

Service Manual



(Product rendering is only for reference, please subject to actual product)

Product Model: 32S5045/78G(32GFS-FISDB)

Main Board: TPD.T950R4.PB751

File Version: V202405.01.X0

Main board scheme: TPD.T950R4.PB751, please subject to actual one

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1. Safety Precautions

To ensure the normal use of this product and prevent accidents such as electric shock or fire, please read and understand all requirements and operating procedures before use or repair. Please strictly observe the following requirements (including but not limited to):

- Do not expose this product to rain, moisture and direct sunlight, and it is not allowed to be too wet or attach too much dust, otherwise circuit might be corroded and causes malfunction;
- This product must not be near heat sources, such as heaters or radiation sources; and please put it in a place where is well-ventilated for heat dissipation;
- Please do not use corrosive liquid to wipe this product and prevent any liquid from entering the machine;
- Do not plug in/out wires violently, ensure wires are inserted into corresponding ports correctly, firmly;
- Please unplug power cord if product is not in use for a long time;
- Do not disassemble the product privately. If the product malfunctions and needs to be repaired, such repair can only be conducted by the professional who fully understand product information and relevant repair guidance documents;
- Power off the product before repair or assembly;
- Ensure ESD protection is conducted before repair or assembly to prevent from ESD damage on product;
- Before repair or assembly, please ensure the product is put in a place where is well-ventilated for heat dissipation, so that charged conductors would not touch components and lead to short circuit.

2. Product Information

1.Panel Spec.	
Size	31.51"
Backlight	DLED direct Type
Max.resolution	1366×768
Contrast ratio(Typ)	3500:1
Response time(Typ)	20ms
Aspect ratio	16:9
Viewing angle(CR>10)	Typ(H:178°,V:178°)
Display color	16.7 M
Color gamut(NTSC)	Min: 58% Typ: 62% / Min: 65% Typ: 68%
LCM white central brightness	Min:200cd/m2;Typ:240cd/m2
Local dimming	Not support
Brightness uniformity	≥70%
2.Hardware Information	
ATV	PAL M/N;NTSC M
DTV	ISDB
CPU architecture	Quad core ARM cortex A35
GPU	ARM Mali-G31 MP2
RAM(DDR)	512MB
ROM(Flash)	512MB
Audio power (output)	6W+6W
WIFI(Type)	1T1R
Tuner type	screw-thread
USB 2.0	1
USB 3.0	-
VGA	-
AV In	-

YPbPr In	-
CI	-
PC audio	-
RJ-45	1
Earphone	1
Audio input	-
Audio output	-
Video output	-
SPDIF output	1
Bluetooth (version)	-
HDMI	3
Others	-
3.Software Functions	
Channel List	YES
Channel Edit	YES
Picture freezing	NO
MTS/NICAM	MTS
Sleep time setting	YES
Teletext	NO
PVR	NO
EPG	NO
V_CHIP/Parental guidance	Parental Guidance
CC(Closed caption)	YES
AD(Audio description)	NO
TTS(Text to Speech)	YES
CI+	NO
DOLBY	YES
HDMI-ARC	YES
HDMI-CEC	YES

HDMI-MHL	NO
Operating system	Linux
OTA	YES
Hotel mode	NO
4.Structure Information	
Base model name	BCD4-32A Skirt wing fixed plastic base
Dimensions (without base) L×W×H	716×82×424mm
Dimensions (include base) L×W×H	716×223×477mm
Dimensions (carton) L×W×H	778×109×468mm
Net weight (without base)	4.0kg
Net weight (include base)	4.1kg
Gross weight (without base)	4.7kg
Gross weight (include base)	4.8kg
Size (wall mount)	200×200mm
5.Power Management, Safety and Certificates	
Power input	100-240VAc
Fire rating	UL94-HB75
Standby power	≤0.5W
Rated power	55W
Working conditions	Temperature:5℃~40℃,Humidity;10%~80%,Atmosphere:86KPa~106KPa
Storage conditions	Temperature:-20℃~55℃,Humidity:10%~80%,Atmosphere:86kPa~106kPa
6.Accessories	
Base (optional)	1PCS
Remote control	1PCS
Instruction manual	1PCS
Warranty card (optional)	1PCS
Battery (optional)	2PCS

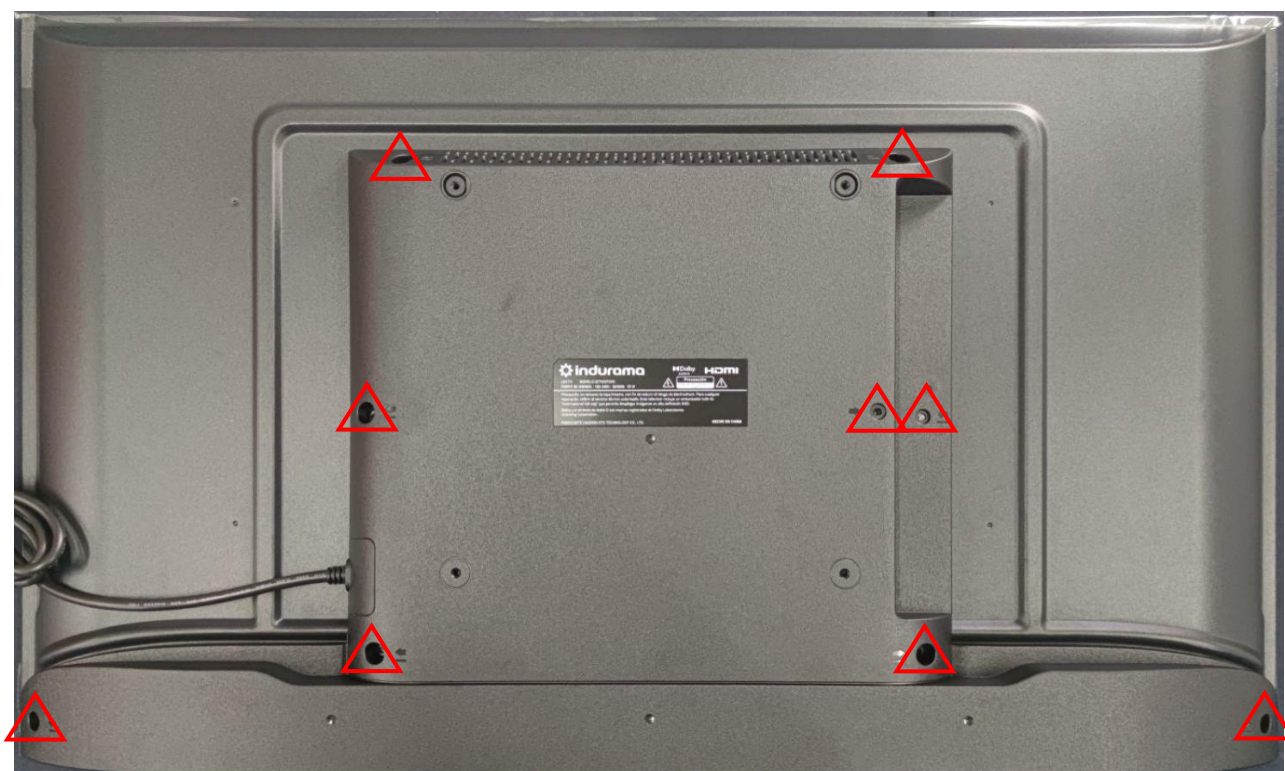
3. Disassembly Guide of Machine

3.1 Remove screws from back cover

1. Use electric screwdriver to remove 9pcs screws from back cover ( in the figure) (torque of electric screwdriver: $4 \pm 1 \text{ kgfcm}$)
2. Put the removed screws in a particular component bin, please do not mix up.
3. After inspecting operations meet requirements, convey the machine to next station.

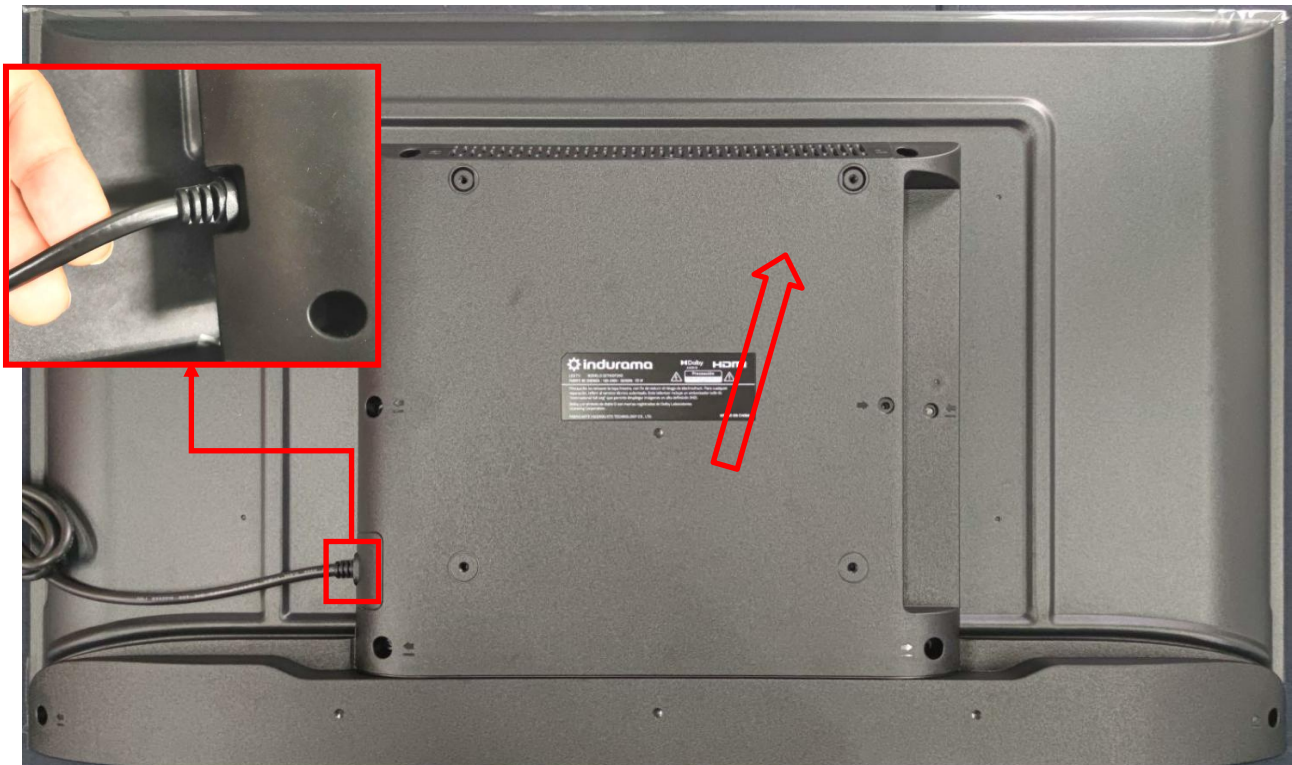
Note:

1. When unscrewing screws, please do not scrape the back cover.



3.2 Remove back cover-U

1. Push back cover upward to separate back cover bolt from back plate slot, lift back cover upward, use the left hand to unplug power cable from back cover slot, then remove back cover upward.
2. Put back cover U in a packing box.
3. After inspecting operations meet requirements, convey the machine to next station.

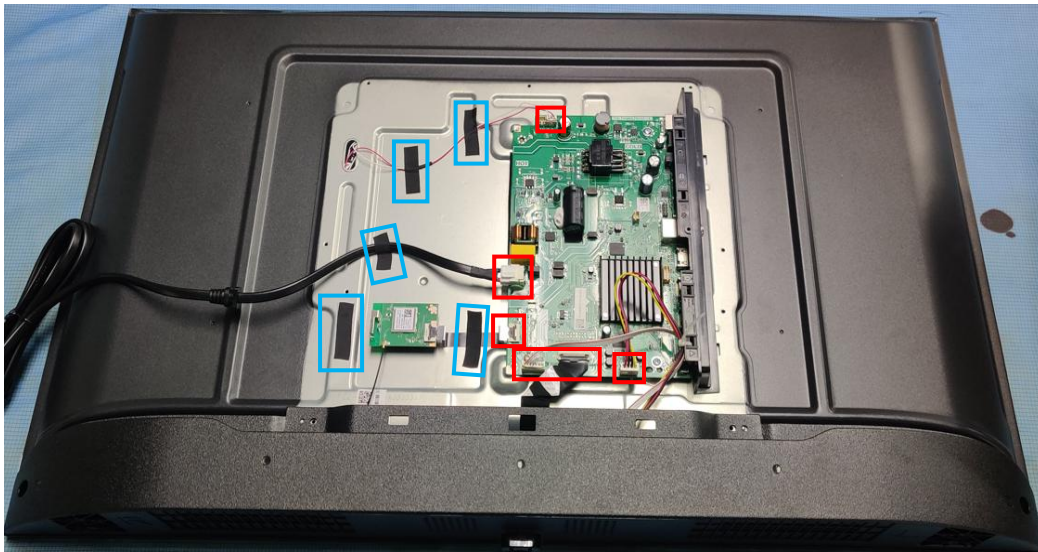


3.3 Unplug wires

- 1.Remove tapes ( in the figure) from wires, then put them in designated position.
- 2.Unplug power cable, backlight wire, FFC wire, key board wire, WIFI wire and speaker wire from main board, then put them in designated position ( in the figure)
- 4.Classify wires and then put them in designated component bins, arrange them neatly.
- 5.After inspecting operations meet requirements, convey the machine to next station.

Note:

- 1.Please wear ESD wrist strap during operation.
- 2.When removing tape, please tear off one side first, then gently remove it from cable and put it in designated position, do not litter it everywhere.
- 3.The force exerted to remove tape must be proper, prevent from damaging wires during pulling.
- 4.When unplugging wire, please hold the connector lest the wire is pulled.



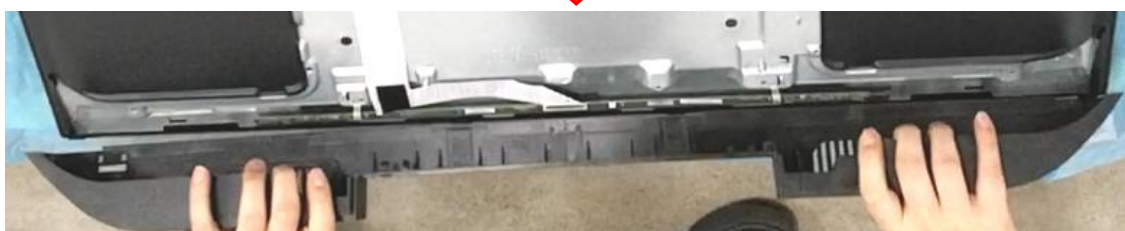
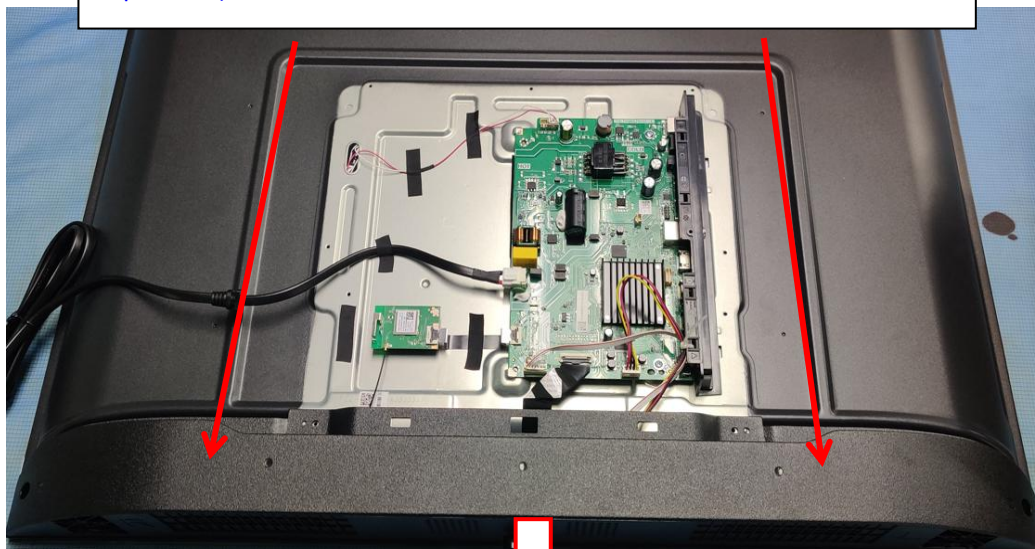
3.4 Remove back cover-D

1. Hold the left and right side of the top of back cover D, lift back cover upward, then gently turn it to the bottom. After back cover D is separated from bezel, remove the back cover.
2. After inspecting operations meet requirements, convey the machine to next station.

Note:

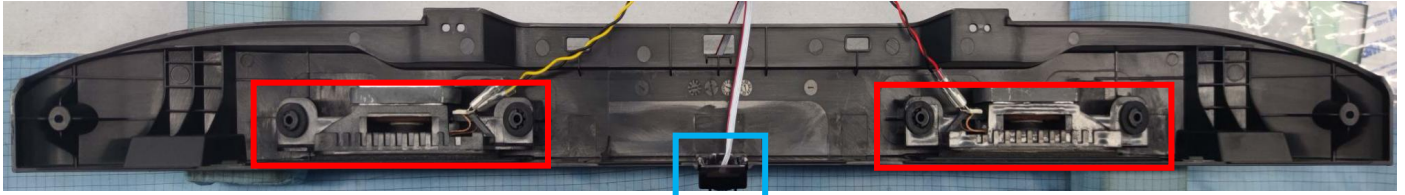
1. Please wear ESD wrist strap during operation.

Hold the left and right side of the top of back cover D, lift back cover upward, then gently turn it to the bottom. After back cover D is separated from bezel, remove the back cover. ("da-da" can be heard during separation)



3.5 Remove speakers

- 1.Remove speaker-L/R (in the figure)
- 2.Remove remote control receiving board. (in the figure)

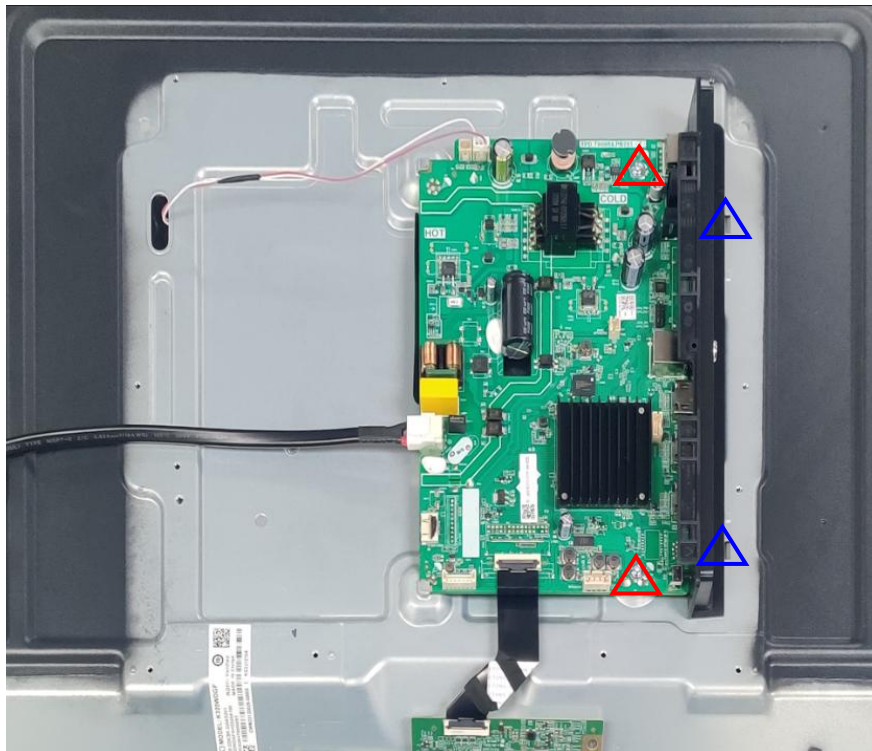


3.6 Remove main board

1. Remove baffle-R from snaps. ( in the figure)
2. Use screwdriver to unscrew the screws from main board, move main board towards right to make it separates from panel slot, then remove the main board. ( in the figure)
3. Put the removed screws in a component bin, do not mix up.
4. Put the removed main board in a component bin.
5. After inspecting operations meet requirements, convey the machine to next station.

Note:

1. Please wear ESD wrist strap during operation.



3.7 Remove WIFI board

- 1.Remove screws from WIFI board, unplug WIFI wire, as shown in the figure. ( )
- 2.Unplug WIFI antenna, then remove WIFI board. ( in the figure)

Note:

- 1.Please wear ESD wrist strap during operation.



4. Disassembly Guide of Module

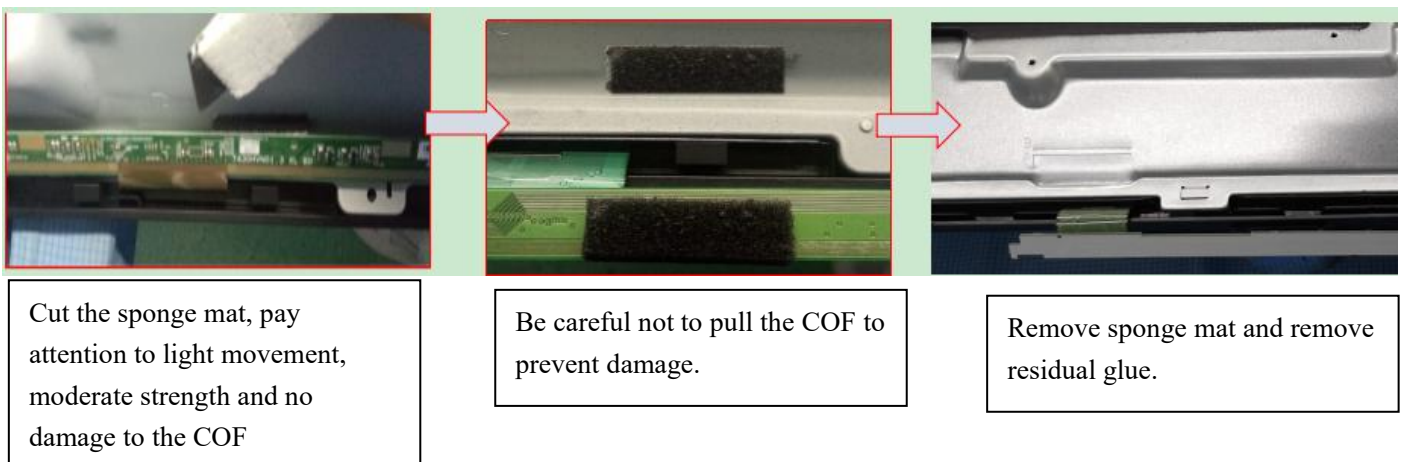
4.1 Remove sponge pad

1. Check whether the disassembly operation of the previous station is completed.
2. The 3PCS sponge mats of the fixed S-PCB were cut from the middle with the blade 3 of the art knife.
(figure: )
3. Tear off the cut sponge pads and remove the residual glue.

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



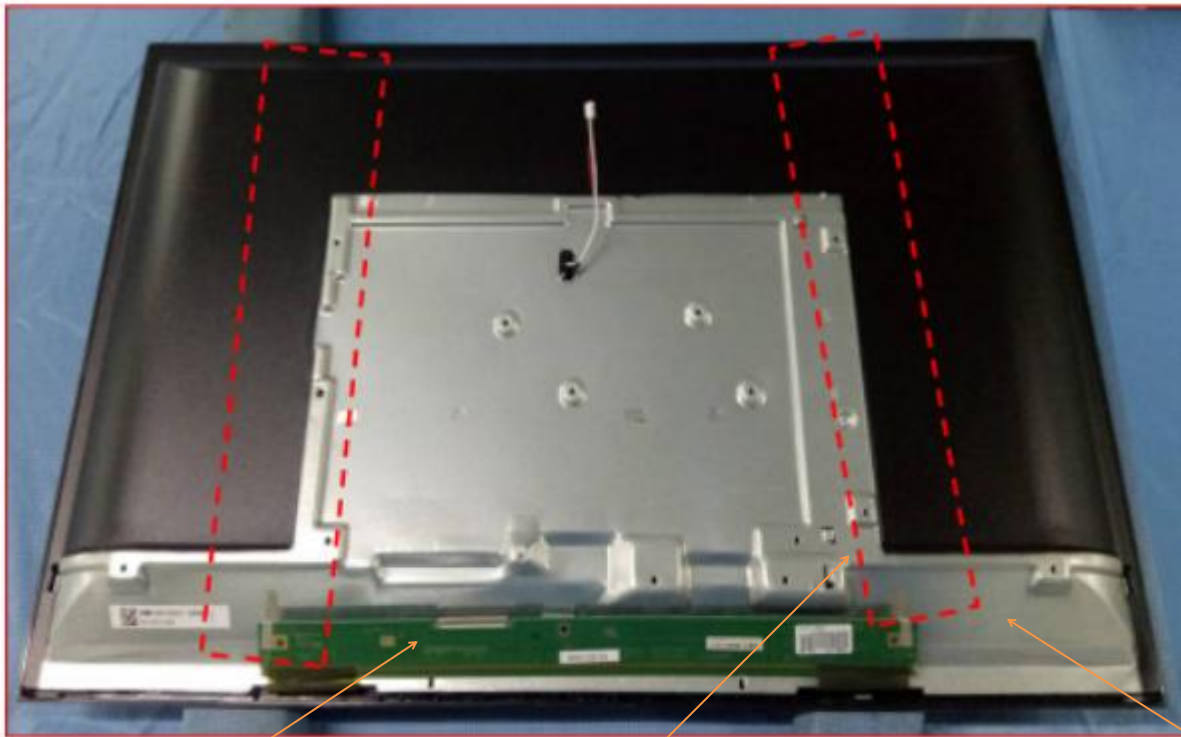
4.2 Flipping the module

1. Check whether the disassembly operation of the previous station is completed.
2. Check that S-PCB has been completely separated from the module backboard.
3. Hold both sides of the module in the middle position to turn the module, then keep the 4 open cell upside

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



When turning the module, pay attention to keep S-PCB on top, turn over speed not too fast, and movement range should be small.

After the module is turned over, the supporting rod is placed in the area of the back plate, which separates the T-CON board from the table surface and prevents the damage caused by the force.

After turning, put the module flat.

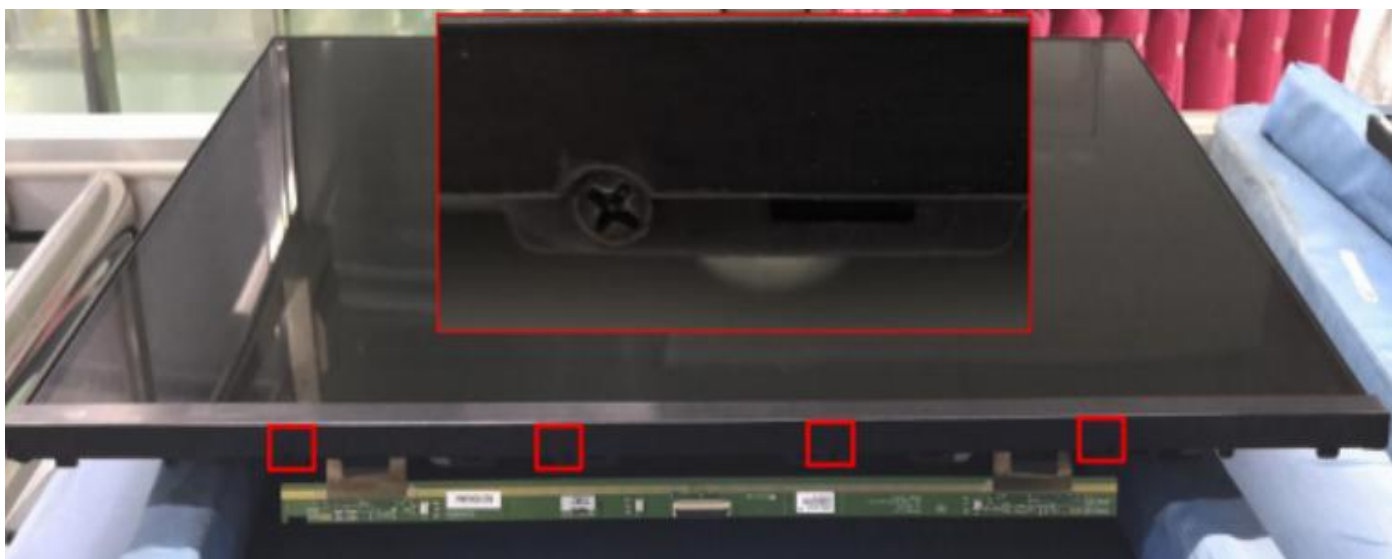
4.3 Remove screws-1

- 1.Check whether the disassembly operation of the previous station is completed.
- 2.Unscrew the screws of the fixed face frame with electric screwdriver,and place them in the designated recycling locations.
- 3.Check that all the specified screws have been released.

Notes:1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2.When material is defective, make marks and return it original package, Classification placed.

3.The operator should be familiar with operation content, check with each other to avoid misoperation.



4.4 Separating glass

1. Check whether the disassembly operation of the previous station is completed.
2. Use Cards to separate the center frame from the glass
3. After self-check, transfer to the next station

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



With the help of the card, the card is first inserted into the side frame of the module and the glass gap, and then the double-sided adhesive is cut off by sliding toward the glass adhesive bonding area.

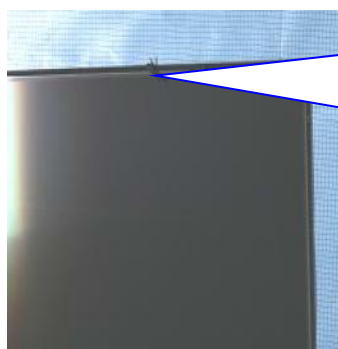
4.5 Take out the glass

1. Check whether the disassembly operation of the previous station is completed.
2. Ensure that the glass is no longer bonded to the frame;
3. Check if S-PCB fixing tool will fix s-PCB in the Horizontal Position;(Figure: )
4. Absorbing the glass and extracting the glass vertically from the module
5. Pay attention to cleaning the residual foam on the back of the glass;
6. Place the cleaned glass in the box and remove the S-PCB holder and Suction Cup.

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



Clean the remaining foam debris from the back of the glass
Clean the remaining foam debris from the back of the glass

Make sure that the back of the glass is clear of foam debris, and if necessary reattach a protective film to protect it



4.6 Cleaning module

1. Check whether the disassembly operation of the previous station is completed.
2. Stripping the residual foam on the Middle Frame;
3. Clean the diaphragm and center frame with vacuum cleaner
4. After self-check, transfer to the next station

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



Vacuum thoroughly the diaphragm and the surface of the center frame of the foam debris

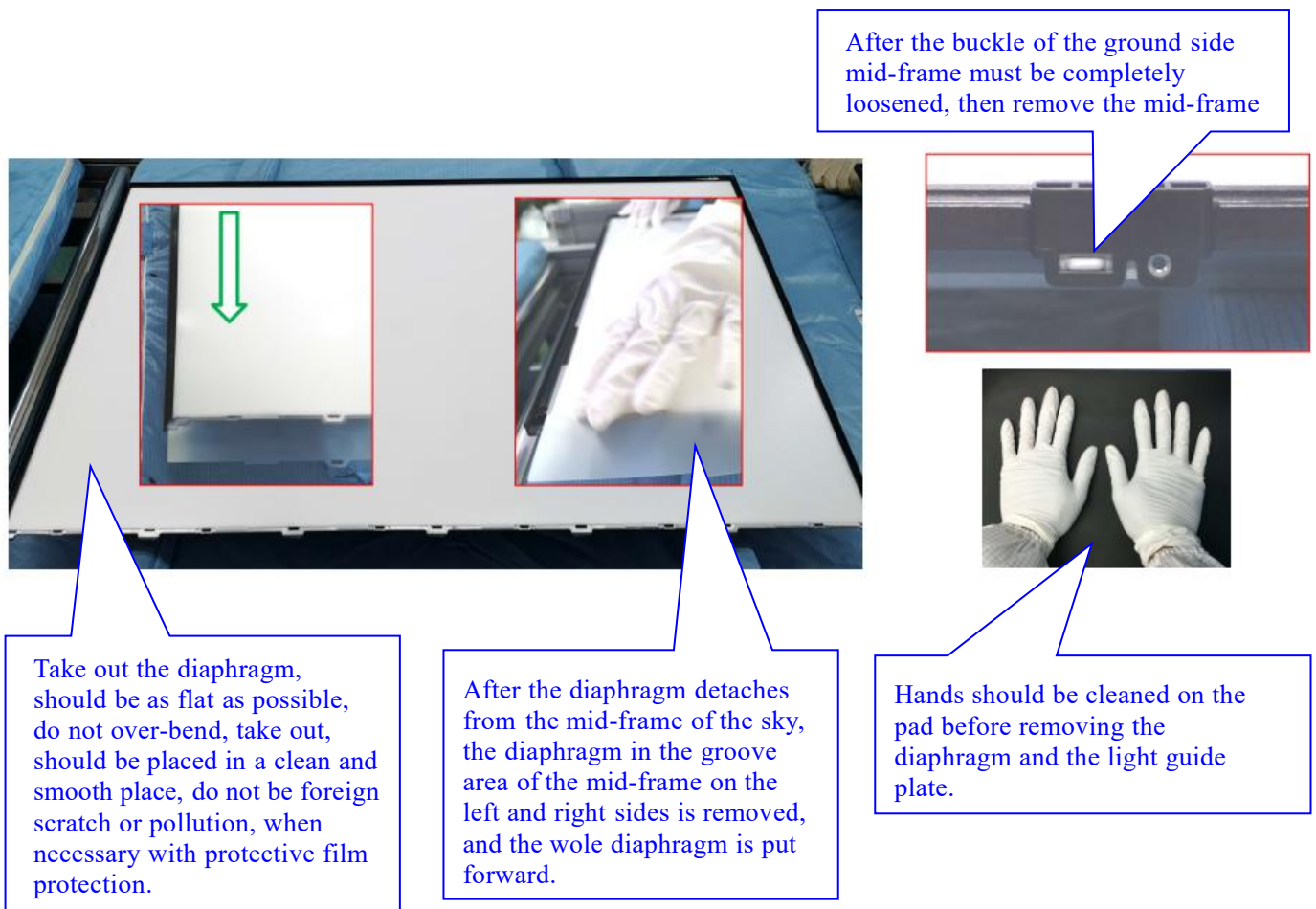
4.7 Remove the diaphragm

1. After the middle frame is taken out, take out the two pieces of diaphragm at the same time. Hold the diaphragm to the left and right middle position, forbid the diaphragm to fold and scrape the diaphragm to the back board to prevent damage

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



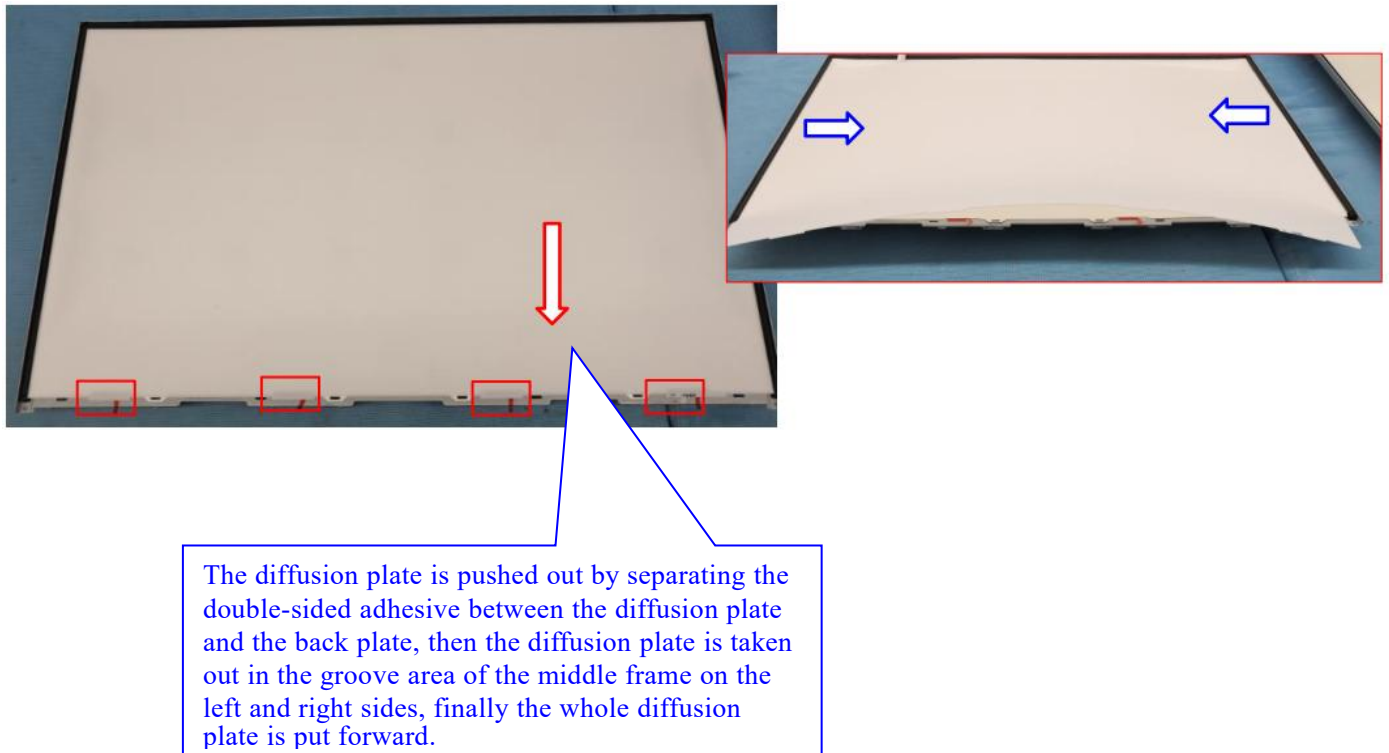
4.8 Remove the diffusion plate

1.After taking out the diaphragm, place both hands on the drawing position to lift the diffusion plate and take it out and place it on the table top with the clean non-foreign body PE bag;

Notes:1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2.When material is defective, make marks and return it original package, Classification placed.

3.The operator should be familiar with operation content, check with each other to avoid misoperation.



4.9 Remove screws-2

1. Check whether the disassembly operation of the previous station is completed.
2. Use an electric screwdriver to unscrew the diffusion plate and place it at a designated recycling location.

(Figure : ) (electric screwdriver torque: $3.0 \pm 0.5 \text{ kgfcm}$)

3. Check that all the specified screws have been released.

Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



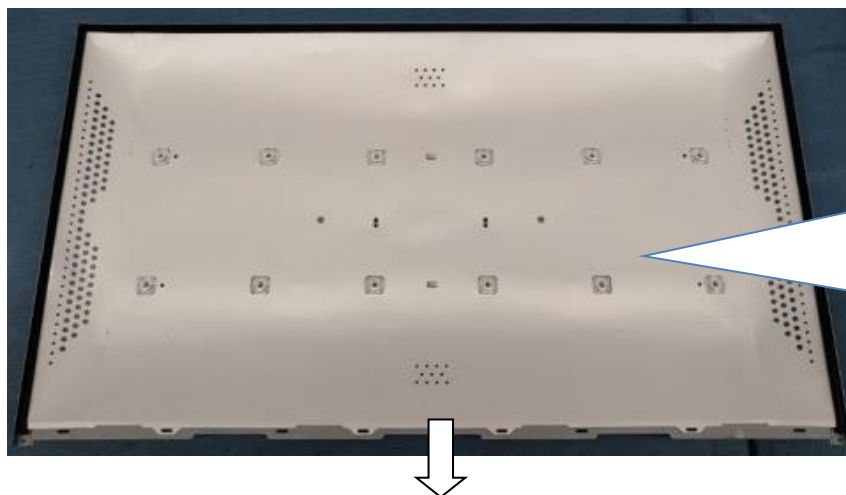
4.10 Remove reflection film

1. Check whether the disassembly operation of the previous station is completed.
2. Check that all the screws of the fixed reflection film have been loosened and removed.
3. Hold the reflective film on both sides, gently move, and remove the reflecting film from the lens.
4. The reflective film should be placed in the designated position and protected.

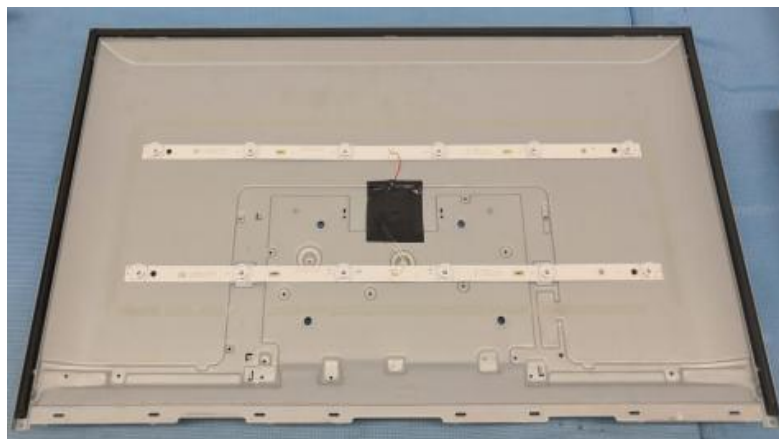
Notes: 1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

2. When material is defective, make marks and return it original package, Classification placed.

3. The operator should be familiar with operation content, check with each other to avoid misoperation.



1. Check that all screws have been released and taken away.
2. First, the reflective film is separated from the lens, then the reflection film is removed.



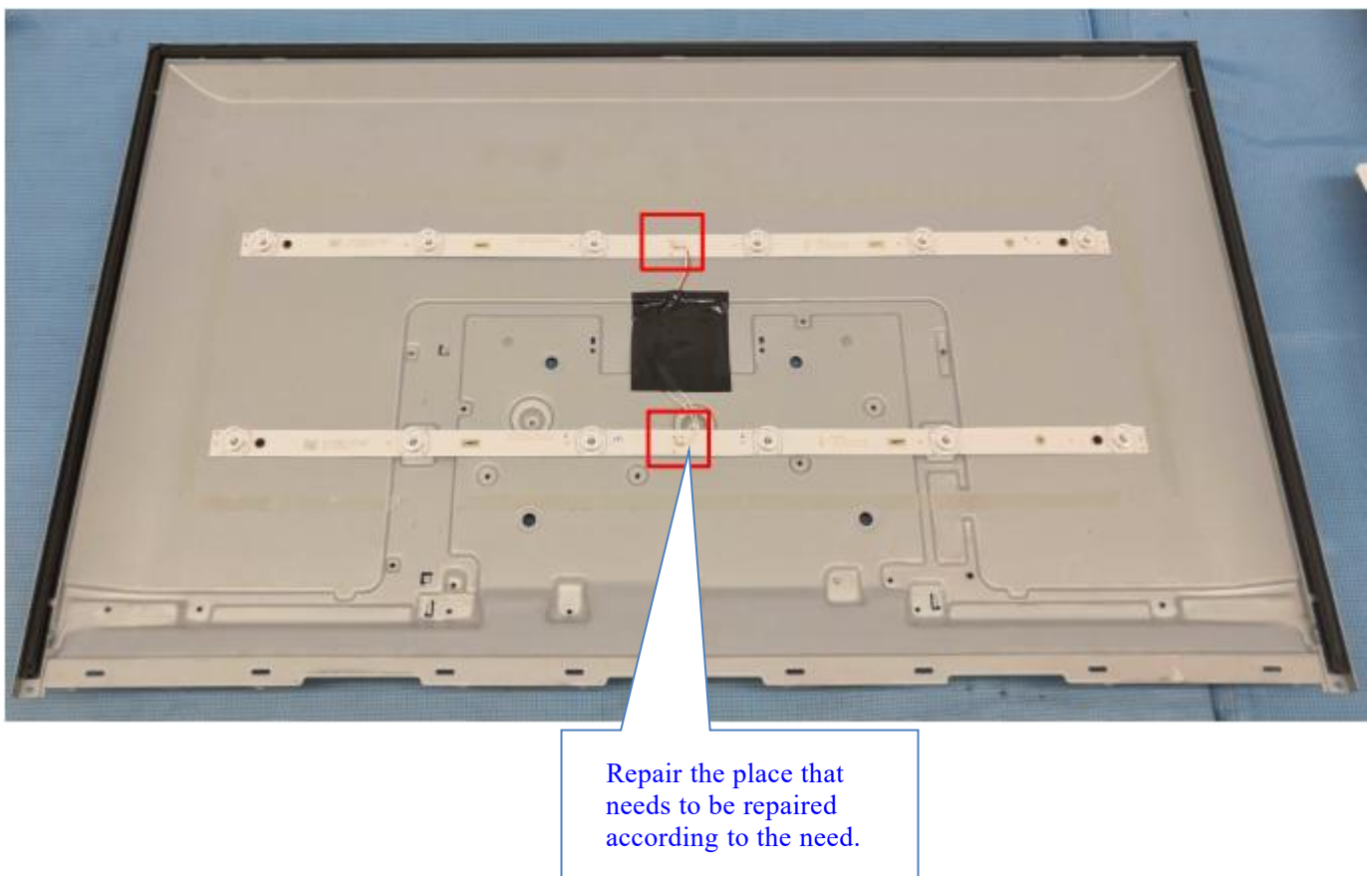
4.11 Repair

- 1.Repair the place that needs to be repaired according to the need.
- 2.After repairing, reinstall the module.

Notes:1. Wastes produced by this station shall be placed in the assigned position. Refer to Waste Classification and Disposal List.

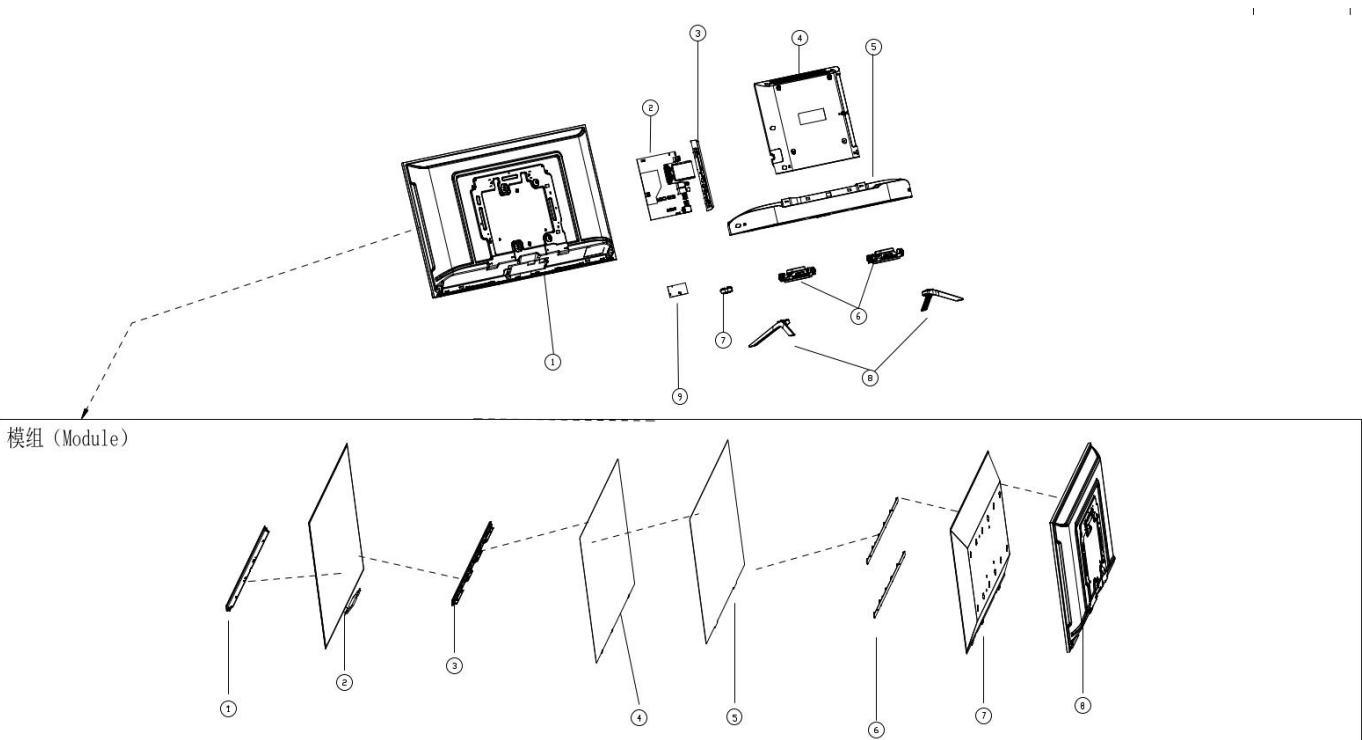
2.When material is defective, make marks and return it original package, Classification placed.

3.The operator should be familiar with operation content, check with each other to avoid misoperation.



5. Exploded Views

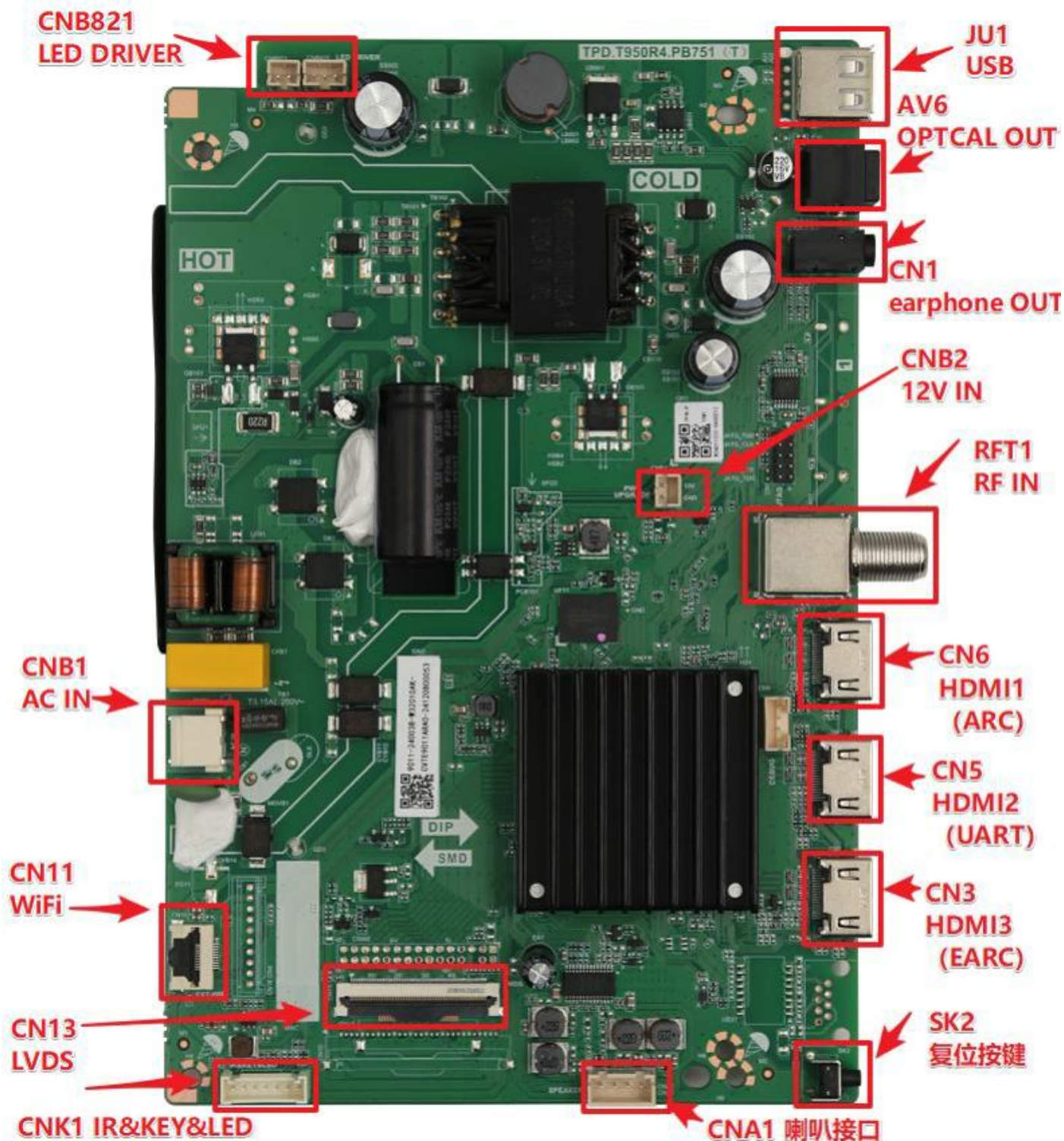
5.1 Exploded View of Machine



NO.	Name	QTY	NO.	Name	QTY
1	K320WDGF module	1	1	32GF decoration strip	1
2	Main board	1	2	OC	1
3	Baffle-R	1	3	Module middle frame-D	1
4	Back cover-U	1	4	Film	1
5	Back cover-D	1	5	Diffusion plate	1
6	Speaker	2	6	Light bar	2
7	Remote control receiving window	1	7	Reflective film	1
8	Base	1	8	Module back plate	1
9	WIFI board	1			

6. Interfaces

6.1 Main board interfaces



8. Circuit

8.1 Introduction

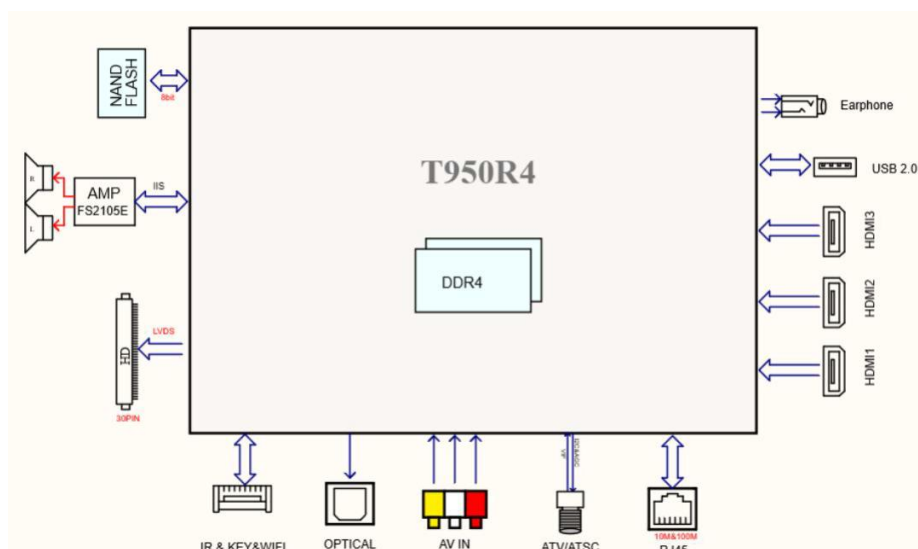
Main board supports dvb-c; dvb-t2,usb0, wifi/multimedia, video output.

8.2 Major components

Key components of the main board:

- S34ML04G300BHI0000 NAND FLASH
- FS2105E amplifier IC
- IU632C headphone amplifier IC
- TMI3252T
- TMI3253T
- LC2202CB5TR
- LC1117CLTR18
- LC1463CB5ATR25
- WL2803E18-5/TR
- R842 tuner IC
- LPW5202FDB5F11 current limiting IC

8.3 Block Diagram



8.4 Power Supply Device

All power is supplied by a service black box. When there is a defect, a new board must be reordered and the defective one must be returned unless the main board has fuse failure.

Always replace defective fuse with the fuse with correct specification! This is valid in a regular market.

Please refer to the Philips Service Portal for main board code.

Important variables of platform:

- New led backlight power architecture
- The "stimulus" signal is now a PWM signal + continuous variable

Control signal:

- PS-ON
- Light "on/off"
- DIM (PWM) (not for PSDL)

In this manual, no detailed information is provided due to design protection.

- +12 output (on-mode)
- +12V_sound(sound AMP power)
- Output to monitor; prevent
- IPB: high voltage liquid crystal panel
- PSL and PSLS (LED driver output)
- PSDL (high-frequency) AC-current

8.5 Diversity

The diversity of power supply units depends largely on the diversity of displays.

Can distinguish displays below:

- CCFL/EEFL backlight: power board is the traditional IPB
- LED backlight:
 - No scanned LED side view: PSL power board
 - No scanned LED side view: PSLS power board
 - Without 2D dimming D-LED: PSL power board
 - with 2D dimming D-LED: PSDL power board

PSL is an integrated LED driver power supply

PSLS integrates the LED driver power supply with scanning function (add micro-controller)

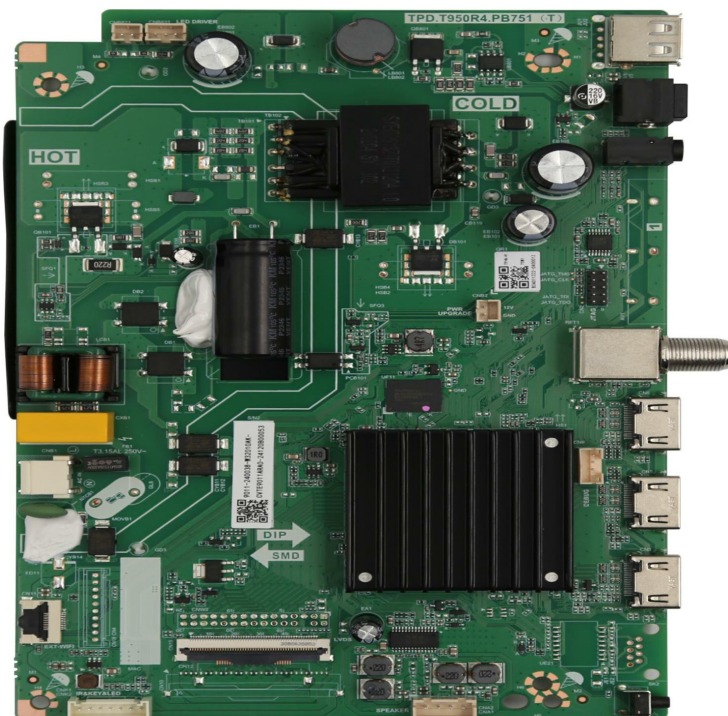
PSDL integrates a power LED backlight 2D dimming which can be viewed directly

8.6 DC/DC converter

The on-board DC/DC converter provides the following voltages (depending on the setting implementation):

- +5V-STB, constant voltage of standby power supply system
- +3V3-STB, supply power to remote control board/key board
- +12V, panel (active mode) power input
- +3V3-EMMC, +V-EMMC-IO, TV turn-on status EMMC voltage
- +1V2-DDR,+2V5-DDR, DDR voltage
- TUNER_3V3, tuner supply voltage
- +5V-M, intermediate input supply voltage of the USB
- +12V-AUDIO1 for the AUDIO AMP
- +3.3_WIFI,wifi voltage
- VDDC_CPU-0.89V,CPU voltage

8.6.1.Power Distribution SSB



8.7 HDMI

Refer to applications below:

Available HDMI connections:

- HDMI 1: HDMI input (support ARC)
- HDMI 2: HDMI input (support UART) • HDMI 3:HDMI input (support CEC) • +5V detection mechanism
- Stable clock detection mechanism
- HPD control
- Synchronous detection
- TMDS output control
- CEC control
- ARC control
- UART control

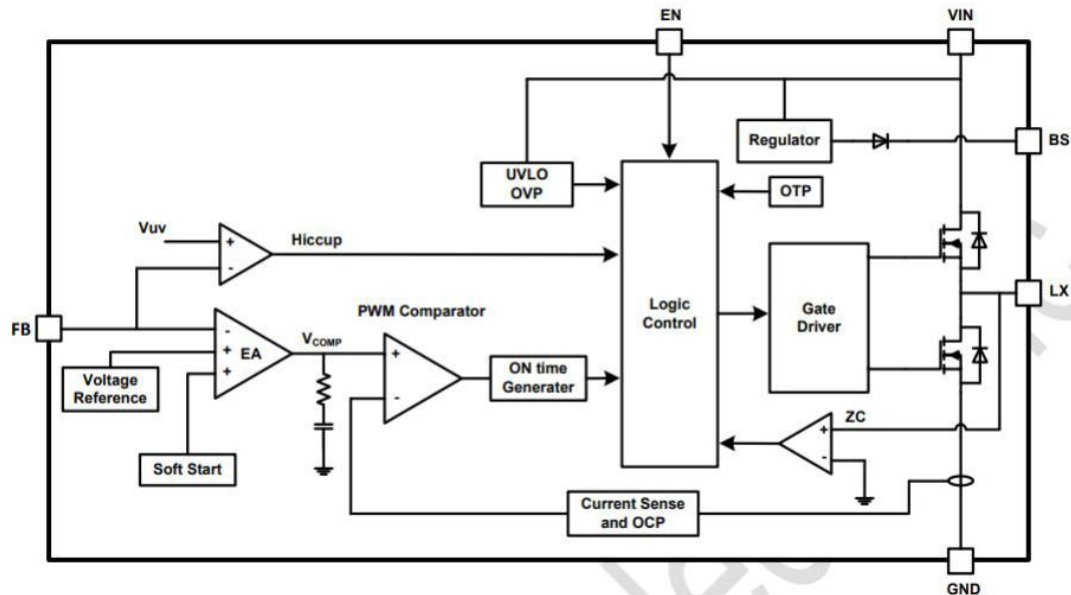
8.8 Video and Sound Processing

The main sound and video processing area (system-on-chip) of the MSD6A658 platform, including the following features:

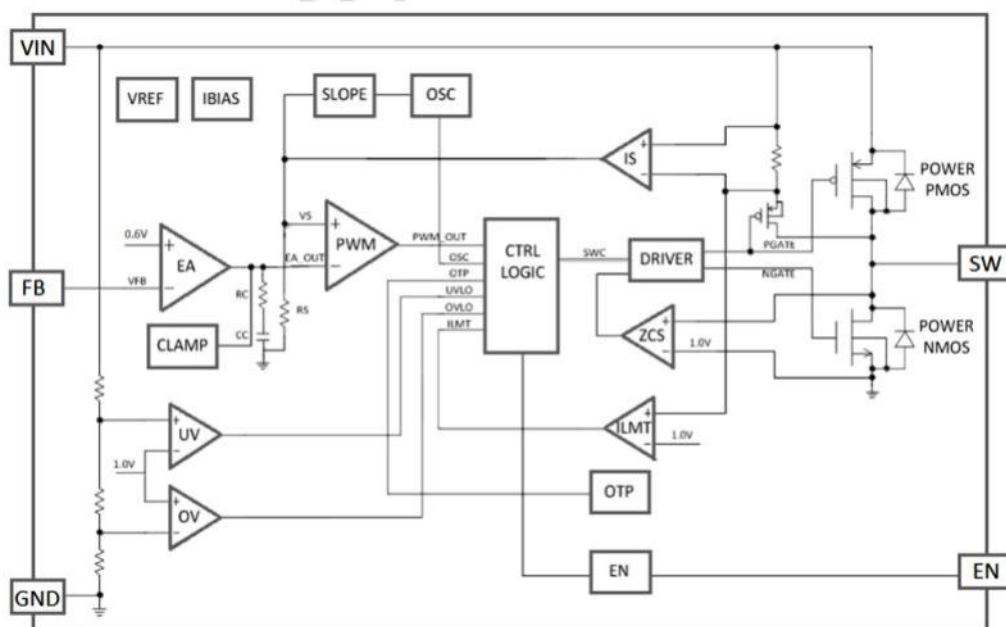
- 1.Global multi-system analog television demodulator
- 2.ATSC/DVB-T/DVB-C/DTMB/ISDB-T demodulator
- 3.UHD@60Hz direct drive
4. Powerful CPU core
- 5.Multi-way multiplexer
- 6 Multimedia video decoder(including VP9)
7. Audio codecs supporting various formats
- 8.H.264 & VP8 encoder
- 9.3D converter
10. MHL3.0 input
- 11.LAN MAC+PHY
12. PWM dimming (LED backlight)
13. Two-way LVDS

9. IC Data Sheet

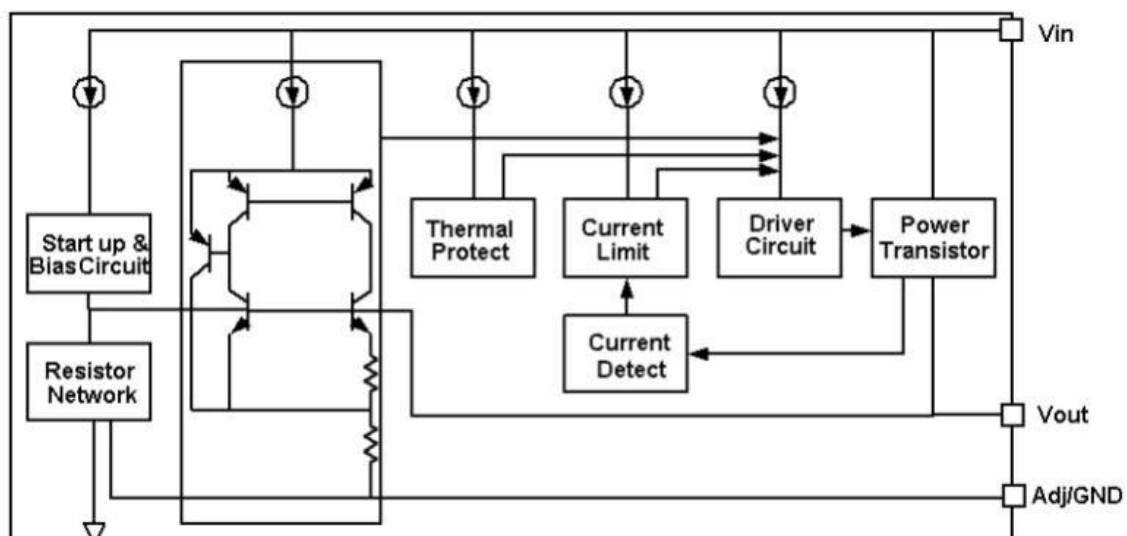
9.1 TMI3252T&TMI3253T



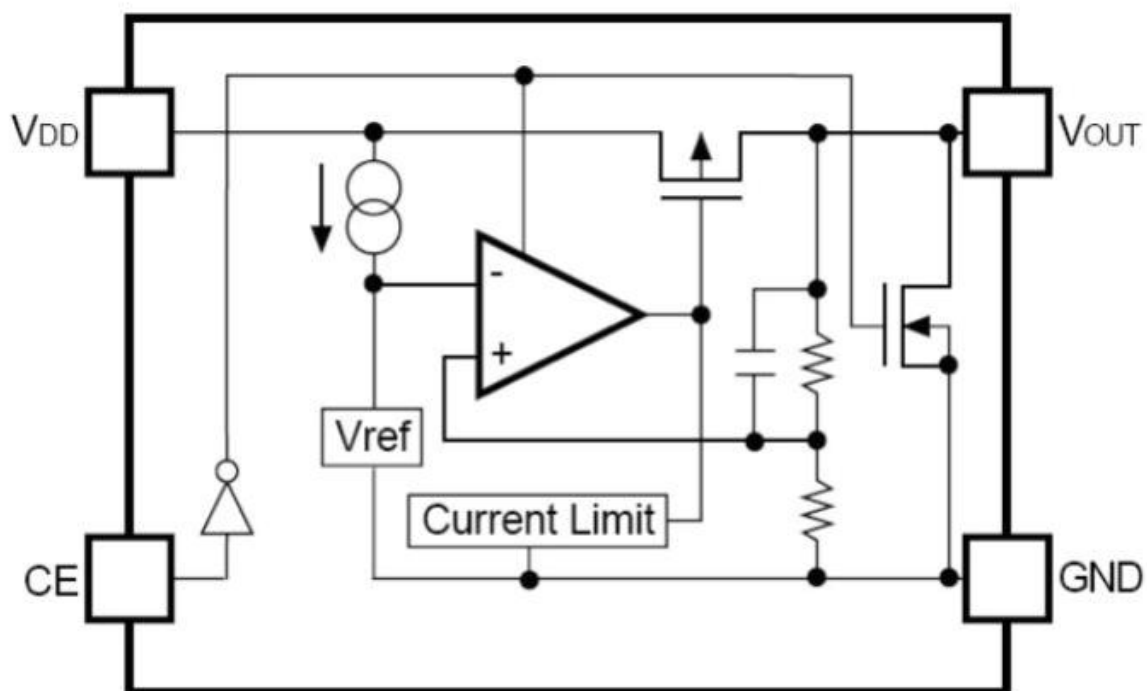
9.2 LC2202CB5TR



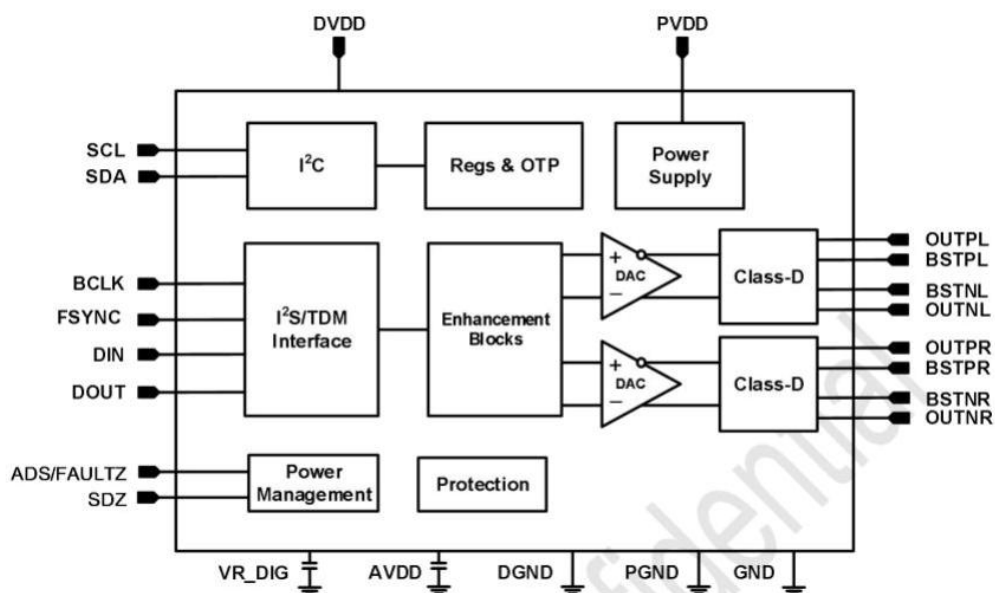
9.3 LC1117CLTR18



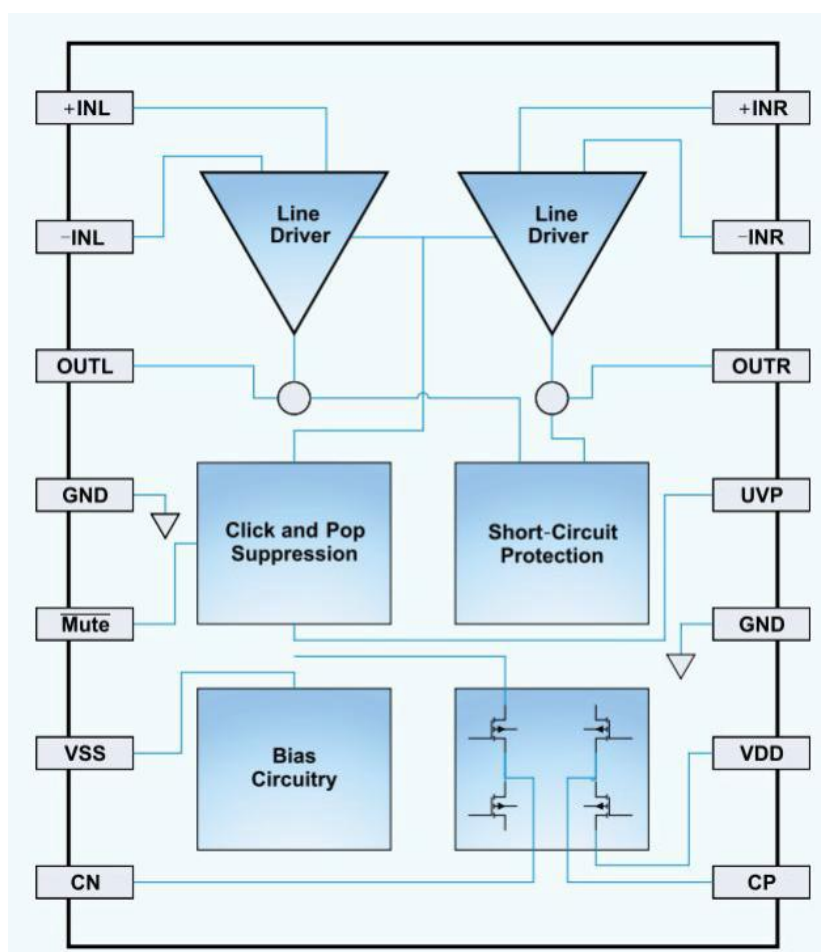
9.4 LC1463CB5ATR25



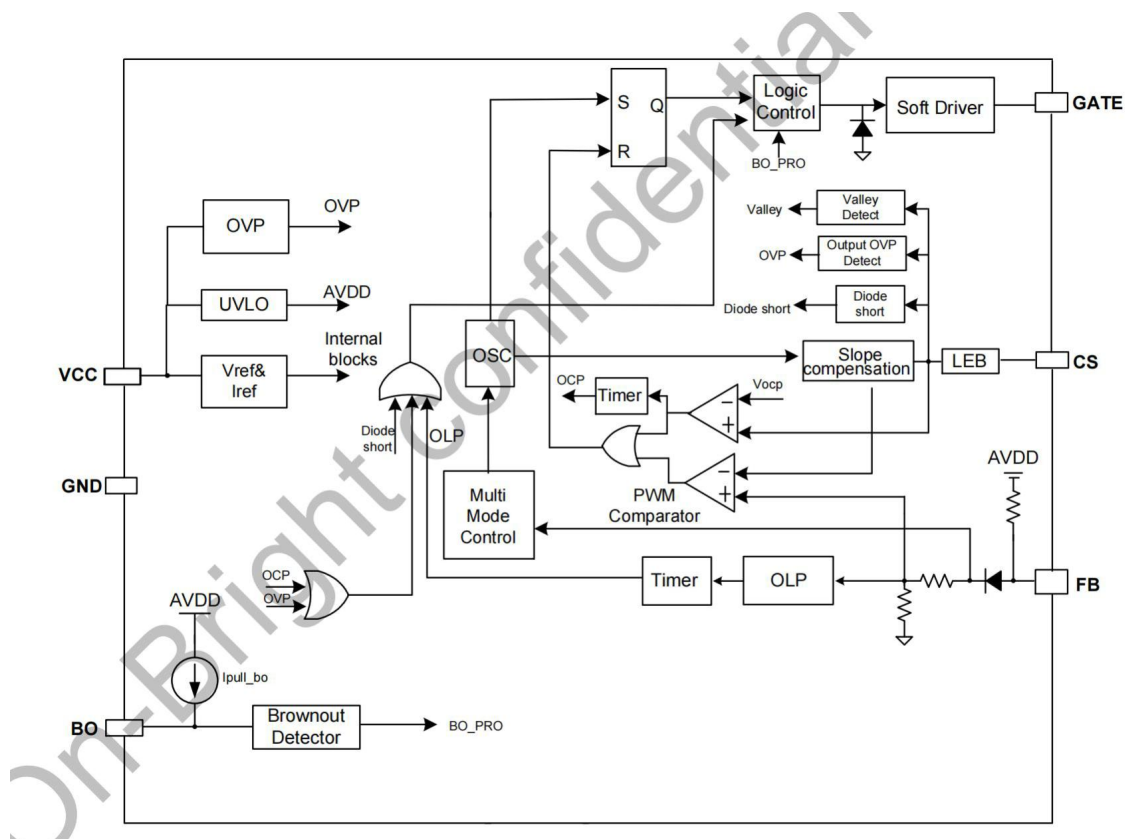
9.5 FS2105E



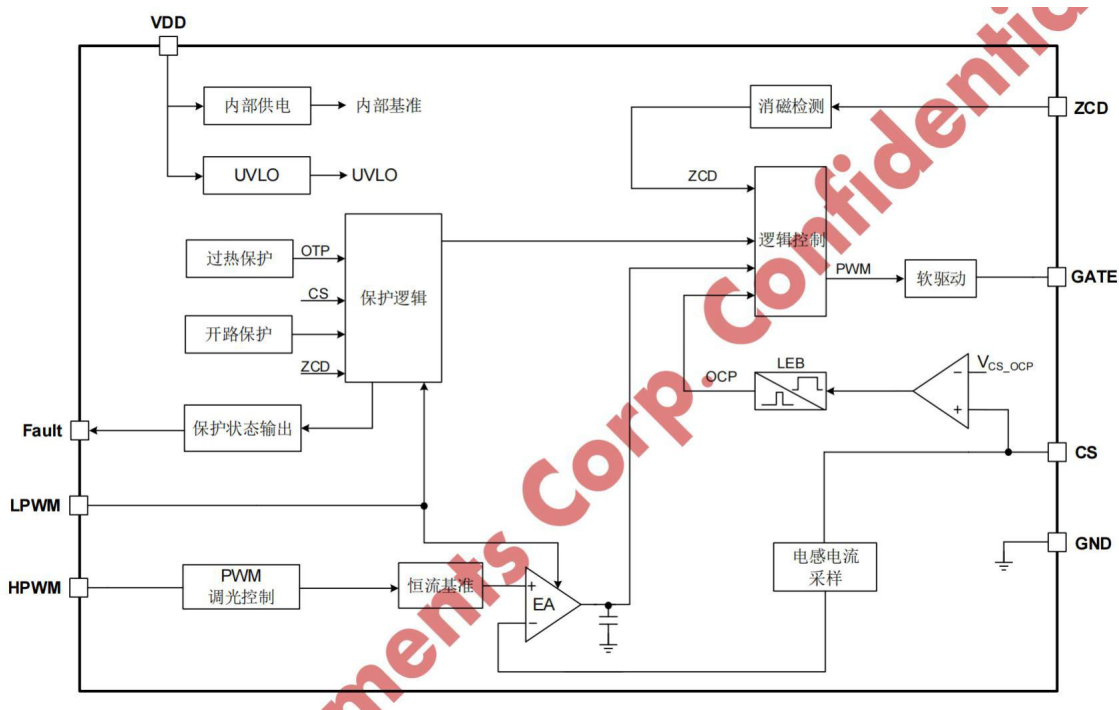
9.6 IU632C



9.7 OB2271QMP

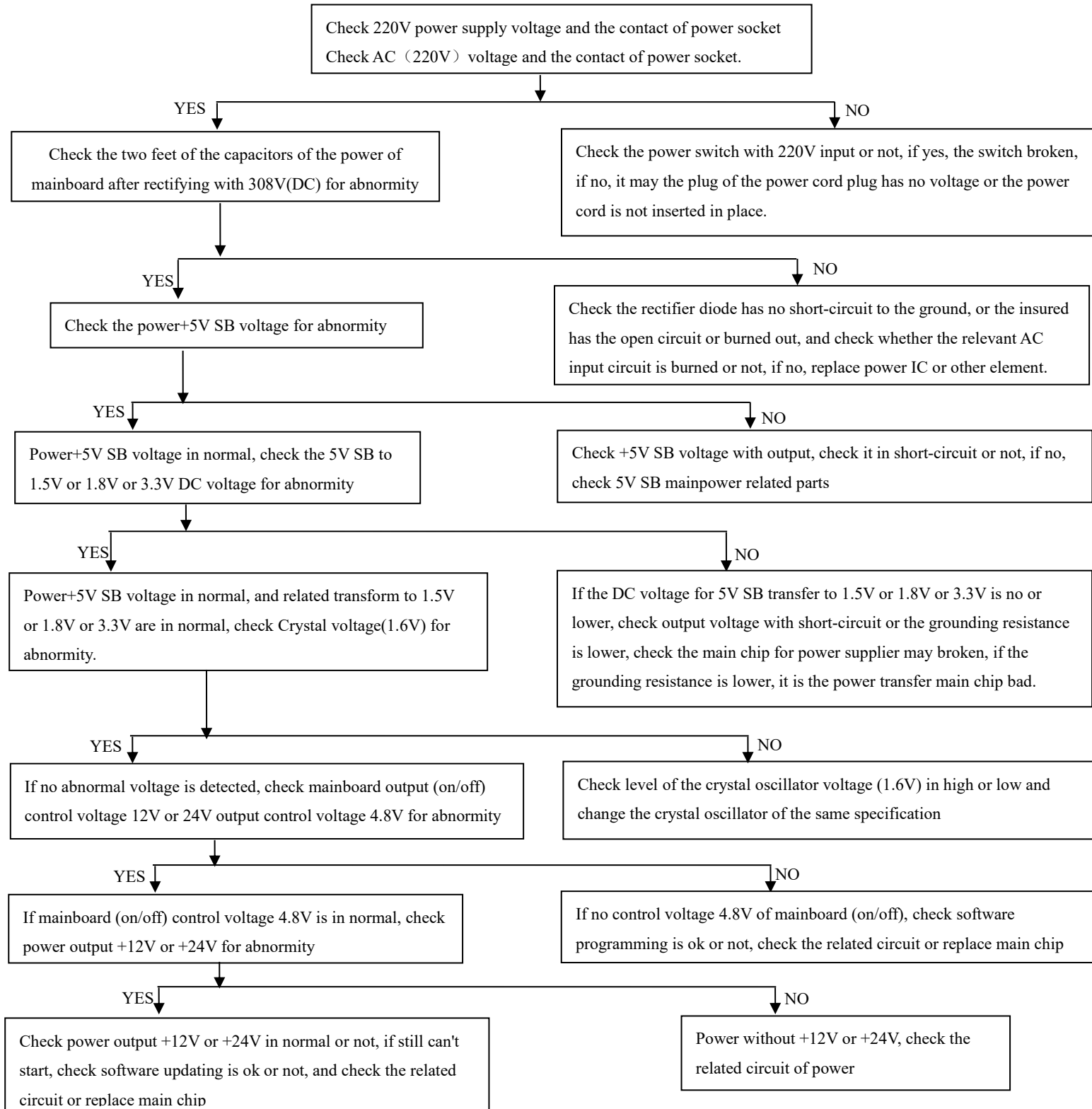


9.8KP1601SGA

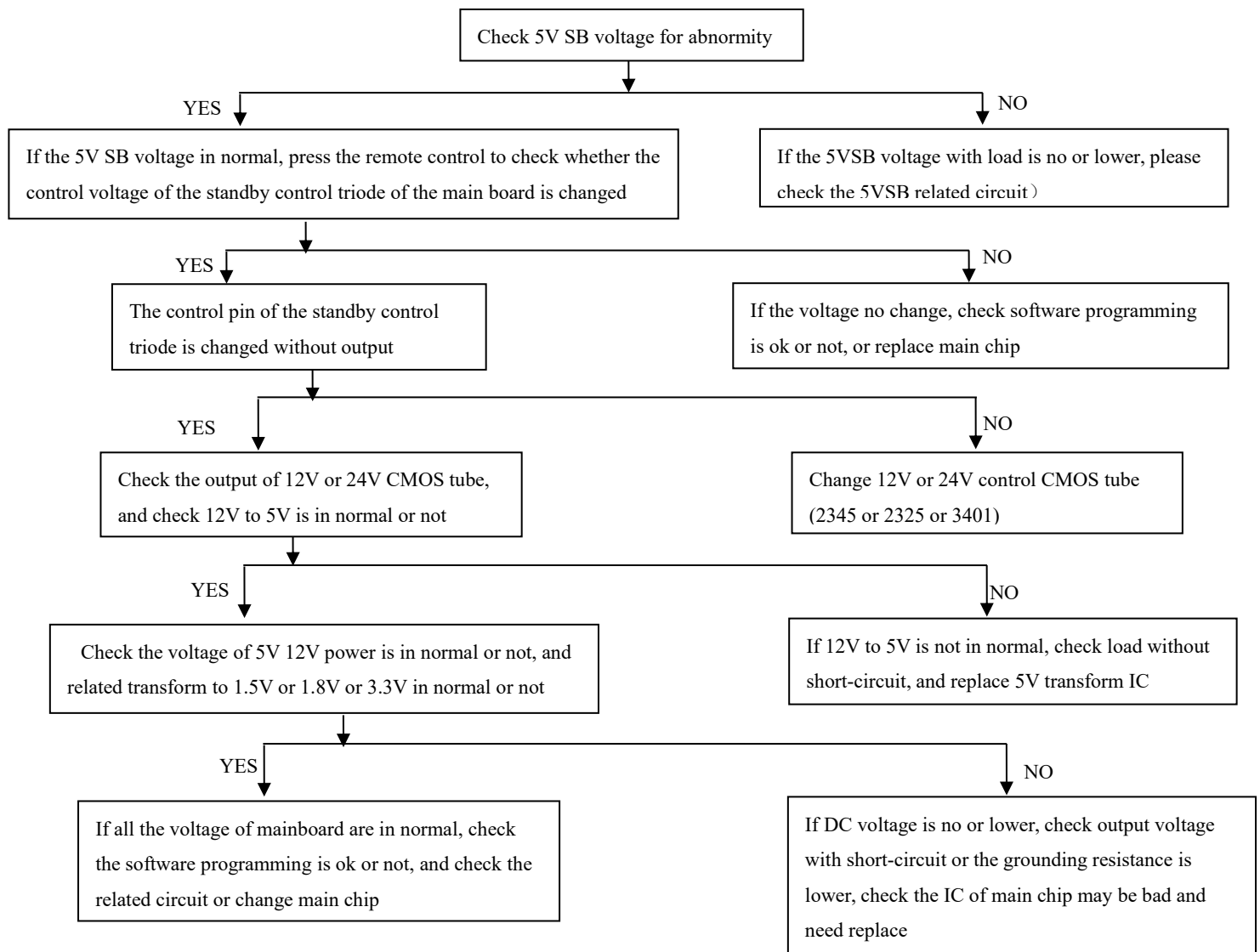


10. Troubleshooting

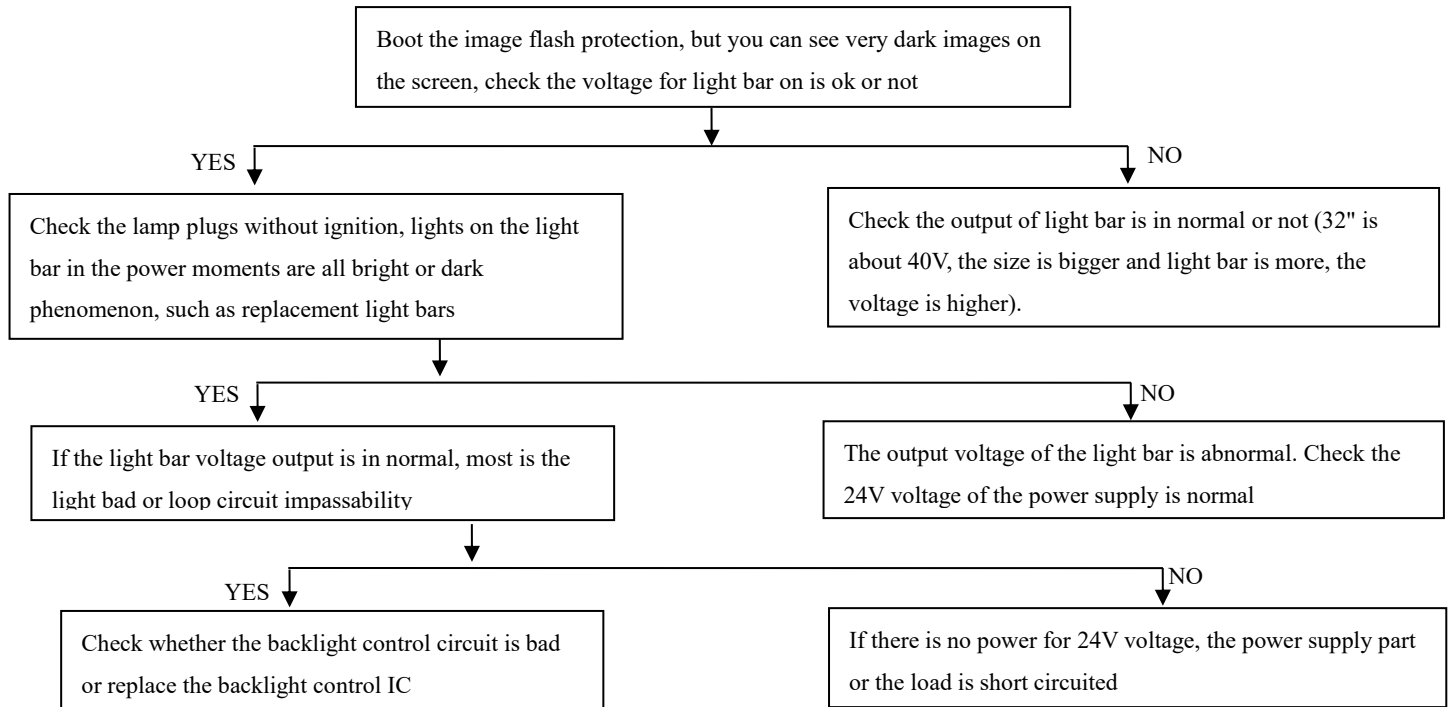
10.1 No power (Connect to power, but all the indicator lights don't work)



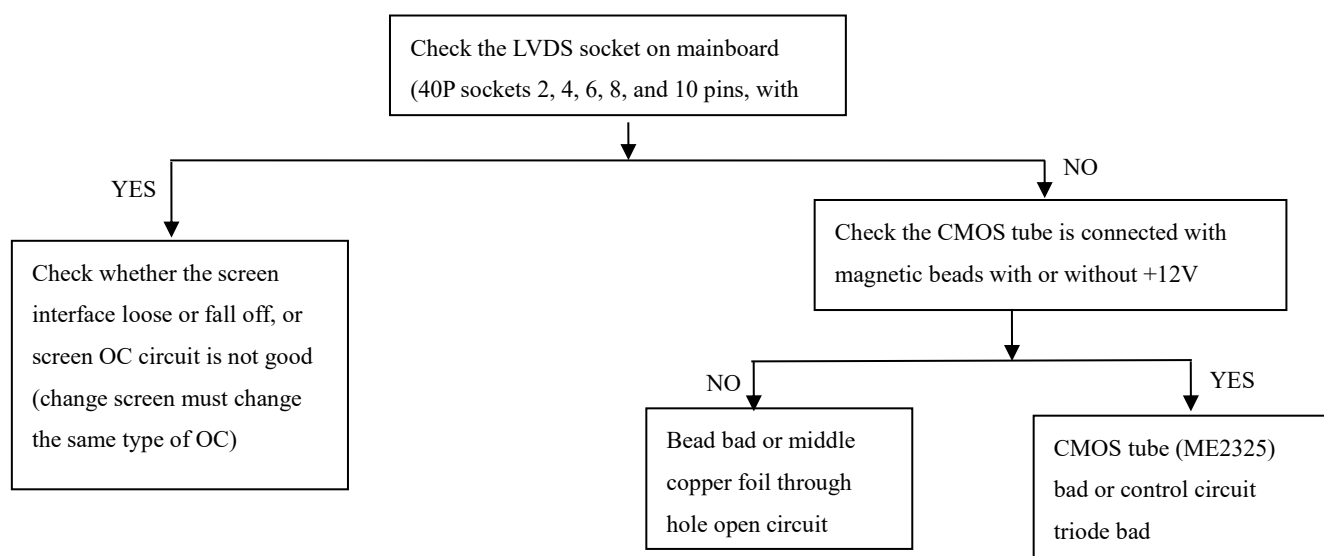
10.2 Red light can't start (Red light, remote control no reflect, no picture display)



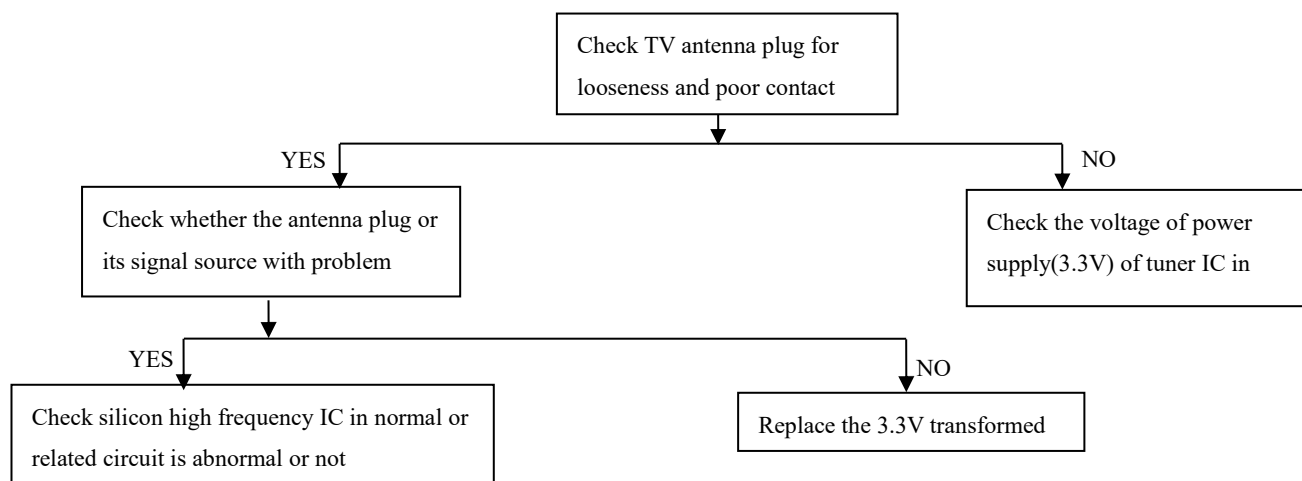
10.3 No light (Boot the image flash protection, but you can see very dark images on the screen)



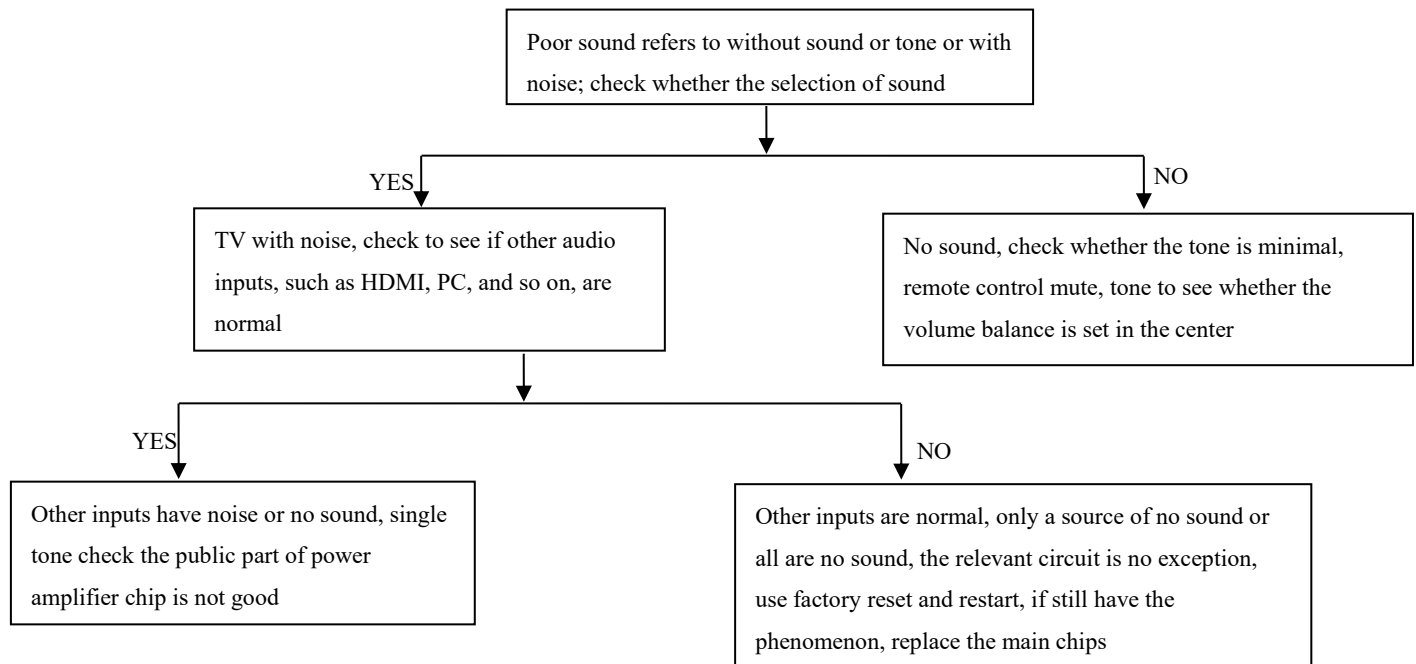
10.4 No picture (the screen light shadow, backlight is bright, but no picture display)



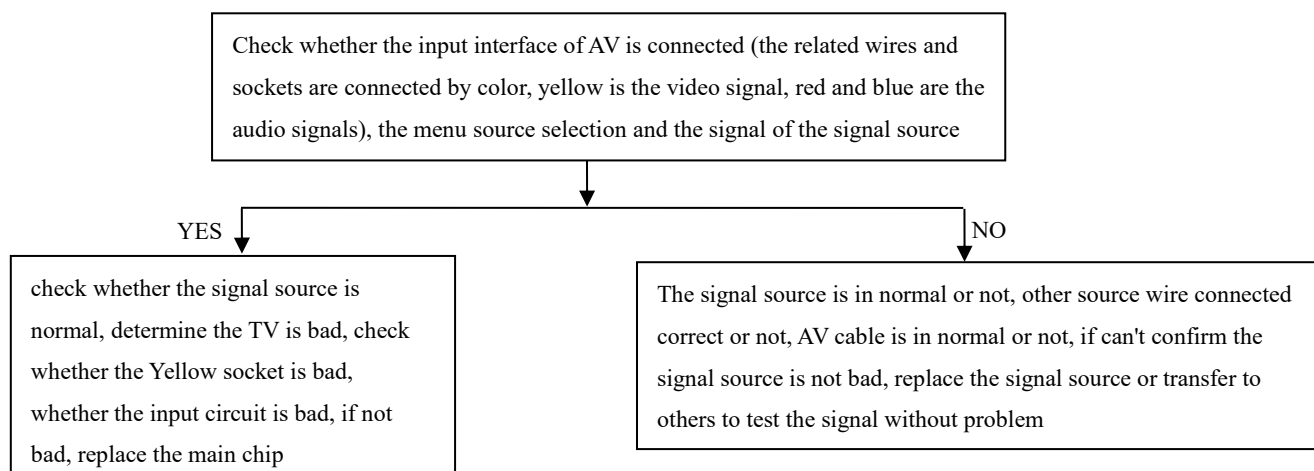
10.5 TV without channel or less channel or interfered



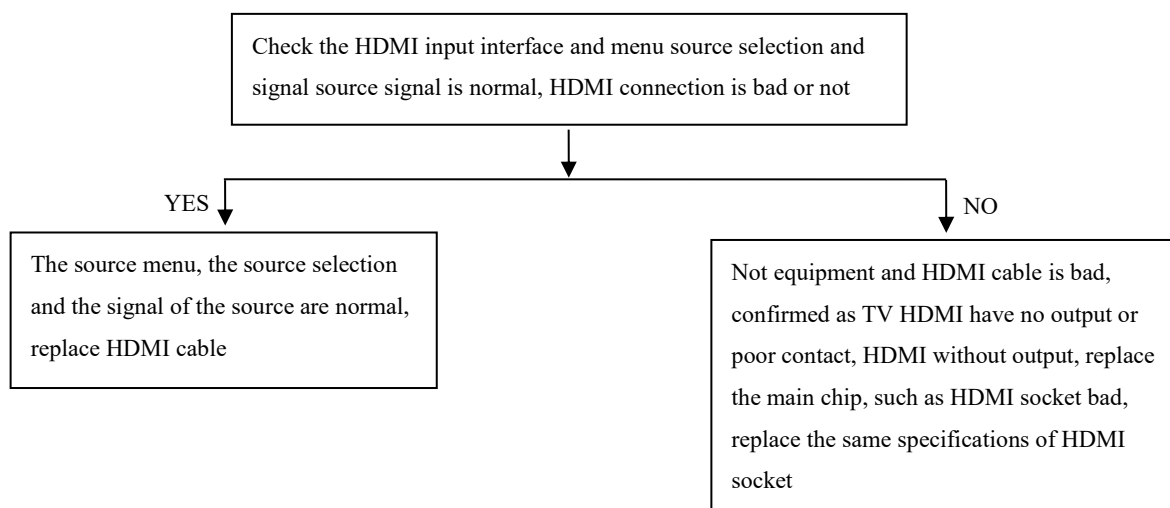
10.6 Poor sound



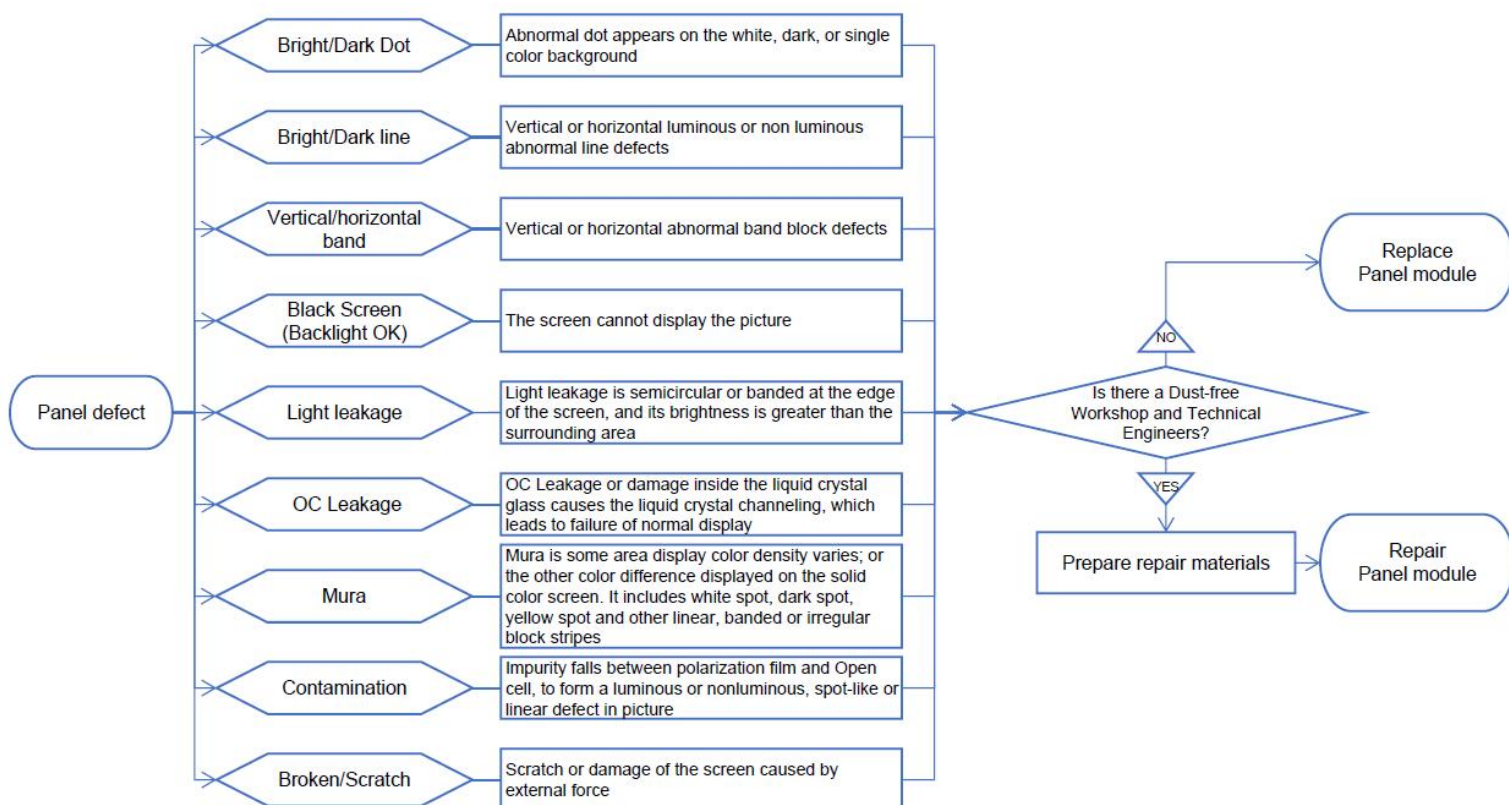
10.7 AV (video) without picture

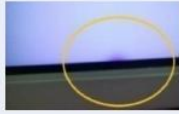


10.8 HDMI without picture



10.9 Panel defect

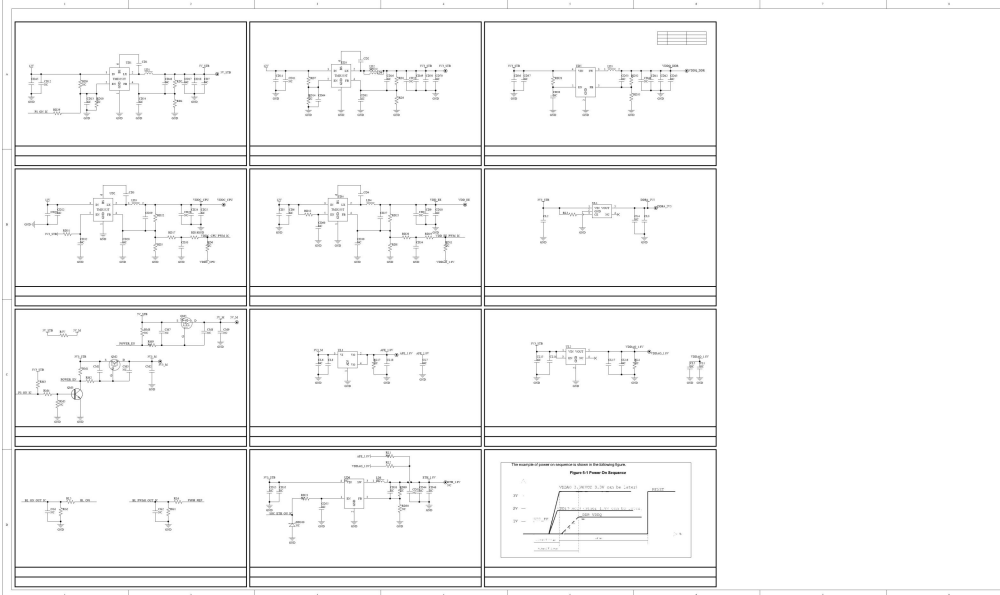


Panel defect	Sample photo	Panel defect	Sample photo
Bright/Dark Dot		OC Leakage	
Bright/Dark line		Mura	
Vertical/horizontal band		Contamination	
Black Screen (Backlight OK)		Broken/Scratch	
Light leakage			

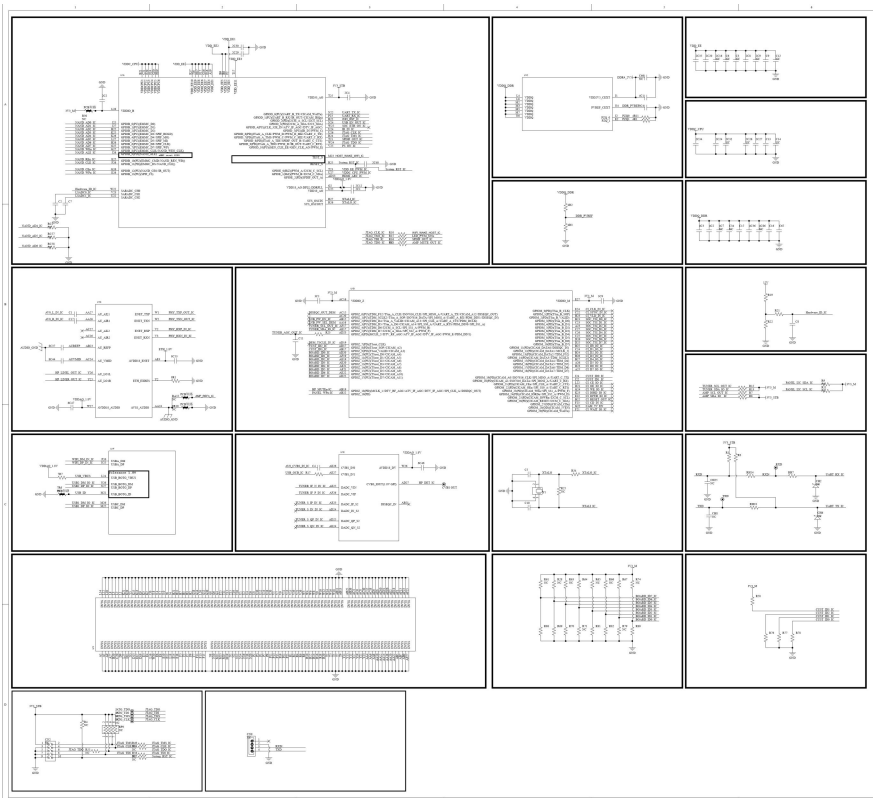
11. Circuit Diagrams

11.1 Circuit Diagram of Main Board

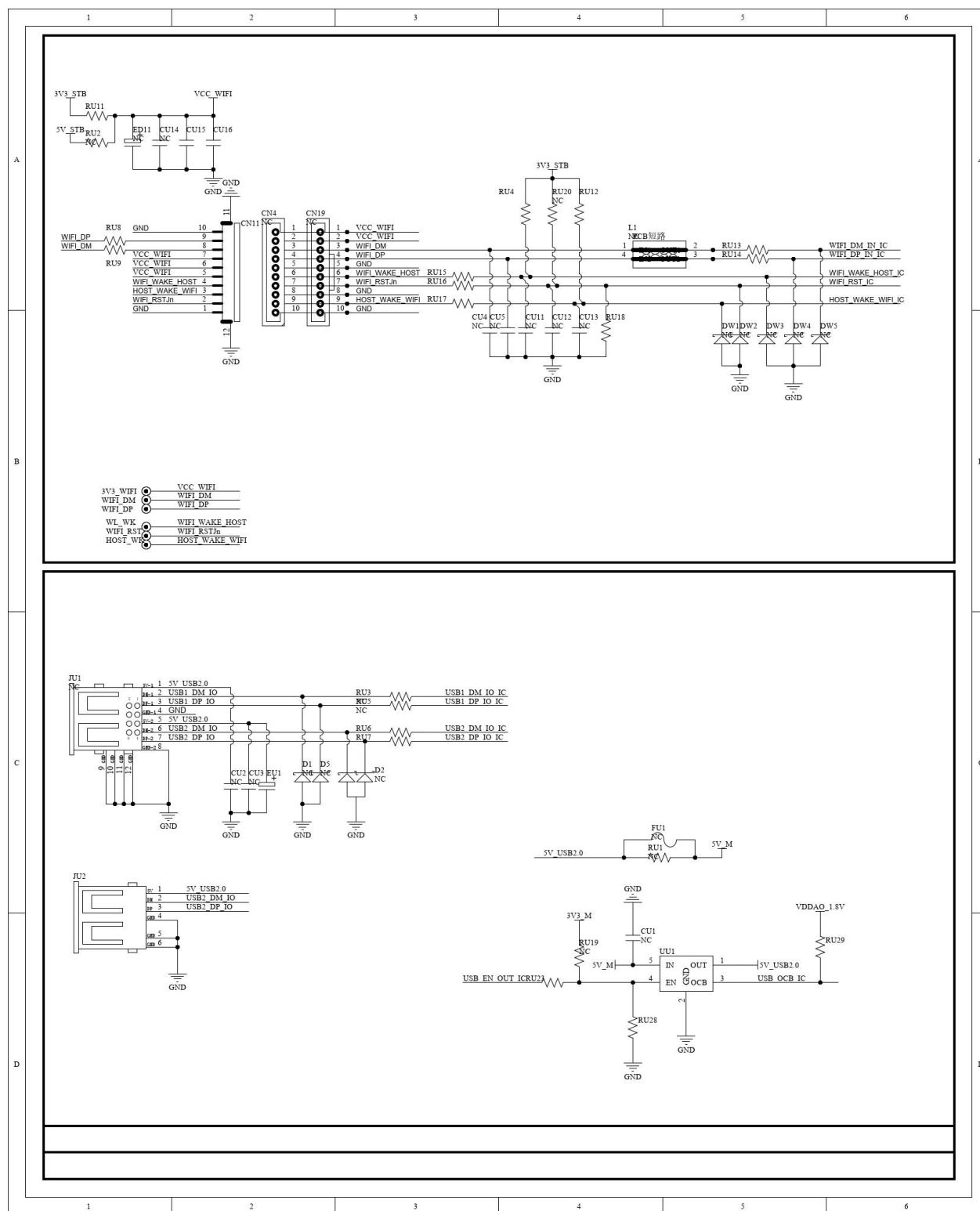
1.



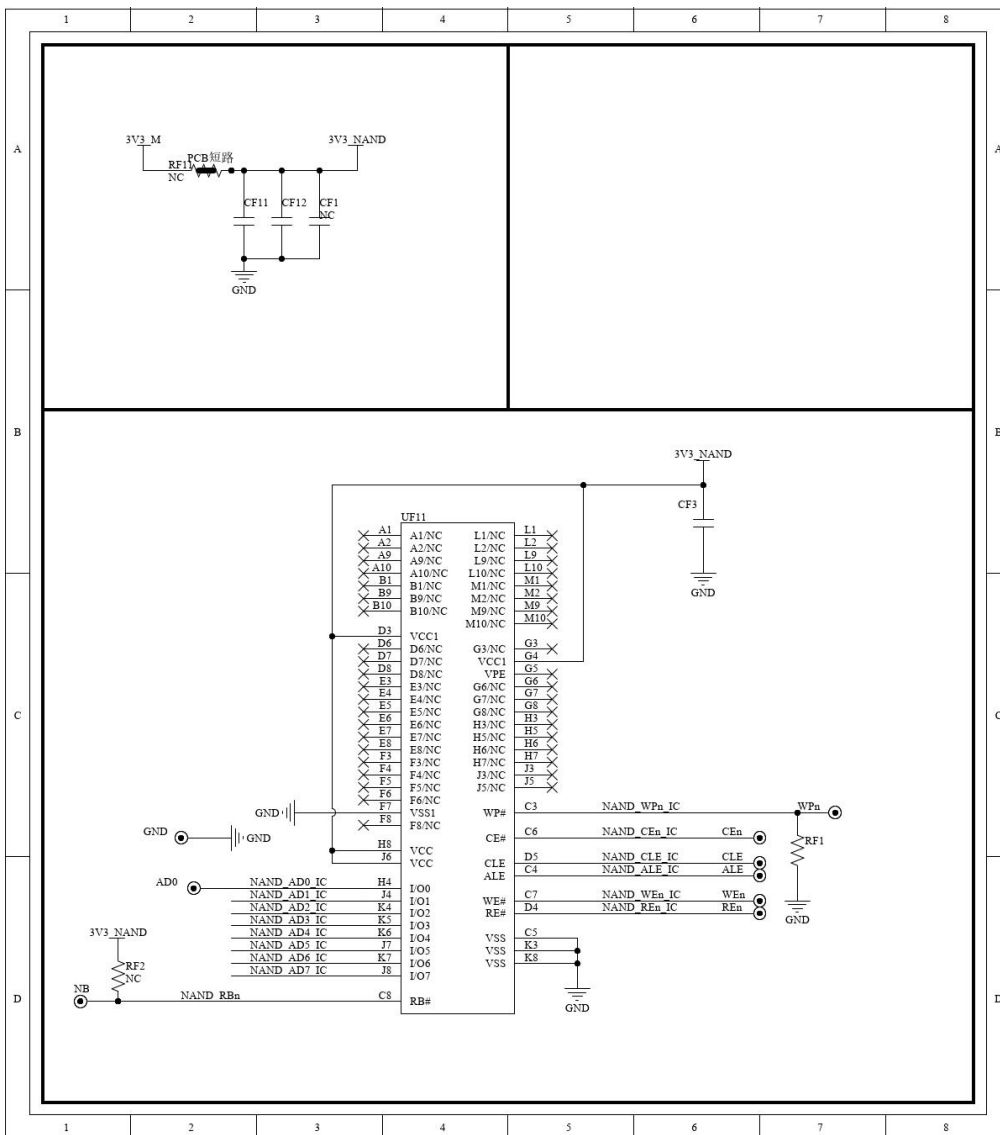
2.



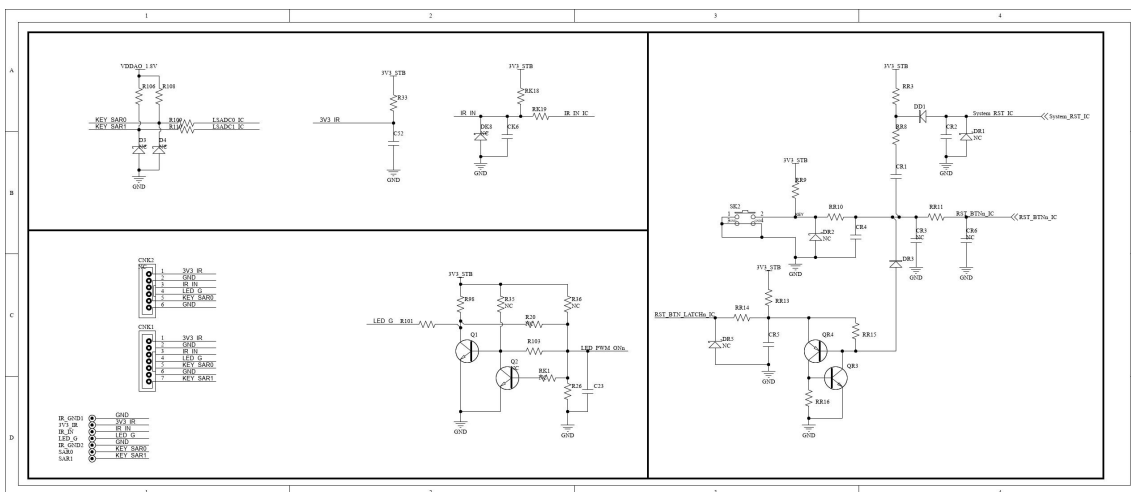
3.



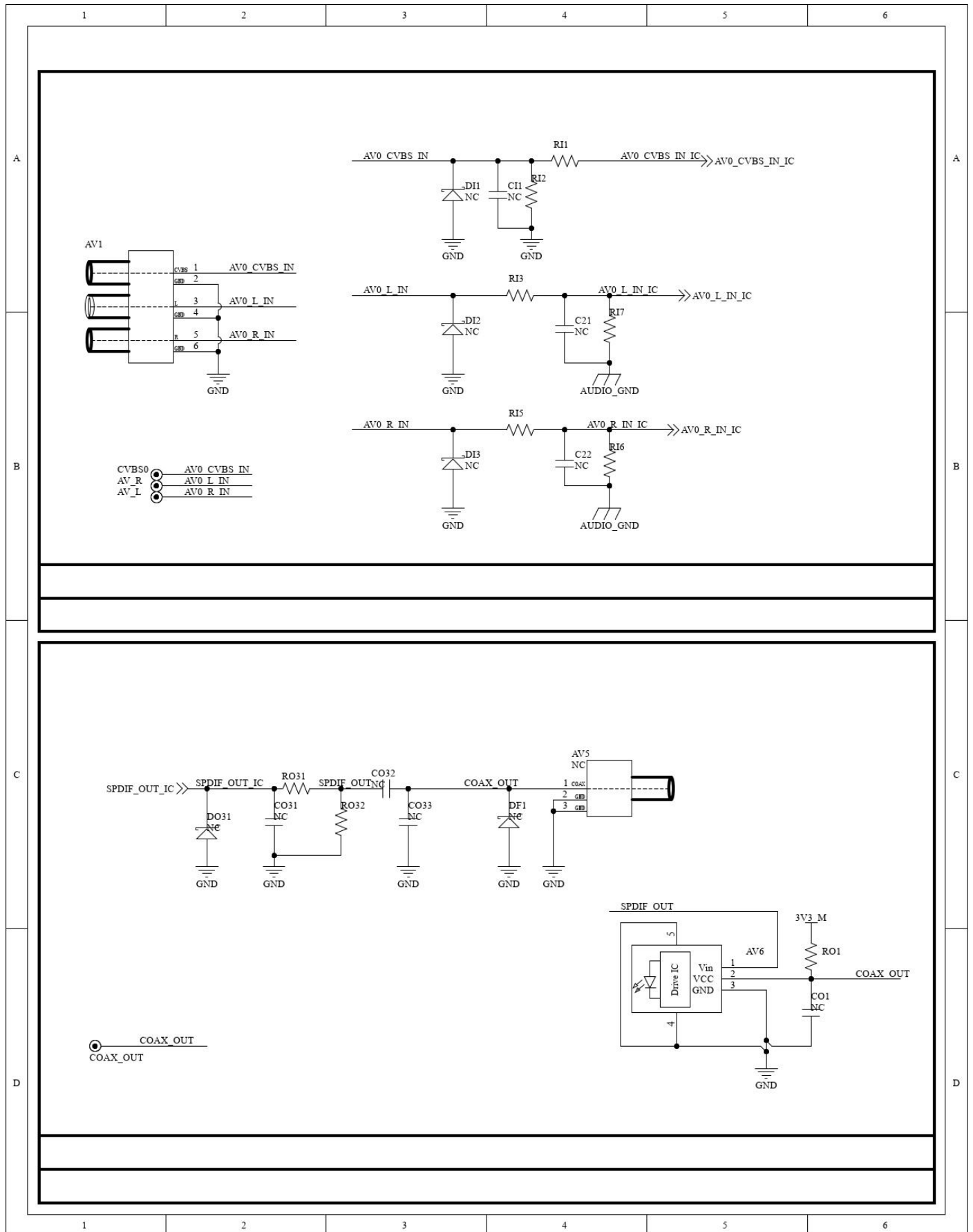
4.



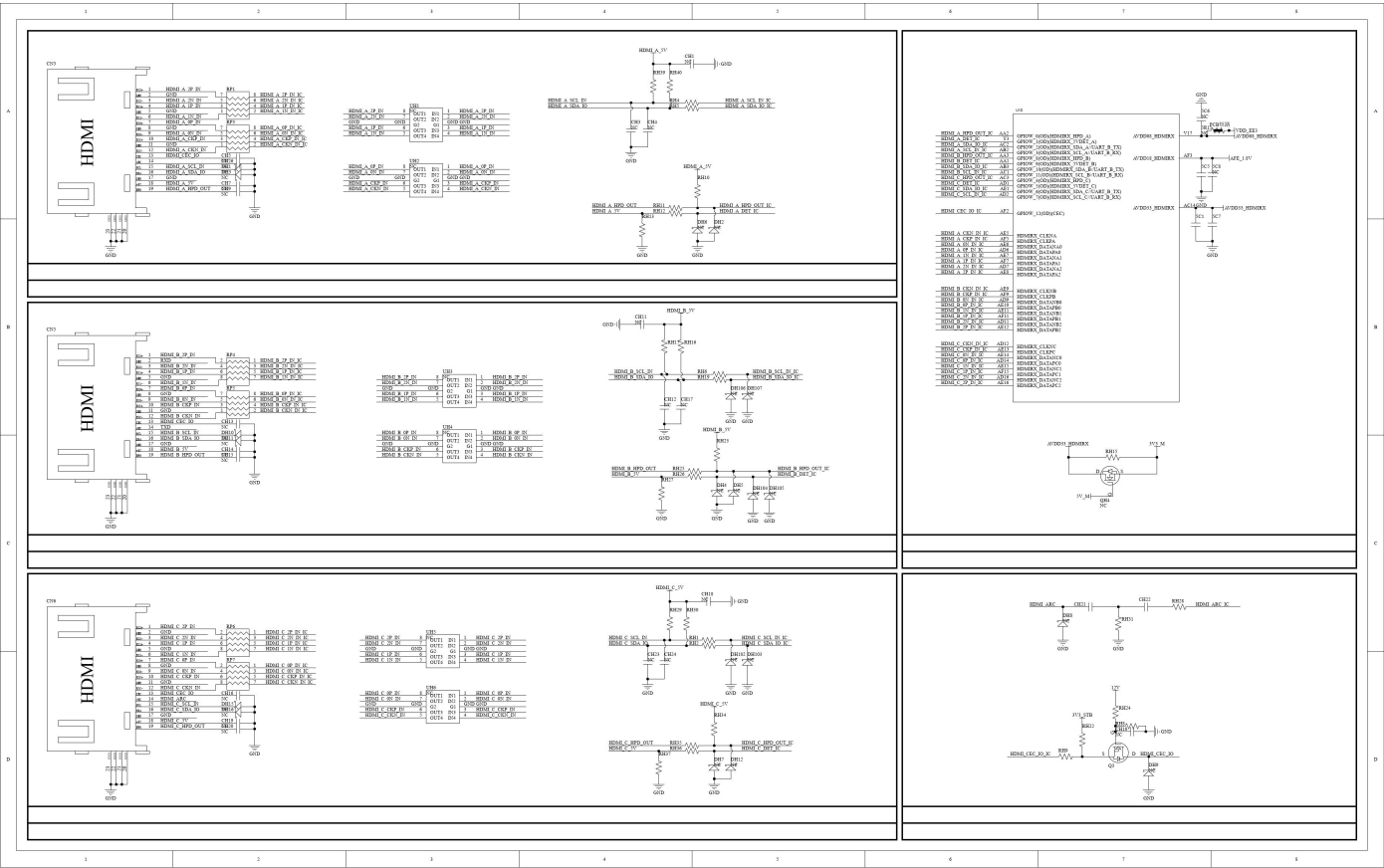
5.



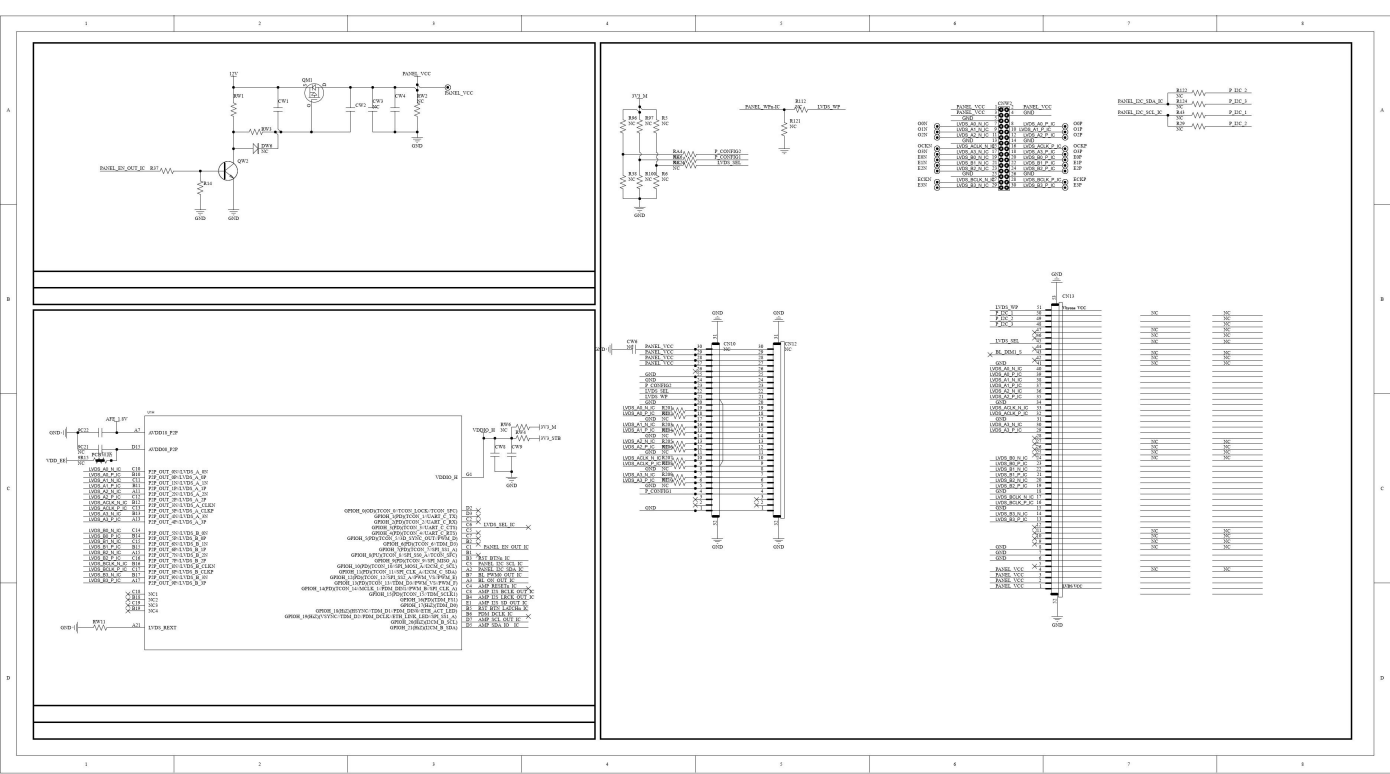
6.



7.



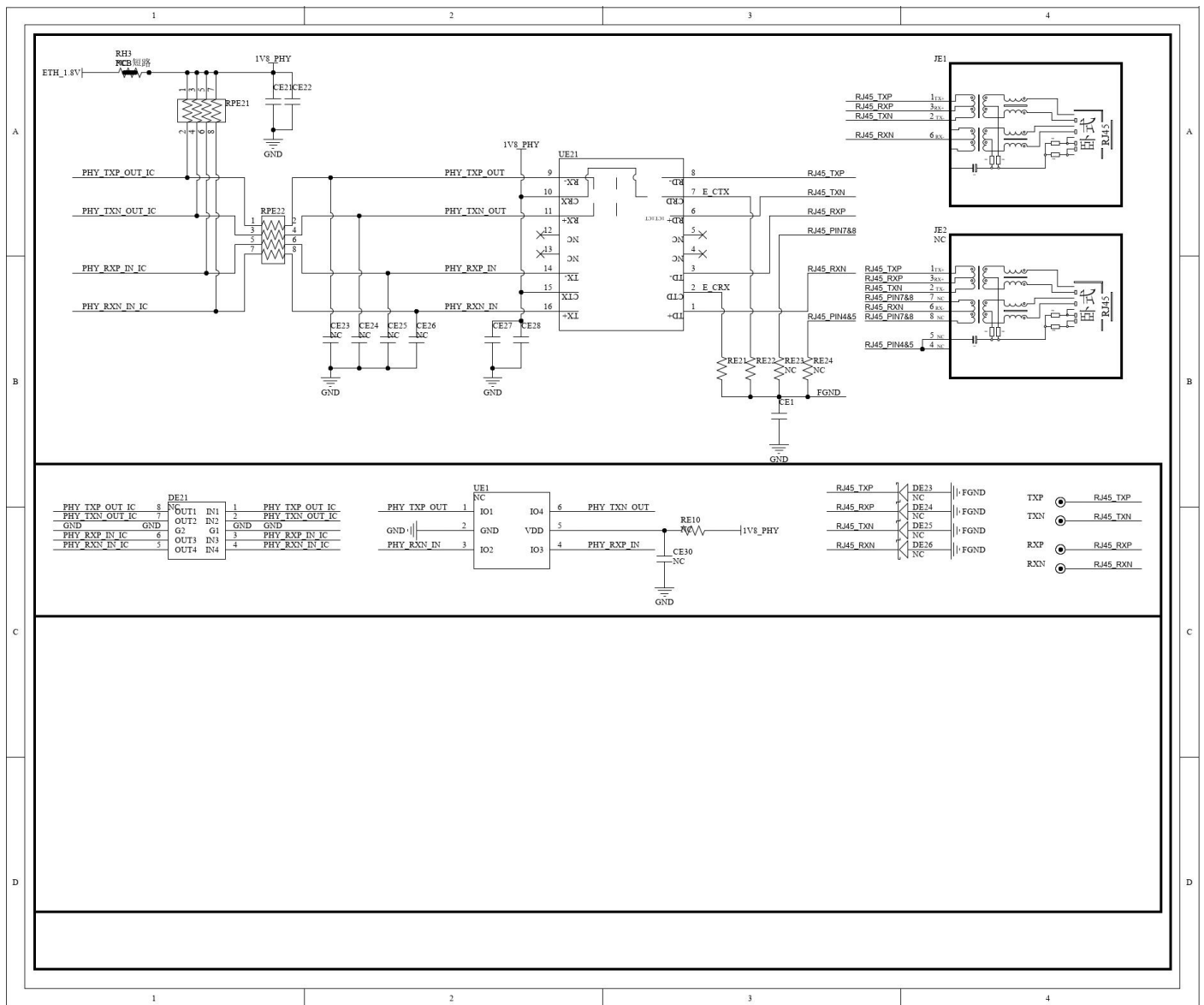
8.



The schematic diagram illustrates the internal circuitry of a power management IC, organized into 10 pages. The components and connections are as follows:

- Page 1:** Features a 1.2V regulator (R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R

11.



12. PCBA Silkscreen

12.1 Main Board Silkscreen

