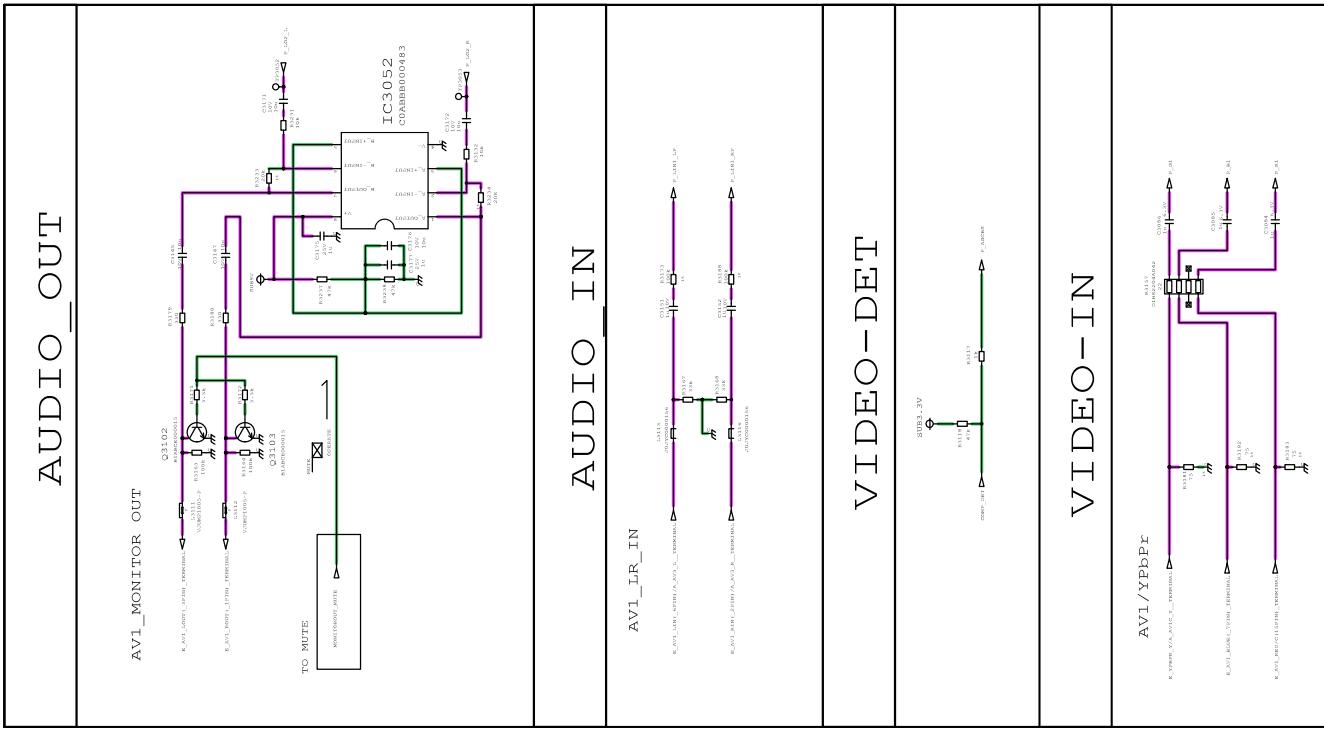
AUDIO_MUTE



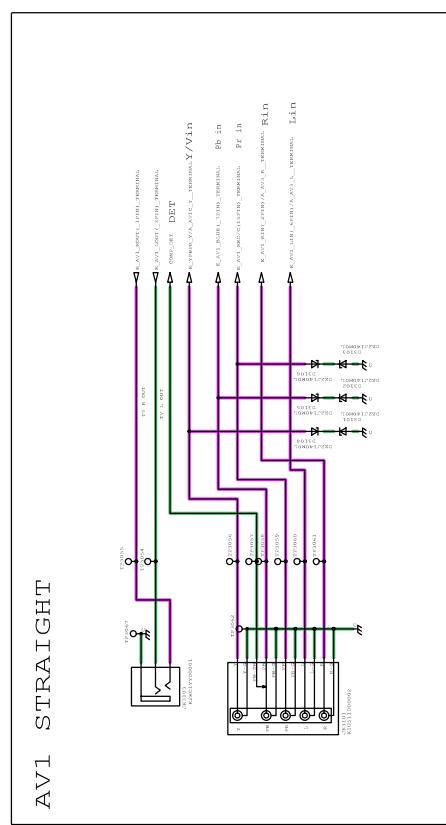
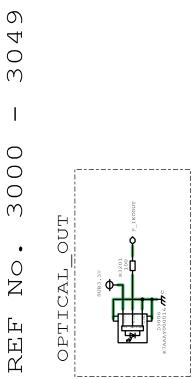
ARC
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ARC1
REF No. -

**AVSW-Connection**

REF No. 3000 - 3049

AVSW

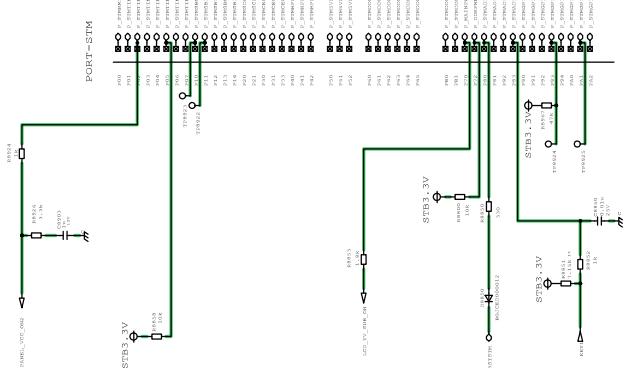
Initial SETUP

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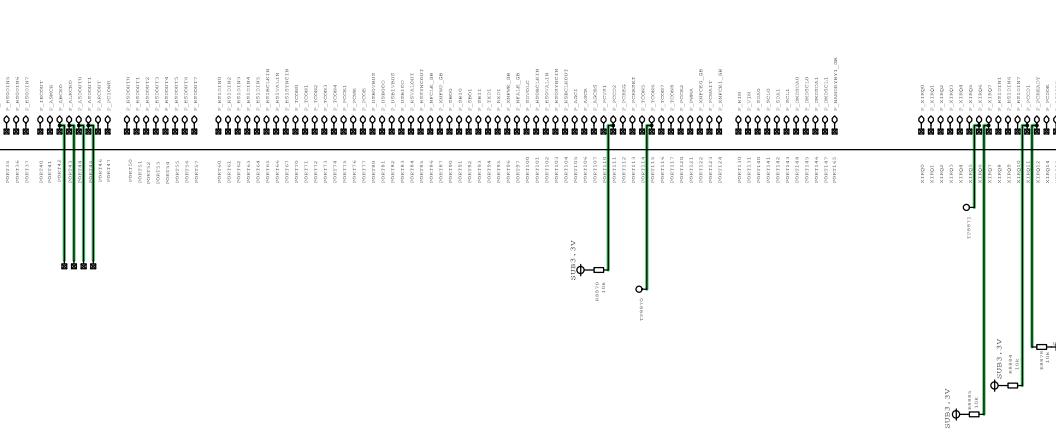
STM Port

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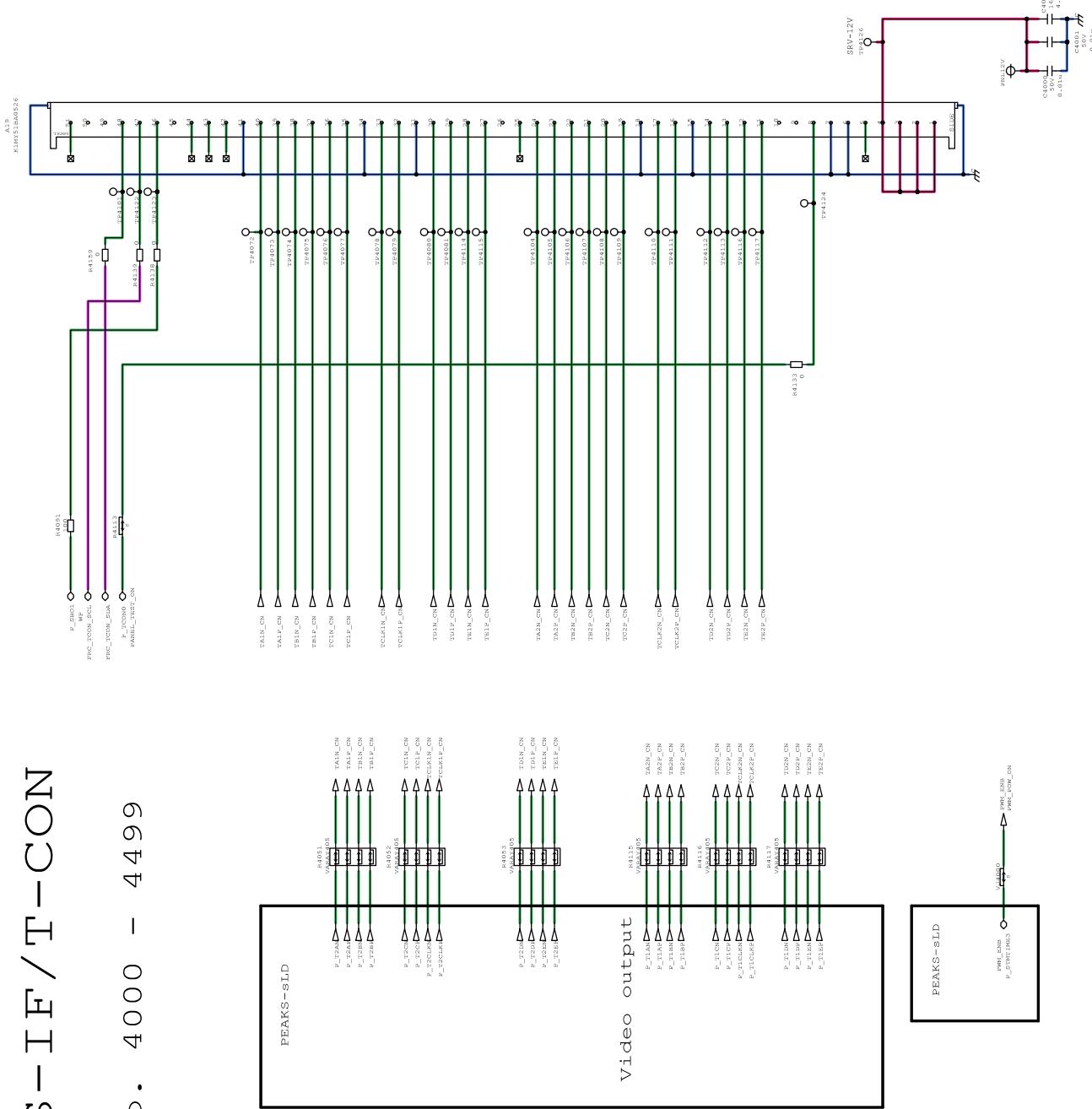
Peaks Port

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LVDS-TF/T-CON

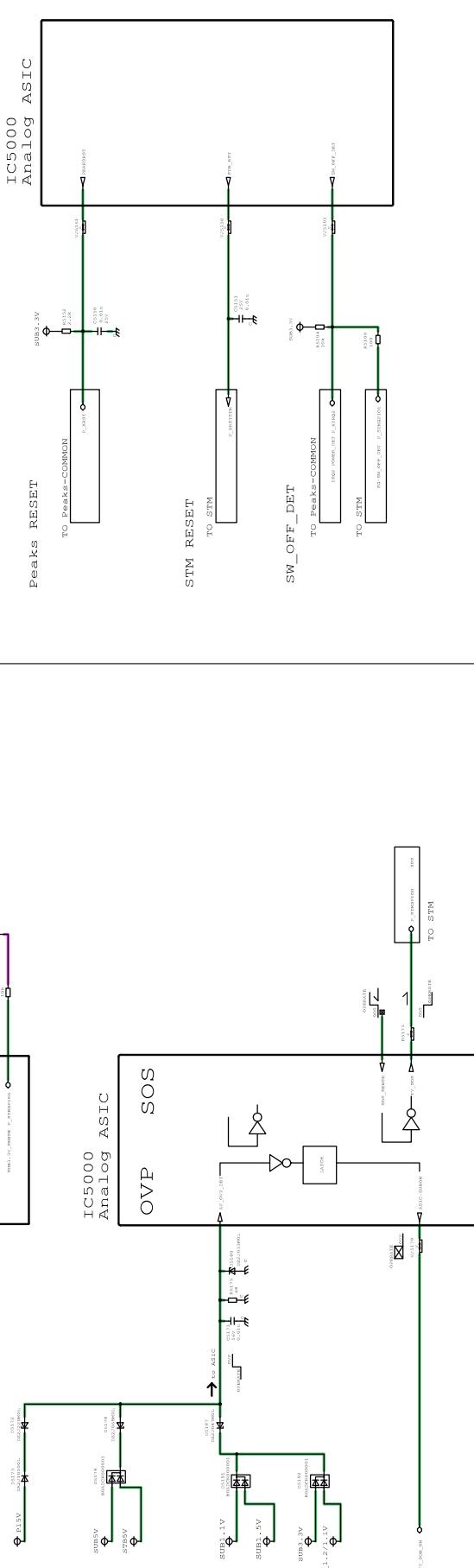
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SOS
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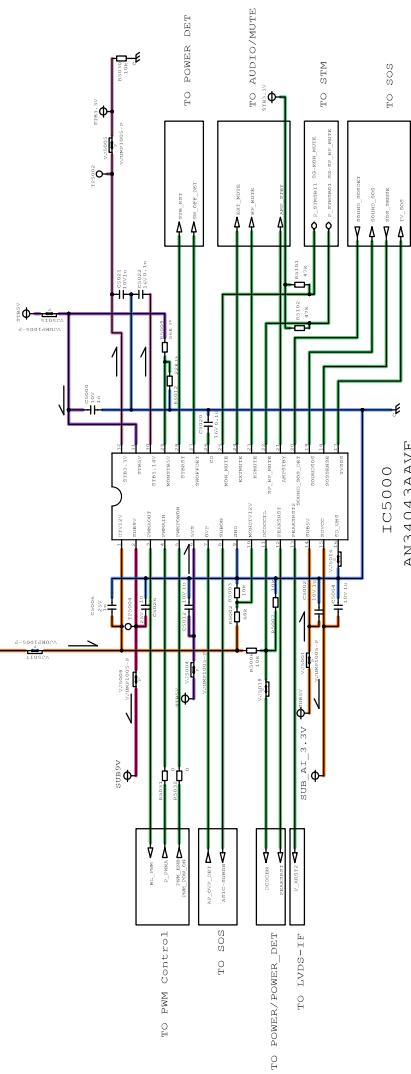
POWER_DET

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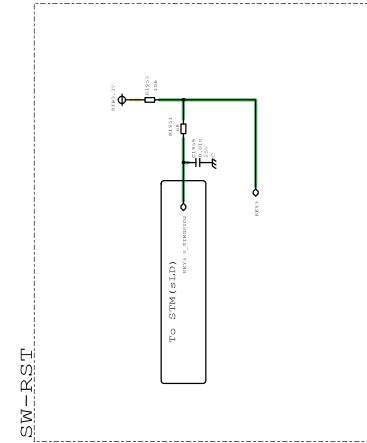
Analog ASIC

REF No. 5000 - 5139



POWER KEY RESET

REF No. 1951 - 1999

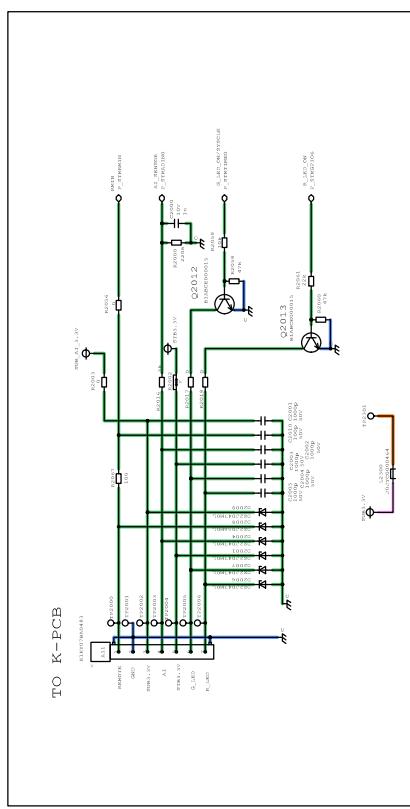
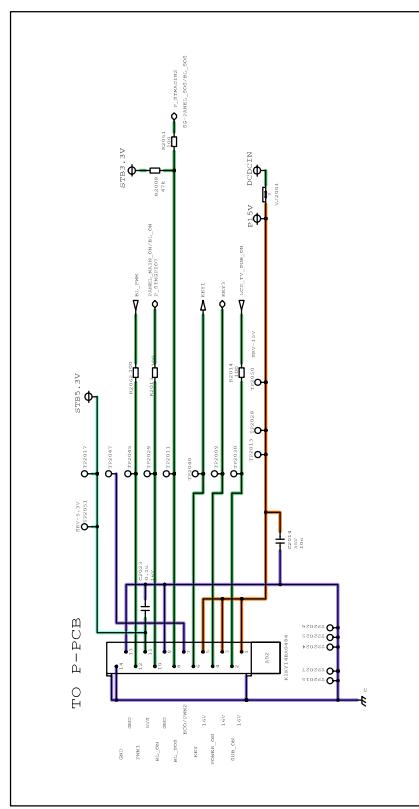
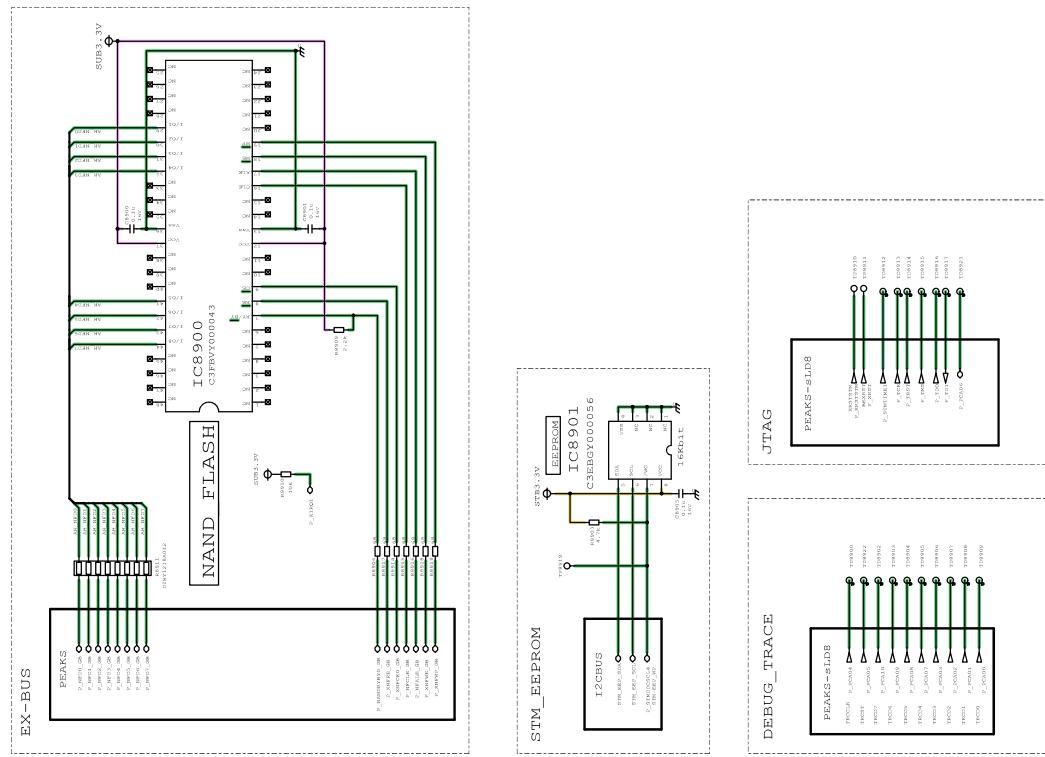


Set

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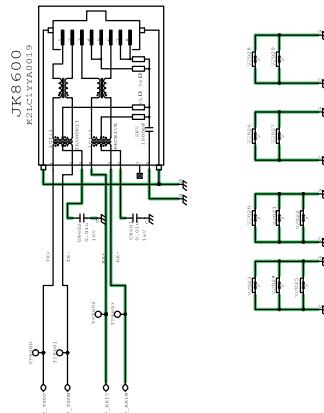
COMMON_NAND/SPC/EEPROM/JTAG

REF No.



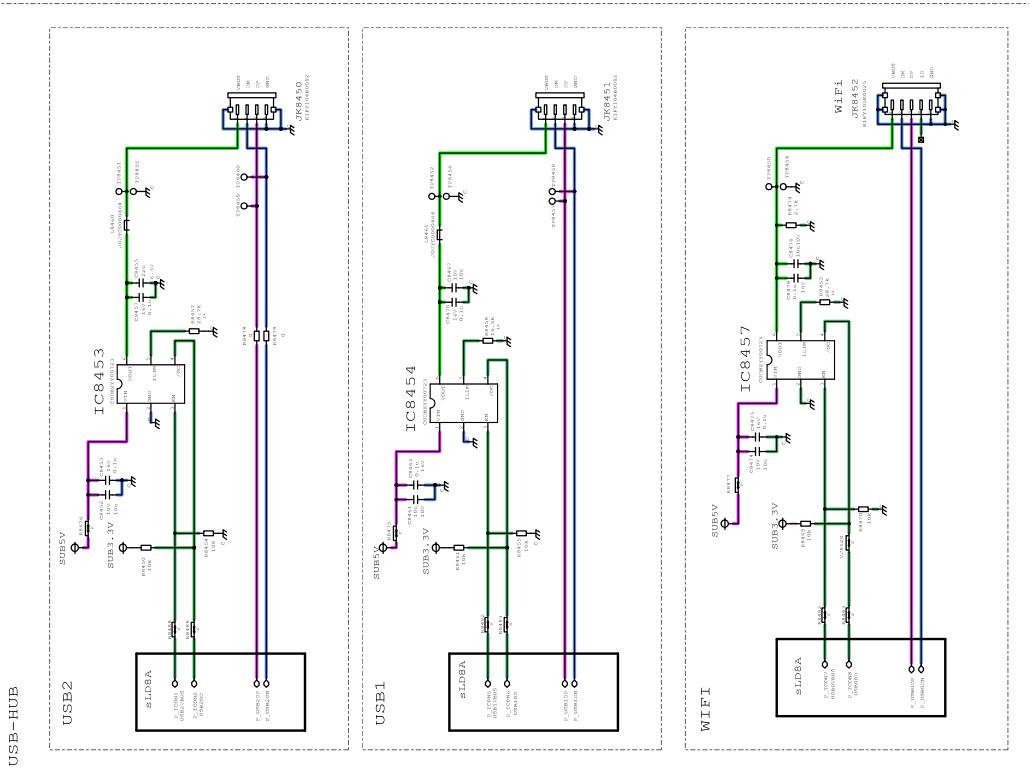
LAN

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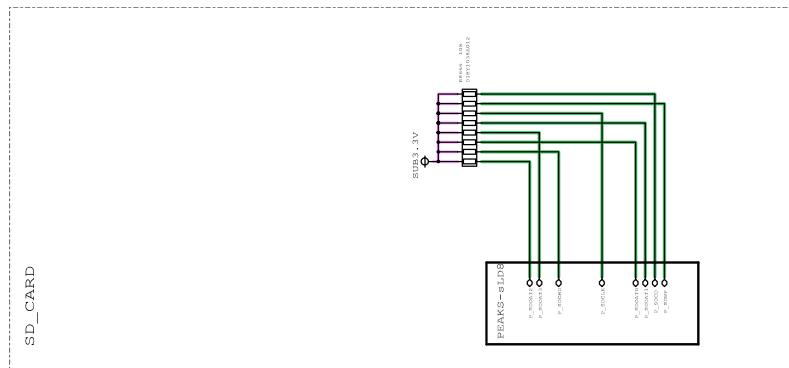
USB

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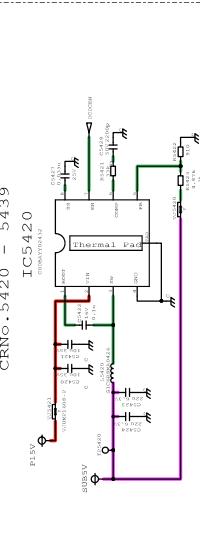
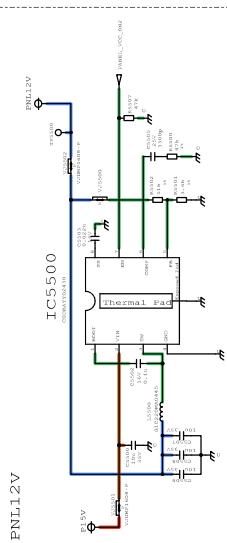
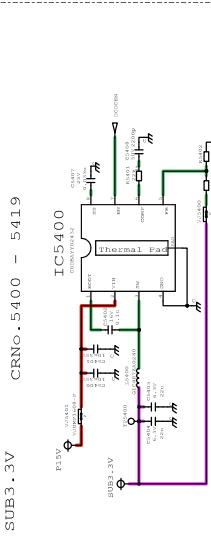
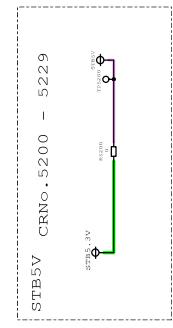
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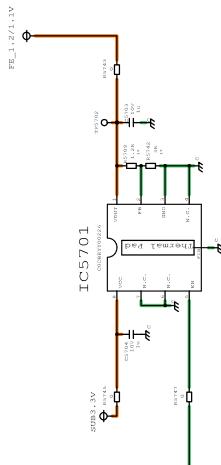
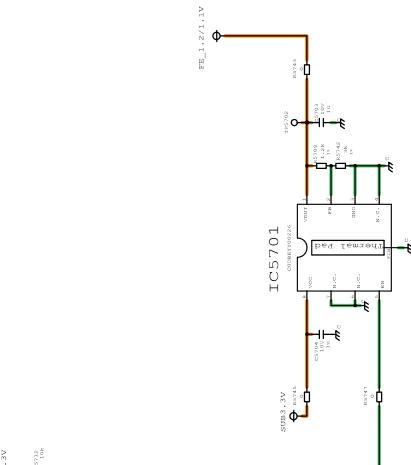
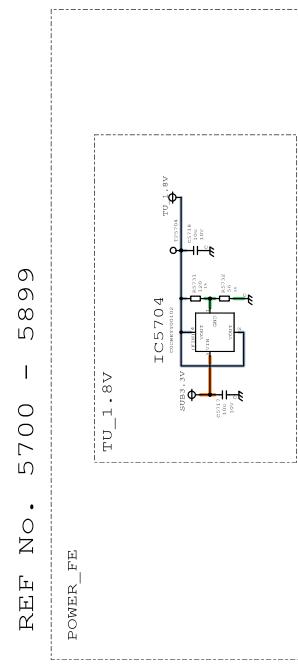


POWER-Model

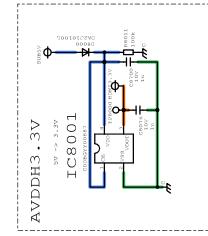
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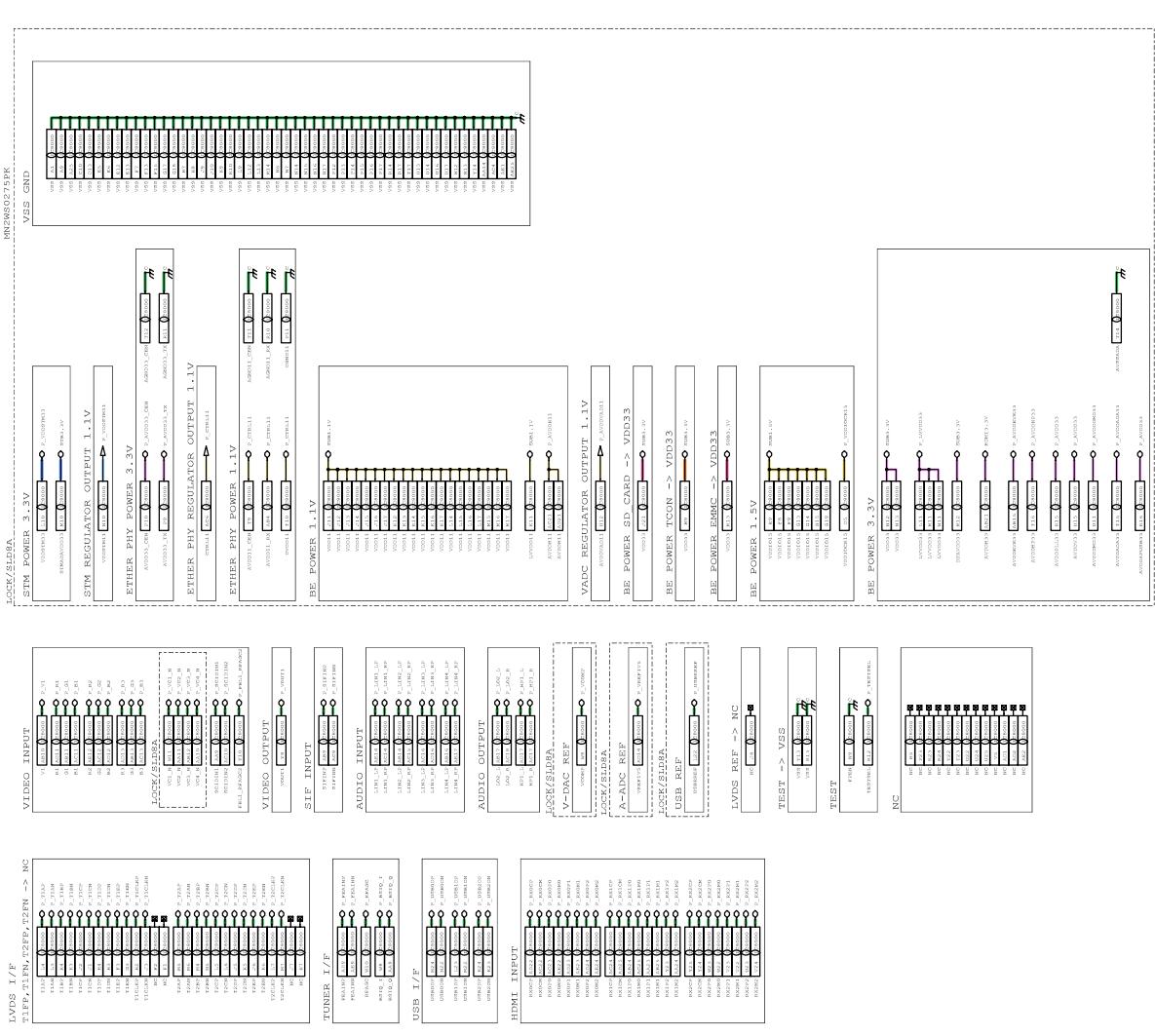
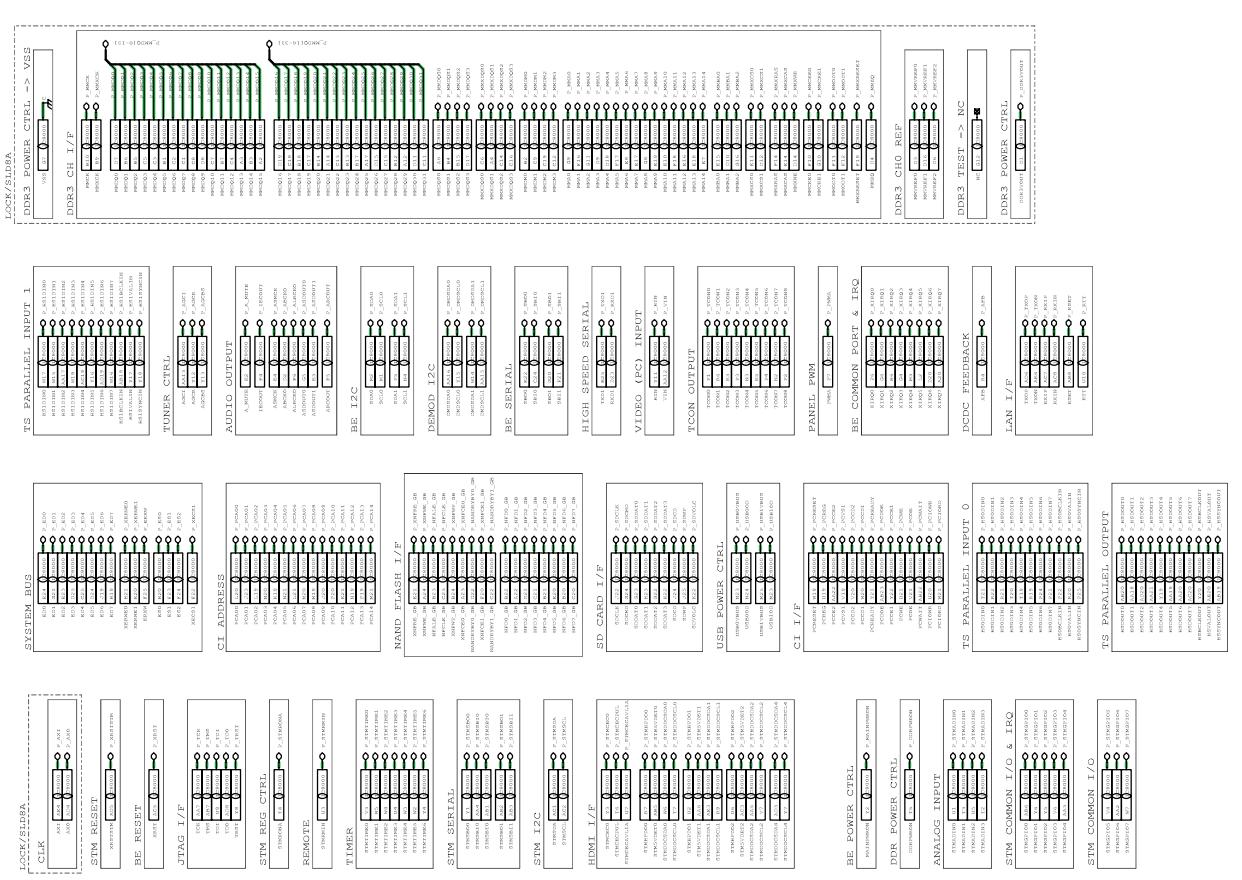
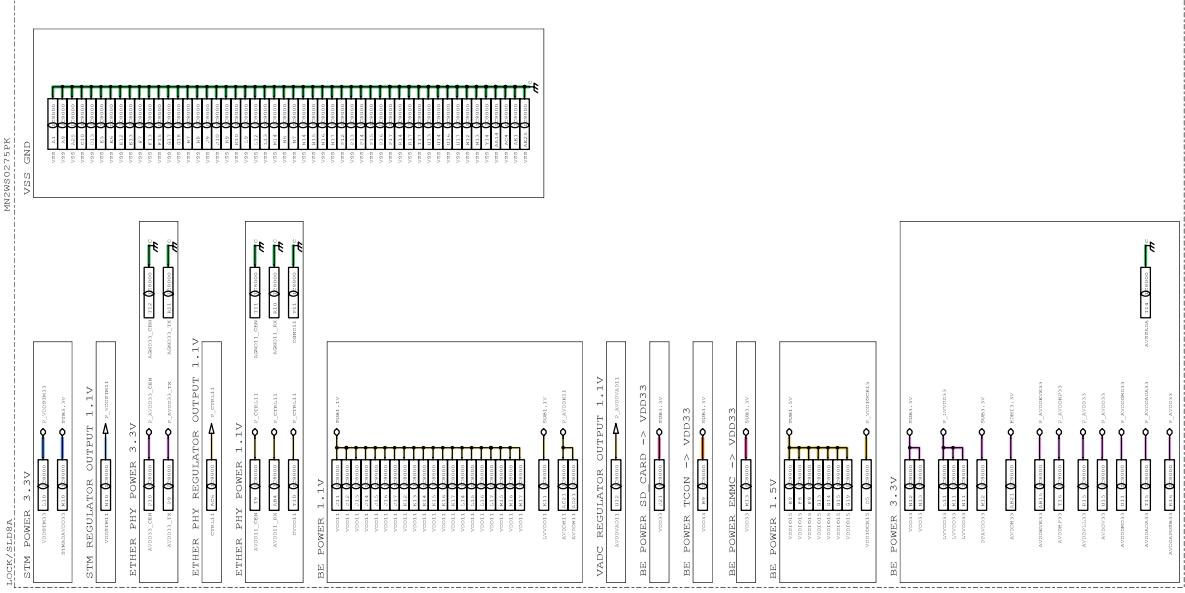
SLD8A DC/DC
REF No. 8100 - 8199



REF No. 8000 - 8999

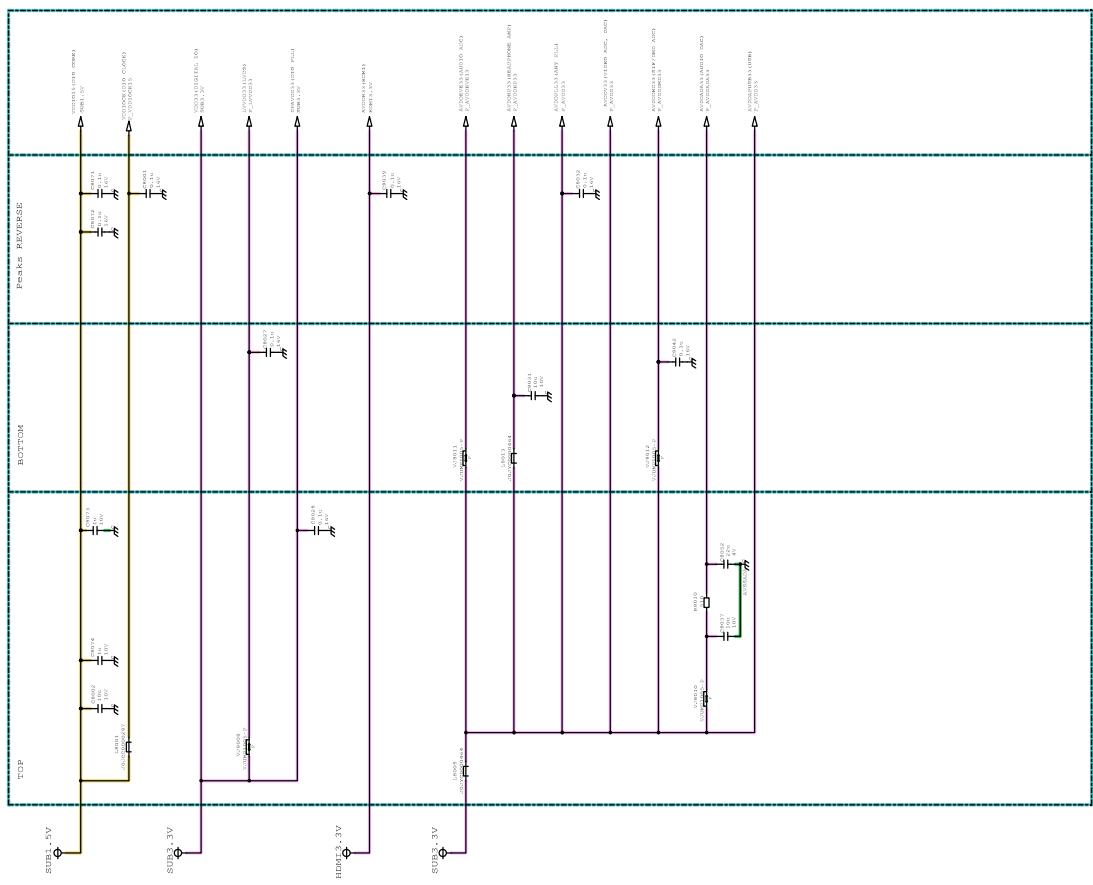
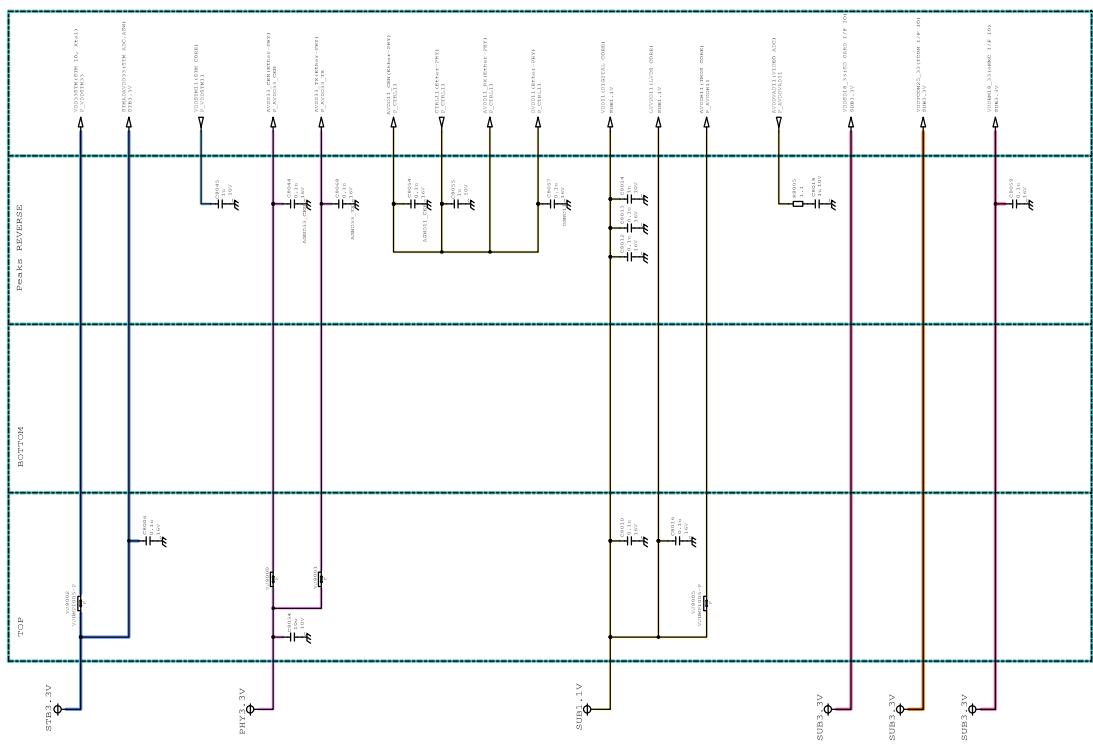


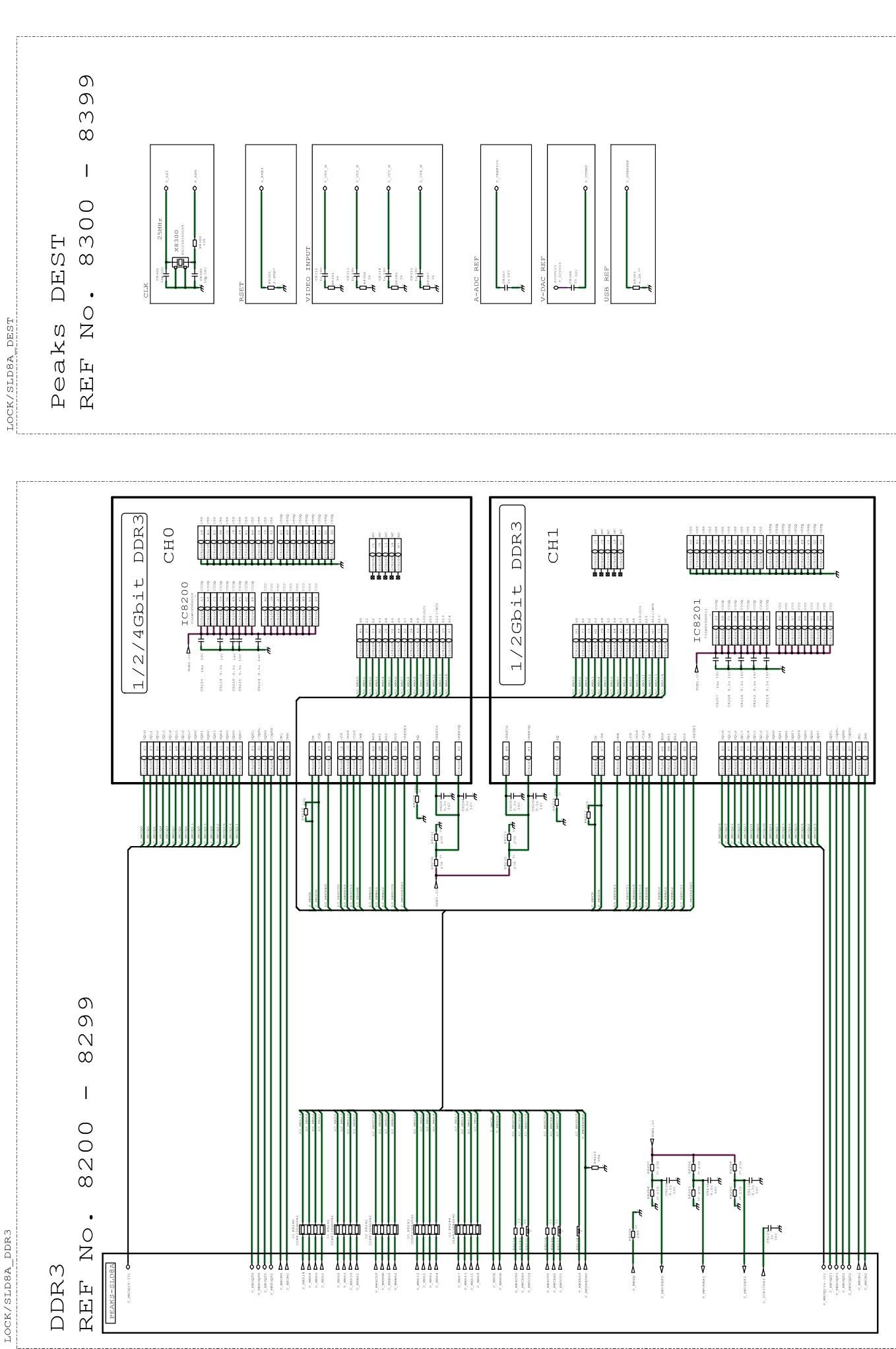
POWER-Peaks

Peaks SLD8A
 REF No. 8000

 IC8000
 REF ID: REF-IC8000


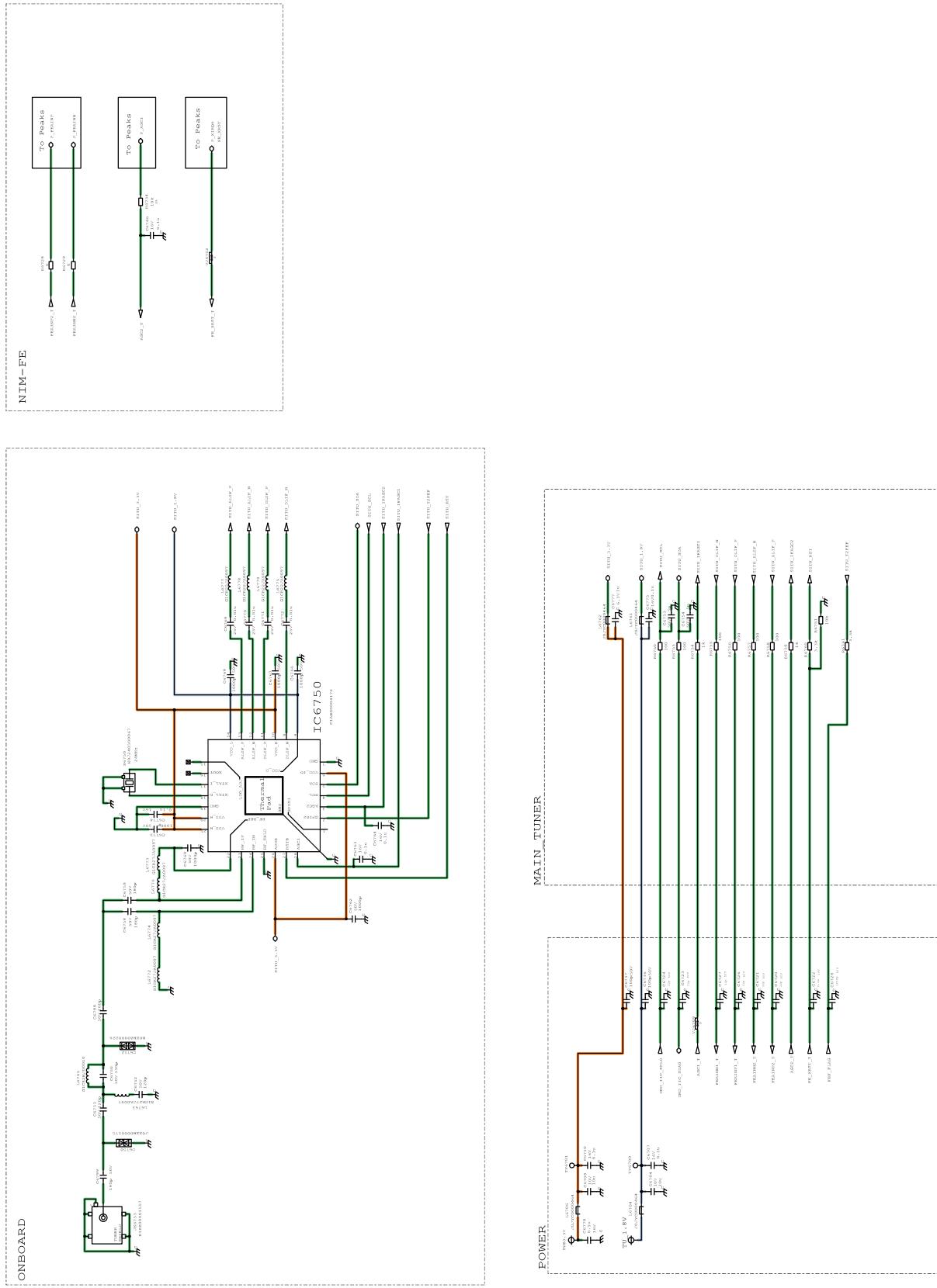
LOCK/SLD8A POWER

Peaks POWER
REF No. 8001 - 8099

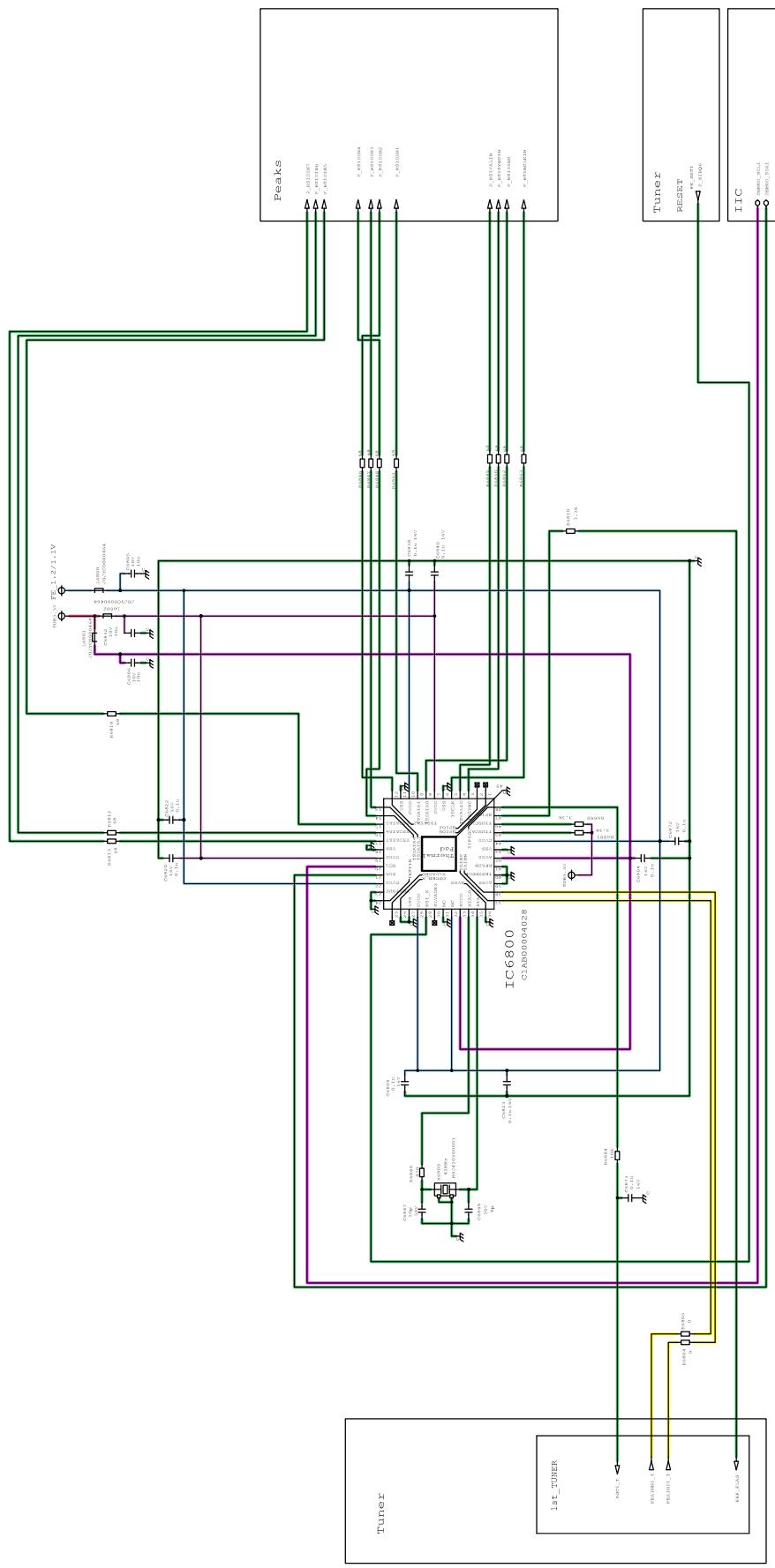


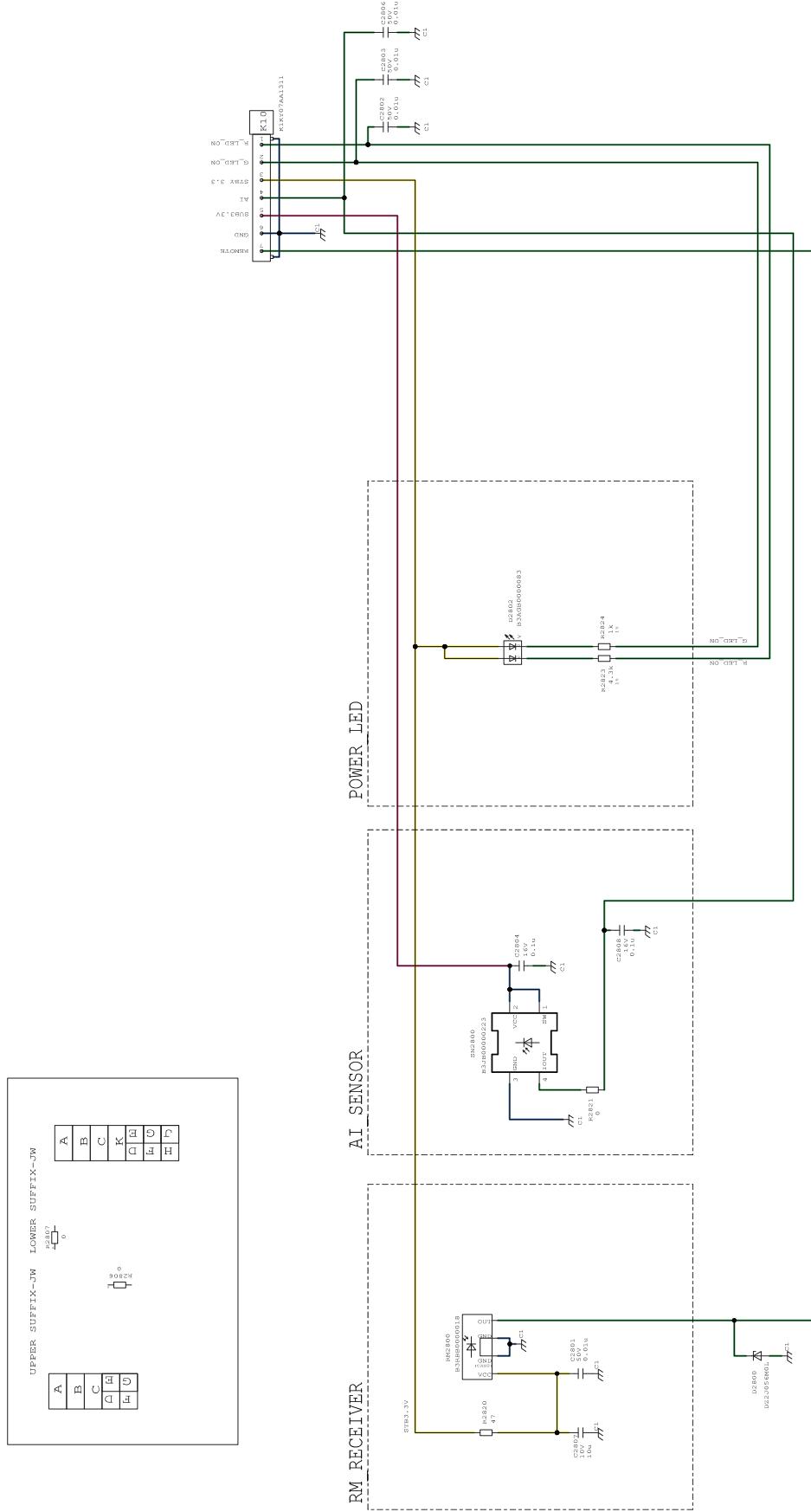


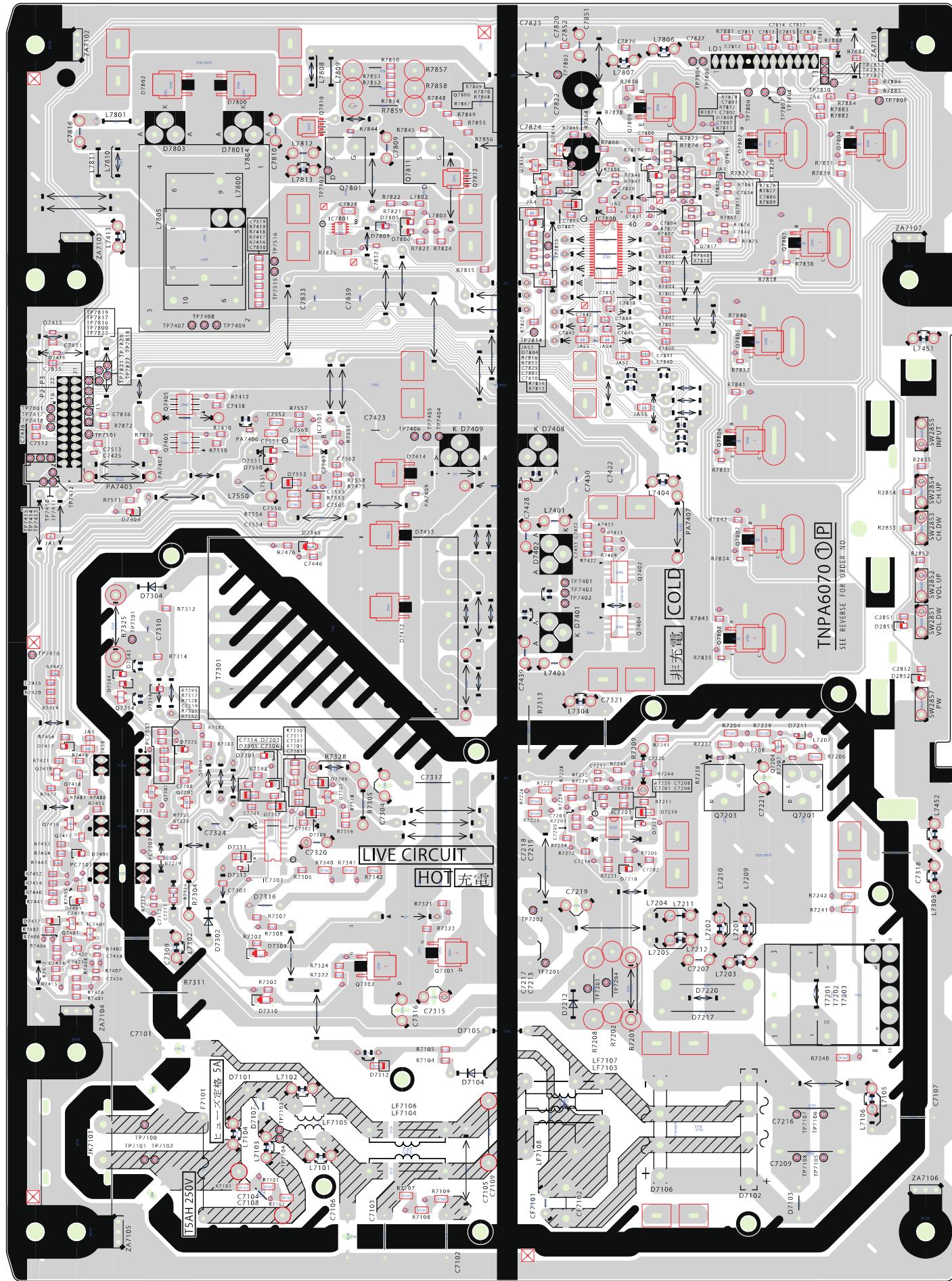
Tuner
REF No. 6700 - 6799

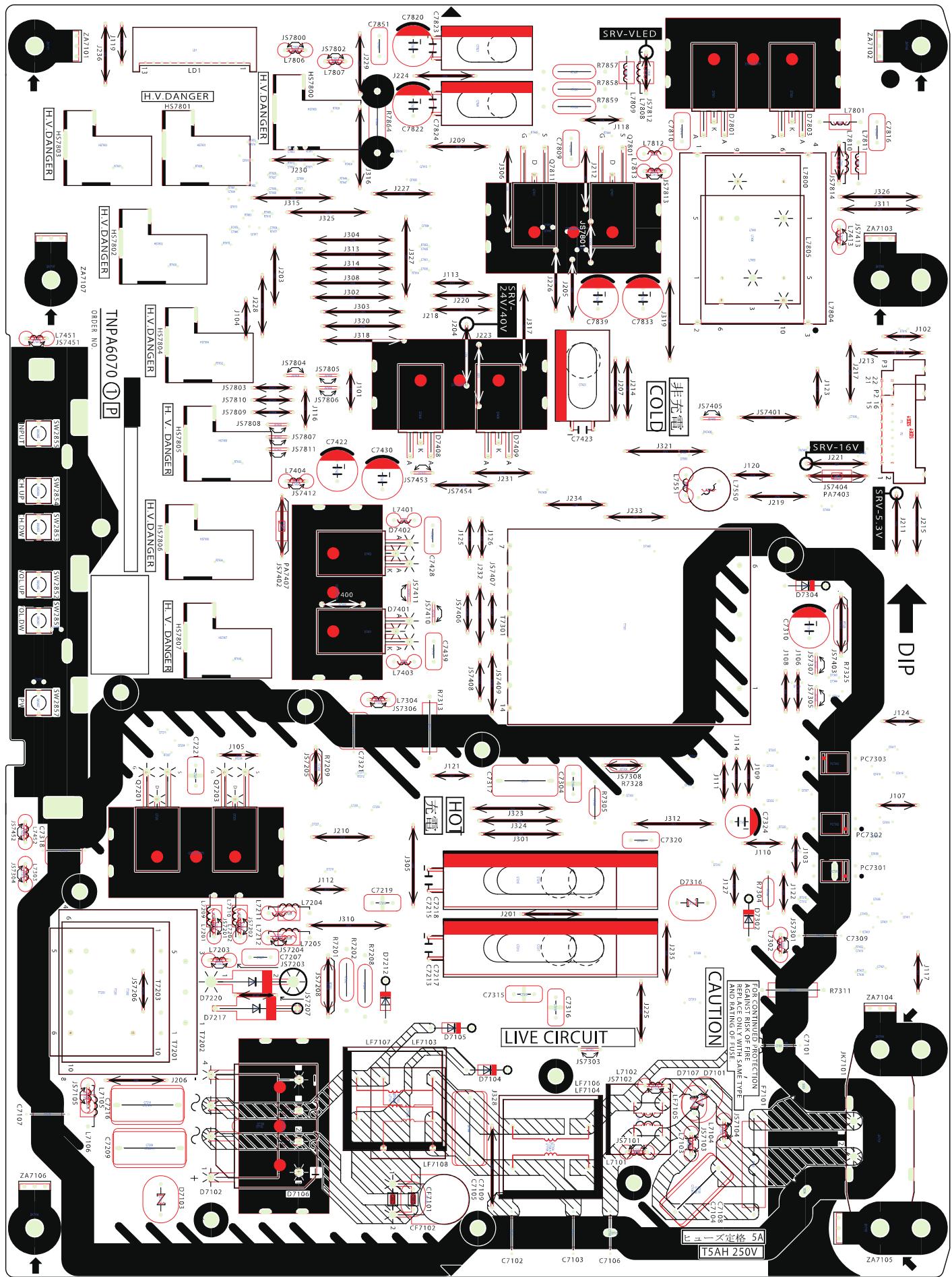


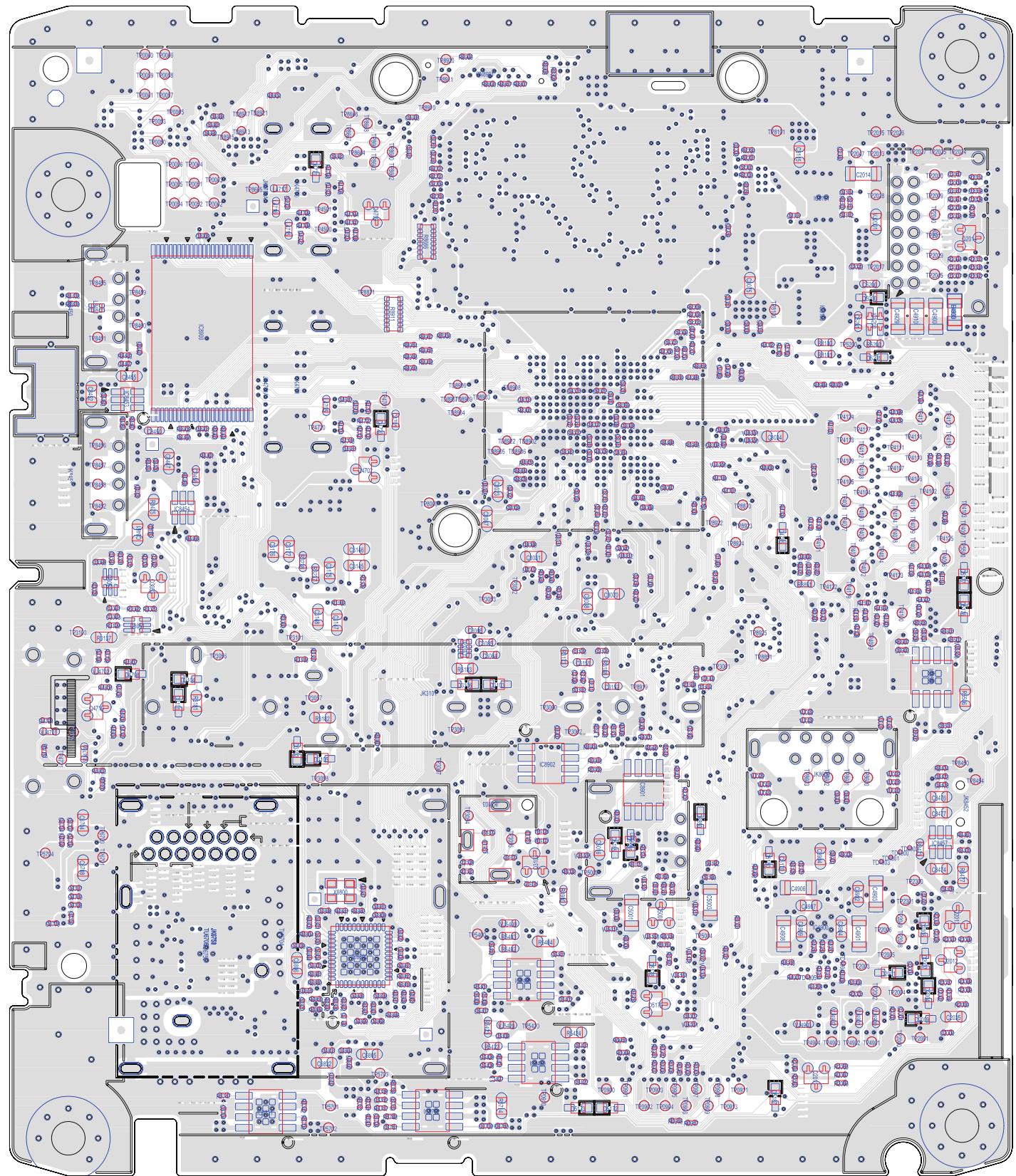
Demodulator
REF No. 6800 - 6999

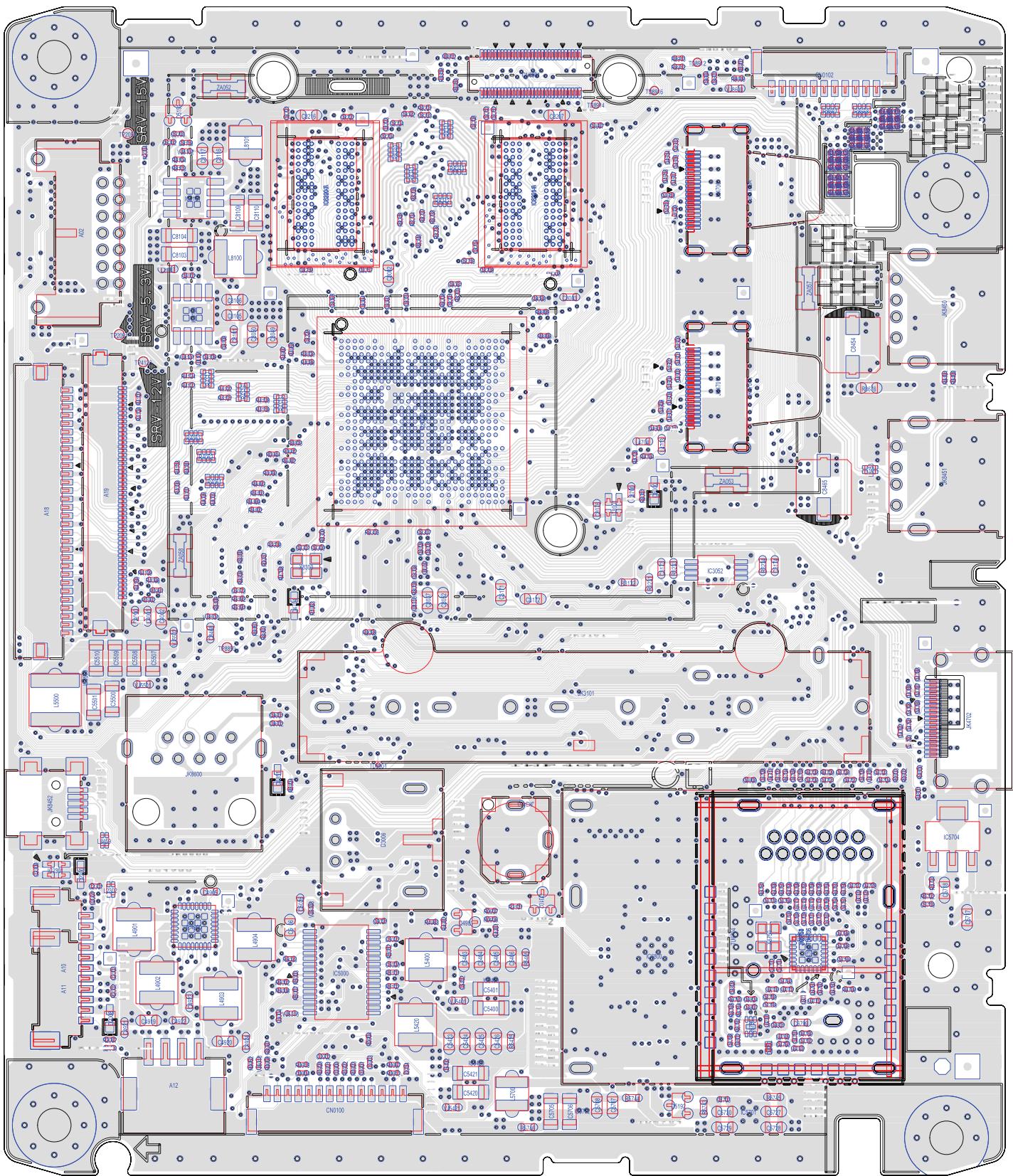


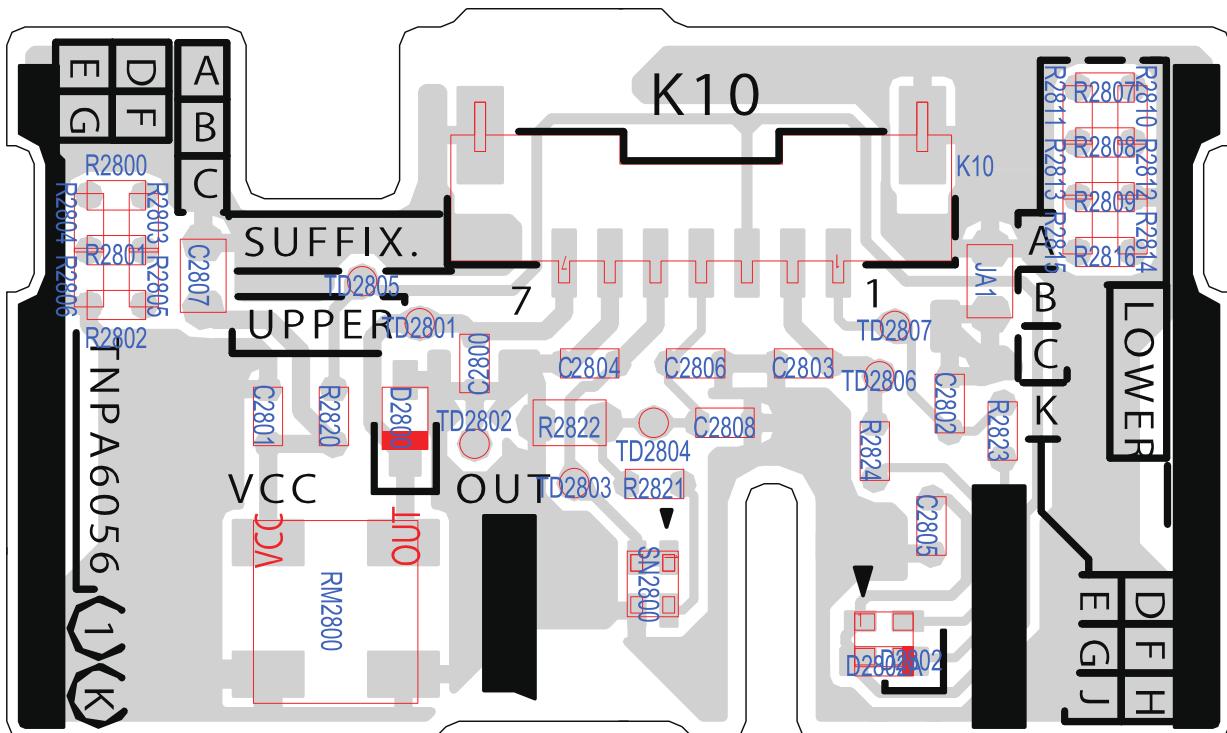




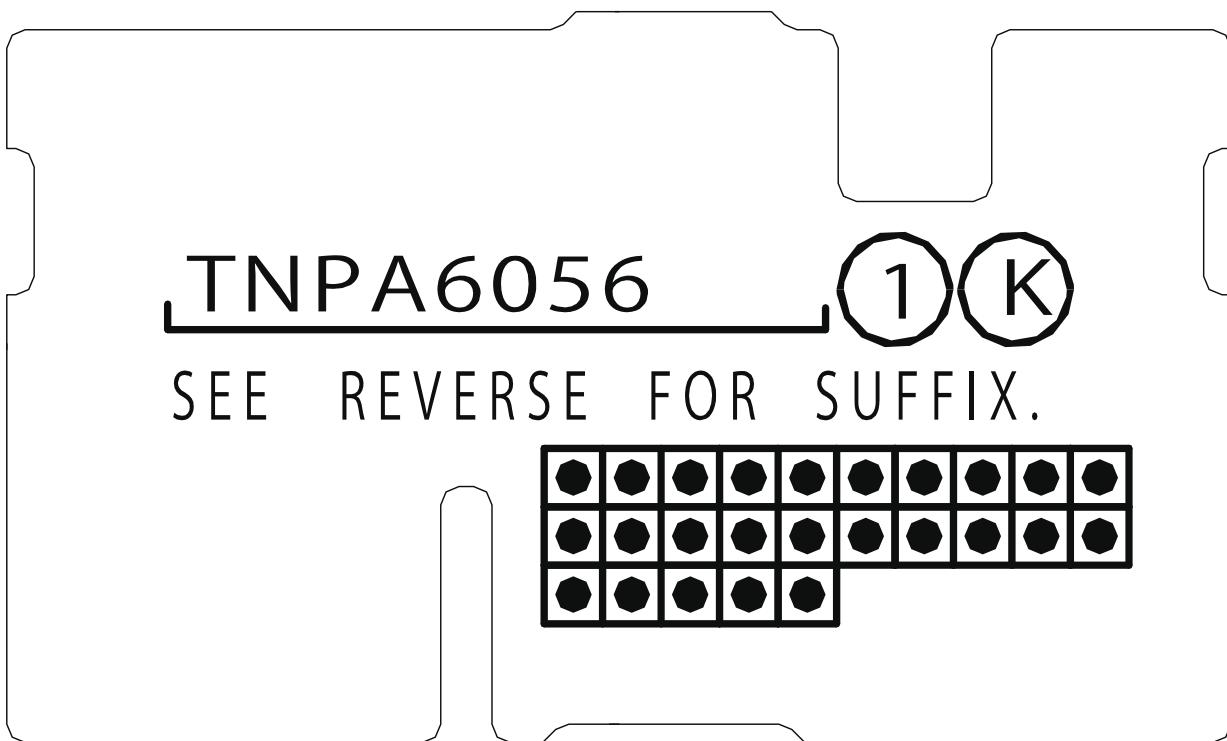






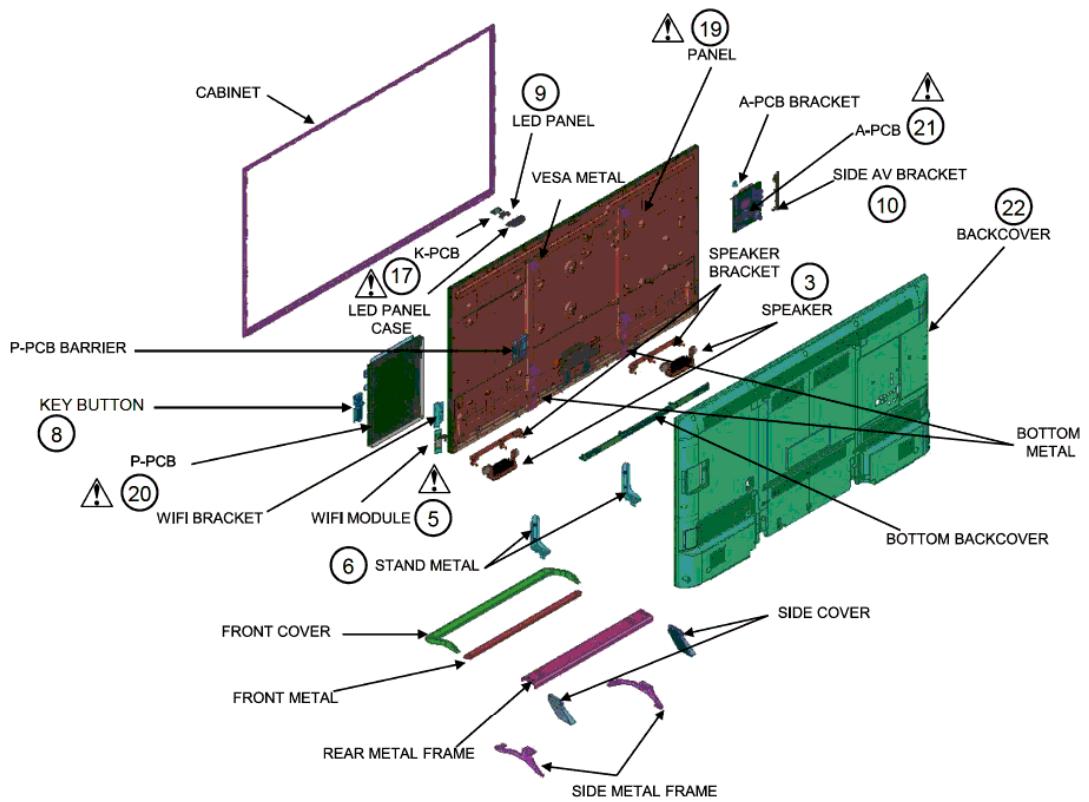


(FOIL SIDE)



(COMPONENT SIDE)

Model No. : TH-43/49CS630S Parts Location

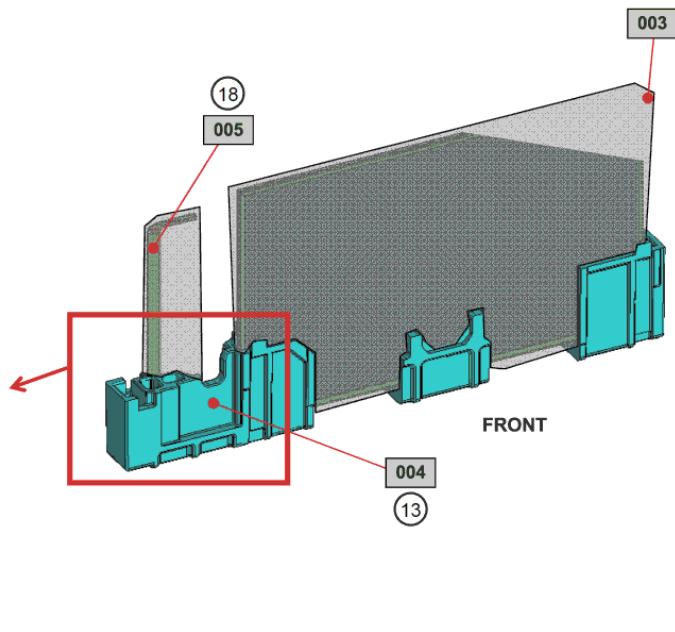
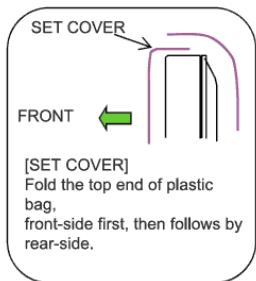
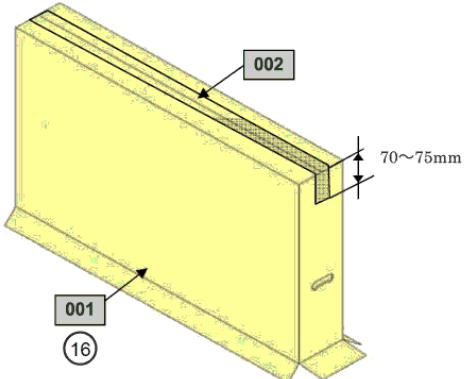


Model No. : TH-43/49CS630S Packing Exploded View 1

ASSEMBLY CONTENTS :

1. Follow all the sequence and arrangement for place accessories.
2. There are several item need to special arrangement position like fanbag and remote.

No.	Description	Qty	UOM
001	PACKING CASE	1	PC
002	PP_TAPE(TOP1.56/BTM1.56)	3.4	MT
003	SET COVER	1	PC
004	CUSHION BOTTOM	1	PC
005	PEDESTAL ASSY	1	PC
006	FAN BAG ASSY	1	PC
007	REMOTE TRANSMITTER	1	PC



<Note>

1. The position of button is facing right side.
2. The position of DIODE is upper side.

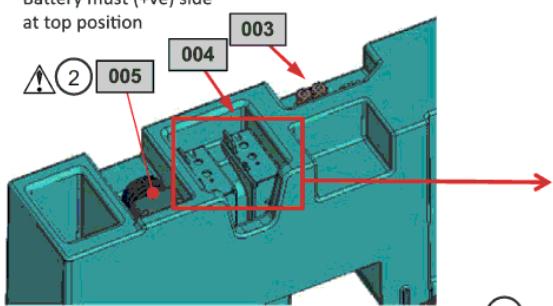
Model No. : TH-43/49CS630S Packing Exploded View 2

ASSEMBLY CONTENTS :

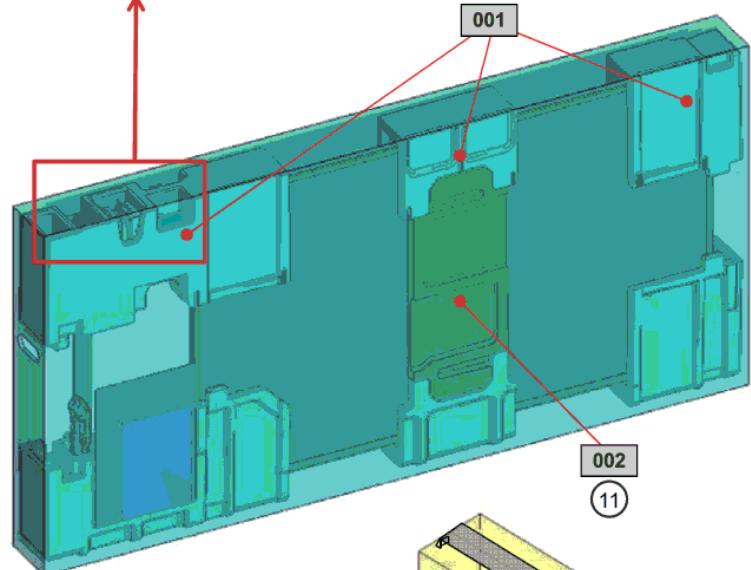
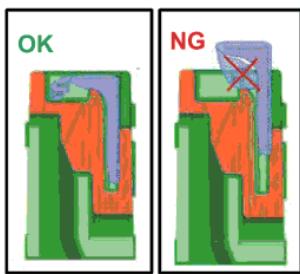
1. Follow all the sequence and arrangement for place accessories.
2. There are several item need to special arrangement position like batteries and stand mtg.

<Note>

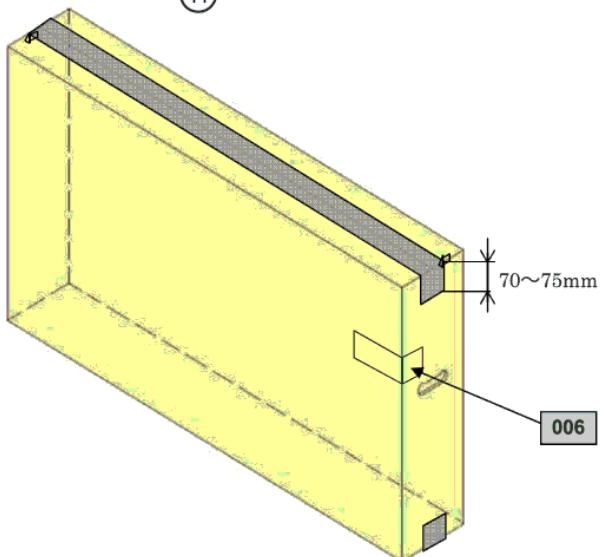
Battery must (+ve) side at top position



No.	Description	Qty	UOM
001	CUSHION_TOP	1	PC
002	CUSHION_FRONT	1	MT
003	BATTERY	1	PC
004	STAND_METAL_ASSY	1	PC
005	AC CORD	1	PC
006	CARTON_LABEL	1	PC
007	CARTON LABEL(INDONESIA)	1	PC



Carton Label
(Indonesia only)



<Note>

Stick carton label on marked area on front side and side of carton.

Model No. : TH-43/49CS630S Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
			K1HY05YY0230	WIFI USB CABLE	1	For TH-49CS630S only
	▲	2	K2CQ2YY00131	AC CORD	1	
		3	LOEYAA000068	SPEAKER UNIT	1	
		4	N2QAYB000934	REMOTE TRANSMITTER	1	
	▲	5	N5HBZ0000114	WIFI MODULE	1	
		6	TBL5ZX09041	STAND METAL ASSY	1	
	▲		TBM4GD5733	MODEL NAME PLATE	1	For TH-49CS630S only
	▲		TBM4GD5739	MODEL NAME PLATE	1	For TH-43CS630S only
		8	TBX5ZA03303	KEY BUTTON BRACKET	1	
		9	TKK5ZC50581	LED PANEL	1	
		10	TKP5ZA32206	SIDE AV BRACKET	1	
		11	TPD4GA05131	CUSHION FRONT	1	
		12	TPD4GA06071	CUSHION TOP	1	For TH-43CS630S only
		13	TPD4GA06081	CUSHION BOTTOM	1	For TH-43CS630S only
		12	TPD4GA06161	CUSHION TOP	1	For TH-49CS630S only
		13	TPD4GA06171	CUSHION BOTTOM	1	For TH-49CS630S only
		14	TQZ4GB923	FAN BAG ASSY	1	
	▲		TSCKF0970002	LVDS CABLE	1	For TH-43CS630S only
	▲		TSCKF0970003	LVDS CABLE	1	For TH-49CS630S only
		16	TXFPC01TSUS	CARTON ASSY	1	For TH-49CS630S only
		16	TXFPC01TTUS	CARTON ASSY	1	For TH-43CS630S only
	▲	17	TXN/K1TSUS	K PRINT (FINISHED)	1	
		18	TZBL5ZX09091	PEDESTAL_ASSY	1	For TH-43CS630S only
		18	TZBL5ZX09151	PEDESTAL_ASSY	1	For TH-49CS630S only
		19	TZLP735TSUT	LCD PANEL ASSY	1	For TH-49CS630S only
		19	TZLP769TTUT	LCD PANEL ASSY	1	For TH-43CS630S only
	▲	20	TZRNP11TSUS	P PRINT ASSEMBLIES	1	For TH-49CS630S only
	▲	20	TZRNP11TTUS	P PRINT ASSEMBLIES	1	For TH-43CS630S only
	▲	21	TZT/A1TSUS	A PRINT FINISHED	1	For TH-49CS630S only
	▲	21	TZT/A1TTUS	A PRINT FINISHED	1	For TH-43CS630S only
		22	TZTU4GA1446	BACK COVER COMPLETE ASSY	1	For TH-49CS630S only
		22	TZTU4GA1453	BACK COVER COMPLETE ASSY	1	For TH-43CS630S only