SERVICE MANUAL (TROUBLESHOOTING)

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9-888-904-21

LCD TV

SONY

Sony EMCS (Malaysia) Sdn. Bhd. HES-M
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MODEL LISTS

THIS SERVICE MANUAL CONTAINS **TROUBLESHOOTING** INFORMATION FOR BELOW MODELS:

MODEL

XR-65X95K	XR-75X95K	XR-85X95K
XR-65X93L	XR-75X93L	XR-85X93L
XR-65X93CL	XR-75X93CL	

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Self Diagnosis Supported model

Please refer Service Manual (Disassembly) for below information:

- Tools and Equipments
- FFC Precautions
- Disassembly and Removal Caution
- Wire Dressing
- Circuit Board Location
- Exploded Views and Part Lists
- Smart Core
- Appendix

Note: Pictures provided in this manual may have difference from an actual sets

SAFETY NOTES

1-1. Warnings and Caution.

1) CAUTION :These servicing instructions are for use by qualified service personnel only.
2) To reduce the risk of electric shock, do not perform any servicing other than that stated in the operating instructions unless you are qualified to do so.
3) WARNING!!: An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line. The replaceable fuse should be in the neutral of the mains supply. When replacing the fuse, the mains must be disconnected to de-energize the phase conductors. (*Except AC ADAPTOR, because it does not carry out replacing an internal fuse.)
4) CARRYING THE TV: be sure to follow these guidelines to protect your property and avoid causing serious injury:
   - Carry the TV with an adequate number of people; larger size TVs require two or more people.
   - Correct hand placement while carrying the TV is very important for safety and to avoid damages.
5) SAFETY-RELATED COMPONENT WARNING!!: Components identified by shading and ⚠ mark on the exploded views, and in the parts list are critical for safe operations. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operations are identified in this manual. Follow these procedures whenever critical components are replaced, or improper operation is suspected.
6) IMPORTANT REMINDER FOR TV MAIN BOARD REPLACEMENT:

It is mandatory for service centers to confirm the TV‘s system information after each repair is carried out with Main board replacement. Whenever a TV Main board is replaced, the correct TV Model and Serial number must be reinserted into memory. This is a MANDATORY procedure that each service center must apply.

1-2. Caution Handling of LCD Panel.

When repairing the LCD Panel, make sure you are grounded with a wrist band.
When repairing the LCD Panel on the wall, the panel must be secured using the 4 mounting holes on the rear cover.

1) Do not press the panel or frame edge to avoid the risk of electric shock.
2) Do not scratch or press on the panel with any sharp objects.
3) Do not leave the module in high temperature or in areas of high humidity for an extended period.
4) Do not expose the LCD panel to direct sunlight.
5) Avoid contact with water. It may cause short circuit within the module.
6) Disconnect the AC power when replacing the backlight.
7) Always clean the LCD panel with a soft cloth material.
8) Handle the wires or connectors of the backlight circuit with care. Damaging the wires may cause a short circuit.
9) Protect the panel from ESD to avoid damaging the electronic circuit (C-MOS).

SAFETY NOTES

10) During the repair, DO NOT leave the POWER ON or Burn-in period for more than 1 hour while the TV is facing down on a cloth. Refer Figure 1.

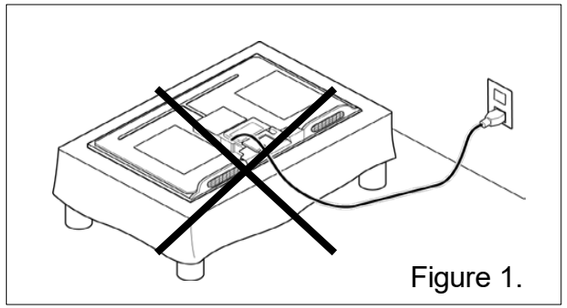


Figure 1.

1-3. Caution_for_Board_handling.

The following problems will occur due to handling of the IC mounted on the board

・Solder crack due to substrate handling (stress).

・IC breakdown due to static electricity (ESD).

When repairing the TV at the customer‘s home or service station or Repair of defect board, please pay attention to the handling of the board.

Substrate that needs attention for handling :

- Main Board（B** Board）
- Backend Board（D** Board）

※Things to prepare in advance.

ESD wrist-strap.

※Caution: ESD wrist-strap to be checked daily.

Use Multi-meter to make sure resistance of ESD wrist-strap is OK.

(R=750K Ohms to 35Mega Ohms)

SAFETY NOTES

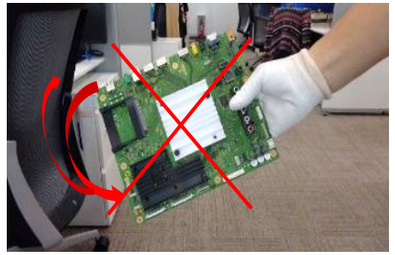
ESD cushion / sheet
Please use a bag containing the board or a special seat

1) Caution for Board handling(Stress).Be sure to observe the following contents.

① Hold the board with both hands

② Do not hold/push Heat-Sink

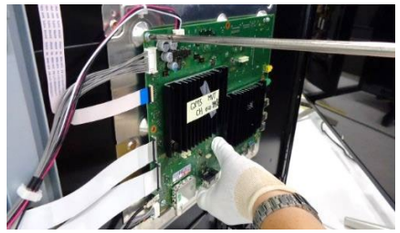
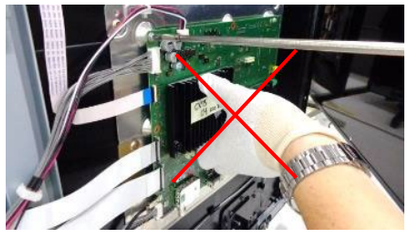
③ Handle with care. Do not swing



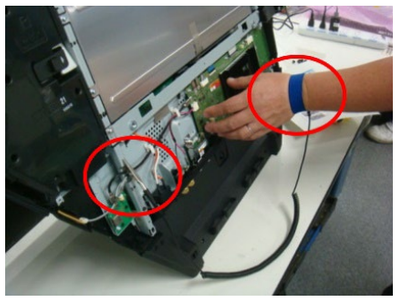
④ Regardless of Good board or Defective board, always put it on
ESD cushion / sheet slowly.

⑤ Do not stack up

SAFETY NOTES

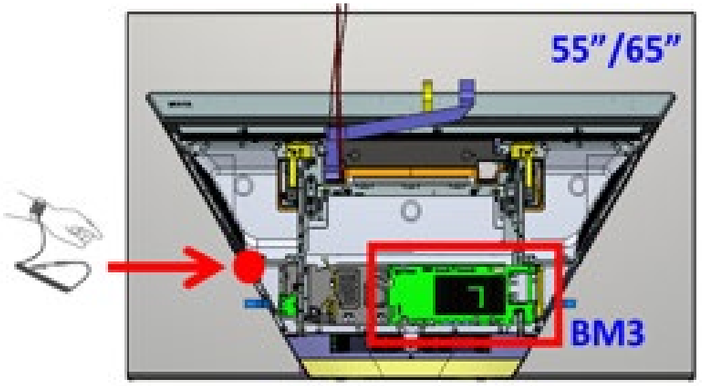
⑥ Keep vertical position and put in/take out from Box. Always put into ESD bag then place into Box/Container Box
⑦ After take defective board out from TV, put it into ESD bag. Do not place on floor mat/carpet direct and always put it on ESD cushion
 

2) Caution for Board handling (ESD).Be sure to observe the following contents

① When take off Rear-Cover, do not touch to board	② Use ESD wrist-strap
	

※Installation example of wrist-strap.

Please connect the clip to the metal part of the chassis of the TV with the wristband grounded. Below is a grounding example of each model.



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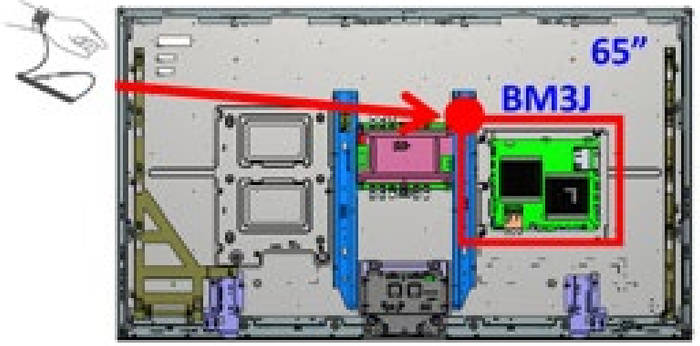


※Caution : ESD wrist-strap to be checked daily.

Use Multi-meter to make sure resistance of ESD wrist-strap is OK.

(R=750K Ohms to 35Mega Ohms)

SAFETY NOTES

③ When holding board, do not hit or touch to Plastic part(s)

④ After take defective board out from TV, put it into ESD bag.
Do not place on floor mat/carpet direct. And, always put it on ESD cushion

1-4. Caution About the Lithium Battery.

1) Danger of explosion if battery is incorrectly replaced.
   Replace only with the same or equivalent type.
2) Outer case broken battery should not contact to water.

SAFETY NOTES

1-5. Safety Check-Out

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:-

1) Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2) Check the inter board wiring to ensure that no wires are pinched or contact high-wattage resistors.
3) Check all control knobs, shields, covers, ground straps and mounting hardware have been replaced. Be certain you have replaced all the insulators.
4) Look for unauthorized replacement parts, particularly transistors that were installed during a previous repair. Point them out to the customer and recommend them replacement.
5) Look for parts which show obvious signs of deterioration even though functioning. Point them to the customer and recommend for replacement.
6) Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7) Check the antenna terminals, metal trim, metalized knobs, screws and all other exposed metal parts for AC leakage. Check leakage test as described next.
8) For safety reasons, repairing the Power board and/or Inverter board is prohibited.

1-6. Leakage Test.

(To protect electric shock when customer touch the terminal.). Leakage current can be measured by V: Voltmeter or oscilloscope (r.m.s or peak reading).

Stabilized power supply instrument and isolated voltage transformer:

Use too much current capacity and isolated voltage transformer does not need to use stabilized power supply equipment.

Specification of RMS voltmeter: Input resistance > 1 Mohm, Input capacitance < 200 pF, Frequency range: 15 Hz – 1MHz . Refer Figure 2. Isolated type volt - meter (FLUKE 8921A etc *1).

*1 Not use FLUKE 8920A that connected to protective earth by diode.

Leakage current of measurement instrument is less than 10μArms when under test equipment AC plug is opened.

Set up the following condition and turn on the set. Applied voltage: Nominal input voltage (Description on Nameplate).

Measure the leakage current between one phase conductor and neutral for terminal A and terminal B.

Read rms value, and then calculate to peak value PEAK VALUE =√2 RMS VALUE.

Comply with the following requirement.

Class II equipment (2-pin plug): for each terminal, the worst value of measurement must not exceed AC 350uA peak).

Note: including AC adaptor, AC adaptor/DC operated unit combination.

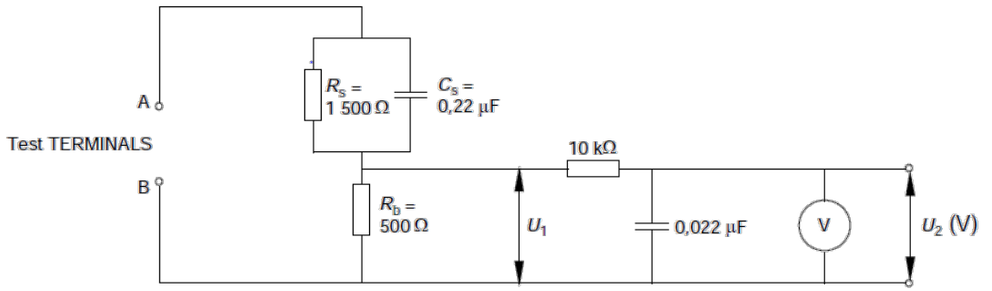


Figure 2 – Measuring network for Leakage Current

SYS SET

SAFETY NOTES

1-7. How to Find a Good Earth Ground.

1) A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground.

2) If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

3) If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure 3).

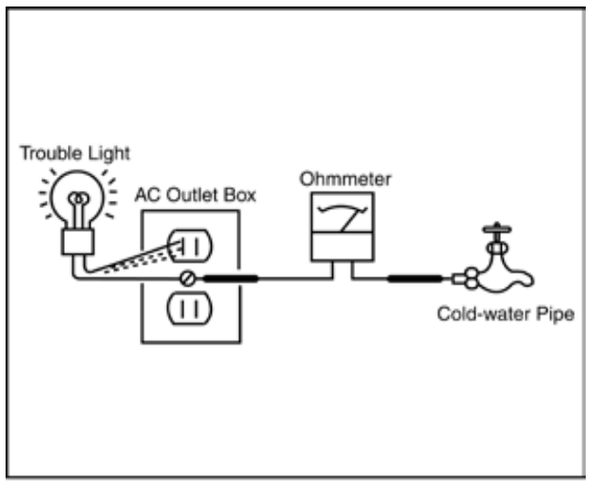


Figure 3. Checking for earth ground.

1-8. Lead Free Information

The circuit boards used in these models have been processed using Lead Free Solder. The boards are identified by the LF logo located close to the board designation.

Figure 4: LF Logo

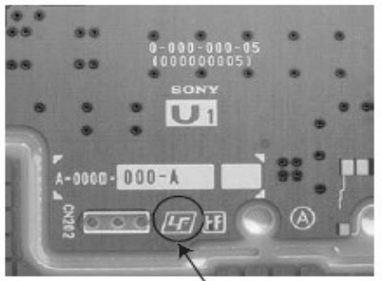


Figure 5: LF logo on circuit board

The servicing of these boards requires special precautions. It is strongly recommended to use Lead Free Solder material in order to guarantee optimal quality of new solder joints.

SELF DIAGNOSIS FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the Smart Core Red LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem.

A definition of the Smart Core Red LED flash indicators is listed in the instruction manual for the user's knowledge and reference.
If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

DIAGNOSTIC TEST INDICATORS

When an error occurs, the Smart Core Red LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.
Result for all of the following diagnostic items are displayed on screen. If the screen displays a "0", no error has occurred .

Self Diag. Quick Reference (LED blinking)

Smart Core RED LED blinking count		Detection Items
2x	MAIN_POWER	<B/G> Main 12V over voltage [MAIN_POWER]
3x	DC_ALERT	<B/G> Main 5.0V failure [DC_ALERT]
	AUD_ERR	<B/S/G> Audio amp. protection [AUD_ERR]
4x	LD_ERR	<P/LD/B/G> LED driver failure/LED voltage protection [LD_ERR] <LD/P/B>*Error detection of the I2C communication between the Main device and the LD IC.[BCM_ERR]*
5x	*BCM_ERR*	<P/T/G/B> *Panel ID EEPROM I2C No ACK (Also, panel power failure is a suspect) [P_ID_ERR]*
6x	*P_ID_ERR*	<P/G/B> Backlight failure [BACKLIGHT_ERR]
7x	BACKLIGHT_ERR	<P/B> Over temperature protection [TEMP_ERR]
8x	TEMP_ERR	<B> 4KBE failure (4KBE WDT) [4KBE_ERR]

Blue italic: detect at startup sequence only.
<G>: Power Supply board, <B>: Main board, <T>: T-con board, <LD>: LD board, <P>: Panel module, <S>: Speaker

SELF DIAGNOSIS FUNCTION

Self Diagnosis Quick Reference (Not LED blinking) – Record Only

Error Item	Detection Items
TU_DEMOD	None
T-CON ERR	<T> T-CON device I2C communication failure
AUD_ERR_I2C	<B> Audio amp I2C communication failure
TEMP_ERR_I2C	<B/H> Temp sensor I2C communication failure
TU_DEMOD_I2C	<B> Tuner & Demodulator I2C communication failure
EARC_ERR_I2C	None
8KBE_COM_ERR	None
8KSHV_ERR	None
AMB_ERR_I2C	<B/H> Ambient sensor I2C communication failure

Notes :
<B>: Main board, <T>: T-con board, <H>: LED / IR & sensor board

SELF DIAGNOSIS FUNCTION

Retry Limitation By Remote / Power Key

Smart Core Red LED blinking count	Error Name	Retry Permission Times *1	Note
2x	MAIN_POWER	STDWN_RTRY_LIMIT_MAINPOWR = 1	
3x	DC_ALERT (5V)	STDWN_RTRY_LIMIT = 2	
	AUD_ERR	STDWN_RTRY_LIMIT = 2	
4x	LD_ERR	STDWN_RTRY_LIMIT = 2	
	BCM_ERR	STDWN_RTRY_LIMIT = 2	
5x	P_ID_ERR	STDWN_RTRY_LIMIT = 2	
6x	BACKLIGHT	STDWN_RTRY_LIMIT = 2	
7x	TEMP_ERR	STDWN_RTRY_LIMIT = 2	
8x	4KBE_ERR	STDWN_RTRY_LIMIT = 2	

→ Number of off/on action for MAIN_POWER shutdown is recorded to STDWN_OFFON_CNT_MAIN_POWER*2

Number of off/on action during the error shutdown is recorded to STDWN_OFFON_CNT*2

*1) If STDWN_OFFON_CNT <= STDWN_RTRY_LIMIT, and STDWN_OFFON_CNT_MAIN_POWER <= STDWN_RTRY_LIMIT_MAINPOWR, you can turn the set on by a remote/power key. At this time, if the error occurs again, the STDWN_OFFON_CNT is incremented by 1.

*2) When the main micro operates normally for STDWN_OFFON_CLR = 60 minutes, STDWN_OFFON_CNT and STDWN_OFFON_CNT_MAIN_POWER are cleared.

TROUBLESHOOTING

Triage Chart – X95K

Before you make the service call:

1. Confirm the symptom from the customer.
2. Select that symptom from the chart.
3. Bring all the boards and cables listed for that symptom.
4. Follow the troubleshooting charts in the technical guides to isolate the board.
5. Chart Color Code: ● : Most likely defective part ■ : Tertiary possible defective part
   ▲ : Secondary possible defective part BLACK TEXT: Board that may correct the symptom

Reference	Symptoms - Shutdown. Power LED blinking red diagnostics sequences							Symptoms - no shutdown Error log record only										No Power	Video - missing or distorted					Remote	Network	Audio	Smart Core	Bluetooth (BT)
	2	3	4	5	6	7	8	TU_ DEMOD	TU_ DEMOD _I2C	TCON_ ERR	FRCTC _I2C	AUD_ ERR_ I2C	4KPQ_ ERR_ I2C	TEMP_ ERR_ I2C	EARC_ ERR_ I2C	8KBE_ COM_ ERR	AMB_ ERR_ I2C	No White Power LED & does not response to remote (Dead Set)	Stationary colored lines or dots	No video One of Inputs	NO RF input	No video of Camera	No video all Inputs	No Remote Operation	Cannot connect to Wireless Network	No Audio	Smart Core no LED (Set is still alive)	Bluetooth / One Step Remote (OSR) can't connect
Main Board	▲	●	■	■	■	●	●		●	▲		●		▲				▲	▲	●	●	▲	●	▲	▲	●	▲	▲
Power Board	●	▲	■	■	■													●					▲			▲		
Receiver Board														●				▲						●			●	
Speaker		▲																								●		
Wi-fi & BT Module																									●			●
LD* Board			▲		▲																		▲					
V By One FFC				▲						▲									▲				▲					
Tcon				●						●									▲				■					
LCD Panel			●	▲	●	▲				■									●				■					
Camera (bundle or accessory)																						●						
Problem	Power	Power	Panel	Panel (Communication)	Panel (Backlight)	TEMP	4KBE																					
		Audio	LD	Tcon																								

TROUBLESHOOTING

Triage Chart – X93L / X93CL

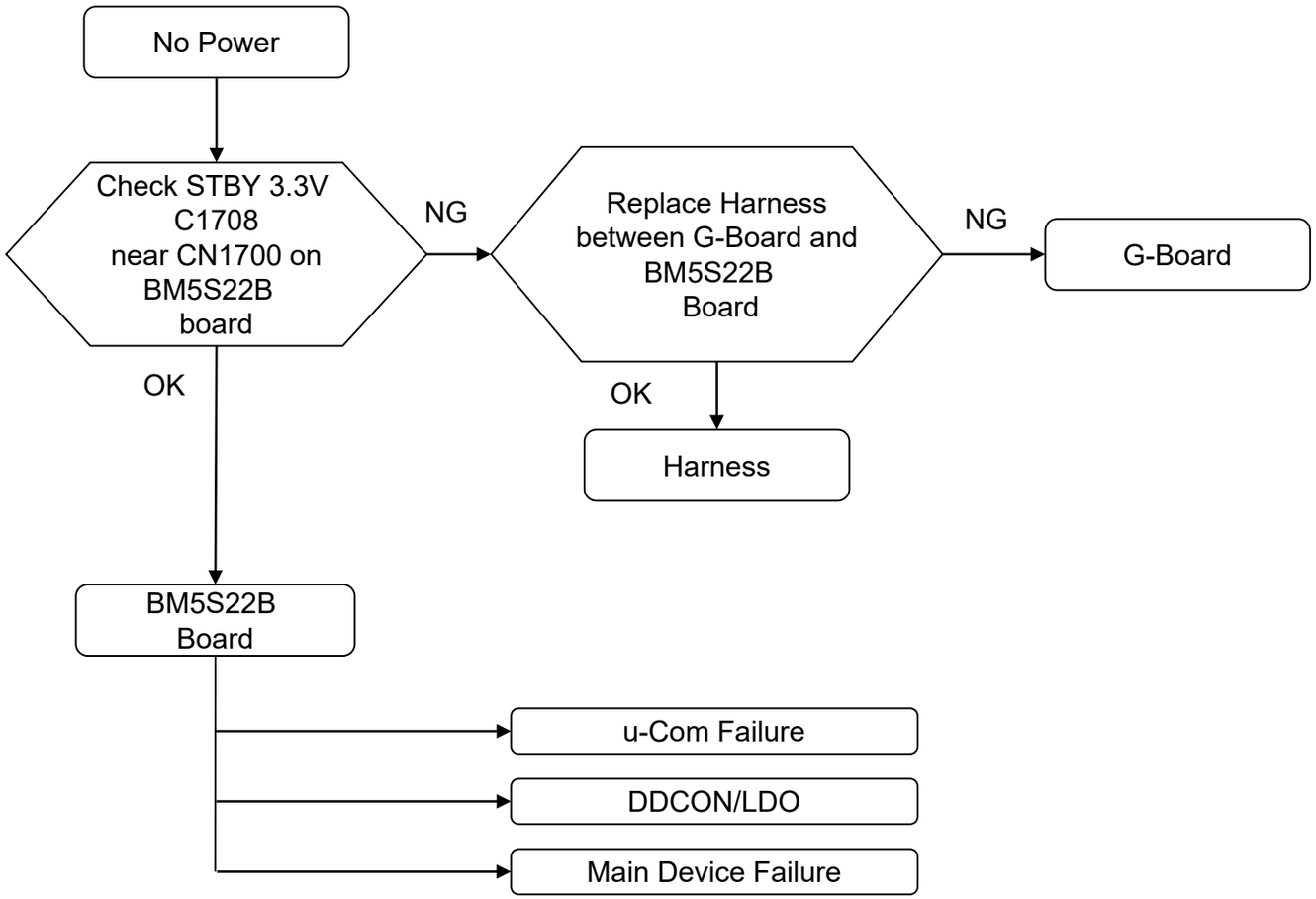
Before you make the service call:

1. Confirm the symptom from the customer.
2. Select that symptom from the chart.
3. Bring all the boards and cables listed for that symptom.
4. Follow the troubleshooting charts in the technical guides to isolate the board.
5. Chart Color Code: ● : Most likely defective part ■ : Tertiary possible defective part
   ▲ : Secondary possible defective part BLACK TEXT: Board that may correct the symptom

Reference	Symptoms - Shutdown. Power LED blinking red diagnostics sequences							Symptoms - no shutdown Error log record only									No Power	Video - missing or distorted					Remote	Network	Audio	Smart Core	Bluetooth (BT)
	2	3	4	5	6	7	8	TU_DEMOD	TU_DEMO_I2C	TCON_ERR	FRCTC_I2C	AUD_ERR_I2C	4KPQ_ERR_I2C	TEMP_ERR_I2C	EARC_ERR_I2C	8KBE_COM_ERR	AMB_ERR_I2C	No White Power LED & does not respond to remote (Dead Set)	Stationary colored lines or dots	No video One of Inputs	NO RF input	No video of Camera	No video all Inputs	No Remote Operation	Cannot connect to Wireless Network	No Audio	Smart Core no LED (Set is still alive)	Bluetooth / One Step Remote (OSR) can't connect
Main Board	▲	●	■	■	■	●	●		●	▲		●		▲			▲	▲	▲	●	●	▲	●	▲	▲	●	▲	▲
Power Board	●	▲	■	■	■													●					▲			▲		
Receiver Board														●			●	▲						●			●	
Speaker		▲																								●		
Wi-fi & BT Module																									●			●
LD* Board			▲		▲																		▲					
V By One FFC				▲						▲									▲				▲					
Tcon				●						●									▲				■					
LCD Panel			●	▲	●	▲				■									●				■					
Camera (accessory)																						●						
Problem	Power	Power	Panel	Panel (Communication)	Panel (Backlight)	TEMP	4KBE																					
		Audio	LD	Tcon																								

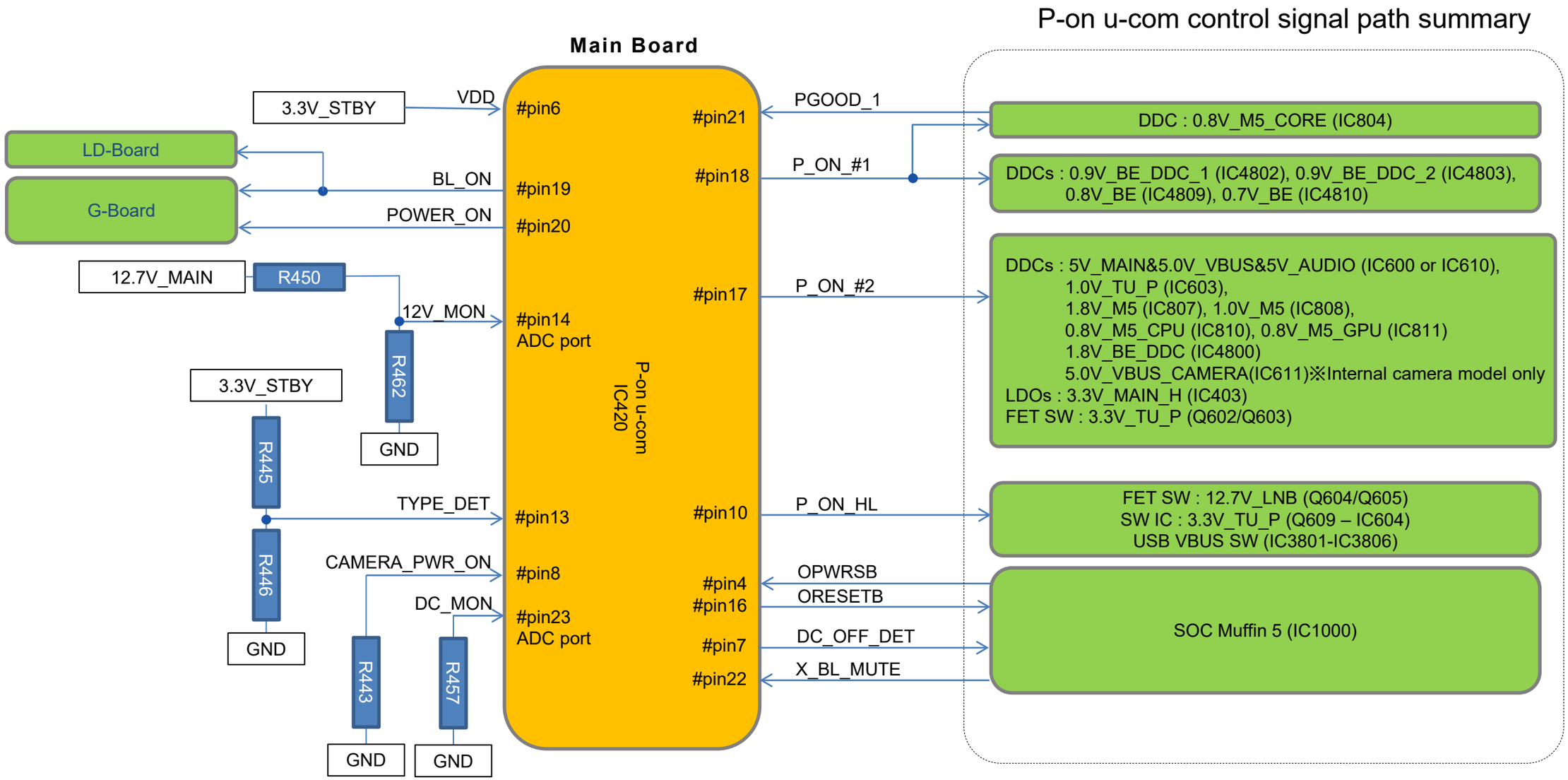
TROUBLESHOOTING

1.0 No Power



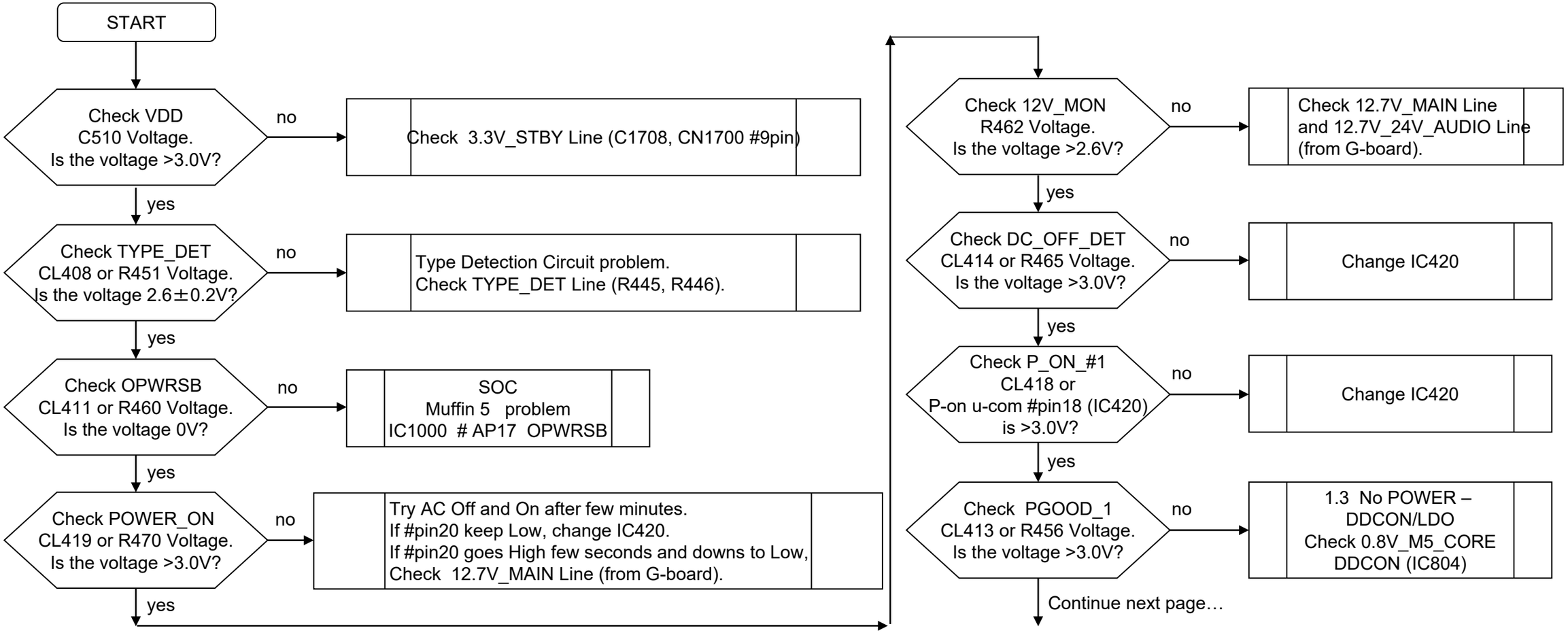
TROUBLESHOOTING

1.2 No Power U – com Failure



TROUBLESHOOTING

1.2 No Power U – com Failure



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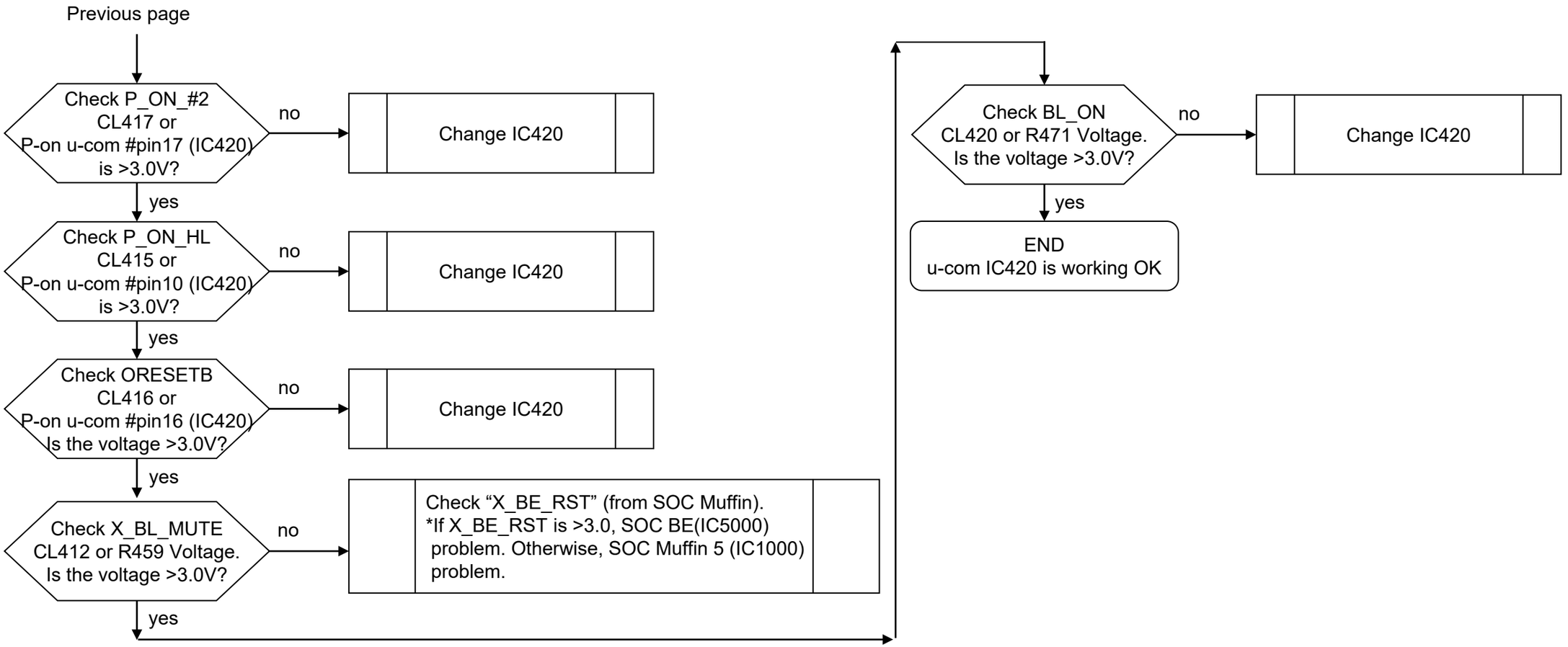
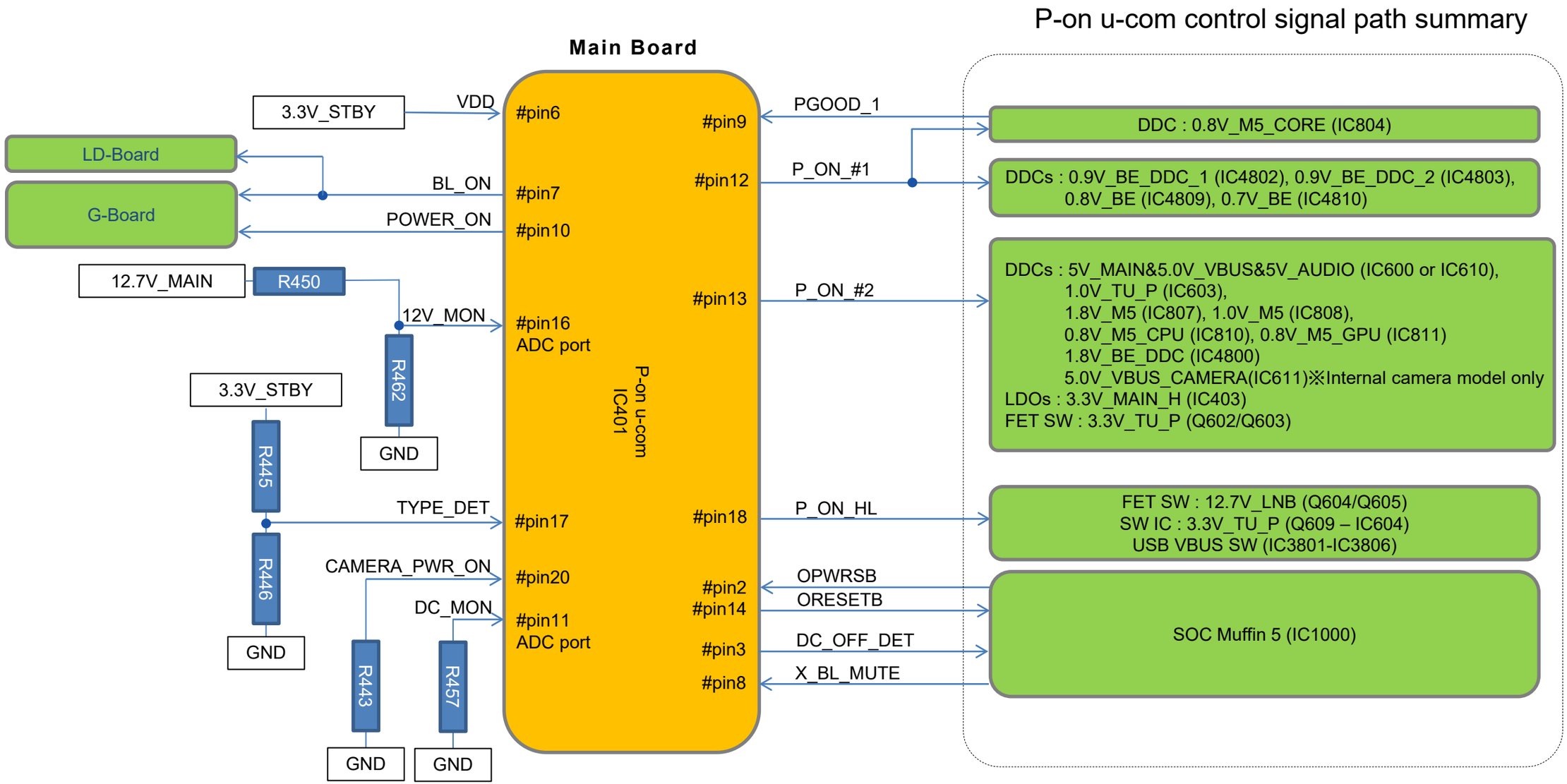


TROUBLESHOOTING

1.2 No Power U – com Failure



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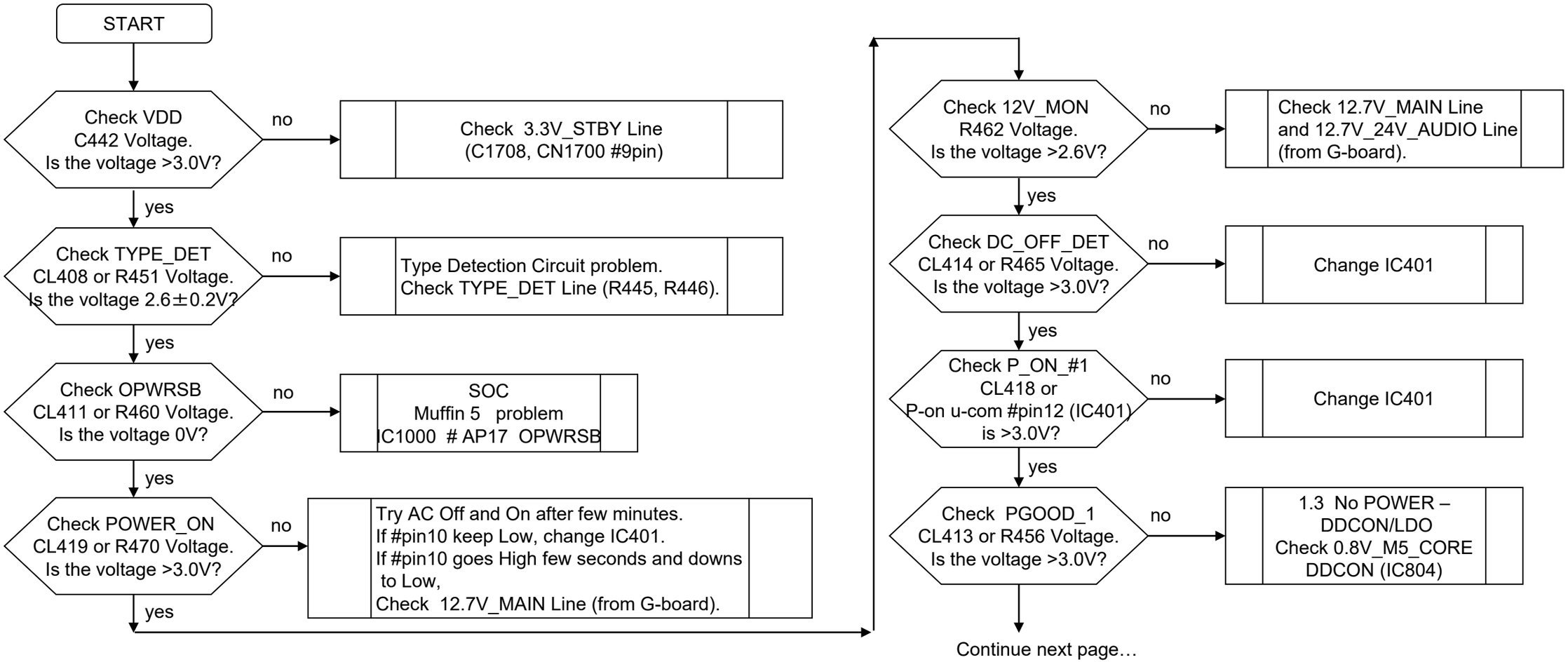
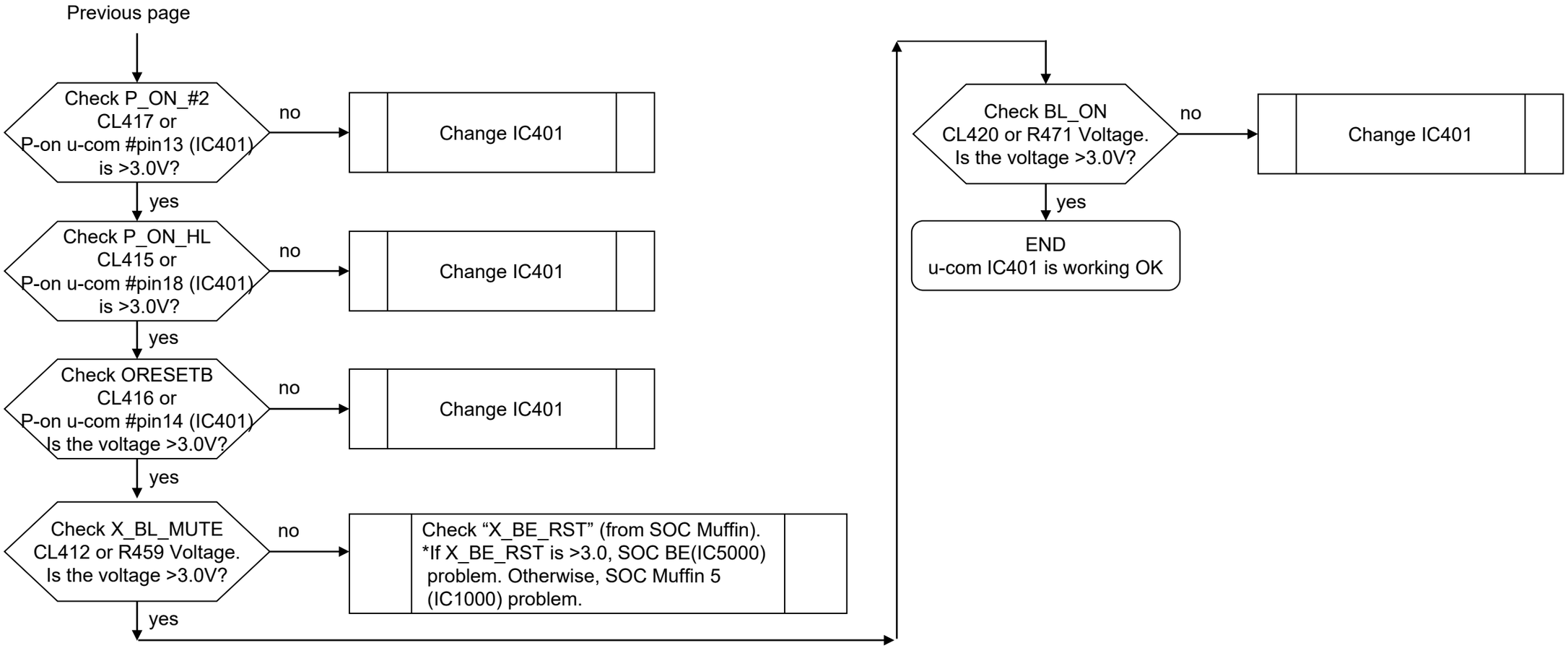
1.2 No Power U – com Failure



TROUBLESHOOTING

1.2 No Power U – com Failure



TROUBLESHOOTING

1.3 No Power – DDCON / LDO

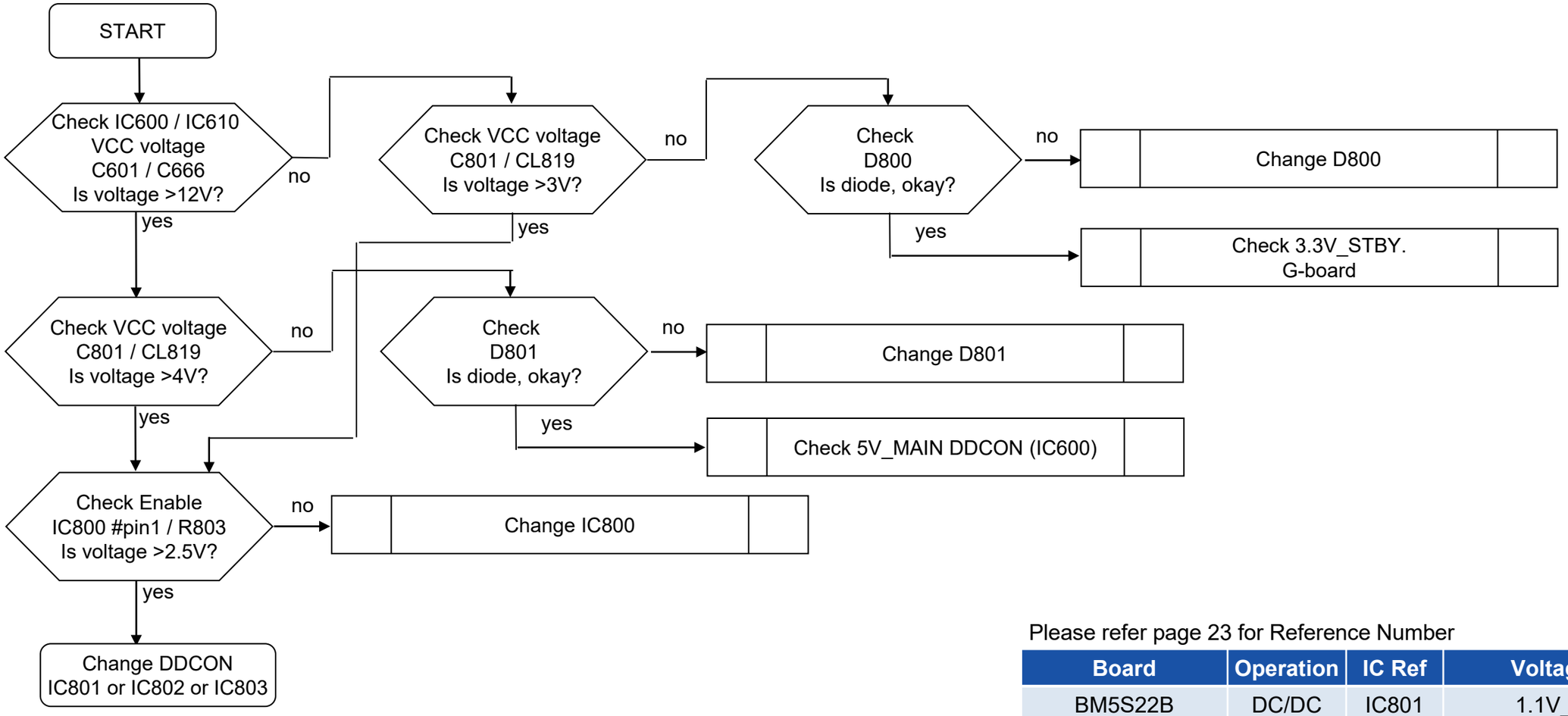
P_ON_#1 : P-on u-com IC401 #pin12
P_ON_#2 : P-on u-com IC401 #pin13

Check item summary

Board	Operation	IC Ref	Voltage supply	Output ref.	Enable pin	Enable source	Fuse	Vcc ref.
BM5S22B	DC/DC	IC418 or IC419	5.0V_STBY_H	C508 or C514 /JL1212	R557	R557(3.3V_STBY)	-	C505 or C511
	LDO	IC403	3.3V_MAIN_H	C416/CL402	R413(shorted)	P_ON_#2	-	C415
	DC/DC	IC600 or IC610	5V_MAIN/5V_AUDIO	C610 or C673/JL601	R600 or R670/ CL604 or CL615	P_ON_#2	F600 or F602	C601 or C666
	DC/DC	IC601	3.3V_MAIN/3.3V_AUDIO	C619/JL603	R658/CL605	R658(1.8V_BE_DDC)	F601	C618
	DC/DC	IC603	1.0V_TU_P	C630/CL607	R631(shorted)/JL607	P_ON_#2 or IC1000 #AL18 (EWS_PWR_ON)	-	C628
	DC/DC	IC611	5.0V_VBUS_CAMERA	C682/JL635	R681/CL616	P_ON_#2	F603	C681
	DC/DC	IC801	1.1V_M5_DDR	C806/JL801	R913(shorted)	R804/R907 (3.3V_STBY)	-	C801/CL819
	DC/DC	IC802	0.9V_M5_STBY	C809/CL803	R908(shorted)	R804/R907 (3.3V_STBY)	-	C807/CL822
	DC/DC	IC803	1.8V_STBY	C812/CL811	R822(shorted)	R804 (3.3V_STBY)	-	C810/CL824
	DC/DC	IC804	0.8V_M5_CORE	C846/JL803	R849(shorted)/CL816	P_ON_#1	F802	C831
	LDO	IC806	1.8V_M5_ET_STBY	C818/JL808	R832(shorted)	IC1000 #AN19 (ETHER_PWR_EN)	-	C817/CL826
	DC/DC	IC807	1.8V_M5	C823/JL811	R833(shorted)/CL827	P_ON_#2	F800	C822
	DC/DC	IC808	1.0V_M5	C829/JL813	R839(shorted)/CL828	P_ON_#2	F801	C828
	LDO	IC809	3.3V_M5_STBY	C816/CL831	R917	R917(3.3V_STBY)	-	C815
	DC/DC	IC810	0.8V_M5_CPU	C861/JL816	R914/CL829	P_ON_#2	F803	C855
	DC/DC	IC811	0.8V_M5_GPU	C874/JL818	R915/CL830	P_ON_#2	F804	C868
	DC/DC	IC4800	1.8V_BE_DDC	C4805/JL4801	R4801(shorted)/CL4816	P_ON_#2	F4800	C4803
	DC/DC	IC4801	1.1V_BE	C4813/JL4803	R4907/CL4817	R4907(1.8V_BE_DDC)	F4801	C4812
	DC/DC	IC4802	0.9V_BE_DDC_1	C4820/JL4805	R4819(shorted)/CL4818	P_ON_#1	F4802	C4819
	DC/DC	IC4803	0.9V_BE_DDC_2	C4828/JL4807	R4827(shorted)/CL4819	P_ON_#1	F4803	C4827
	DC/DC	IC4809	0.8V_BE	C4860/JL4819	R4849(shorted)/CL4808	P_ON_#1	F4804	C4845
	DC/DC	IC4810	0.7V_BE	C4878/JL4821	R4865(shorted)/CL4811	P_ON_#1	F4805	C4863

TROUBLESHOOTING

1.3 No Power – DDCONs check

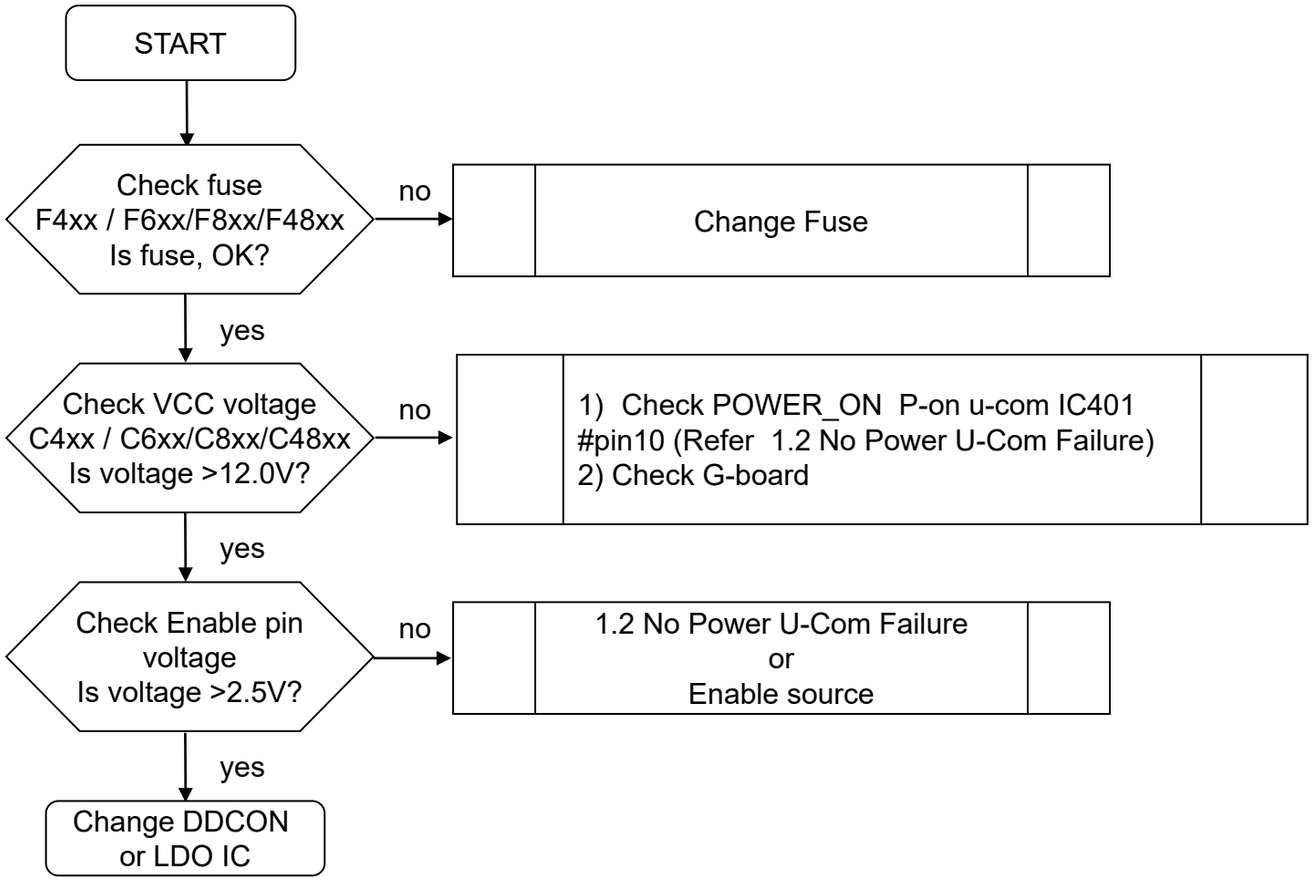


Please refer page 23 for Reference Number

Board	Operation	IC Ref	Voltage supply
BM5S22B	DC/DC	IC801	1.1V_M5_DDR
BM5S22B	DC/DC	IC802	0.9V_M5_STBY
BM5S22B	DC/DC	IC803	1.8V_STBY

TROUBLESHOOTING

1.3 No Power – DDCONs & LDO check



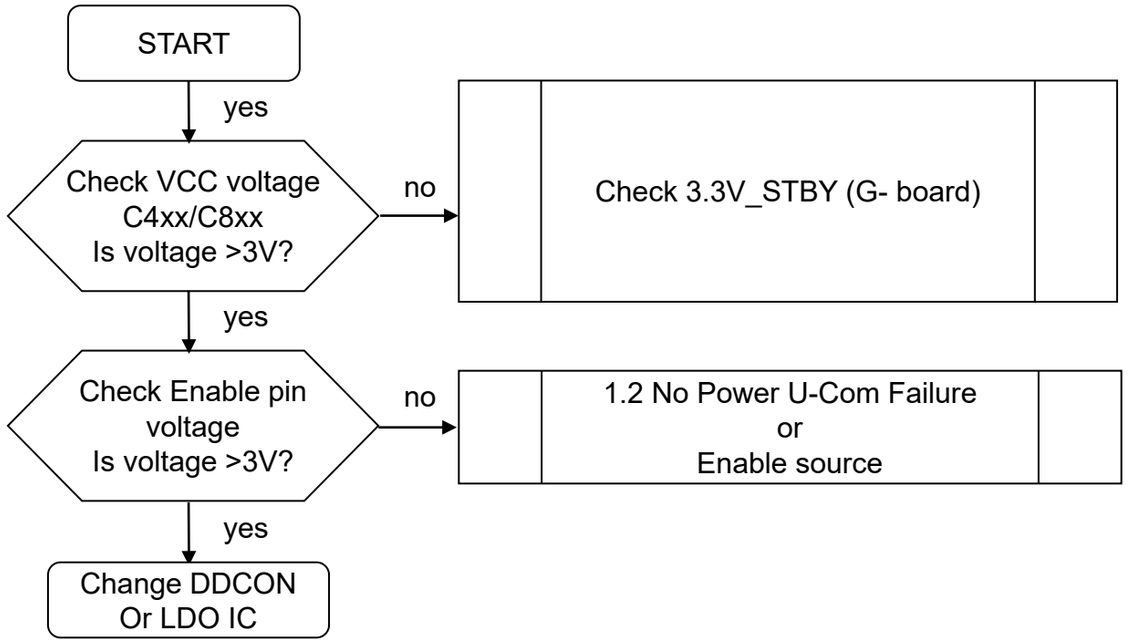
Please refer page 23 for Reference Number

Board	Operation	IC Ref	Voltage supply
BM5S22B	DC/DC	IC600 or IC610	5V_MAIN/5V_AUDIO
BM5S22B	DC/DC	IC601	3.3V_MAIN/3.3V_AUDIO
BM5S22B	DC/DC	IC804	0.8V_M5_CORE
BM5S22B	DC/DC	IC807	1.8V_M5
BM5S22B	DC/DC	IC808	1.0V_M5
BM5S22B	DC/DC	IC810	0.8V_M5_CPU
BM5S22B	DC/DC	IC811	0.8V_M5_GPU

Board	Operation	IC Ref	Voltage supply
BM5S22B	DC/DC	IC4800	1.8V_BE_DDC
BM5S22B	DC/DC	IC4801	1.1V_BE
BM5S22B	DC/DC	IC4802	0.9V_BE_DDC_1
BM5S22B	DC/DC	IC4803	0.9V_BE_DDC_2
BM5S22B	DC/DC	IC4809	0.8V_BE
BM5S22B	DC/DC	IC4810	0.7V_BE

TROUBLESHOOTING

1.3 No Power – DDCONs & LDO check

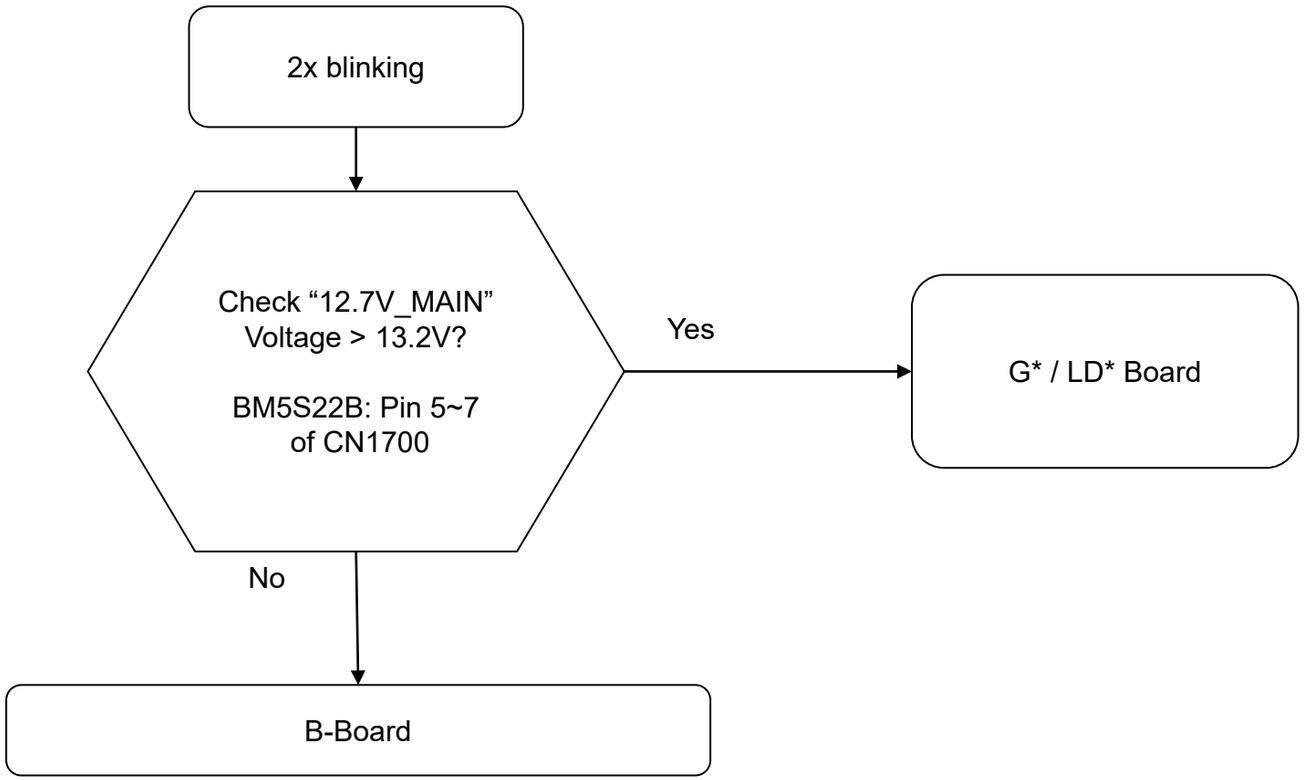


Please refer page 23 for Reference Number

Board	Operation	IC Ref	Voltage supply
BM5S22B	DC/DC	IC418 / IC419	5.0V_STBY_H
BM5S22B	LDO	IC403	3.3V_MAIN_H
BM5S22B	LDO	IC806	1.8V_M5_ET_STBY
BM5S22B	LDO	IC809	3.3V_M5_STBY

TROUBLESHOOTING

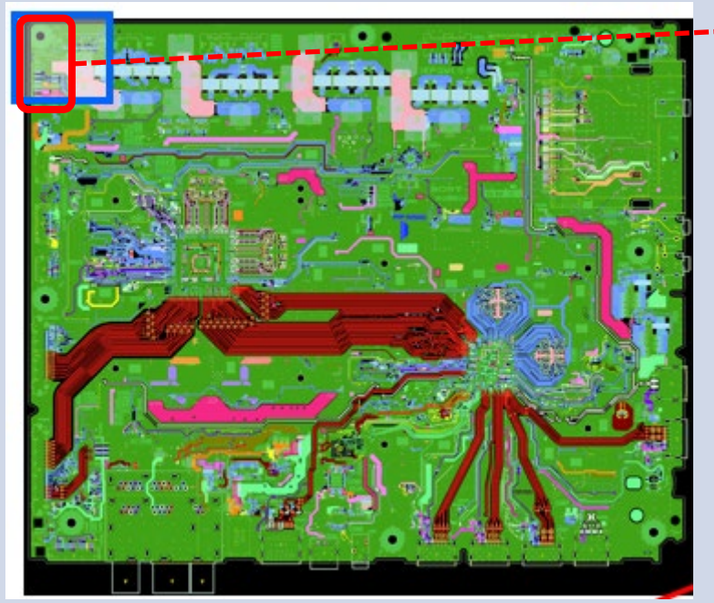
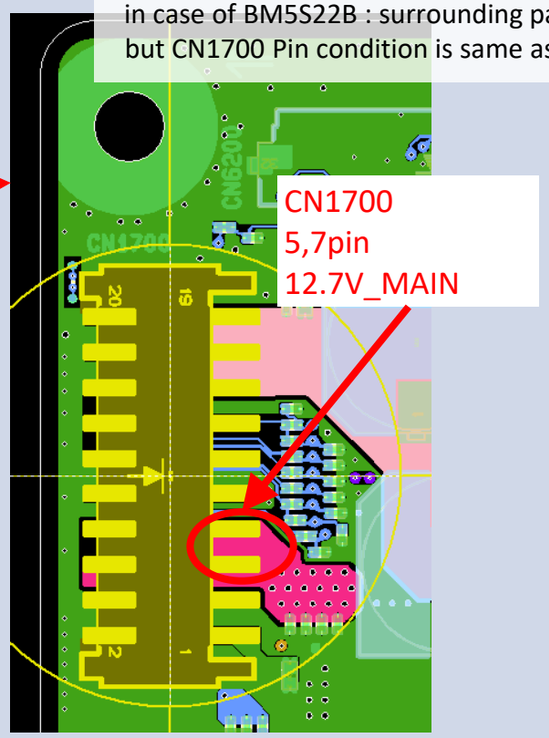
2.0 2x LED Blinking – Main Power Error



TROUBLESHOOTING

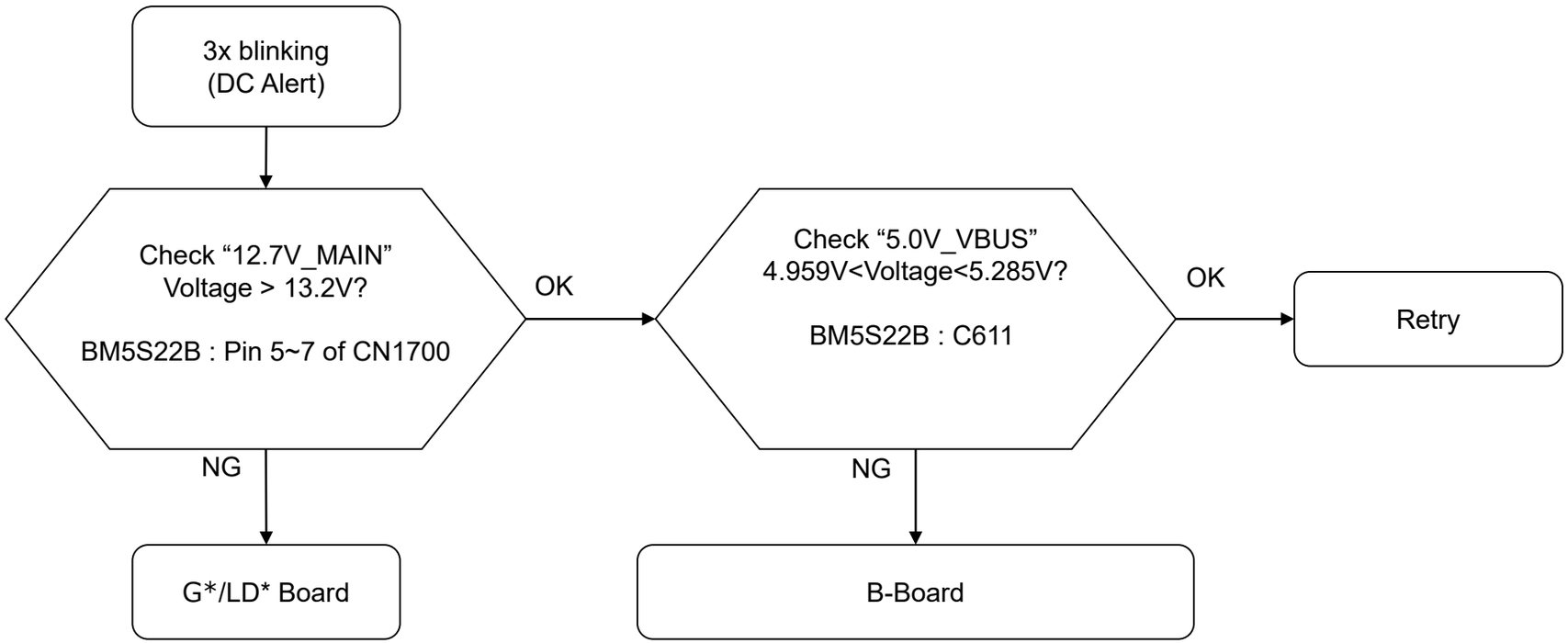
2.0 2x LED Blinking – Main Power Error

Check Point for BM5S22B

Board PWB (A side)	Detail
	* This image is BM5S22. in case of BM5S22B : surrounding parts layout are little different, but CN1700 Pin condition is same as BM5S22. 

TROUBLESHOOTING

2.1 3x LED Blinking – DC Alert

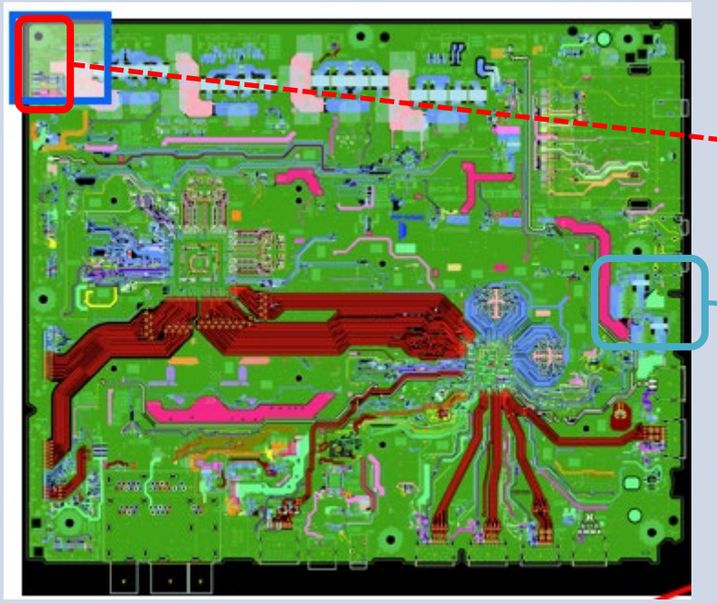
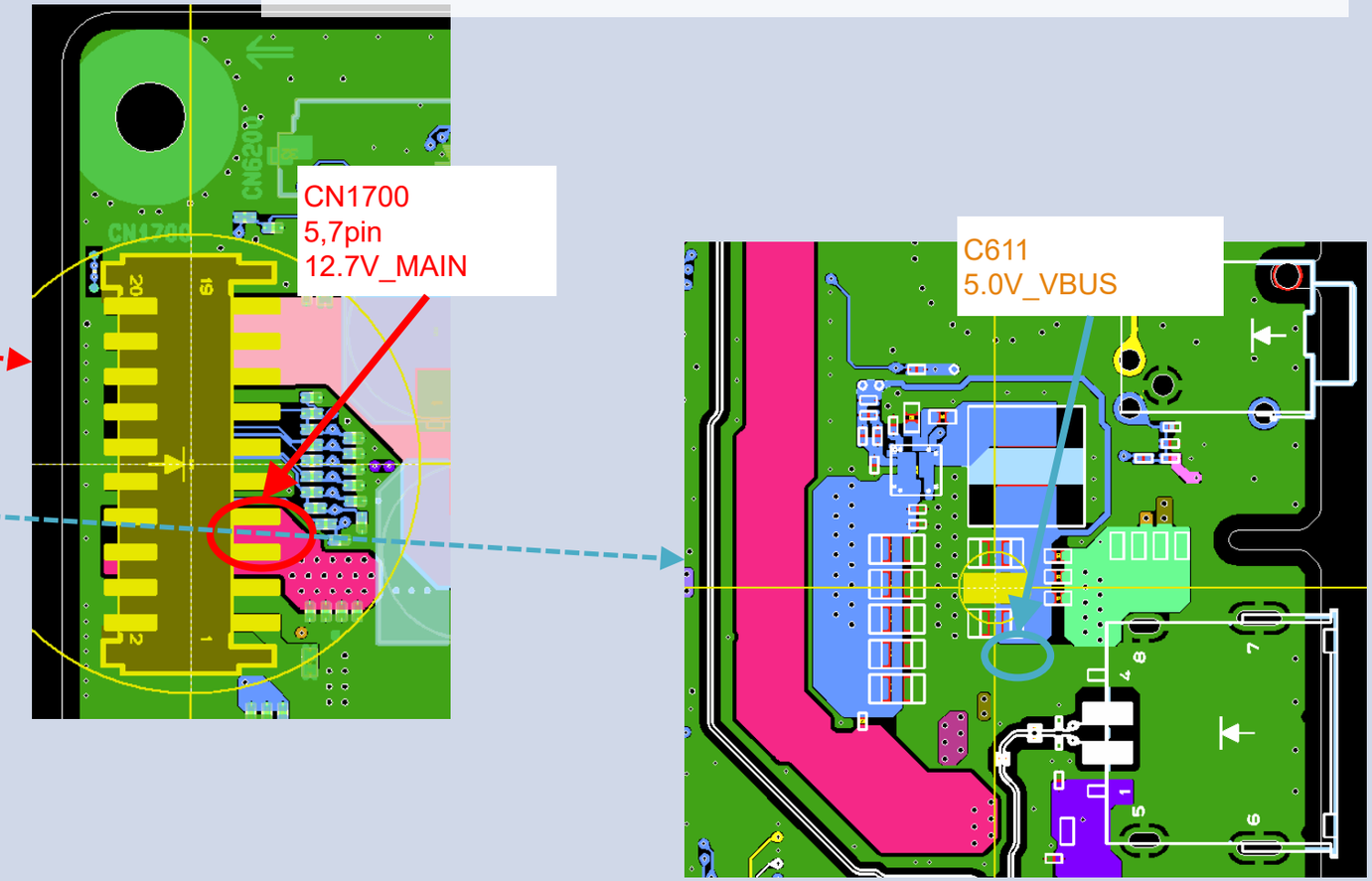


Error Item	Number of STBY LED Blinking	Description
DC_ALERT	3	Main 5V power failure
AUD_ERR	3	Audio amp. protection

TROUBLESHOOTING

2.1 3x LED Blinking – DC Alert

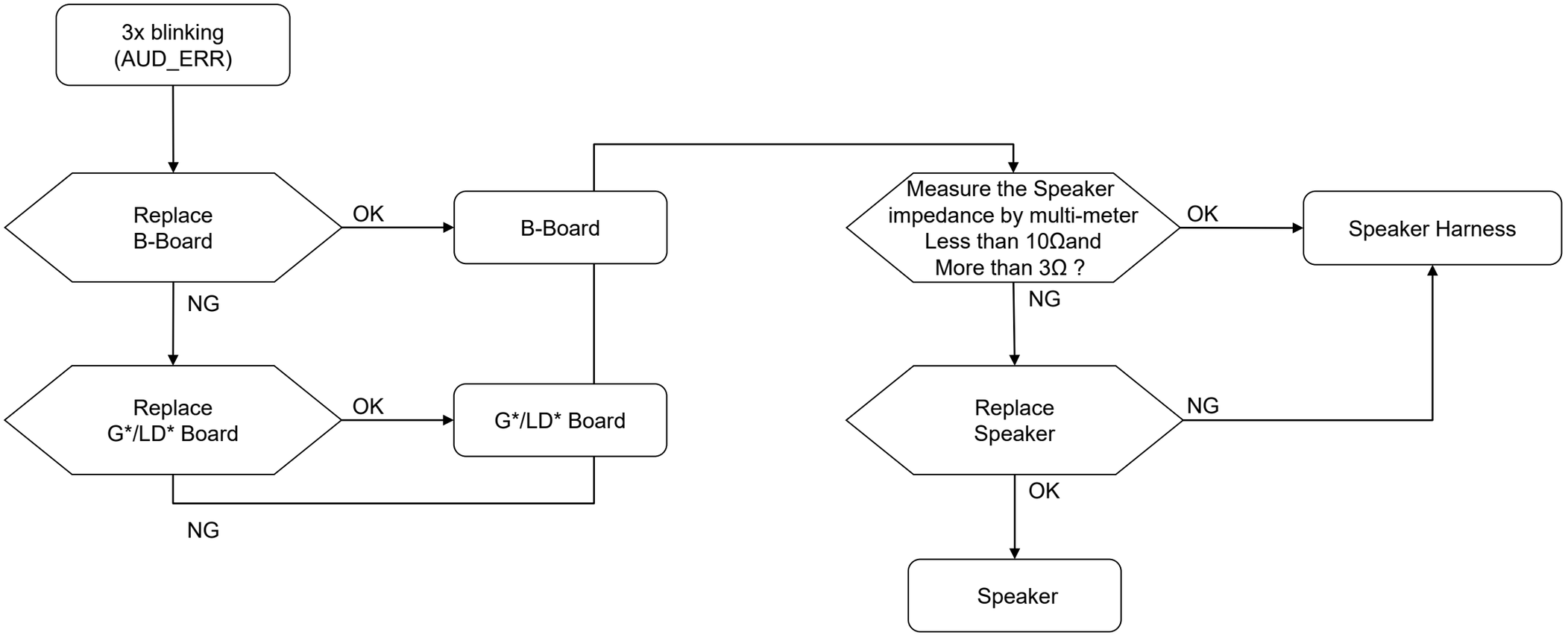
Check Point for BM5S22B

Board PWB (A side)	Detail
	

* This image is BM5S22.
in case of BM5S22B : surrounding parts layout are little different,
but CN1700 Pin condition is same as BM5S22.

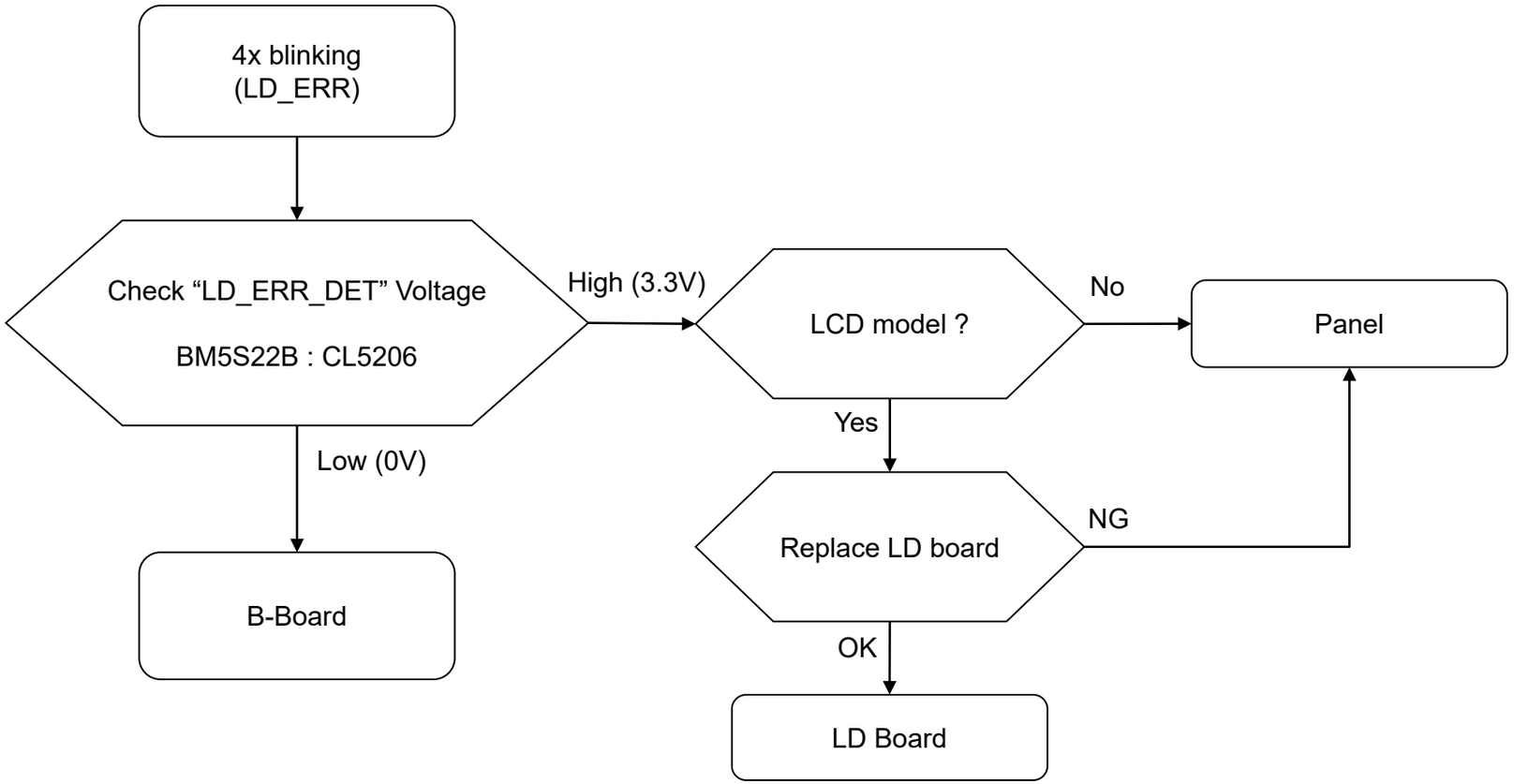
TROUBLESHOOTING

2.2 3x LED Blinking – AUD_ERR



Error Item	Number of STBY LED Blinking	Description
DC_ALERT	3	Main 5V power failure
AUD_ERR	3	Audio amp. protection

2.3 4x LED Blinking – LD_ERR

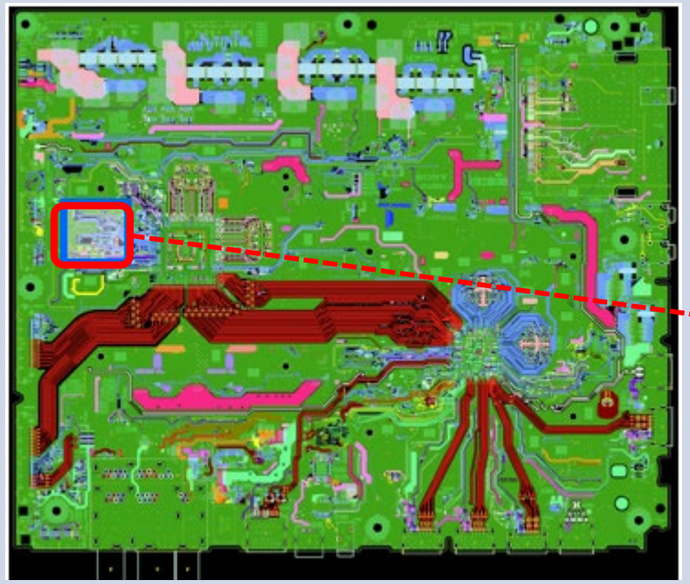
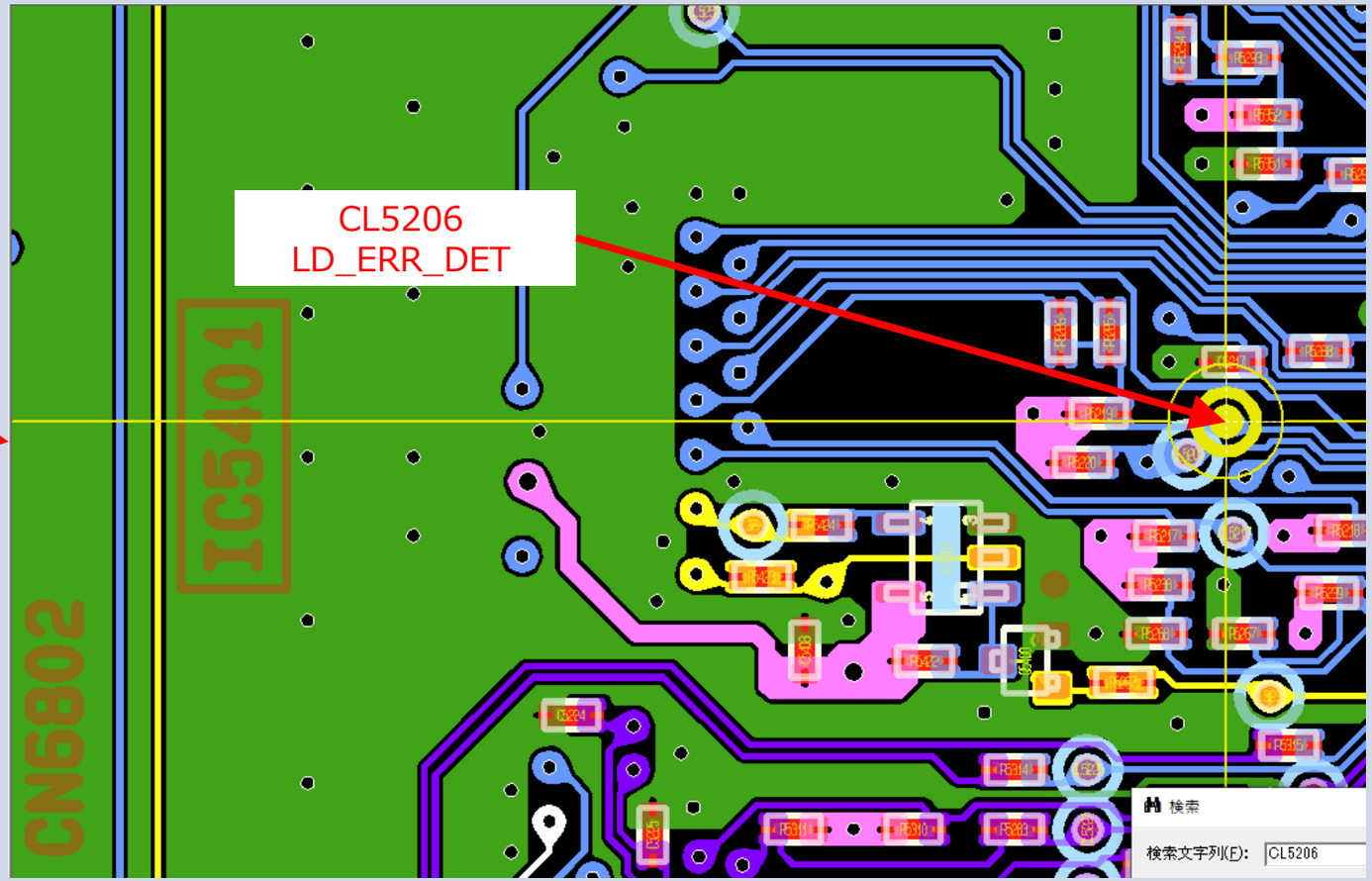


Error Item	Number of STBY LED Blinking	Description	
LD_ERR	4	LCD	LED driver failure/LED voltage protection
		OLED	TCON internal or I2C communication failure

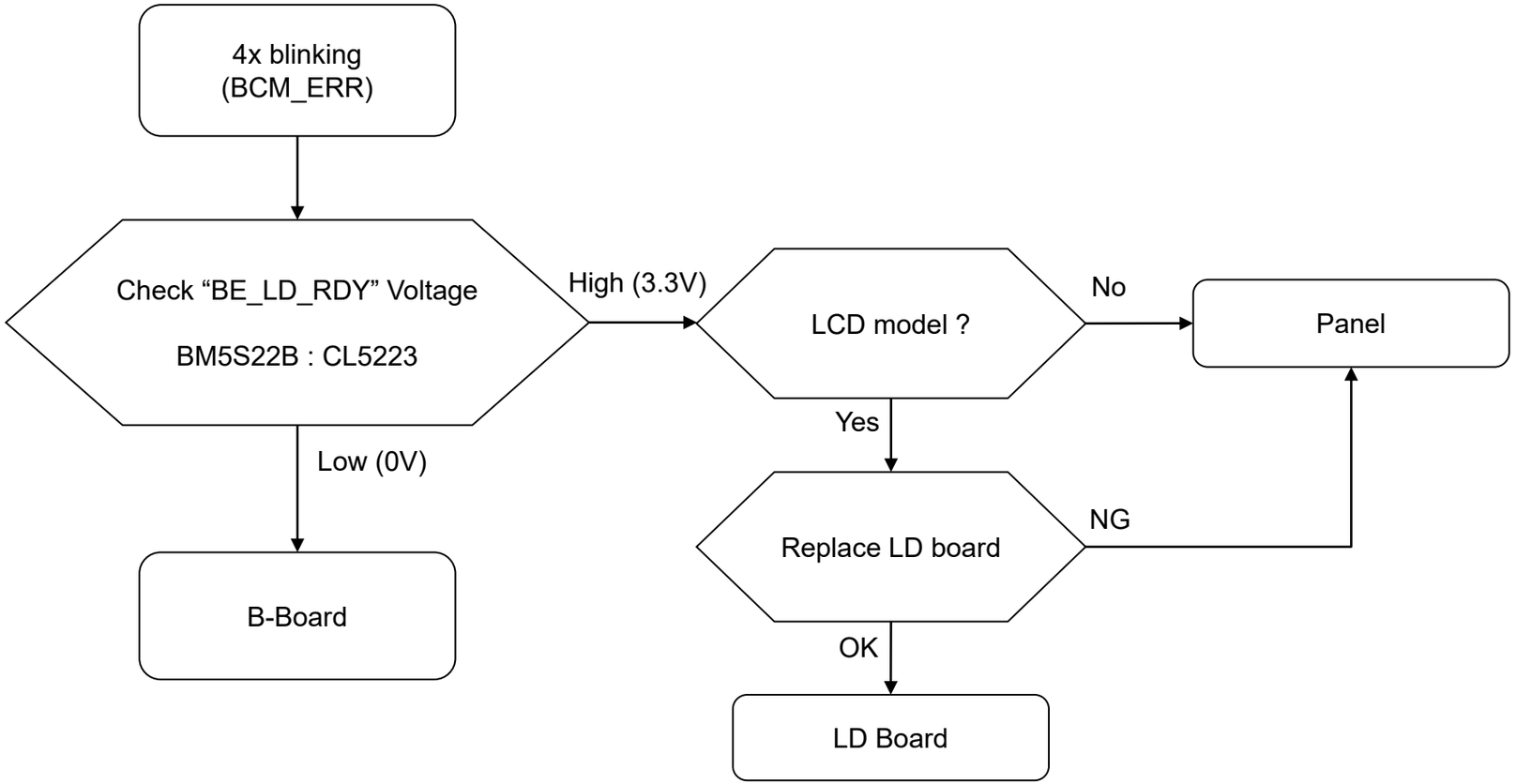
TROUBLESHOOTING

2.3 4x LED Blinking – LD_ERR

Check Point for BM5S22B

Board PWB (A side)	Detail
	

2.4 4x LED Blinking – BCM_ERR

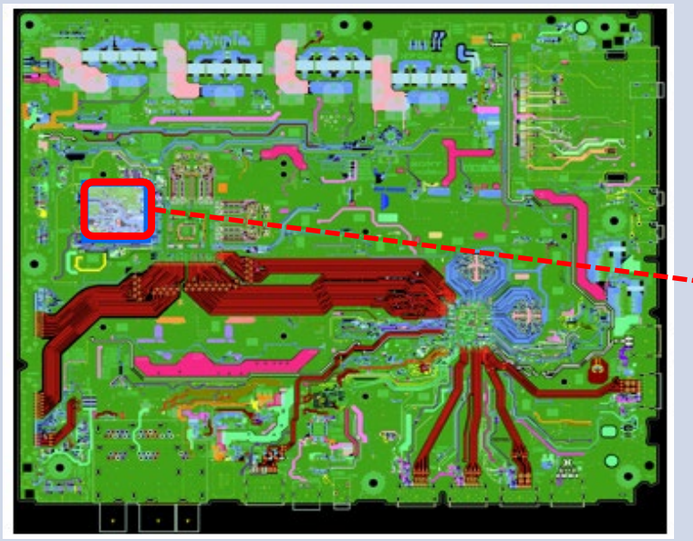
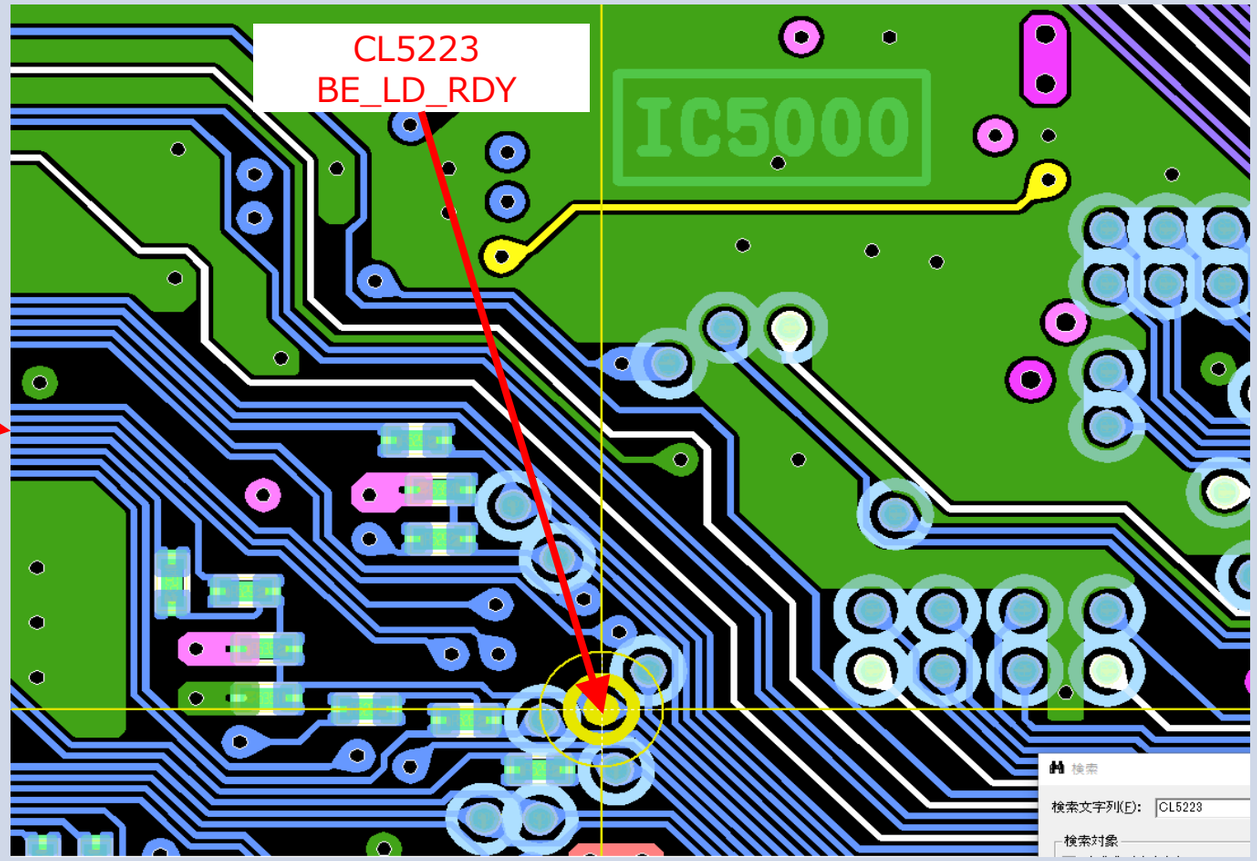


Error Item	Number of STBY LED Blinking	Description	
BCM_ERR	4	LCD	LD IC initialize or I2C communication failure
		OLED	Panel power failure

TROUBLESHOOTING

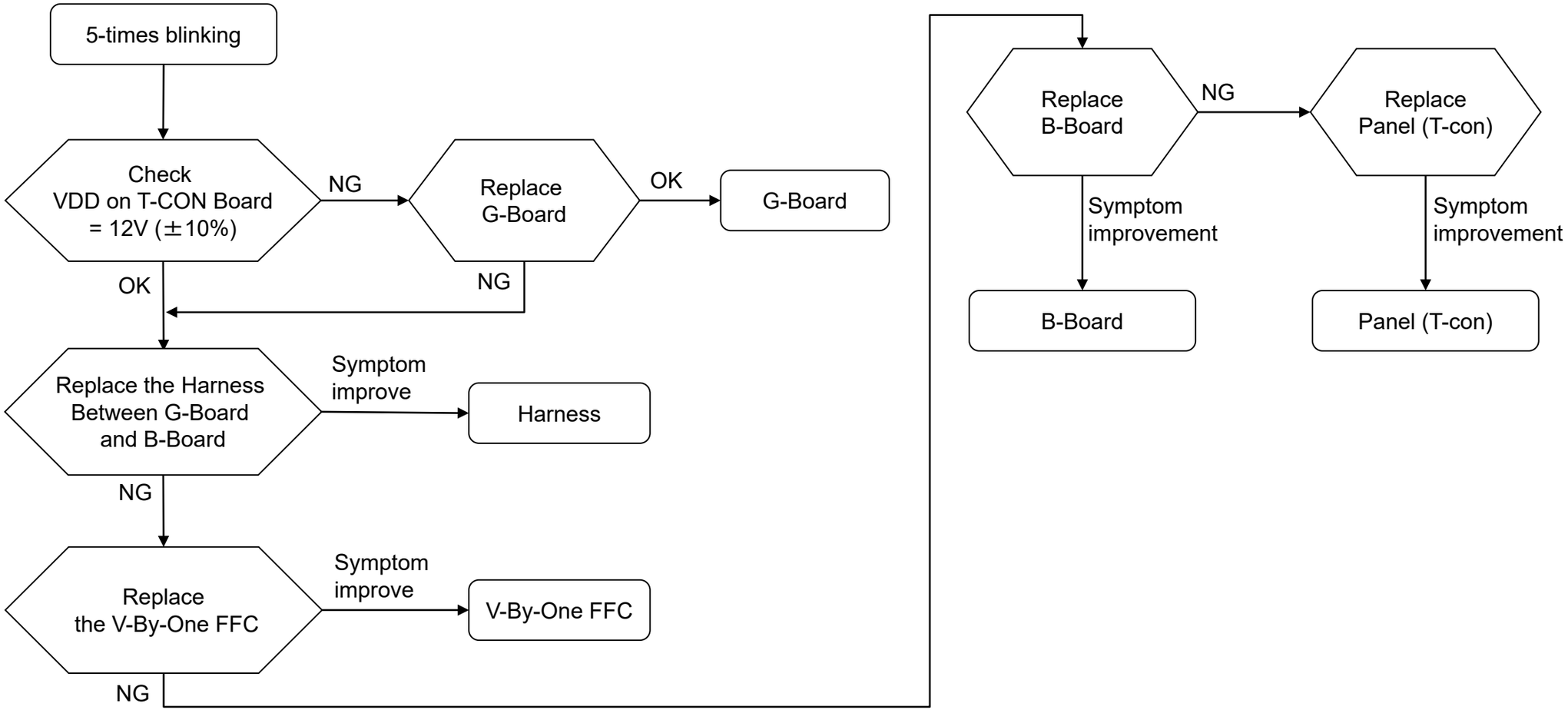
2.4 4x LED Blinking – BCM_ERR

Check Point for BM5S22B

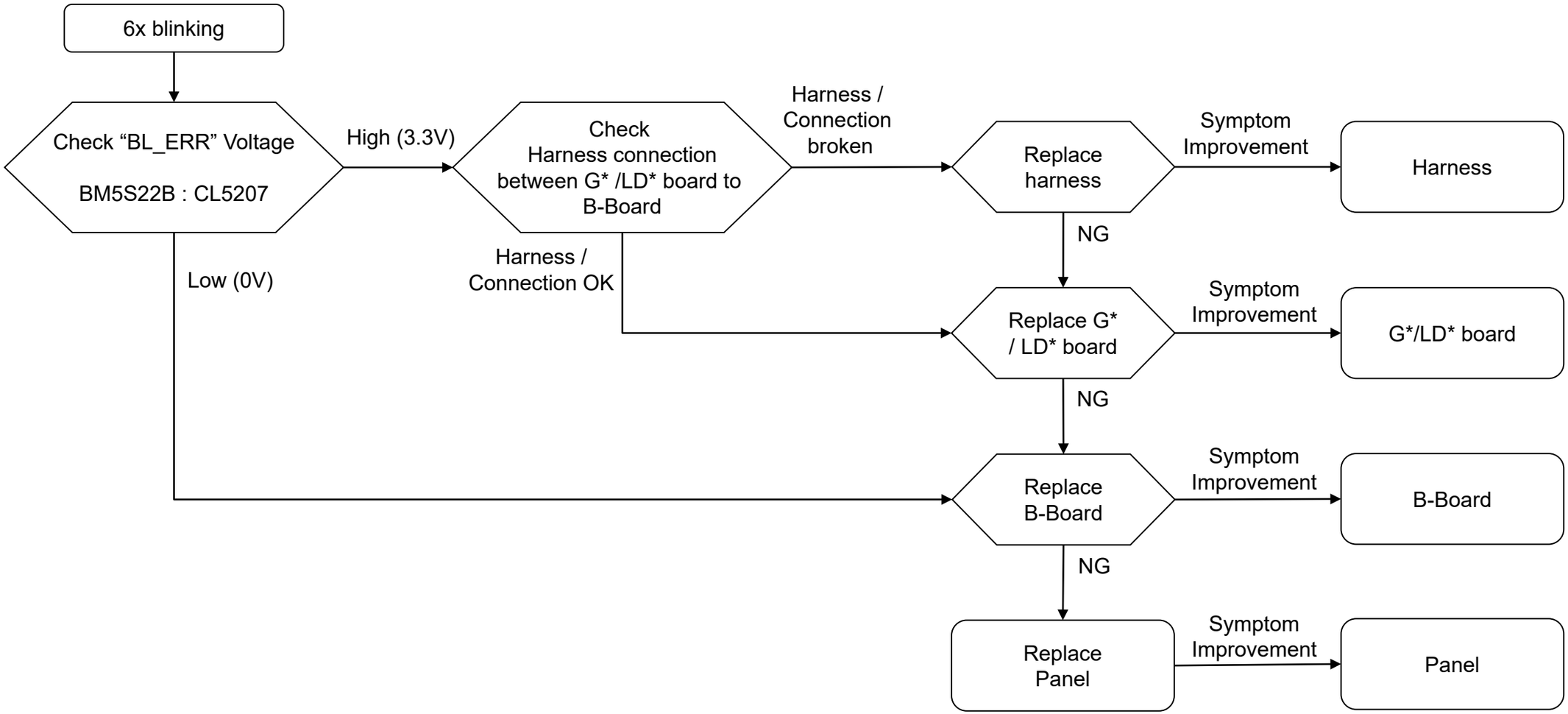
Board PWB (A side)	Detail
	

TROUBLESHOOTING

2.5 5x LED Blinking – P_ID_ERR

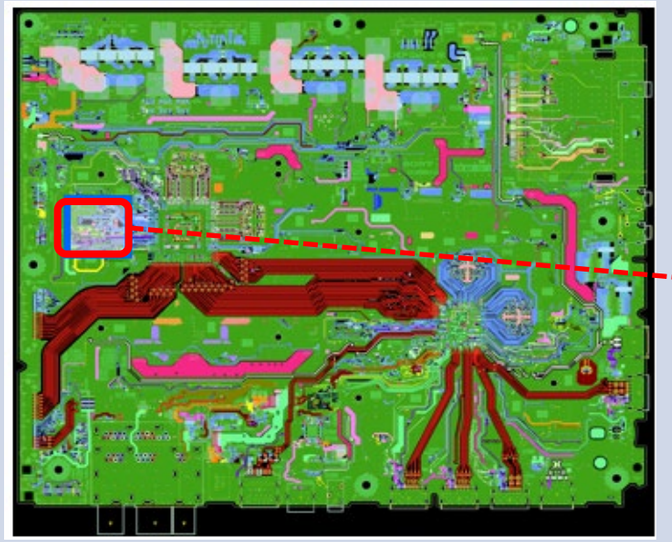
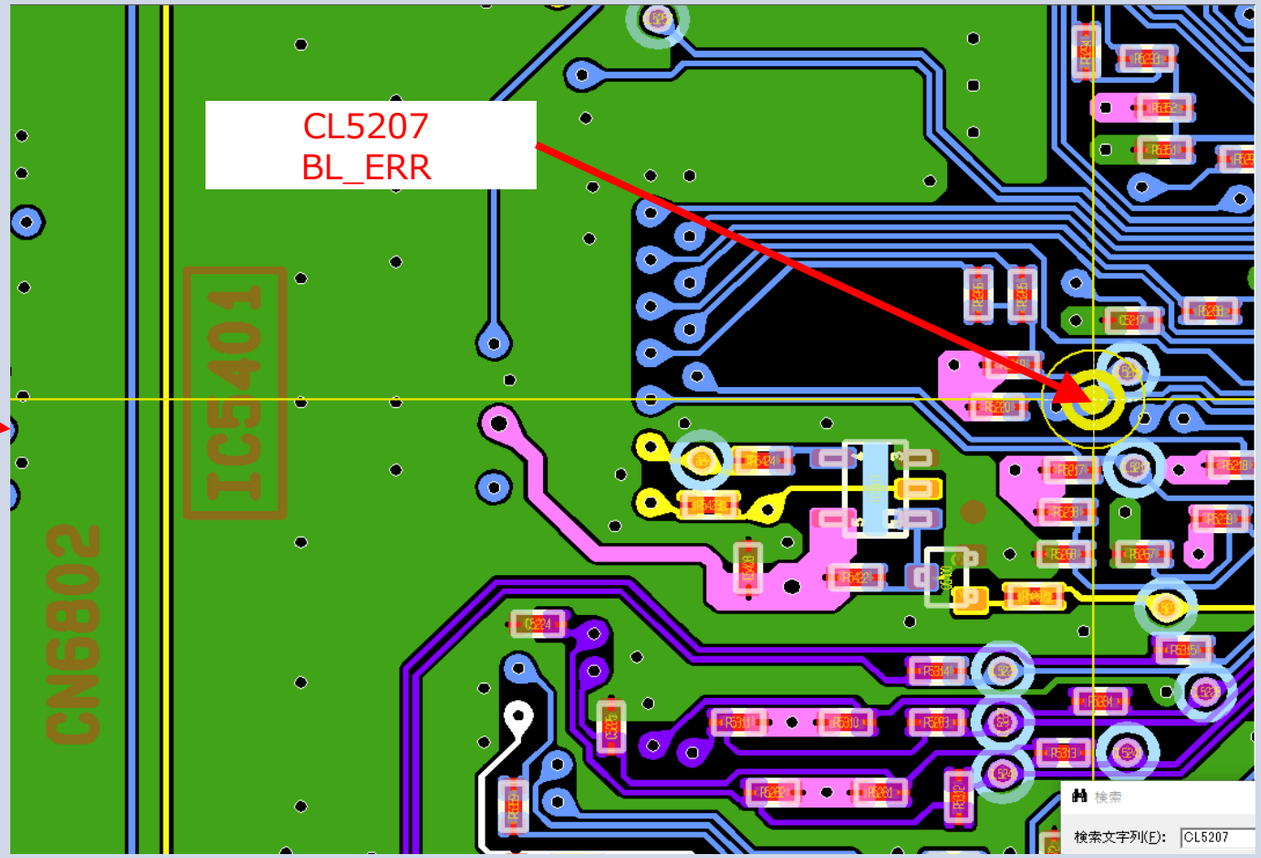


2.6 6x LED Blinking – Backlight_ERR

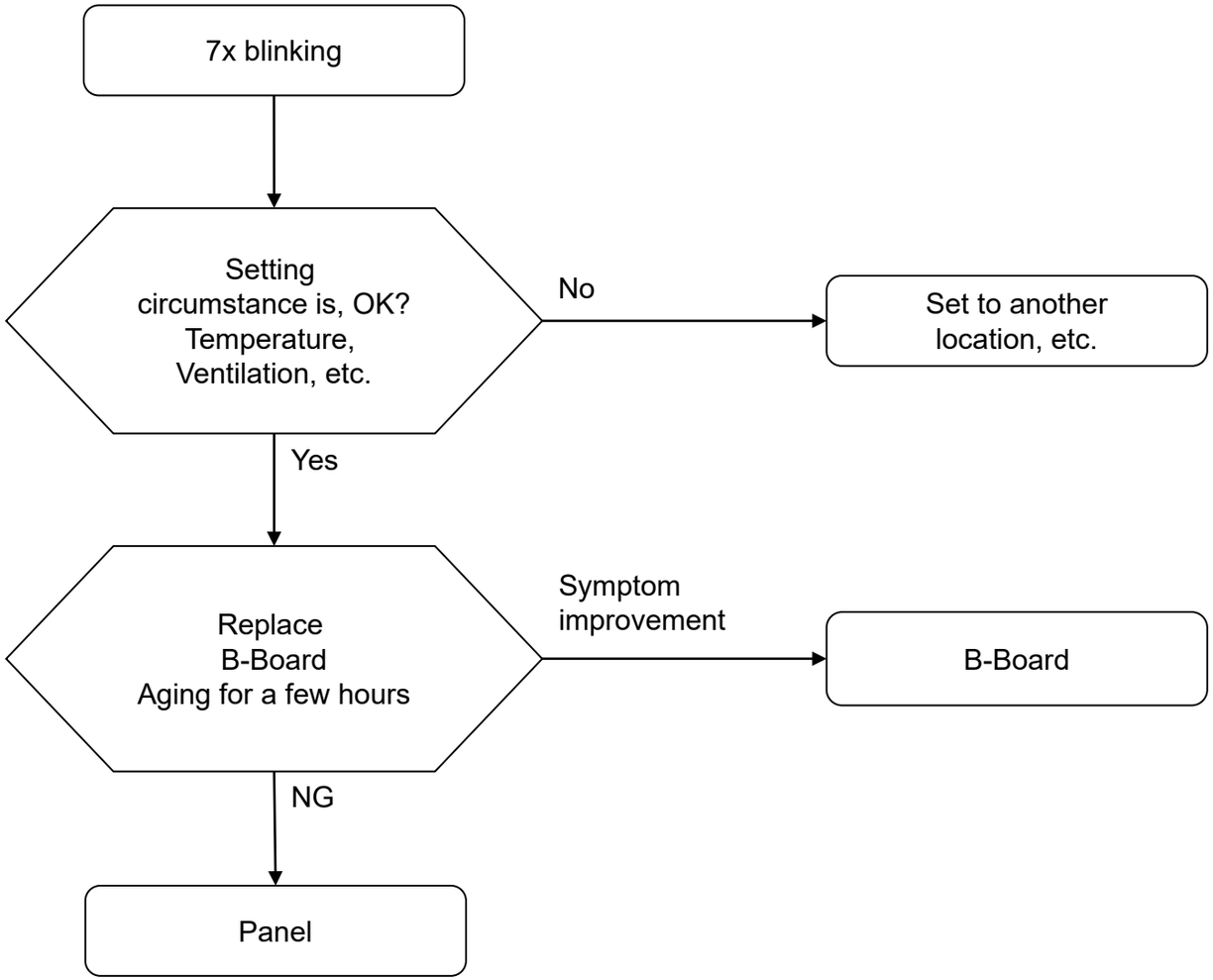


2.6 6x LED Blinking – Backlight_ERR

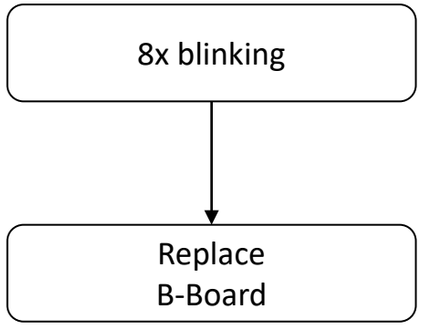
Check Point for BM5S22B

Board PWB (A side)	Detail
	

2.7 7x LED Blinking – TEMP_ERR

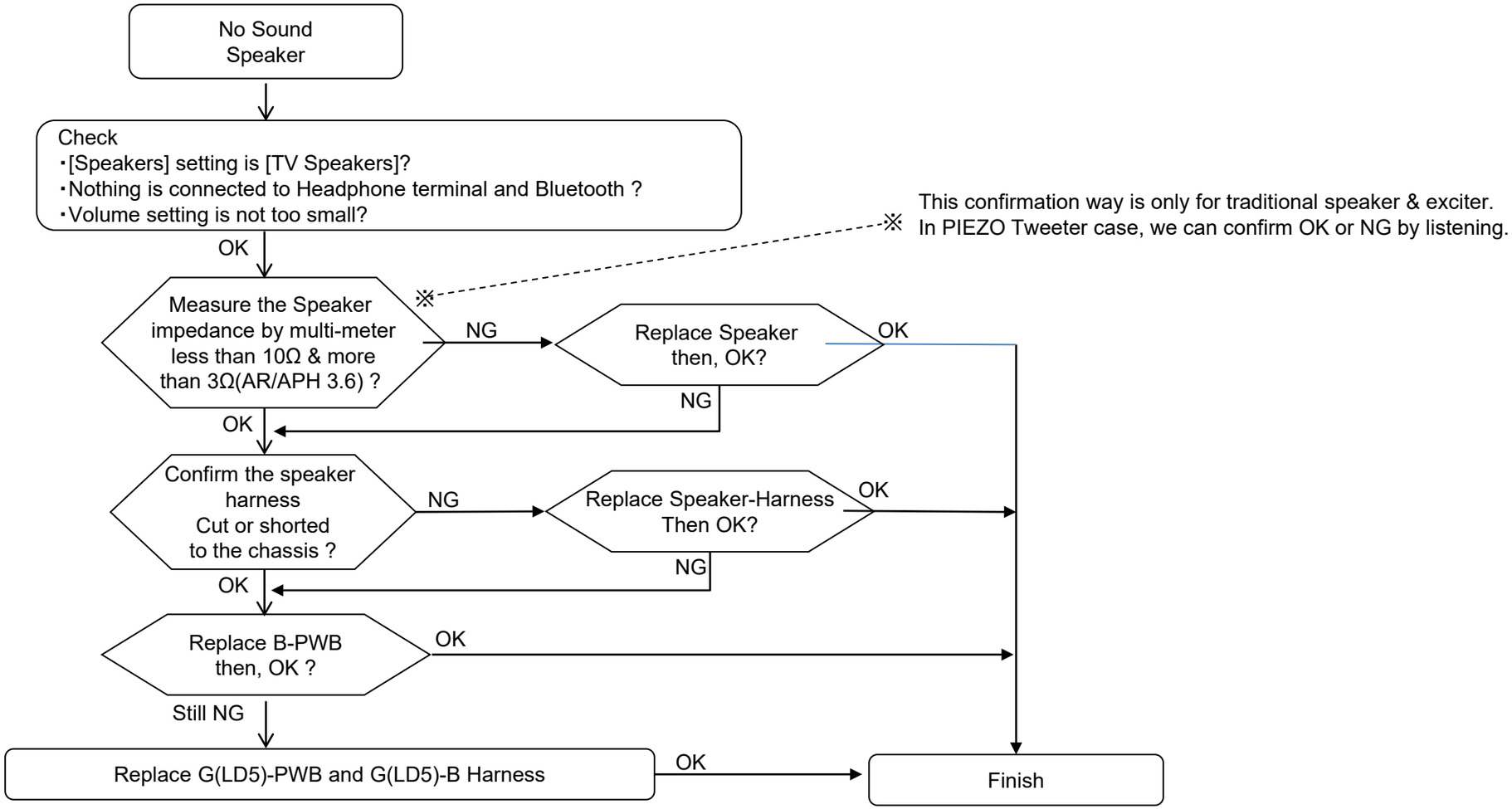


2.8 8x LED Blinking – 4KBE_ERR



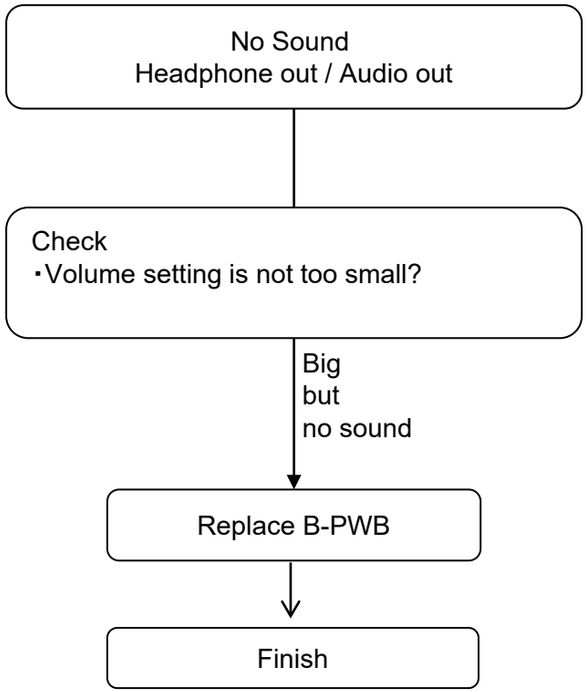
TROUBLESHOOTING

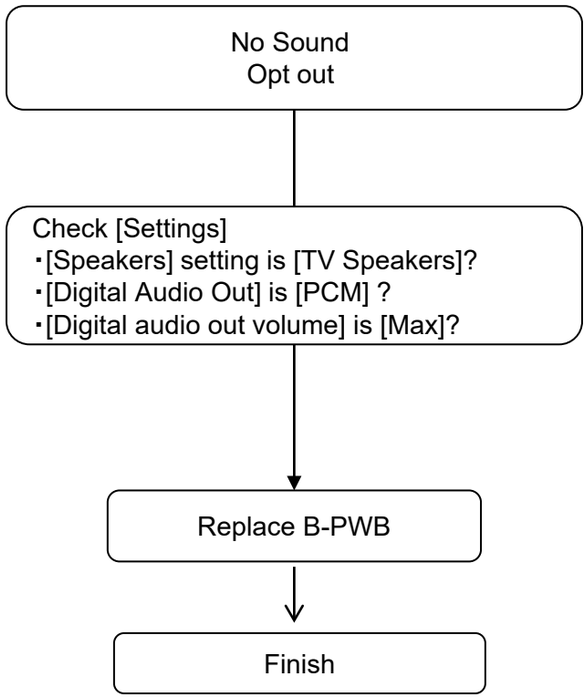
3.1 No Sound – Speaker



TROUBLESHOOTING

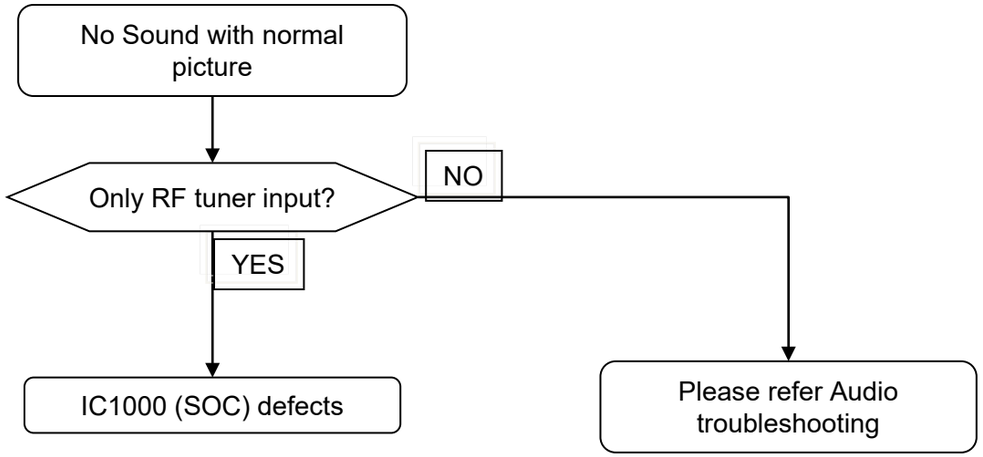
3.2 No Sound – Headphone / Audio / Opt Out



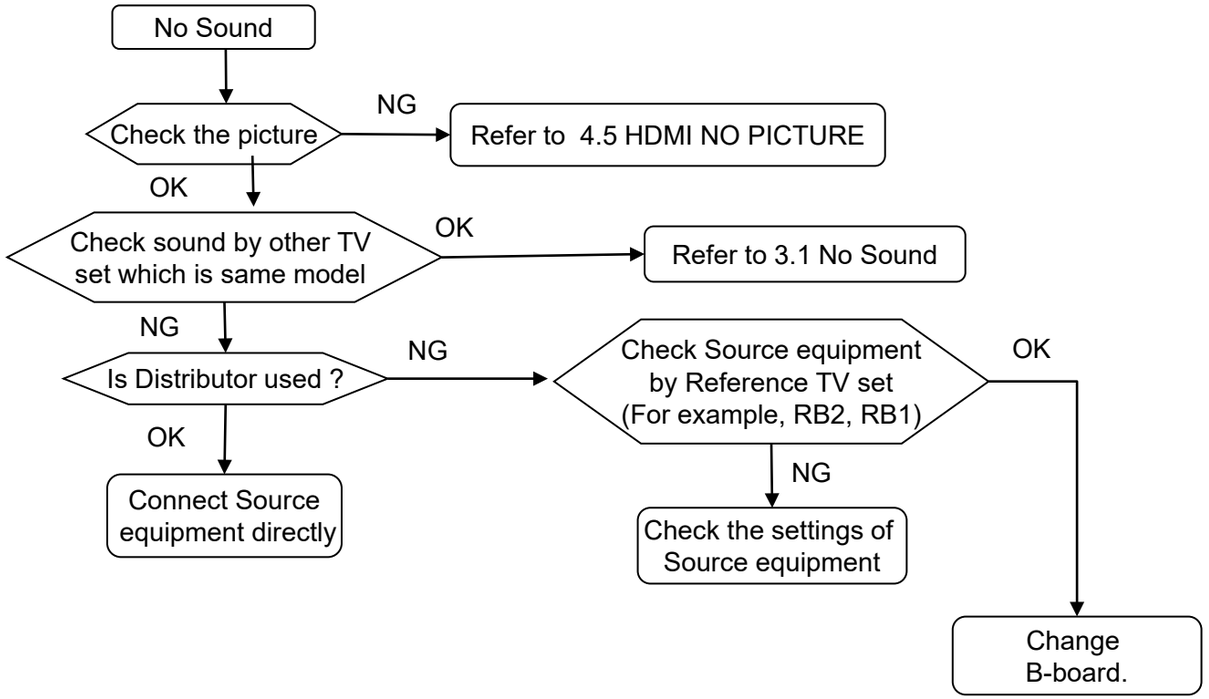


TROUBLESHOOTING

3.7 No Sound – Tuner

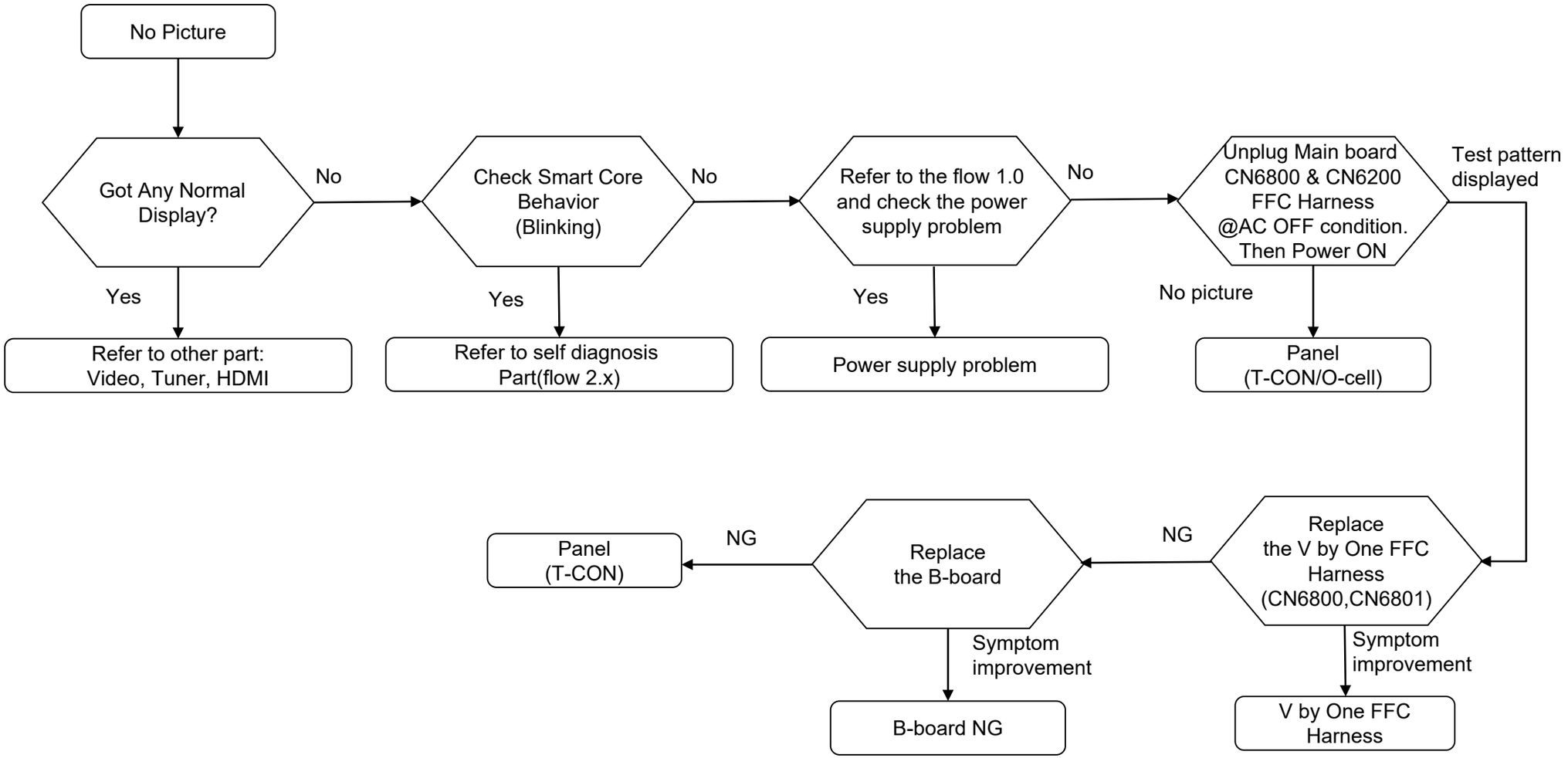


3.8 No Sound – HDMI 1/2/3/4



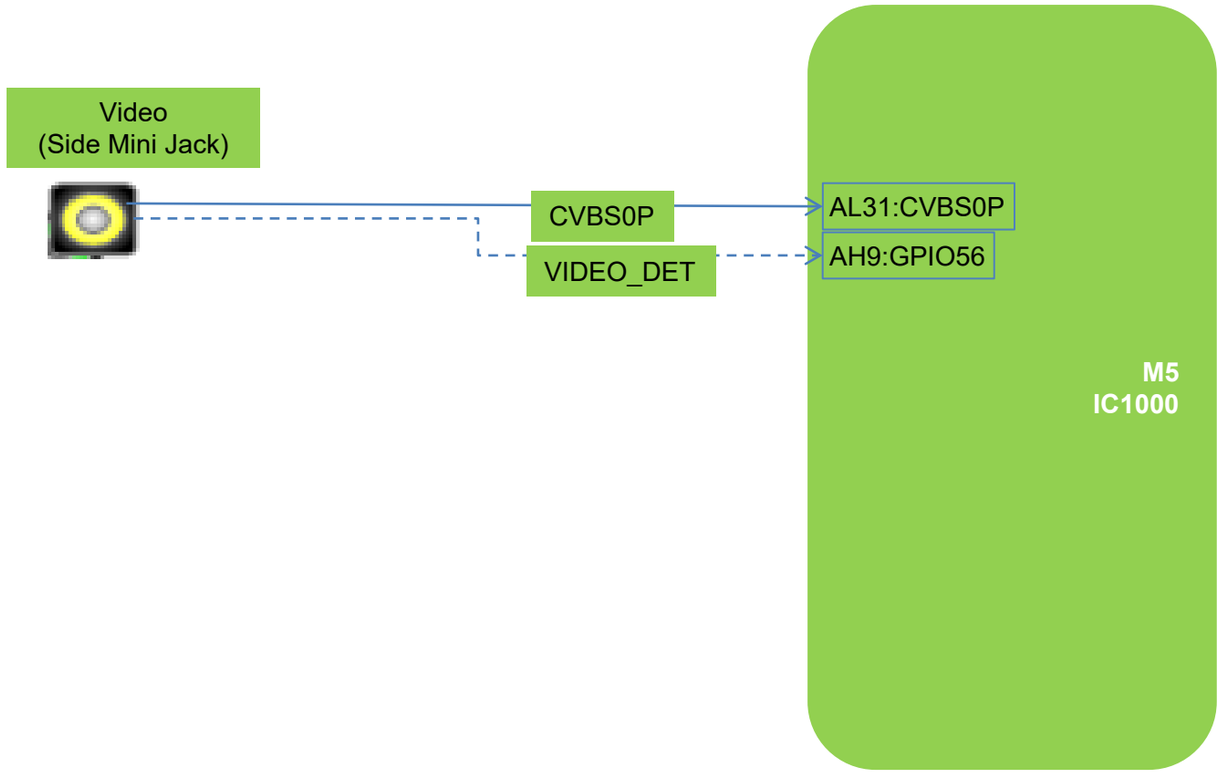
TROUBLESHOOTING

4.0 No Picture



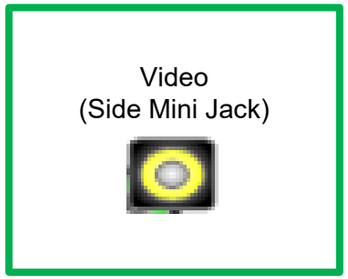
TROUBLESHOOTING

4.1 Video Analog Signal Path



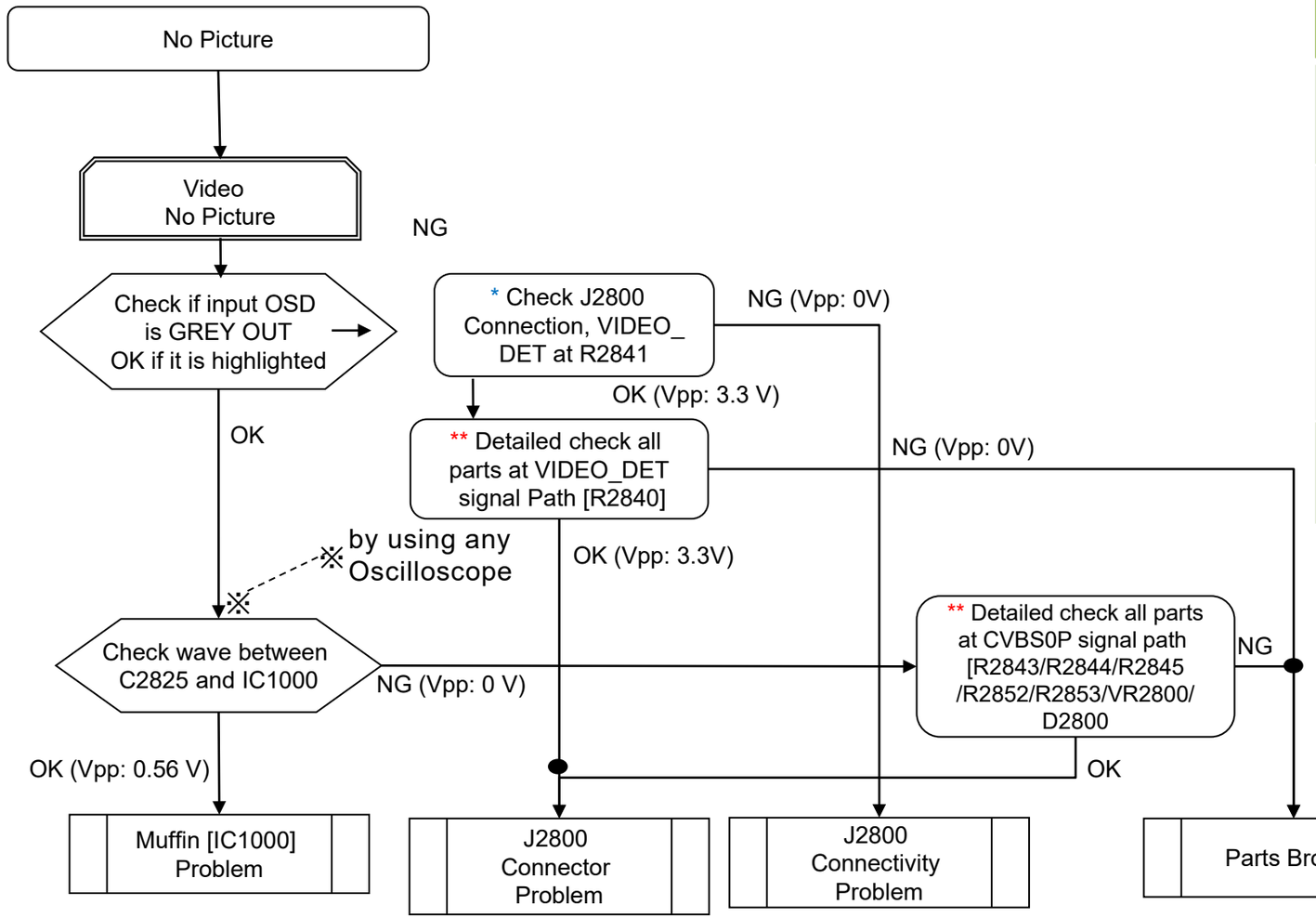
Input Skip Function

Input	Signal	Non-Detect (Typical)	Detect (Typical)
Video	VIDEO_DET IC1000 AH9-GPIO56	0V	3.3V



TROUBLESHOOTING

4.2 No Picture



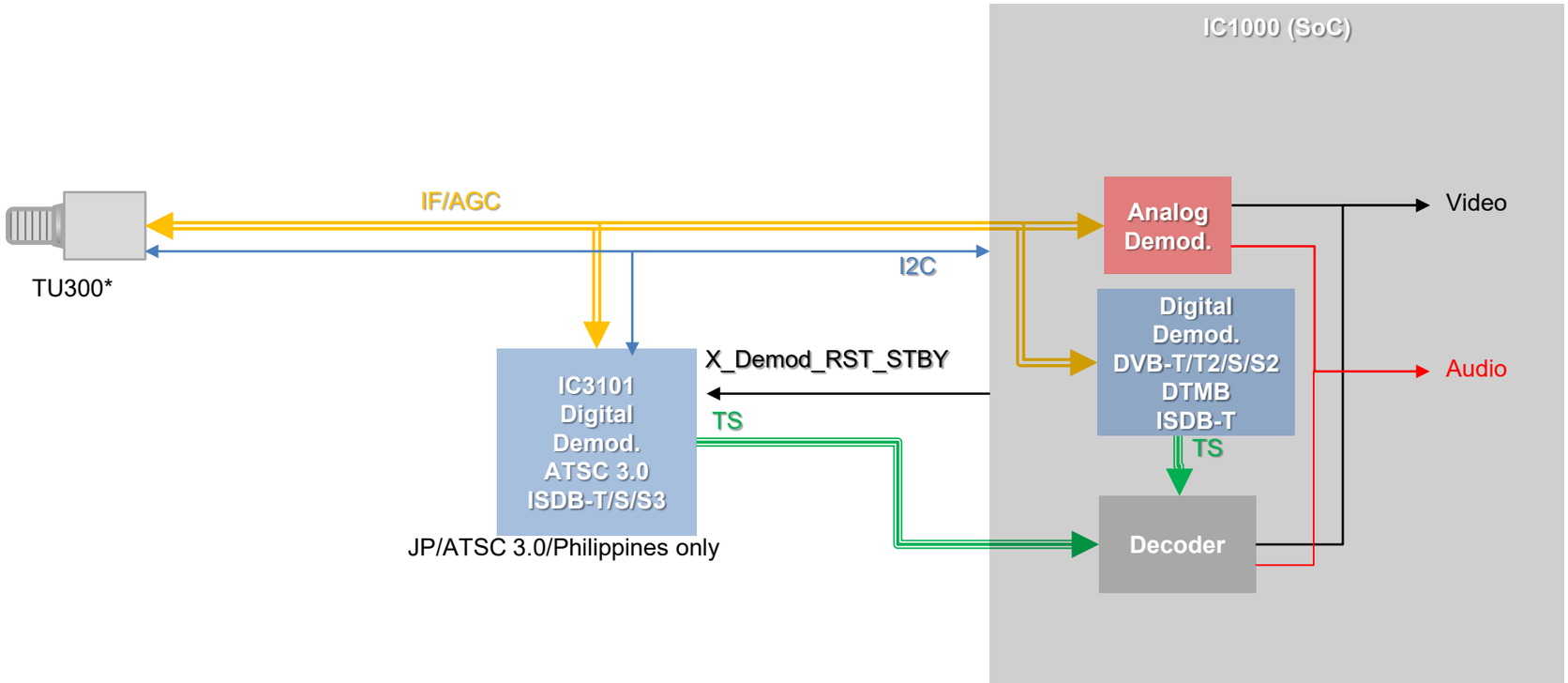
Condition	Actions to be taken
Muffin [IC1000] Problem	Refer to IC troubleshooting for further investigation
J2800 Connector Problem J2800 Connectivity Problem	Change Connector
Parts Broken	Change Part

* → OK Condition : No solder splash can be seen
→ NG Condition : Solder splash can be seen

** → OK Condition : No part short-circuited
→ NG Condition : Part short-circuited

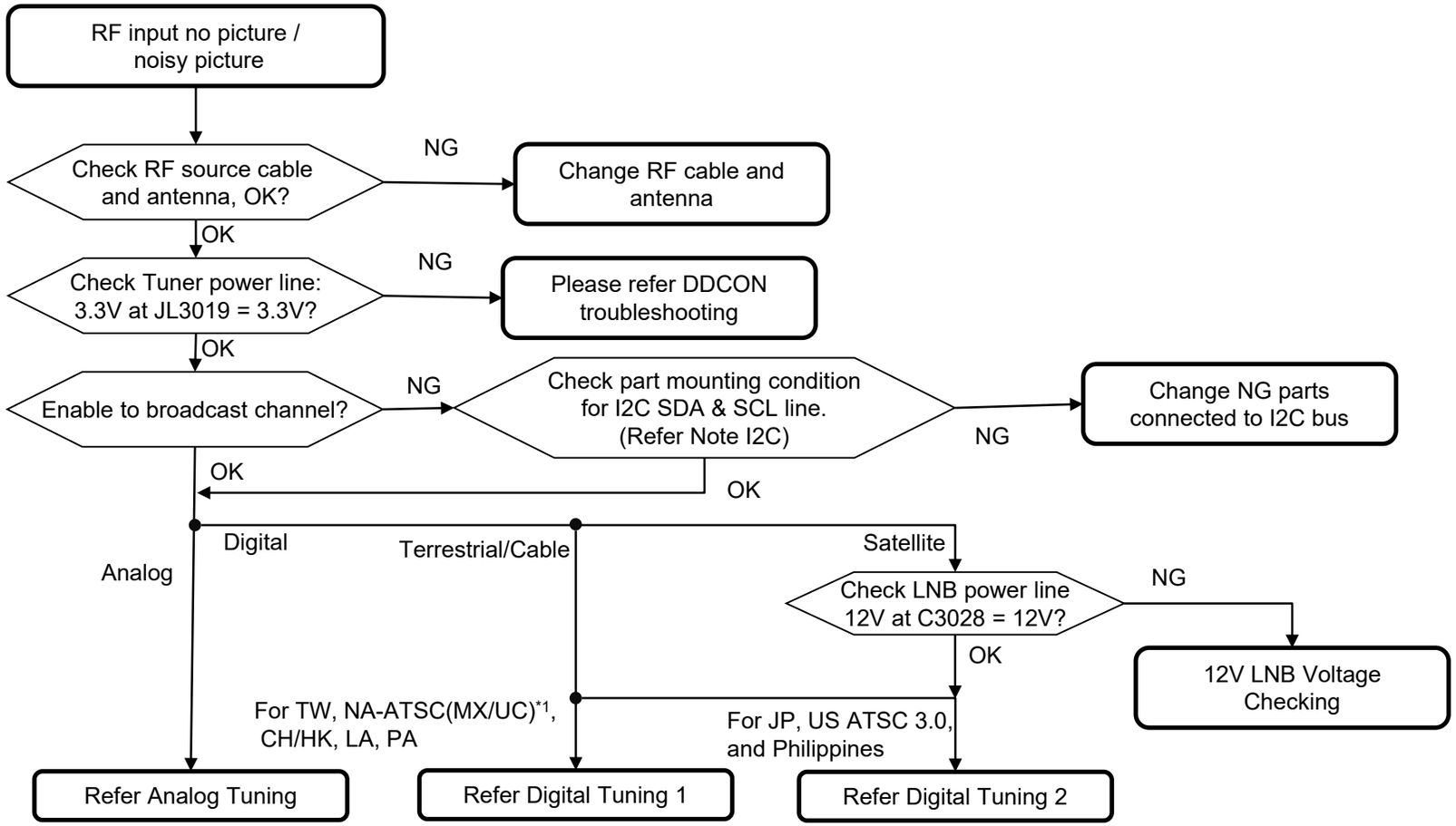
TROUBLESHOOTING

4.4 No Picture - Tuner



TROUBLESHOOTING

4.4 No Picture - Tuner



Notes: I2C
- Parts for I2C SDA line: R3036, R3040, C3005
- Parts for I2C SCL line : R3035, R3039, C3006

Waveform confirmation point
- I2C_TU_SDA line: JL3013
- I2C_TU_SCL line : JL3012

Notes: Demodulator
- Digital Tuning 1 : SoC inside demodulator
- Digital Tuning 2 : On board demodulator

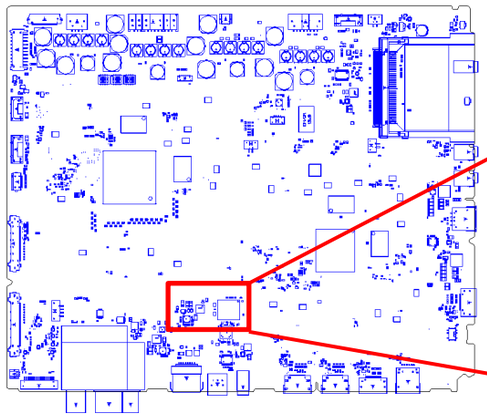
*1 : Except US ATSC3.0, Please refer Digital Tuning 2

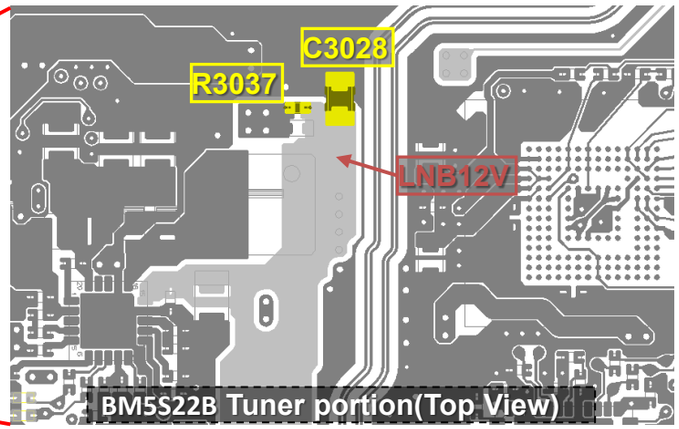
TROUBLESHOOTING

4.4 No Picture - Tuner

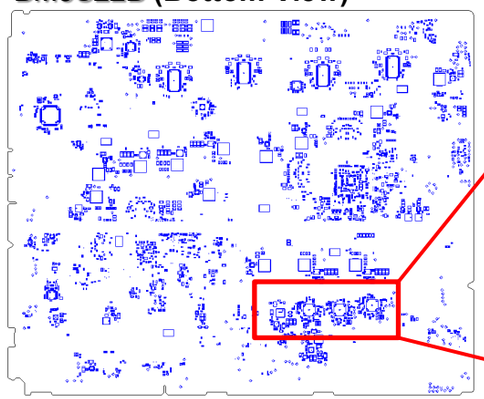
*I2C: Please refer Digital Tuning

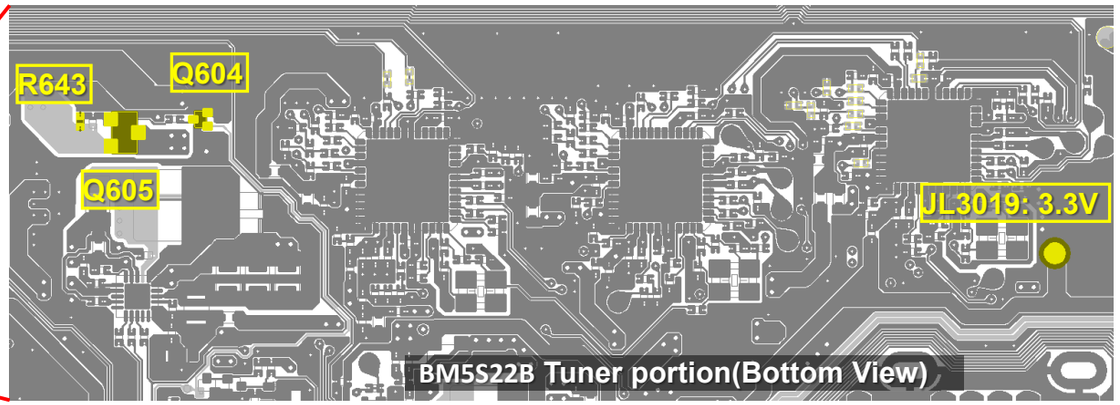
BM5S22B (Top View)





BM5S22B (Bottom View)

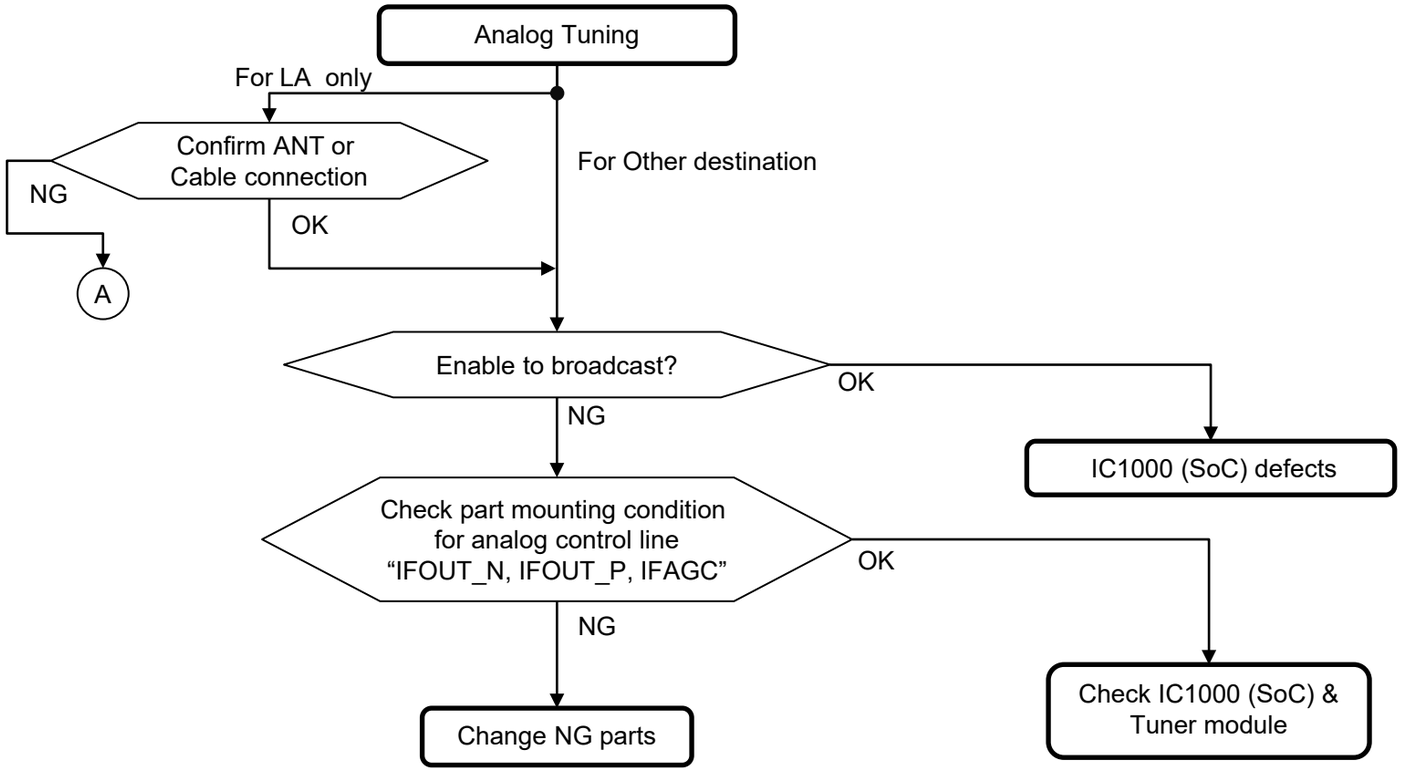




TROUBLESHOOTING

4.4 No Picture - Tuner

FOR ANALOG TUNING



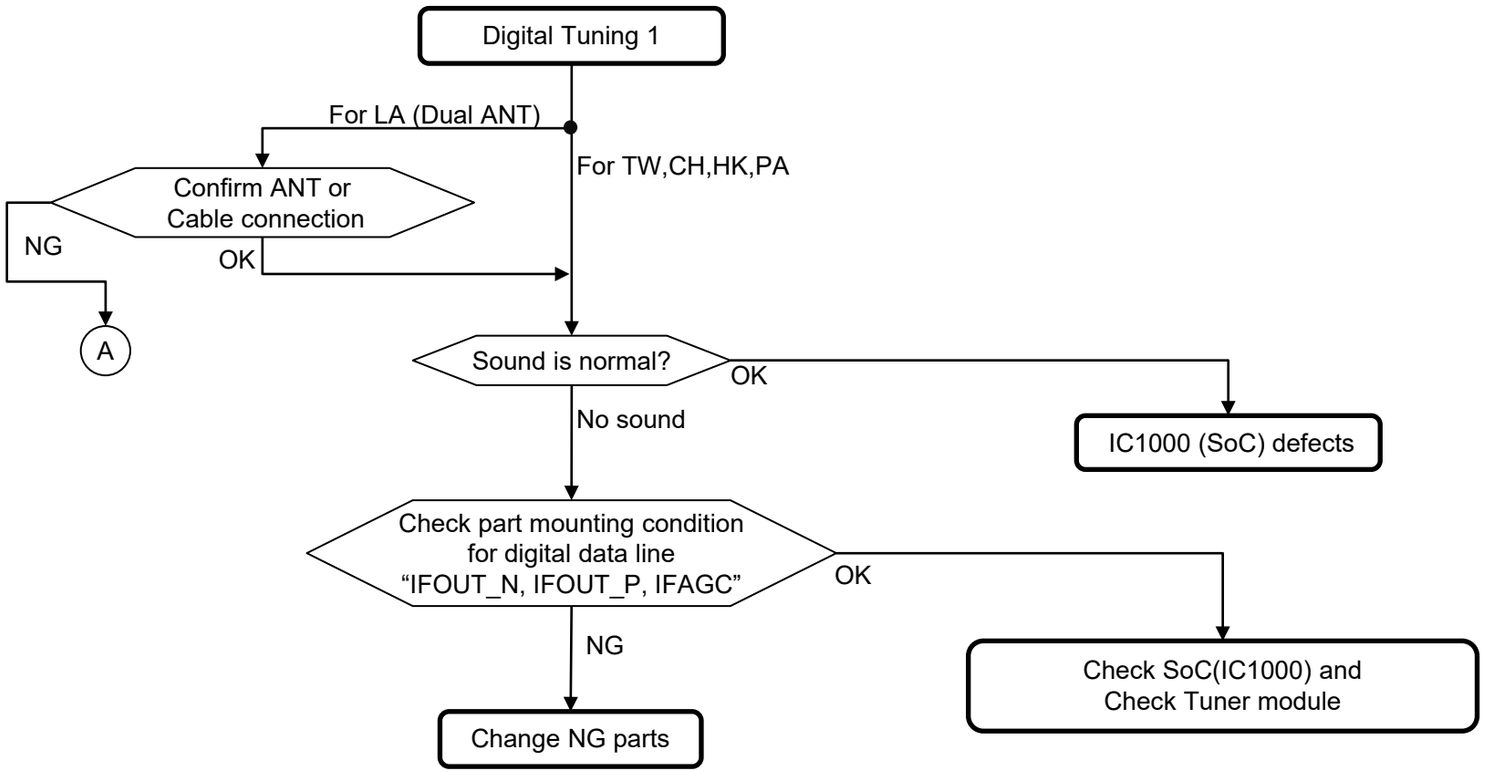
Notes:
- Parts for IFOUT_N line : C3011
- Parts for IFOUT_P line : C3010
- Parts for IFAGC line : R3003 ,R3024, C3023

(A) Insert correct signal in correct ANT terminal.

TROUBLESHOOTING

4.4 No Picture - Tuner

FOR DIGITAL TUNING 1: @ For TW,CH,HK,LA,PA



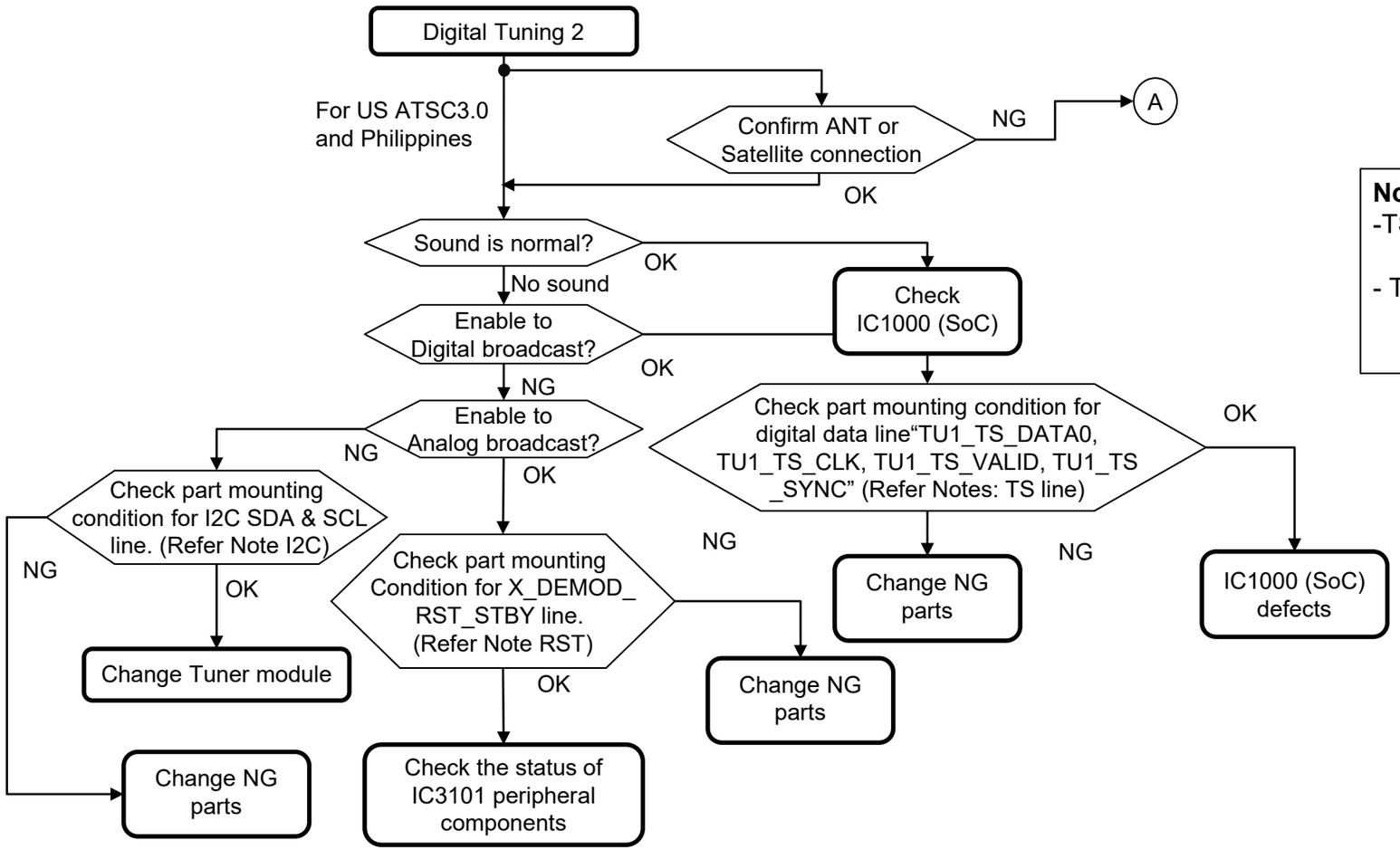
Notes:
- Parts for IFOUT_N line : C3011
- Parts for IFOUT_P line : C3010
- Parts for IFAGC line : R3003 ,R3024, C3023

(A) Insert correct signal in correct ANT terminal.

TROUBLESHOOTING

4.4 No Picture - Tuner

FOR DIGITAL TUNING 2: @ US ATSC3.0 and Philippines



Notes: I2C
- Parts for I2C SDA line: R3036, R3040, C3005
- Parts for I2C SCL line : R3035, R3039, C3006

Waveform confirmation point
- I2C_TU_SDA line: JL3013
- I2C_TU_SCL line : JL3012

Notes: TS line
-TS line parts for US ATSC3.0/Philippines
R3114/R3116/R3117/R3120/R3121/R3122/R3123/RB3001
- TS line parts for JP :
R3113/R3114/R3116/R3117/R3120/R3121/R3122/R3123/ R3027/RB3001

A Insert correct signal in correct ANT terminal.

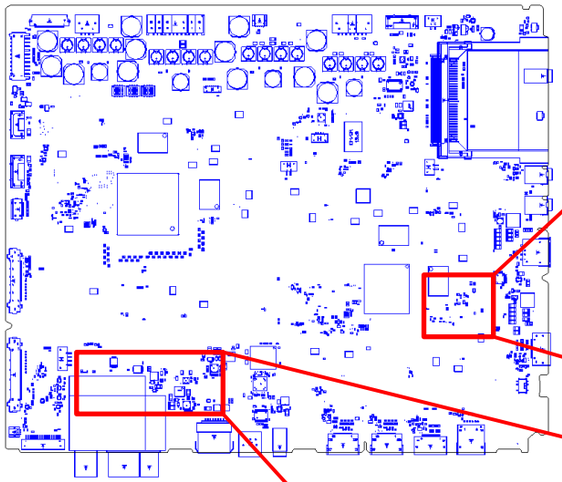
Notes: RST
- Parts for X_DEMOD_RST line: R3109, C3117

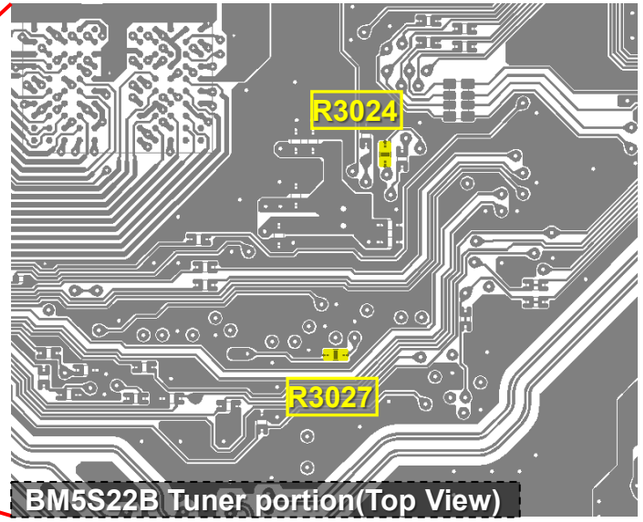
Voltage confirmation point
C3117 = 3.3V

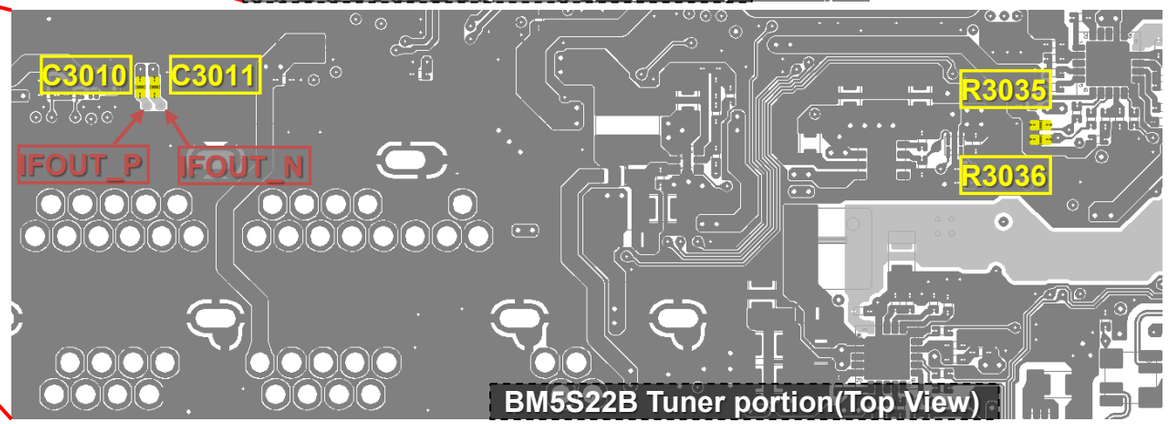
TROUBLESHOOTING

4.4 No Picture - Tuner

BM5S22B (Top View)



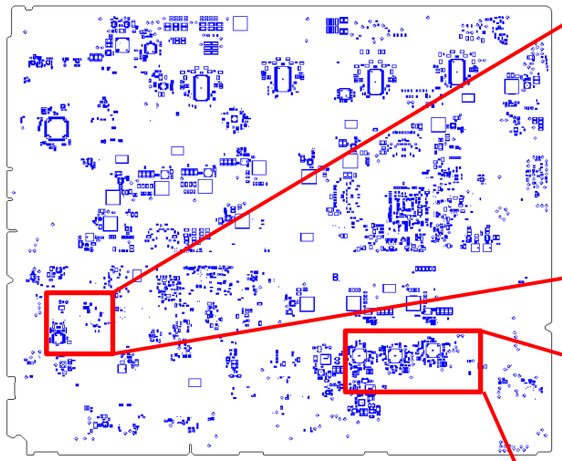


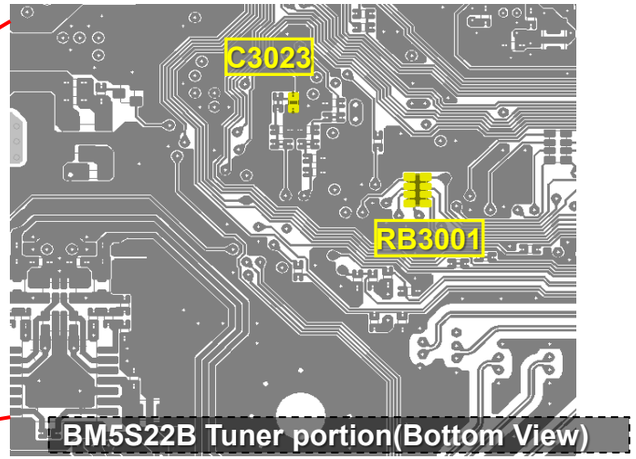


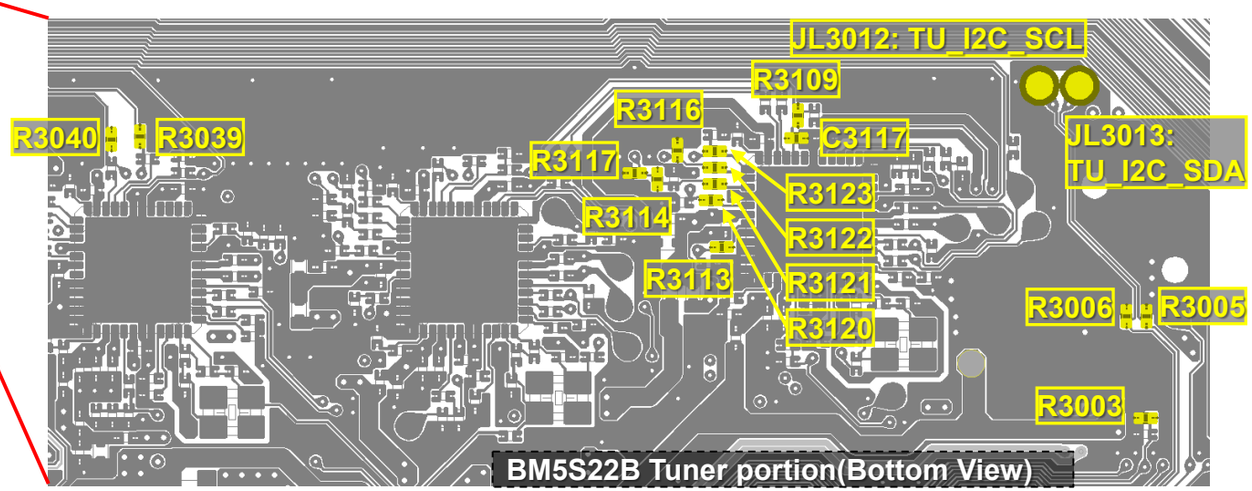
TROUBLESHOOTING

4.4 No Picture - Tuner

BM5S22B (Bottom View)

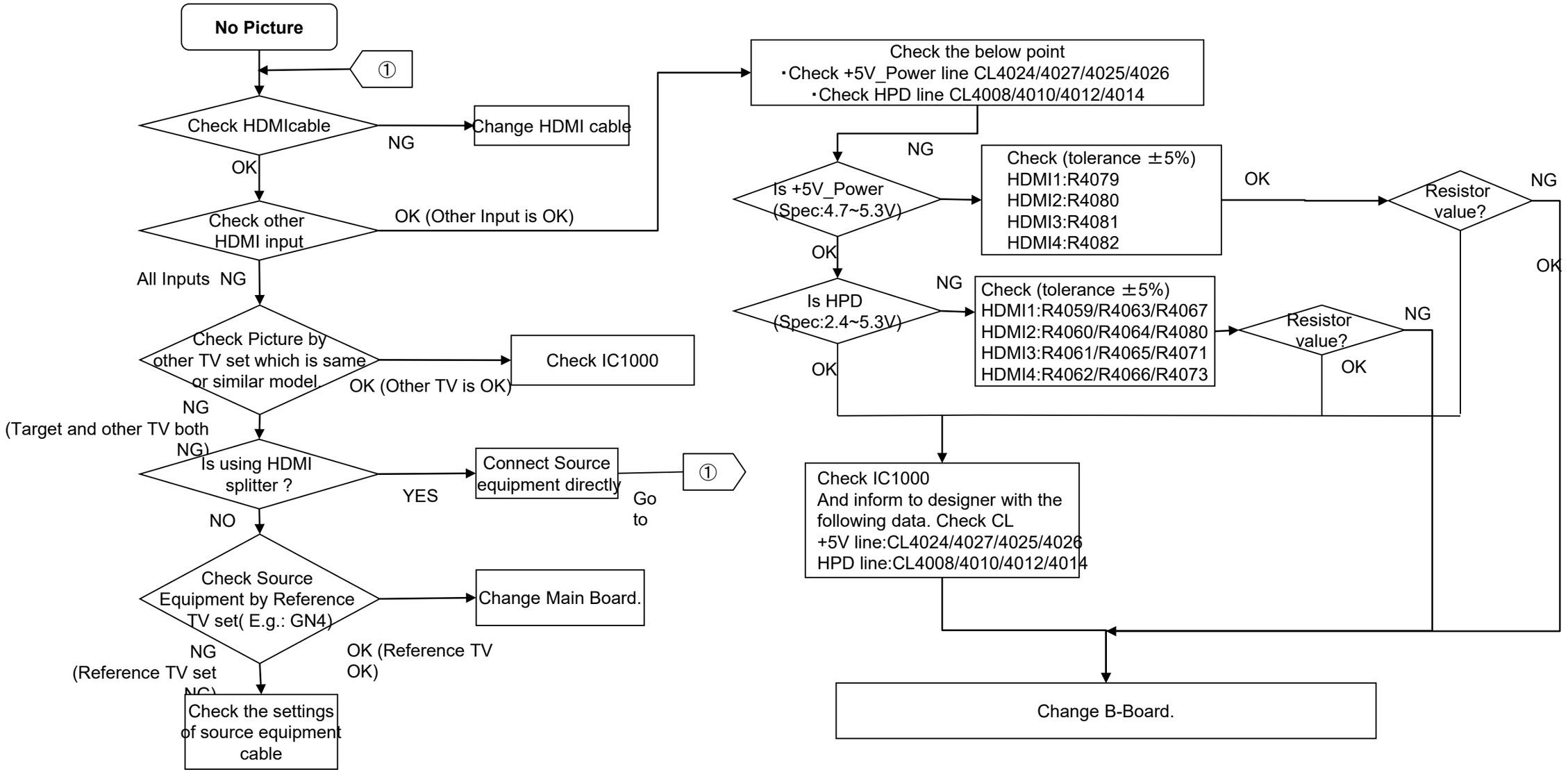






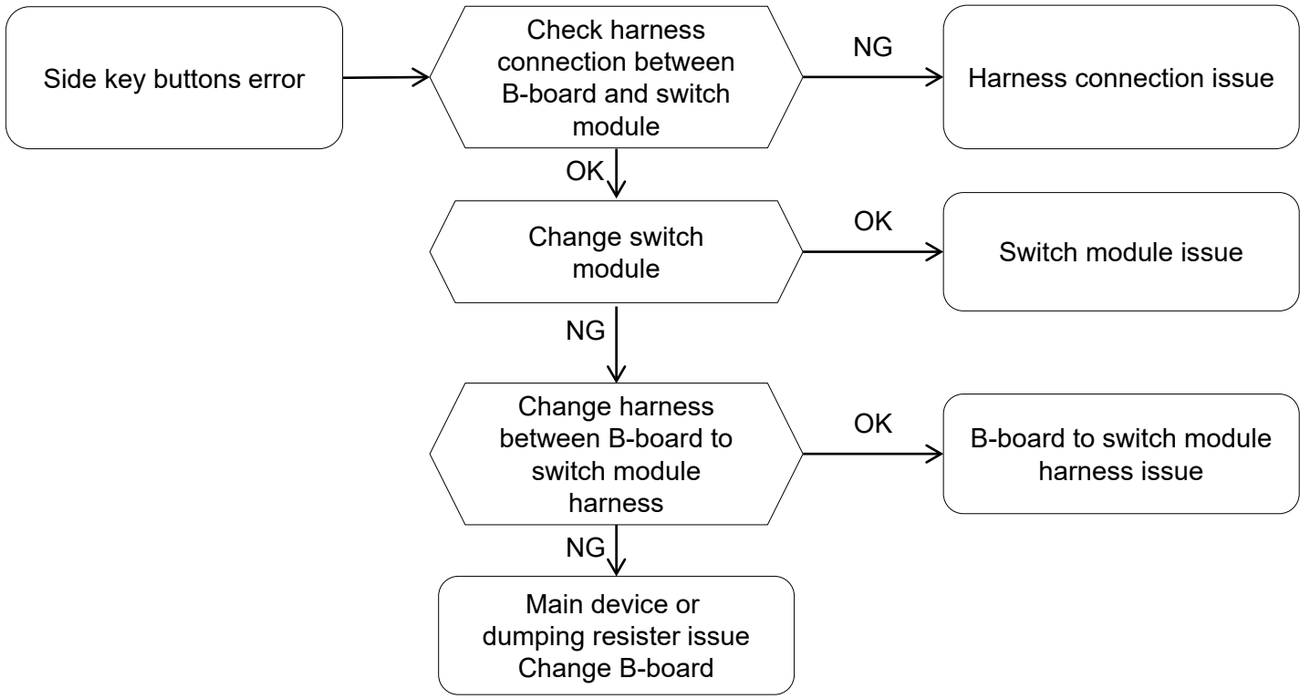
TROUBLESHOOTING

4.5 No Picture – HDMI 1/2/3/4

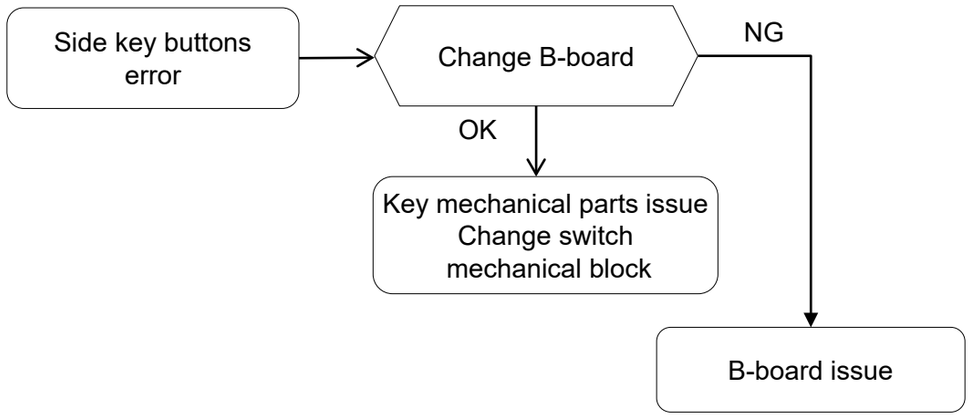


5.0 Key Switch – Buttons Error

Switch Module Type

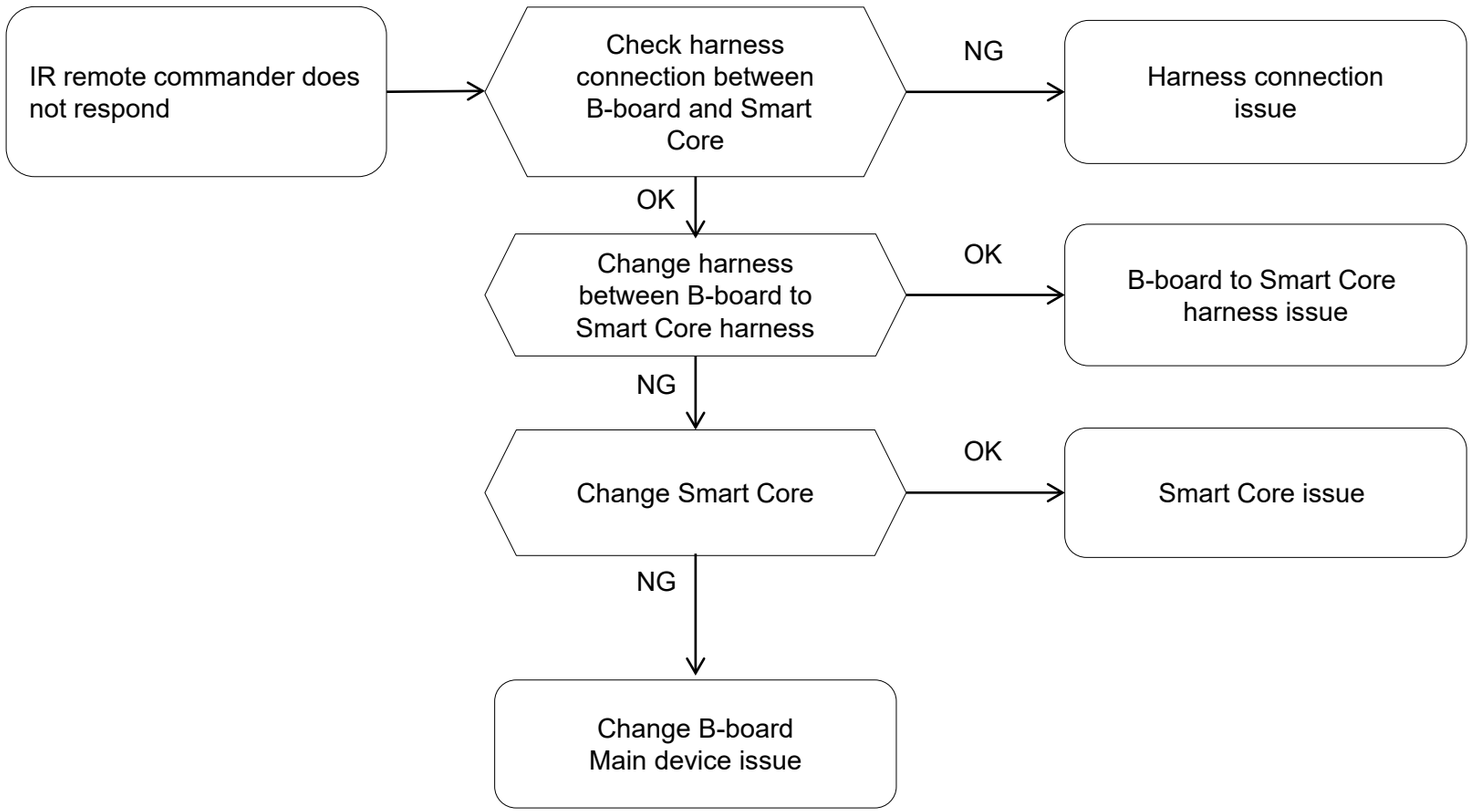


On Board Switch Type

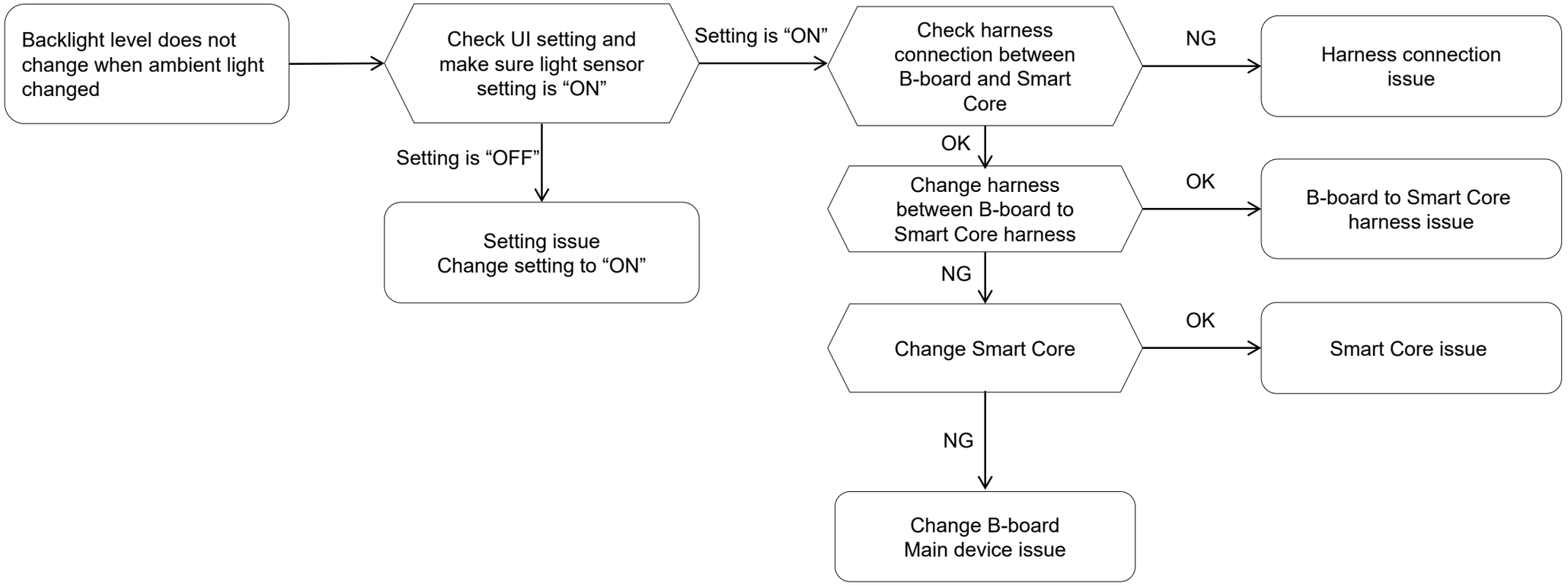


TROUBLESHOOTING

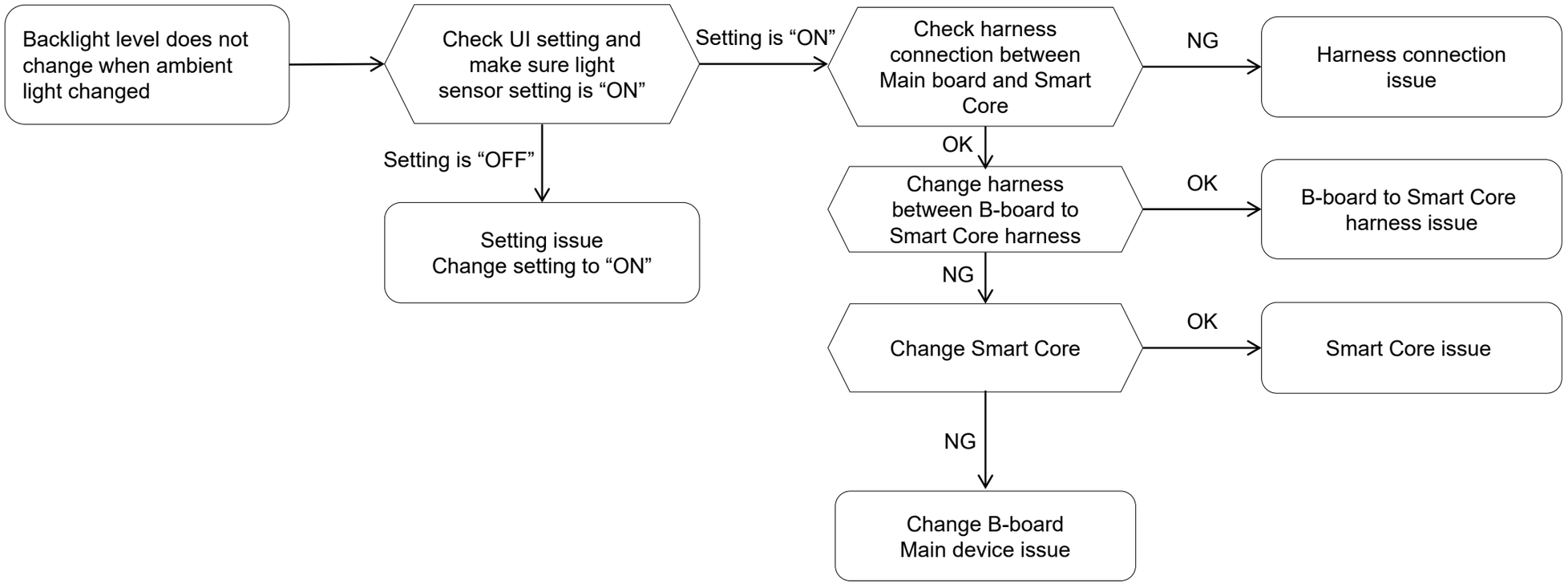
5.1 IR Remote Commander Error



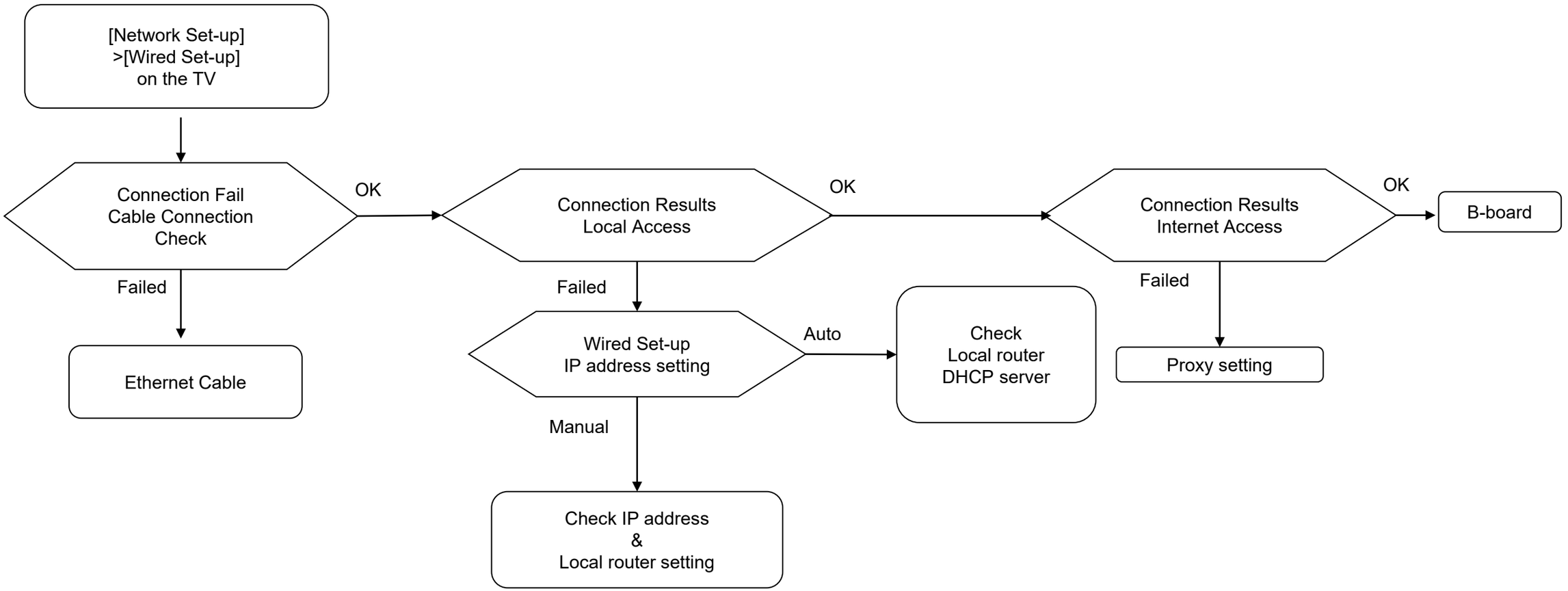
5.2 Light Sensor Error



5.3 CAS ID Unknown

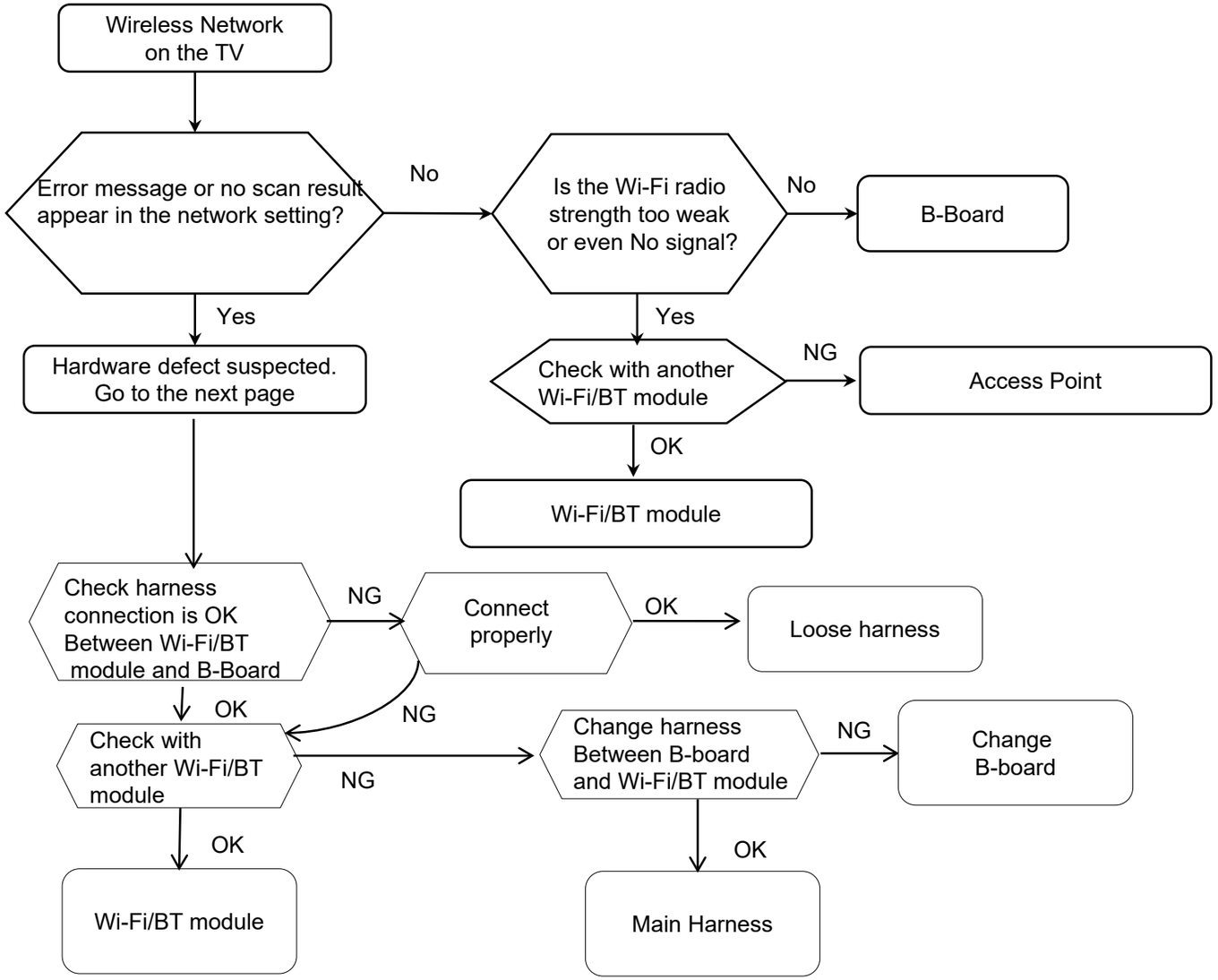


6.0 Network Malfunction – Ethernet Wired



TROUBLESHOOTING

6.2 Wireless Network Malfunction

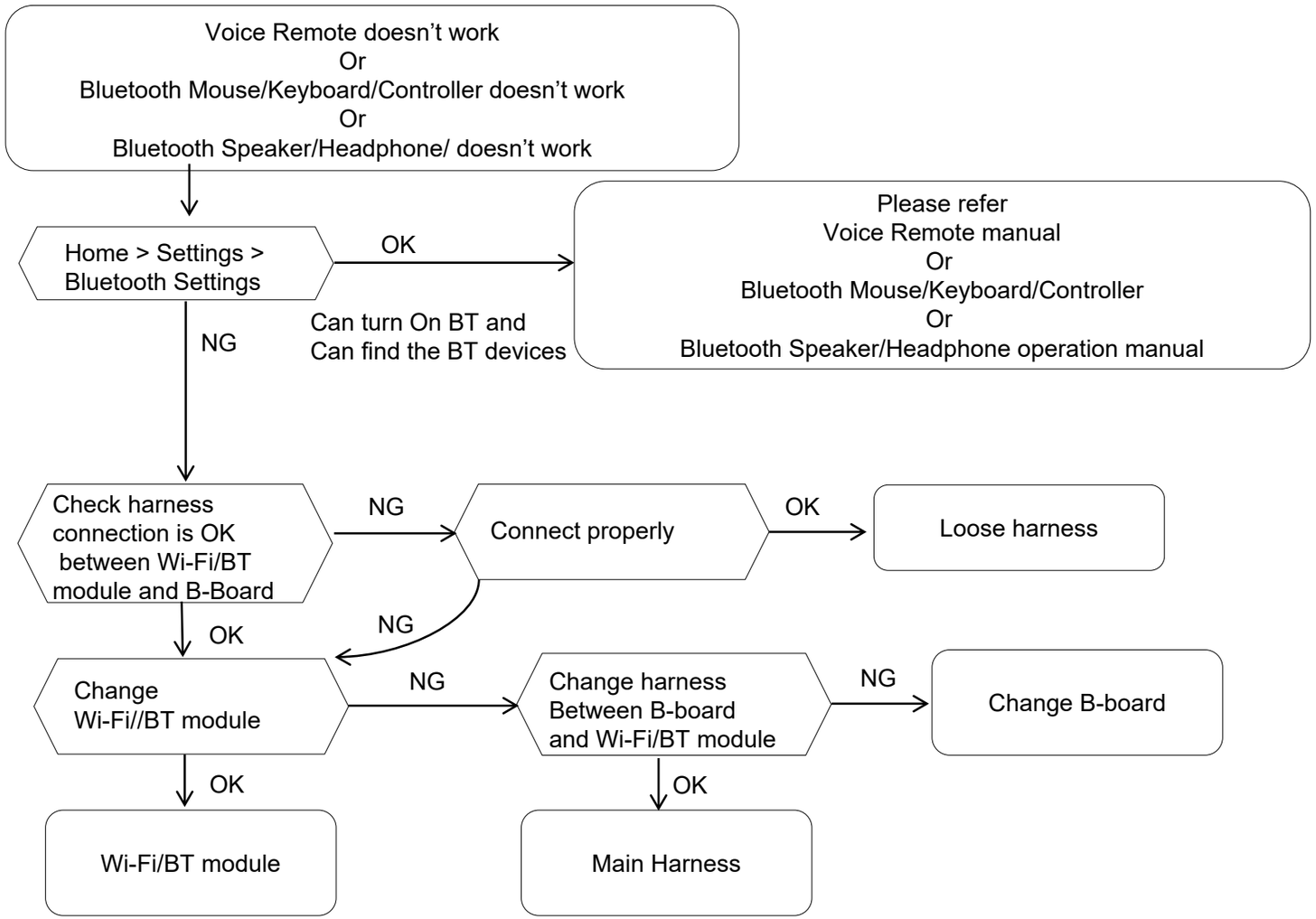


If Wi-Fi malfunction happens,

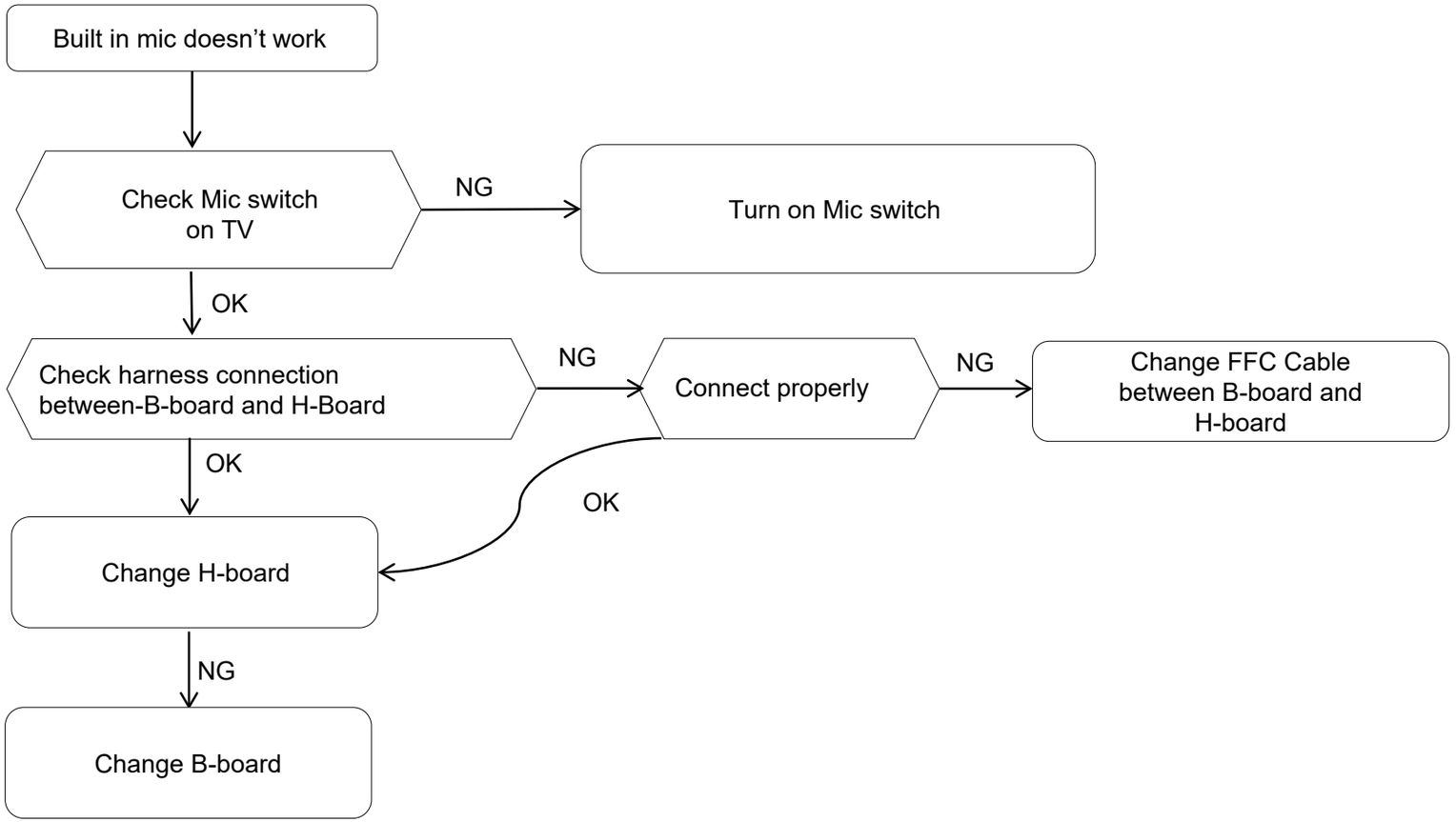
- Wi-Fi/BT module
- Harness between Wi-Fi/BT and Main Board are suspected.

TROUBLESHOOTING

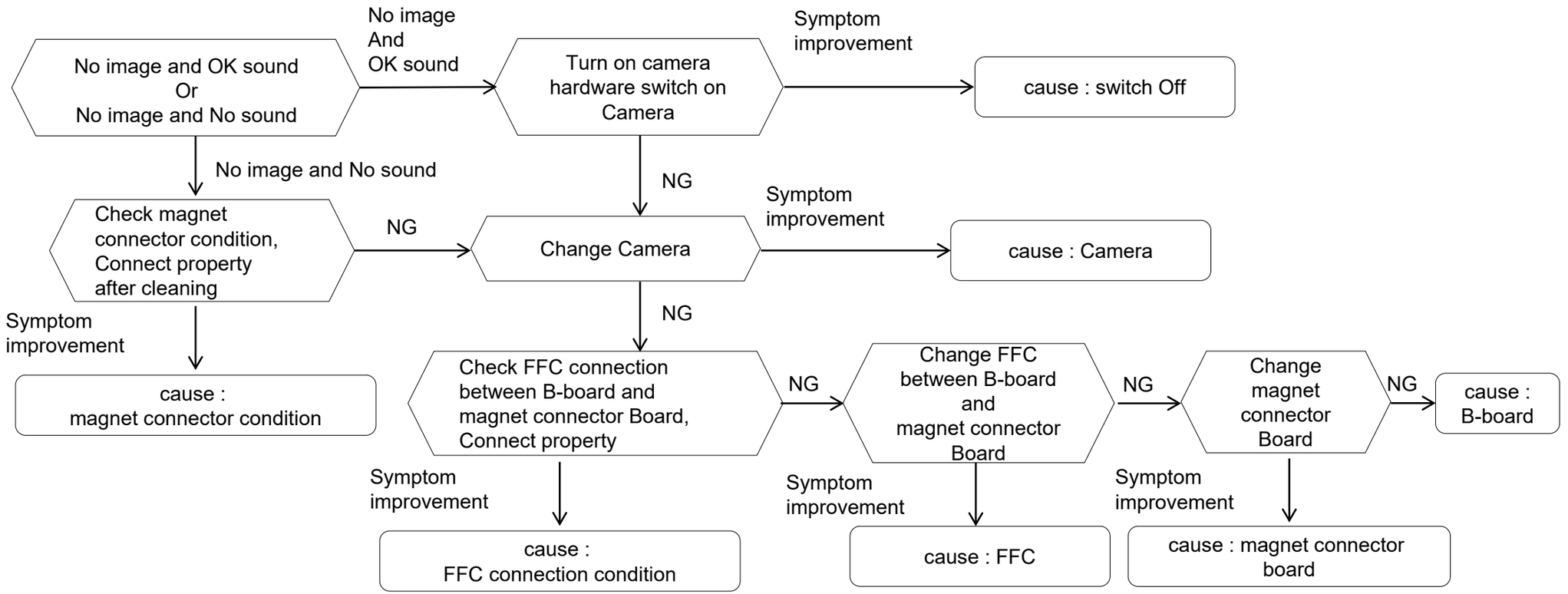
6.3 Bluetooth Malfunction



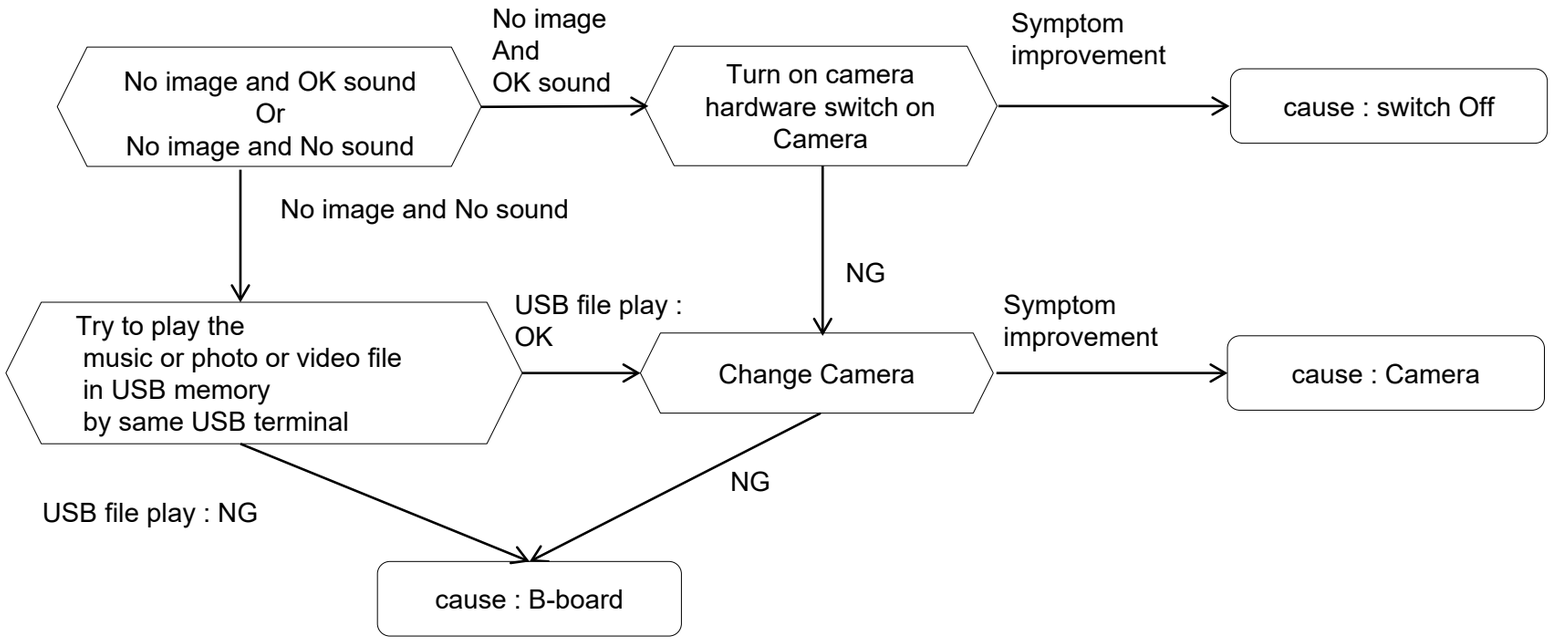
6.4 Built in MIC Malfunction



6.5 Magnet connector type Camera (Bundle)



6.5 USB connector type Camera (Accessory)



SOFTWARE UPDATE & RESET

USB Update

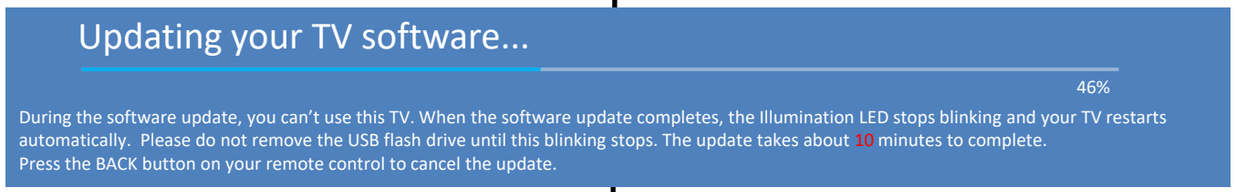
Caution: Do not power off while the update is in progress.

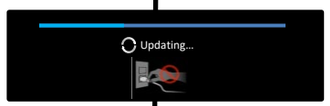
1: Download USB image and unzip file.

2: Copy zip file to USB memory root folder.

3: USB memory insert TV.

4-a:USB image is newer soft version.
Automatically show message and start update.
Please follow directions.





5: finished

The system reboot
will happen once or twice

4-b:USB image is not newer soft version.
Automatically show message.
Please follow directions.

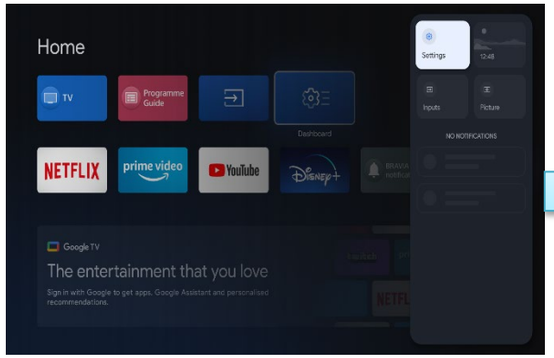
5: finished

※ Display may change depending on the model / SW version.

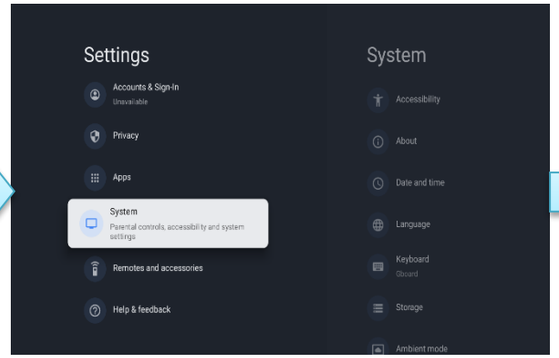
SOFTWARE UPDATE & RESET

Factory Data Reset – with UI method

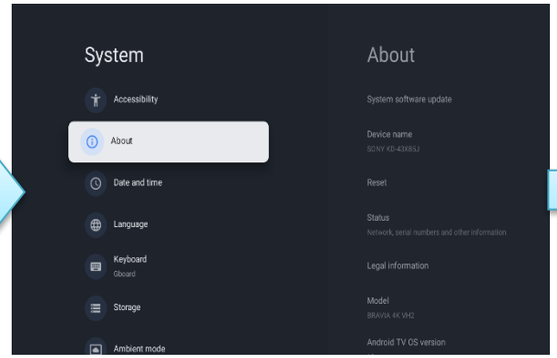
1. At Home Menu, go to Settings



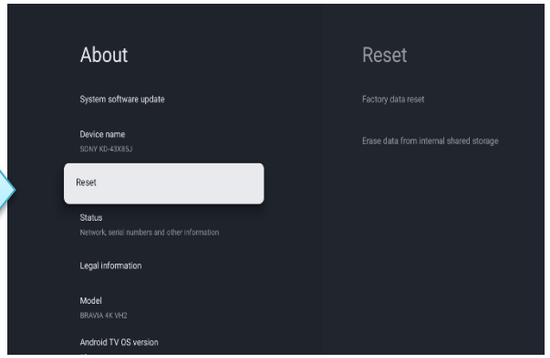
2. Select System / Device Preferences



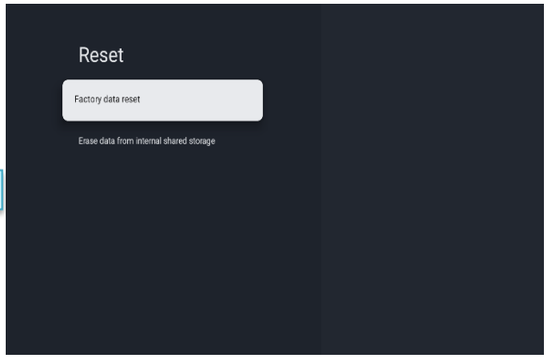
3. In 'System', select 'About'.



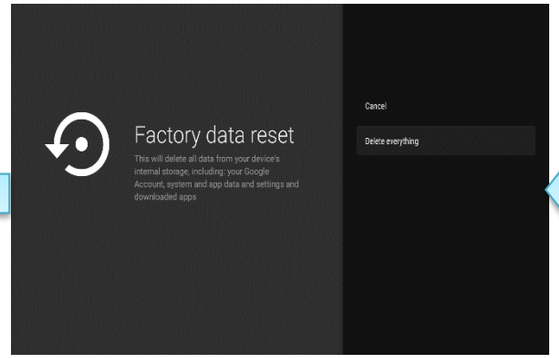
4. In About, Select 'Reset'



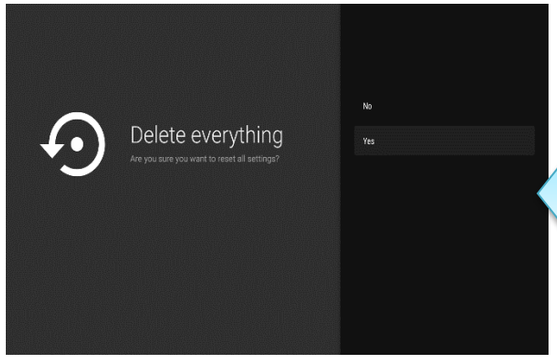
5. In Reset, Select 'Factory data reset'



6. Select 'Delete everything'



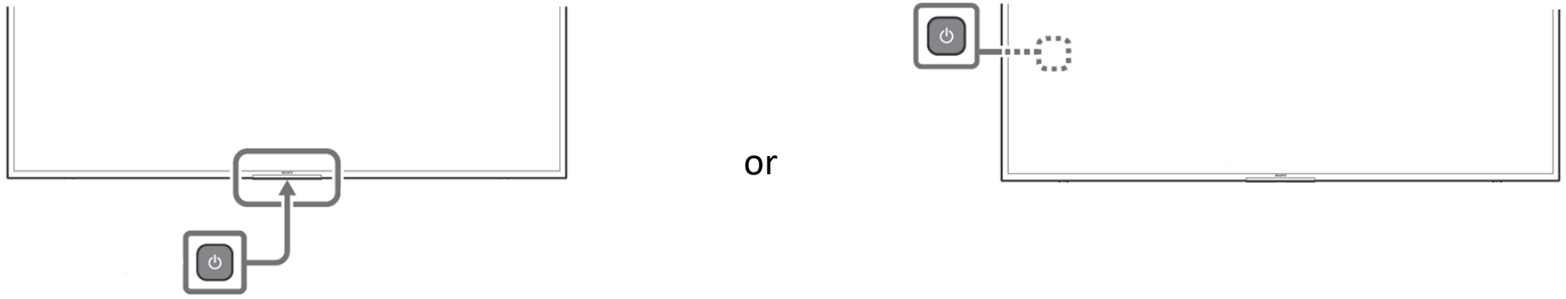
7. Select 'Yes'



SOFTWARE UPDATE & RESET

Factory Data Reset – force method (without UI)

1. Press and hold the Power button. (The position of the Power button depends on the model.)

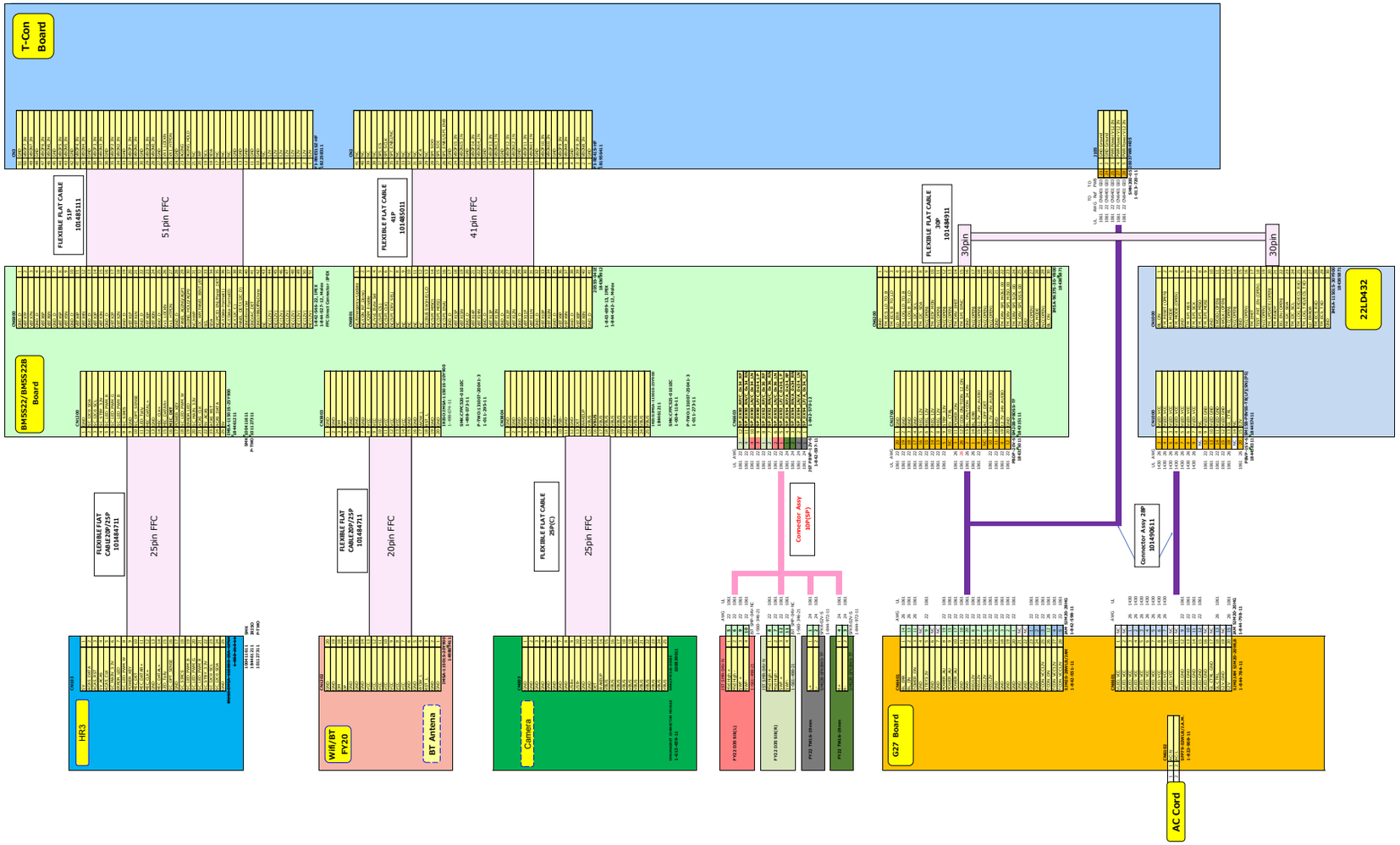


2. AC on.

3. Hold the Power button down for several seconds until the system starts Factory Data Reset.

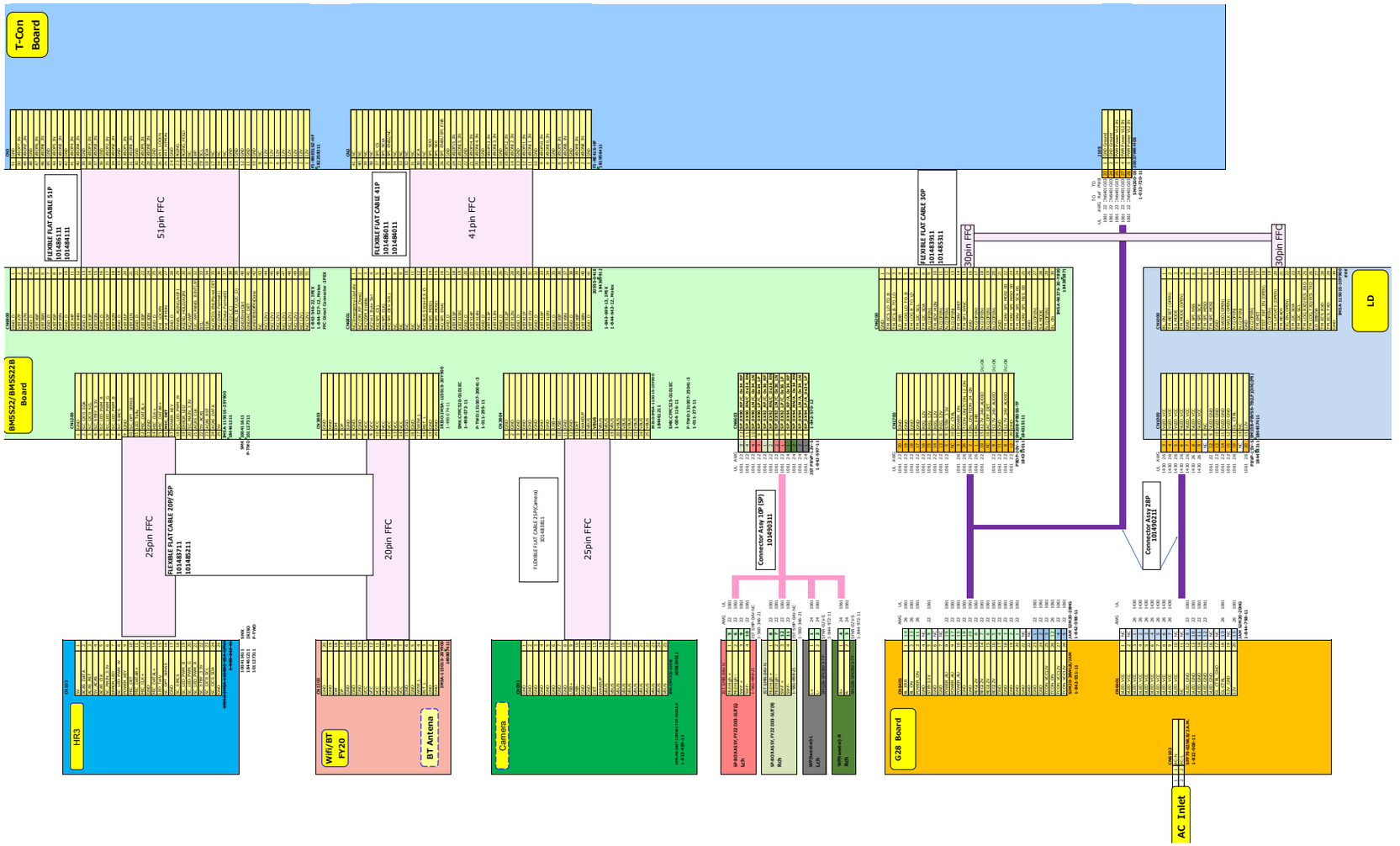
DIAGRAM

65” Connecting Diagram



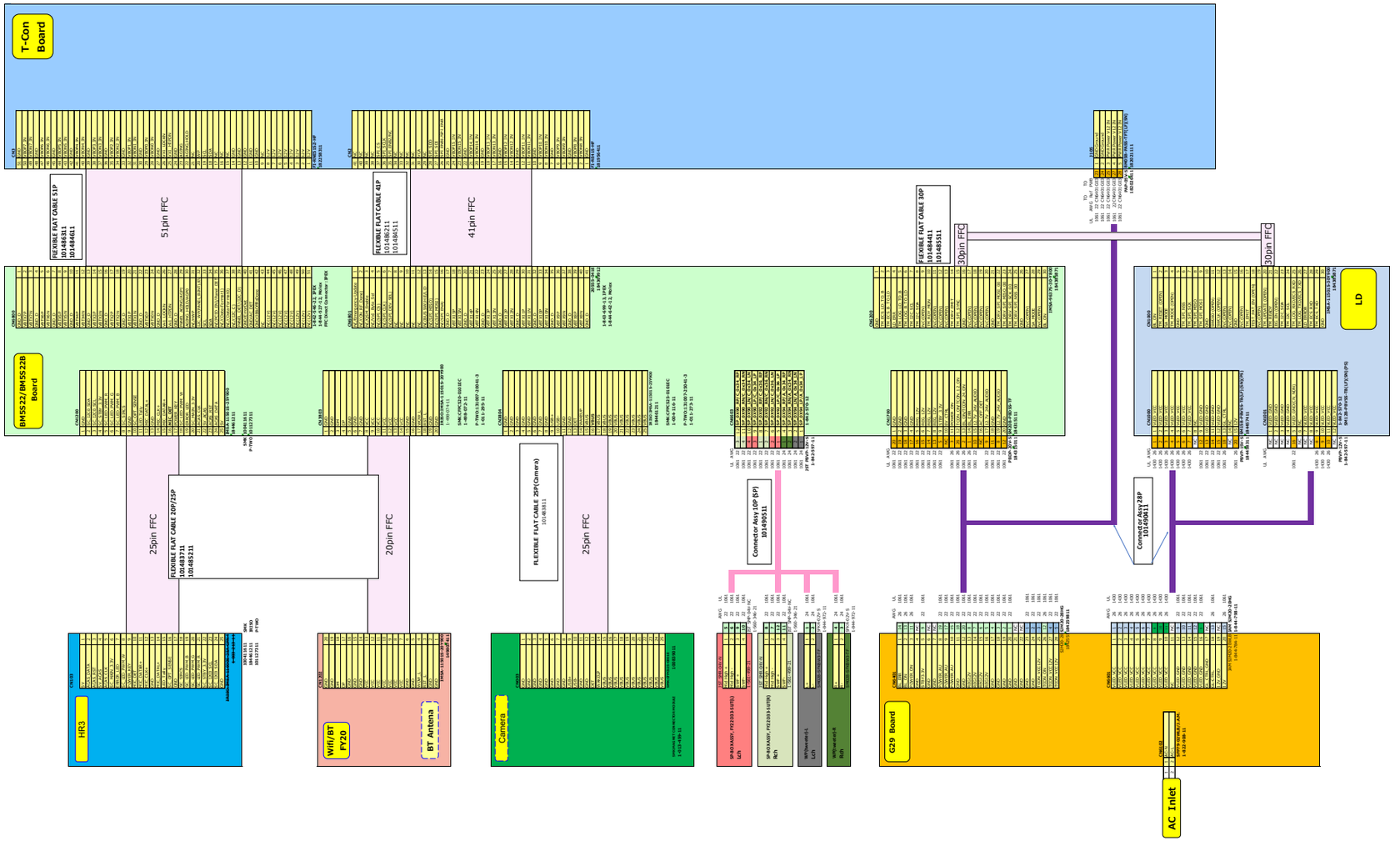
DIAGRAM

75” Connecting Diagram



DIAGRAM

85” Connecting Diagram



HANDLING GUIDE

1. Holding Position

OK

Always wear gloves during P-mod handling

NG

Hand pressing O-cell

OK

Holding edge of Bezel without touching O-cell

NG

Hand pressing o-cell

OK

Support set at edge of Bezel without touching O-cell

HANDLING GUIDE

2. Carry Position

OK

Carry P-mod by vertical position

OK

Carry P-mod by 2 persons

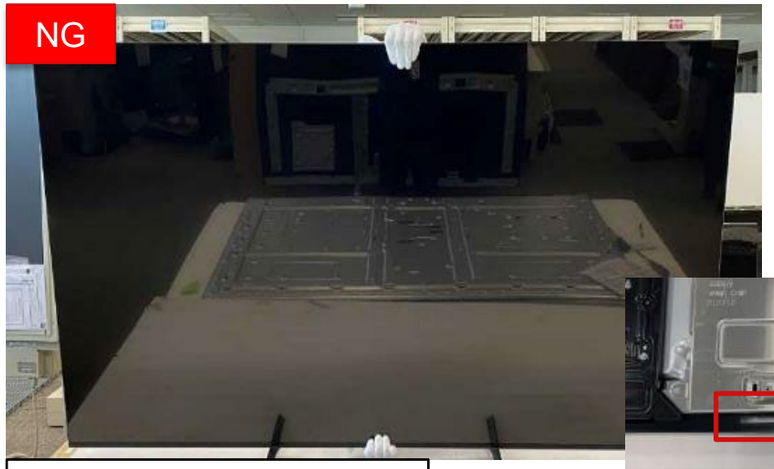
OK

Carry P-mod by corners

NG

Carry P-mod by horizontal position

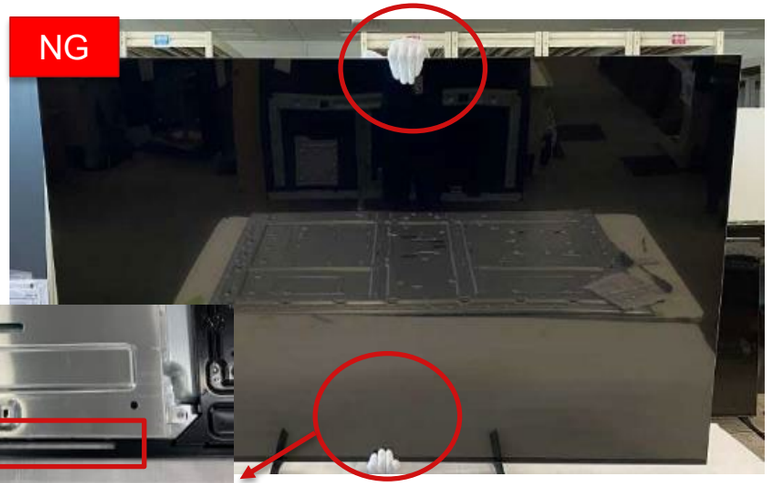
NG



Carry P-mod by 1 person

It is easy to deform by holding in this area

NG



Carry P-mod at center area

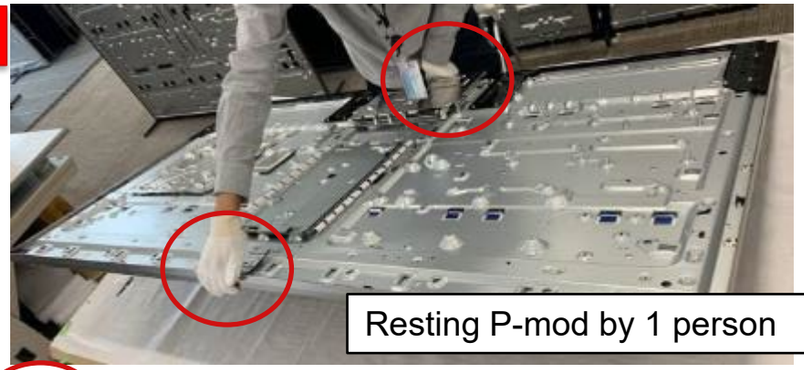
HANDLING GUIDE

3. Resting Position

OK

Resting P-mod by 2 persons
(Hold **long** sides)

NG

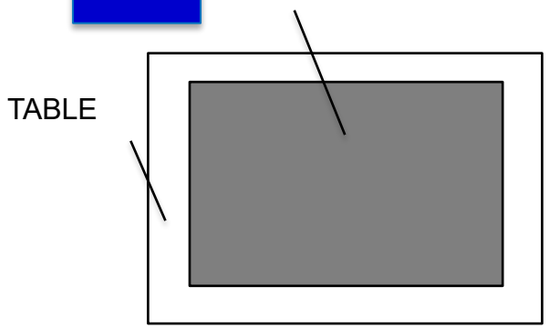


Resting P-mod by 1 person

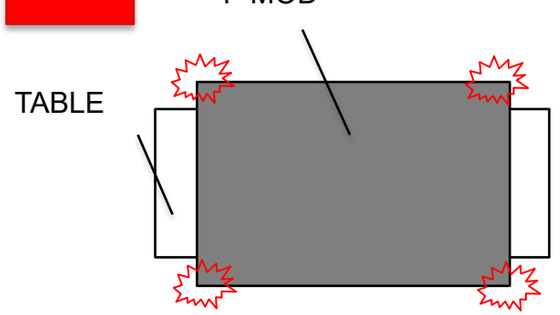
Resting P-mod by 2 persons
(Hold **short** sides)

Top of View when panel pun on top of table

OK



NG



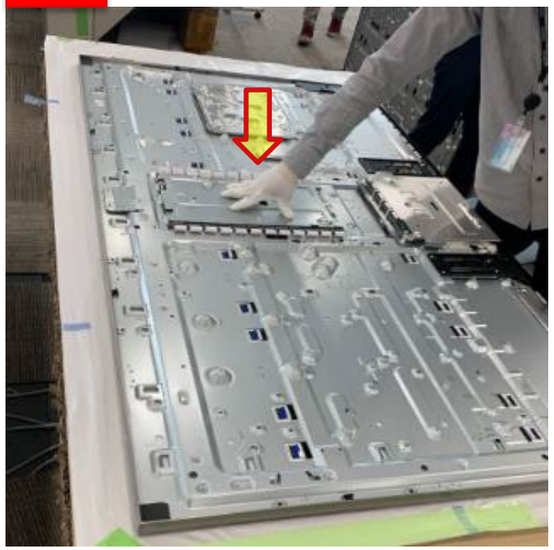
HANDLING GUIDE

4. Prohibited Method

NG

Handle P-mod without gloves

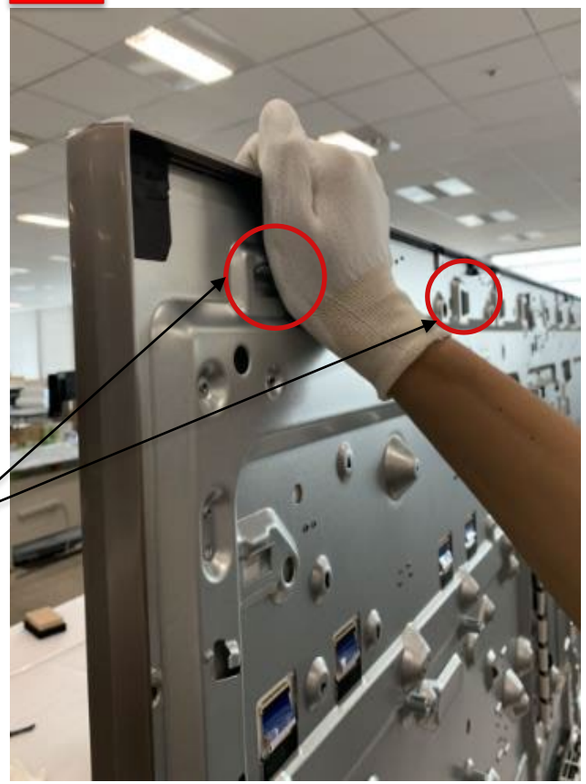
NG



Press on P-mod during Assy & Disassy

5. Restricted Area

NG



Avoid touch Rear cover hook during P-mod handling

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SERVICE MANUAL (DISASSEMBLY)

ORIGINAL MANUAL ISSUE DATE: 2023.12

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9-888-904-U1

LCD TV

SONY

Sony EMCS (Malaysia) Sdn. Bhd. HES-M
© 2023.12

MODEL LISTS

Model	Remote	Destination
XR-65X95K	RMF-TX800U	UCM
XR-65X93L	RMF-TX810U	UC2
XR-65X93CL	RMF-TX910U	UC2
XR-75X95K	RMF-TX800U	UCM
XR-75X93L	RMF-TX810U	UC2
XR-75X93CL	RMF-TX910U	UC2
XR-85X95K	RMF-TX800U	UCM
XR-85X93L	RMF-TX810U	UC2

Self Diagnosis Supported model

RMF-TX800U

RMF-TX810U

RMF-TX910U

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3-4	EXPLODED VIEW AND PART LIST	88
SMART CORE		
EXPLODED VIEW AND PART LIST		95

Self Diagnosis Supported model

Please refer Service Manual (Troubleshooting) for below information:

- General Safety Notes
- Self Diagnosis Function
- Triage Chart
- Troubleshooting, Troubleshooting reference
- Software Update & Reset
- Diagrams: Connector Diagram
- Handling Guide

Note: Pictures provided in this manual may have difference from an actual sets

TOOLS & EQUIPMENTS

1 LIST OF ITEMS TO PREPARE

i. Screwdriver (e.g., #2 Phillips Screwdriver)

ii. Multimeter

iii. ESD Wrist Straps

iv. Metal Washer (Flat) or Coin (for remove Rear Cover)

v. Ruler (for remove Rear Cover)

vi. Service Manual (Disassembly) (for remove & replace details)

2 OPTIONAL EQUIPMENTS

i. Screwdriver (e.g., #0 Phillips Screwdriver)

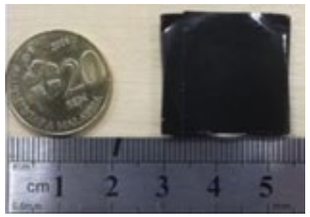
ii. Parts Tray for loose screws and small items

iii. Flashlight

iv. Service Manual (Troubleshooting)

3 PREPARATION BEFORE REPAIRS

Before you begin, unplug the TV from the wall outlet and stand it up on a level work surface to begin removing the Rear Cover. If you are working on a TV that was wall-mounted, and does not have a stand, simply place the TV faced-down on top of a thick blanket, on a large/flat surface, or you may be able to lean it up against a wall near a wall outlet.



Thickness: approx. 1.5mm
Diameter: 20~25mm
(wrap in tape (L=50mm))

Plastic or Metal Ruler
(In case of Metal ruler, wrap in tape (L=50mm) for prevent scratches)

FFC PRECAUTIONS

※Caution: DO NOT hold / touch copper side during FFC handling.

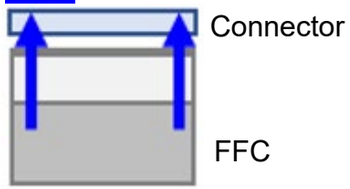
FFC Insertion Method

ESSENTIAL CAUTION INFO THAT MUST BE FOLLOWED BY PRODUCTION FOR ANY FFC INSERTION METHOD

INSERT FFC IN STRAIGHT CONDITION

STRAIGHT INSERT

OK



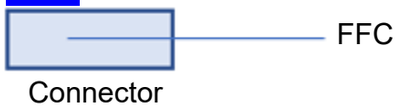
NG

DO NOT INSERT FFC IN SLANTING CONDITION

DO NOT APPLY EXCESSIVE FORCE DURING INSERTION

INSERT ANGLE

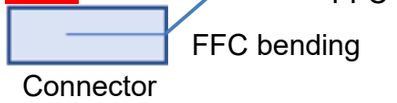
OK



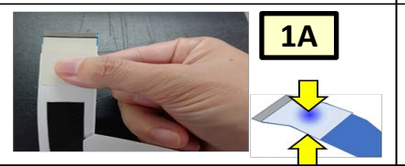
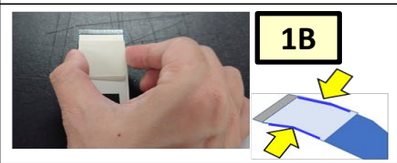
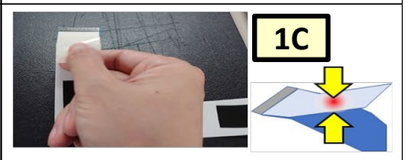
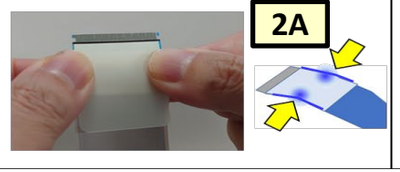
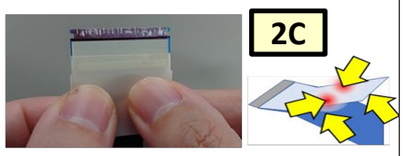
<15°

Cross section of TV set from A

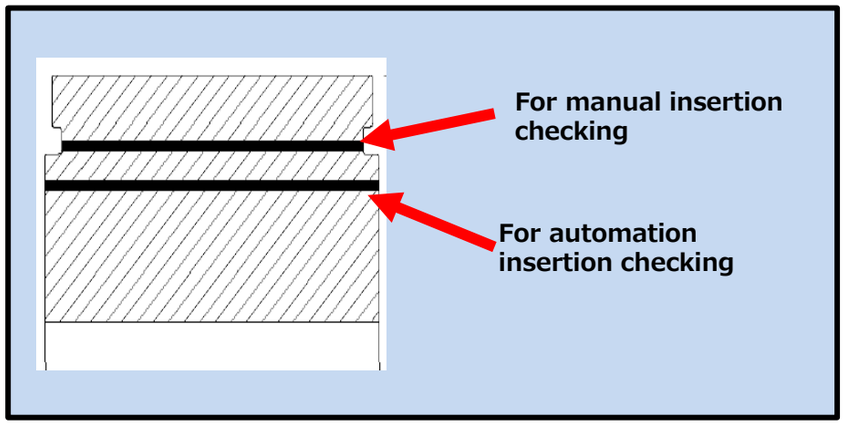
NG



RECOMMENDED FFC HOLDING METHOD MATRIX

	A Sandwich	B Both ends	C Plate
1 One-hand	 1A	 1B	 1C
2 Both hands	 2A		 2C

INDICATION FOR FFC FULL INSERTION

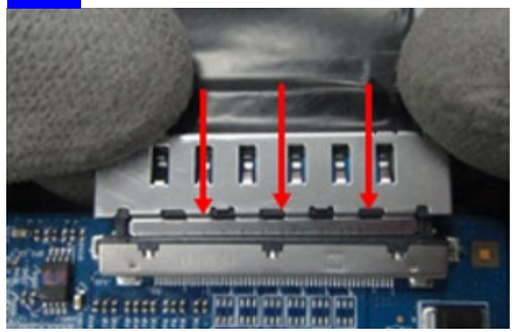


FFC PRECAUTIONS

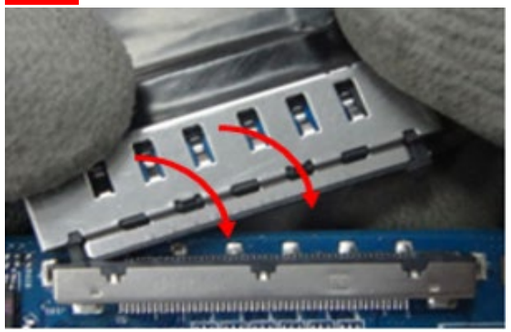
Caution for FFC with Housing Connector

CAUTION FOR FFC WITH CONNECTOR INSTALLATION AT PANEL SIDE

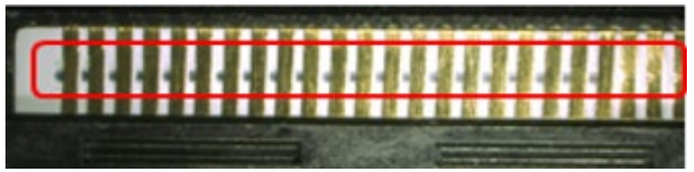
OK



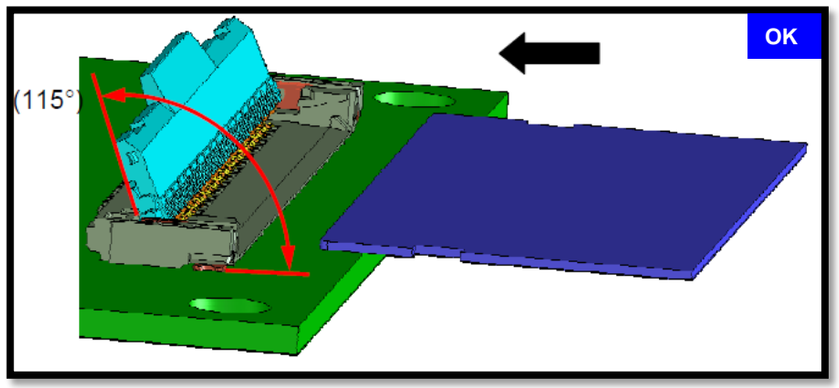
NG



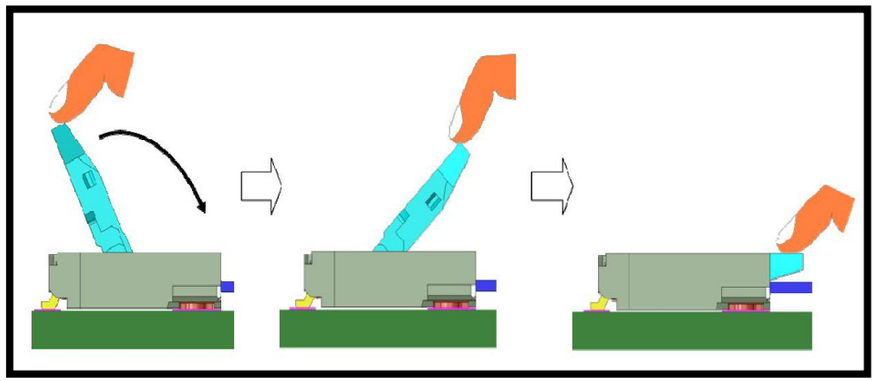
ABNORMAL HANDLING WILL CAUSE CONTACT SHIFTED & FOREIGN PARTICLES ISSUE AS PICTURE BELOW:



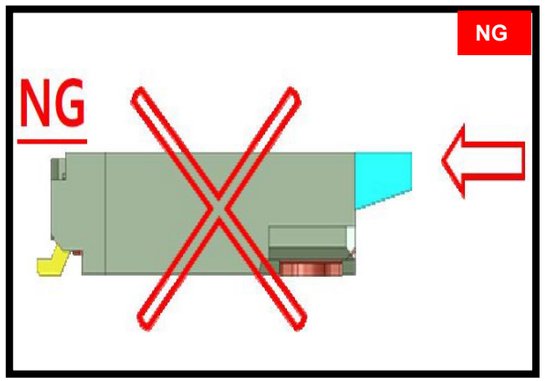
ZIFF FFC Insertion Caution



Pull ***up*** to open actuator.



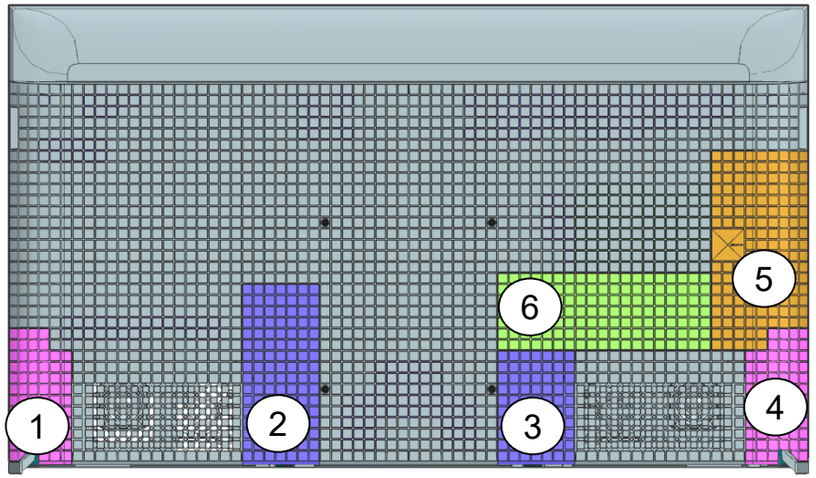
Close actuator securely to lock
Make sure line indication on FFC is align with actuator.



Do not push ***inwards*** with excessive force.

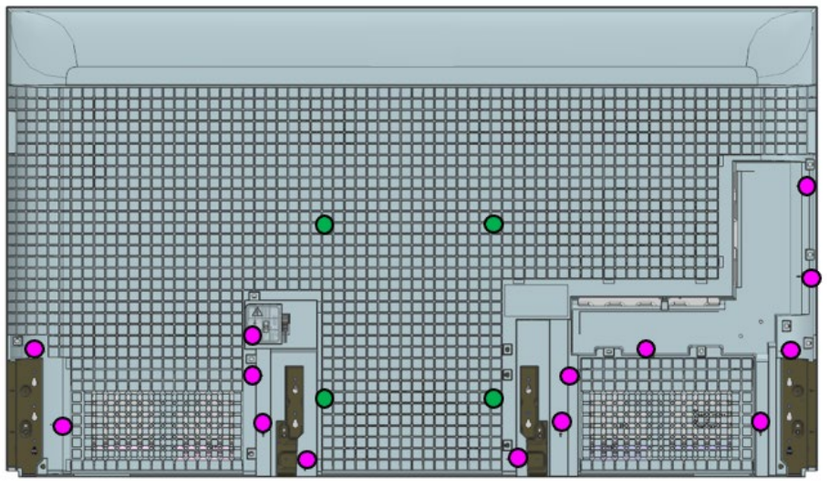
REAR COVER

1. Remove Cover (6 Covers).



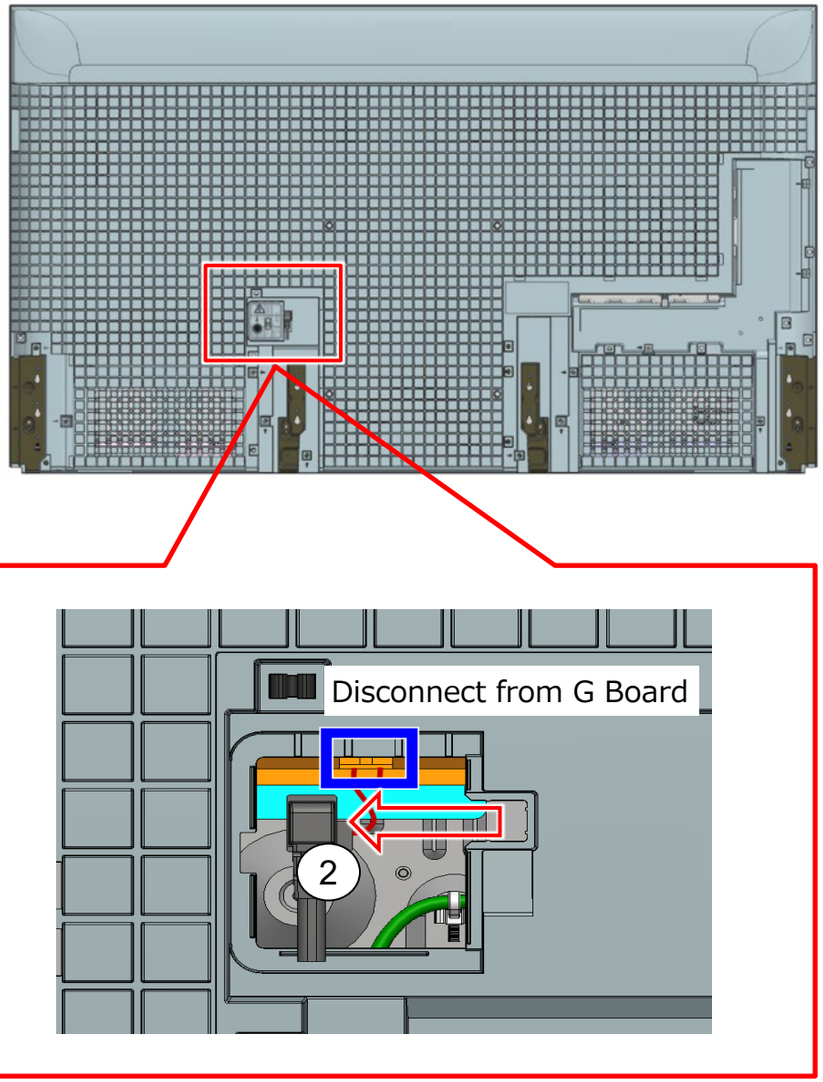
   (1) STAND COVER R (2L MKY)
   (2) STAND COVER CR (2L MKY)
   (3) STAND COVER CL (2L MKY)
   (4) STAND COVER L (2L MKY)
   (5) COVER TML V (2L MKY)
   (6) COVER TML H (2L MKY)

2. (i) Remove 18 screws



   SCREW, ORNAMENTAL M6X12 (4pcs)
   SCREW M3X3.0 STEP (14pcs)

REAR COVER



(ii) Remove AC cover.

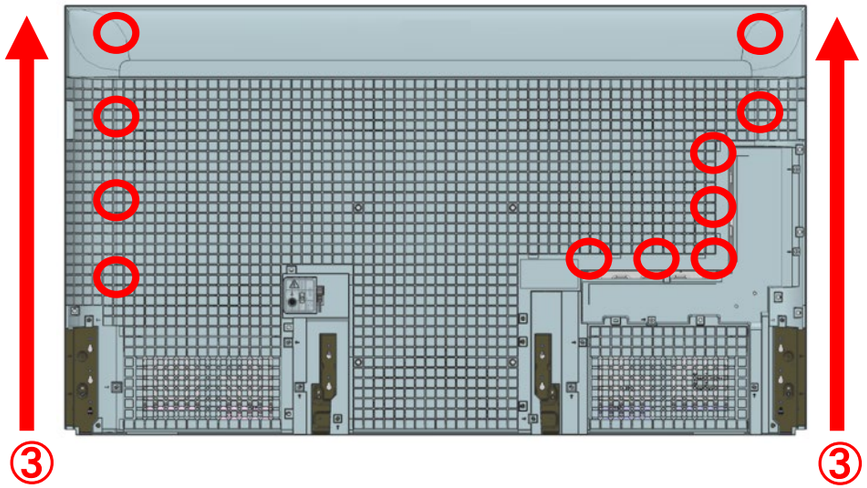
① AC COVER (AT)

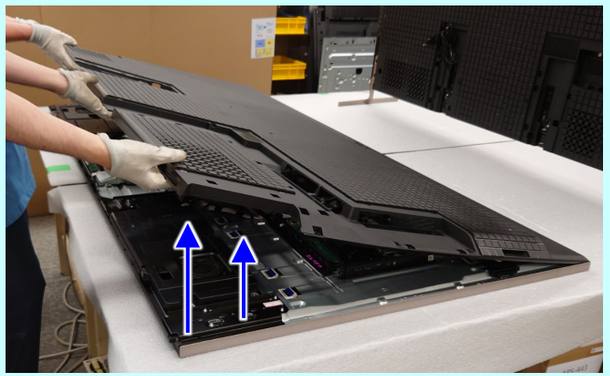
(iii) Remove Power Supply Code.

② POWER SUPPLY CODE

REAR COVER

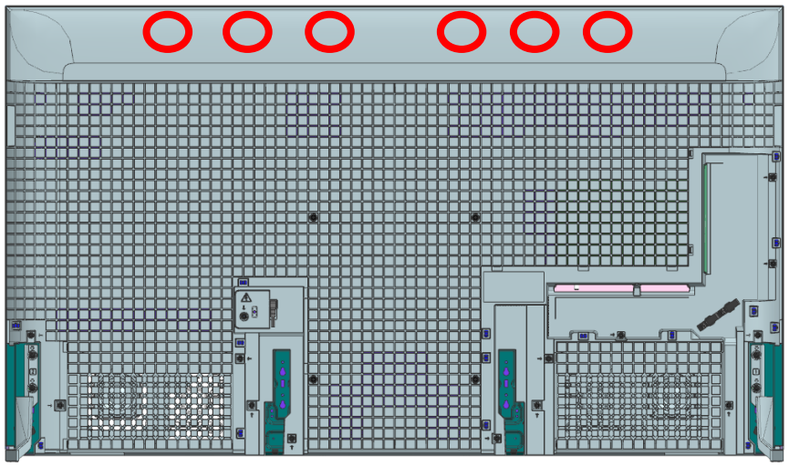
3. Release Side and Bracket Hook.

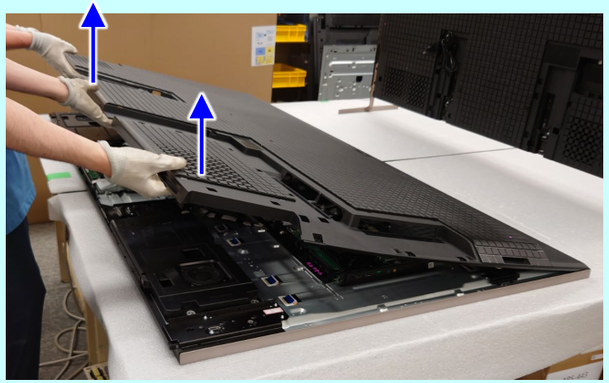




Lift up Rear Cover from Bottom side

4. Release Top Hook (6 pcs).



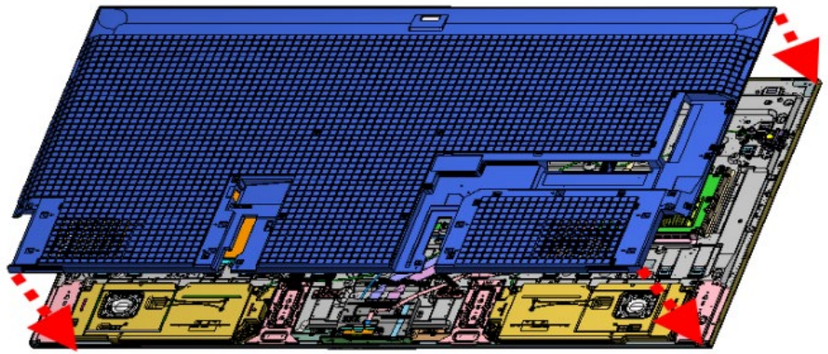


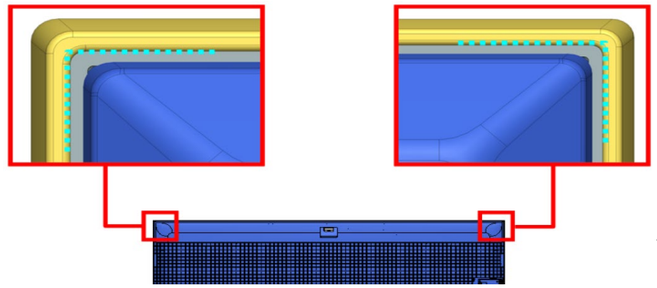
Lift up Rear Cover from Bottom side more

REAR COVER

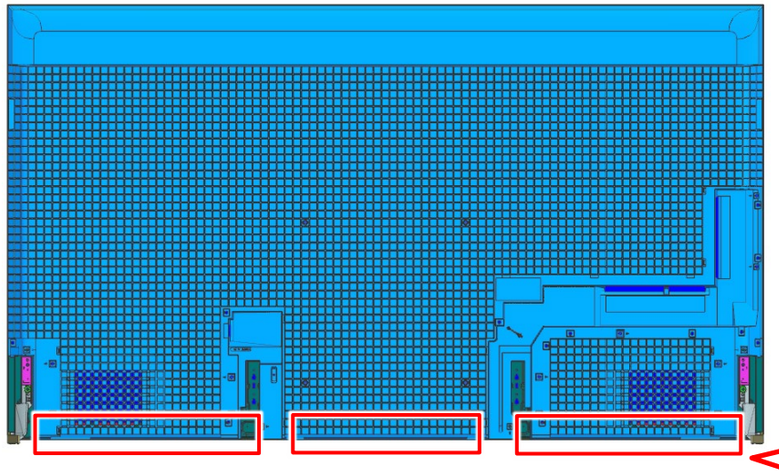
1. Install REAR COVER.

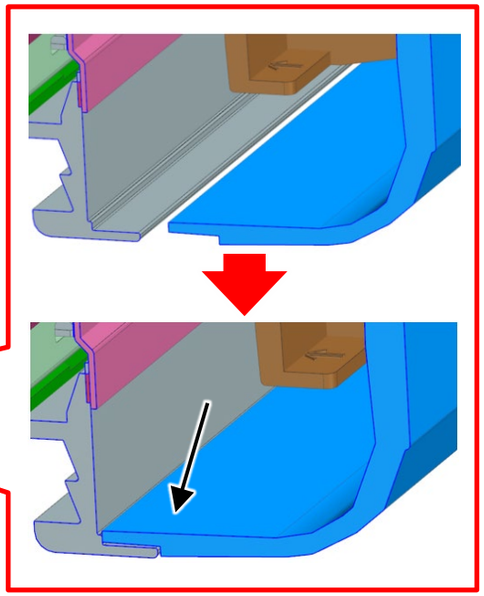
(i) REAR COVER aligning.
→ Don't overwrap to the BEZEL.





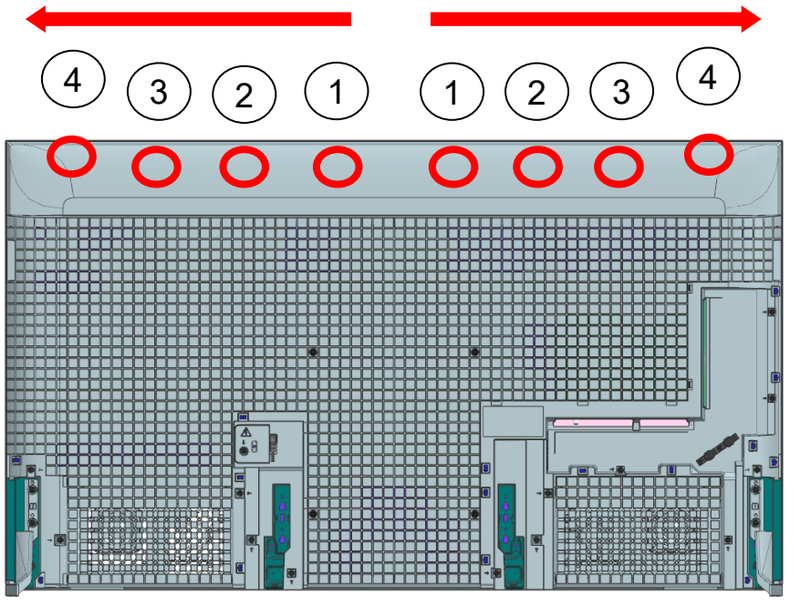
(ii) Insert rib of the bottom to the BEZEL.





REAR COVER

2. (i) Push and Lock Top Hook (pushing order) (8 pcs).

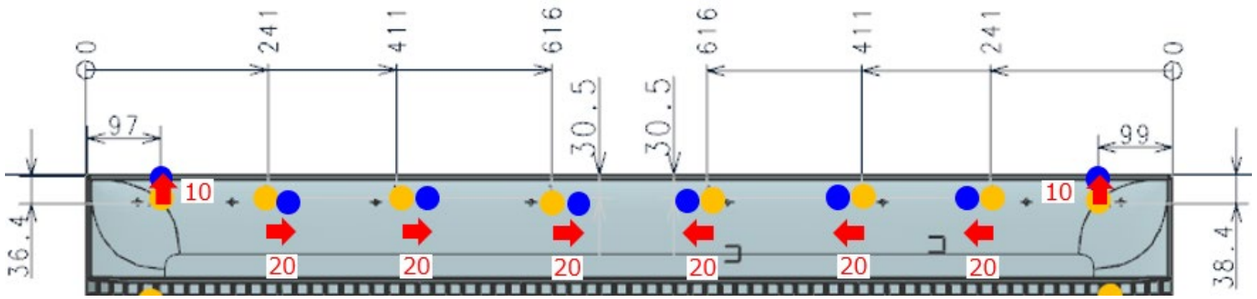


(ii) Push and Lock Top Hook (pushing position) (8 pcs).

Notice:
Please push the inside (10～20mm) of the hook because pushing the outside increases the insertion force.

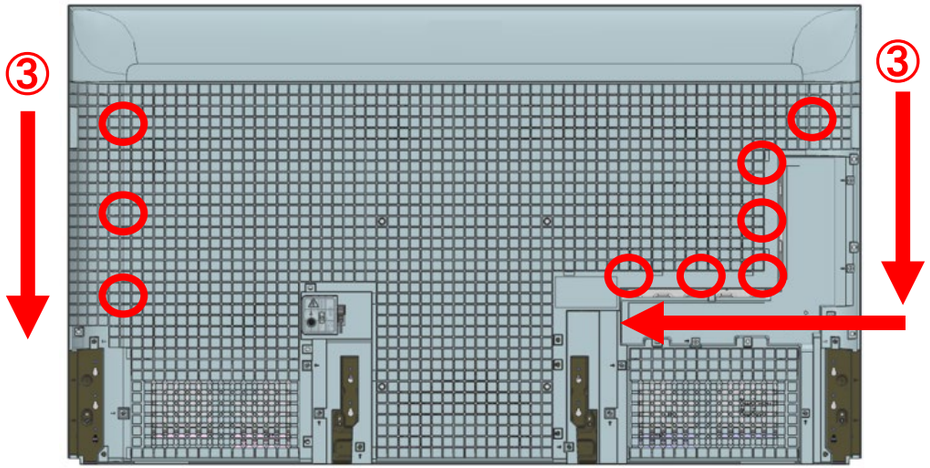
Hook position

Push position

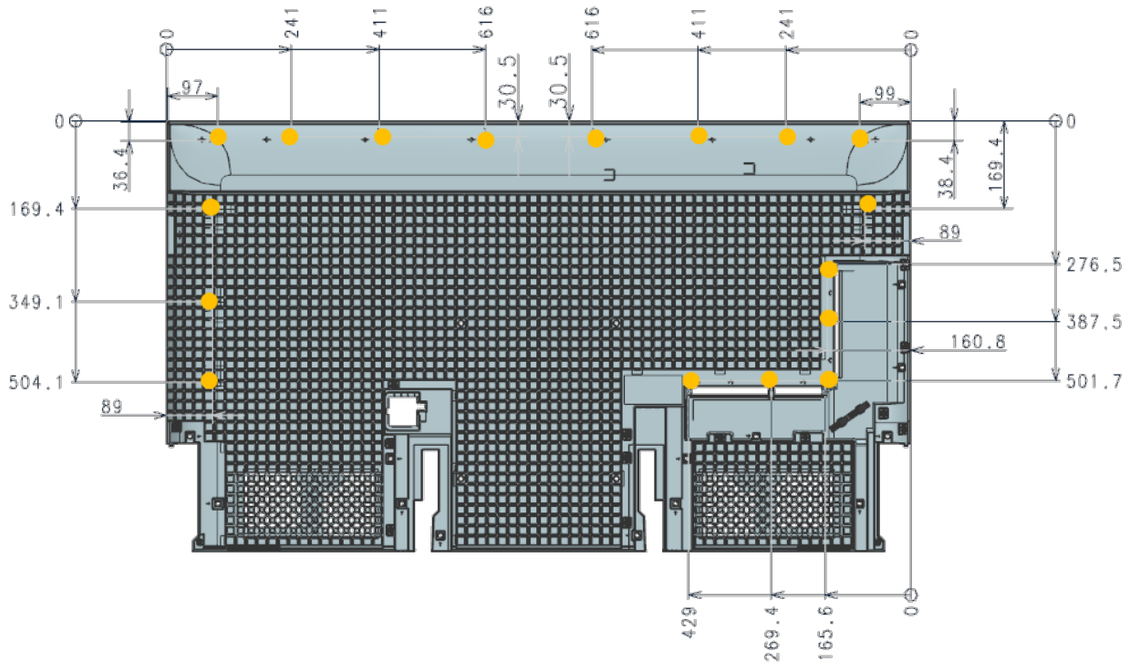


REAR COVER

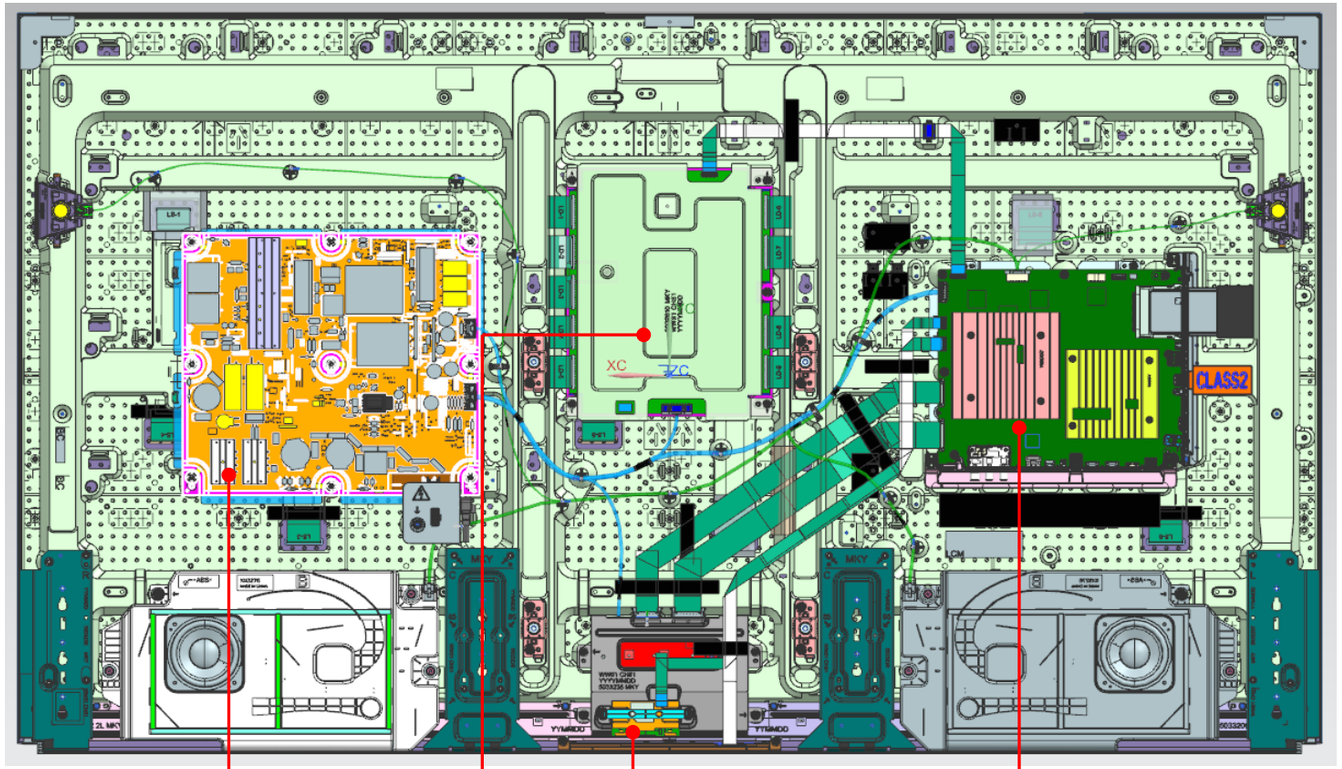
3. Push and Lock Side and Bracket Hook (pushing order).

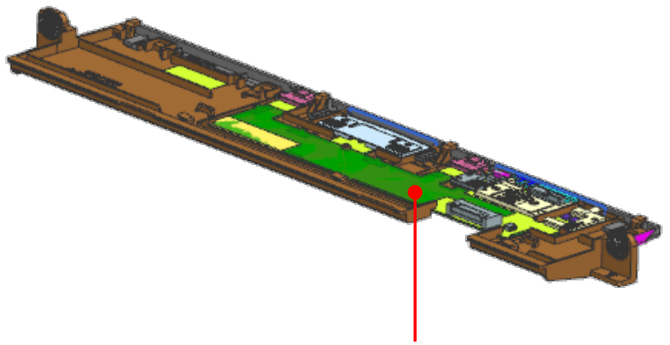


Hook Position.

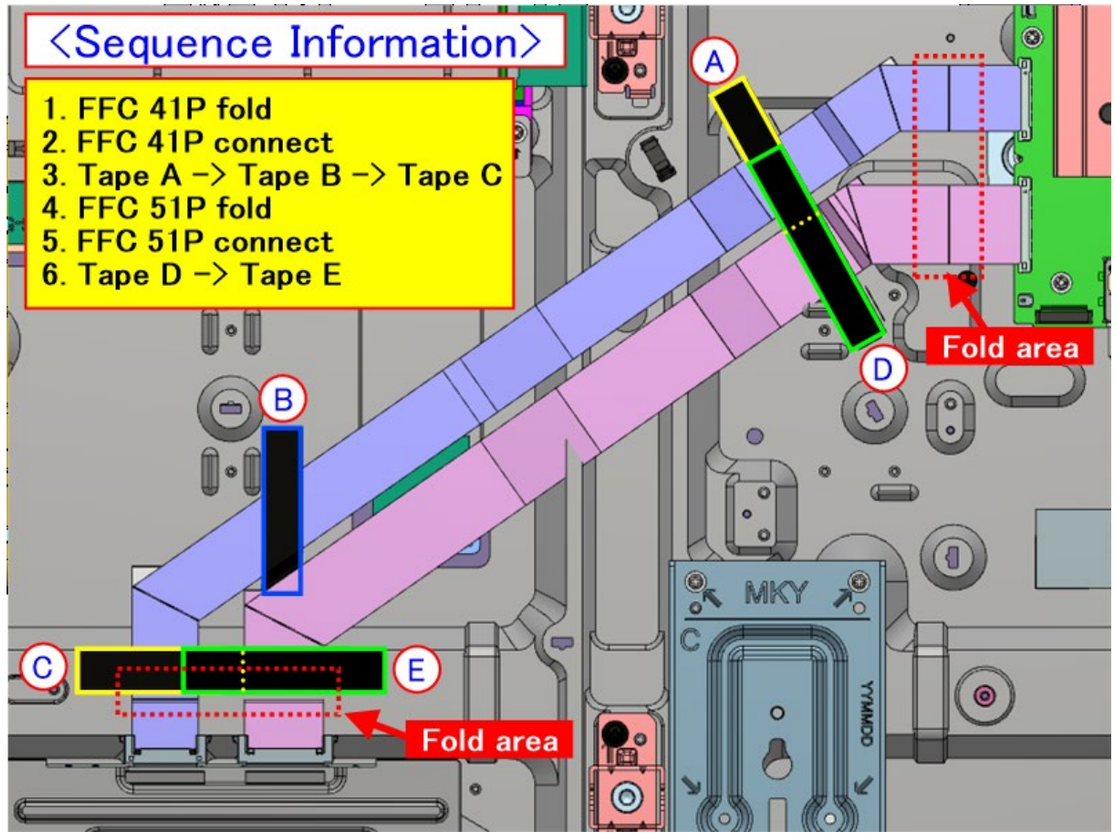


1-2. BOARD LOCATION

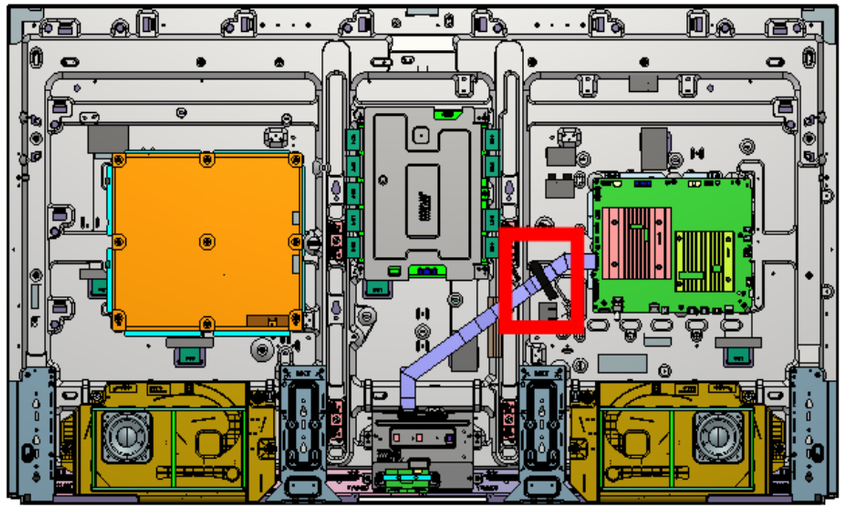




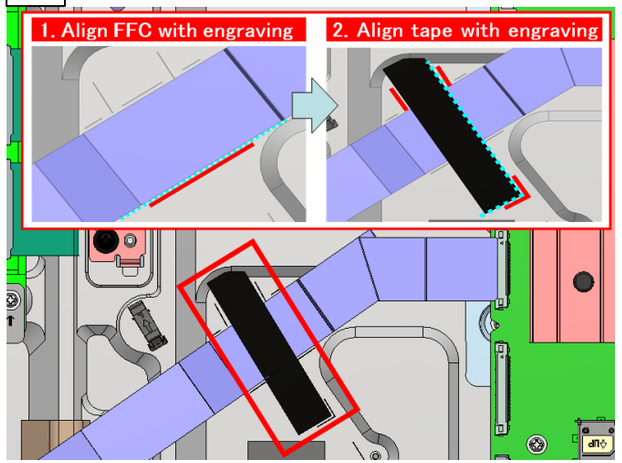
INFORMATION



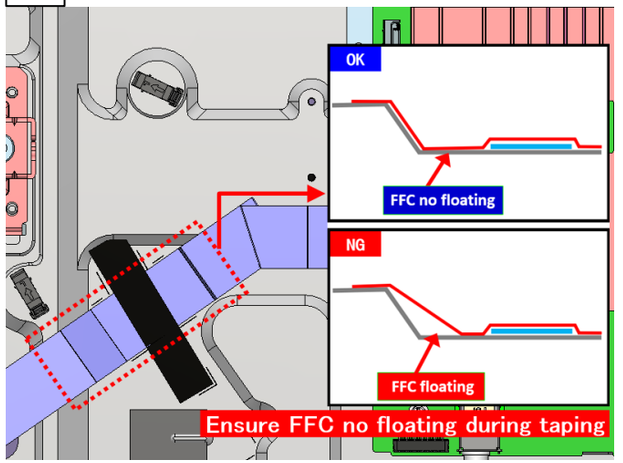
TAPE



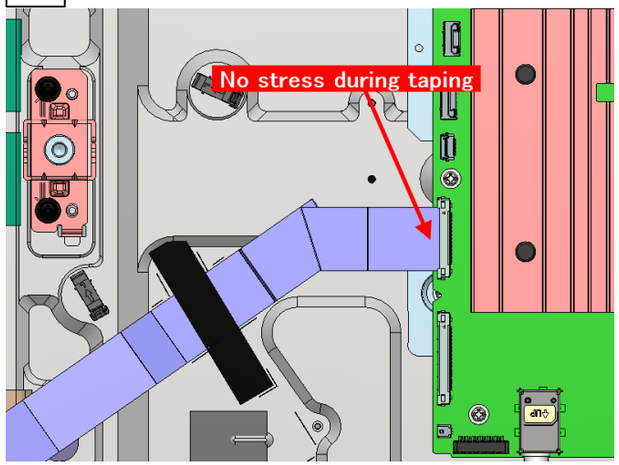
1


1. Align FFC with engraving
2. Align tape with engraving

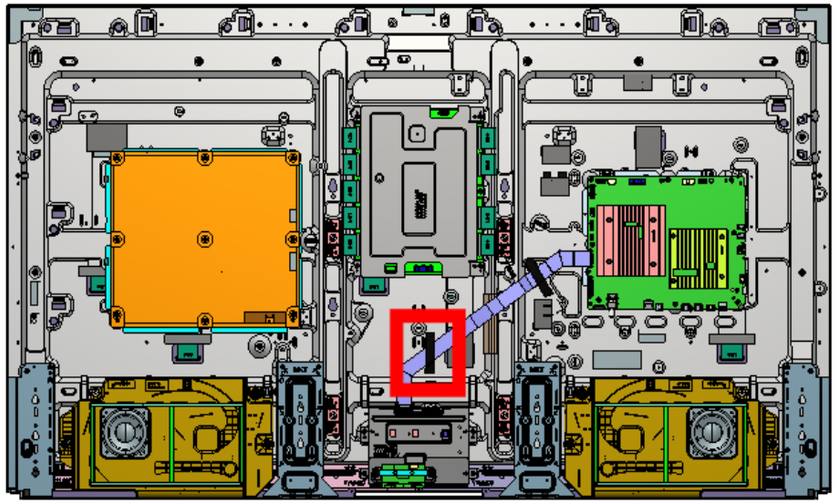
2

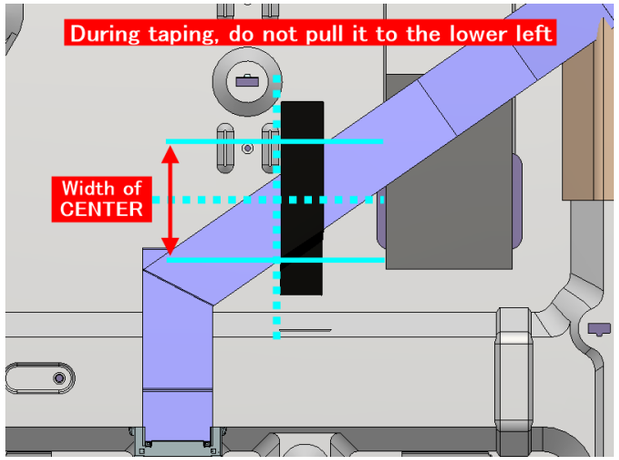

OK
FFC no floating
NG
FFC floating
Ensure FFC no floating during taping

3

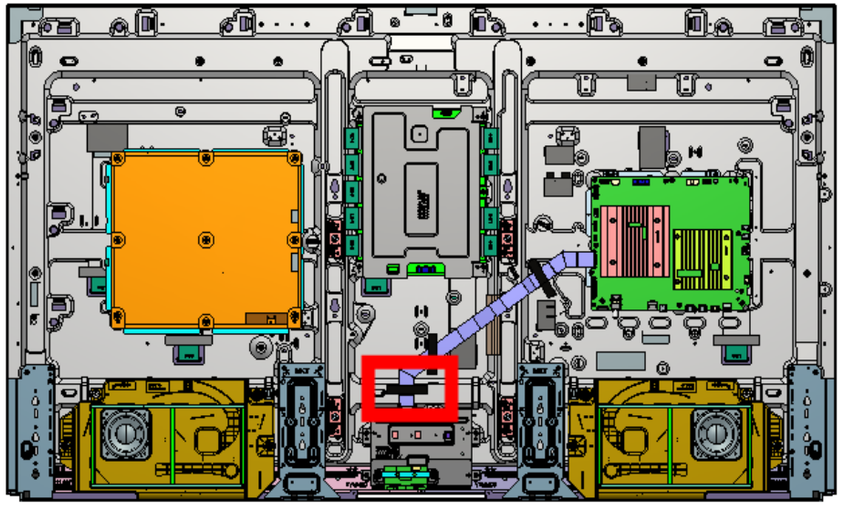

No stress during taping

TAPE

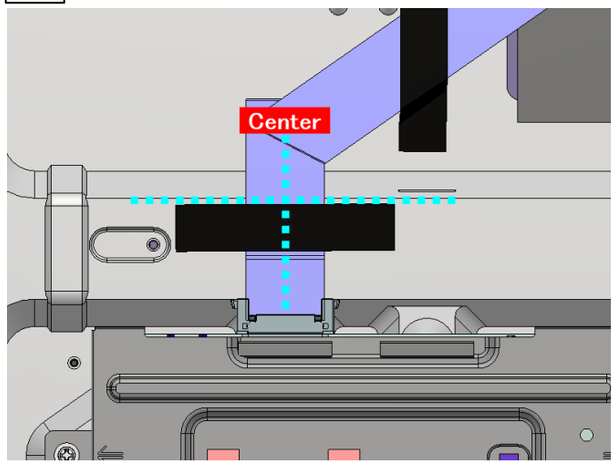



During taping, do not pull it to the lower left
Width of CENTER

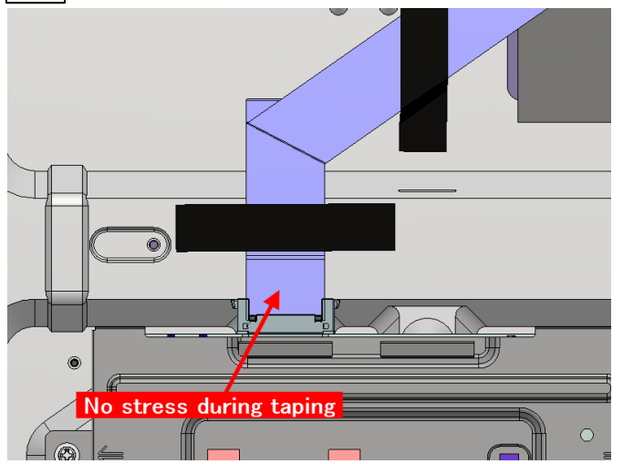
TAPE



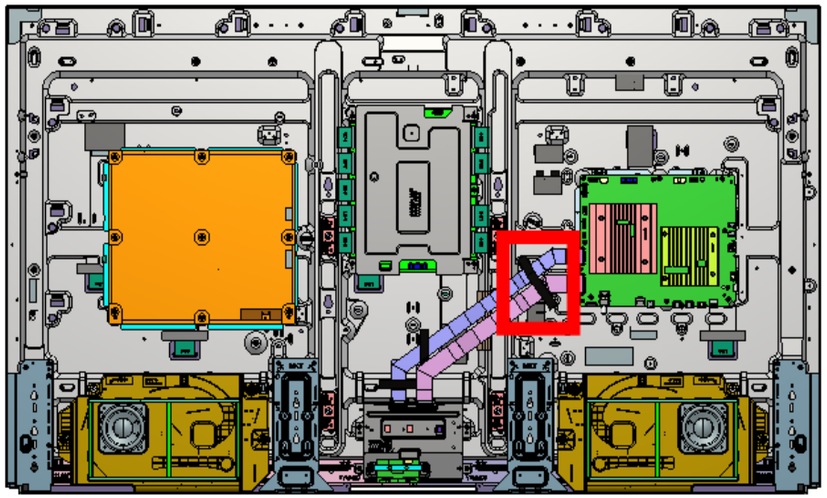
1


Center

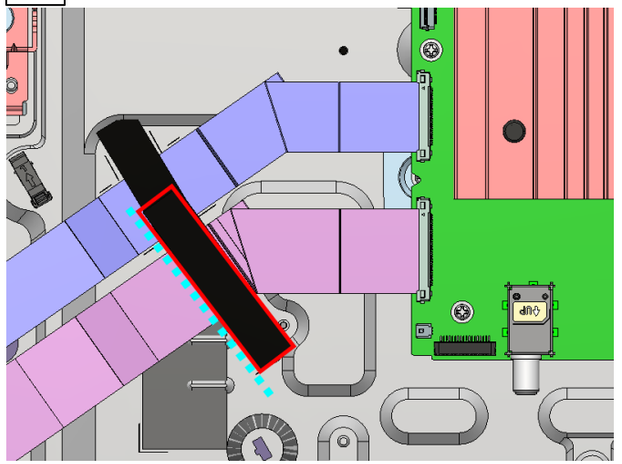
2


No stress during taping

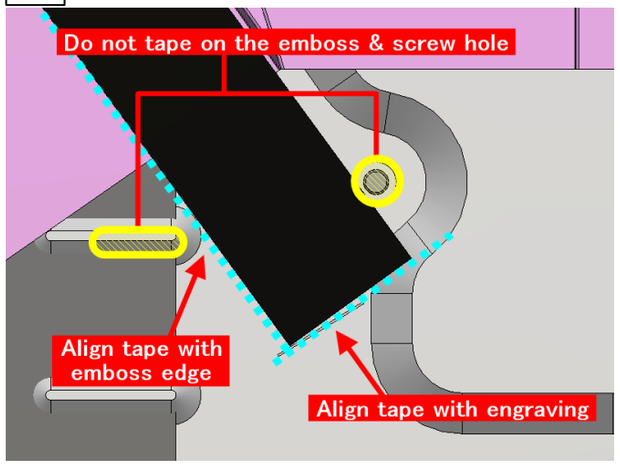
TAPE



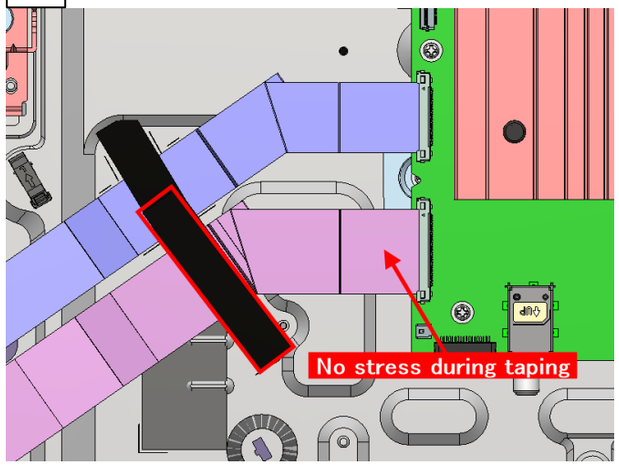
1



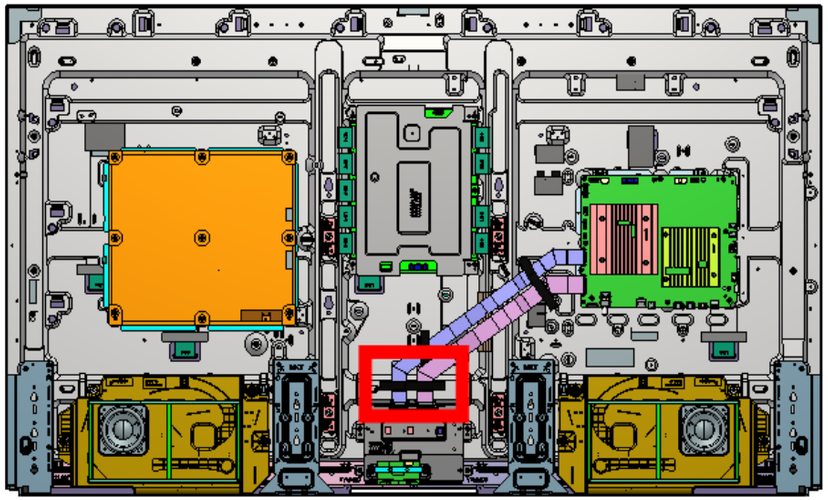
2


Do not tape on the emboss & screw hole
Align tape with emboss edge
Align tape with engraving

3


No stress during taping

TAPE



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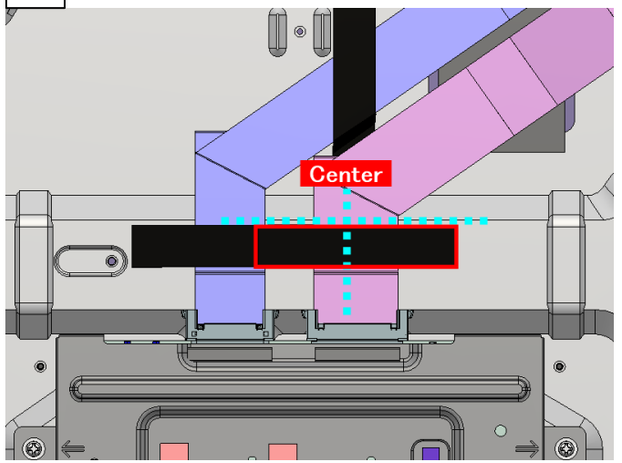

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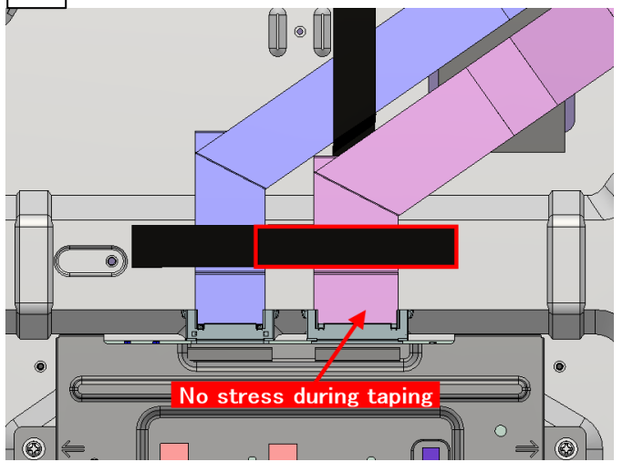

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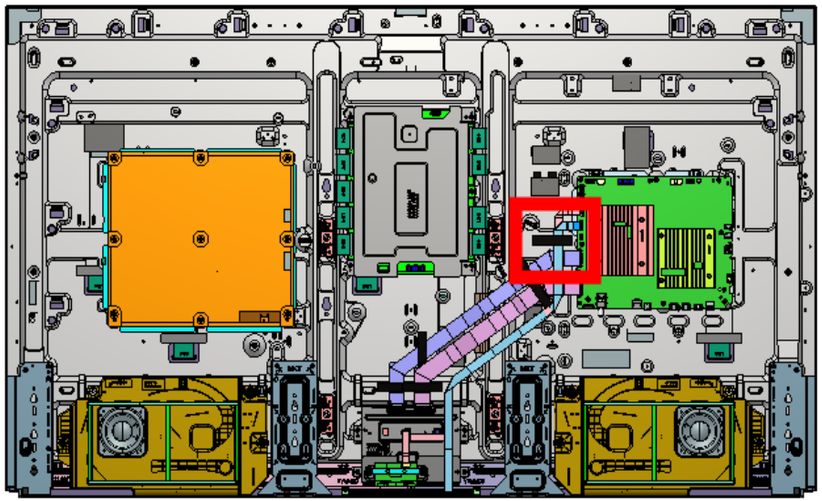

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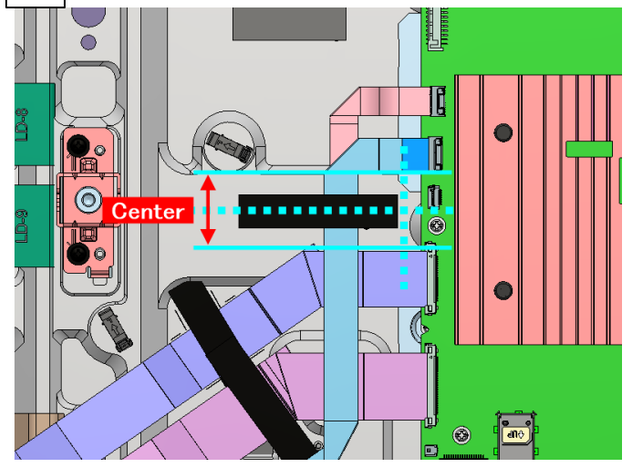

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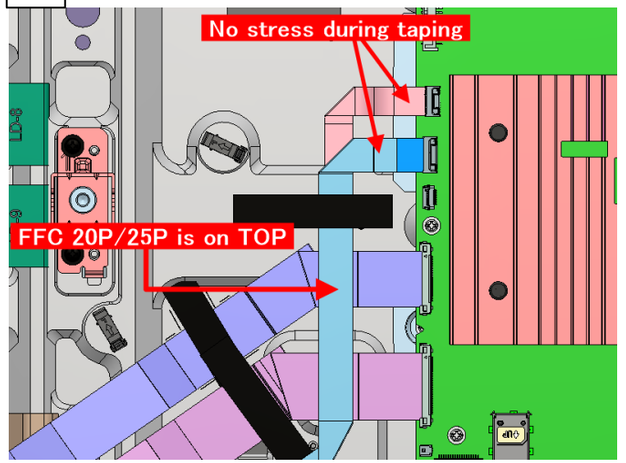

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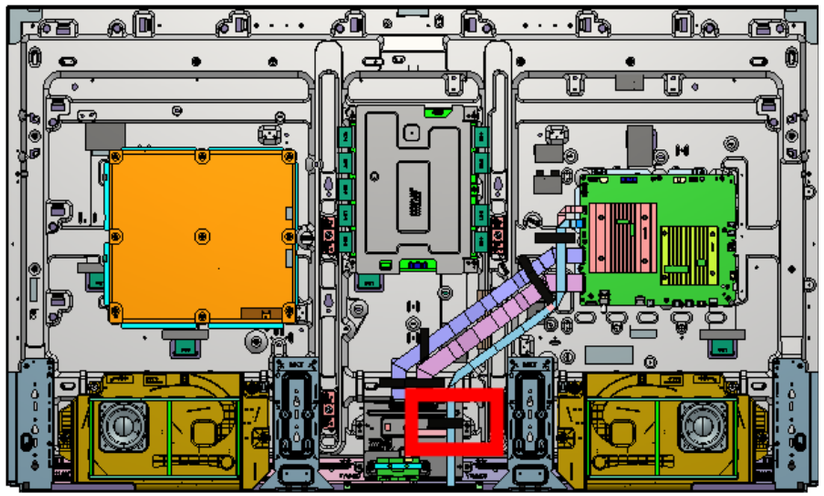

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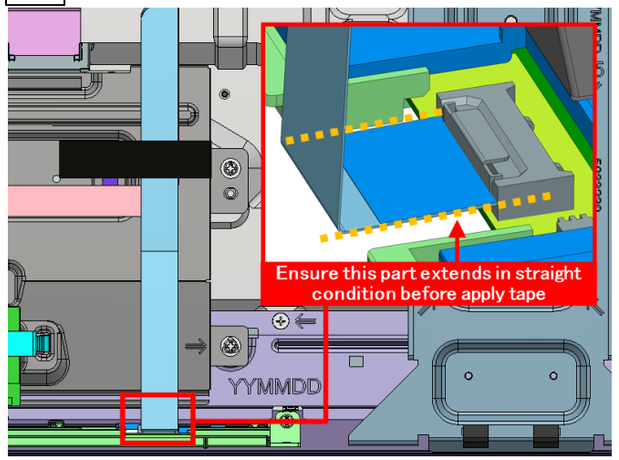
Ensure this part extends in straight condition before apply tape
YYMMDD

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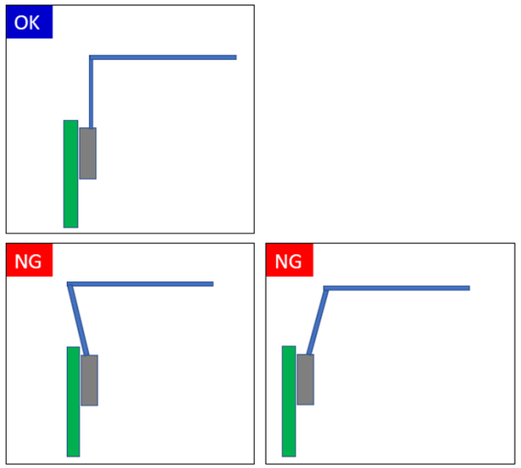
OK
NG
NG

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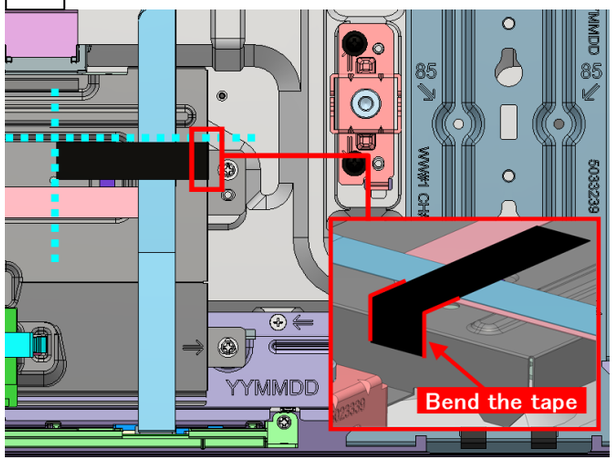
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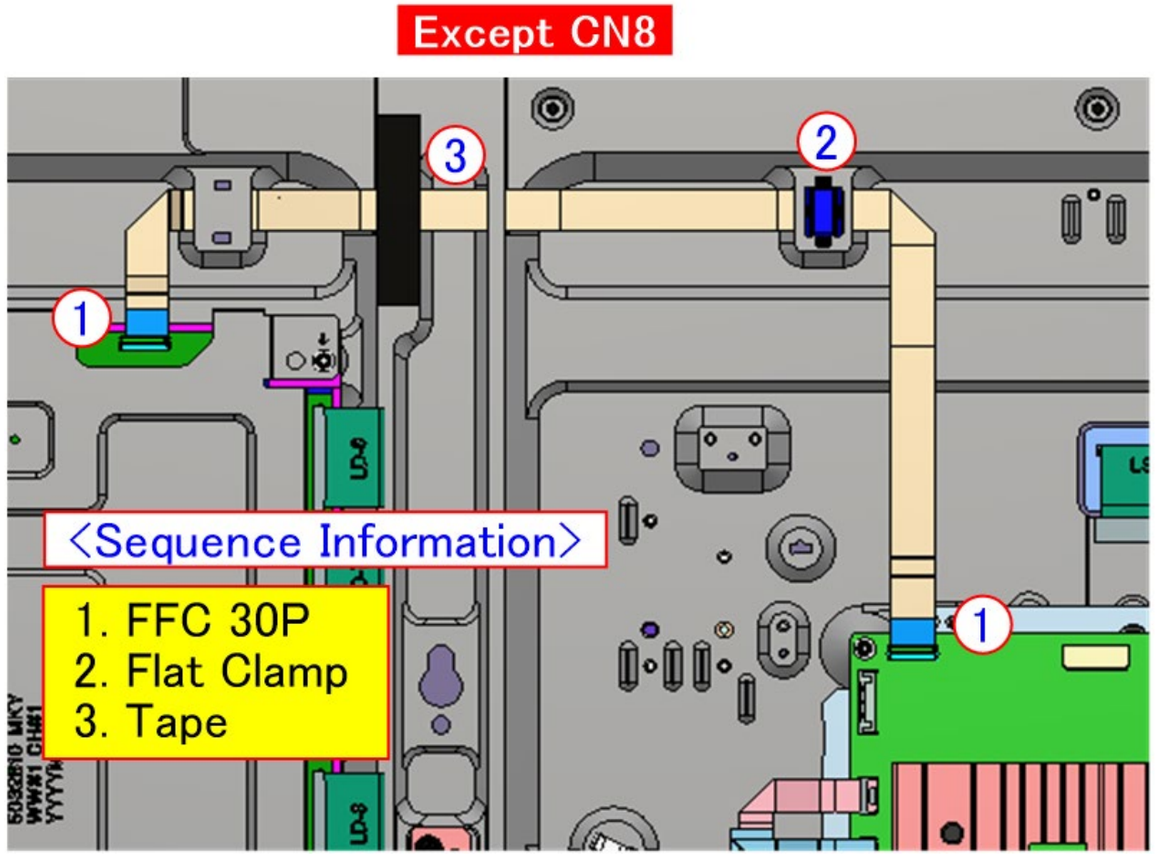
Bend the tape

INFORMATION



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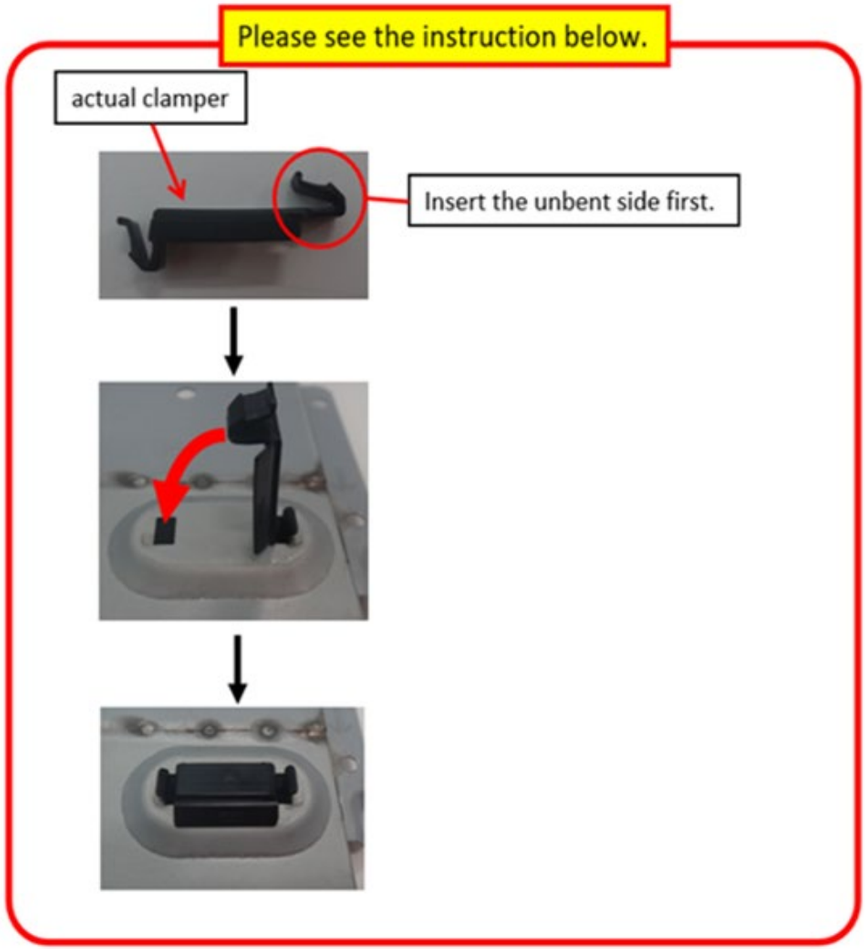

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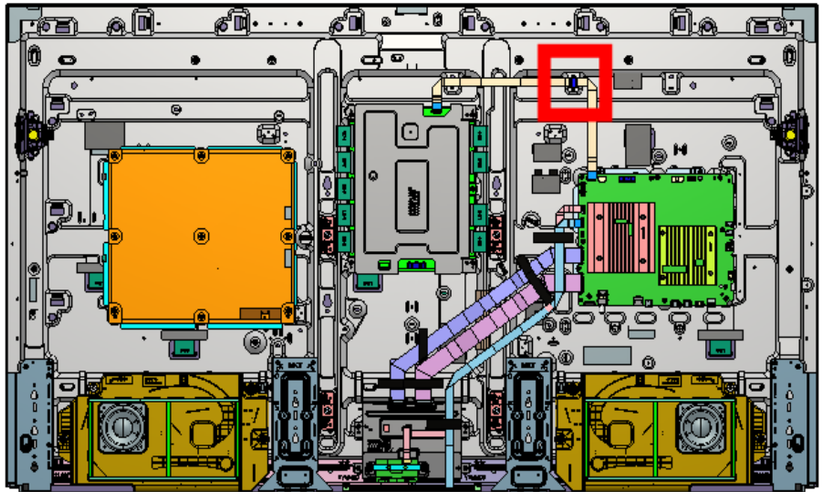

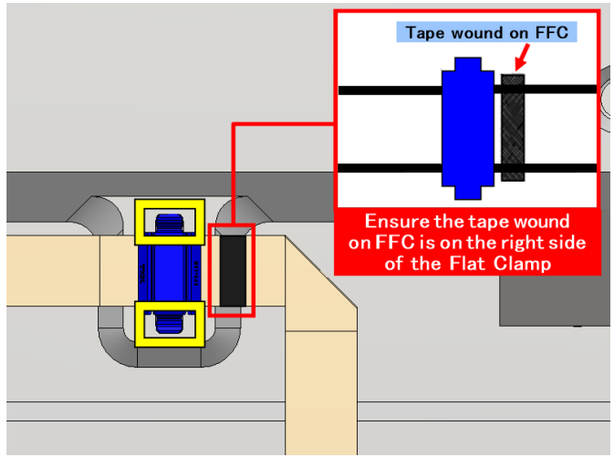

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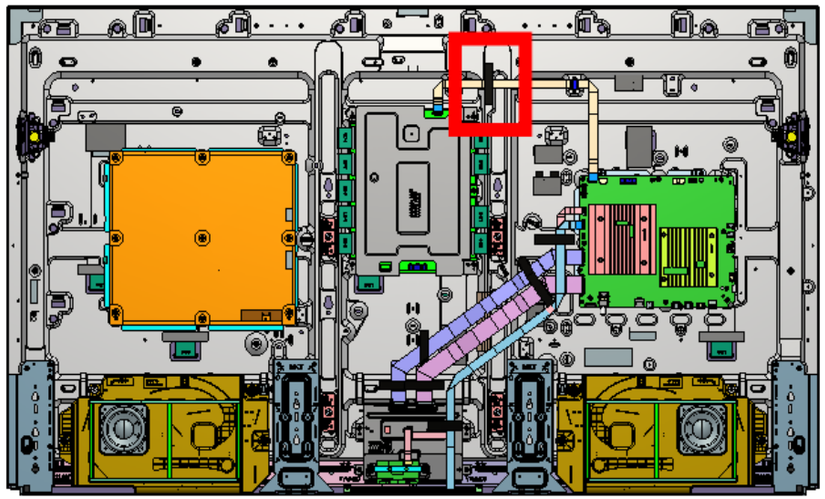

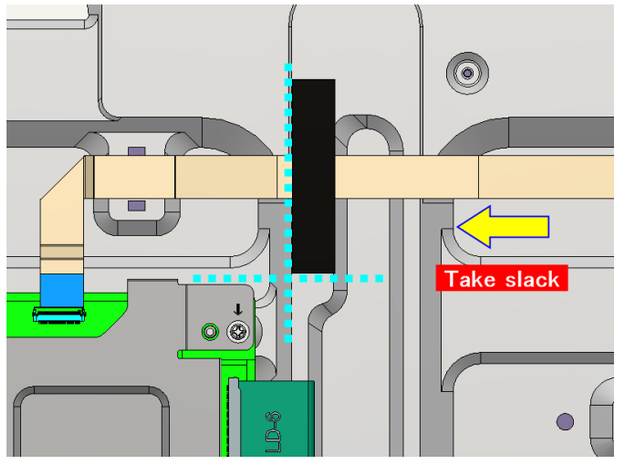

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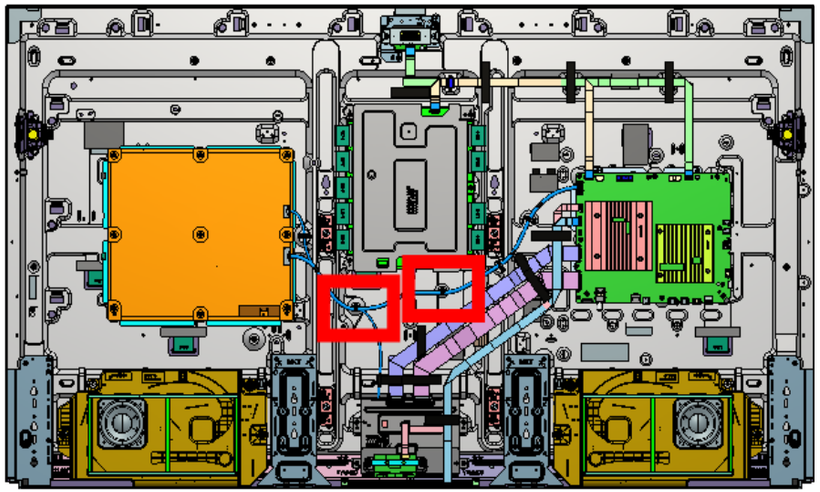

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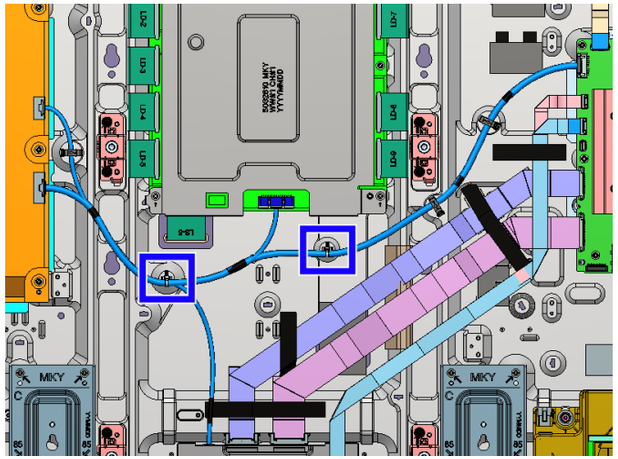

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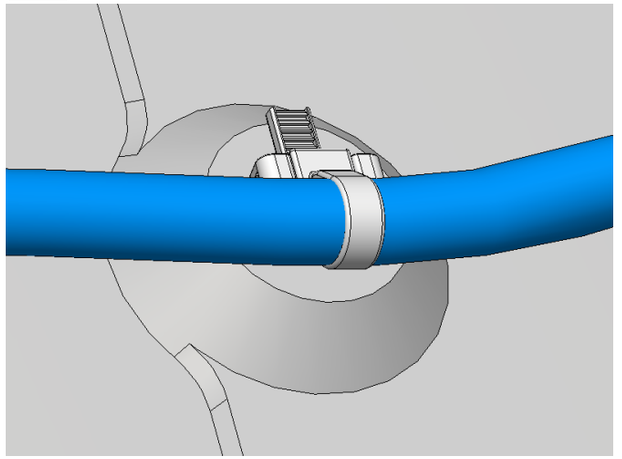

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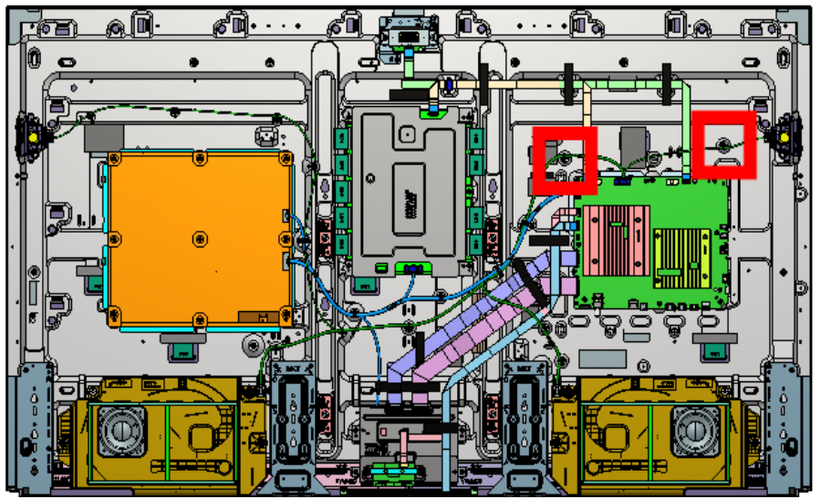

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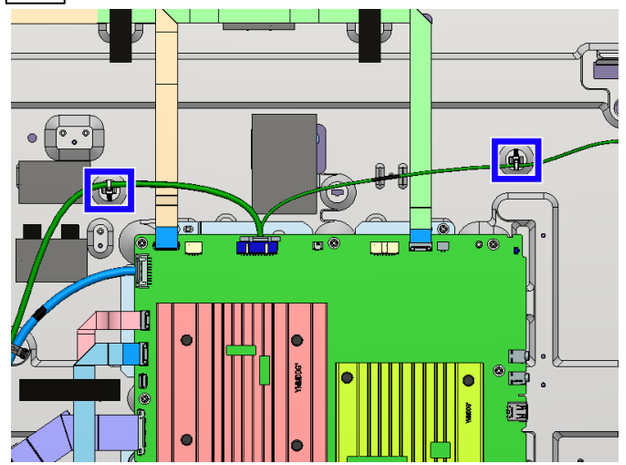

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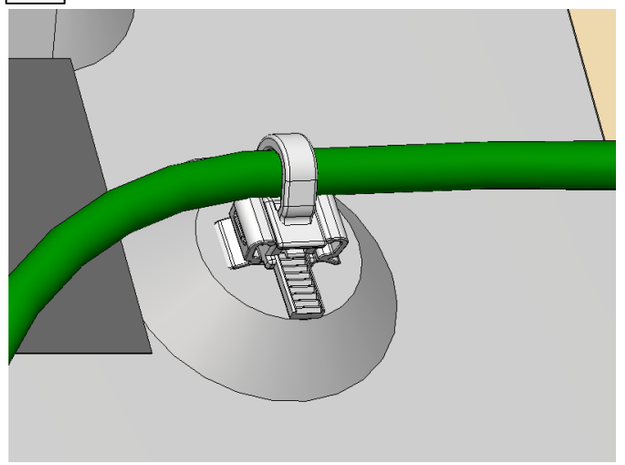

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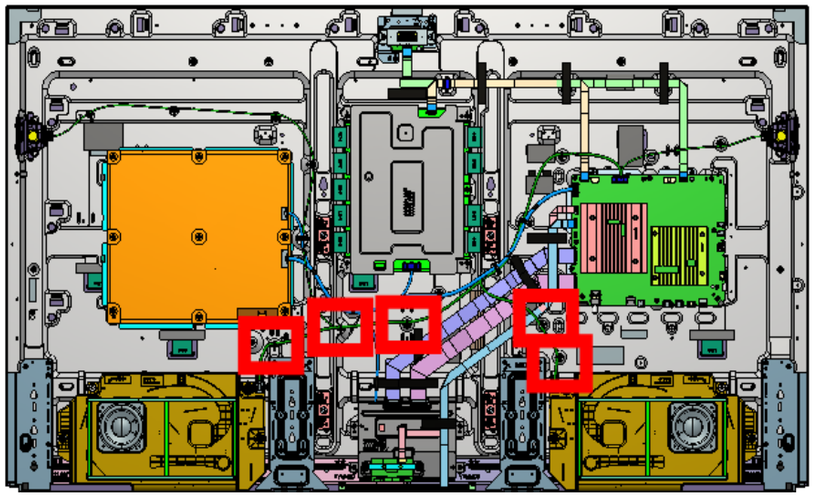

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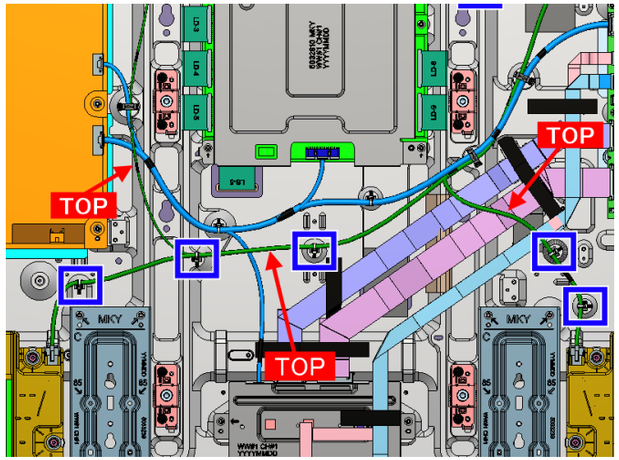

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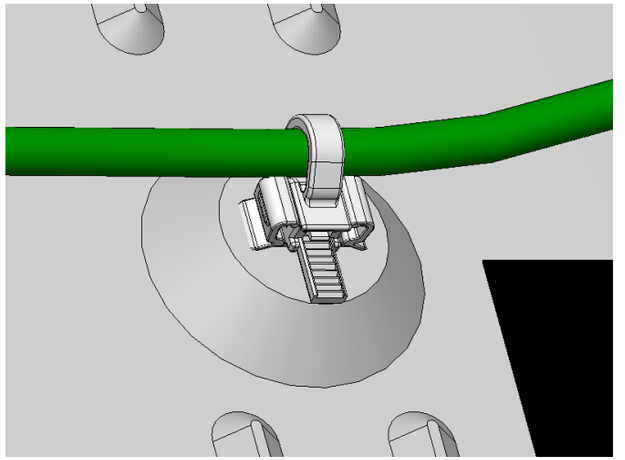

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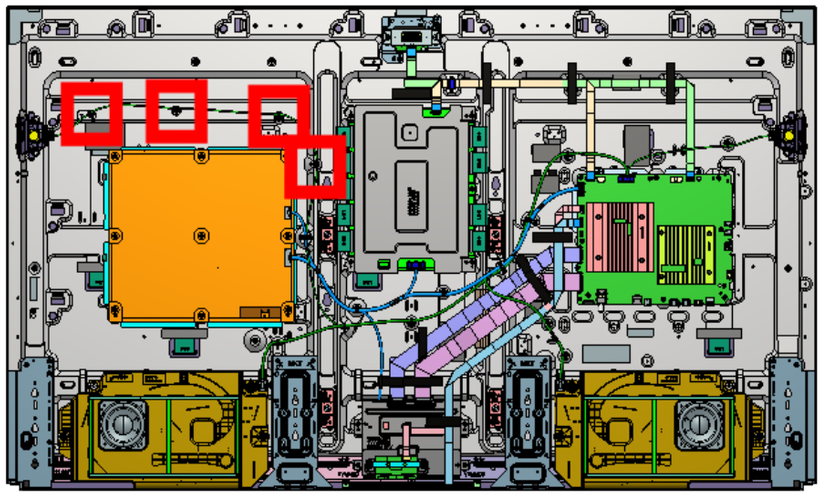

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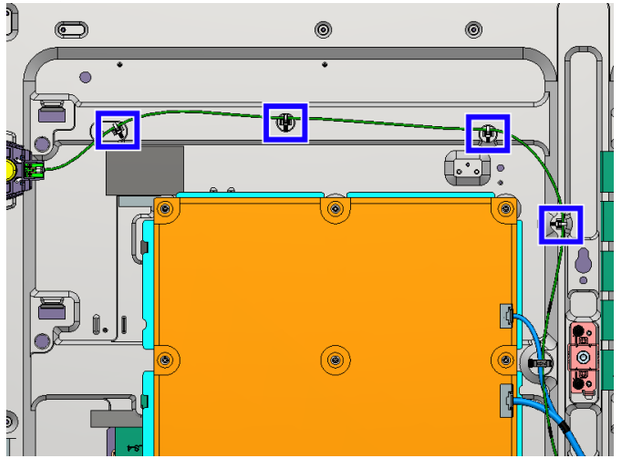

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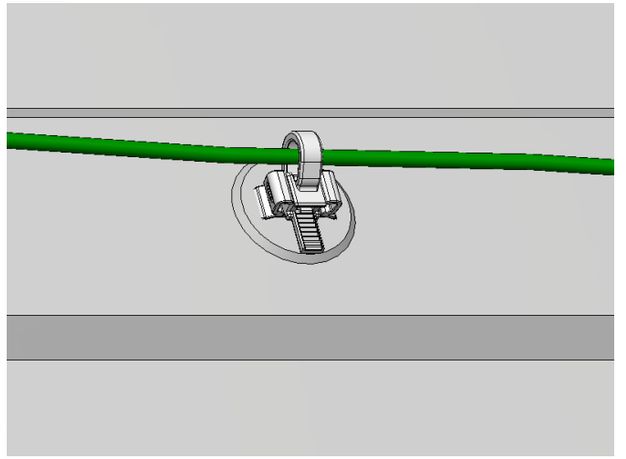

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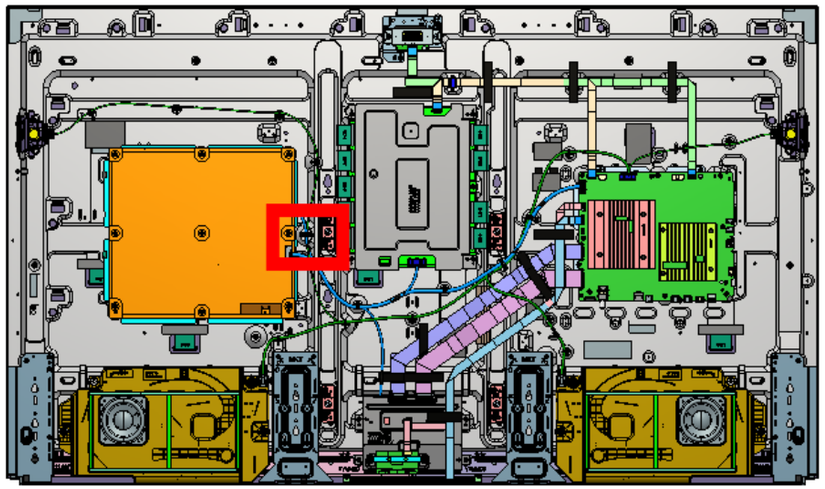

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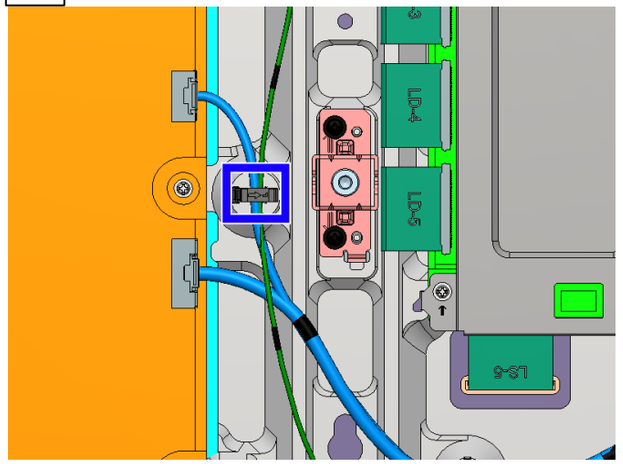

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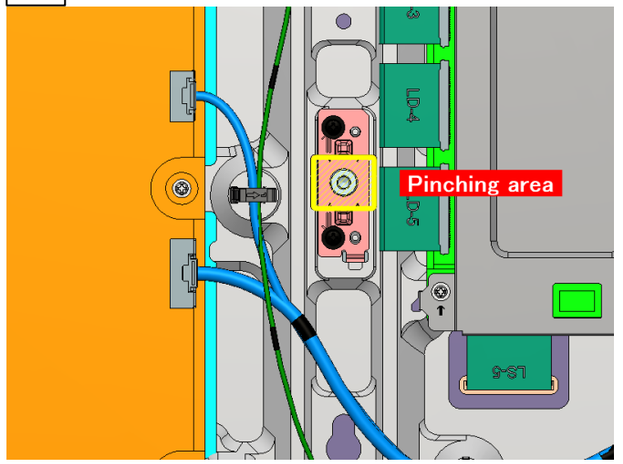

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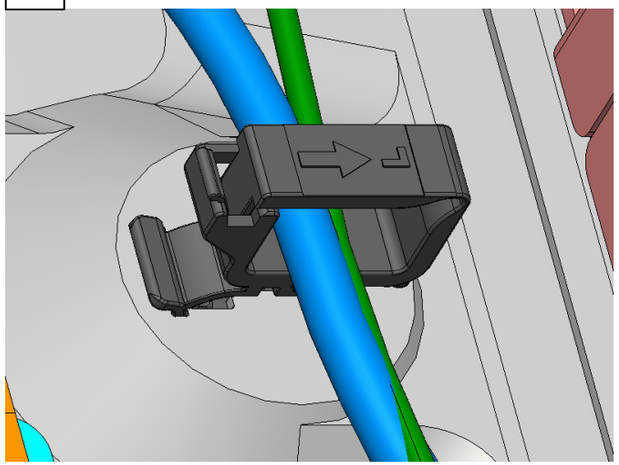

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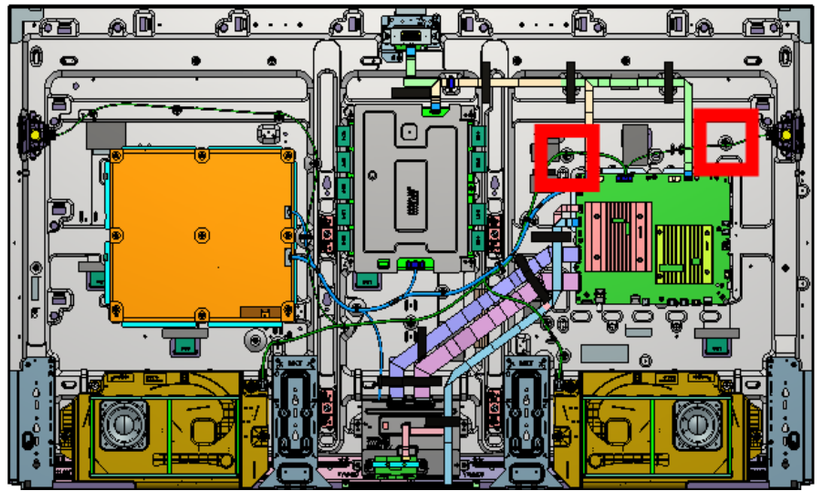

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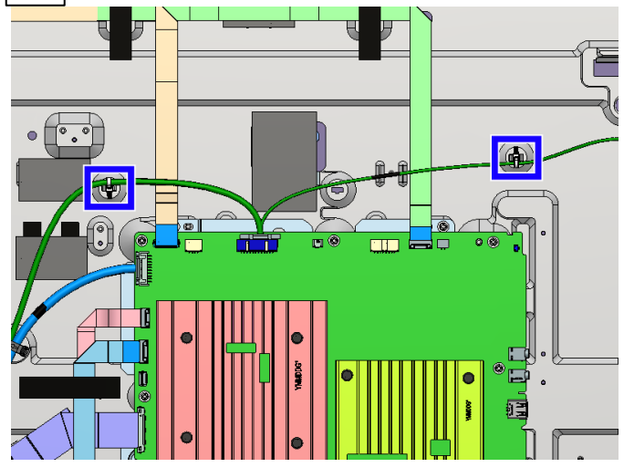

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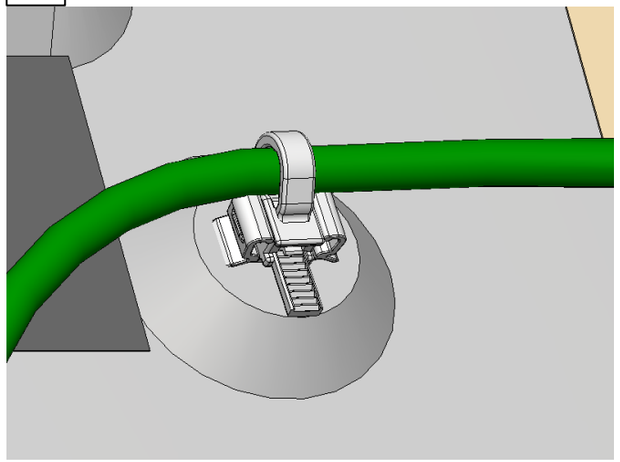

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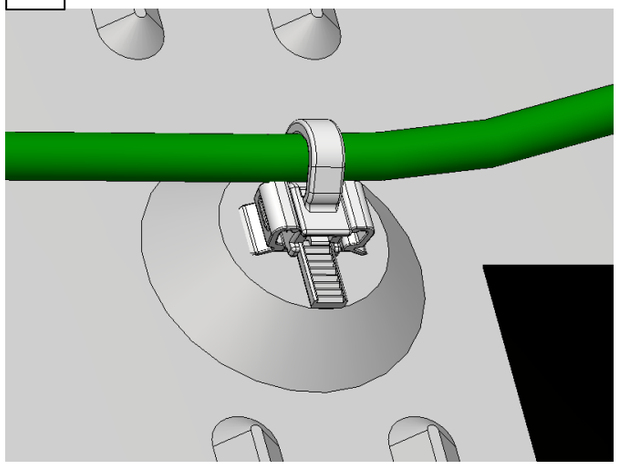

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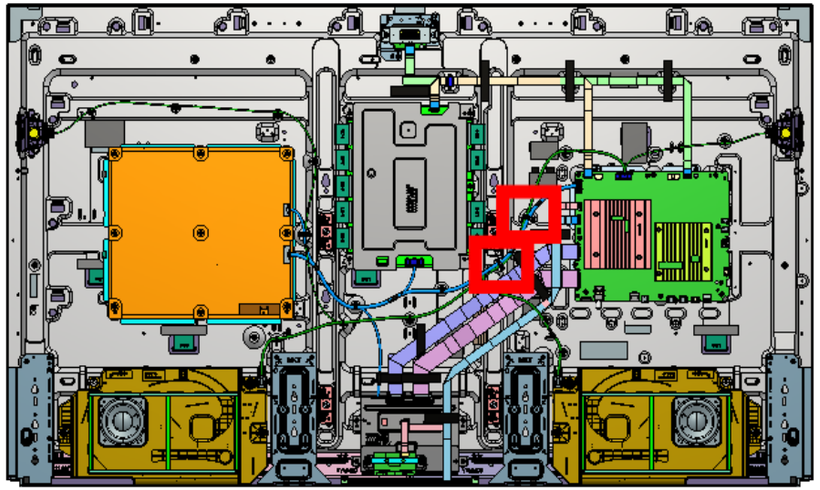

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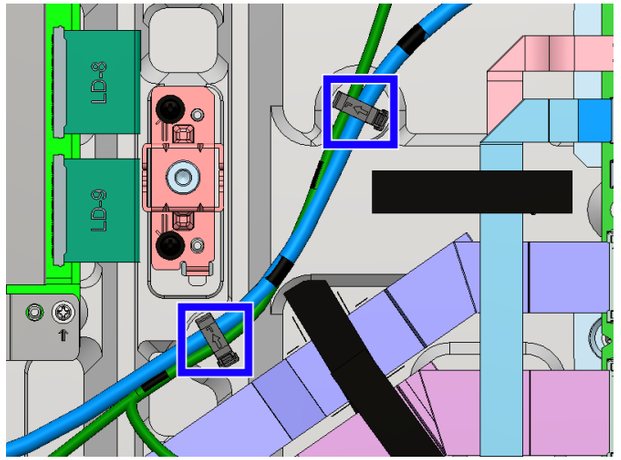

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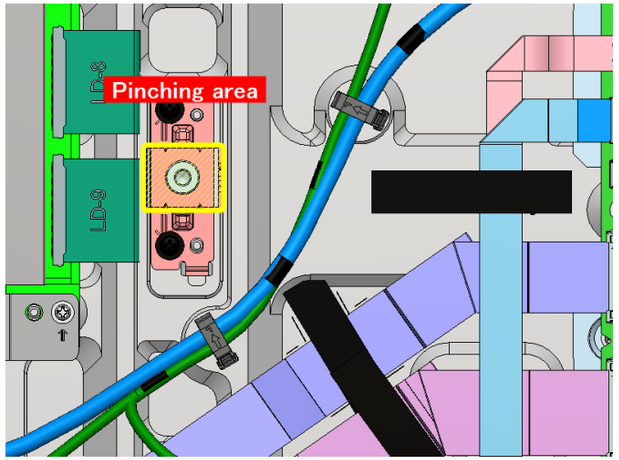

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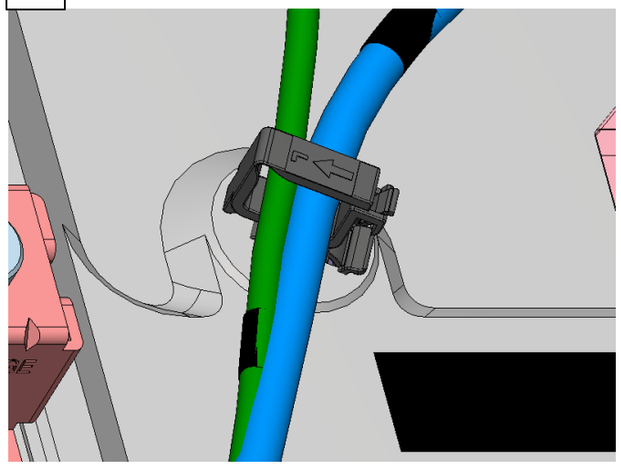
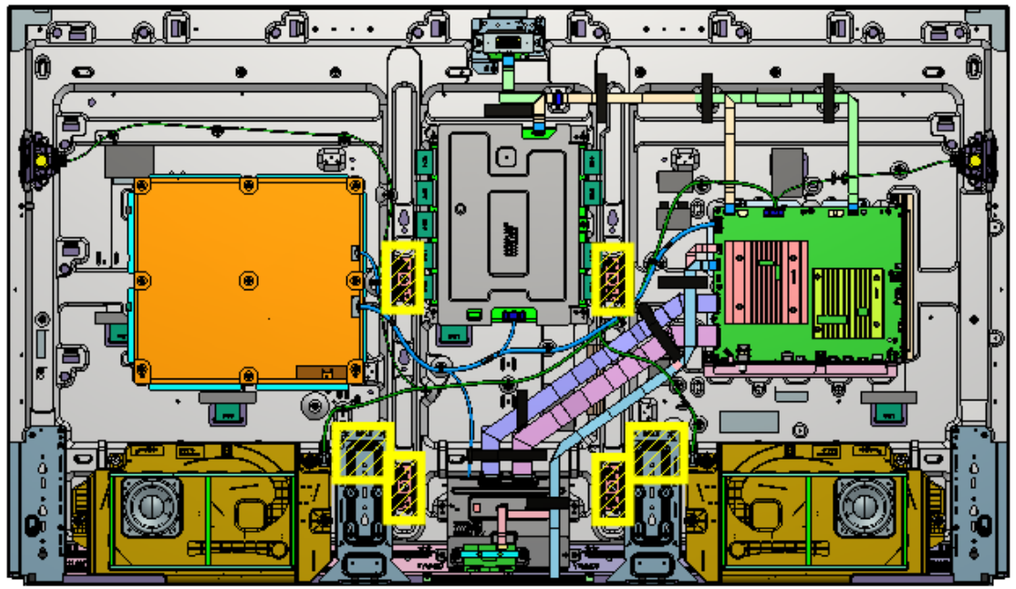
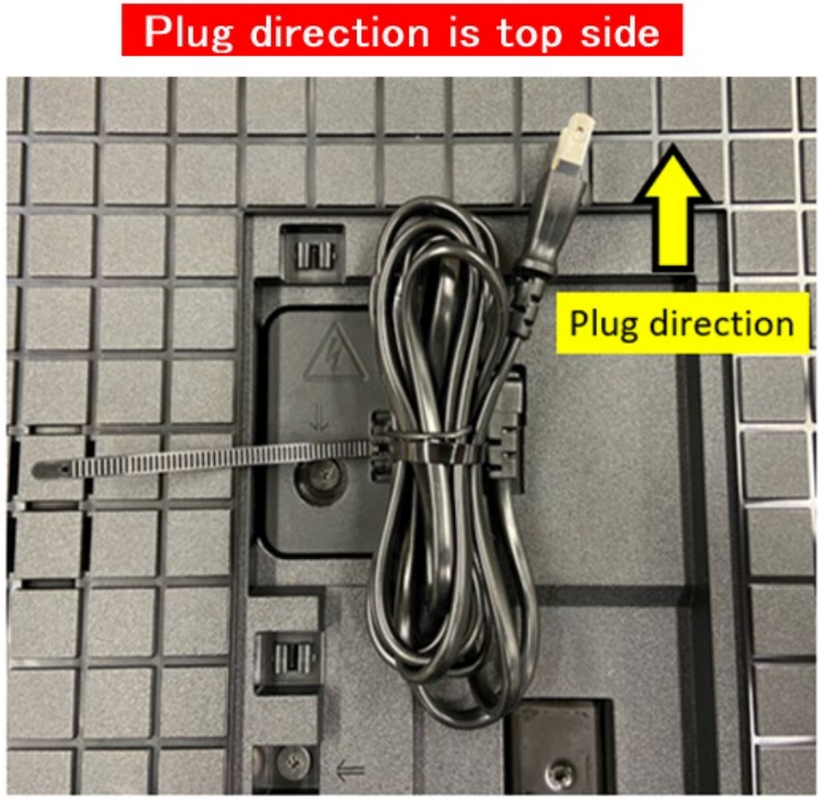


INFORMATION



Caution : Ensure harness is away from inhibit area

WIRE DRESSING

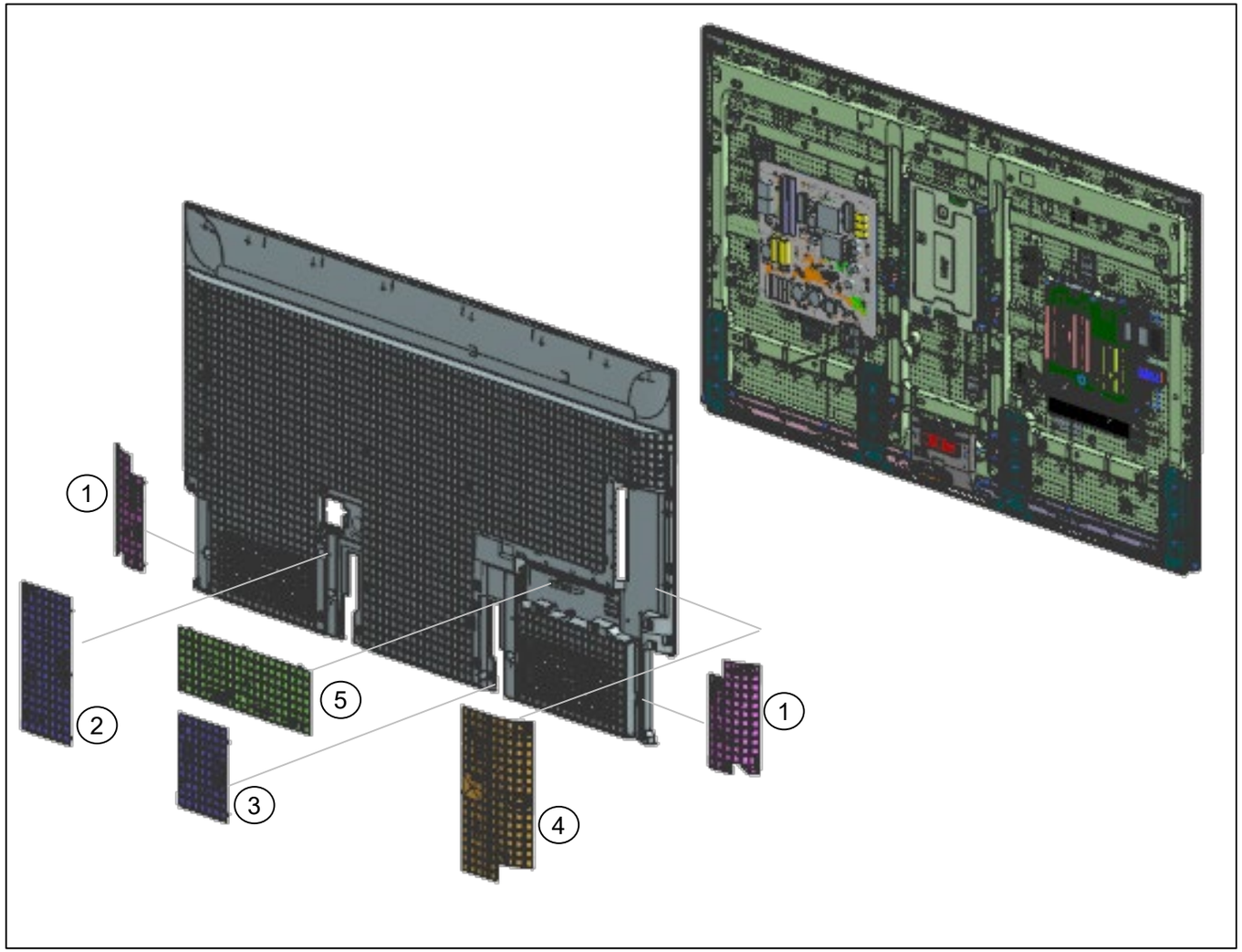


SECTION 1: XR-65X9*

1-4. EXPLODED VIEW AND PART LIST

- Place the TV set facing downwards on a stable, level surface before disassembly and assembly of parts.
- ⚠ and shaded parts are critical for safety. Replace only with part number specified.
- 🔒 Parts contain confidential information. Strictly follow the instruction whenever the components are repaired and/or replaced

- (*) Parts are not stocked since they are seldom required for routine service. Some delays should be anticipated when ordering these components.
- Picture provided in this section might have slight difference from the actual sets.
- The reference number beside the part indicates the disassembly sequence.
- Remove screws before disassembly. Unplug connectors before disassembly



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	5-035-744-01	STAND COVER LR (2L MKY) A	Including STAND COVER L (2L MKY) & STAND COVER R (2L MKY)
2	5-035-746-01	STAND COVER CR (2L MKY) A	-
3	5-035-745-01	STAND COVER CL (2L MKY) A	-
4	5-035-742-01	COVER TML V (2L MKY) A	Side Terminal Cover
5	5-035-743-01	COVER TML H (2L MKY) A	Under Terminal Cover

SECTION 1: XR-65X9*

1-4. EXPLODED VIEW AND PART LIST

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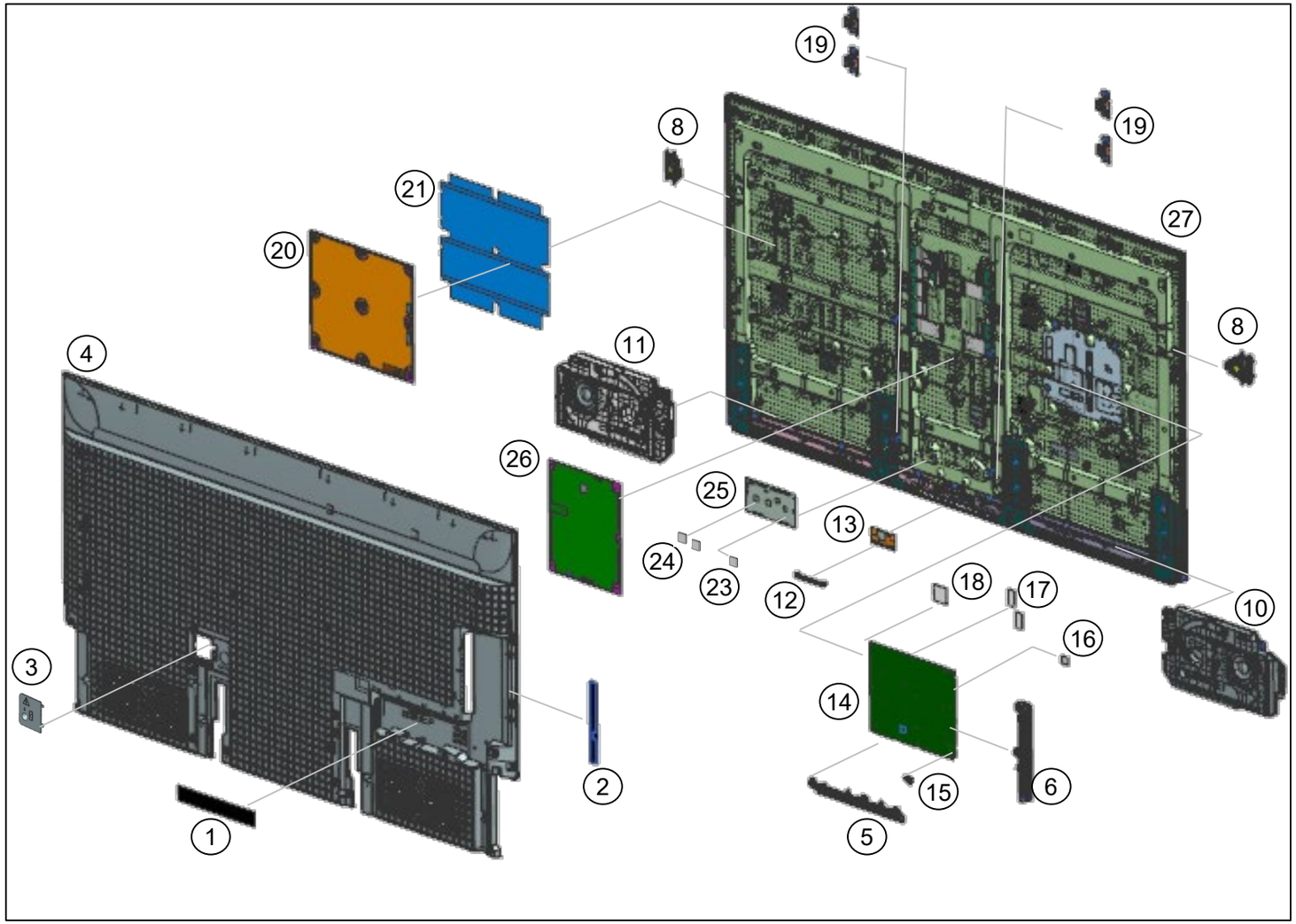
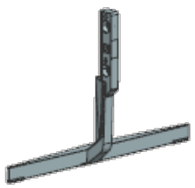
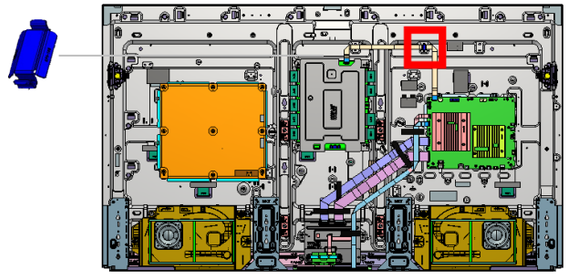


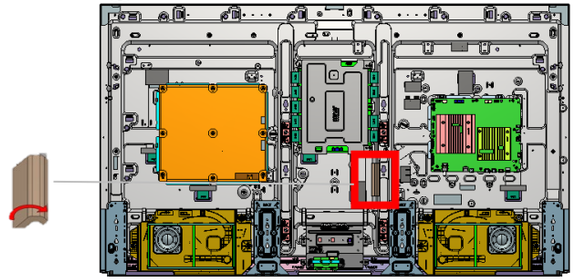
Stand



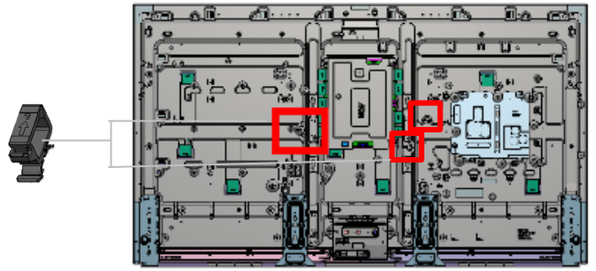
7 4-745-335-01 FLAT CLAMP(FFC)



9 5-039-515-01, CUSHION, VBO (MKY)



22 2-650-770-31 SLIDE, CLAMP



SET PART LIST

REF. NO	PART NO.	DESCRIPTION	XR-65X95K	XR-65X93L	XR-65X93CL	REMARKS
			UCM	UC2	UC2	-
1	5-036-141-01	LABEL, UNDER TERMINAL (BM5S22)	•	n/a	n/a	-
1	5-049-098-01	LABEL, UNDER TERMINAL(BM5S,6S)	n/a	•	•	-
2	5-036-145-01	LABEL, SIDE TERMINAL (BM5S22)	•	n/a	n/a	-
2	5-049-096-01	LABEL, SIDE TERMINAL(BM5S,6S)	n/a	•	•	-
⚠ 3	4-745-608-01	AC COVER (AT)	•	•	•	-
⚠ 4	5-033-691-01	REAR COVER (2L MKY) A	•	•	•	-
5	4-726-396-13	BRACKET, UNDER (BM2A)	•	•	•	Compatible
5	4-724-146-14	BRACKET, UNDER (BM2A)	•	•	•	
6	5-036-018-21	BRACKET SIDE(SGT)	•	•	•	Compatible
6	5-036-017-22	BRACKET SIDE(SGT)	•	•	•	
7	4-745-335-01	FLAT CLAMP(FFC)	•	•	•	-
8	1-013-275-11	LOUDSPEAKER, FY22 TW16-19MM	•	•	•	-
9	5-039-515-01	CUSHION, VBO (MKY)	•	•	•	-
10	1-013-276-12	SP BOX ASSY, FY22 D35 SLIT(L)	•	•	•	-
11	1-013-276-22	SP BOX ASSY, FY22 D35 SLIT(R)	•	•	•	-
12	5-009-258-22	BRACKET, WIFI(BNN)	•	•	•	-
13	1-005-419-32	WLAN/BT MODULE(11AC)FXC	•	•	•	Compatible
13	1-005-419-14	WLAN/BT MODULE(11AC)	•	•	•	

Notes :
When replacing P-MOD, please also replace the following parts at the same time.

9 CUSHION, VBO (MKY)

21 SHT, INSULATION (2L MKY)

SET PART LIST

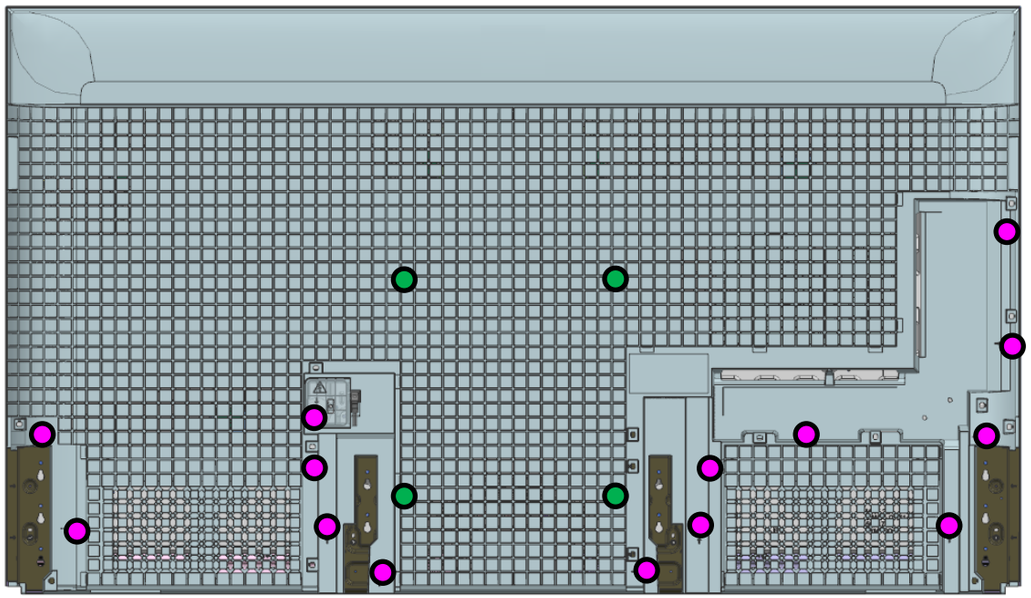
REF. NO	PART NO.	DESCRIPTION	XR-65X95K	XR-65X93L	XR-65X93CL
			UCM	UC2	UC2
14	A-5044-976-A	COMPL SVC BM5S22B_FM_UCMX	•	n/a	n/a
14	A-5056-077-A	COMPL SVC BM5S22B_FM2_UCMX	n/a	•	•
15	5-023-281-02	KEY,TOP(SGT)	•	•	•
16	4-699-975-02	SHEET,THERMAL(5567H)	•	•	•
17	5-023-557-01	SHEET THERMAL(BM5S21 DDR)	•	•	•
18	5-011-960-01	SHEET, THERMAL(LMN TCON)	•	•	•
19	*5-023-339-01	BRACKET,VESA(GMN)	•	•	•
20	1-013-590-12	G27 - STATIC CONVERTER(TV)	•	•	•
21	5-035-899-01	SHT, INSULATION (2L MKY)	•	•	•
22	2-650-770-31	SLIDE, CLAMP	•	•	•
23	5-026-767-01	SHEET, THERMAL T-CON(3L GMN)	•	•	•
24	5-028-173-01	SHEET,THERMAL CONDUCTIVE (GMN)	•	•	•
25	1-013-500-11	MOUNTED PWB E-T-CON (65)	•	•	•
26	A-5041-953-A	22LD432A1 COMPL	•	•	•
27	A-5042-990-A	P-MOD(YDCS065MES02)	•	n/a	n/a
28	5-034-692-01	STAND L (2L MKY) A	•	•	•
29	5-034-693-01	STAND R (2L MKY) A	•	•	•

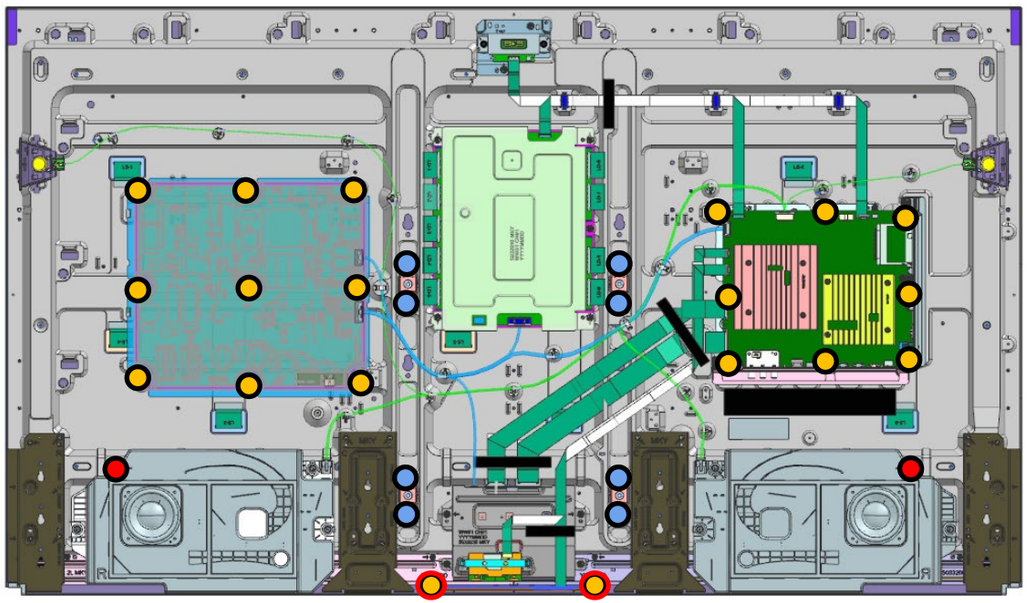
Notes :
When replacing P-MOD, please also replace the following parts at the same time.

9 CUSHION, VBO (MKY)

21 SHT, INSULATION (2L MKY)

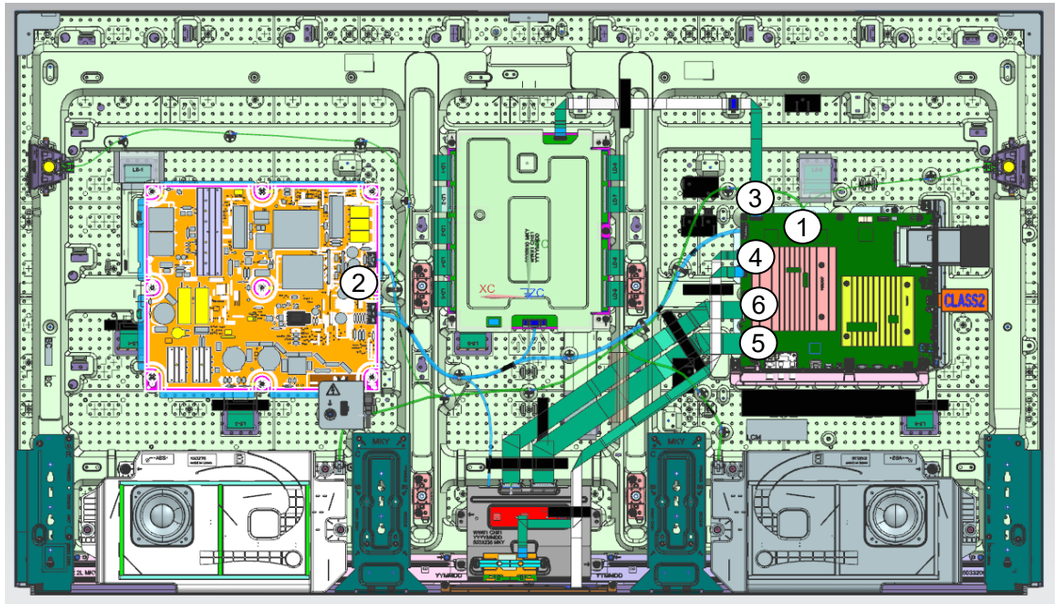
SCREW





REMARKS	P/N	DESCRIPTION	QTY	TORQUE (N.m)	REMARKS
●	4-268-126-02	SCREW, ORNAMENTAL M6X12	4	1.2 ± 0.1	-
●	4-579-926-01	SCREW M3X3.0 STEP	14	0.65 ± 0.05	-
●	4-256-393-12	SCREW, +PSW M3X6 W12	2	0.4 ± 0.05	-
●	2-580-600-01	SCREW, +PSW M4X8	8	0.65 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	19	0.4 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	17	0.4 ± 0.05	93L / 93CL
●	7-682-948-09	SCREW +PSW 3X8	2	0.4 ± 0.05	93L / 93CL

CONNECTOR



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	1-014-907-11	CONNECTOR ASSY 12P (SP)	CN6603(B)-SP(1)
2	1-014-906-11	CONNECTOR ASSY 28P	CN1700(B)-CN6401(G)-CN6601(G)-CN1000(LD)-J105(TCON)(1)
3	1-014-857-11	FLEXIBLE FLAT CABLE 30P	CN6200(B)-CN1000(LD)(1)
4	1-014-847-11	FLEXIBLE FLAT CABLE 20P/25P	CN103(H)-CN1200(B)-CN3803(B)-BT(1)
5	1-014-851-11	FLEXIBLE FLAT CABLE 51P	CN6800(B)-CN3(TCON)(1)
6	1-014-850-11	FLEXIBLE FLAT CABLE 41P	CN6801(B)-CN2(TCON)(1)

OTHER PARTS

PART NO.	DESCRIPTION	XR-65X95K	XR-65X93L	XR-65X93CL	REMARKS
		UCM	UC2	UC2	
4-535-064-62	ASSY,FALL LOCK,BELT LL	•	•	•	-
4-462-871-03	BAG, SCREW A (CCT)	•	•	•	Including SCREW, +PSW M5X12 (Qty 4)
4-262-708-04	CLAMPER, CABLE	•	•	•	-
⚠ 1-849-274-11	POWER-SUPPLY CORD (WITH CONN.)	•	•	•	-
1-013-691-23	REMOTE COMMANDER (RMF-TX800U)	•	n/a	n/a	-
1-016-940-21	REMOTE COMMANDER (RMF-TX810U)	n/a	•	n/a	-
1-016-949-21	REMOTE COMMANDER (RMF-TX910U)	n/a	n/a	•	-
*5-038-398-11	REFERENCE GUIDE	•	n/a	n/a	-
*5-049-617-11	REFERENCE GUIDE	n/a	•	•	-
*5-038-399-11	SETUP GUIDE	•	n/a	n/a	-
*5-049-618-11	SETUP GUIDE	n/a	•	•	-
7-600-031-97	TAPE (3M 1350FB-1)15MMX66M BLK	•	•	•	-

REAR COVER

1. Remove Cover (6 Covers).

   (1) STAND COVER R (3L MKY)

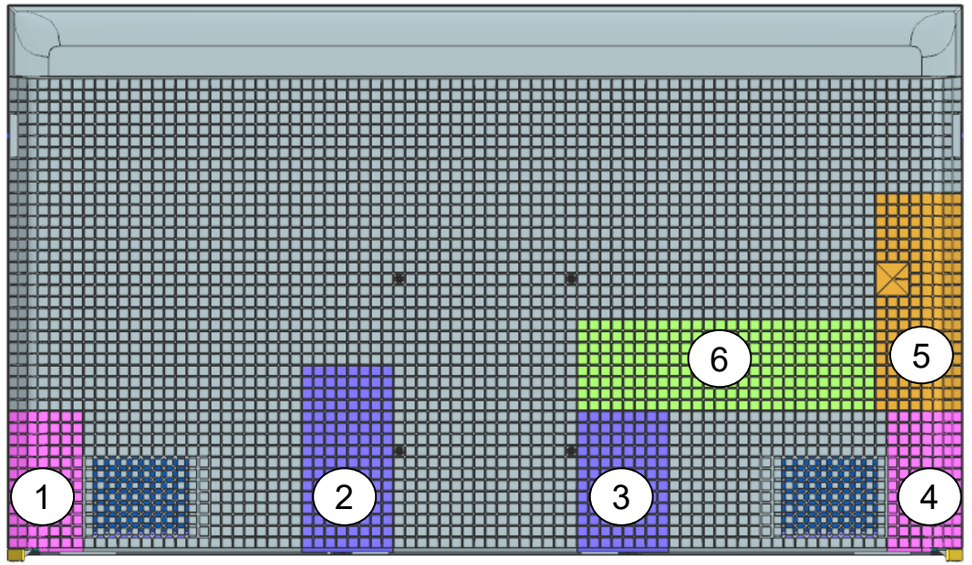
   (2) STAND COVER CR (3L MKY)

   (3) STAND COVER CL (3L MKY)

   (4) STAND COVER L (3L MKY)

   (5) COVER TML V (3L MKY)

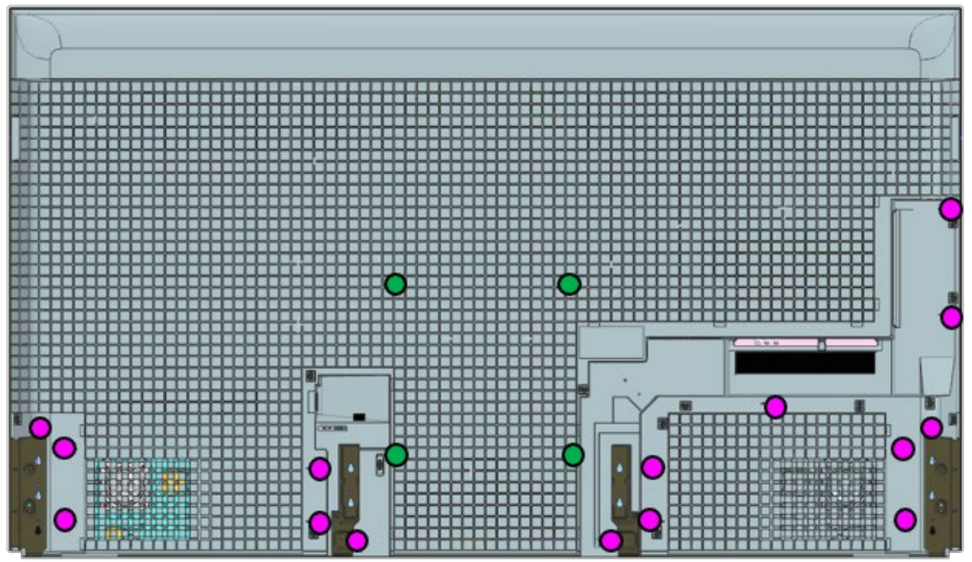
   (6) COVER TML H (3L MKY)



2. (i) Remove 19 screws

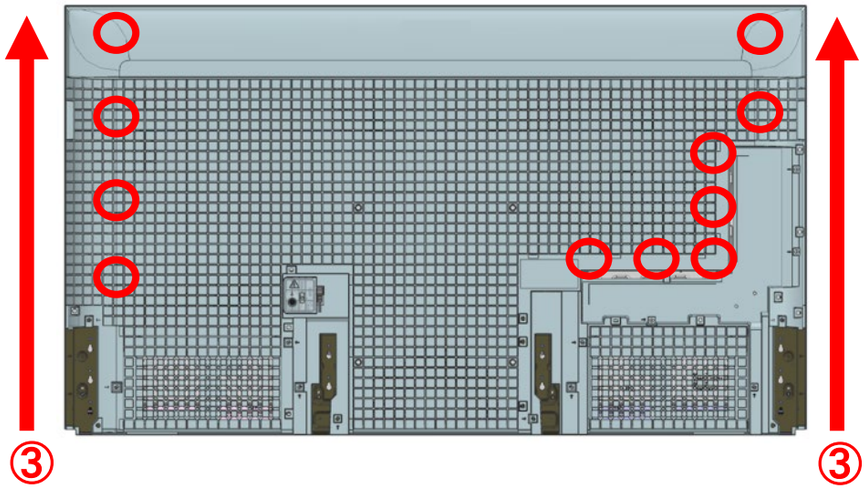
   SCREW, ORNAMENTAL M6X12 (4pcs)

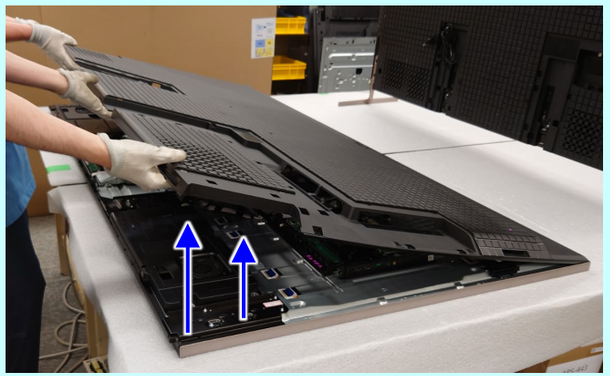
   SCREW M3X3.0 STEP (15pcs)



REAR COVER

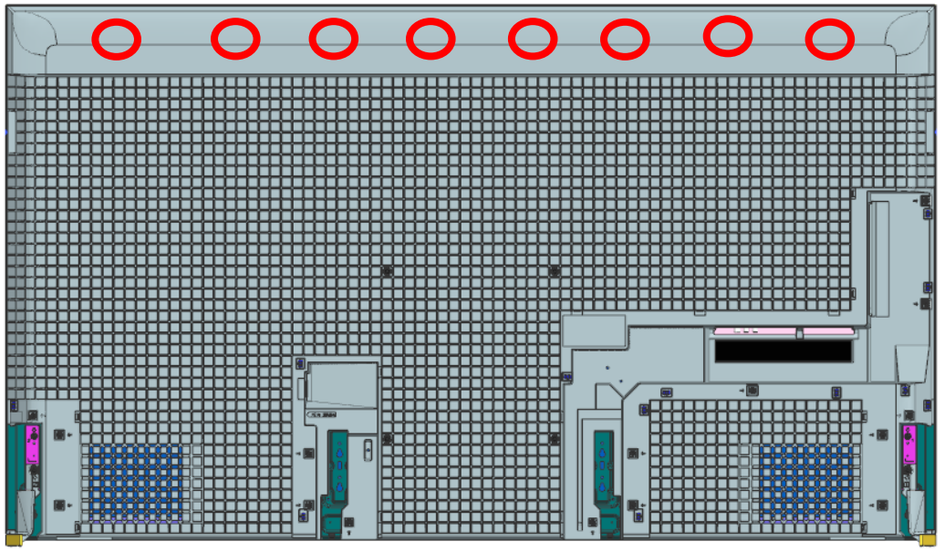
3. Release Side and Bracket Hook.

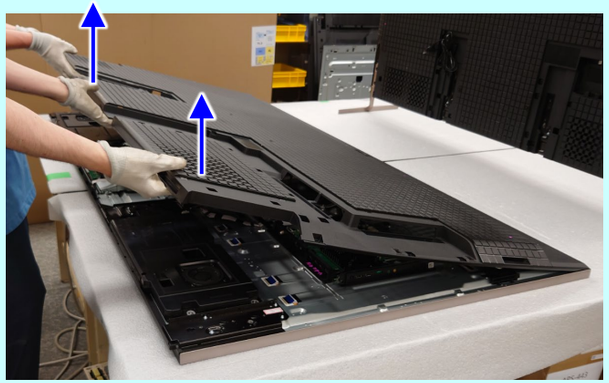




Lift up Rear Cover from Bottom side

4. Release Top Hook (8 pcs).



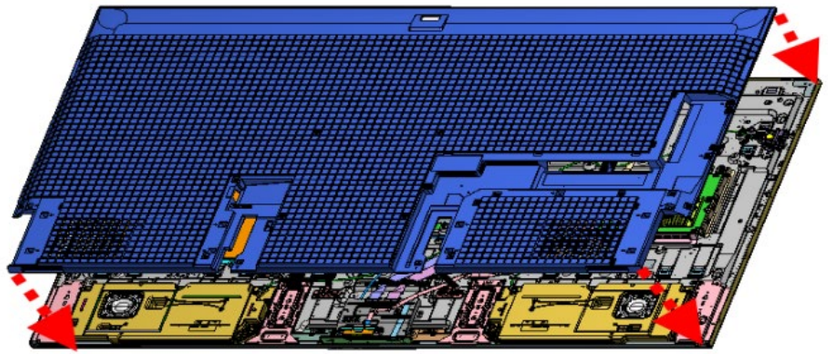


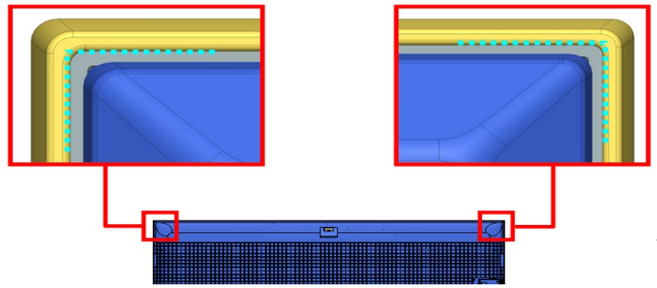
Lift up Rear Cover from Bottom side more

REAR COVER

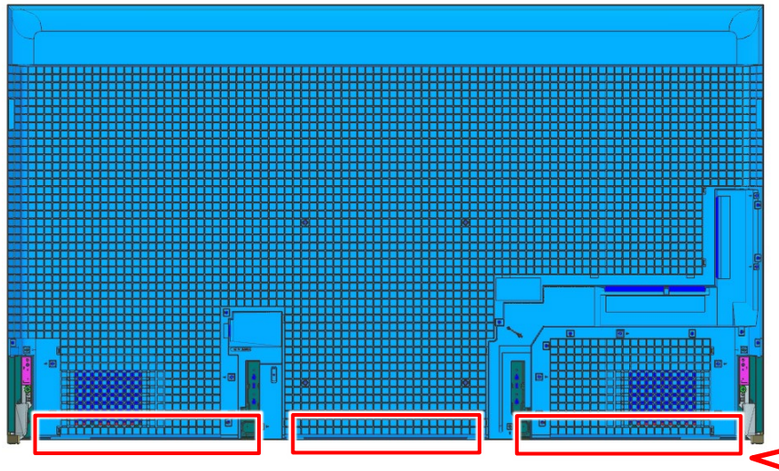
1. Install REAR COVER.

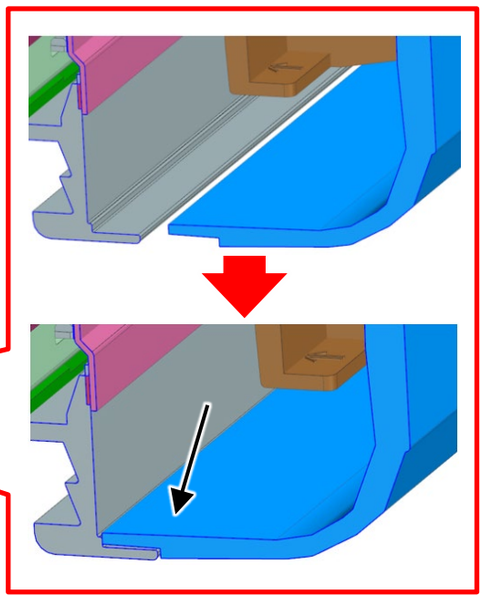
(i) REAR COVER aligning.
→ Don't overwrap to the BEZEL.





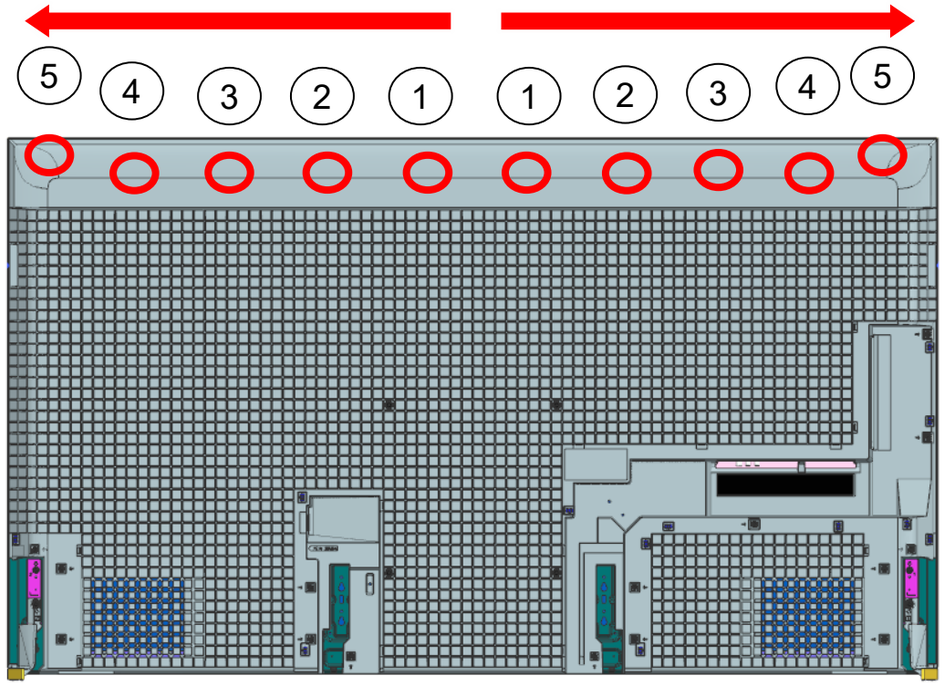
(ii) Insert rib of the bottom to the BEZEL.





REAR COVER

2. (i) Push and Lock Top Hook (pushing order) (10 pcs).

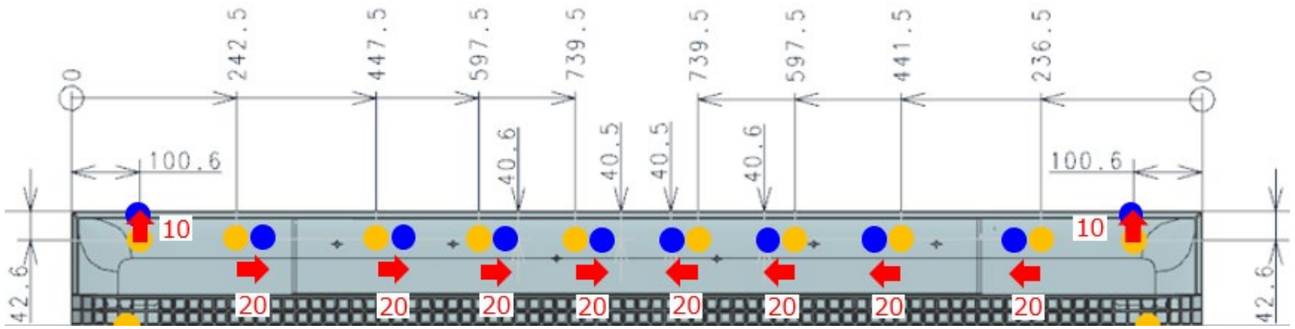


(ii) Push and Lock Top Hook (pushing position) (10 pcs).

Notice:
Please push the inside (10～20mm) of the hook because pushing the outside increases the insertion force.

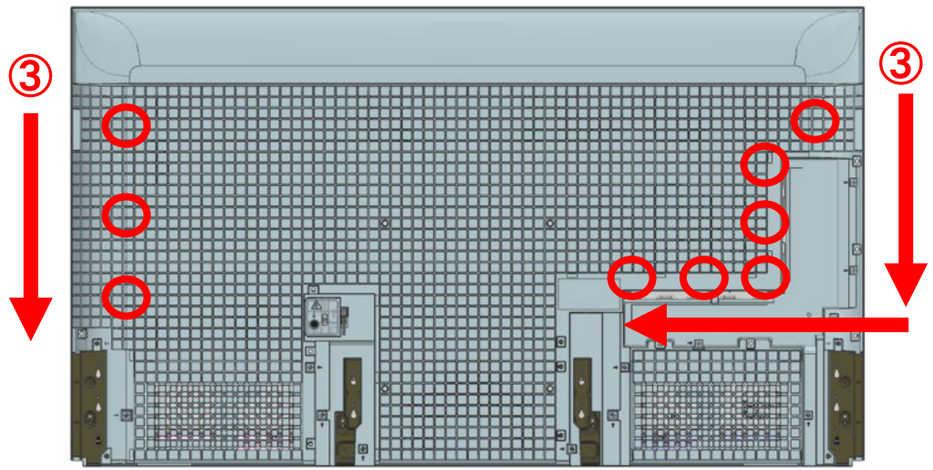
Hook position

Push position

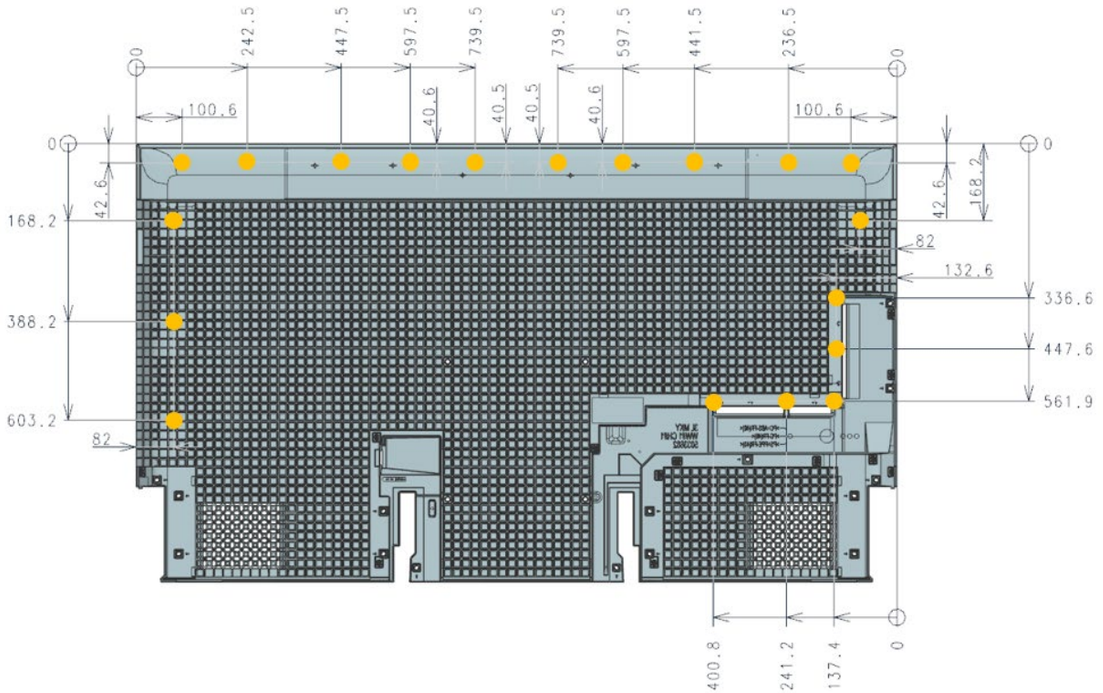


REAR COVER

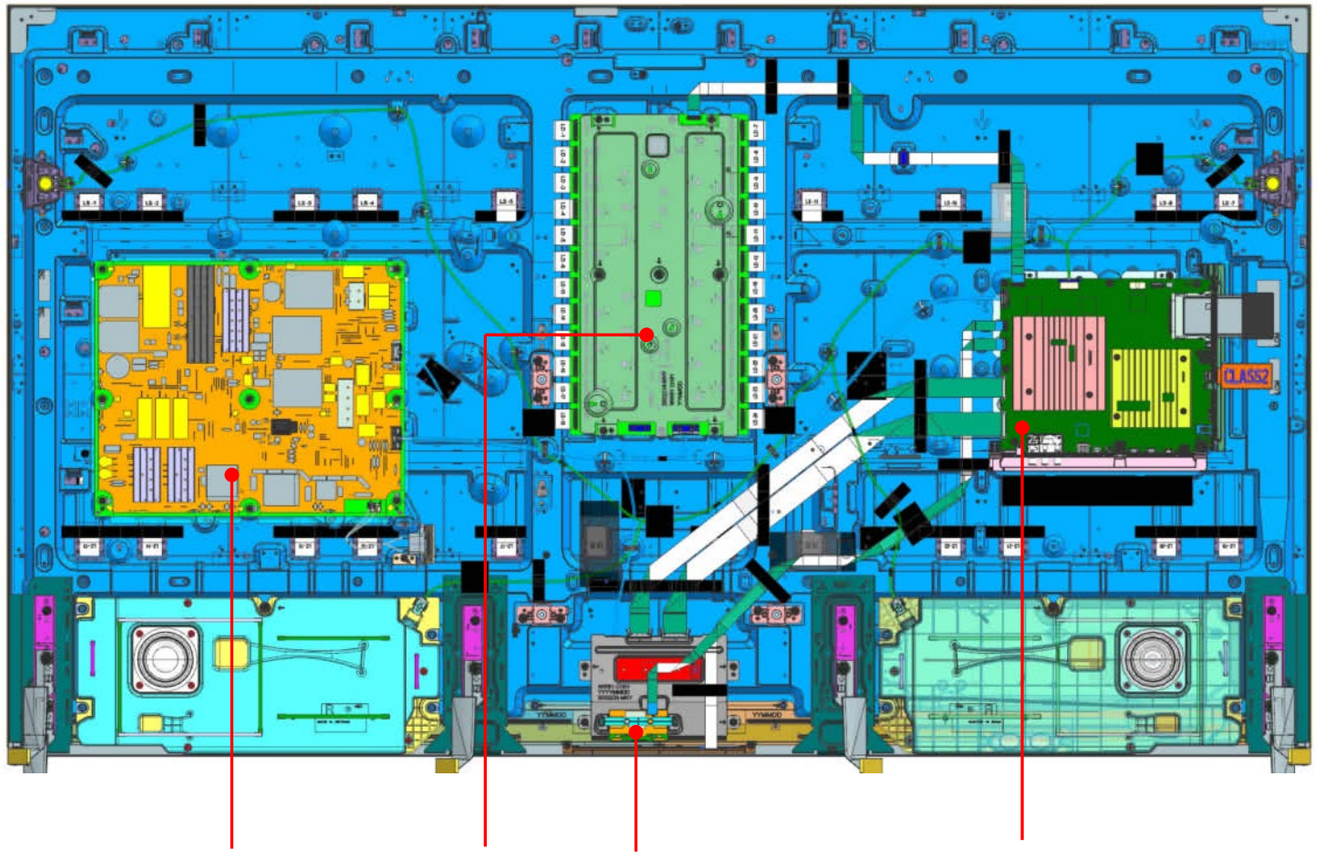
3. Push and Lock Side and Bracket Hook (pushing order).

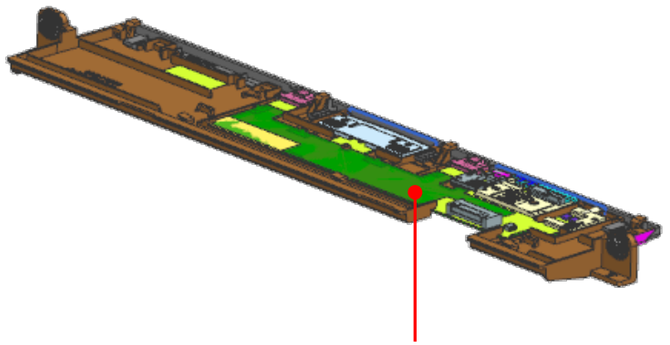


Hook Position.

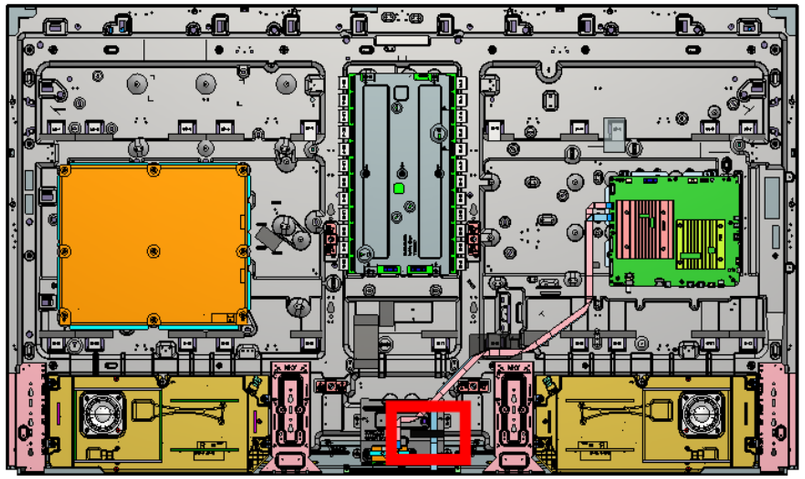


2-2. BOARD LOCATION





TAPE



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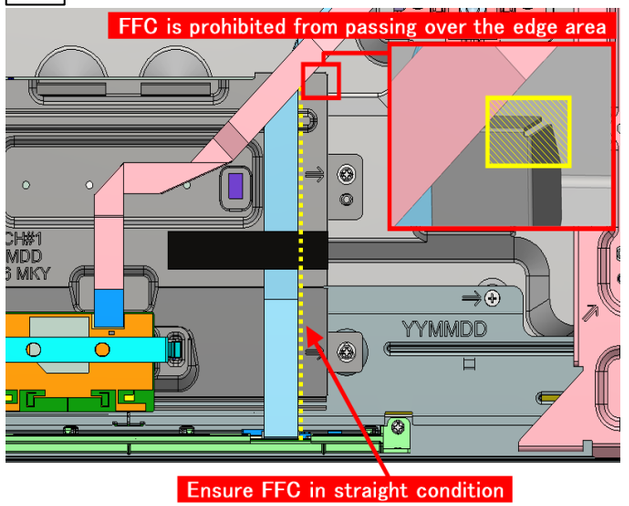
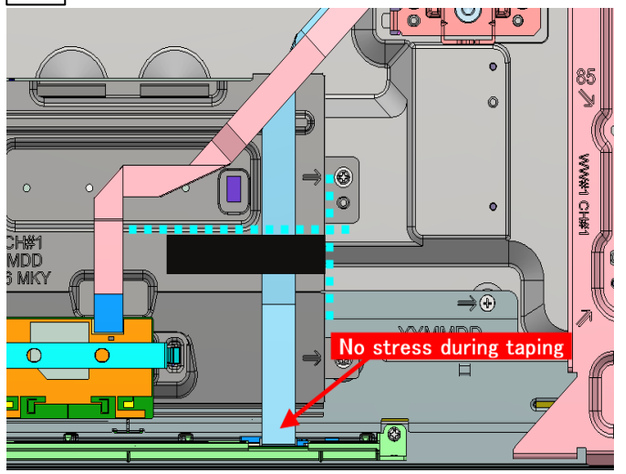
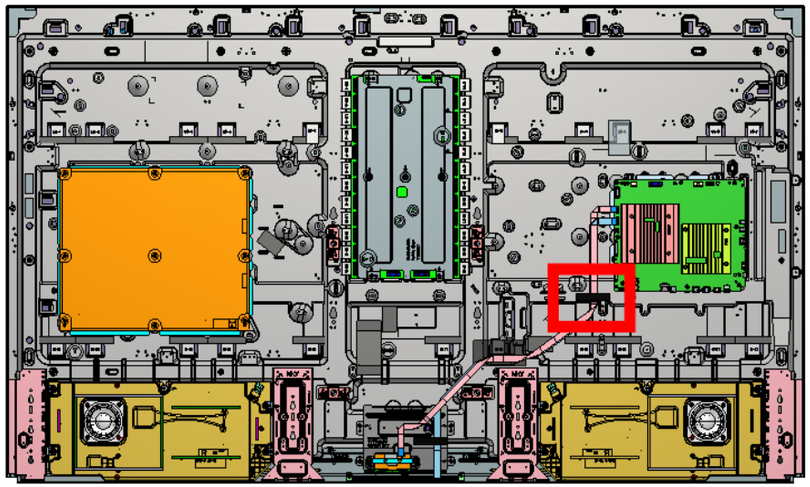
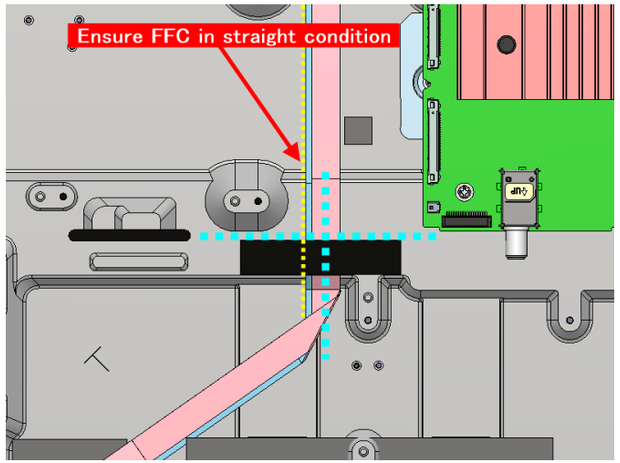

FFC is prohibited from passing over the edge area
Ensure FFC in straight condition

2

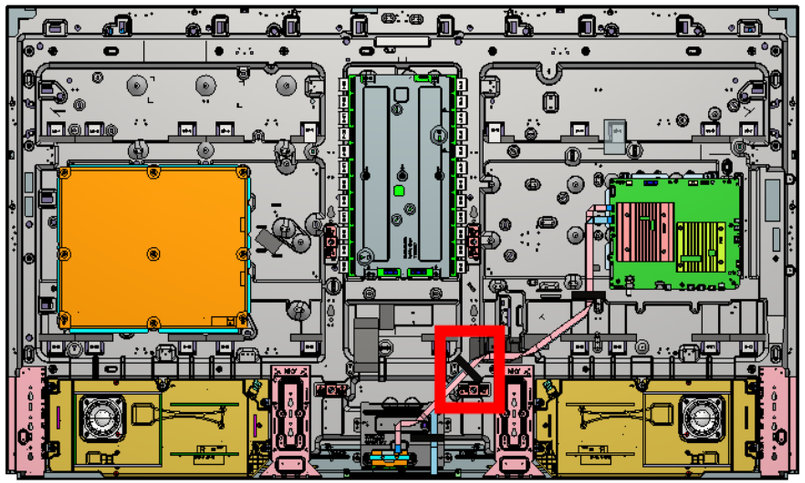

No stress during taping

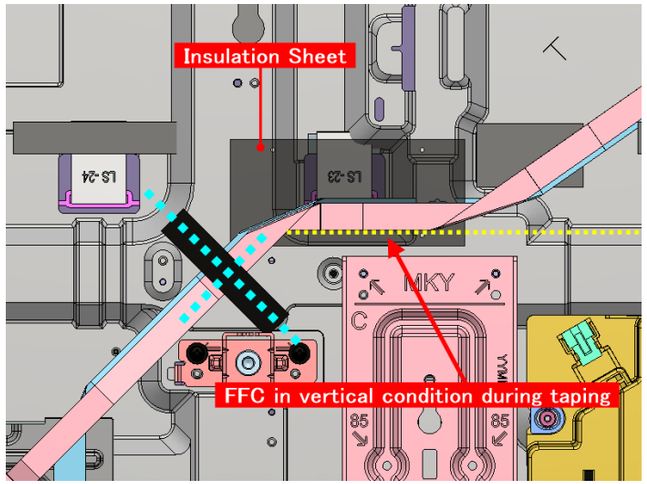
TAPE



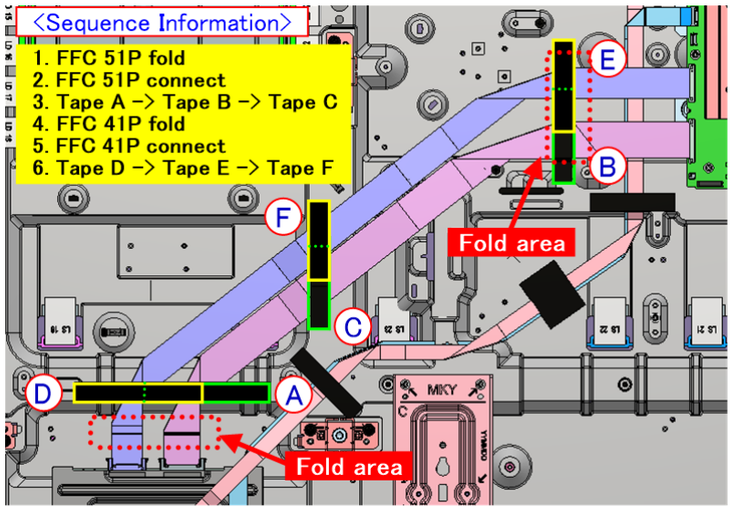

Ensure FFC in straight condition

TAPE





INFORMATION



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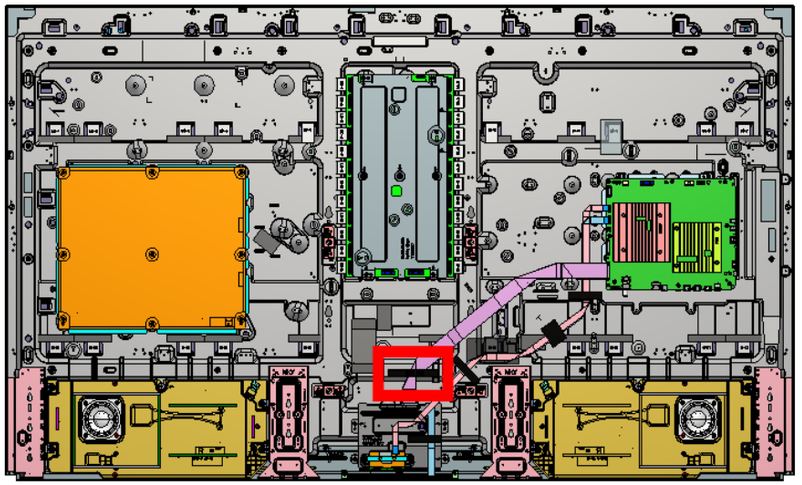

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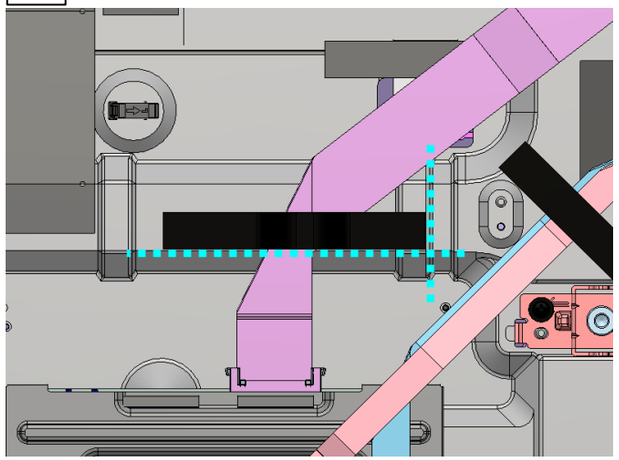

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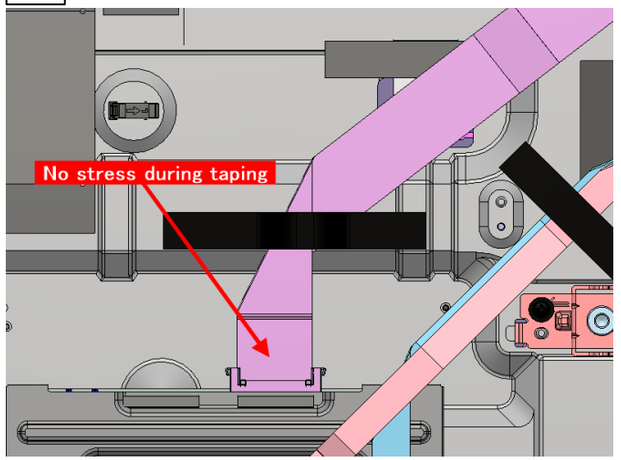

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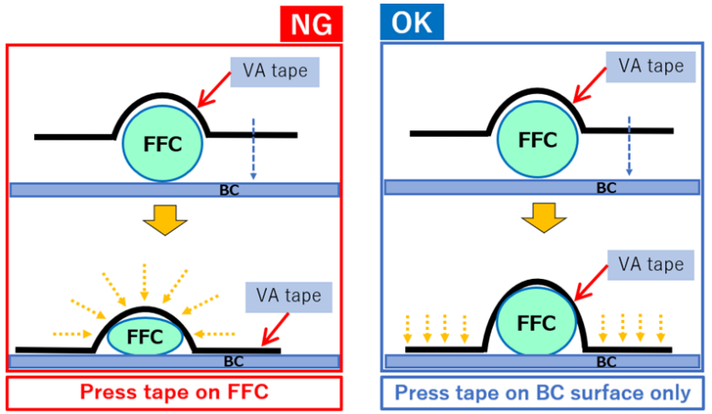
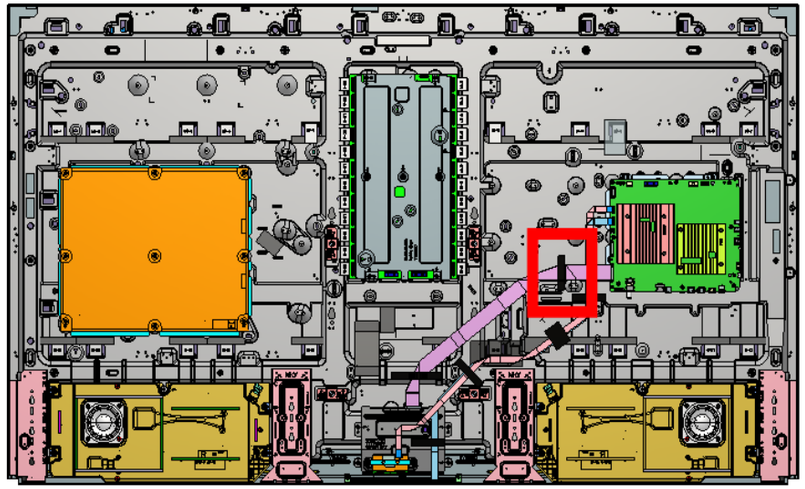


Caution : Do not press tape on FFC

TAPE



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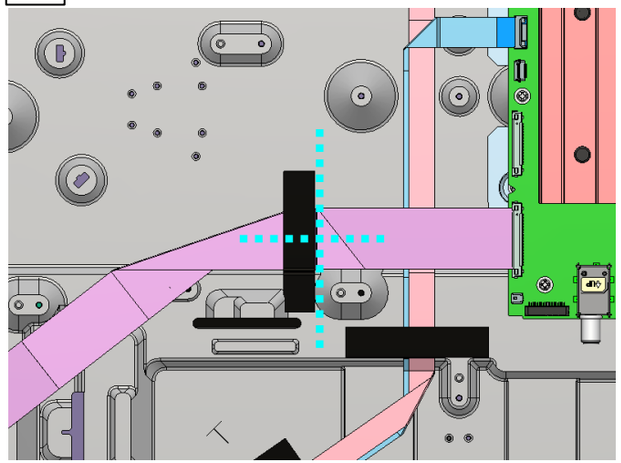

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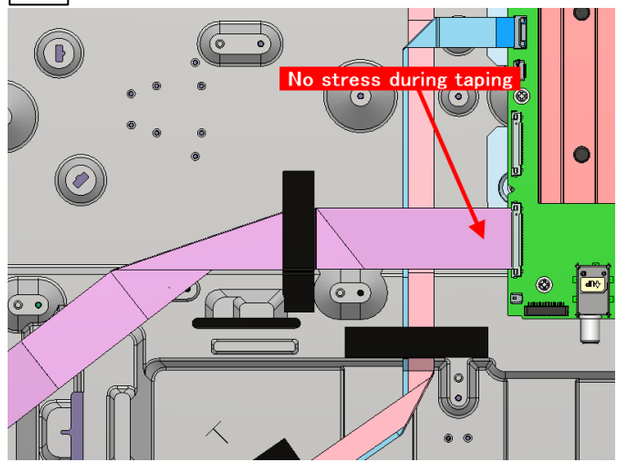
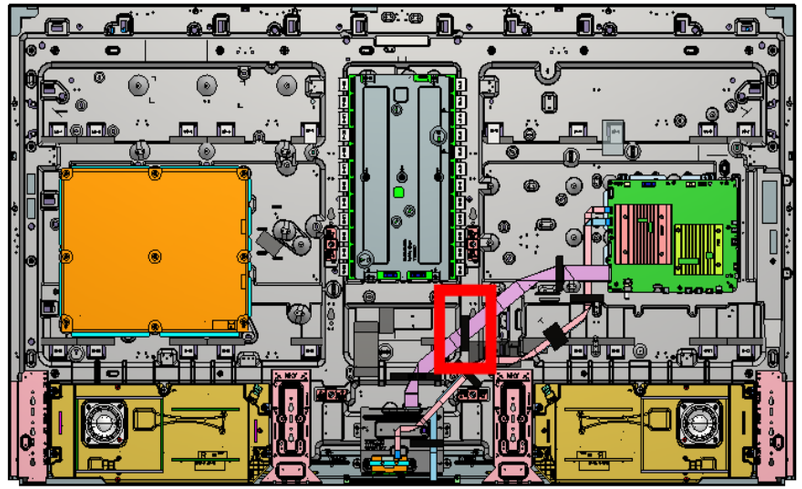
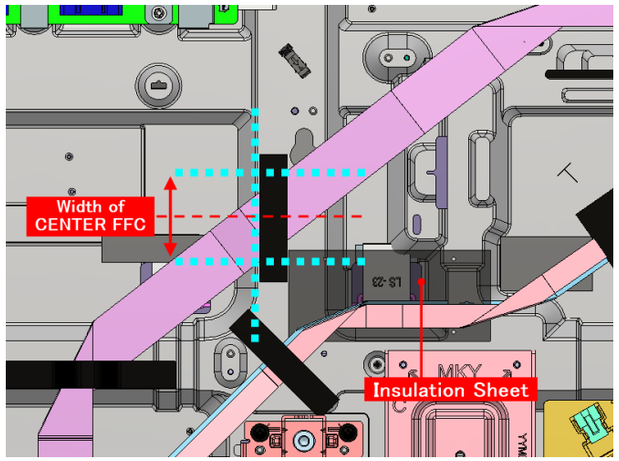
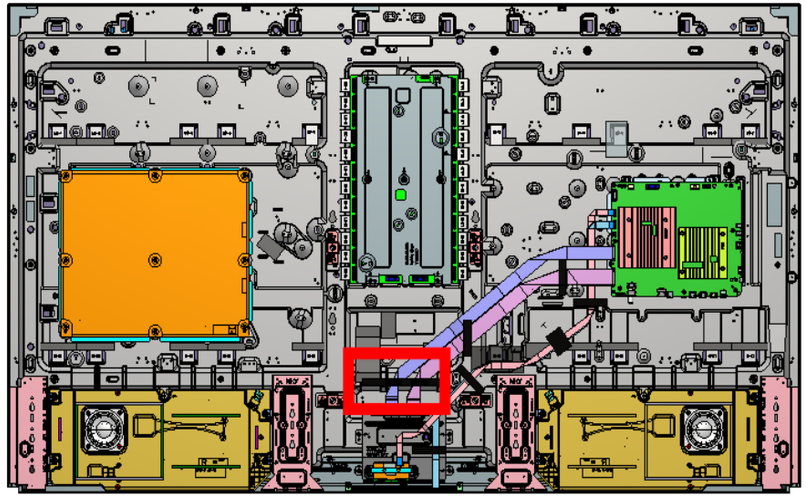

No stress during taping

TAPE




Width of
CENTER FFC
Insulation Sheet

TAPE



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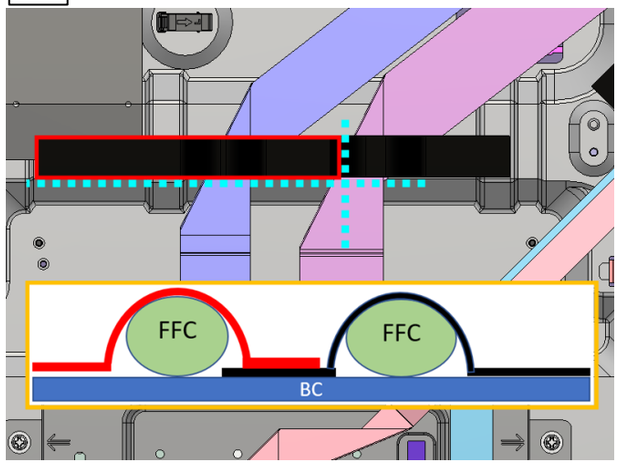

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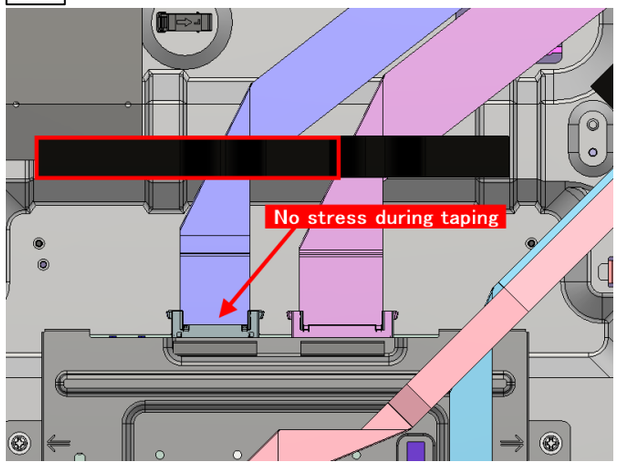

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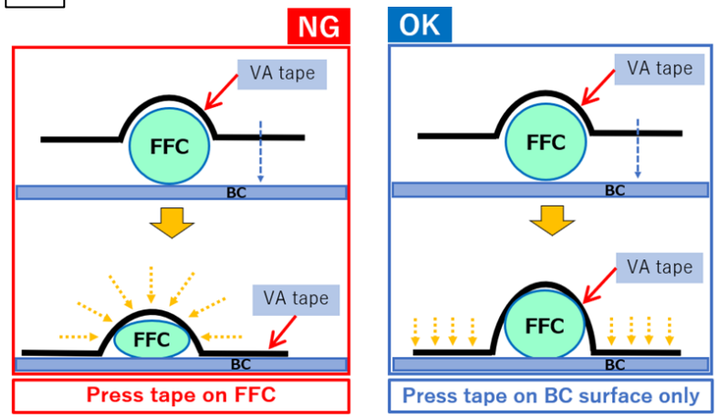
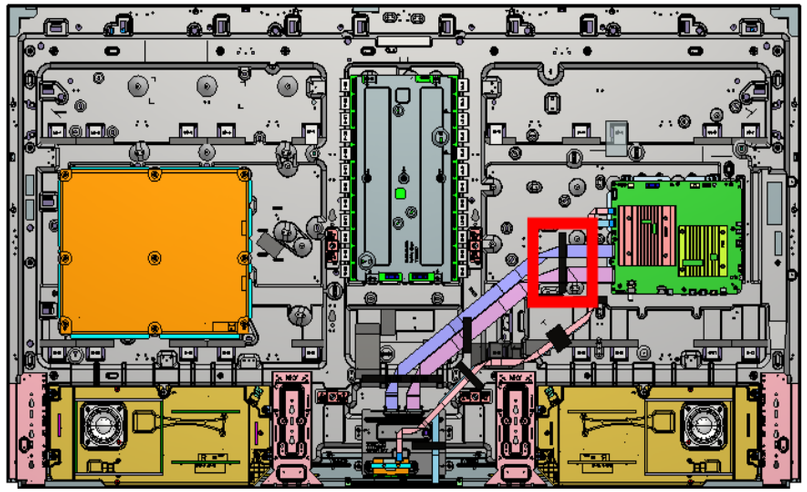


Caution : Do not press tape on FFC

TAPE



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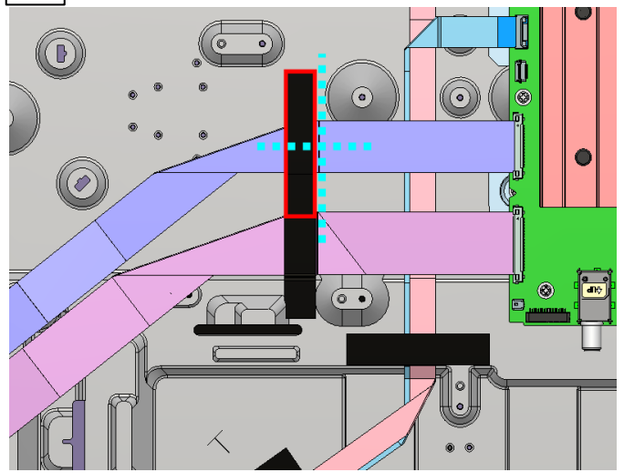

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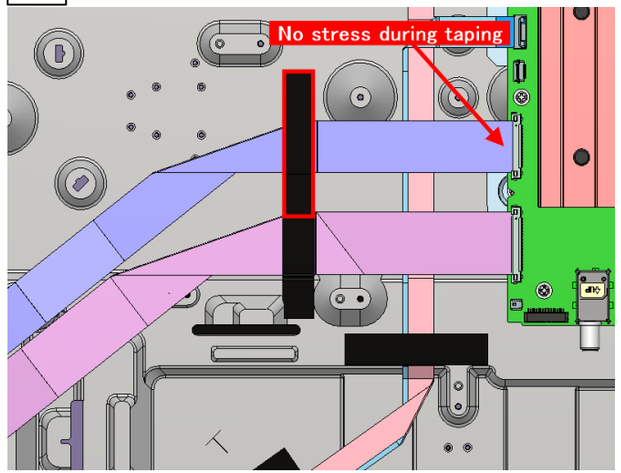
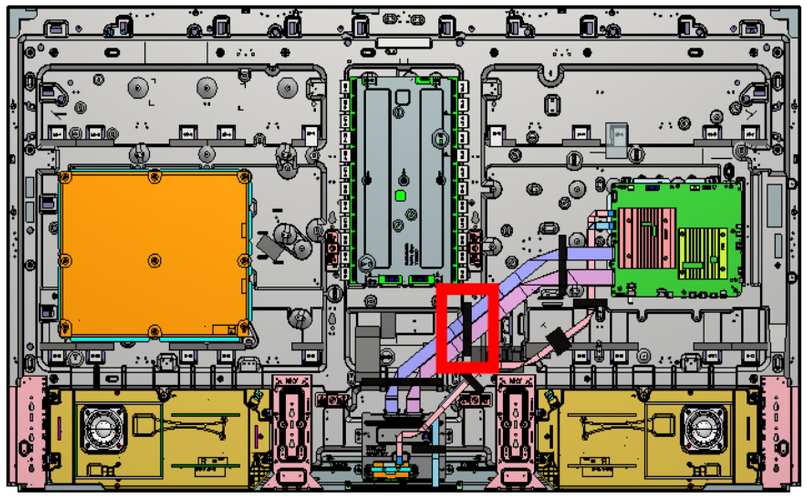
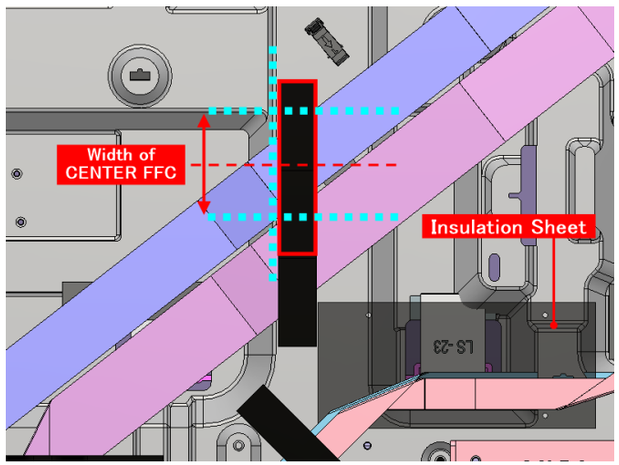
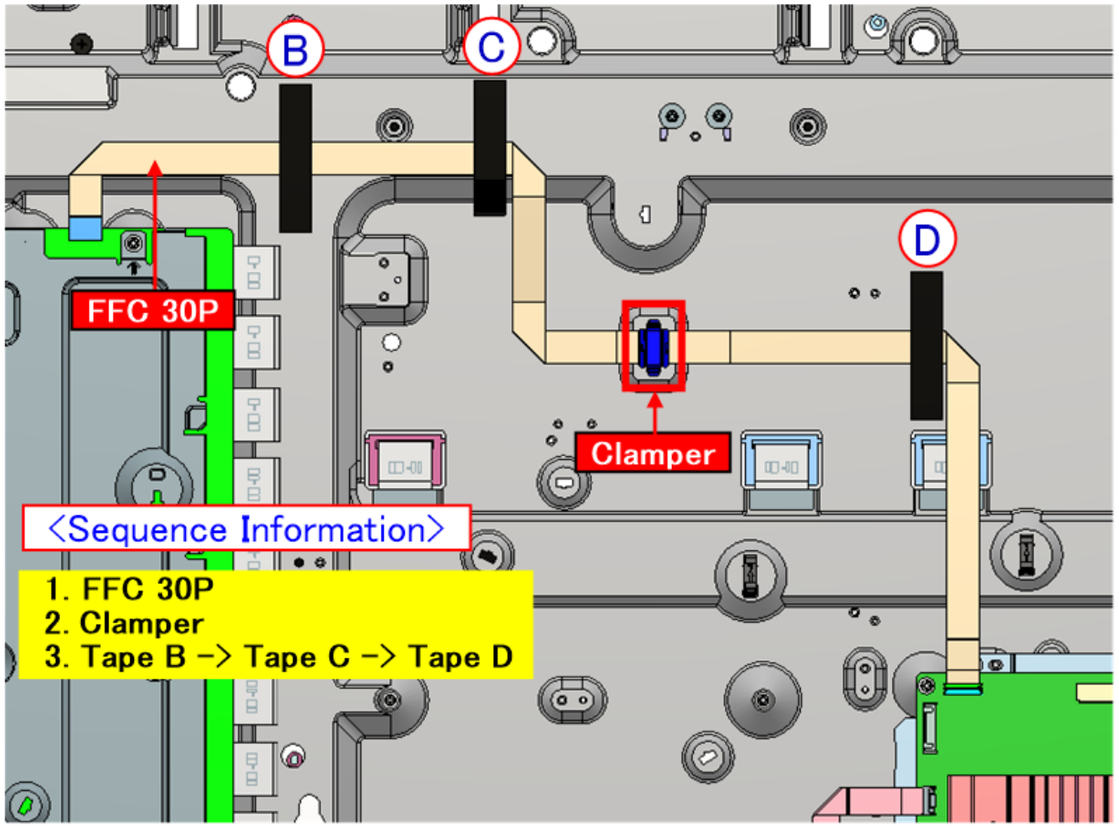

No stress during taping

TAPE




Width of
CENTER FFC
Insulation Sheet

INFORMATION



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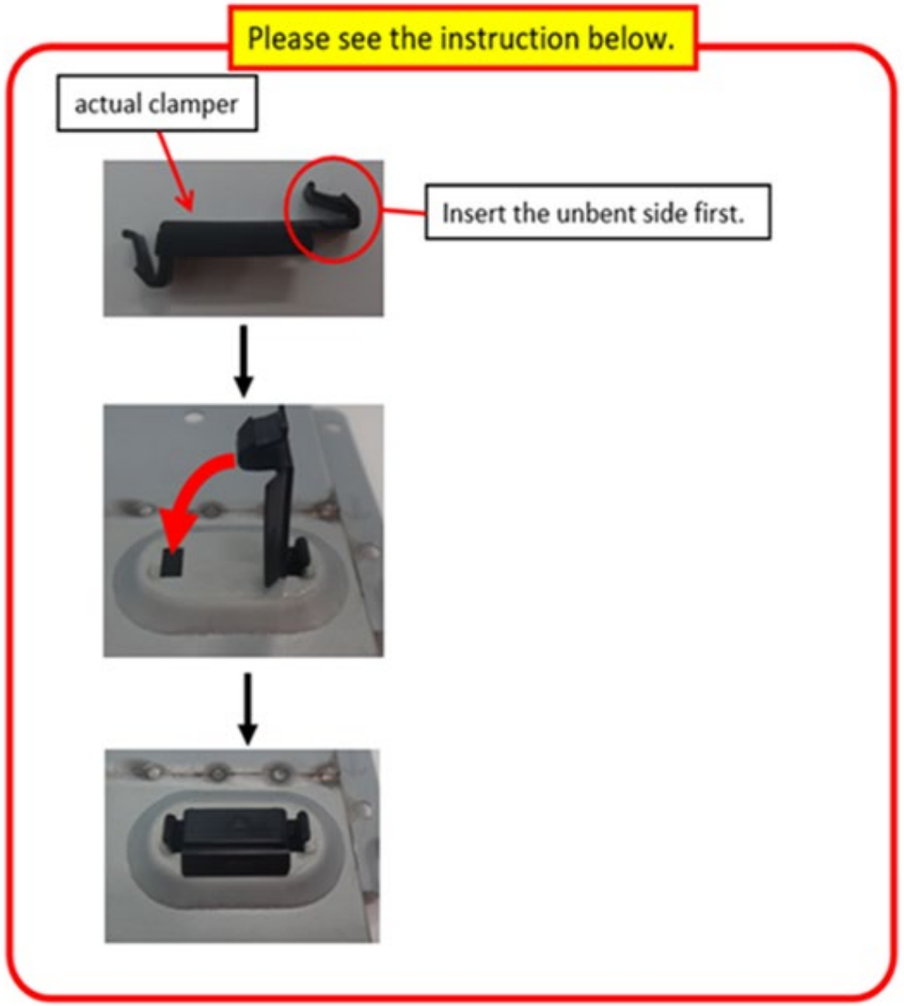

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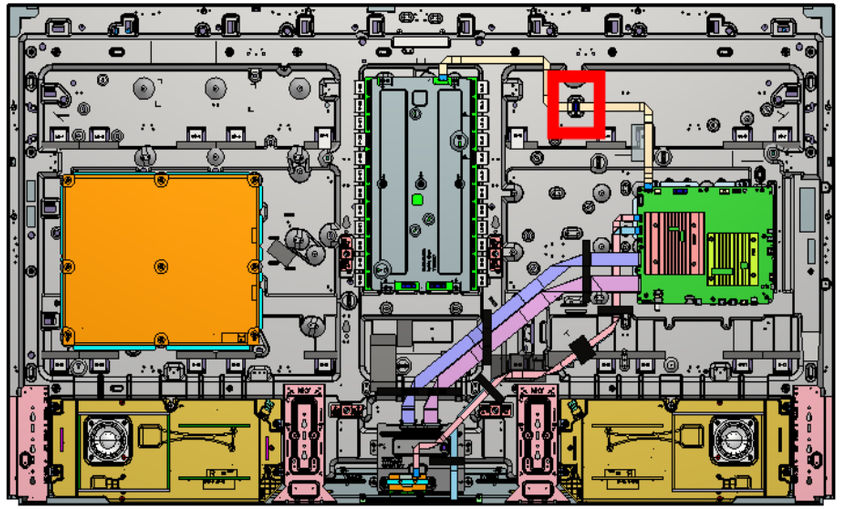

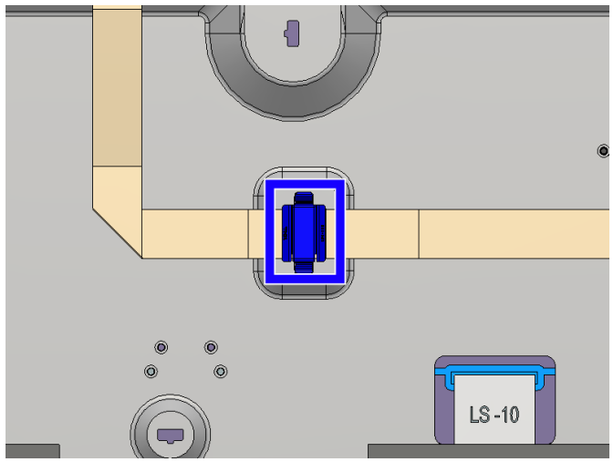

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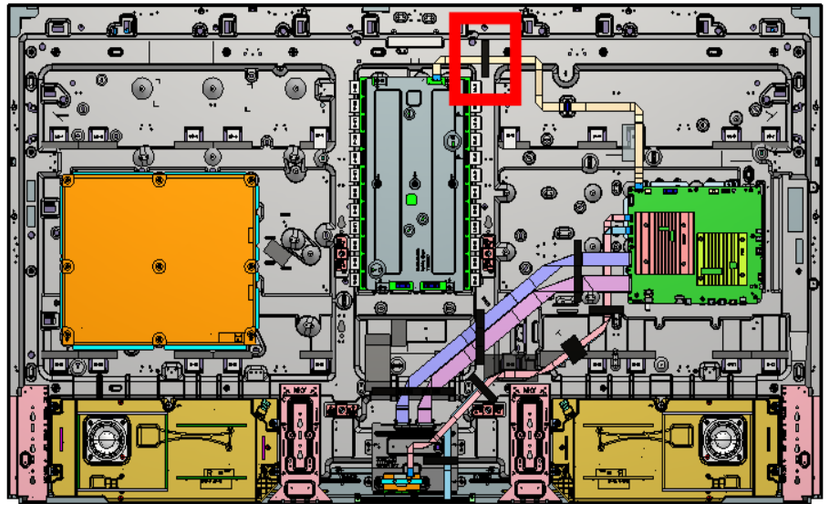

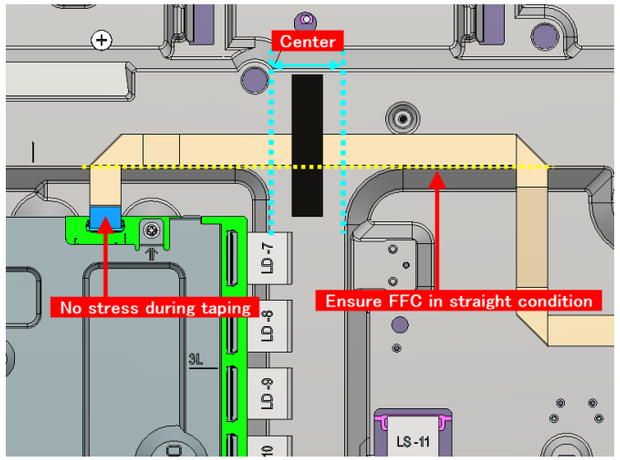

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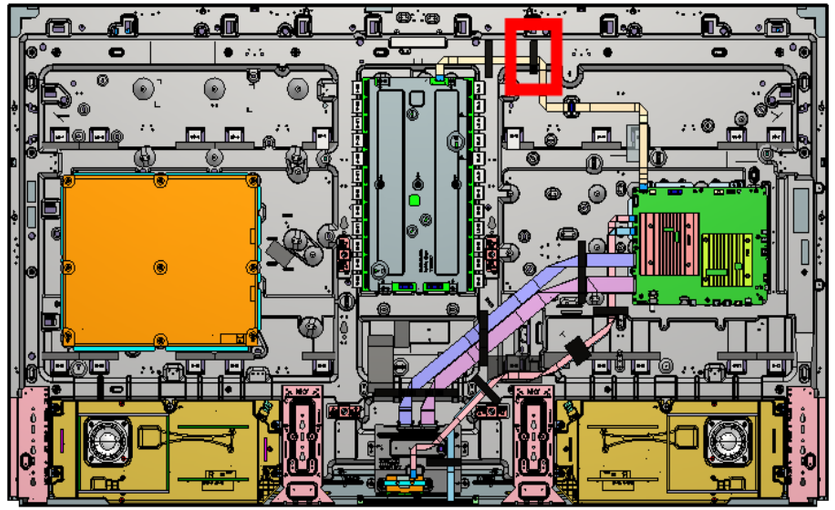

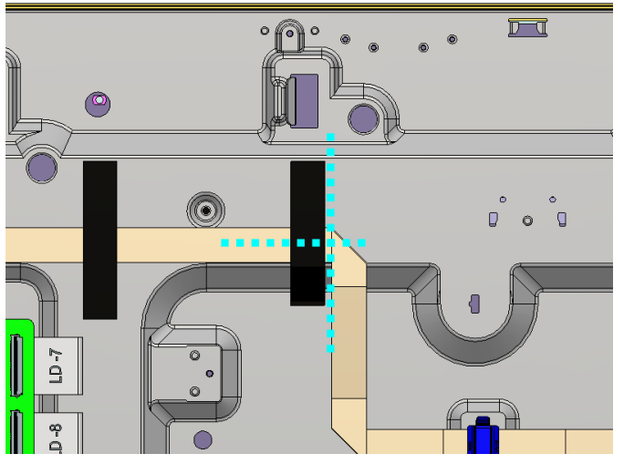
LD-7
LD-8

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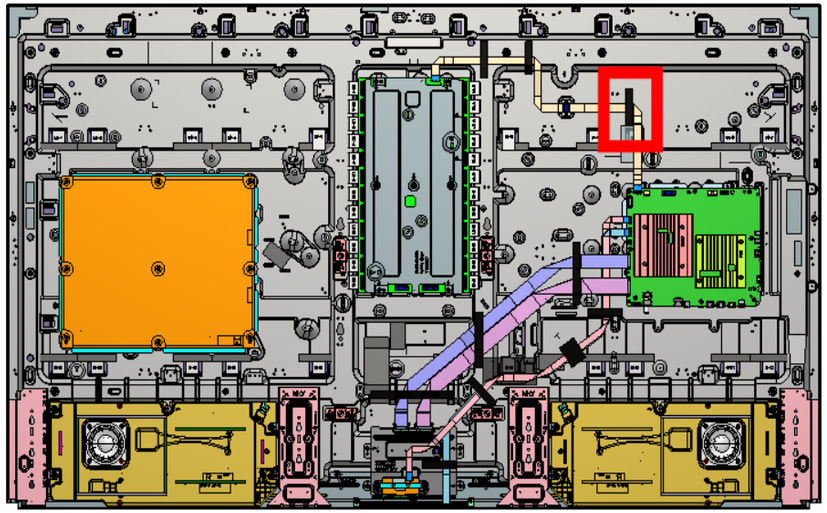

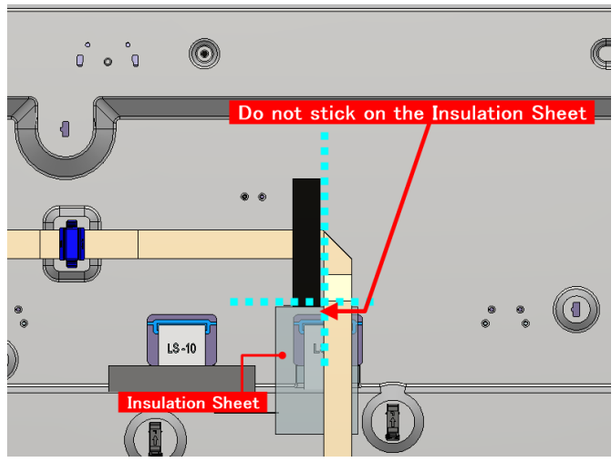
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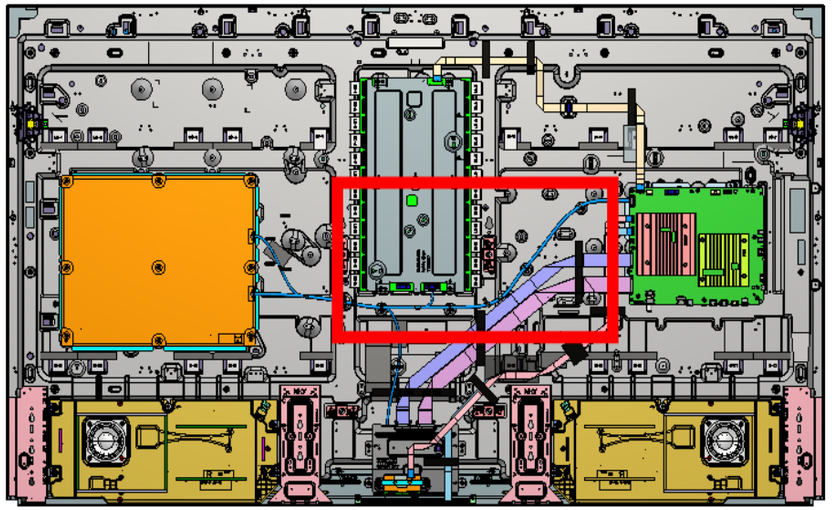
LS-10
Insulation Sheet

WIRE DRESSING



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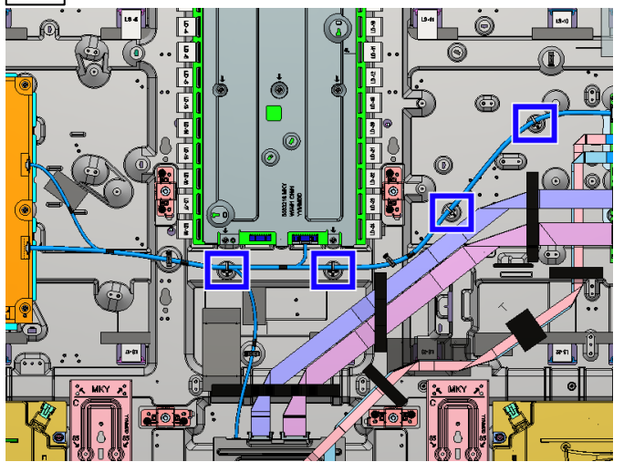

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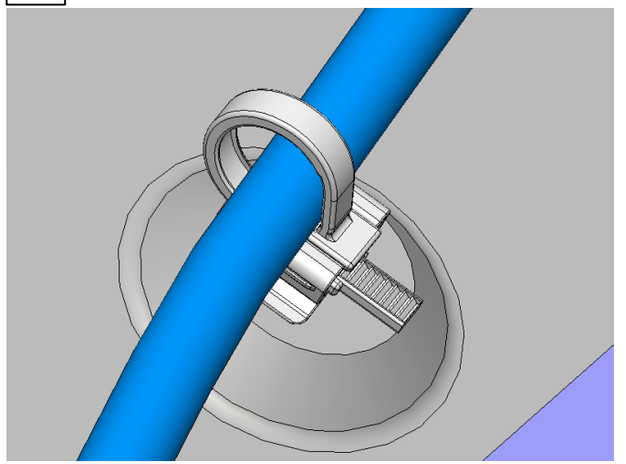

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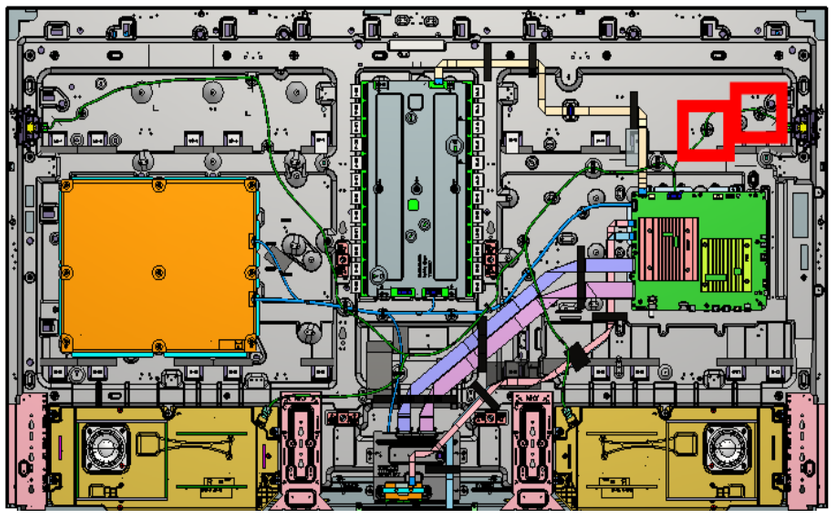

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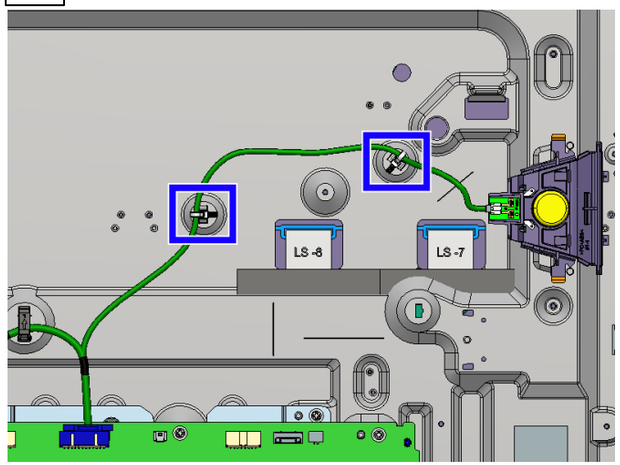

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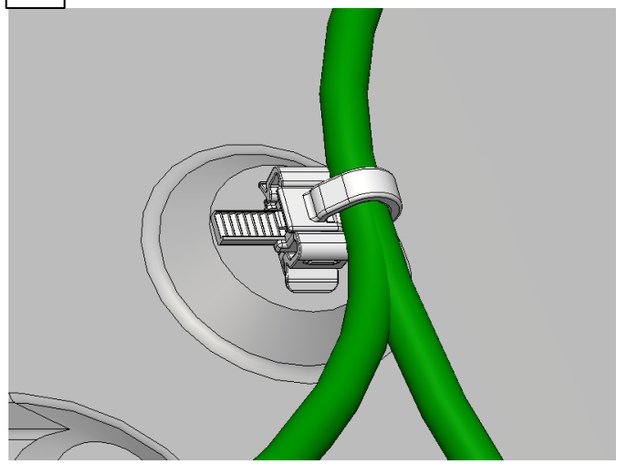

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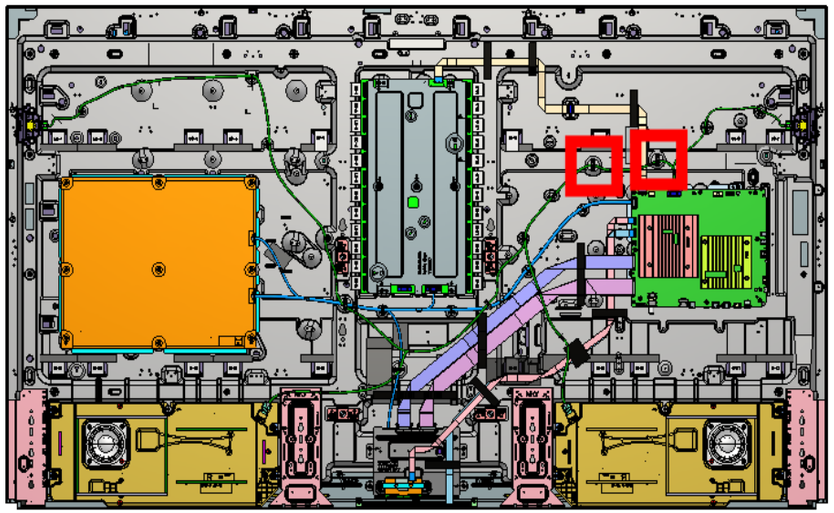

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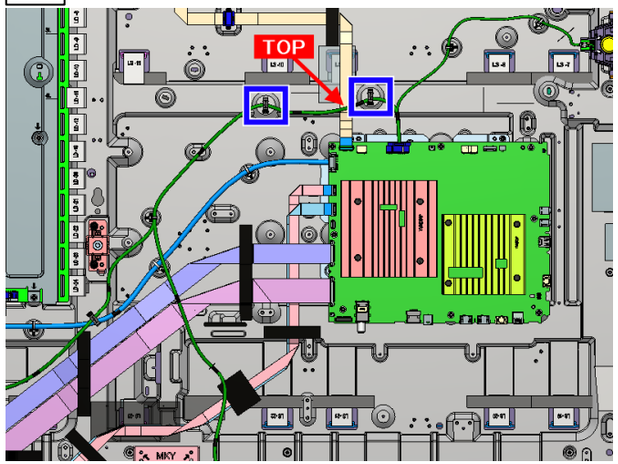

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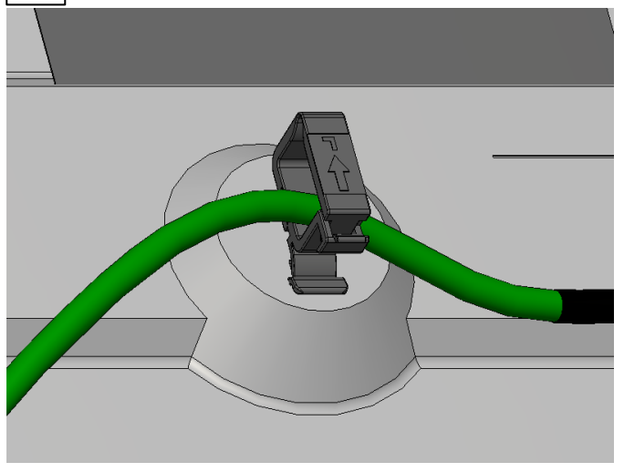

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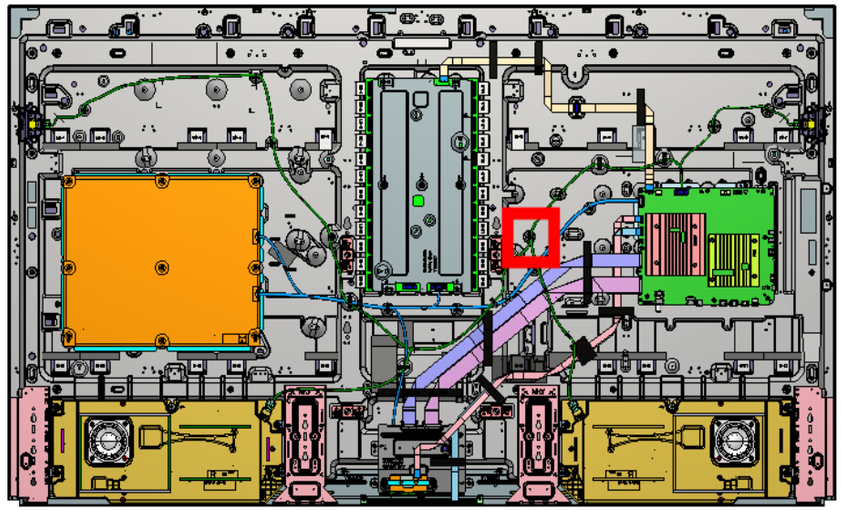

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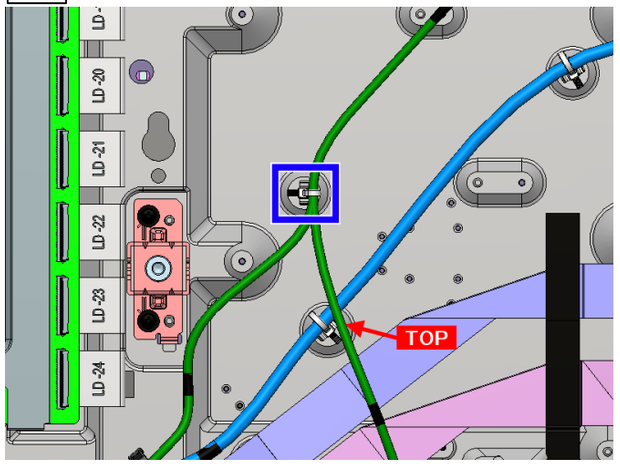

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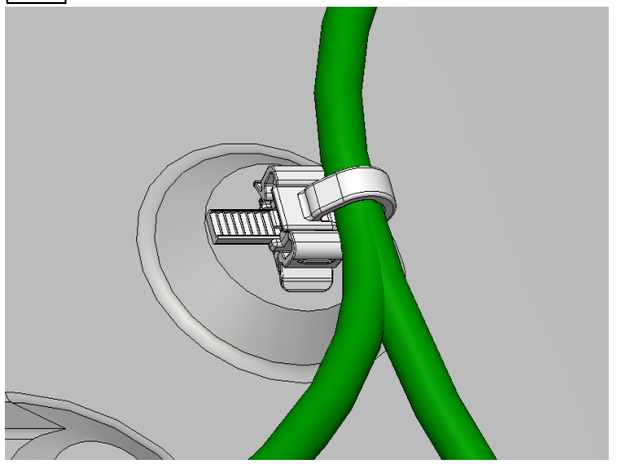

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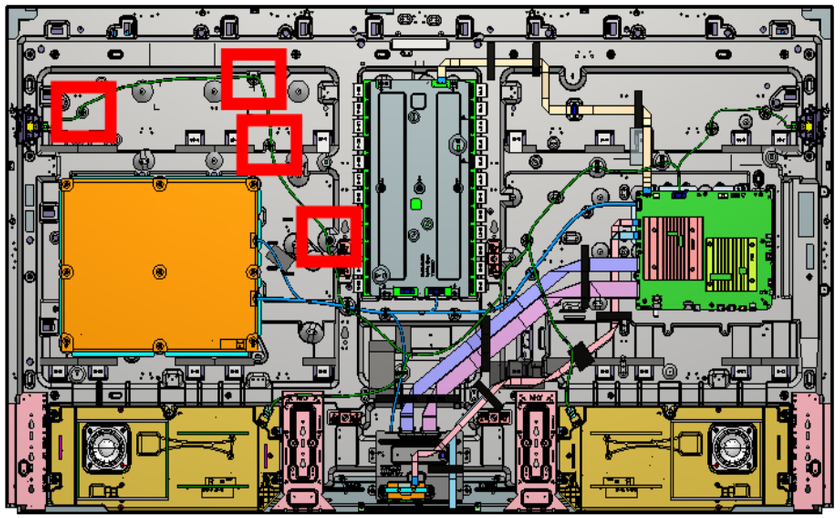

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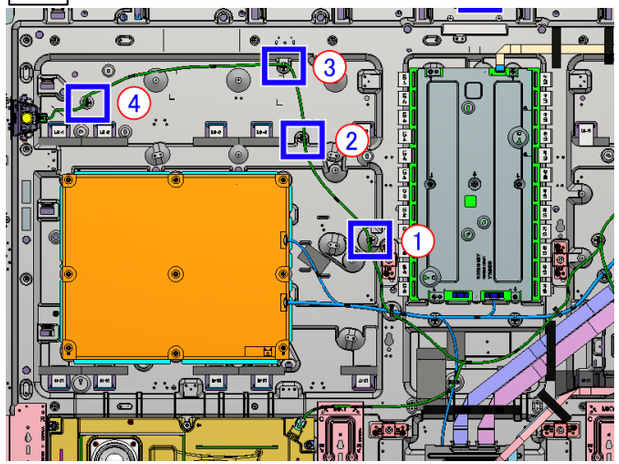

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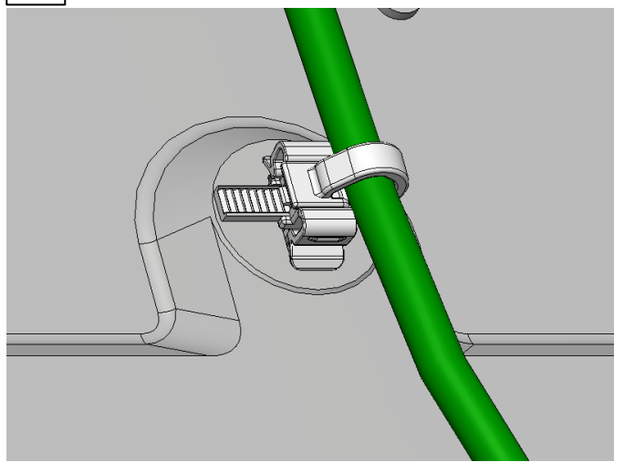

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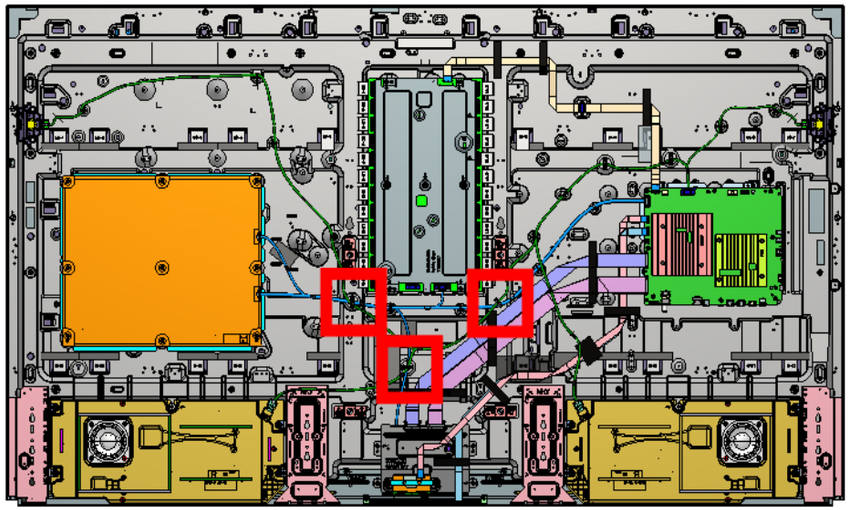

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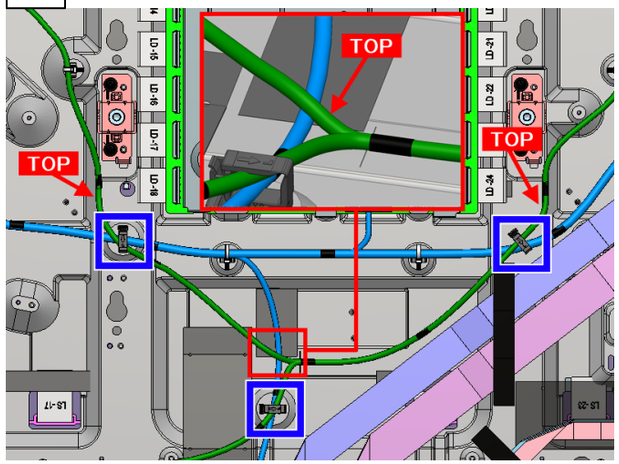

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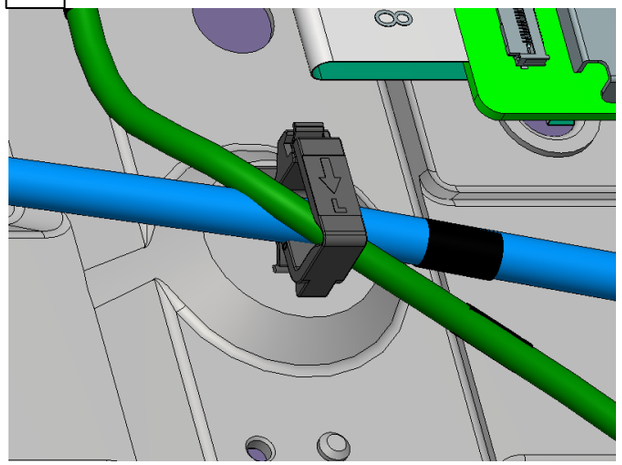

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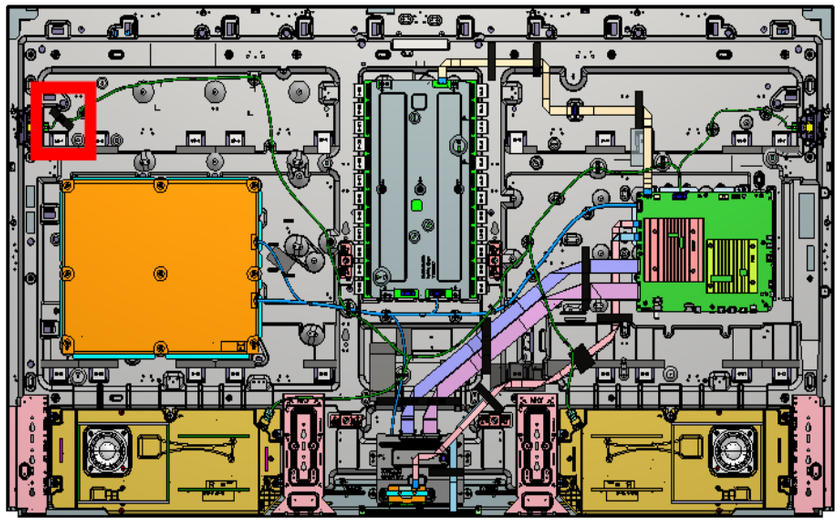

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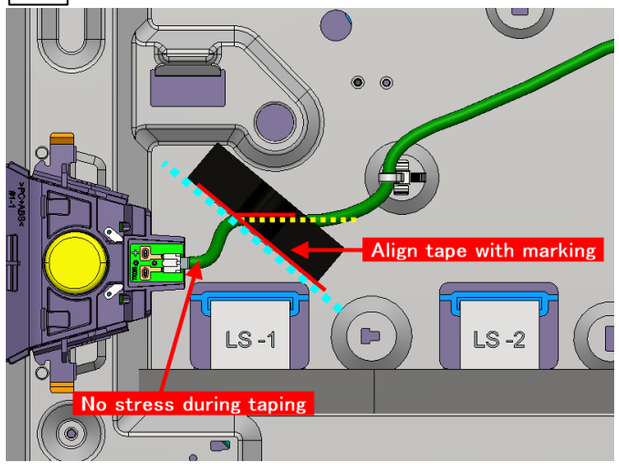

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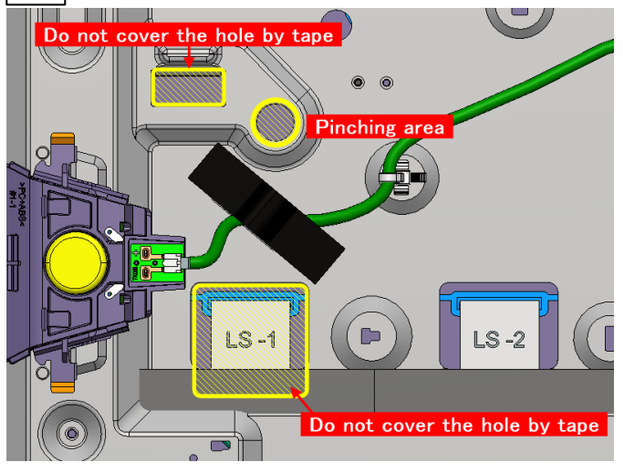

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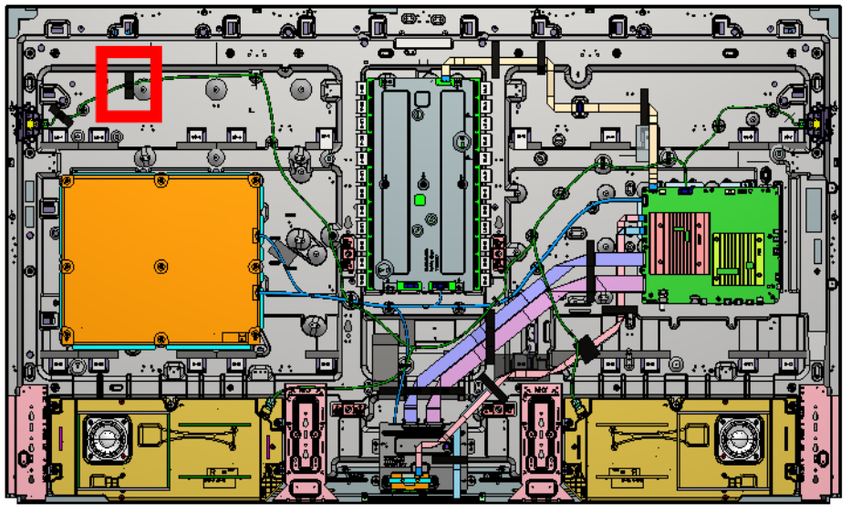

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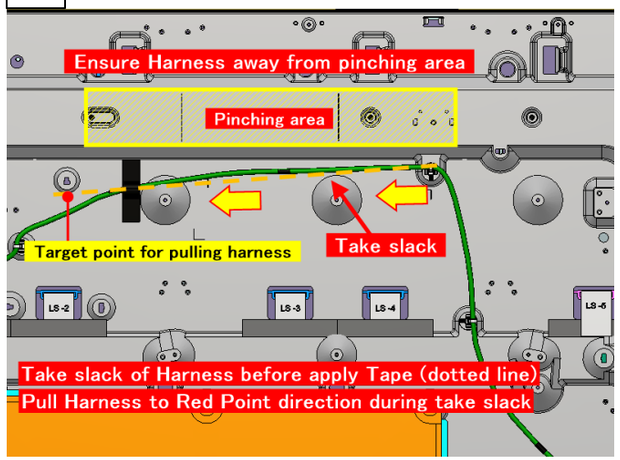

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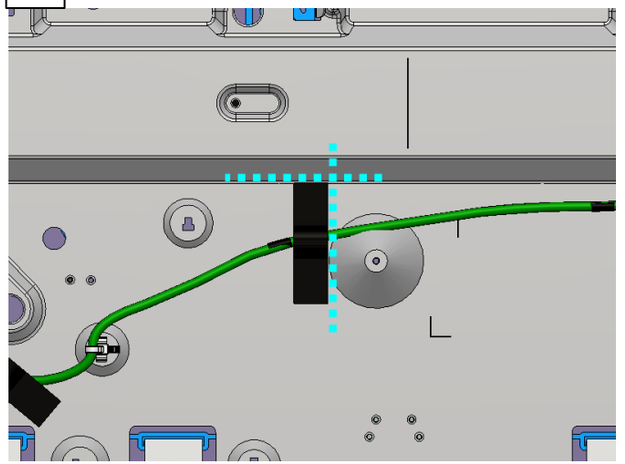

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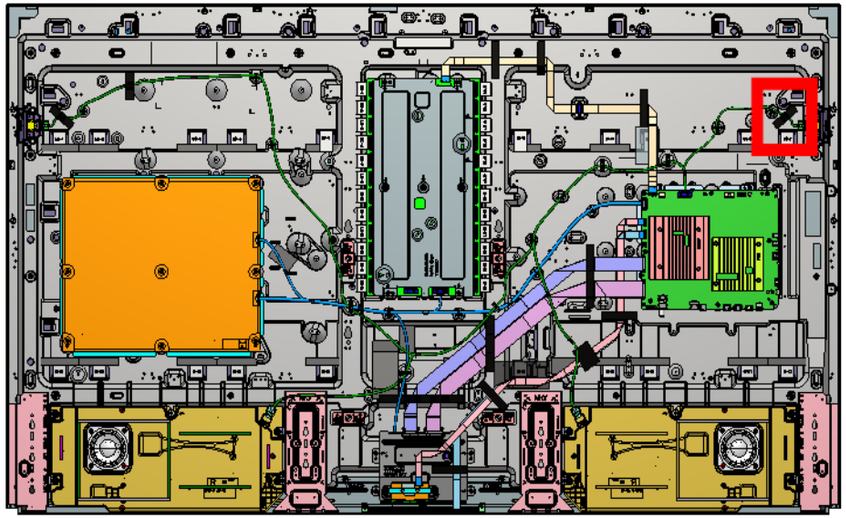

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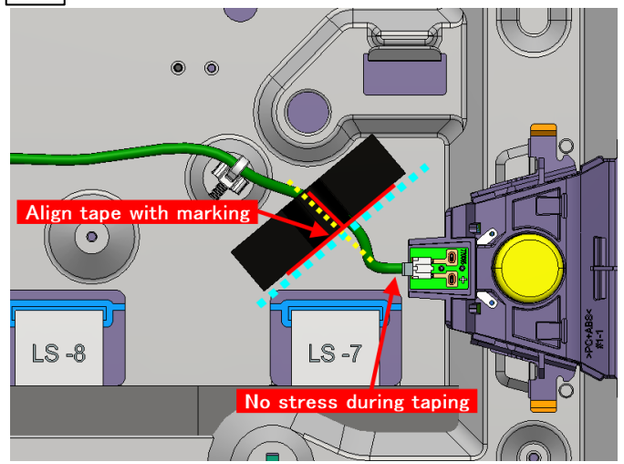

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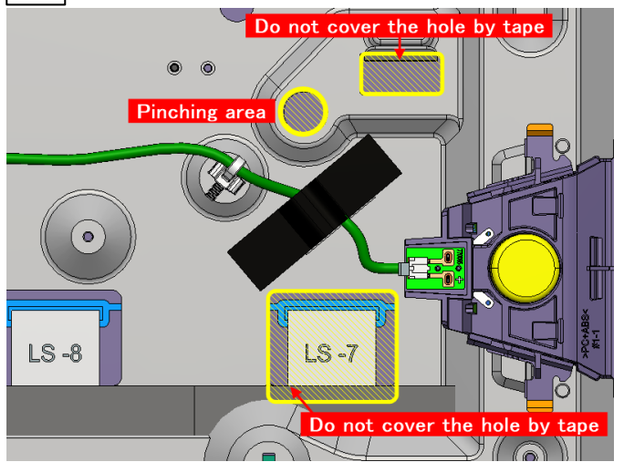

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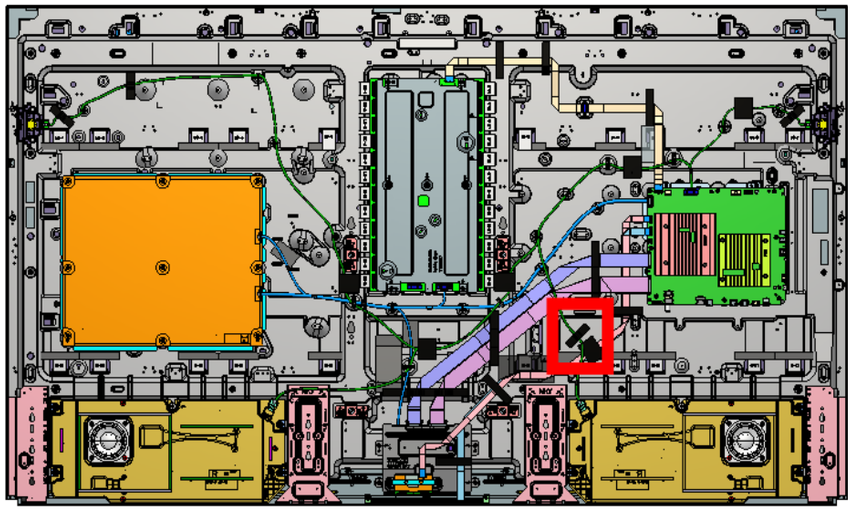

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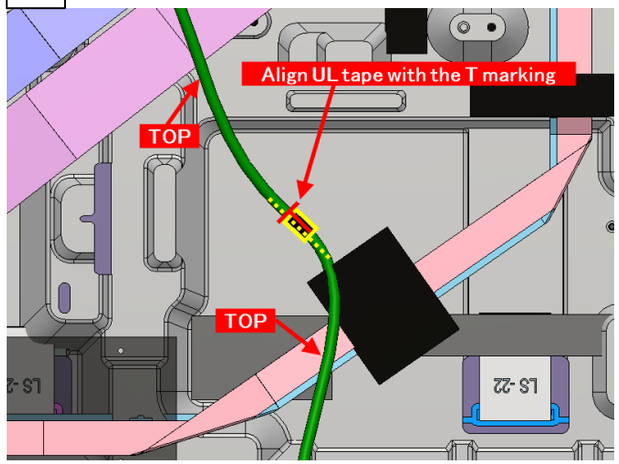

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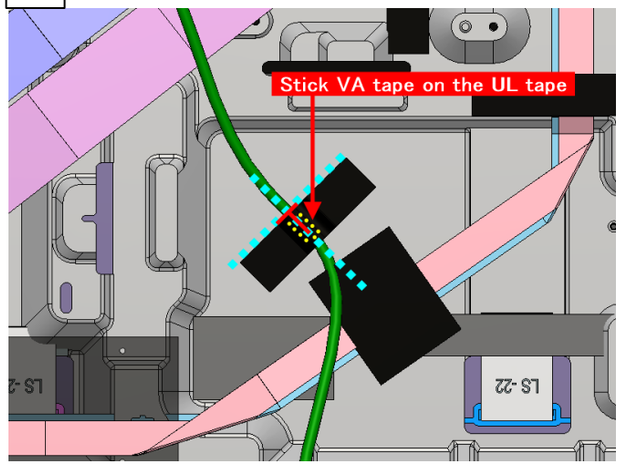

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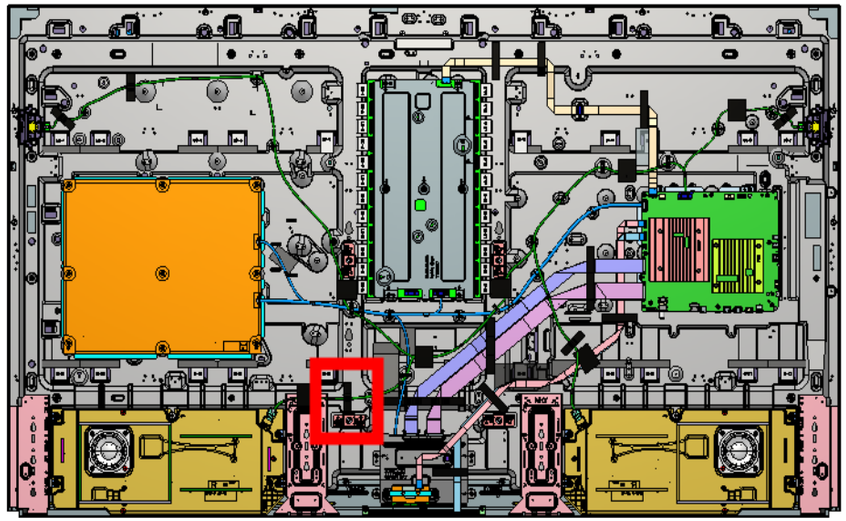

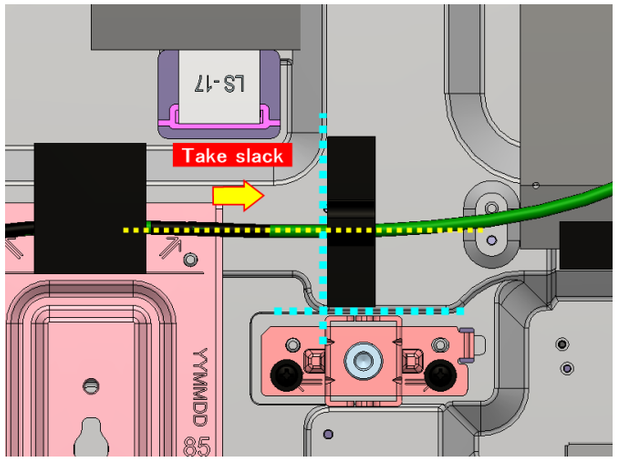

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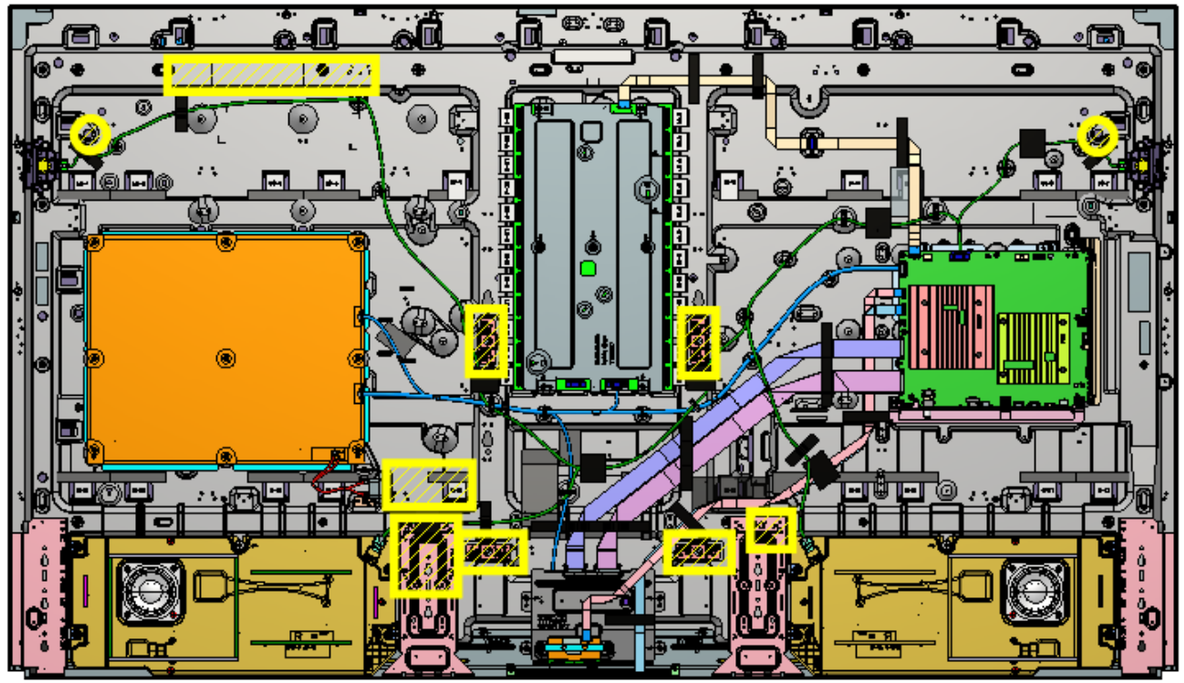
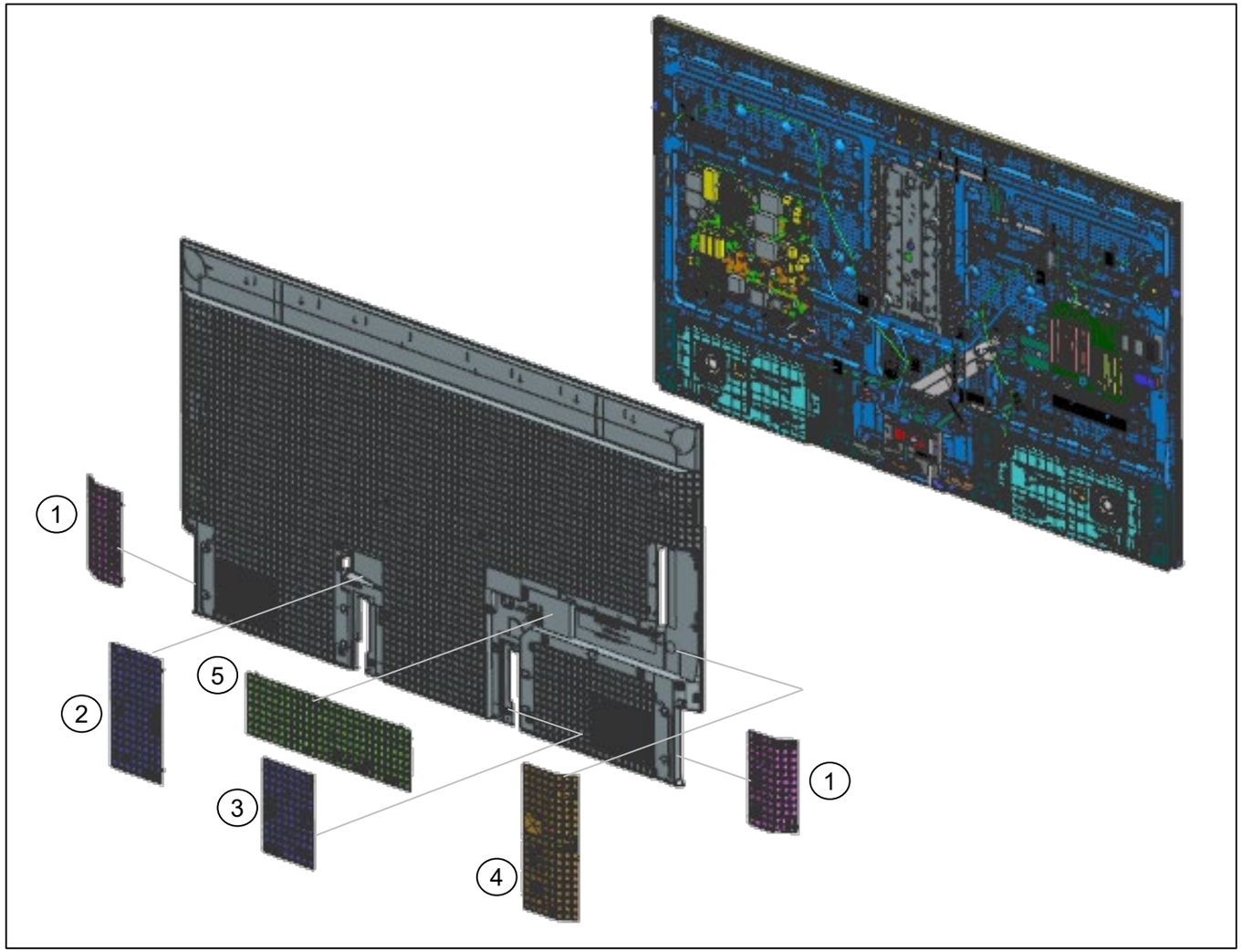


Caution : Ensure harness is away from inhibit area

2-4. EXPLODED VIEW AND PART LIST

- Place the TV set facing downwards on a stable, level surface before disassembly and assembly of parts.
- ⚠ and shaded parts are critical for safety. Replace only with part number specified.
- 🔒 Parts contain confidential information. Strictly follow the instruction whenever the components are repaired and/or replaced

- (*) Parts are not stocked since they are seldom required for routine service. Some delays should be anticipated when ordering these components.
- Picture provided in this section might have slight difference from the actual sets.
- The reference number beside the part indicates the disassembly sequence.
- Remove screws before disassembly. Unplug connectors before disassembly



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	5-035-719-01	STAND COVER LR (3L MKY) A	Including STAND COVER L (3L MKY) & STAND COVER R (3L MKY)
2	5-035-721-01	STAND COVER CR (3L MKY) A	-
3	5-035-720-01	STAND COVER CL (3L MKY) A	-
4	5-035-717-01	COVER TML V (3L MKY) A	Side Terminal Cover
5	5-035-718-01	COVER TML H (3L MKY) A	Under Terminal Cover

SECTION 2: XR-75X9*

2-4. EXPLODED VIEW AND PART LIST

- Place the TV set facing downwards on a stable, level surface before disassembly and assembly of parts.
- ⚠ and shaded parts are critical for safety. Replace only with part number specified.
- 🔒 Parts contain confidential information. Strictly follow the instruction whenever the components are repaired and/or replaced

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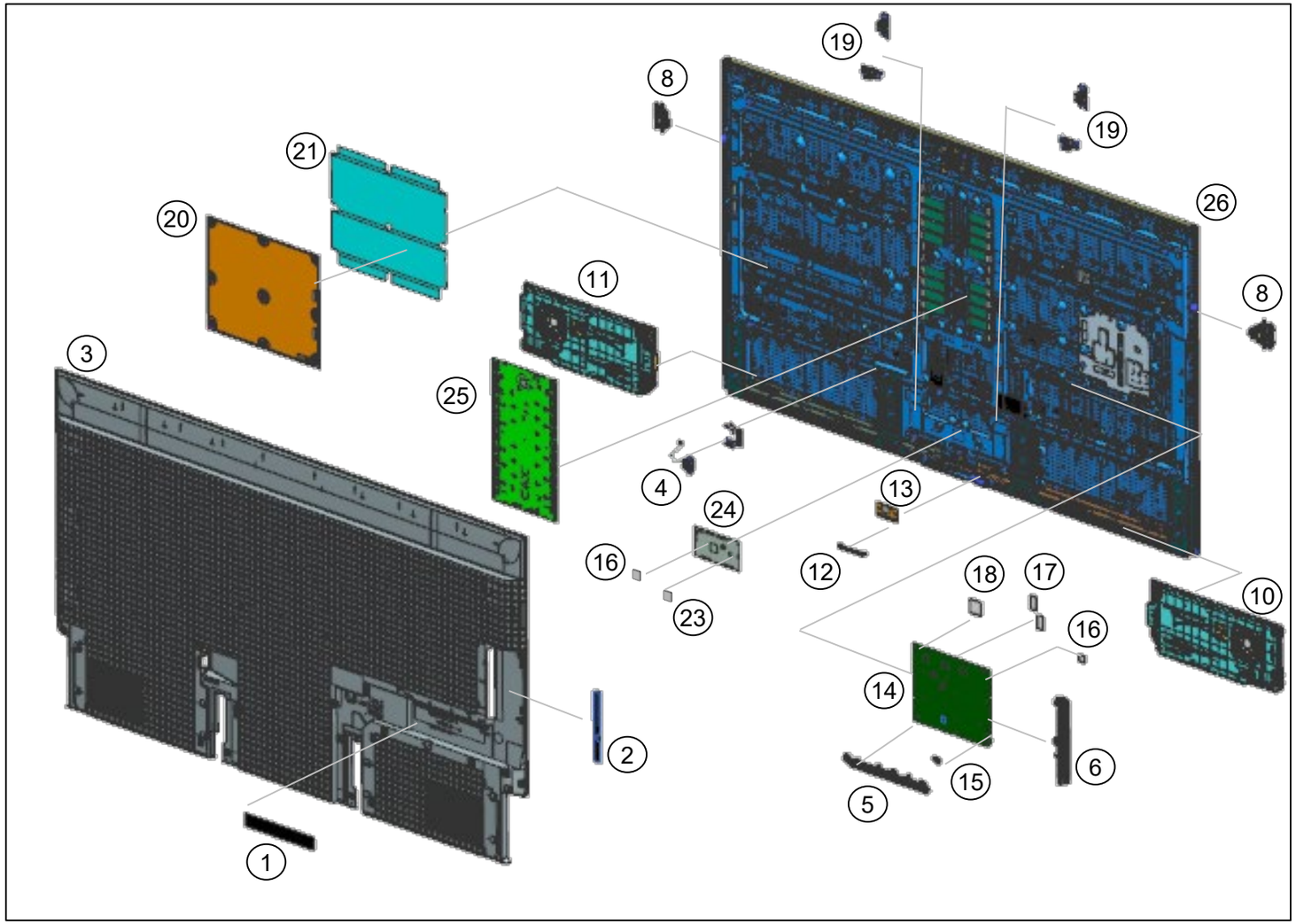
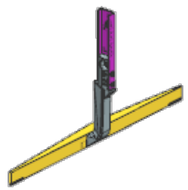
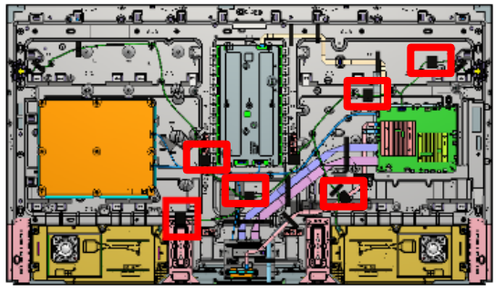


Stand

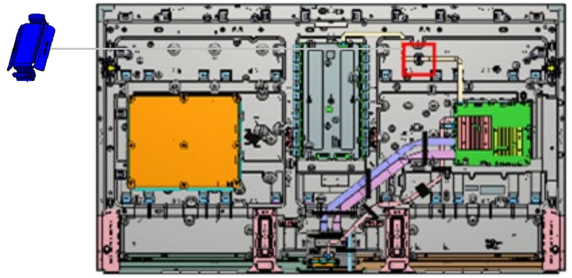
27 28



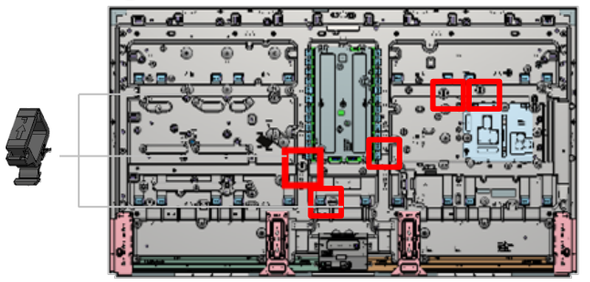
7 4-531-003-01, CUSHION 3525A



9 4-745-335-01, FLAT CLAMP(FFC)



22 2-650-770-31, SLIDE, CLAMP



SET PART LIST

REF. NO	PART NO.	DESCRIPTION	XR-75X95K	XR-75X93L	XR-75X93CL	REMARKS
			UCM	UC2	UC2	-
1	5-036-141-01	LABEL, UNDER TERMINAL (BM5S22)	•	n/a	n/a	-
1	5-049-098-01	LABEL, UNDER TERMINAL(BM5S,6S)	n/a	•	•	-
2	5-036-145-01	LABEL, SIDE TERMINAL (BM5S22)	•	n/a	n/a	-
2	5-049-096-01	LABEL, SIDE TERMINAL(BM5S,6S)	n/a	•	•	-
⚠ 3	5-033-681-01	REAR COVER (3L MKY) A	•	•	•	-
⚠ 4	1-843-998-31	AC INLET	•	•	•	Compatible
⚠ 4	1-002-004-12	C18 AC INLET	•	•	•	
5	4-724-146-14	BRACKET, UNDER (BM2A)	•	•	•	-
6	5-036-017-22	BRACKET, SIDE(SGT)	•	•	•	-
7	4-531-003-01	CUSHION 3525A	•	•	•	-
8	1-013-275-11	LOUDSPEAKER, FY22 TW16-19MM	•	•	•	-
9	4-745-335-01	FLAT CLAMP(FFC)	•	•	•	-
10	1-013-634-11	SP-BOX ASSY, FY22 D33-SLIT(L)	•	•	•	-
11	1-013-634-21	SP-BOX ASSY, FY22 D33-SLIT(R)	•	•	•	-
12	5-009-258-22	BRACKET, WIFI(BNN)	•	•	•	-
13	1-005-419-32	WLAN/BT MODULE(11AC)FXC	•	•	•	Compatible
13	1-005-419-14	WLAN/BT MODULE(11AC)	•	•	•	
14	A-5044-976-A	COMPL SVC BM5S22B_FM_UCMX	•	n/a	n/a	-
14	A-5056-077-A	COMPL SVC BM5S22B_FM2_UCMX	n/a	•	•	-
15	5-023-281-02	KEY,TOP(SGT)	•	•	•	-

Notes :
When replacing P-MOD, please also replace the following parts at the same time.

7 CUSHION 3525A

21 SHT, INSULATION (3L MKY)

SET PART LIST

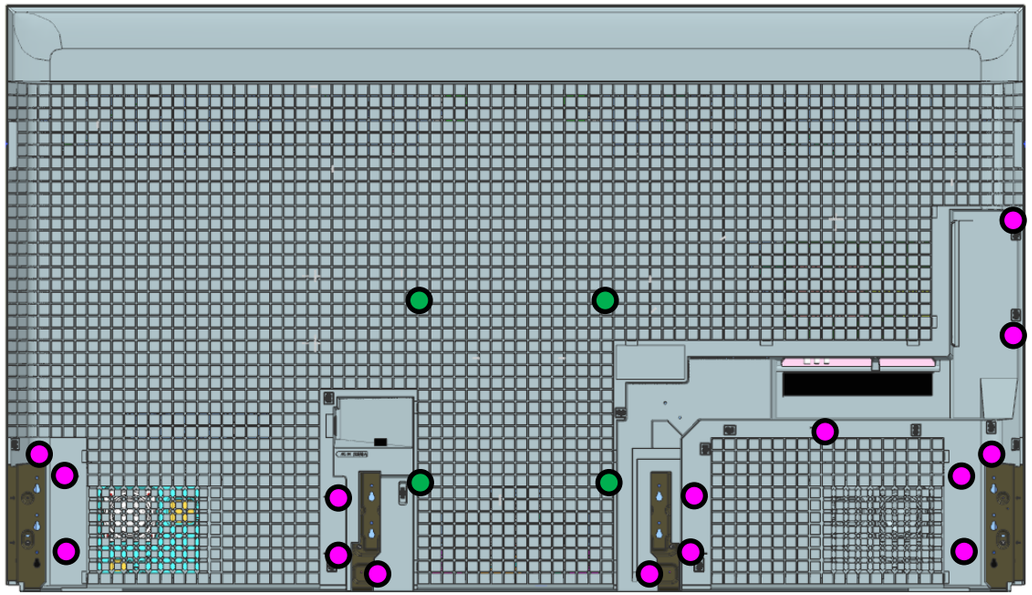
REF. NO	PART NO.	DESCRIPTION	XR-75X95K	XR-75X93L	XR-75X93CL	REMARKS
			UCM	UC2	UC2	-
16	4-699-975-02	SHEET,THERMAL(5567H)	•	•	•	-
17	5-023-557-01	SHEET THERMAL(BM5S21 DDR)	•	•	•	-
18	5-011-960-01	SHEET, THERMAL(LMN TCON)	•	•	•	-
19	*5-023-339-01	BRACKET,VESA(GMN)	•	•	•	-
⚠ 20	1-013-591-12	G28 - STATIC CONVERTER(TV)	•	•	•	-
⚠ 21	5-032-571-01	SHT, INSULATION (3L MKY)	•	•	•	-
22	2-650-770-31	SLIDE, CLAMP	•	•	•	-
23	5-026-767-01	SHEET, THERMAL T-CON(3L GMN)	•	•	•	-
24	1-013-502-11	MOUNTED PWB E-T-CON (75)	•	•	•	-
25	A-5041-952-A	22LD600A1 COMPL	•	•	•	-
⚠ 26	A-5042-994-A	P-MOD(YDCS075MES02)	•	n/a	n/a	Compatible
⚠ 26	A-5048-992-A	P-MOD(YDCS075MES02)	•	n/a	n/a	
27	5-034-694-01	STAND L (3L MKY) A	•	•	•	-
28	5-034-695-01	STAND R (3L MKY) A	•	•	•	-

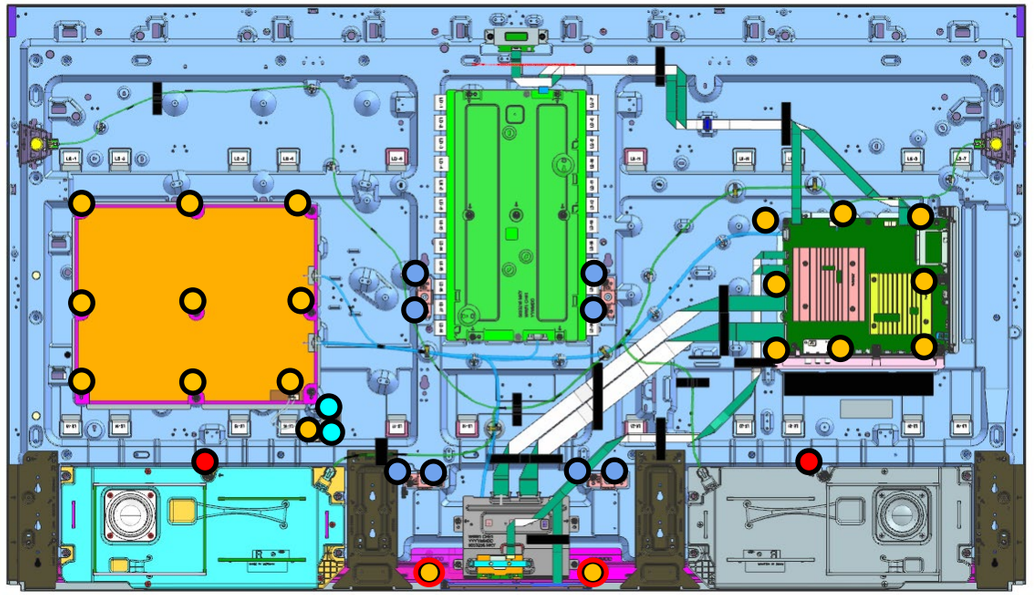
Notes :
When replacing P-MOD, please also replace the following parts at the same time.

7 CUSHION 3525A

21 SHT, INSULATION (3L MKY)

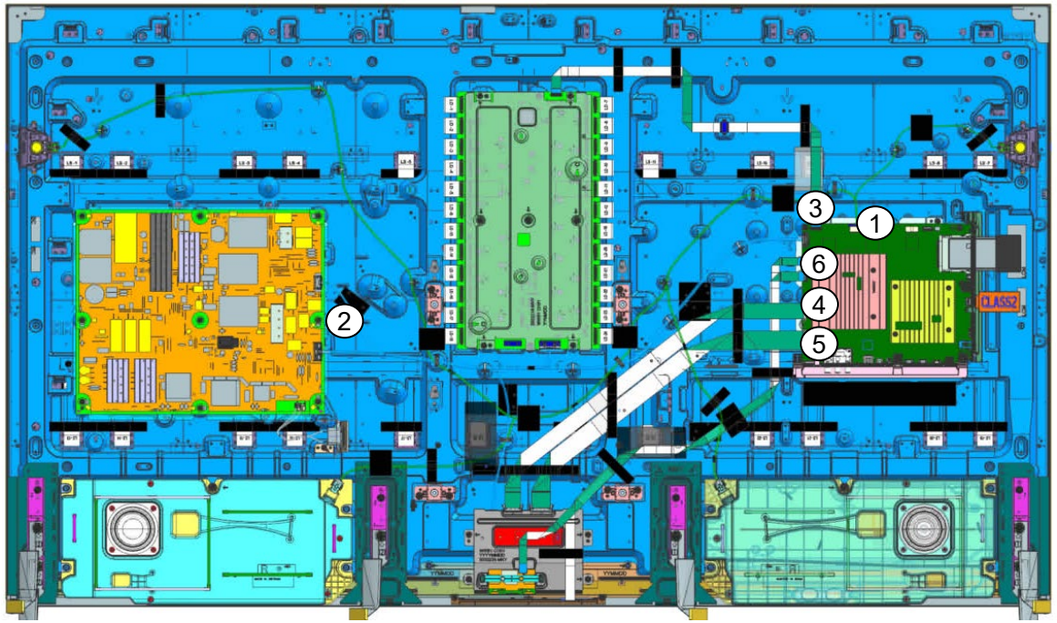
SCREW





REMARKS	P/N	DESCRIPTION	QTY	TORQUE (N.m)	REMARKS
●	4-268-126-02	SCREW, ORNAMENTAL M6X12	4	1.2 ± 0.1	-
●	4-579-926-01	SCREW M3X3.0 STEP	15	0.65 ± 0.05	-
●	4-256-393-12	SCREW, +PSW M3X6 W12	2	0.4 ± 0.05	-
●	2-580-600-01	SCREW, +PSW M4X8	8	0.65 ± 0.05	-
●	2-580-592-01	SCREW, +PSW M3X8	2	0.4 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	20	0.4 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	18	0.4 ± 0.05	93L / 93CL
●	7-682-948-09	SCREW +PSW 3X8	2	0.4 ± 0.05	93L / 93CL

CONNECTOR



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	1-014-903-11	CONNECTOR ASSY 12P (SP)	CN6603(B)-SP(1)
2	1-014-902-11	CONNECTOR ASSY 28P	CN1700(B)-CN6401(G)-CN6601(G)-CN1000(LD)-J105(TCON)(1)
3	1-014-839-11	FLEXIBLE FLAT CABLE 30P	CN6200(B)-CN1000(LD)(1)
4	1-014-840-11	FLEXIBLE FLAT CABLE 41P	CN6801(B)-CN2(TCON)(1)
5	1-014-841-11	FLEXIBLE FLAT CABLE 51P	CN6800(B)-CN3(TCON)(1)
6	1-014-837-11	FLEXIBLE FLAT CABLE 20P/25P	CN103(H)-CN1200(B)-CN3803(B)-BT(1)

OTHER PARTS

PART NO.	DESCRIPTION	XR-75X95K	XR-75X93L	XR-75X93CL	REMARKS
		UCM	UC2	UC2	
4-535-064-62	ASSY,FALL LOCK,BELT LL	•	•	•	-
4-462-871-03	BAG, SCREW A (CCT)	•	•	•	Including SCREW, +PSW M5X12 (Qty 4)
4-262-708-04	CLAMPER, CABLE	•	•	•	-
⚠ 1-836-883-13	POWER-SUPPLY CORD	•	•	•	-
1-013-691-23	REMOTE COMMANDER (RMF-TX800U)	•	n/a	n/a	-
1-016-940-21	REMOTE COMMANDER (RMF-TX810U)	n/a	•	n/a	-
1-016-949-21	REMOTE COMMANDER (RMF-TX910U)	n/a	n/a	•	-
*5-038-398-11	REFERENCE GUIDE	•	n/a	n/a	-
*5-049-617-11	REFERENCE GUIDE	n/a	•	•	-
*5-038-399-11	SETUP GUIDE	•	n/a	n/a	-
*5-049-618-11	SETUP GUIDE	n/a	•	•	-
7-600-031-97	TAPE (3M 1350FB-1)15MMX66M BLK	•	•	•	-

REAR COVER

1. Remove Cover (6 Covers).

   (1) STAND COVER R (3L MKY)

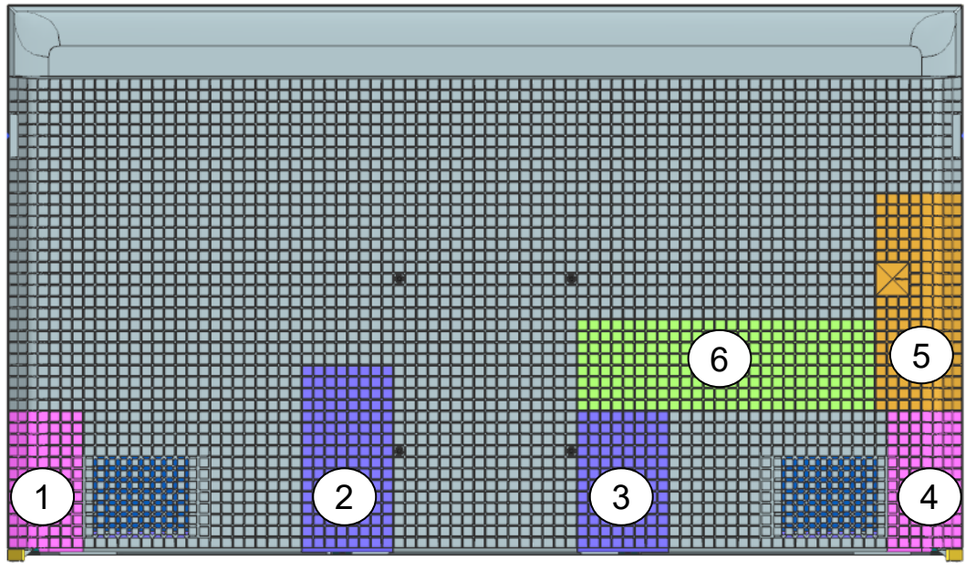
   (2) STAND COVER CR (3L MKY)

   (3) STAND COVER CL (3L MKY)

   (4) STAND COVER L (3L MKY)

   (5) COVER TML V (3L MKY)

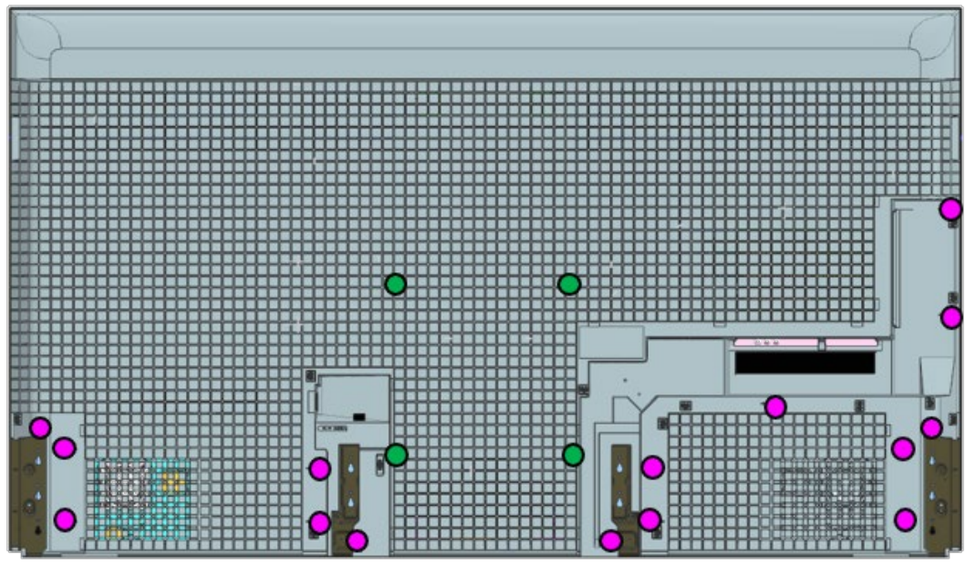
   (6) COVER TML H (3L MKY)



2. (i) Remove 19 screws

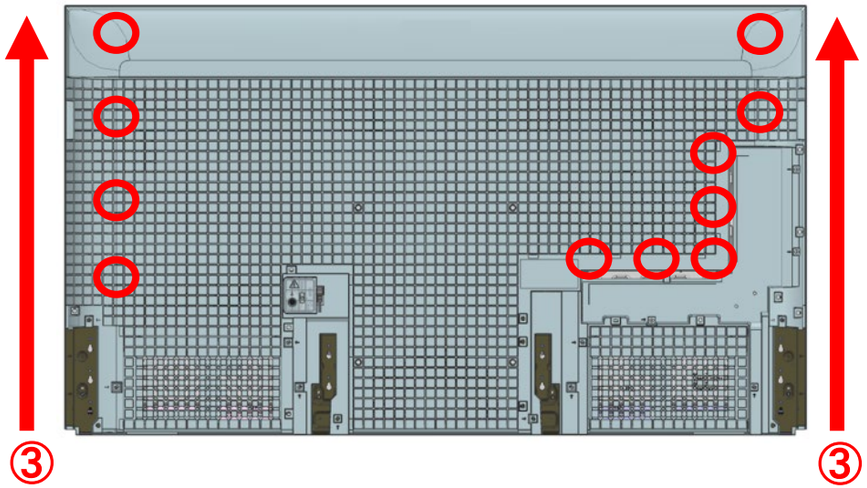
   SCREW, ORNAMENTAL M6X12 (4pcs)

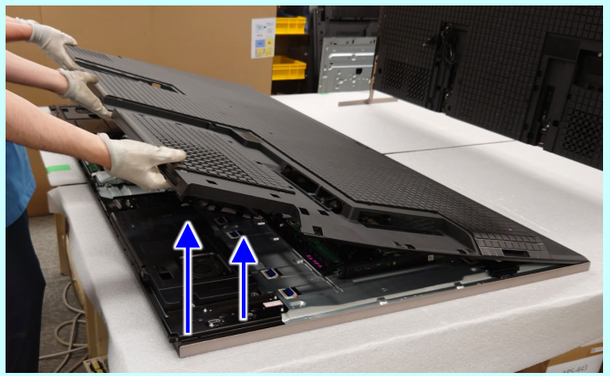
   SCREW M3X3.0 STEP (15pcs)



REAR COVER

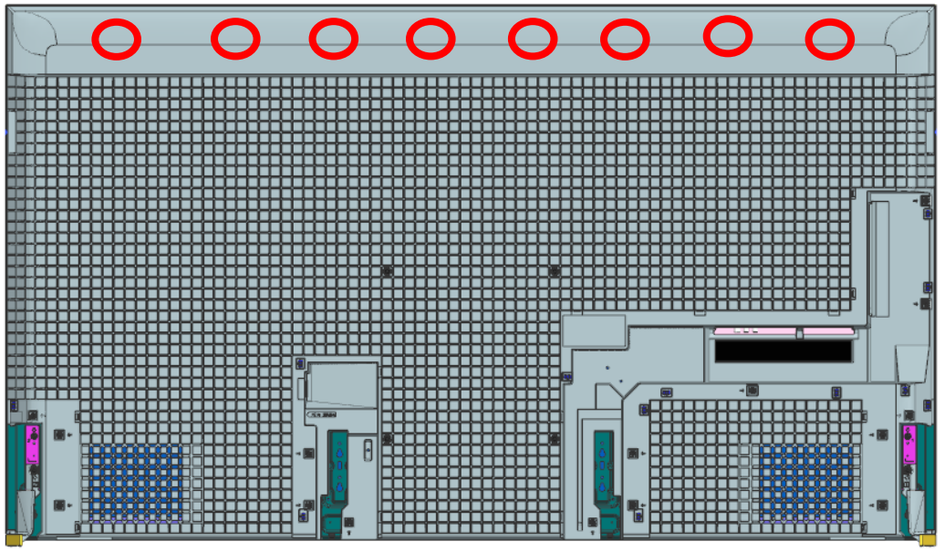
3. Release Side and Bracket Hook.

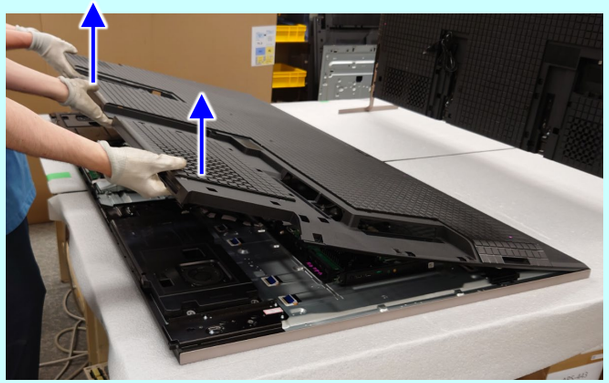




Lift up Rear Cover from Bottom side

4. Release Top Hook (8 pcs).



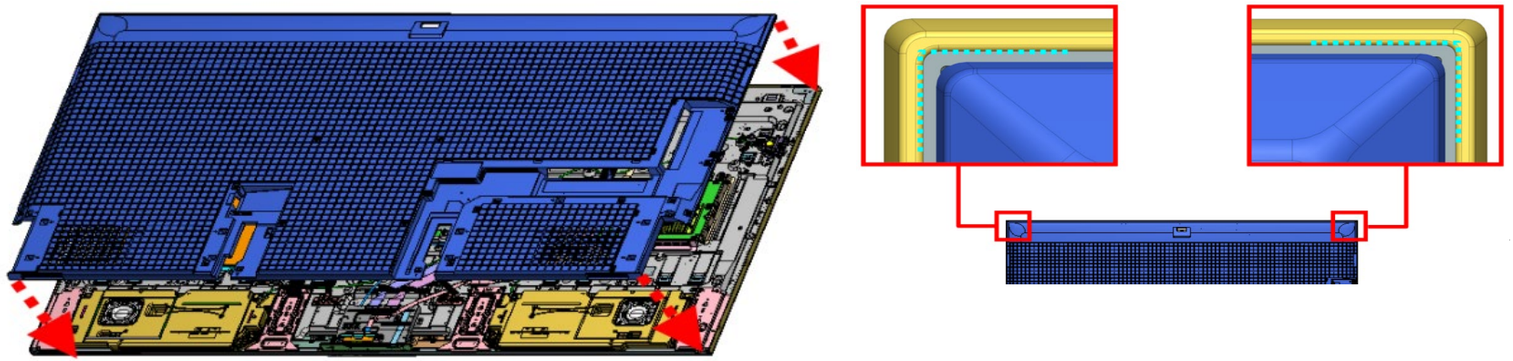


Lift up Rear Cover from Bottom side more

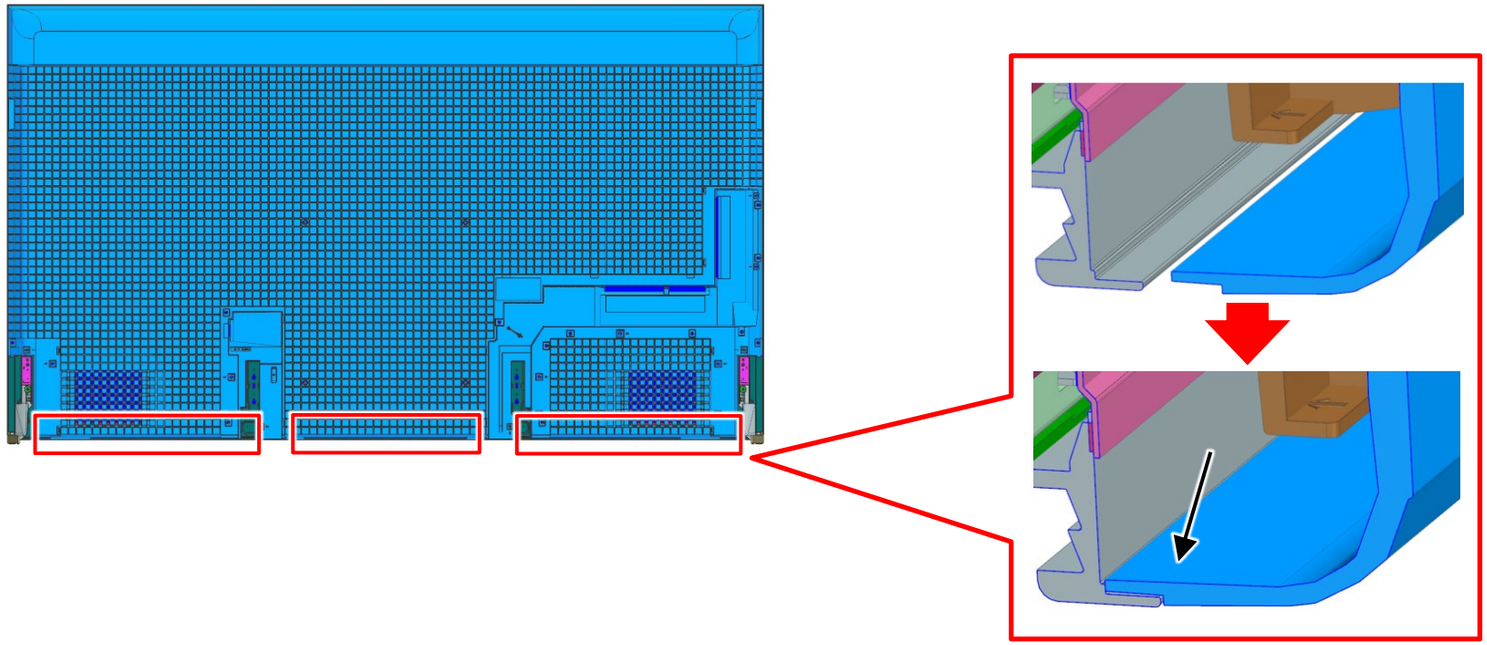
REAR COVER

1. Install REAR COVER.

(i) REAR COVER aligning.
→ Don't overwrap to the BEZEL.

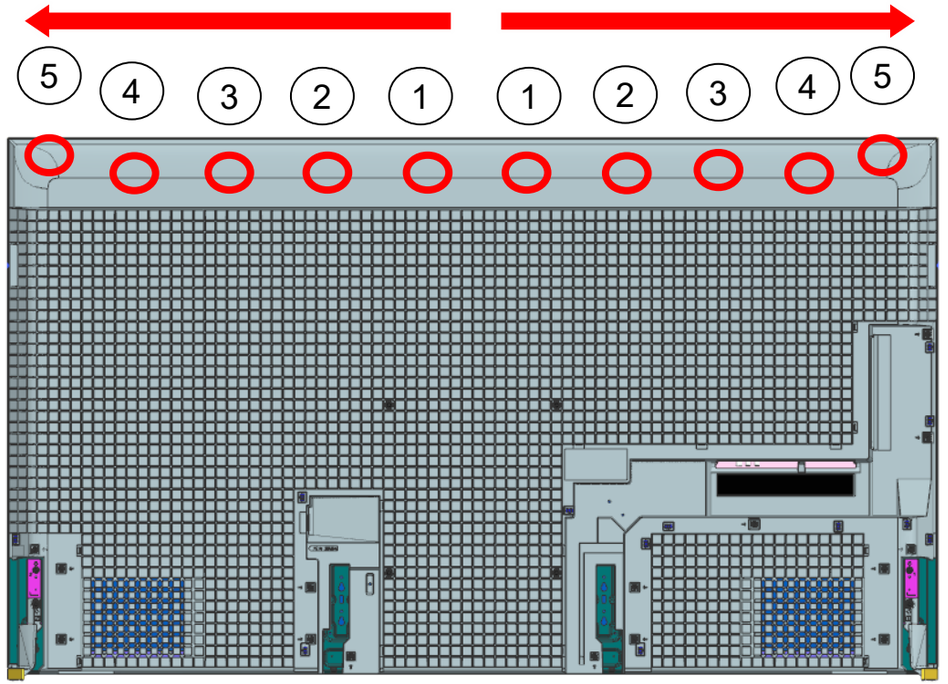


(ii) Insert rib of the bottom to the BEZEL.



REAR COVER

2. (i) Push and Lock Top Hook (pushing order) (10 pcs).

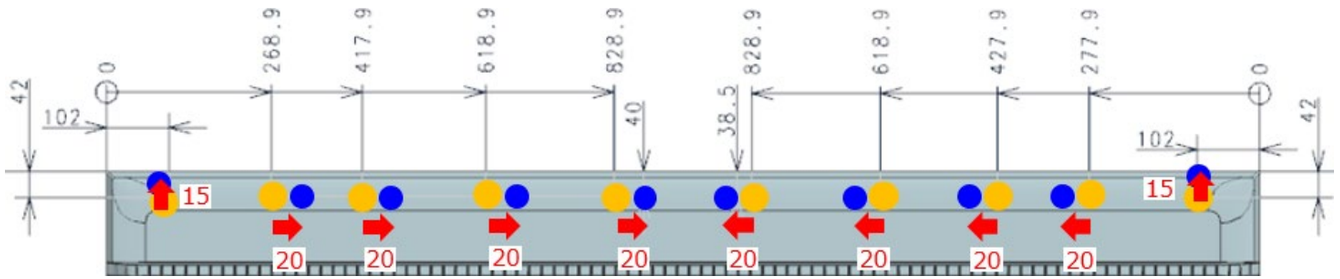


(ii) Push and Lock Top Hook (pushing position) (10 pcs).

Notice:
Please push the inside (10～20mm) of the hook because pushing the outside increases the insertion force.

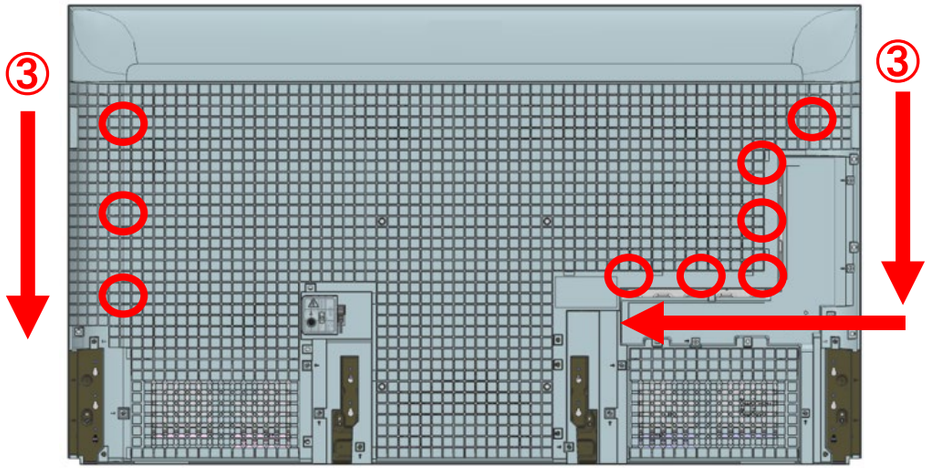
Hook position

Push position

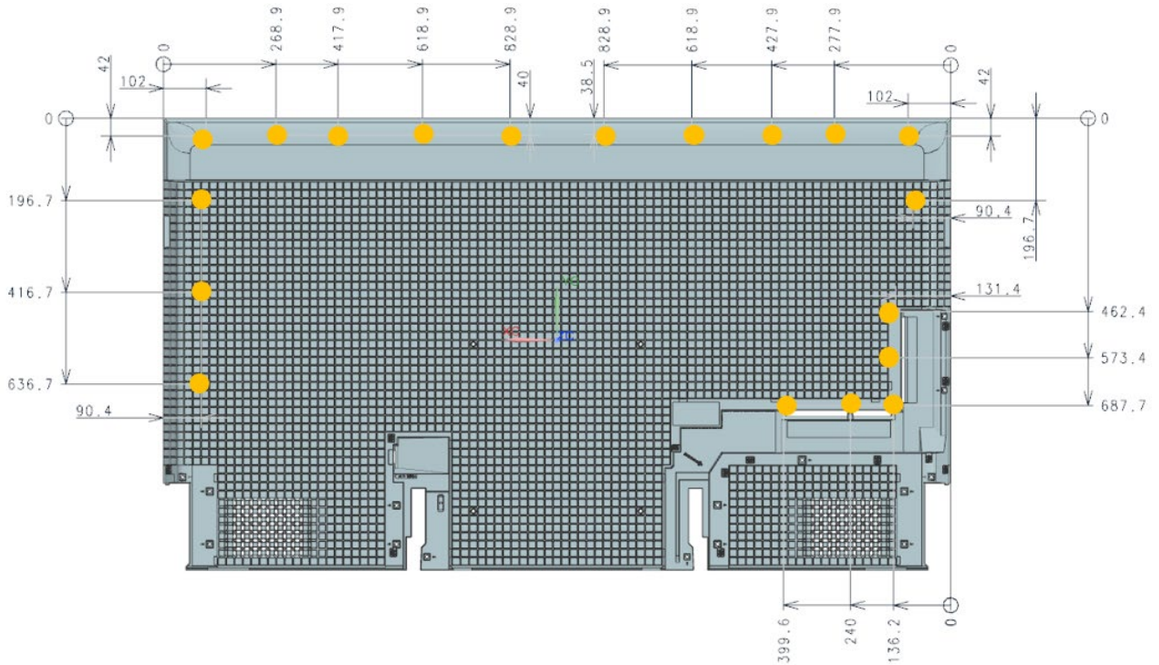


REAR COVER

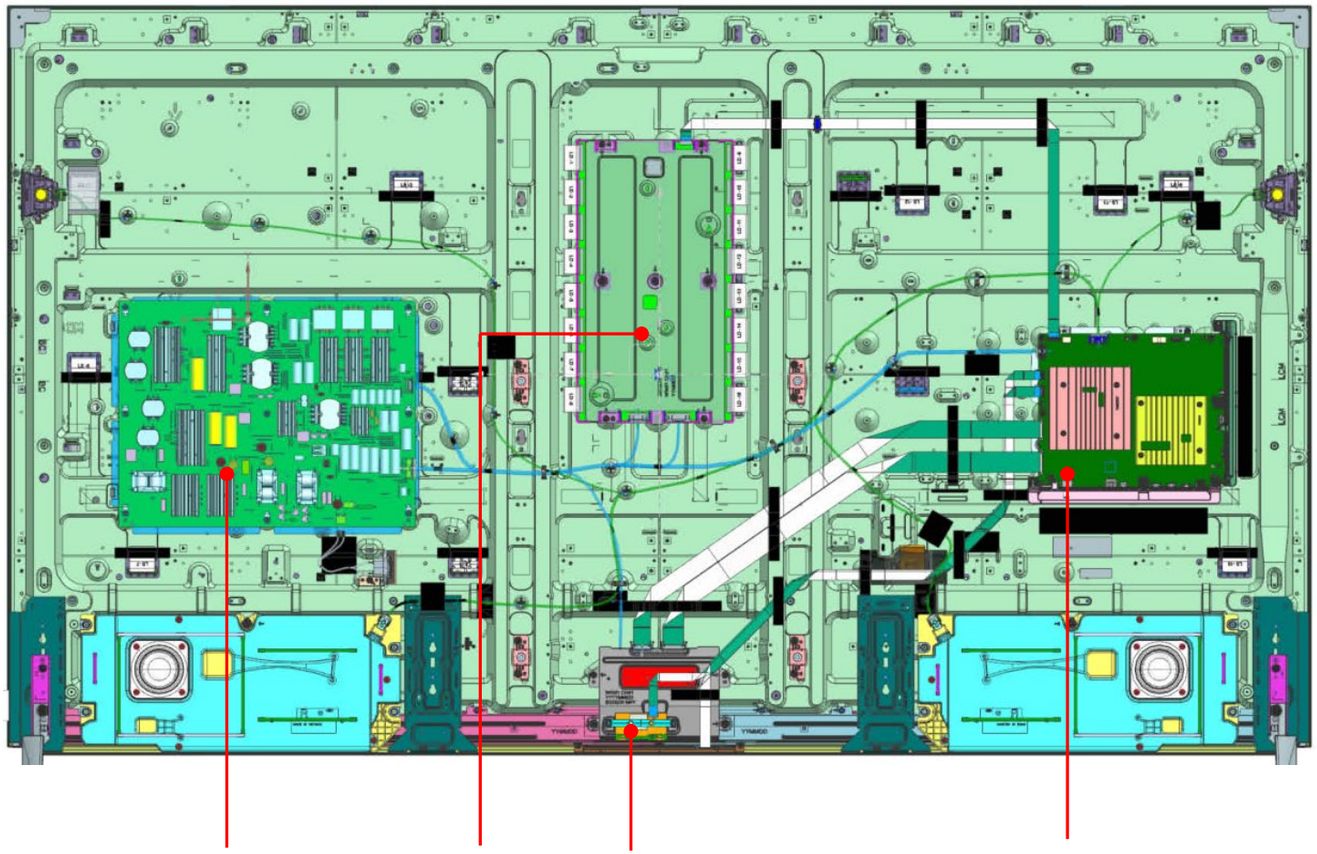
3. Push and Lock Side and Bracket Hook (pushing order).

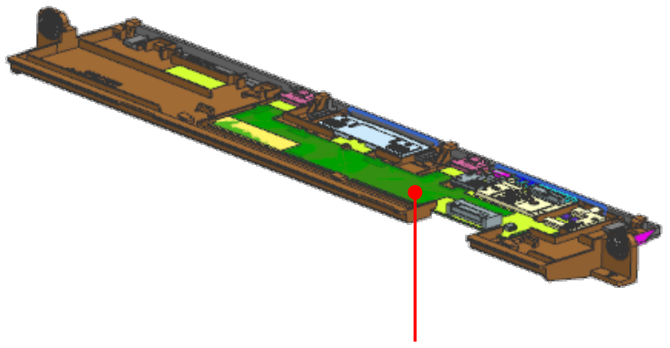


Hook Position.



3-2. BOARD LOCATION





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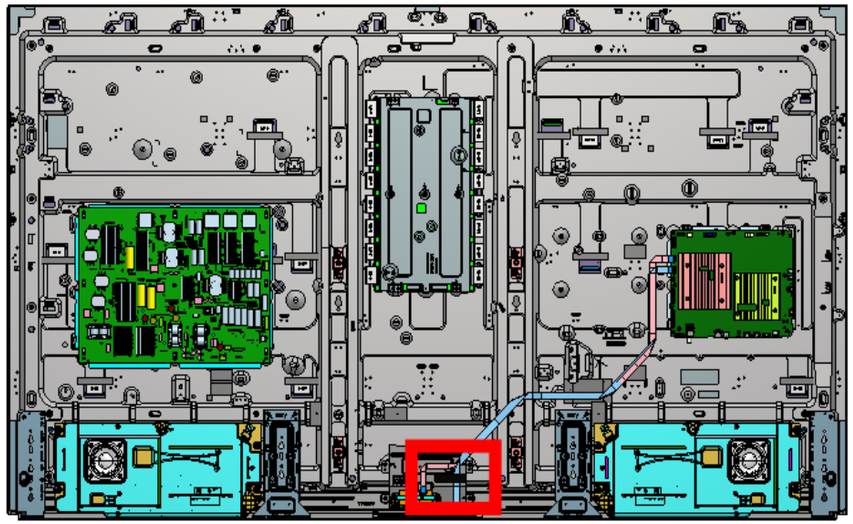

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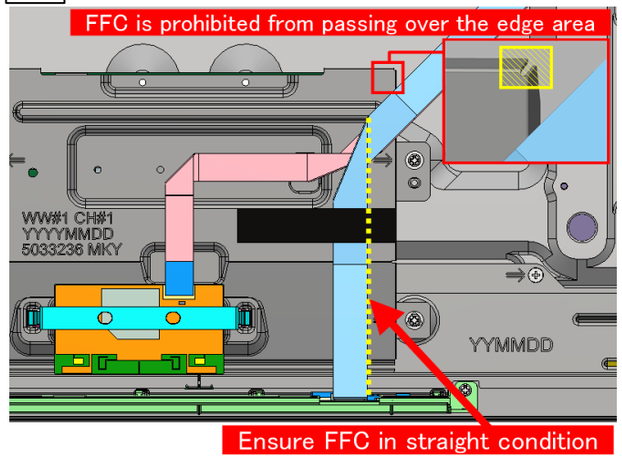

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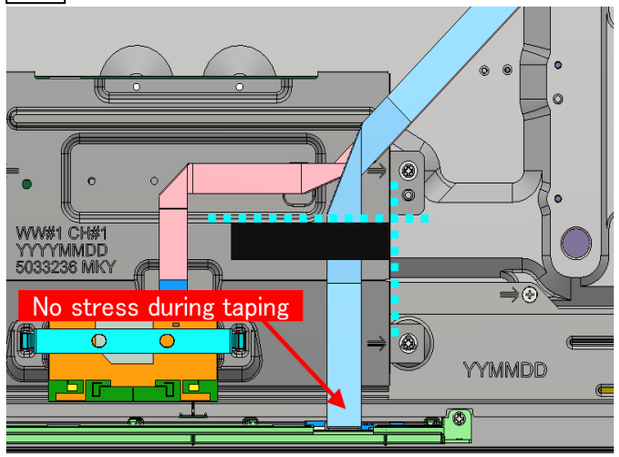

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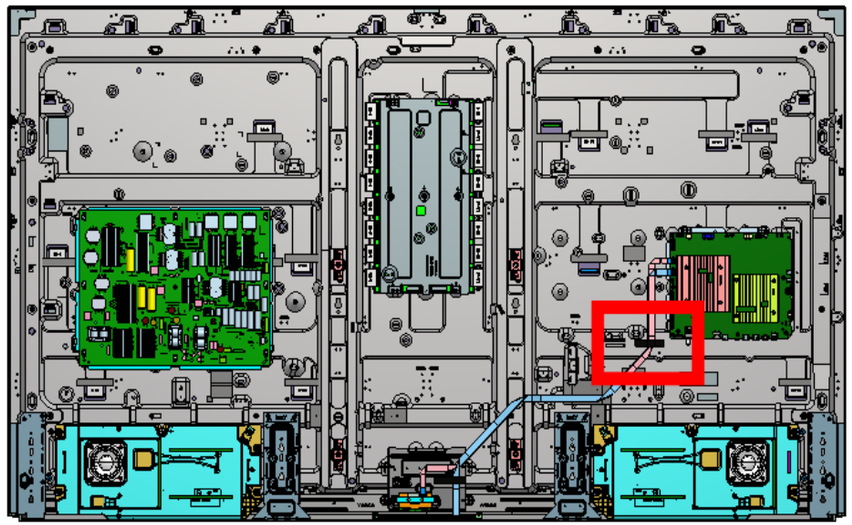

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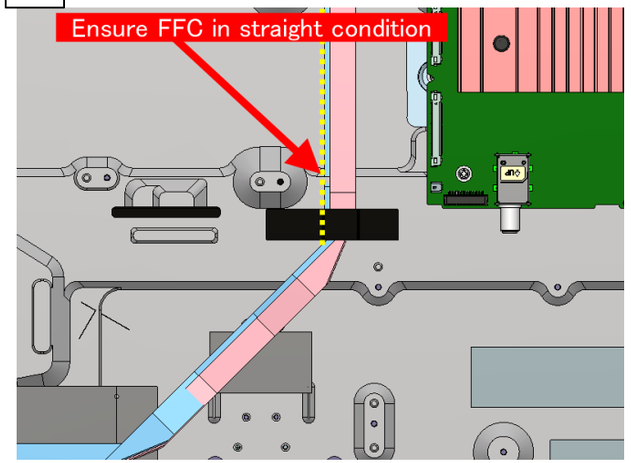

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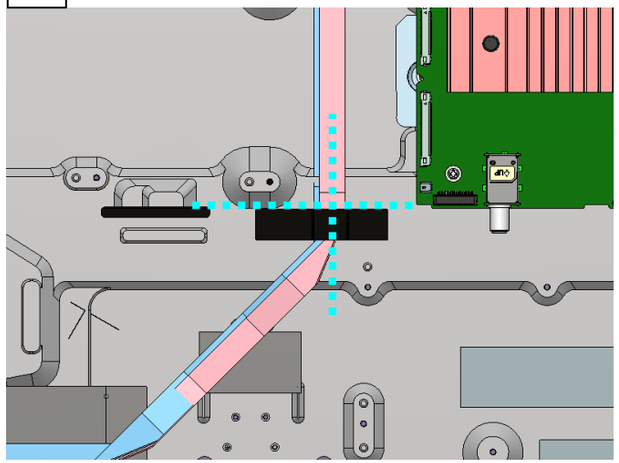

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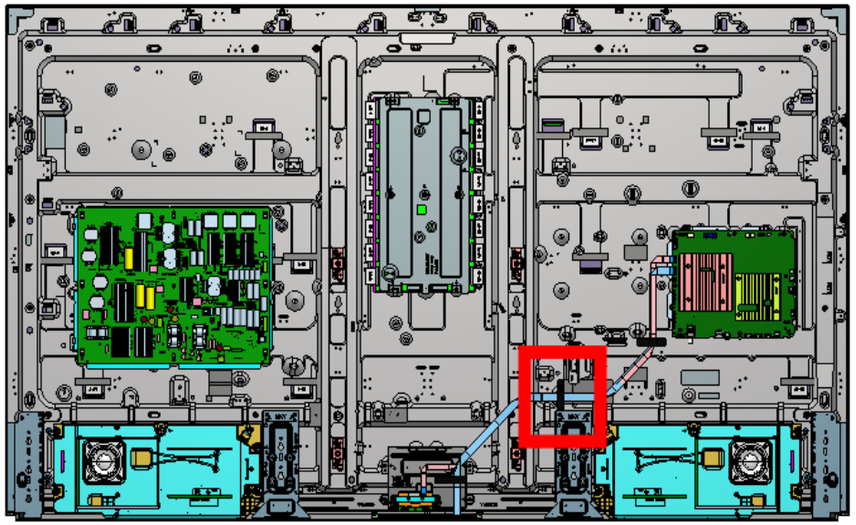

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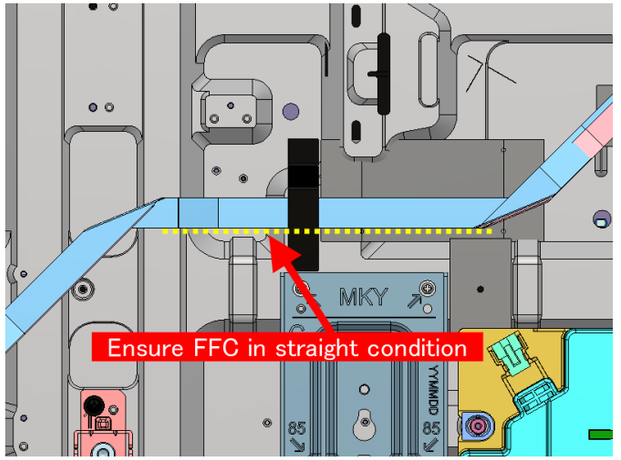
Ensure FFC in straight condition
MKY
YYMMDD
85

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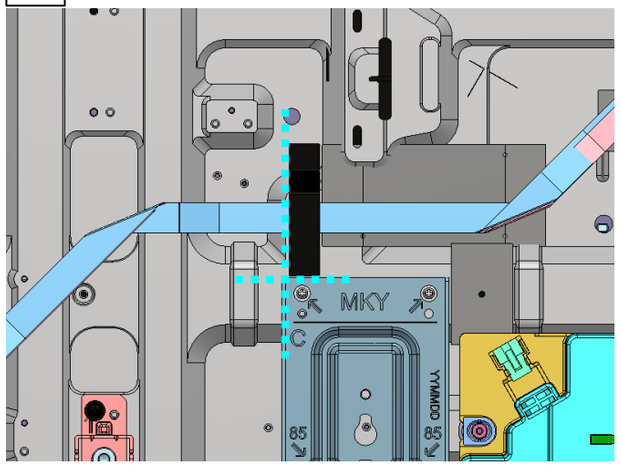
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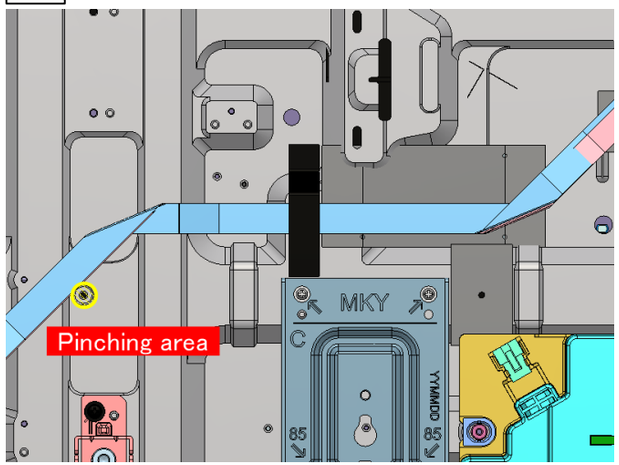
Pinching area
MKY
YYMMDD
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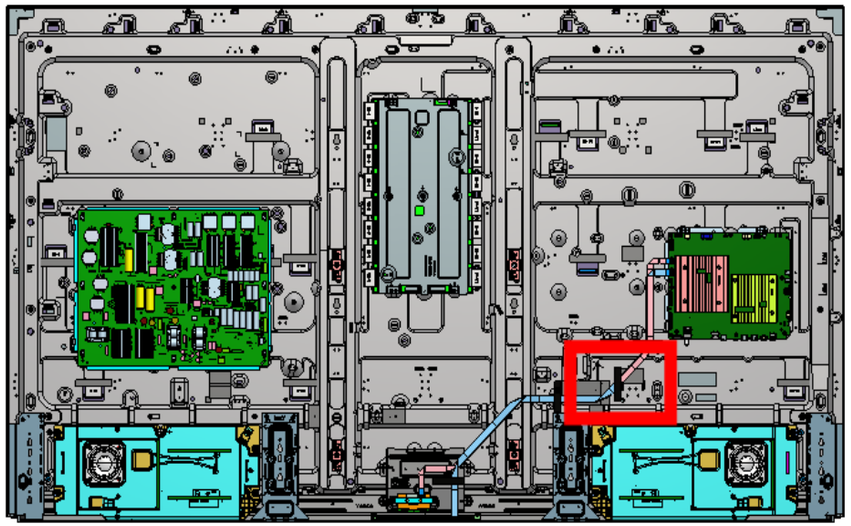

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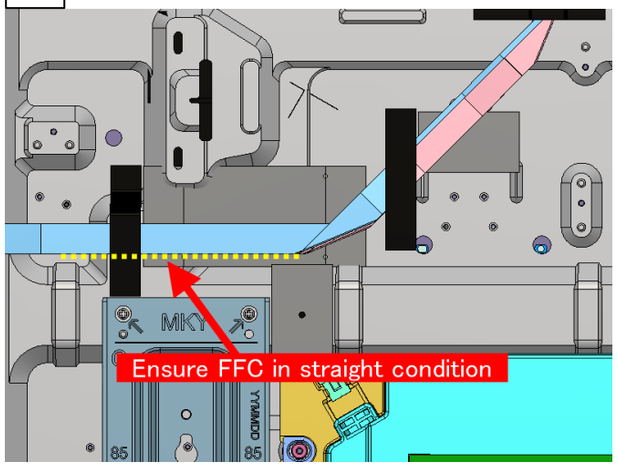

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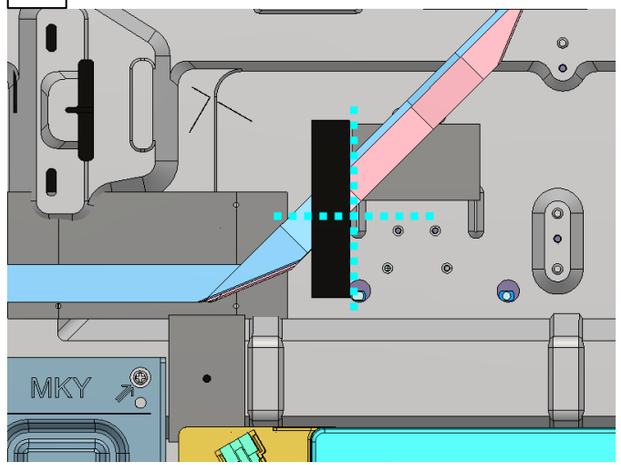

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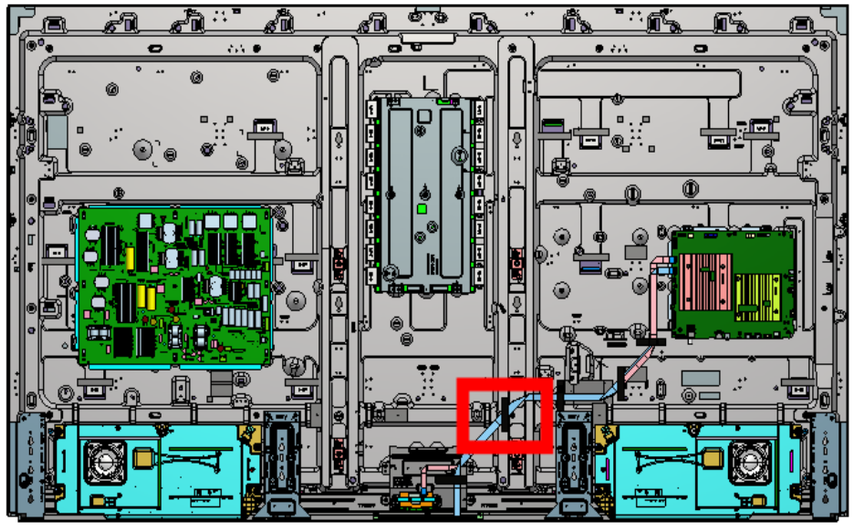

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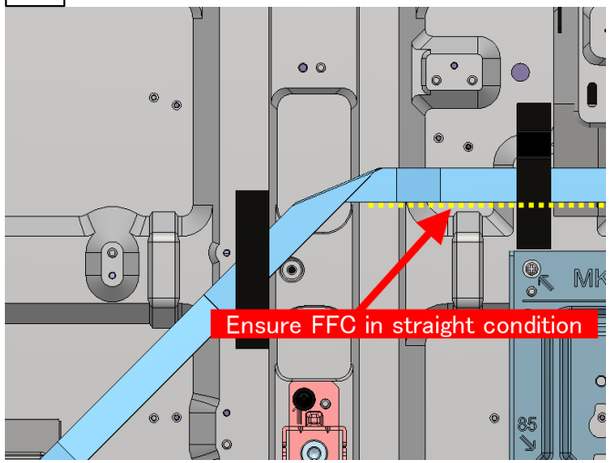

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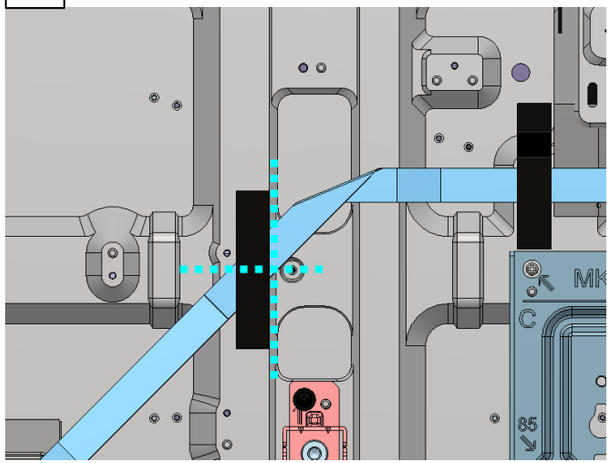

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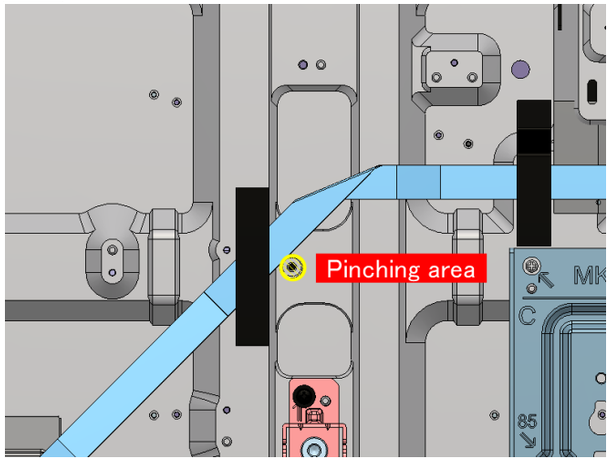
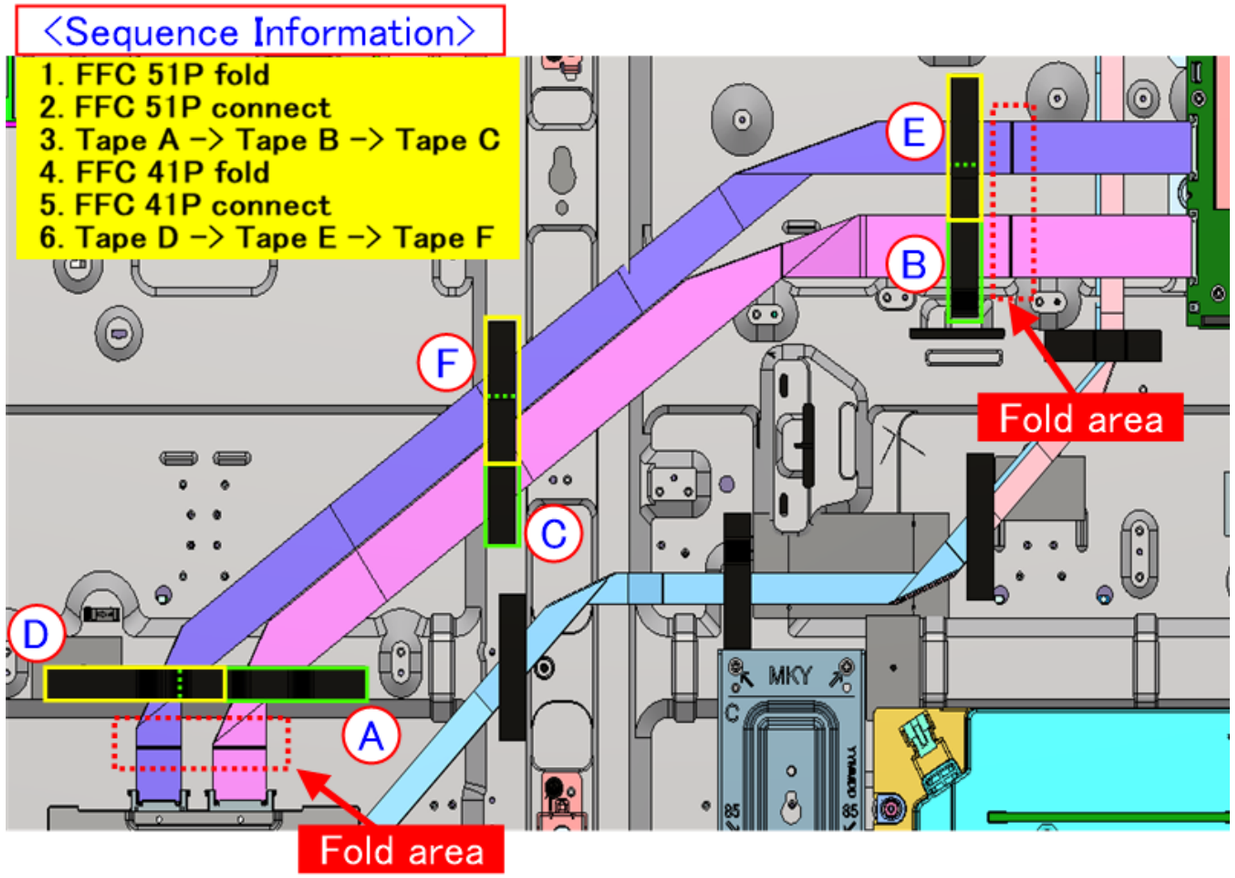


INFORMATION



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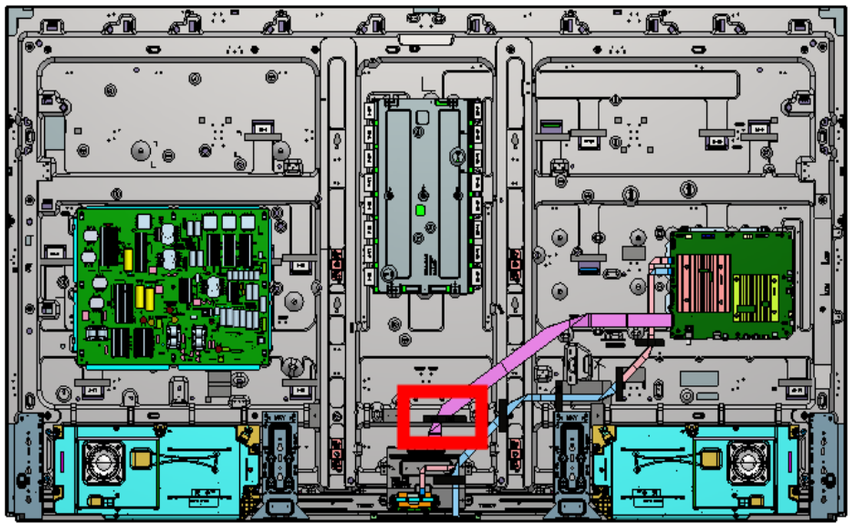

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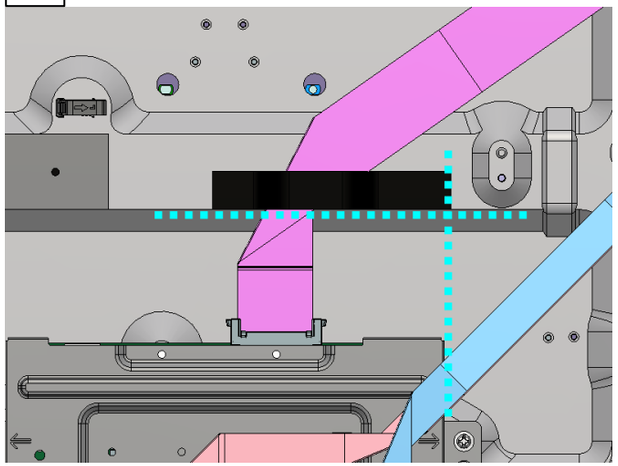

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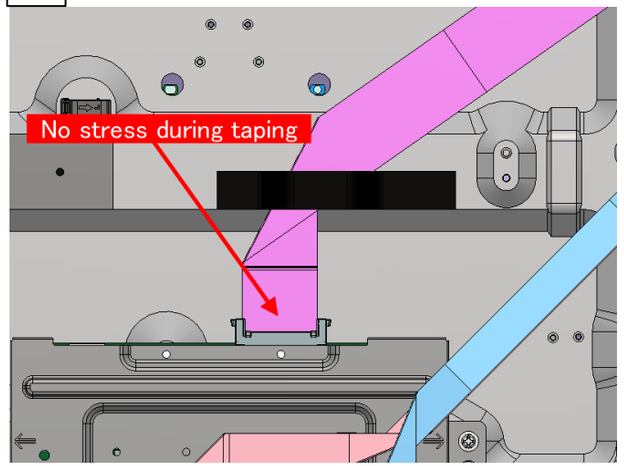

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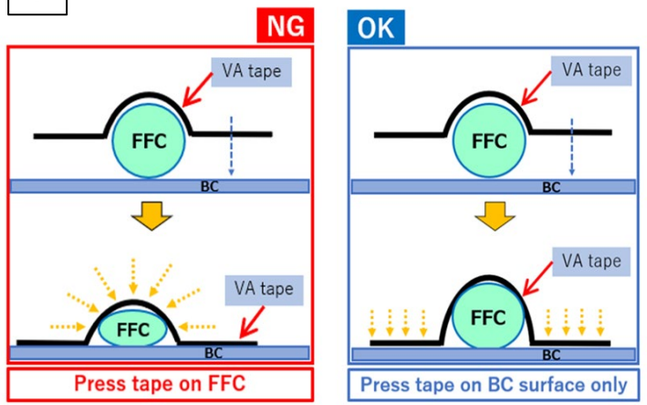

Caution : Do not press tape on FFC

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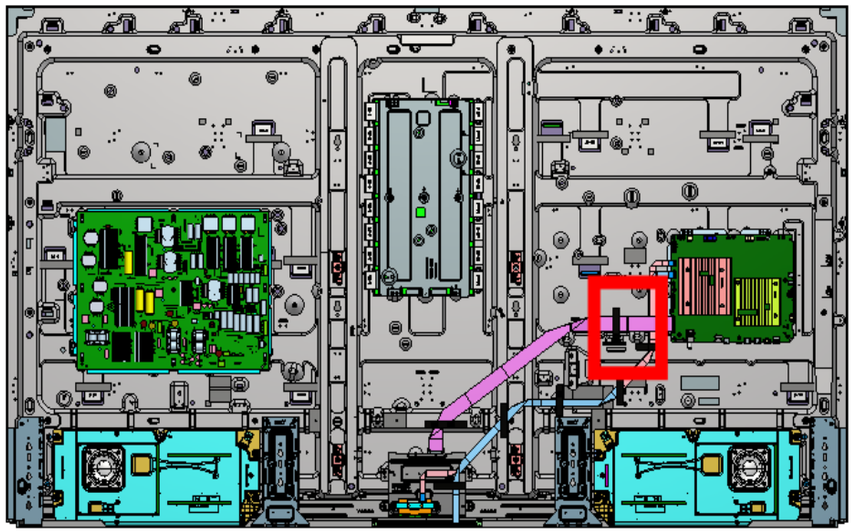

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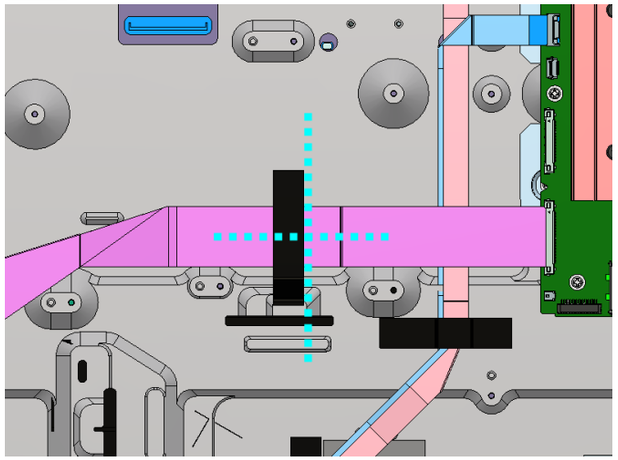

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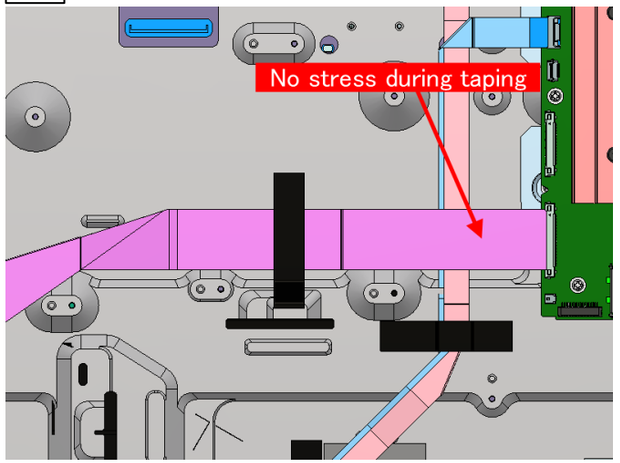

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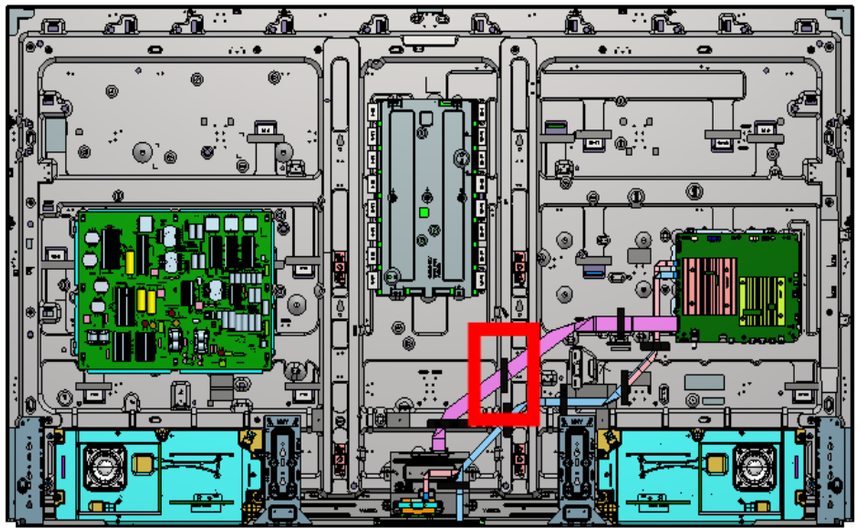

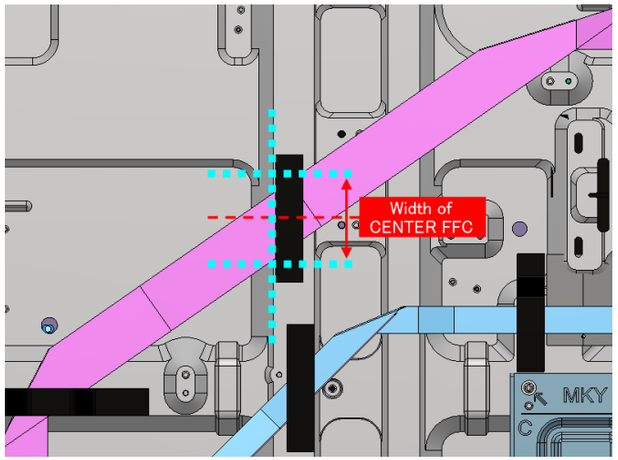

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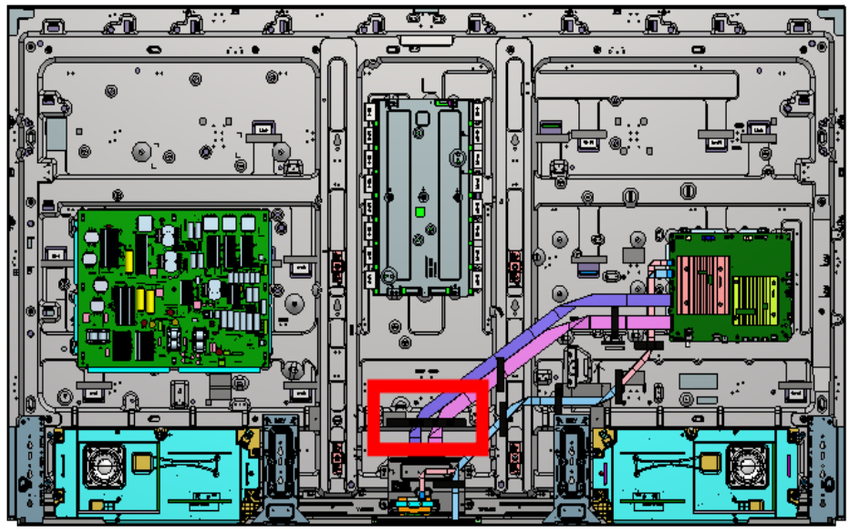

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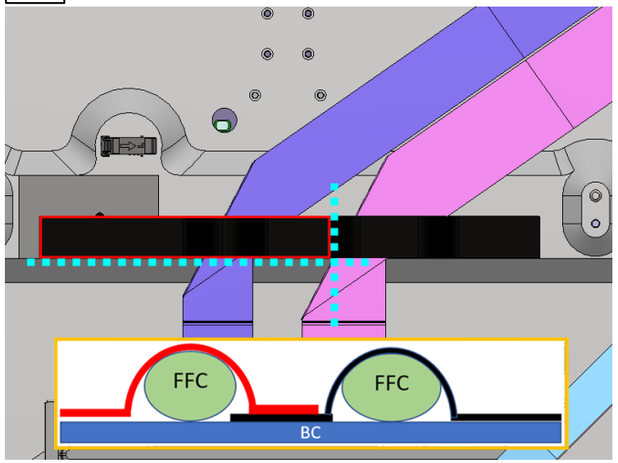

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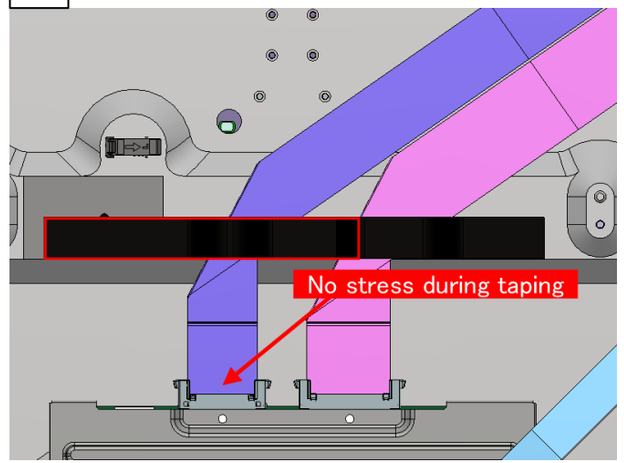

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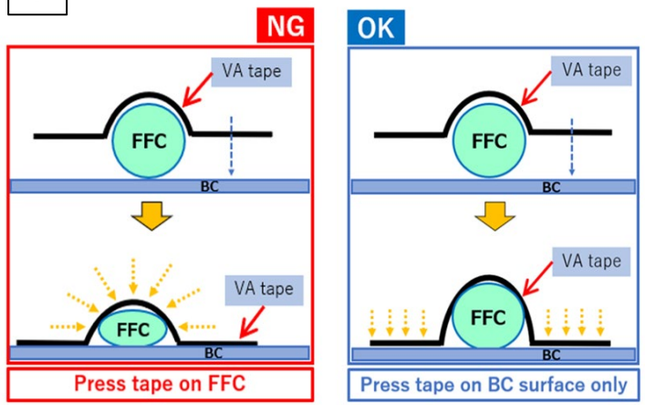

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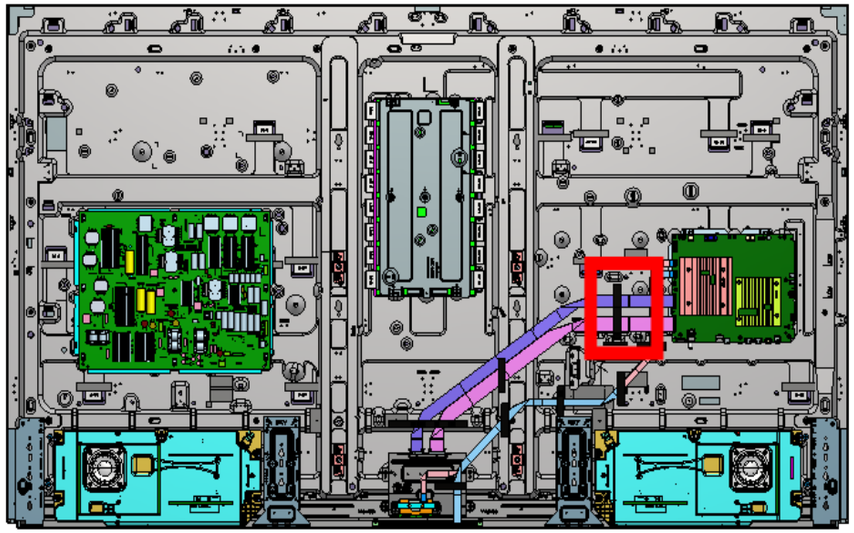

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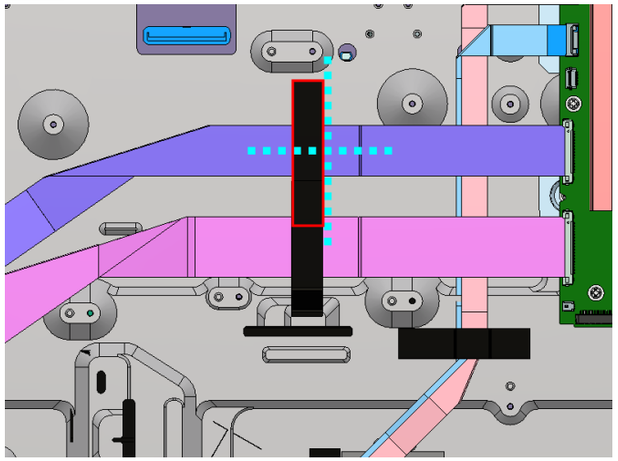

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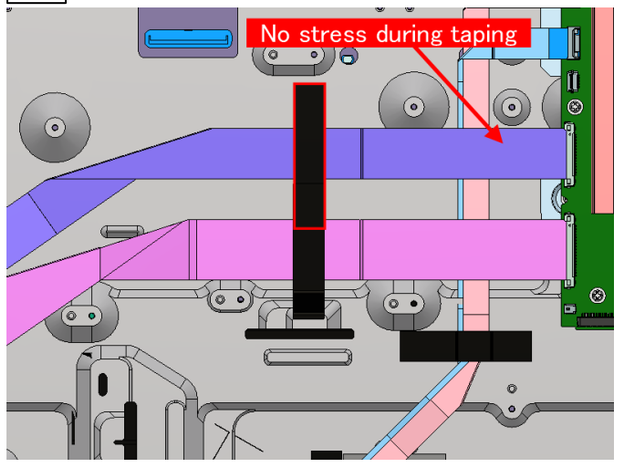

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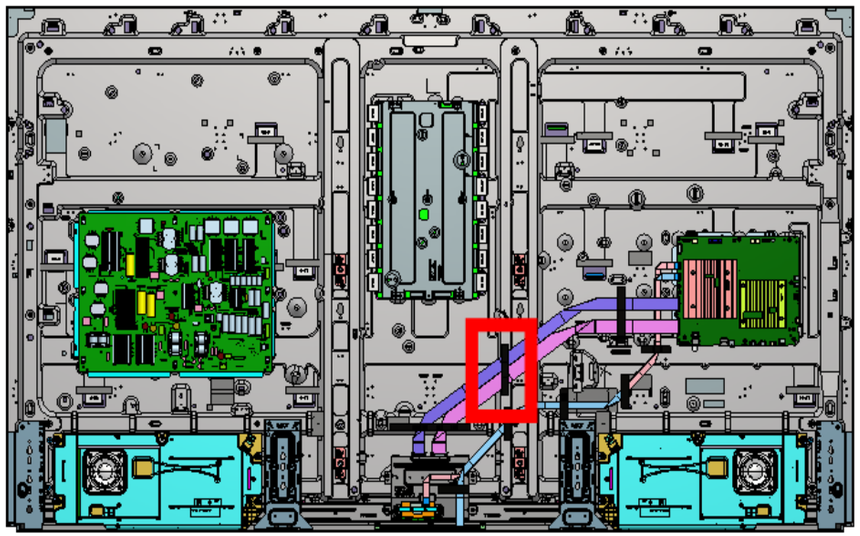

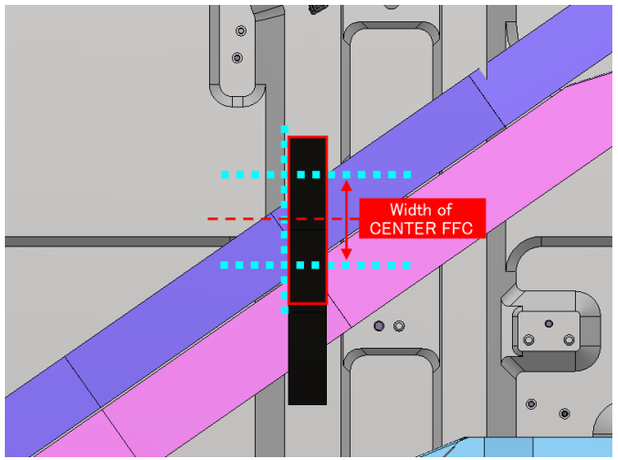

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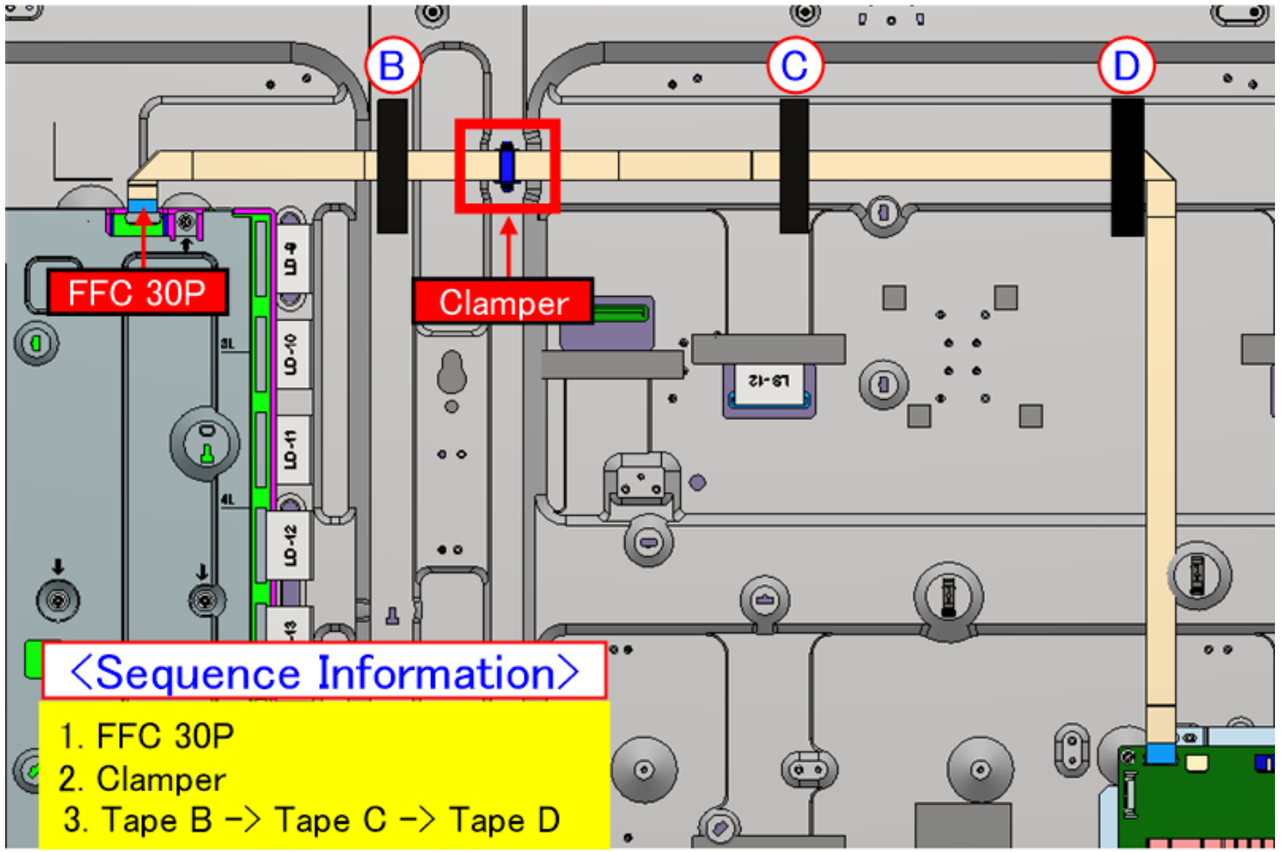

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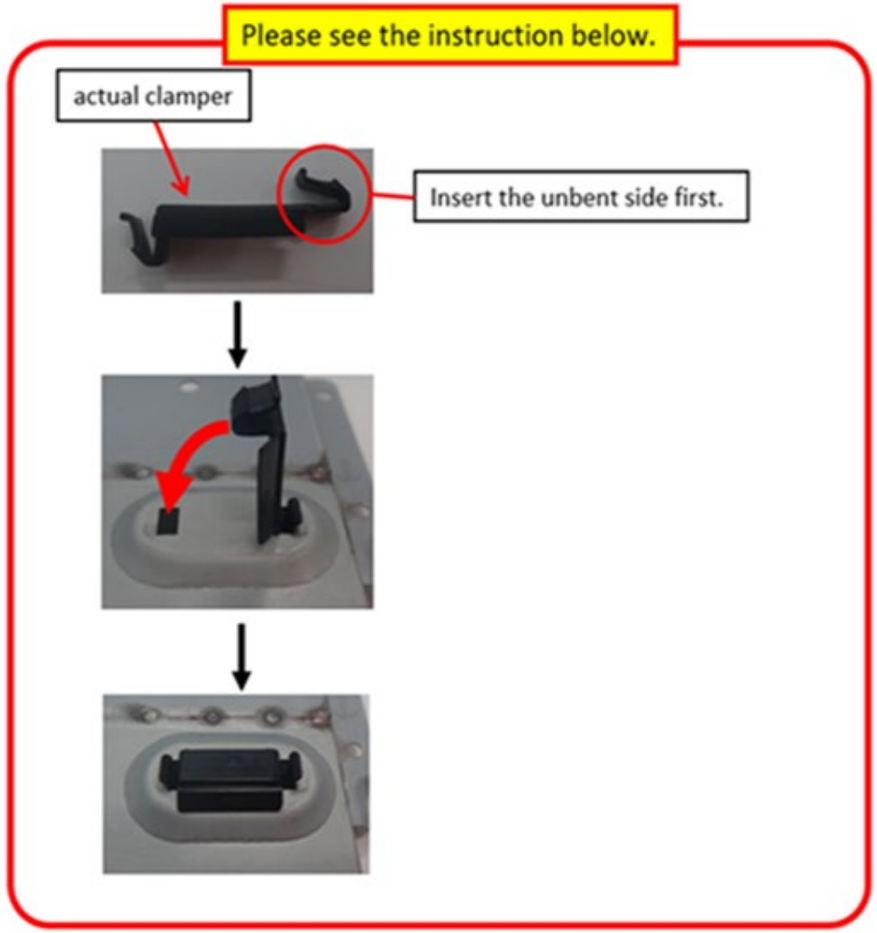

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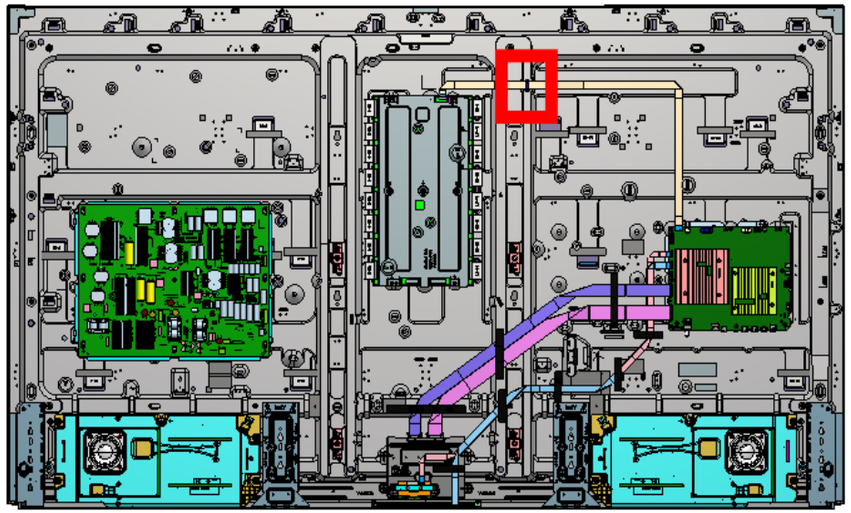

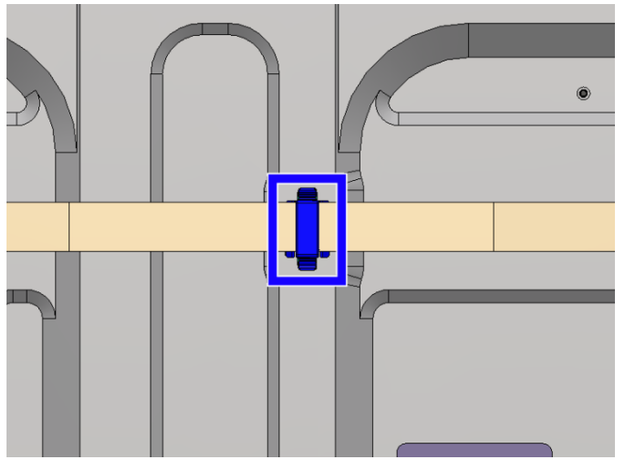

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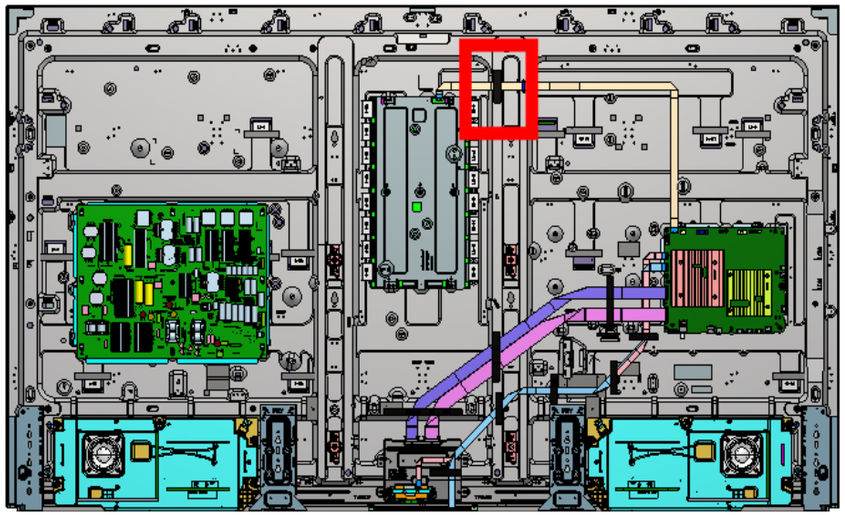

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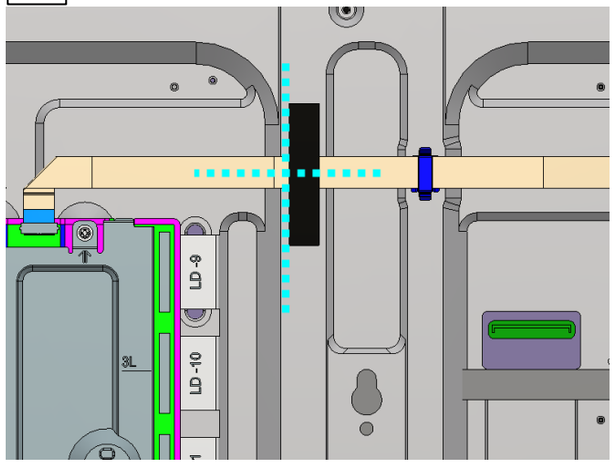
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LD-10
3L

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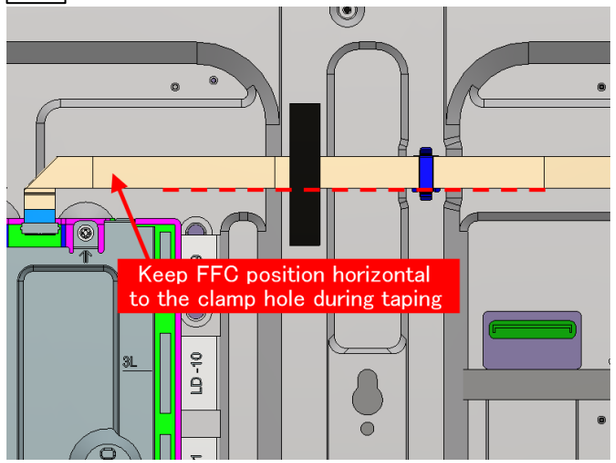
Keep FFC position horizontal
to the clamp hole during taping
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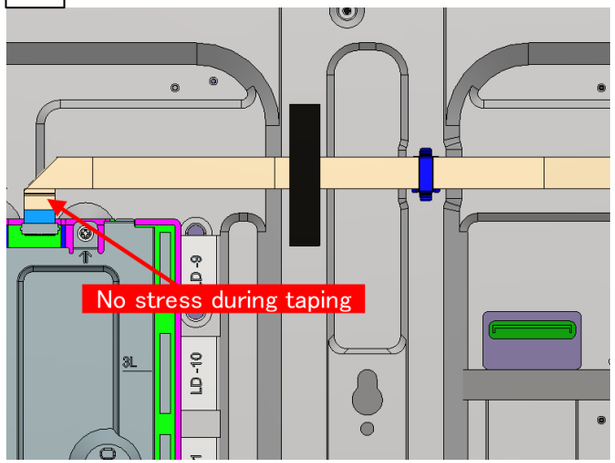
No stress during taping
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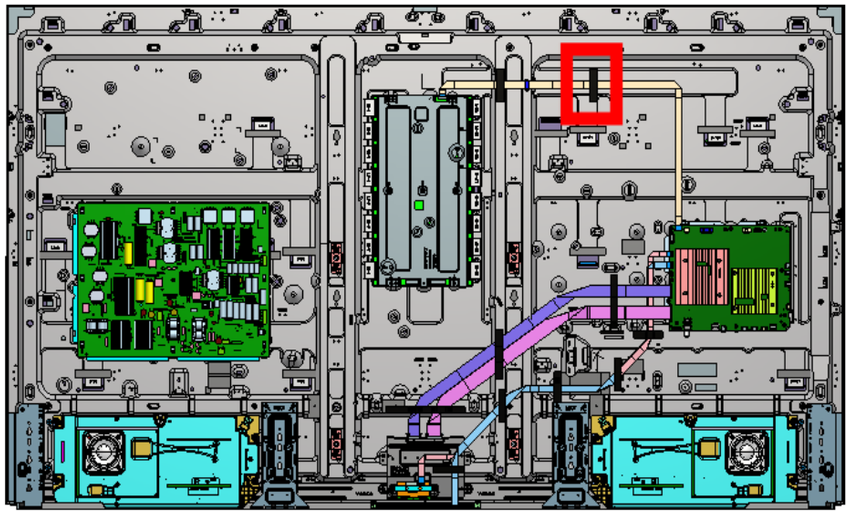
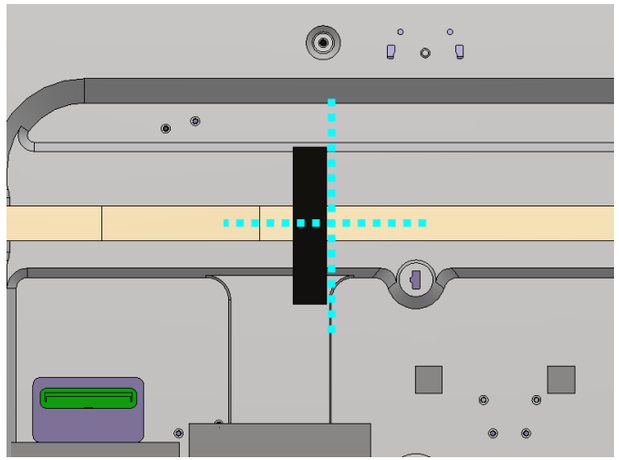
TAPE





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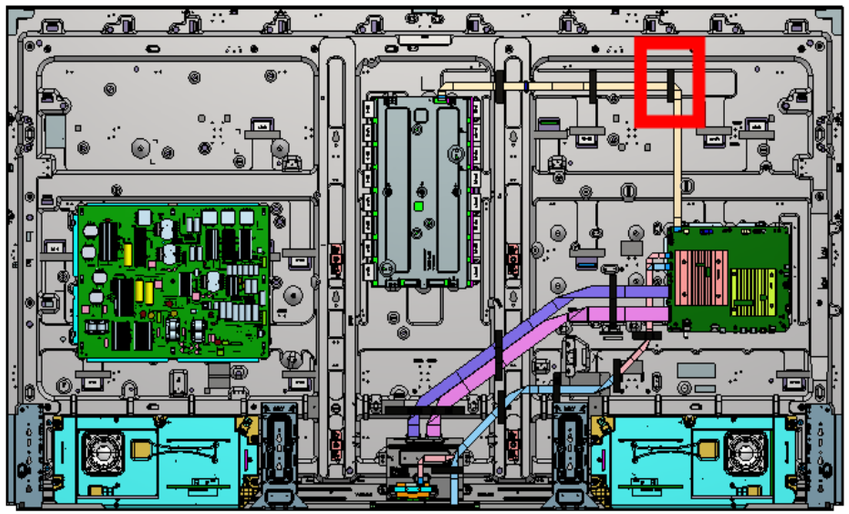

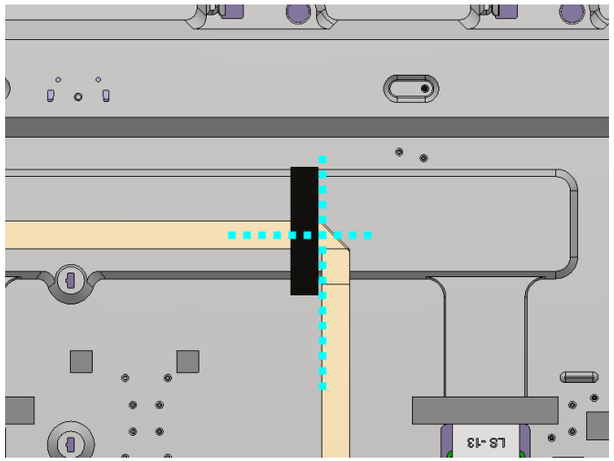

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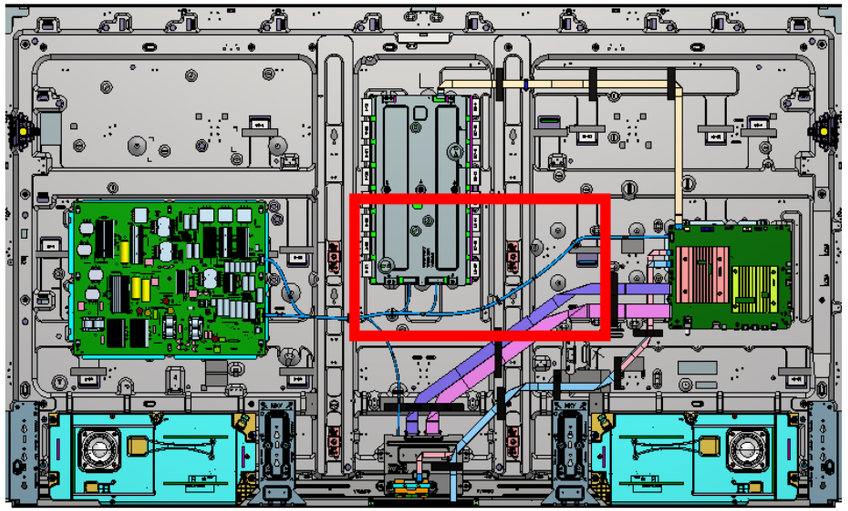

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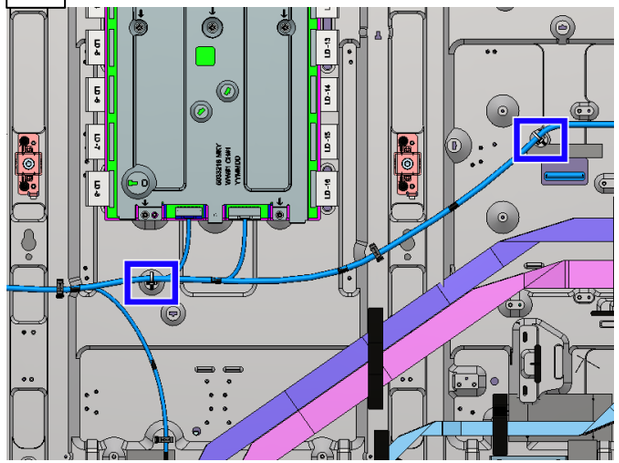

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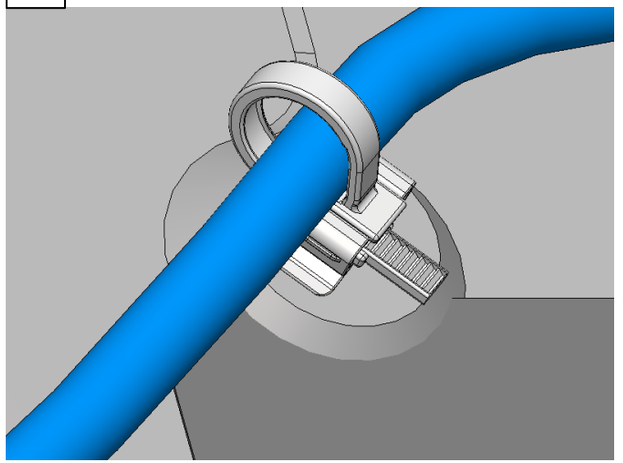

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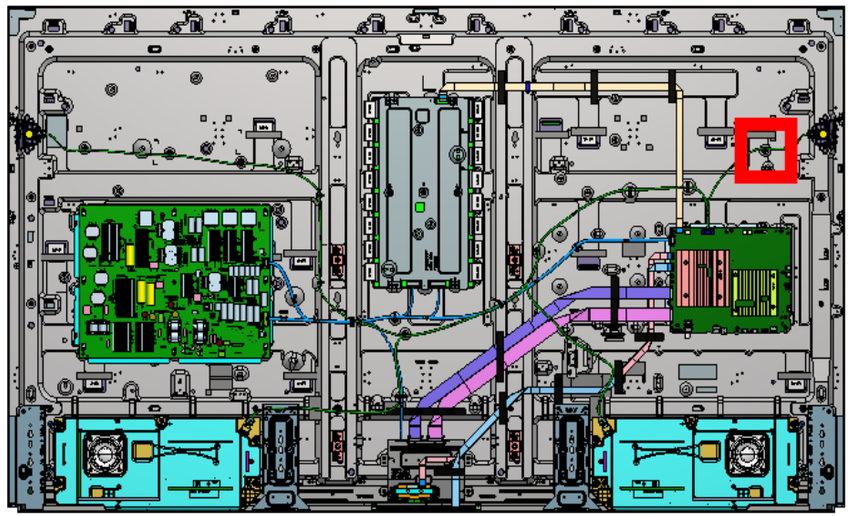

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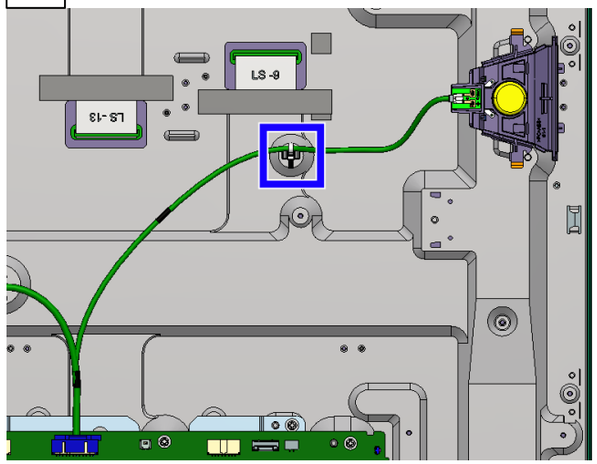

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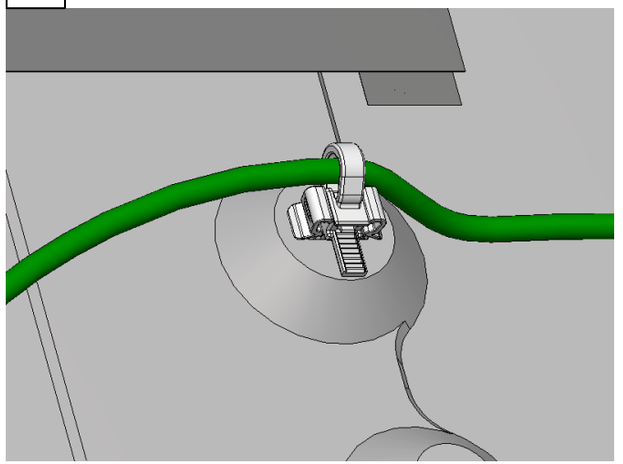

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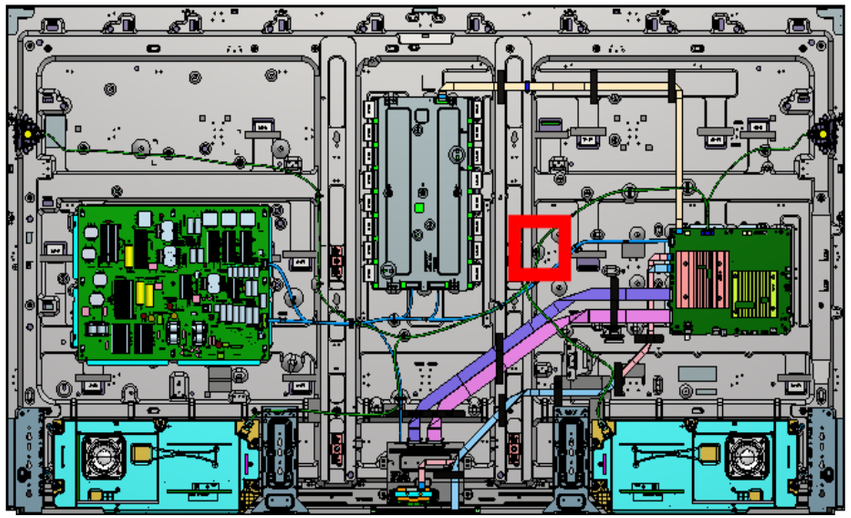

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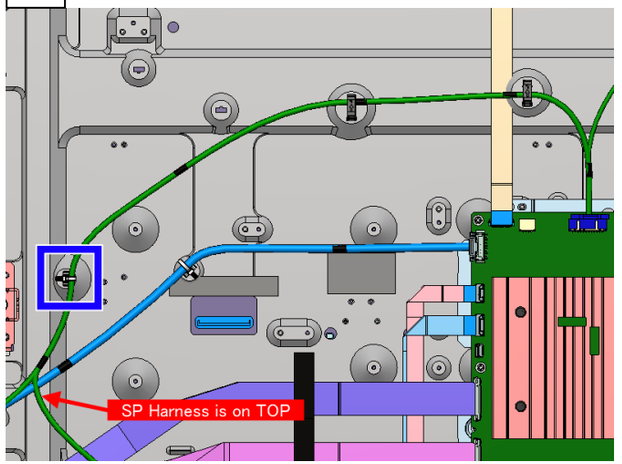

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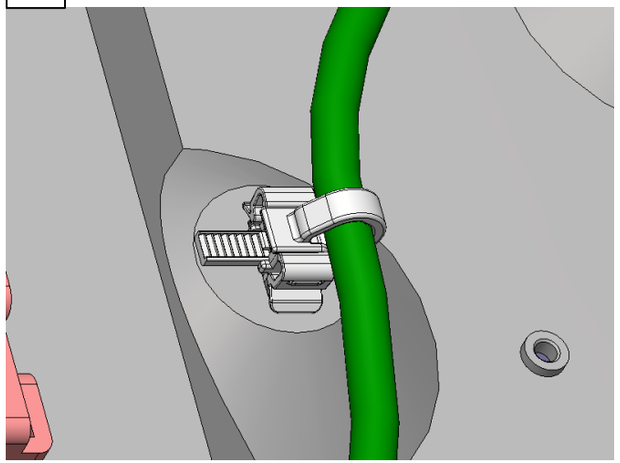

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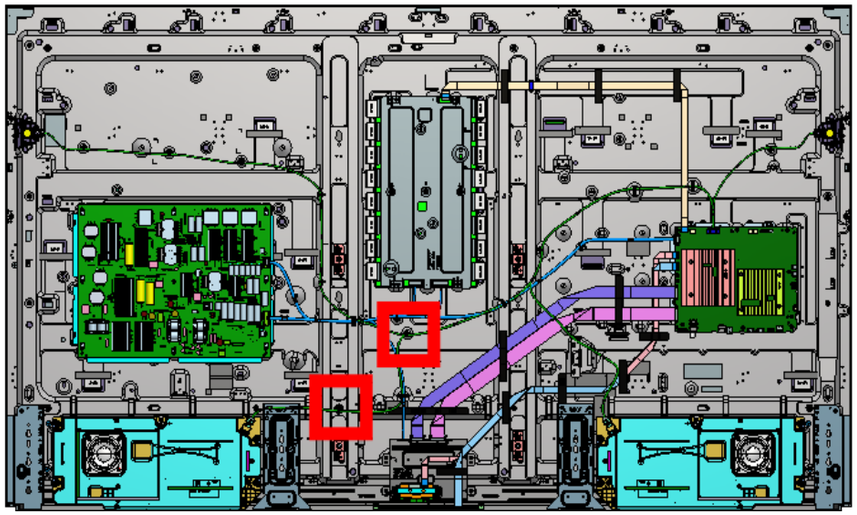

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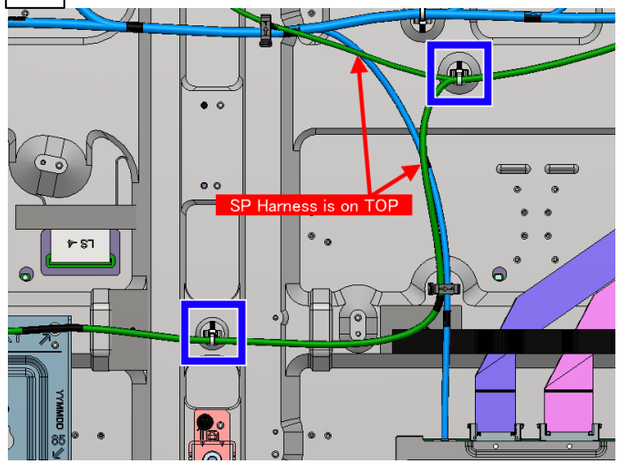

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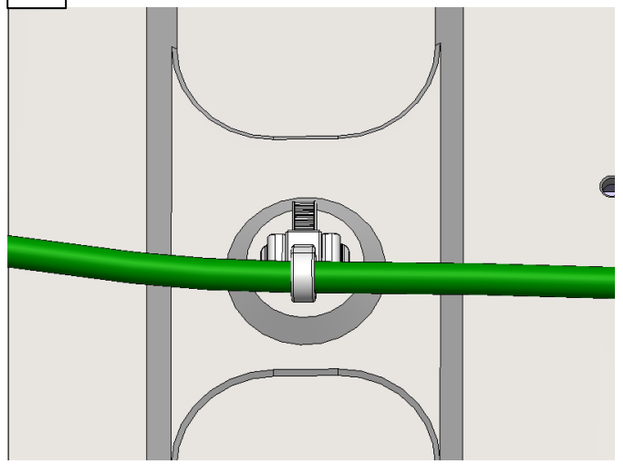

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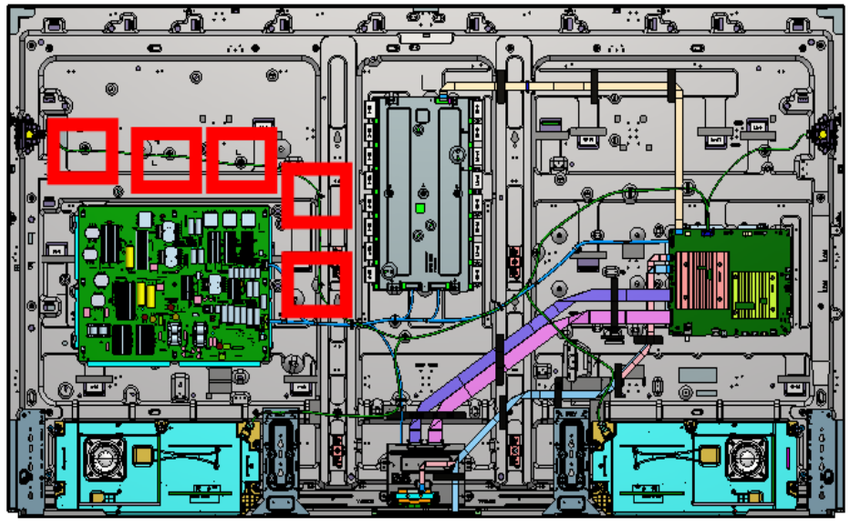

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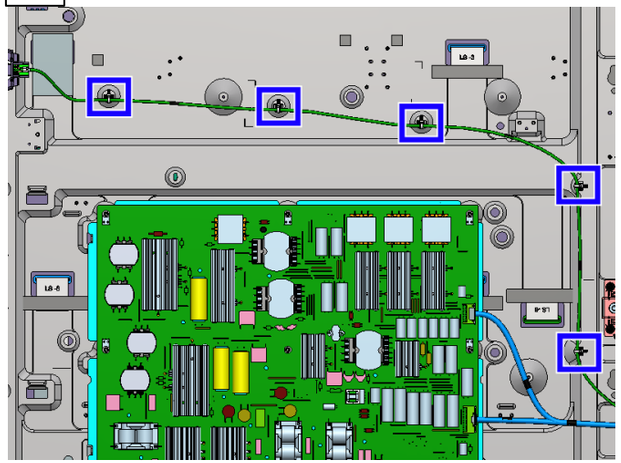

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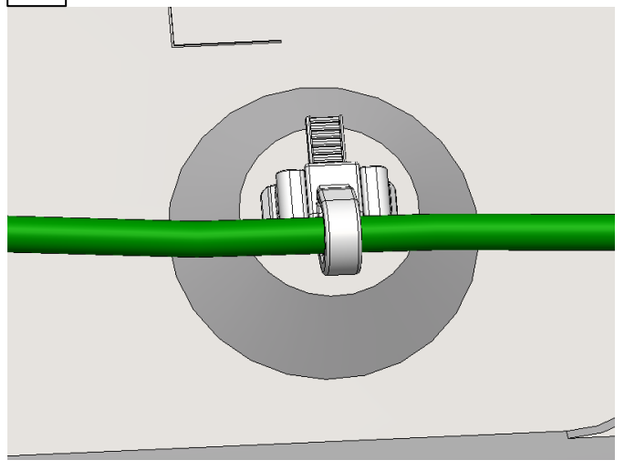

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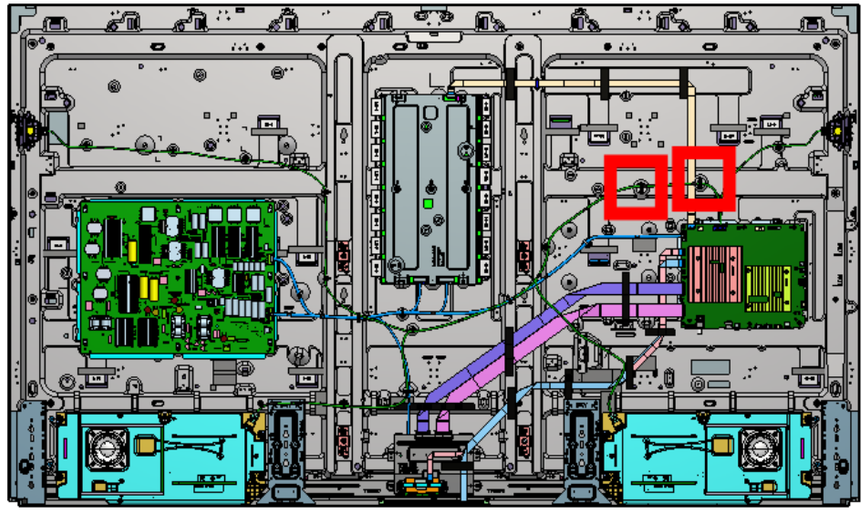

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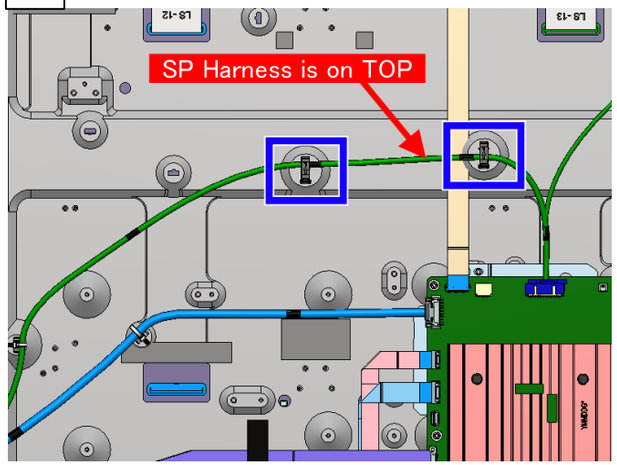

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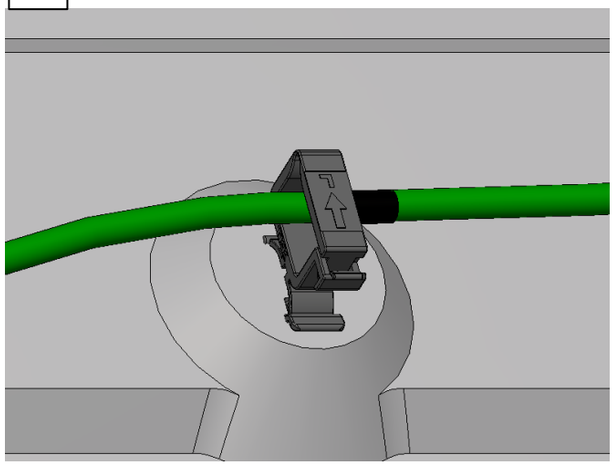

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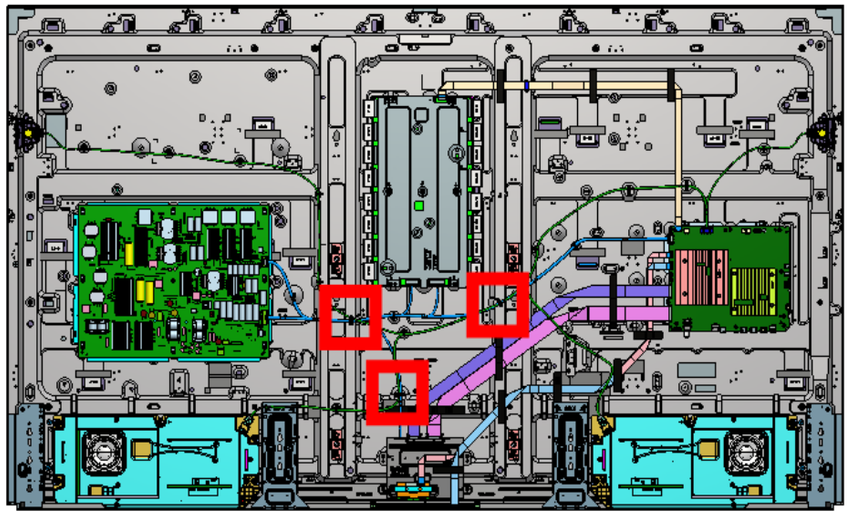

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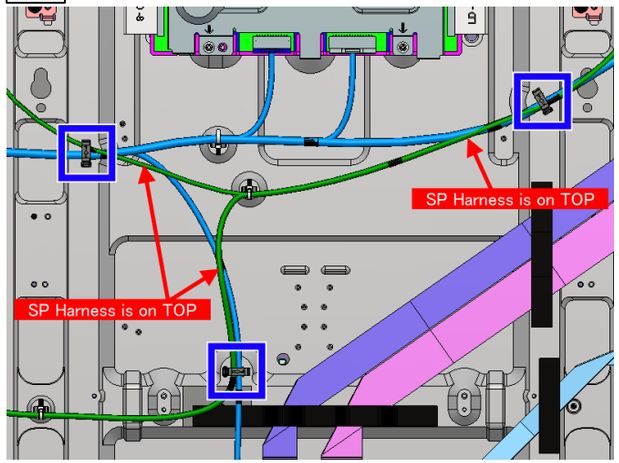

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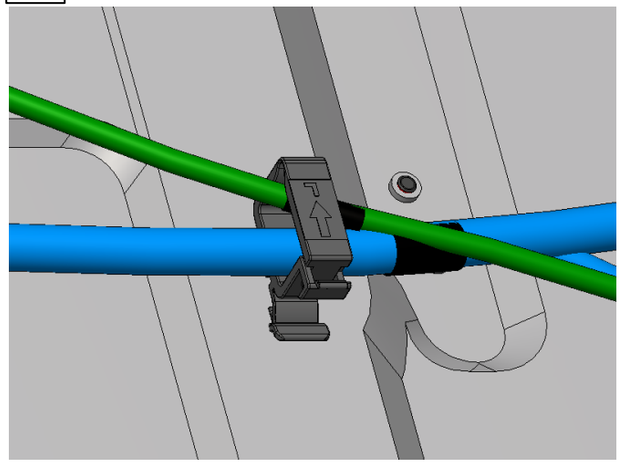

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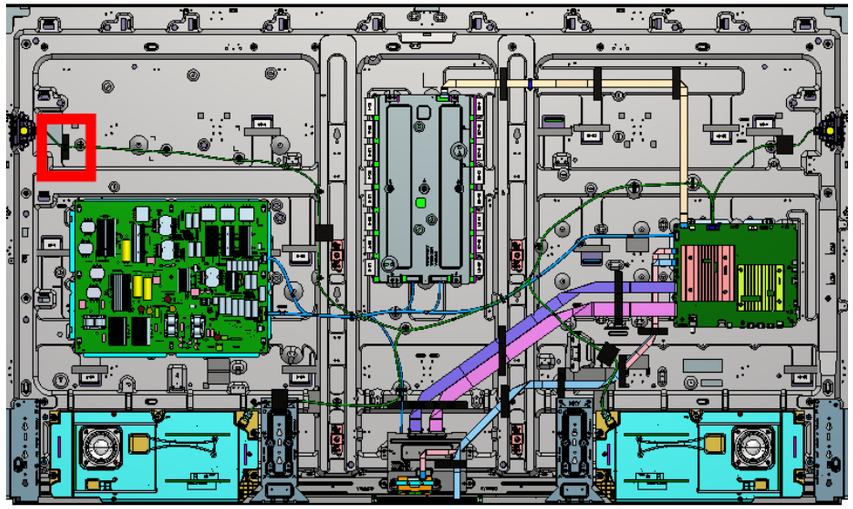

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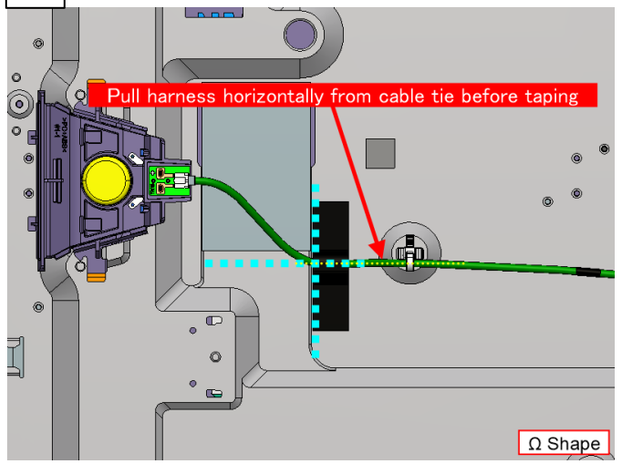

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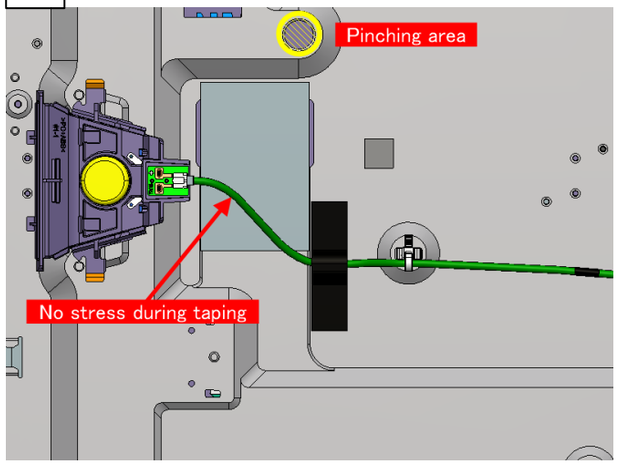
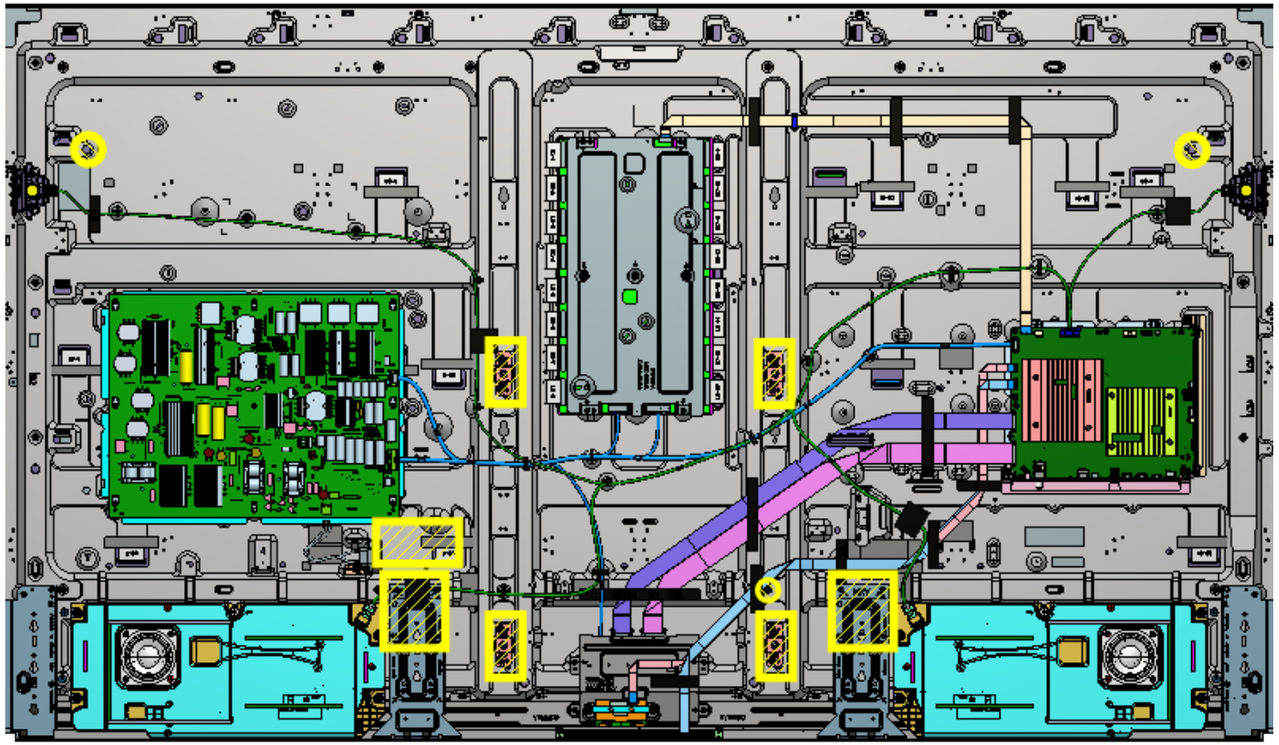


INFORMATION



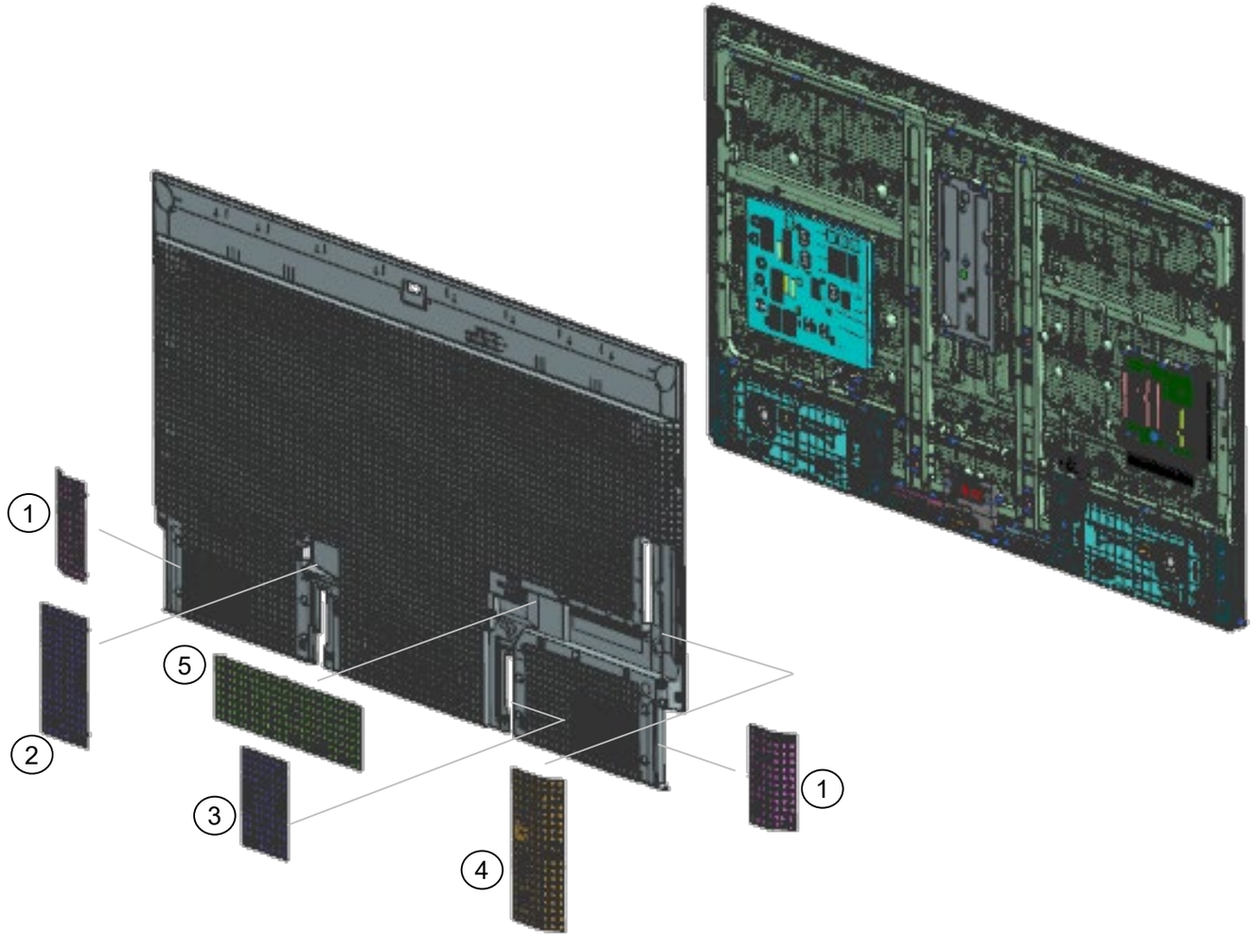
Caution : Ensure harness is away from inhibit area

SECTION 3: XR-85X9*

3-4. EXPLODED VIEW AND PART LIST

- Place the TV set facing downwards on a stable, level surface before disassembly and assembly of parts.
- ⚠ and shaded parts are critical for safety. Replace only with part number specified.
- 🔒 Parts contain confidential information. Strictly follow the instruction whenever the components are repaired and/or replaced

- (*) Parts are not stocked since they are seldom required for routine service. Some delays should be anticipated when ordering these components.
- Picture provided in this section might have slight difference from the actual sets.
- The reference number beside the part indicates the disassembly sequence.
- Remove screws before disassembly. Unplug connectors before disassembly



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	5-035-719-01	STAND COVER LR (3L MKY) A	Including STAND COVER L (3L MKY) & STAND COVER R (3L MKY)
2	5-035-721-01	STAND COVER CR (3L MKY) A	-
3	5-035-720-01	STAND COVER CL (3L MKY) A	-
4	5-035-717-01	COVER TML V (3L MKY) A	Side Terminal Cover
5	5-035-718-01	COVER TML H (3L MKY) A	Under Terminal Cover

SECTION 3: XR-85X9*

3-4. EXPLODED VIEW AND PART LIST

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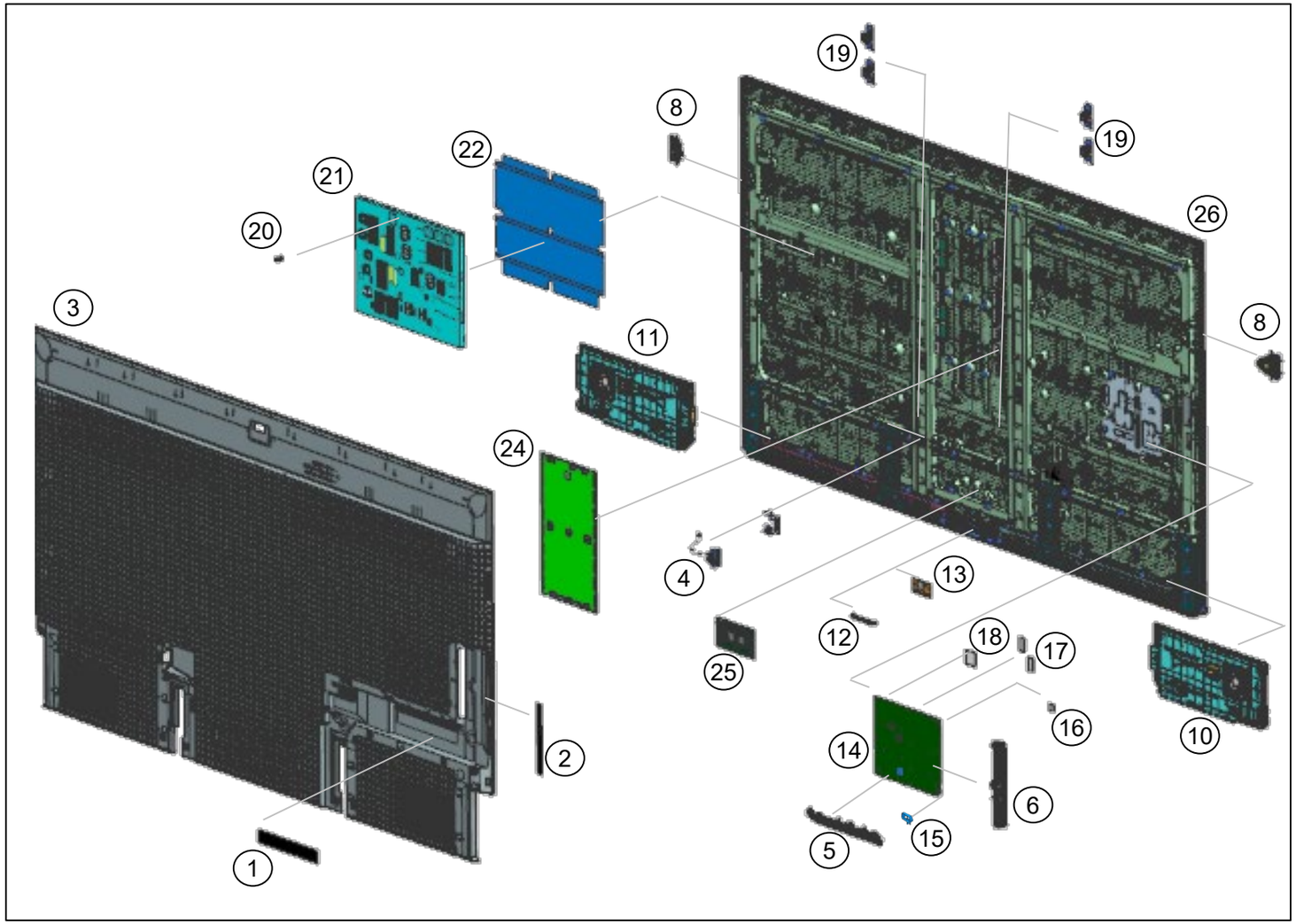
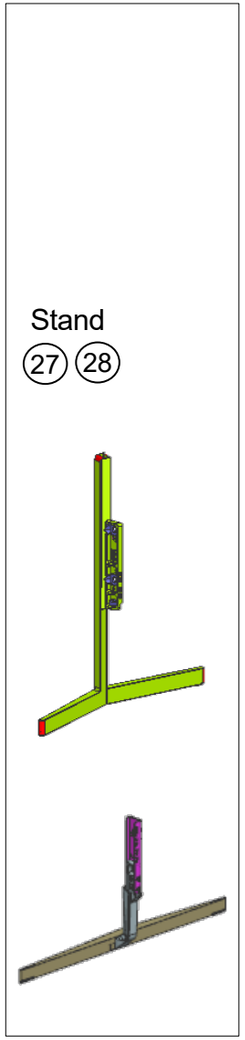
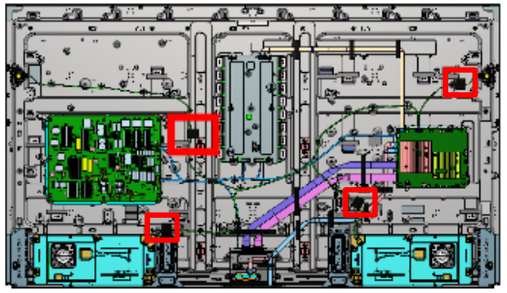
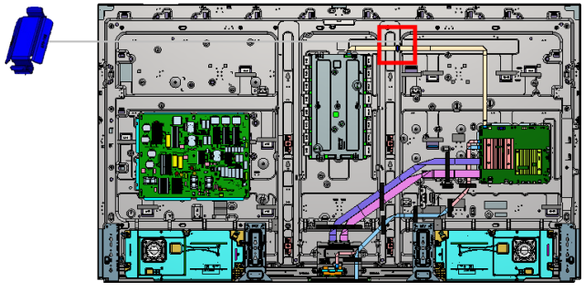




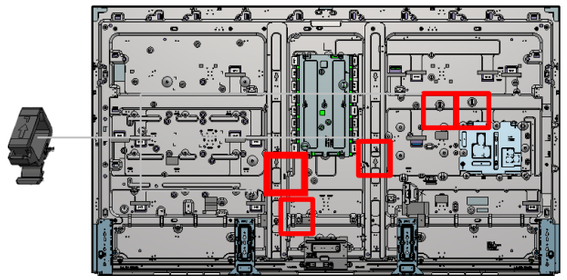
7 4-531-003-01, CUSHION 3525A



9 4-745-335-01, FLAT CLAMP(FFC)



23 2-650-770-31 SLIDE, CLAMP



SET PART LIST

REF. NO	PART NO.	DESCRIPTION	XR-85X95K	XR-85X93L	REMARKS
			UCM	UC2	-
1	5-036-141-01	LABEL, UNDER TERMINAL (BM5S22)	•	n/a	-
1	5-049-098-01	LABEL, UNDER TERMINAL(BM5S,6S)	n/a	•	-
2	5-036-145-01	LABEL, SIDE TERMINAL (BM5S22)	•	n/a	-
2	5-049-096-01	LABEL, SIDE TERMINAL(BM5S,6S)	n/a	•	-
⚠ 3	5-033-689-01	REAR COVER (4L MKY) A	•	•	-
⚠ 4	1-843-998-31	AC INLET	•	•	Compatible
⚠ 4	1-002-004-12	C18 AC INLET	•	•	
5	4-724-146-14	BRACKET, UNDER (BM2A)	•	•	-
6	5-036-017-22	BRACKET, SIDE(SGT)	•	•	-
7	4-531-003-01	CUSHION 3525A	•	•	-
8	1-013-275-11	LOUDSPEAKER, FY22 TW16-19MM	•	•	-
9	4-745-335-01	FLAT CLAMP(FFC)	•	•	-
10	1-013-634-11	SP-BOX ASSY, FY22 D33-SLIT(L)	•	•	-
11	1-013-634-21	SP-BOX ASSY, FY22 D33-SLIT(R)	•	•	-
12	5-009-258-21	BRACKET, WIFI(BNN)	•	•	-
13	1-005-419-32	WLAN/BT MODULE(11AC)FXC	•	n/a	-
13	1-005-419-14	WLAN/BT MODULE(11AC)	n/a	•	-
14	A-5044-976-A	COMPL SVC BM5S22B_FM_UCMX	•	n/a	-
14	A-5056-077-A	COMPL SVC BM5S22B_FM2_UCMX	n/a	•	-

Notes :
When replacing P-MOD, please also replace the following parts at the same time.

7 CUSHION 3525A

22 SHT, INSULATION (4L MKY)

SET PART LIST

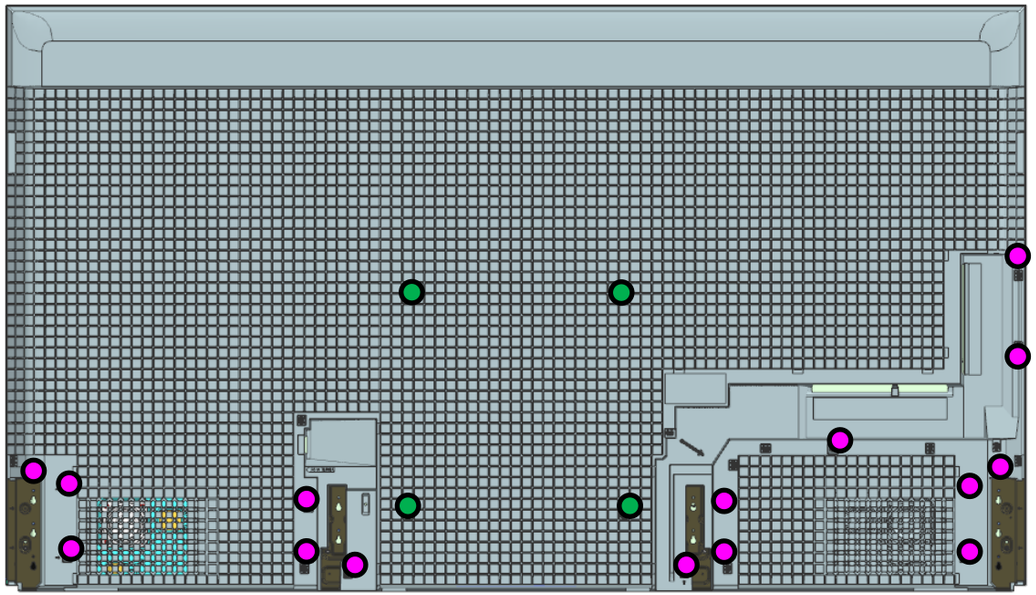
REF. NO	PART NO.	DESCRIPTION	XR-85X95K	XR-85X93L
			UCM	UC2
15	5-023-281-02	KEY,TOP(SGT)	•	•
16	4-699-975-02	SHEET,THERMAL(5567H)	•	•
17	5-023-557-01	SHEET THERMAL(BM5S21 DDR)	•	•
18	5-011-960-01	SHEET, THERMAL(LMN TCON)	•	•
19	*5-023-339-01	BRACKET,VESA(GMN)	•	•
20	4-587-424-22	SPACER(17)+C	•	•
⚠ 21	1-013-592-11	G29 - STATIC CONVERTER(TV)	•	n/a
⚠ 21	1-016-075-11	G211 - STATIC CONVERTER(TV)	n/a	•
⚠ 22	5-035-897-01	SHT, INSULATION (4L MKY)	•	•
23	2-650-770-31	SLIDE, CLAMP	•	•
24	A-5041-950-A	22LD768A2 COMPL	•	•
25	1-013-504-11	MOUNTED PWB E-T-CON (85)	•	•
⚠ 26	A-5042-998-A	P-MOD(YDCS085MDU02)	•	n/a
27	5-034-696-01	STAND L (4L MKY) A	•	•
28	5-034-697-01	STAND R (4L MKY) A	•	•

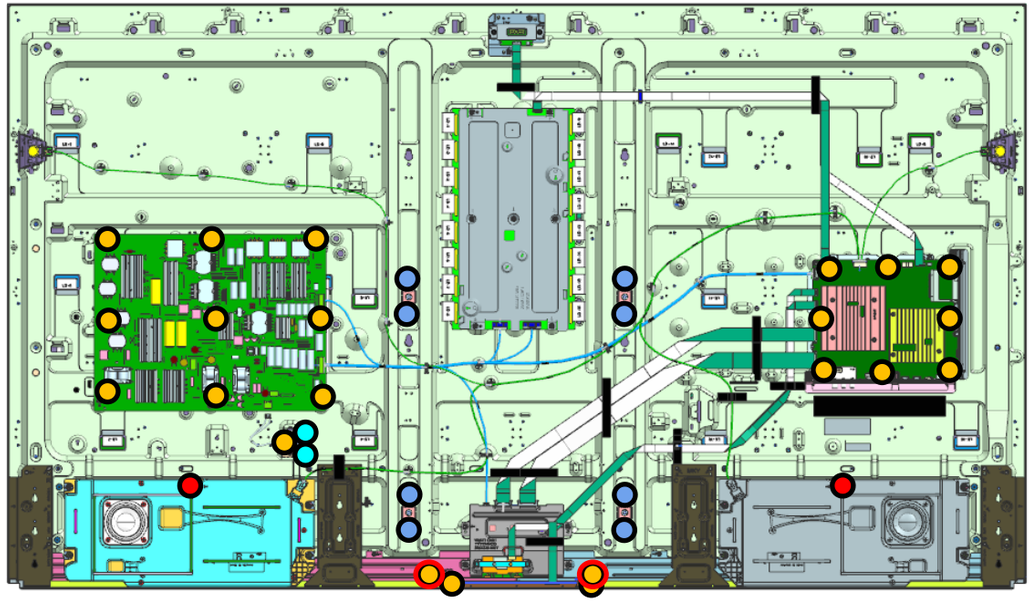
Notes :
When replacing P-MOD, please also replace the following parts at the same time.

7 CUSHION 3525A

22 SHT, INSULATION (4L MKY)

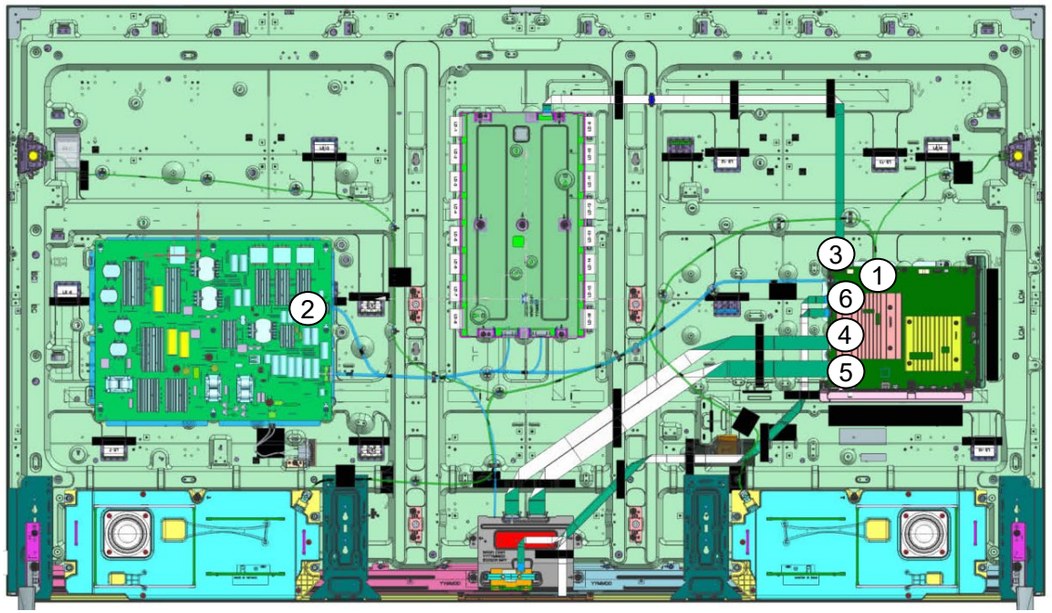
SCREW





REMARKS	P/N	DESCRIPTION	QTY	TORQUE (N.m)	REMARKS
●	4-268-126-02	SCREW, ORNAMENTAL M6X12	4	1.2 ± 0.1	-
●	4-579-926-01	SCREW M3X3.0 STEP	15	0.65 ± 0.05	-
●	4-256-393-12	SCREW, +PSW M3X6 W12	2	0.4 ± 0.05	-
●	2-580-600-01	SCREW, +PSW M4X8	8	0.65 ± 0.05	-
●	2-580-592-01	SCREW, +PSW M3X8	2	0.4 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	20	0.4 ± 0.05	-
●	4-472-518-11	SCREW, +PSW M3x6	18	0.4 ± 0.05	93L / 93CL
●	7-682-948-09	SCREW +PSW 3X8	2	0.4 ± 0.05	93L / 93CL

CONNECTOR



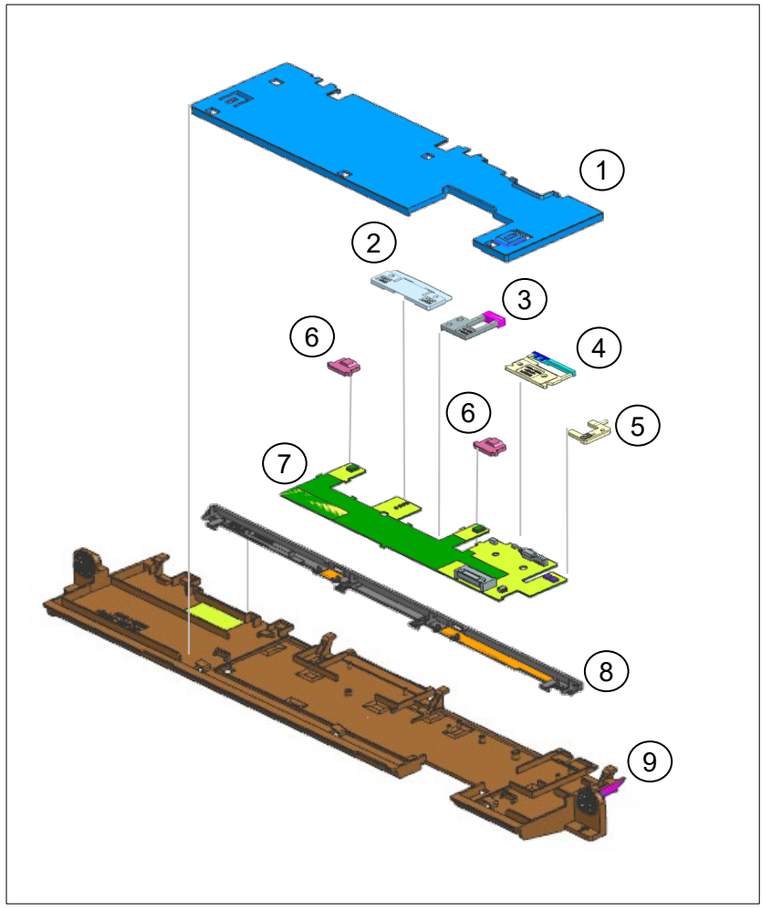
REF. NO	PART NO.	DESCRIPTION	REMARKS
1	1-014-905-11	CONNECTOR ASSY 12P (SP)	CN6603(B)-SP(1)
2	1-014-904-11	CONNECTOR ASSY 28P	CN1700(B)-CN6401(G)-CN6601(G)-CN1000(LD)-J105(TCON)(1)
3	1-014-844-11	FLEXIBLE FLAT CABLE 30P	CN6200(B)-CN1000(LD)(1)
4	1-014-845-11	FLEXIBLE FLAT CABLE 41P	CN6801(B)-CN2(TCON)(1)
5	1-014-846-11	FLEXIBLE FLAT CABLE 51P	CN6800(B)-CN3(TCON)(1)
6	1-014-842-11	FLEXIBLE FLAT CABLE 20P/25P	CN103(H)-CN1200(B)-CN3803(B)-BT(1)

OTHER PARTS

PART NO.	DESCRIPTION	XR-85X95K	XR-85X93L	REMARKS
		UCM	UC2	
4-535-064-62	ASSY,FALL LOCK,BELT LL	•	•	-
4-462-871-03	BAG, SCREW A (CCT)	•	•	Including SCREW, +PSW M5X12 (Qty 4)
4-262-708-04	CLAMPER, CABLE	•	•	-
⚠ 1-836-883-13	POWER-SUPPLY CORD	•	•	-
1-013-691-23	REMOTE COMMANDER (RMF-TX800U)	•	n/a	-
1-016-940-21	REMOTE COMMANDER (RMF-TX810U)	n/a	•	-
*5-038-398-11	REFERENCE GUIDE	•	n/a	-
*5-049-617-11	REFERENCE GUIDE	n/a	•	-
*5-038-399-11	SETUP GUIDE	•	n/a	-
*5-049-618-11	SETUP GUIDE	n/a	•	-
7-600-031-97	TAPE (3M 1350FB-1)15MMX66M BLK	•	•	-

SMART CORE

EXPLODED VIEW AND PART LIST



REF. NO	PART NO.	DESCRIPTION	REMARKS
1	5-032-671-01	COVER,TOP(MKY)	-
2	5-032-673-01	GUIDE,LIGHT ILM(MKY)	-
3	5-032-676-01	GUIDE,LIGHT RGB(MKY)	-
4	5-032-674-01	GUIDE,LIGHT OPT(MKY)	-
5	5-032-675-01	GUIDE,LIGHT LED(MKY)	-
6	5-032-677-01	SILICON,MIC(MKY)	-
7	A-5042-262-A	HR3_WW_RA_YI_OS MOUNT	95K
7	A-5060-177-A	HR3_WW_RA_SI_OS_S MOUNT	93L / 93CL
8	5-032-672-01	OP,INNER(MKY)	-
9	5-032-670-01	COVER,BTM(MKY)	-