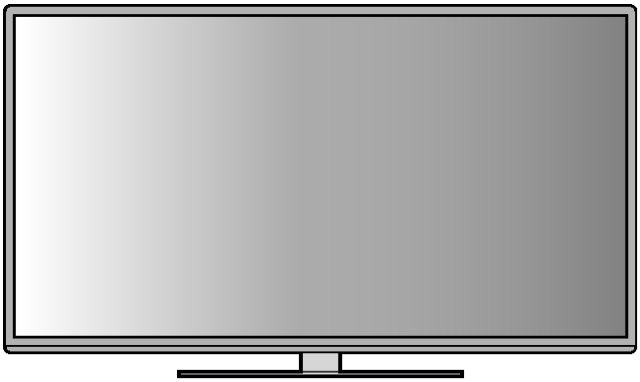
ORDER NO. MTV1506450CE

Service Manual

LED TV



Model No. TH-50C300K
TH-50C300M
TH-50C300S
TH-50C300T
TH-50C300X

⚠ WARNING

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

IMPORTANT SAFETY NOTICE

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

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1 Safety Precautions

1.1. General Guidelines

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

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 8.5Mohm to 13Mohm.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

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

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

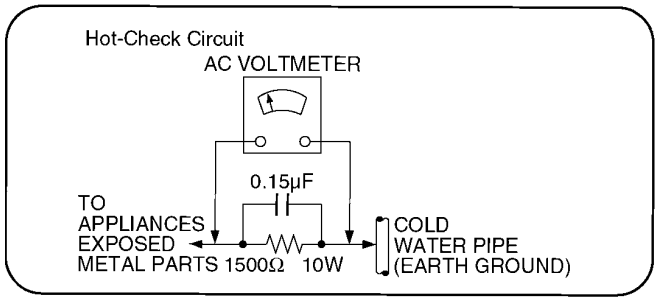


Figure 1

2 Warning

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

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

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as [anti-static (ESD protected)] can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise ham less motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

2.2. About lead free solder (PbF)

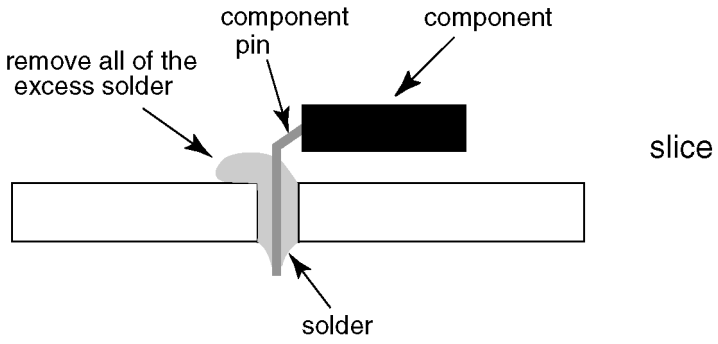
Note: Lead is listed as (Pb) in the periodic table of elements.
In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.
The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

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

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

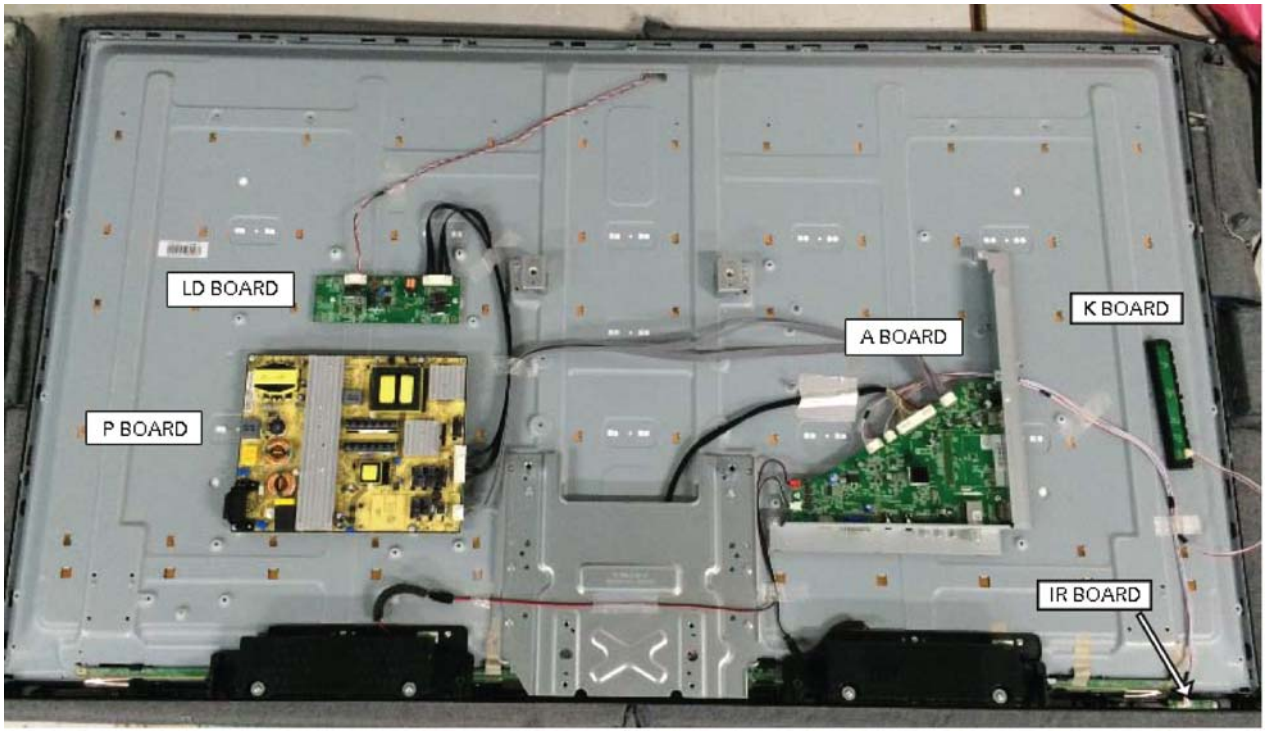
Caution

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



3 Service Navigation

3.1. Service Hint



Board Name	Main Device	Remarks
A BOARD	TUN, EEP, SPI, MTK IC	All boards are non-repairable and should be exchanged for service
P BOARD	Power Supply	
K BOARD	Key	
IR BOARD	Remote	
LD BOARD	LED Driver	

4 Specifications

Dimensions (W × H × D)	1 128.3 mm × 710.7 mm × 230 mm (With Pedestal)	
	1 128.3 mm × 661.7 mm × 78.9 mm (TV only)	
Mass	15.8 kg Net (With Pedestal)	
	13.2 kg Net (TV only)	
Power source	AC 220-240 V, 50 / 60 Hz (TH-50C300K/ TH-50C300S/ TH-50C300T)	
	AC 110-240 V, 50 / 60 Hz (TH-50C300X)	
	AC Auto 110-240 V, 50 / 60 Hz (TH-50C300M)	
Rated power consumption	125 W	
Standby power consumption	0.50 W	
Visible screen size (diagonal)	126 cm	
Display resolution	1 920 (W) × 1 080 (H)	
Panel	LCD panel (LED backlight)	
Connection terminals		
AV IN	**VIDEO**	RCA PIN Type × 1 1.0 V[p-p] (75 Ω)
(COMPONENT / VIDEO)	**AUDIO L - R**	Mini PIN Type 0.5 V[rms]
	Y	1.0 V[p-p] (including synchronisation)
	P_B/C_B, P_R/C_R	±0.35 V[p-p]
HDMI 1 / 2 input	TYPE A Connectors	
USB	USB 2.0 TYPE A Connectors	
	DC 5 V, Max. 500 mA	
SPDIF	PCM / Dolby Digital, Coaxial	
VGA	DB15 Socket	
Analogue Audio Out	Mini PIN Type, 353 - 707 mV[rms]	
Sound		
Audio output	20 W (10 W + 10 W)	

Receiving systems / Band name

	12 SYSTEMS	FUNCTION
1	PAL B, G	Reception of broadcast
2	PAL I	
3	PAL D, K	
4	SECAM B, G	
5	SECAM D, K	
6	SECAM L	
7	NTSC 4.43	Playback from Special VCR's or DVD
8	NTSC 3.58	
9	PAL	
10	PAL 60 Hz / 5.5 MHz	Playback from Special Disc Players and Special VCR's or DVD
11	PAL 60 Hz / 6.0 MHz	
12	PAL 60 Hz / 6.5 MHz	

Digital TV	7 MHz VHF / 8 MHz UHF free-to-air TV broadcast reception
Receiving channels (Analogue TV)	

VHF BAND	2 - 12	(PAL / SECAM B, K1)
	0 - 12	(PAL B AUST.)
	1 - 9	(PAL B N.Z.)
	1 - 12	(PAL / SECAM D)
	1 - 12	(NTSC M Japan)
	2 - 13	(NTSC M USA)
UHF BAND	21 - 69	(PAL G, H, I / SECAM G, K, K1)
	28 - 69	(PAL B AUST.)
	13 - 57	(PAL D, K)
	13 - 62	(NTSC M Japan)
	14 - 69	(NTSC M USA)
CATV	S1 - S20	(OSCAR)
	1 - 125	(USA CATV)
	C13 - C49	(JAPAN)
	S21 - S41	(HYPER)
	Z1 - Z37	(CHINA)
	5A, 9A	(AUST.)

Aerial input	VHF / UHF
Operating Conditions	**Temperature :** 0°C - 40°C
	Humidity : 20 % - 80 % RH (non-condensing)

Note

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

5 Test and Alignment

5.1. Factory Menu Description

Follow the below steps to pop-up the Factory menu in case of “FactoryKey” is disabled:

- Press RCU “**MENU**” key to display main menu
- Select “**Picture**” and press “**OK**” key to enter into Picture submenu
- Scroll down to “**Contrast**” item
- Press the subsequence RCU keys “**9**”, “**7**”, “**3**” and “**5**”

In case of “**FactoryKey**” is enabled, just press RCU “**Return**” key to pop-up again the Factory menu.
The status of “**Factory Key**” can be changed in “**Factory Menu**->**Hotkey**”

- Press RCU “**OK/▶**” key to enter the submenu.
- Press RCU “**Menu**” key to go back to the root menu.
- Press RCU “**◀/▶**” key to change the values.
- Press RCU “**OK**” key run the function.
- Press RCU “**Exit**” key exit the Factory menu.

1 - Hotkey submenu

Item	Sub-item	Value	Note
Hotkey		Off/On	Enable Hotkey flag by pressing “◀▶” key to have possibility to access Factory menu with “RETURN” key (default is disabled)

2 - Warm-Up Mode submenu

Item	Sub-item	Value	Note
Burning Mode		Off/On	Enable Burning mode by pressing “◀▶” key, then press “**EXIT**” key to activate it Press “**Menu**” key on local keyboard to exit the Burning mode

3 - ADC submenu (**N/A** - menu reains grayed)

4 - White Balance submenu

Item	Sub-item	Value	Note
White Balance	Source	HDMI/VGA/DTV PAL/SECAM NTSC/RGB/CMP	Select by pressing “◀▶” key
	Color Temperature	Normal/Warm/Cool	Select Tone by pressing “◀▶” key
	RED Gain	000..255	Set R Gain by pressing “◀▶” key (-127..+128 for offset)
	GREEN Gain	000..255	Set G Gain by pressing “◀▶” key (-127..+128 for offset)
	BLUE Gain	000..255	Set B Gain by pressing “◀▶” key (-127..+128 for offset)
	RED Offset	000..255	Set R Offset by pressing “◀▶” key (-127..+128 for offset)

Item	Sub-item	Value	Note
	GREEN Offset	000..255	Set G Offset by pressing "◀▶" key (-127..+128 for offset)
	BLUE Offset	000..255	Set B Offset by pressing "◀▶" key (-127..+128 for offset)
	White Balance Init	>	Press "▶" key to initialize RGB Gain/Offset values
	Pic. Enhance	On/Off	Press "▶" key to disable all picture settings from Feature submenu. This should be done before any White Balance alignment (flag is restored to Off after Shop-End)
	Picture Related	>	Press "▶" key to activate submenu
Picture Related	Flesh tone	On/Off	Press "◀▶" key to enable/ disable
	Adaptive Luma Control	On/Off	Press "◀▶" key to enable/ disable
	Light Sensor	On/Off	Press "◀▶" key to enable/ disable
	Dynamic Backlight	Low Medium High Auto	Select by pressing "◀▶" key
	Back light	000..100	Set Backlight by pressing "◀▶" key
	ADP Control Low Point	000..100 (007d)	Set ADP Low by pressing "◀▶" key
	ADP Control Middle Point	000..100 (057d)	Set ADP id by pressing "◀▶" key
	ADP Control High Point	000..100 (100d)	Set ADP High by pressing "◀▶" key
	Scaling Brightness	000..255	Set ScBrigh by pressing "◀▶" key (-127..+128 for offset)
	Scaling Contrast	000..255	Set ScCont by pressing "◀▶" key (-127..+128 for offset)
	Scaling Saturation	000..255	Set ScSat by pressing "◀▶" key (-127..+128 for offset)

5 - Reset Shop submenu

Item	Sub-item	Value	Note
Reset Shop		>	Press "**OK** ▶" key to remove Factory presets (channel Maps, bargraph context, …) and restore User OOB settings. All adjustments are not impacted!

6 - Reset ALL submenu

Item	Sub-item	Value	Note
Reset ALL		>	Press "**OK ▶**" key to default NVM according to selected Project ID (all adjustments are defaulted, channel Maps are cleared, Hotkey is enabled, …)

7 - Power Mode submenu

Item	Sub-item	Value	Note
Power Mode		Boot Standby Last Status	Select starting sequence by pressing "◀▶" key - Boot: Force TV to start -Standby: Force TV to standby - Last Status: Force TV to standby or to start depending on latest operation

8 - USB Clone Mode submenu

Item	Sub-item	Value	Note
USB Clone	USB Clone Mode	All ChannelList EEPROM User Setting	Select by pressing "◀▶" key
	TV TO USB	DO	Press "**OK ▶**" to copy TV template context to USB depending on Cloning mode
	USB TO TV	DO	Press "**OK ▶**" to copy USB template context to TV depending on Cloning mode

9 - PC Link Check submenu

Item	Sub-item	Value	Note
PC Link Check		DO	Press "**OK ▶**" to check IP address dectection and control MAC, DID, and UID integrity

10 - Other submenu

Item	Sub-item	Value	Note
Project Info	Project ID	***	Select Project ID by pressing "◀▶" key
	Project Name	***	Info
	Panel ID	***	Info
	Panel Name	***	Info
	Version	***	Info (ex:V8-MT25F0x-LF1Vxxx)
	Date	***	Info
	Time	***	Info

Item	Sub-item	Value	Note
	MCU Version	***	Info (n/a)
	Product S/N	(NULL)	Info
Update CI+ Credential	Update CI+ Credential	>	Press "**OK ▶**" key to active CI+ key
	Update from USB	>	Press "**OK ▶**" key to copy CI+ key from USB
	Erase CI+ Credential	>	Press "**OK ▶**" key to remove CI+ key
	Valid	***	Show the CI+ status (NO by default)
	Cus Code	***	Show the CI+ custom code
	Serial Num	***	Show the CI+ serial number
Update MAC address	Update from USB	>	Press "**OK ▶**" key to copy MAC address from USB
	Written status	***	Show the writing status (NO by default)
	MAC address	***	Show the MAC address (NULL by default)
	PC Link Check	DO	Press "**OK ▶**" to check IP address detection and control MAC, DID, and UID integ-rity
Tuner AGC		-127..+127	Set AGC level by pressing "◀▶" key
Auto Standby		Off 4 hours 6 hours 8 hours	Select ErP Auto Switch-Off mode by pressing "◀▶" key
MT31BOP		On/Off	Enable/Disable by pressing "◀▶" key
MT31BFS		On/Off	Enable/Disable by pressing "◀▶" key
Event By Event		On/Off	
OAD Update		>	Press "**OK ▶**" to start OAD Upgrade process

5.2. How to upgrade Flash SW using USB

5.2.1. Upgrade with Loader

1. Power-off or switch TV to standby (LED should light on).
2. Copy the corresponding SW PKG image (ex: "**V8-0MT310x-LF1Vxxx.pkg**") into USB stick (pen drive) root path and rename it to "**upgrade.pkg**".
3. Plug USB stick to the TV.
4. While power-on TV if previously off (LED status off), press "**Power**" button from localkeyboard during few seconds to start upgrading process.
5. Release "**Power**" button once LED is blinking or USB stick starts blinking, TV is uploading SW BIN image.
6. When reflashing is successful, TV should restart automatically after ~2min.

Info:

If TV doesn't restart and LED is lightening on, an error may occurred during flashing, check the set, PKG file integrity and try again from 1st step.

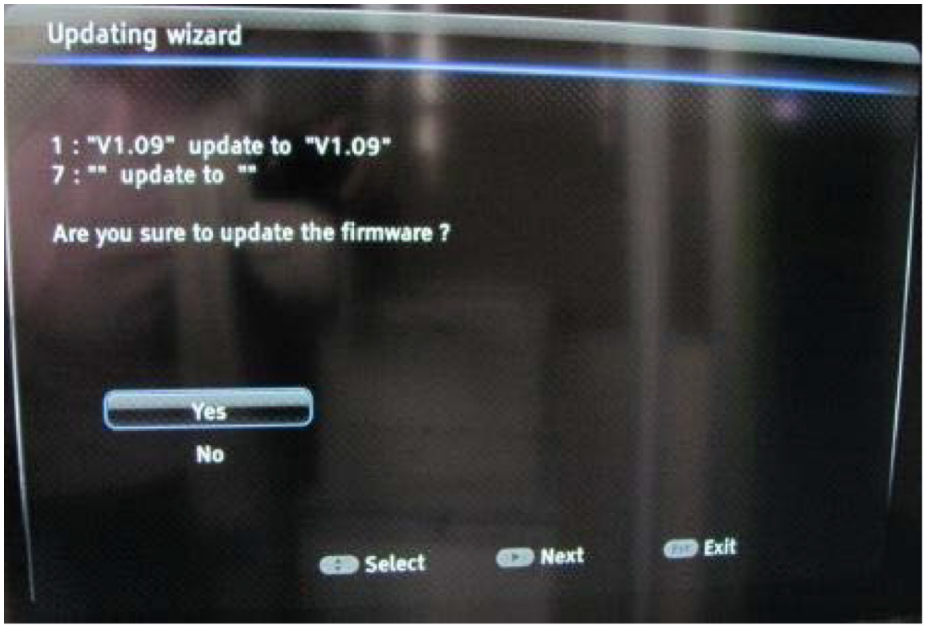
7. Remove USB stick.
8. Remember to perform "**Factory menu** → **Reset ALL**" or "**Factory menu** → **Reset Shop**" and then press RCU "**OK / ▶**" key if there's not any subsequent cloning operation.
9. Switch off TV by removing AC cord.
10. Reconnect AC cord to restart TV and wait few seconds for Eeprom update.

Note:

If "Reset Shop" was performed, a "Welcome Setup" menu should be displayed, otherwise new SW version should be displayed into relevant Factory mode caption info or on bottom of "**Factory menu**".

5.2.2. Upgrade without Loader

1. Copy the corresponding SW PKG image (ex: "**V8-0MT310x-LF1Vxxx.pkg**") into USB stick (pen drive) root path and rename it to "**upgrade.pkg**".
2. Plug USB stick to the TV.
3. TV will automatically detect new SW to upgrade and displays below pop-up message:



4. Press RCU "**OK/**." key to start upgrading process and follow instructions till reflashing is successful.
5. Remove USB stick
6. Remember to perform "**Factory menu** → **Reset ALL**" or "**Factory menu** → **Reset Shop**" and then press RCU "**OK / ▶**" key if there's not any subsequent cloning operation.
7. Switch off TV by removing AC cord.
8. Reconnect AC cord to restart TV and wait few seconds for Eeprom update.

Note:

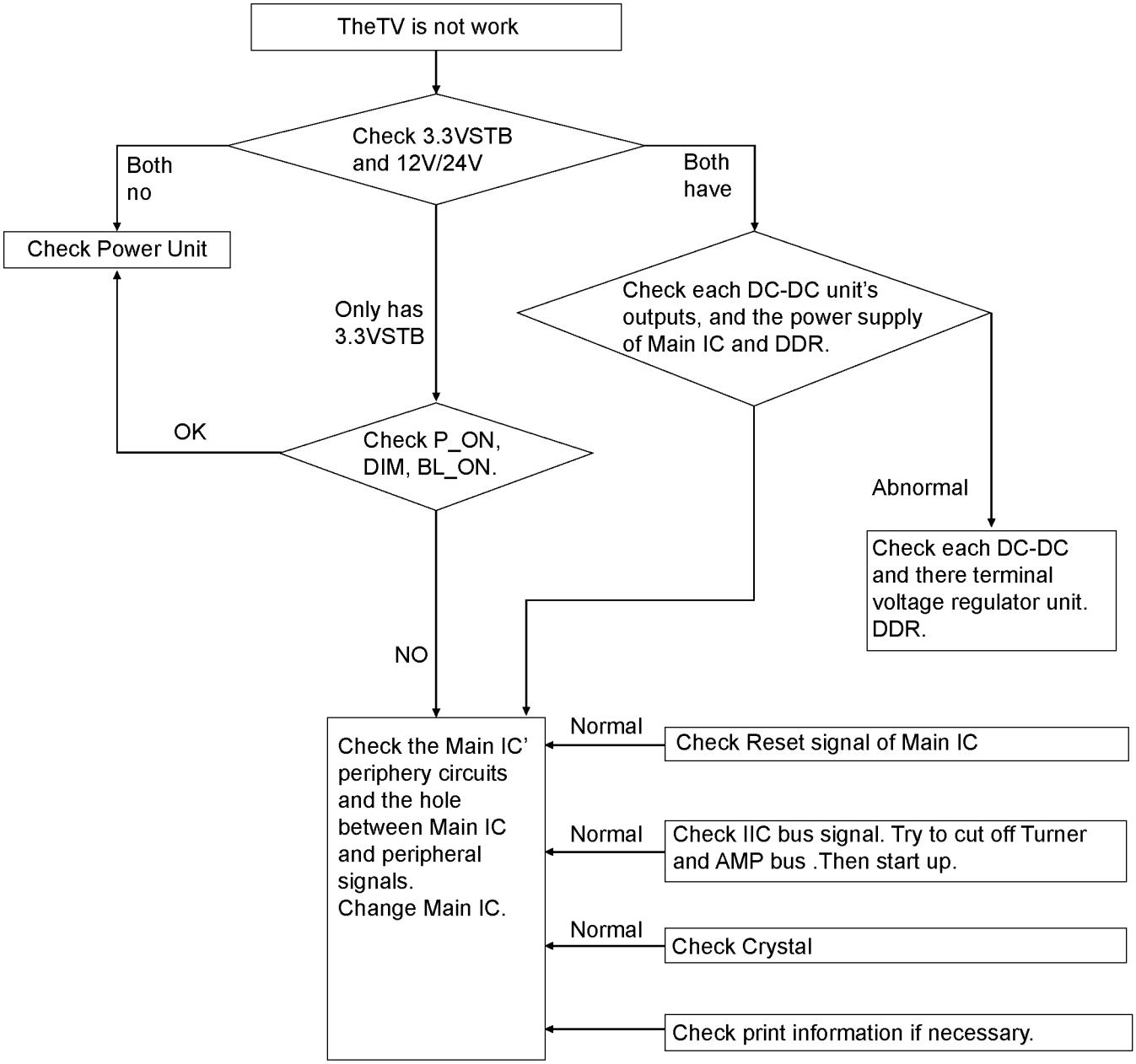
If "Reset Shop" was performed, a "Welcome Setup" menu should be displayed, otherwise new SW version should be displayed into relevant Factory mode caption info or on bottom of "**Factory menu**".

5.3. How to change ProjectID with RCU

1. Process following subsequence IR codes to change projectID: **062598+MENU+xxx** (xxx:ProjectID, ex:003).
2. Restart TV.

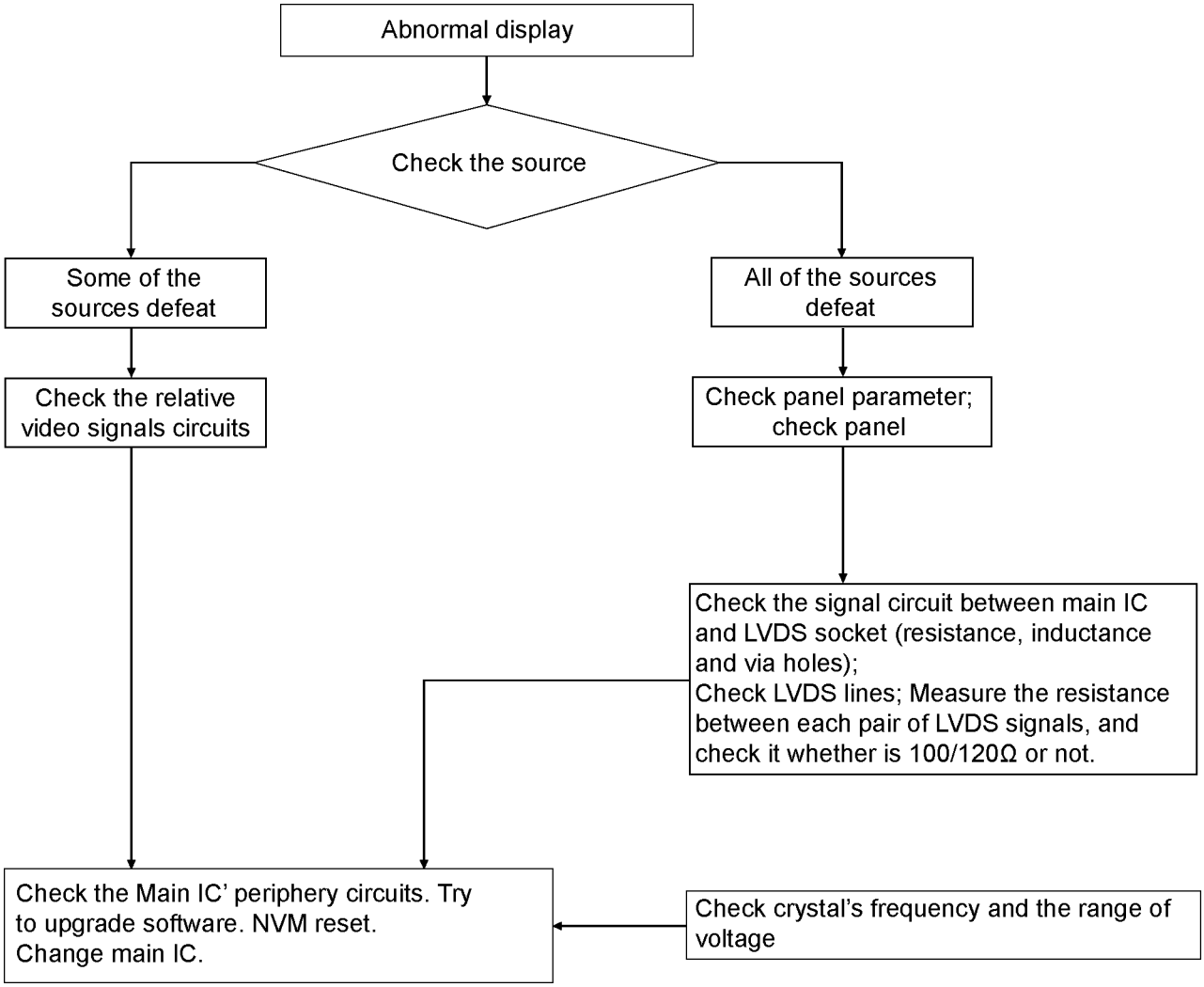
6 Troubleshooting Guide

6.1. Green Power LED does not turned on.



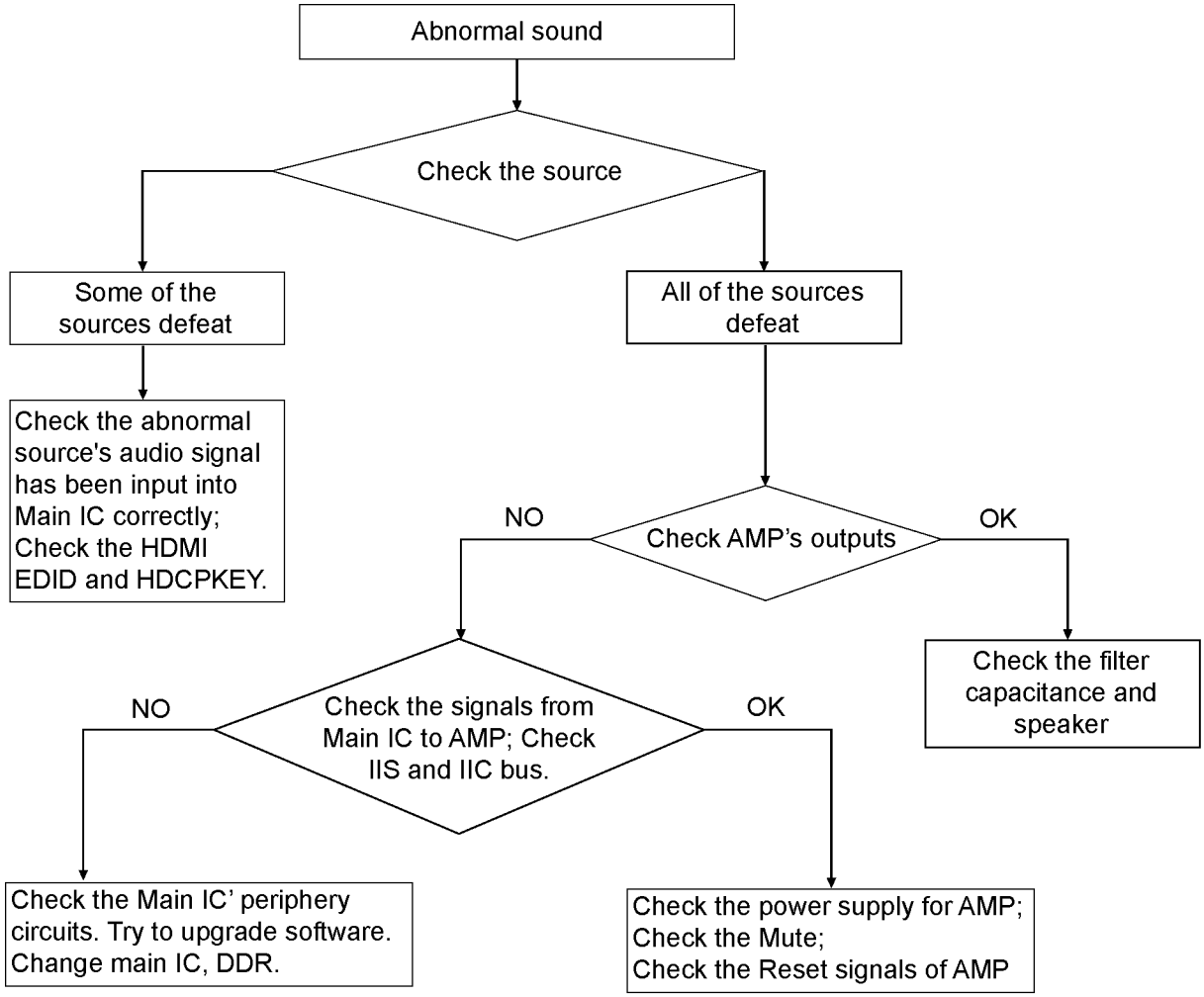
- Many problems may cause the TV can't start up. Firstly, it's need to foreclose the possible bad board (such as main board, key board, panel etc). We can do the right thing only if we find the bad board. The main reasons such as: power supply abnormal, core voltage, DDR's reference voltage, main program abnormal, MBOOT program abnormal, wrong panel parameter, EEPROM data abnormal, bad Main IC and DDR etc. The print information will be useful to analyzing the problems quickly recur to the serial interface tools.

6.2. Abnormal display



- The method of maintain single source (such as TV, AV etc) abnormal display: Firstly, check the relative channel circuit's component whether have obviously short and virtual jointing. It is need to use forehead method to deal with the covert reason. It is need to check Tuner's outputs for TV source abnormal display. Because of Main IC's high degree of integration, all of the video signals are transmitted to the back end after processed by main IC. All of the sources' abnormal display may caused by the main IC's abnormal run. So it is need to judge the problem is caused by the main IC or fore-end circuits. You can do like this: Put the good machine's TV/AV signal into the bad machine's Main IC ,and put the bad machine's TV/AV signal into the good machine's Main IC. If the problem follows the action, the problem is caused by fore-end circuits. If the problem not follows the action, the problem is caused by the Main IC or the periphery circuits.

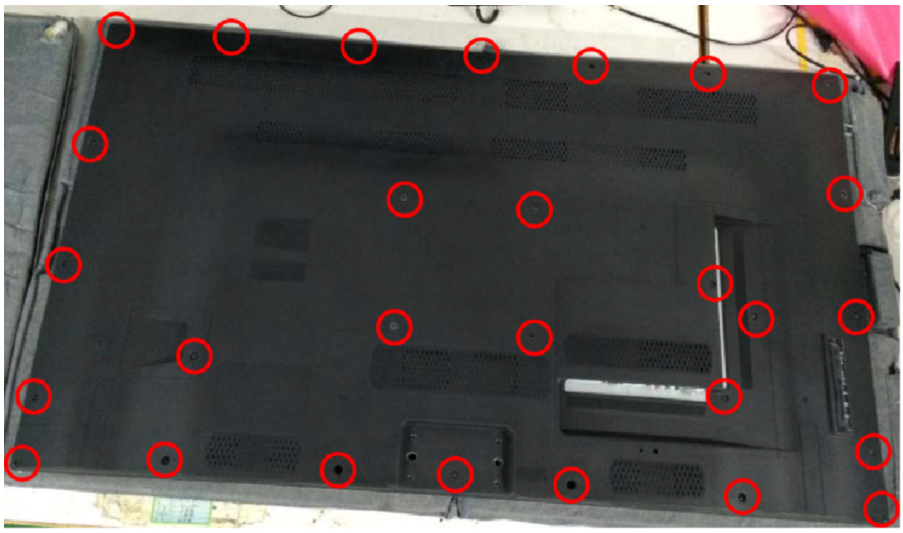
6.3. Abnormal sound



- It is need to check Tuner's outputs when in TV source and check the IIS signals from main IC. Check the Mute circuits and AMP reset's function.

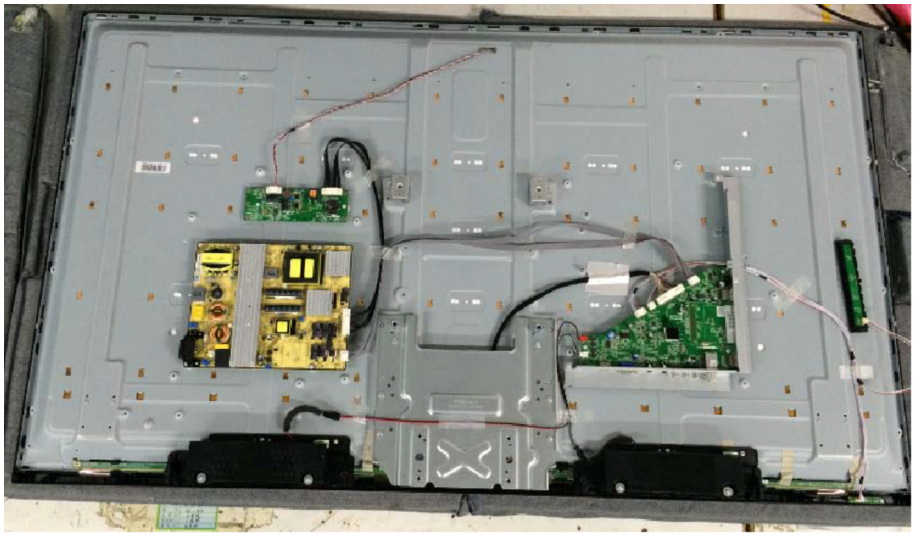
7 Disassembly and Assembly Instructions

1. Disassembly the screws on the back cover.



2. Be careful of the board lines.

3. Remove the back cover.



8 Measurements and Adjustments

8.1. Voltage chart of A-board

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

Power Supply Name	Measurement Point	Specification (V)	Remark
SUB1.2V	L102	1.14 - 1.26	-
SUB3.3V	U101	3.19 - 3.46	-
SUB5V	L116	4.92 - 5.25	-
STV3.3V	P102(pin7)	3.19 - 3.46	-
PNL12V	L101	11.5 - 12.5	-

8.2. Voltage chart of P-board

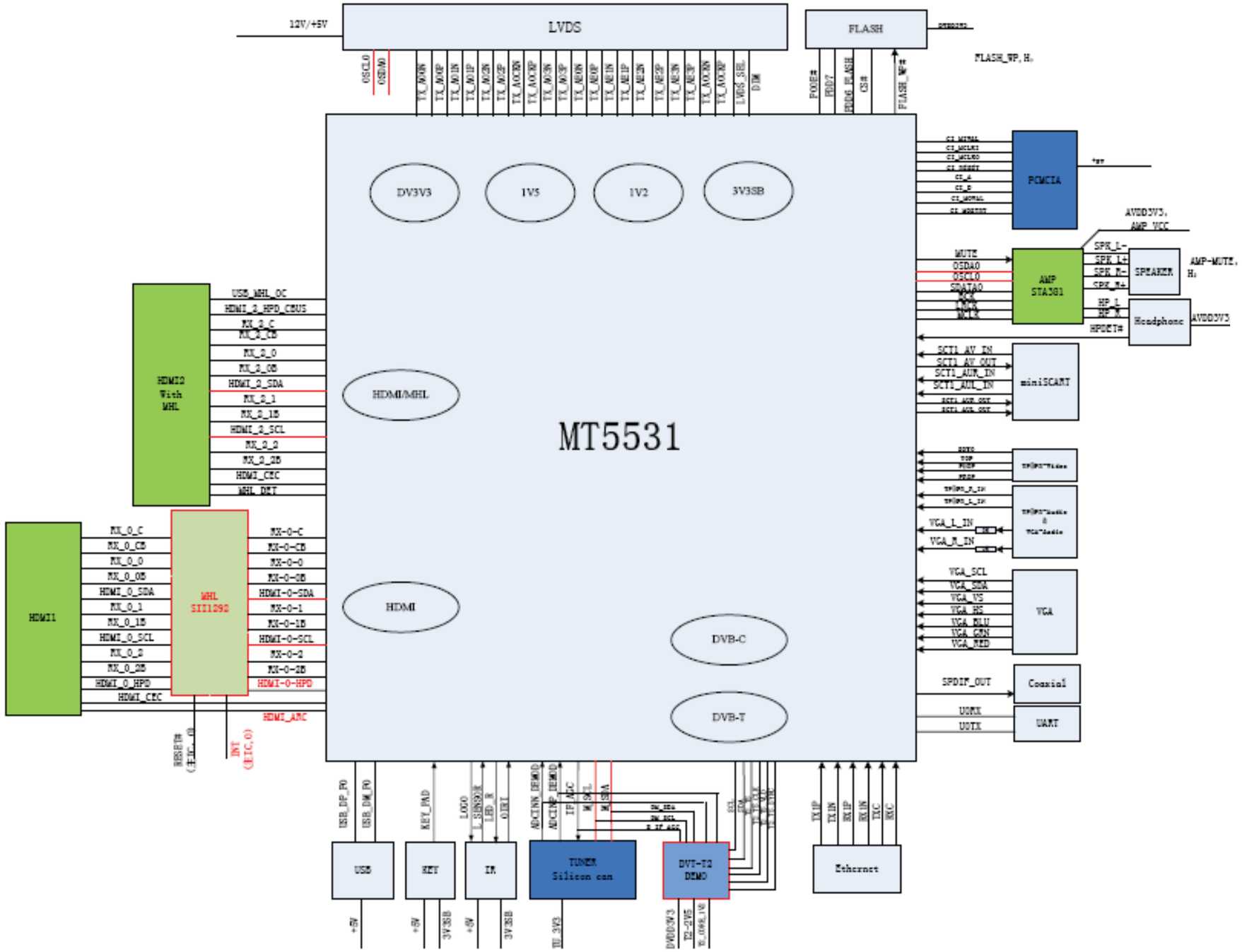
Set P-Board to a dummy load and check the satisfaction with the specified voltage as following table.

Output	Test Point	Specification	
		Step 1	Step 2
24V	CN1 (pin 1, 2, 4)	<1V	24 ± 1.6V
3.3V	CN1 (pin7)	3.3 ± 0.2V	3.3 ± 0.2V
PFC	R13	<340V	390V ± 15V

Step 1 Supply AC 100V/230 to JK7101 connector in the P-Board. Main power button is OFF.

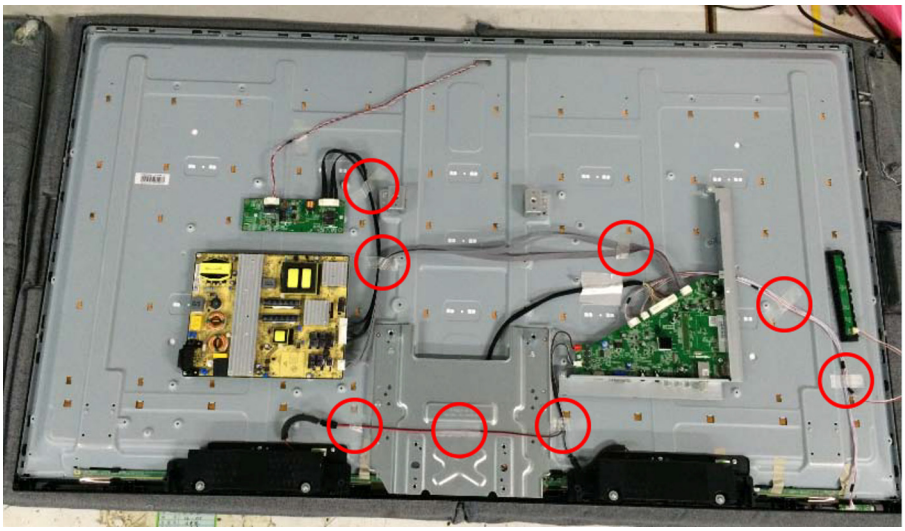
Step 2 Supply DC 2.5V to TV_SUB_ON P2 connector, displayed as SWITCH.

9 Block Diagram

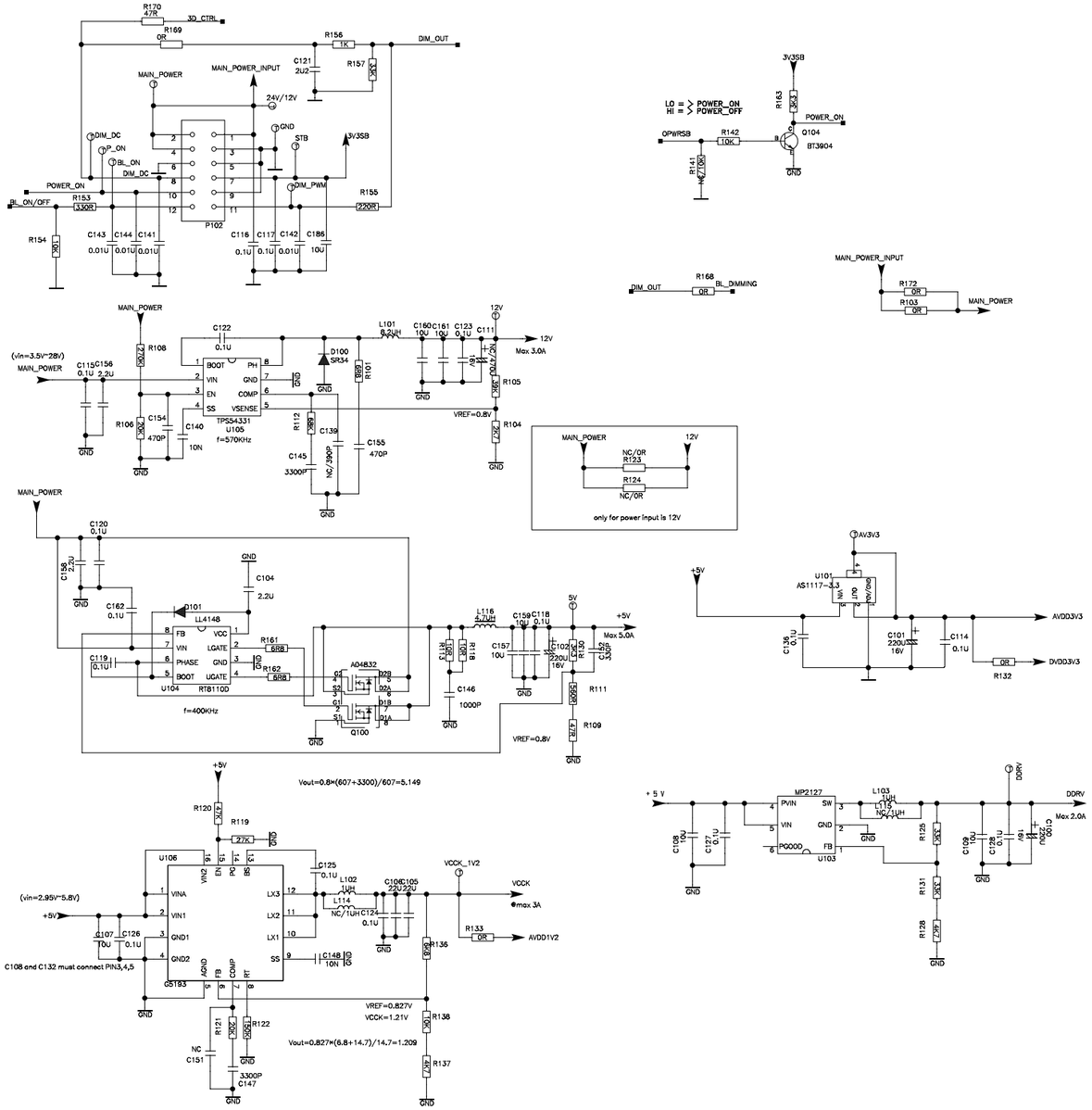


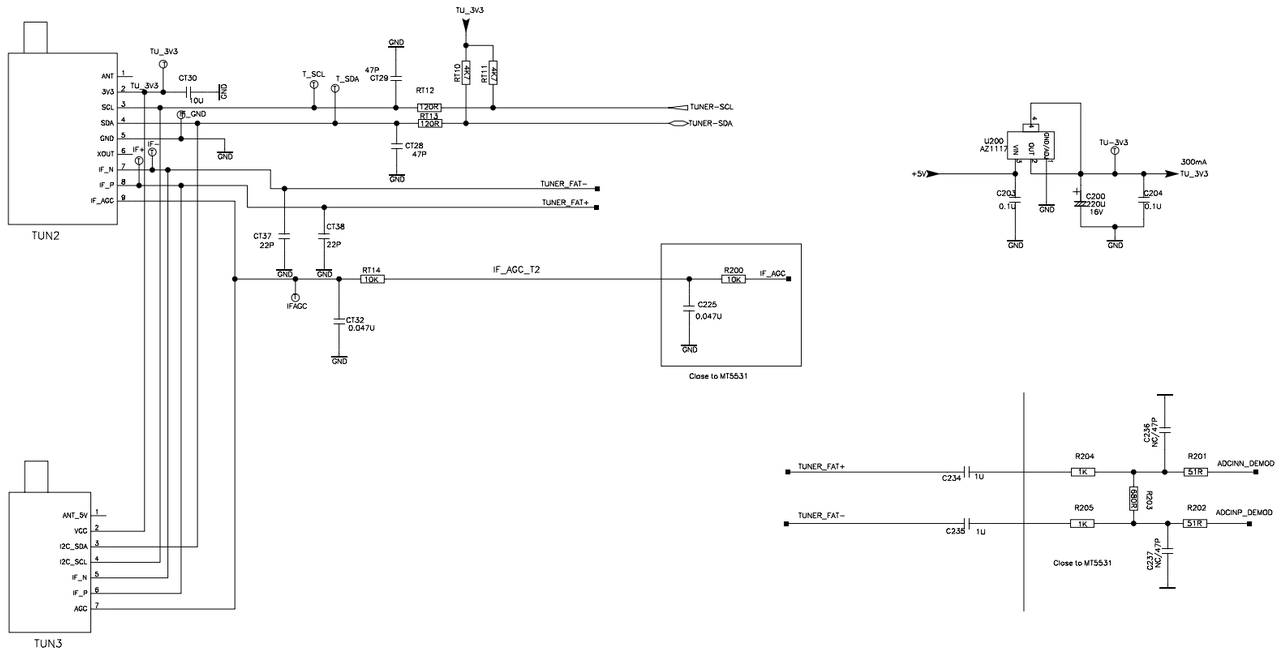
10 Wiring Connection Diagram

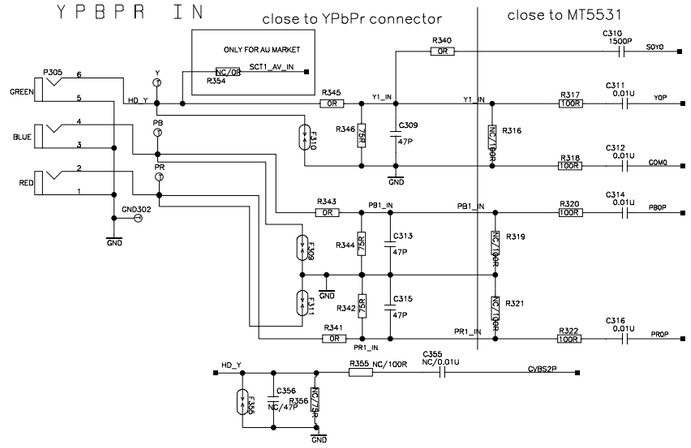
- Stick pet tape for wire dressing.

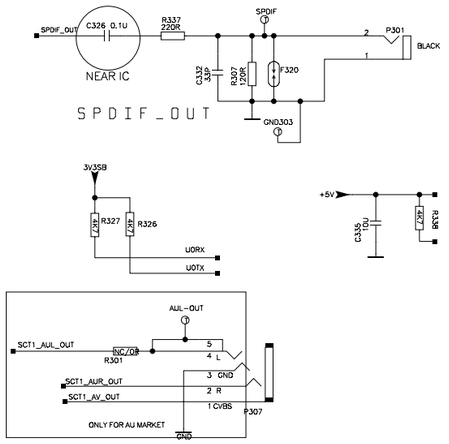


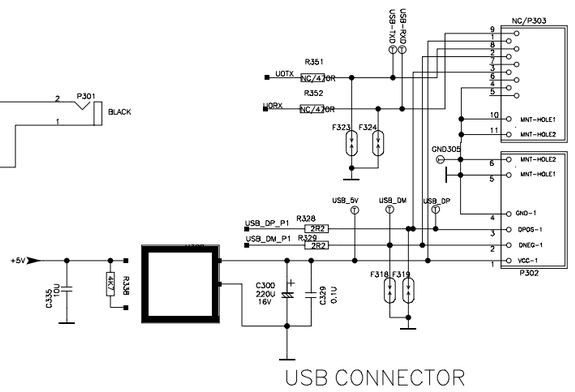
11 Schematic Diagram




TUN2
ANT
3V3
SCL
SDA
GND
XOUT
IF_N
IF_P
IF_AGC
TU_3V3
CT30
10U
T_SCL
T_SDA
47P
CT29
RT12
120R
RT13
120R
RT10
10K
RT11
10K
TUNER-SCL
TUNER-SDA
CT28
47P
TUNER_FAT-
TUNER_FAT+
CT37
22P
CT38
22P
RT14
10K
IF_AGC_T2
IFAGC
CT32
0.047U
R200
10K
IF_AGC
C225
0.047U
Close to MT5531
TUN3
ANT_5V
VCC
I2C_SDA
I2C_SCL
IF_N
IF_P
AGC
U200
AZ1117
VIN
VOUT
GND/ADJ
+5V
300mA
C203
0.1U
C200
220U
16V
C204
0.1U
C234
1U
C235
1U
R204
1K
R205
1K
C235
NC/47P
R203
680R
C237
NC/47P
R201
51R
R202
51R
ADCINN_DEMOD
ADCINP_DEMOD
Close to MT5531

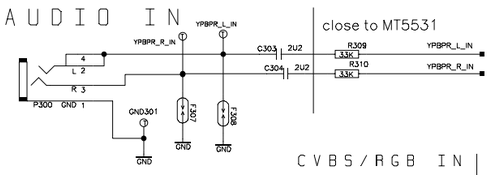

YPBPR IN
close to YPbPr connector
close to MT5531
ONLY FOR AU MARKET
SCT1_AV_IN
NC/0R
R354
PJ305
GREEN
BLUE
RED
HD_Y
PB
PR
GND302
R340 0R
R345 0R
R346 75R
C309 47P
R316 NC/470R
C310 1500P
SOY0
R317 100R
C311 0.01U
YOP
R318 100R
C312 0.01U
COMO
R343 0R
R344 75R
C313 47P
R319 NC/470R
C314 0.01U
PBOP
R320 100R
R342 75R
C315 47P
R321 NC/470R
R341 0R
C316 0.01U
PROP
R322 100R
Y1_IN
PB1_IN
PR1_IN
C355 NC/0.01U
R355 NC/100R
CVBS2P
C356 NC/47P
R356 NC/75R
F305
F306
F307
F308
F309
F310
F311
GND

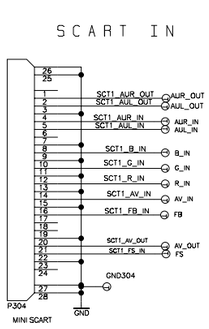

SPDIF_OUT
C326 0.1U
NEAR IC
R337 220R
SPDIF
C332 33P
R307 100R
F320
P301
BLACK
GND303
SPDIF_OUT

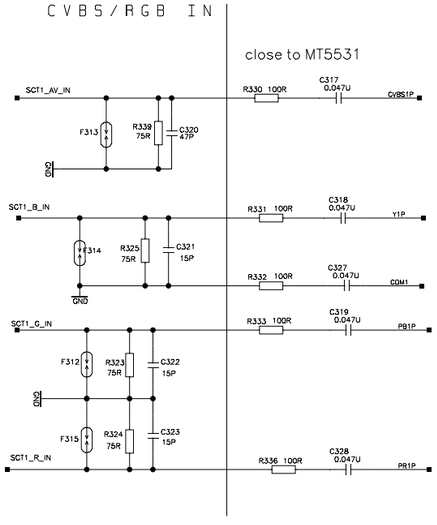

USB CONNECTOR
NC/P303
R351 NC/470R
R352 NC/470R
UOTX
UORX
USB-TXO
USB-RXO
F323
F324
GND305
MNT-HOLE1
MNT-HOLE2
USB_5V
USB_DM
USB_DP
USB_DP_P1
USB_DM_P1
R328 2R2
R329 2R2
C300 220U 16V
C329 0.1U
F318
F319
P302
GND-1
DPOS-1
DNEG-1
VCC-1
+5V
C335 10U
R38 47R

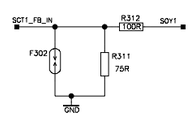
3V35B
R327 47R
R326 47R
UORX
UOTX

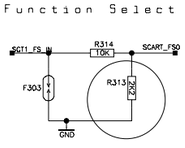
AUL-OUT
SCT1_AUL_OUT
NC/0R
R301
SCT1_AUR_OUT
SCT1_AV_OUT
ONLY FOR AU MARKET
P307
GND
1 CVBS
2 R
3 GND
4 L
5

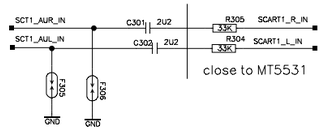

AUDIO IN
close to MT5531
YPBPR_L_IN
YPBPR_R_IN
C303 2U2
C304 2U2
R309 33K
R310 33K
P300
GND301
F307
F308
GND

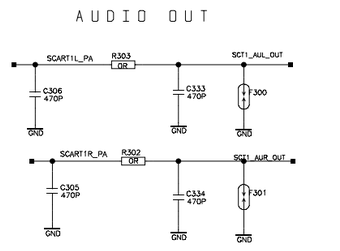

SCART IN
P304
MINI SCART
SCT1_AUR_OUT
SCT1_AUL_OUT
SCT1_AUR_IN
SCT1_AUL_IN
SCT1_B_IN
SCT1_G_IN
SCT1_R_IN
SCT1_AV_IN
SCT1_FB_IN
SCT1_AV_OUT
SCT1_FS_IN
GND304
AUR_OUT
AUL_OUT
AUR_IN
AUL_IN
B_IN
G_IN
R_IN
AV_IN
FB
AV_OUT
FS
GND

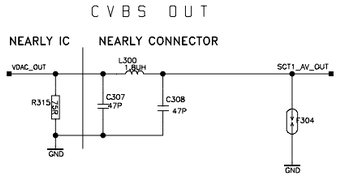

CVBS/RGB IN
close to MT5531
SCT1_AV_IN
R330 100R
C317 0.047U
CVBS1P
F313
R339 75R
C320 47P
SCT1_B_IN
R331 100R
C318 0.047U
Y1P
F314
R325 75R
C321 15P
R332 100R
C327 0.047U
COM1
SCT1_G_IN
R333 100R
C319 0.047U
PB1P
F312
R323 75R
C322 15P
F315
R324 75R
C323 15P
SCT1_R_IN
R336 100R
C328 0.047U
PR1P
GND


FAST BLANKING
SCT1_FB_IN
R312 100R
SOY1
F302
R311 75R
GND

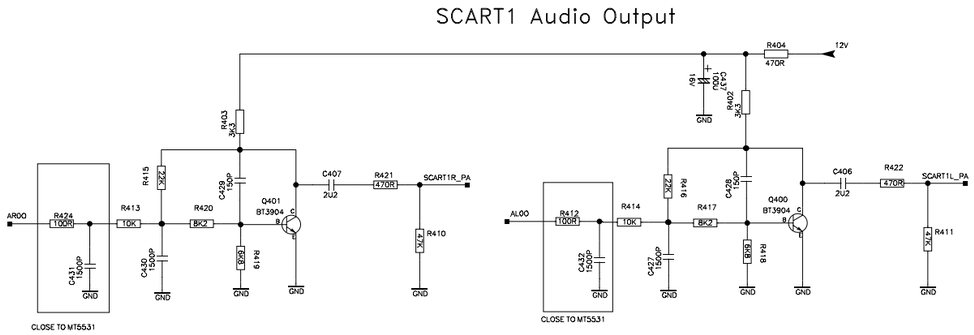

Function Select
SCT1_FS_IN
R314 10K
SCART_FSO
F303
R313 2K2
GND


AUDIO INPUT
SCT1_AUR_IN
SCT1_AUL_IN
C301 2U2
C302 2U2
R305 33K
R304 33K
SCART1_R_IN
SCART1_L_IN
close to MT5531
F305
F306
GND

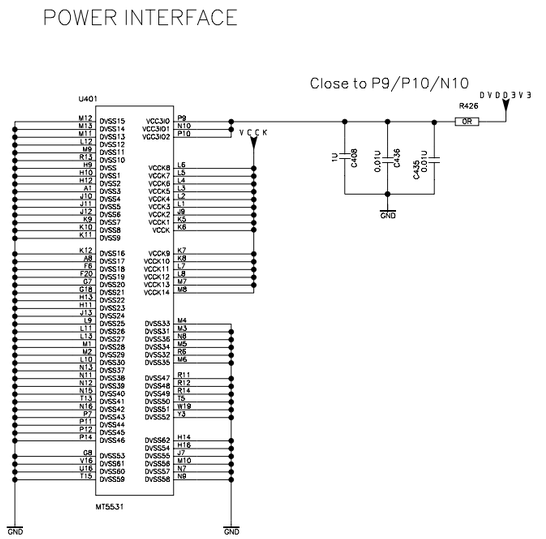

AUDIO OUT
SCART1L_PA
SCART1R_PA
R303 0R
R302 0R
C306 470P
C305 470P
C333 470P
C334 470P
SCT1_AUL_OUT
SCT1_AUR_OUT
F300
F301
GND


CVBS OUT
NEARLY IC
NEARLY CONNECTOR
VDAC_OUT
L300 1UH
R315 75R
C307 47P
C308 47P
SCT1_AV_OUT
F304
GND

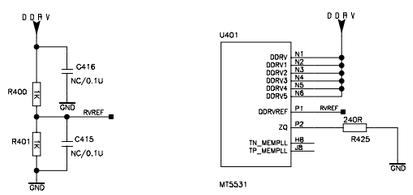
SCART1 Audio Output

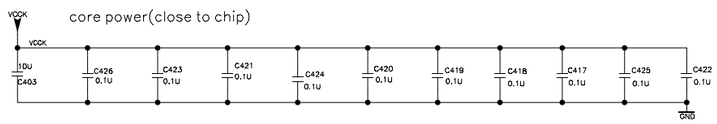


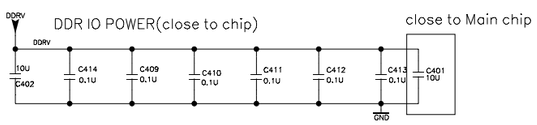
POWER INTERFACE



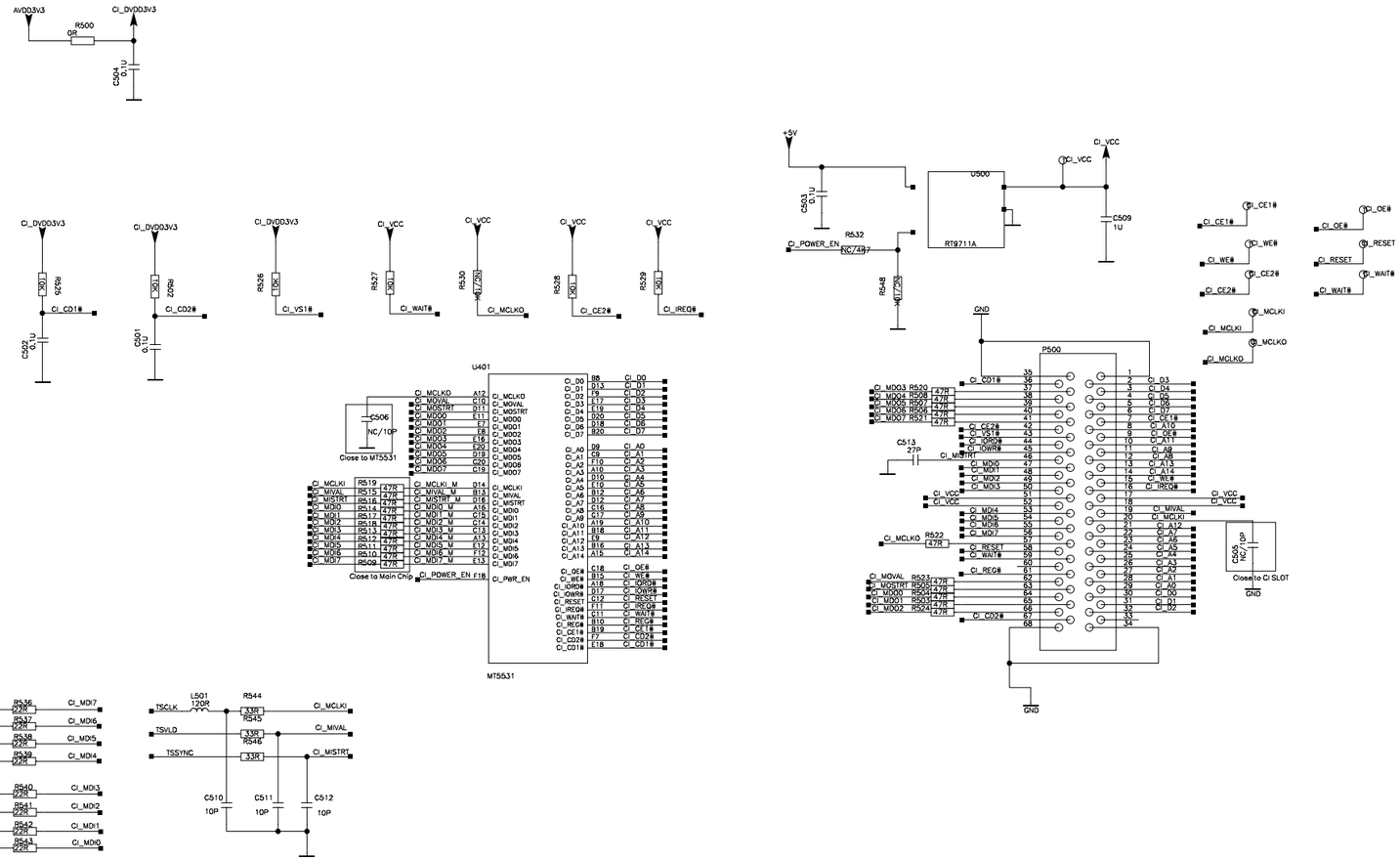
DDR3 POWER



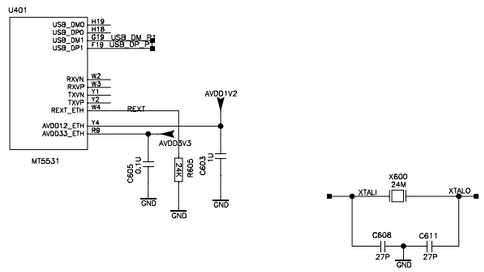




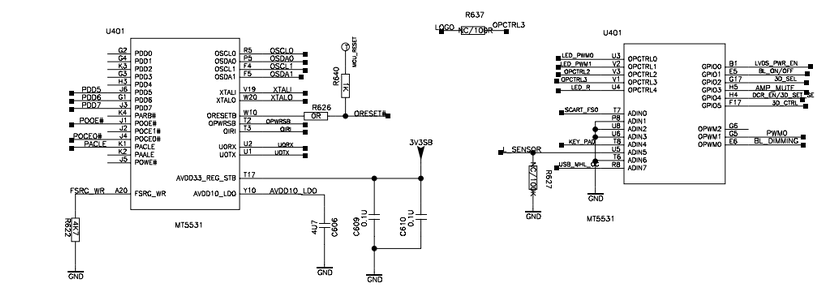
PCMCIA

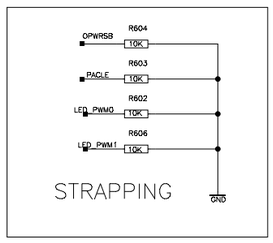

AVDD3V3
CI_DVDD3V3
R500
0R
C504
0.1U
CI_CD1#
CI_CD2#
CI_VS1#
CI_WAIT#
CI_MCLKO
CI_CE2#
CI_IREQ#
C502
0.1U
C501
0.1U
U401
MT5531
C506
NC/10P
Close to MT5531
Close to Main Chip
CI_POWER_EN
CI_MCLKI
CI_MOVAL
CI_MISTRT
CI_MDI0
CI_MDI1
CI_MDI2
CI_MDI3
CI_MDI4
CI_MDI5
CI_MDI6
CI_MDI7
+5V
C503
0.1U
R532
NC/4R7
R548
4R7/2W
U500
RT9711A
CI_VCC
C509
1U
GND
P500
CI_MDO3 R520
CI_MDO4 R508
CI_MDO5 R507
CI_MDO6 R506
CI_MDO7 R521
C513
27P
CI_MOVAL R523
CI_MDO0 R504
CI_MDO1 R503
CI_MDO2 R502
CI_MCLKO R522
C505
NC/10P
Close to CI SLOT
D_TSDATA7
D_TSDATA6
D_TSDATA5
D_TSDATA4
D_TSDATA3
D_TSDATA2
D_TSDATA1
D_TSDATA0
L501
120R
R544
R545
R546
TSCLK
TSVLD
TSSYNC
C510
C511
C512
10P

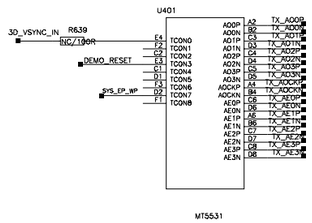
USB&Ethernet

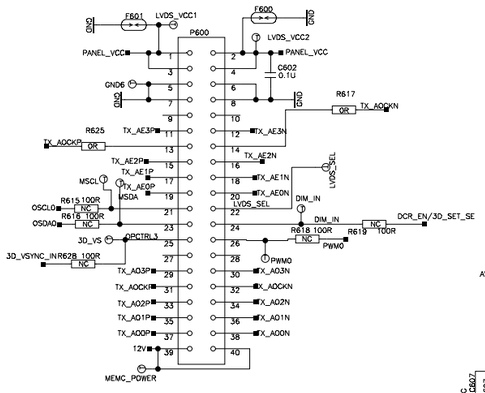


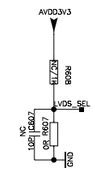
GPIO&LVDS

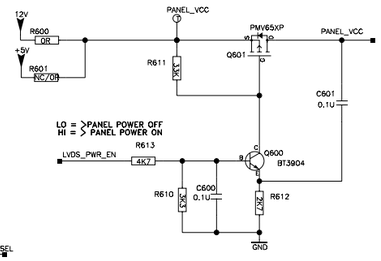




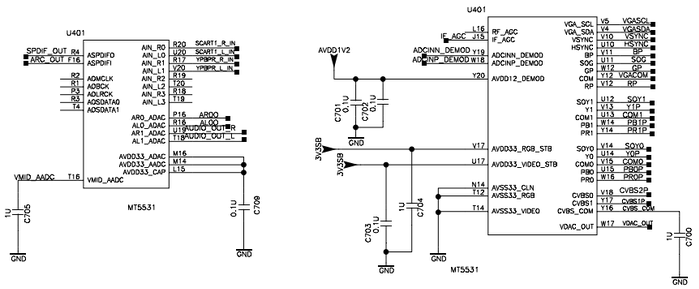


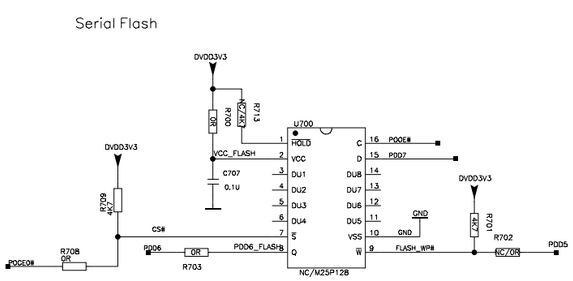


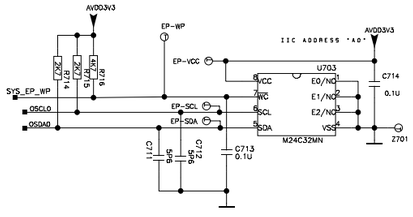


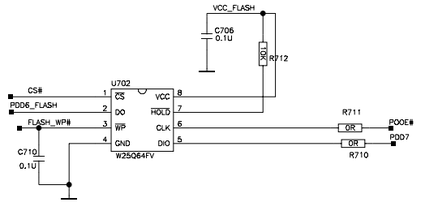


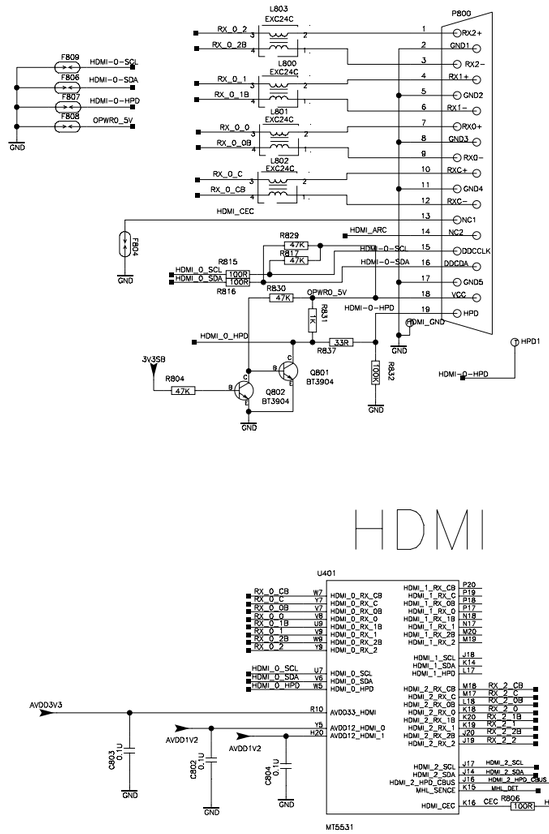
Audio&Video


U401
MT5531
AVDD1V2
3VSYNC
GND

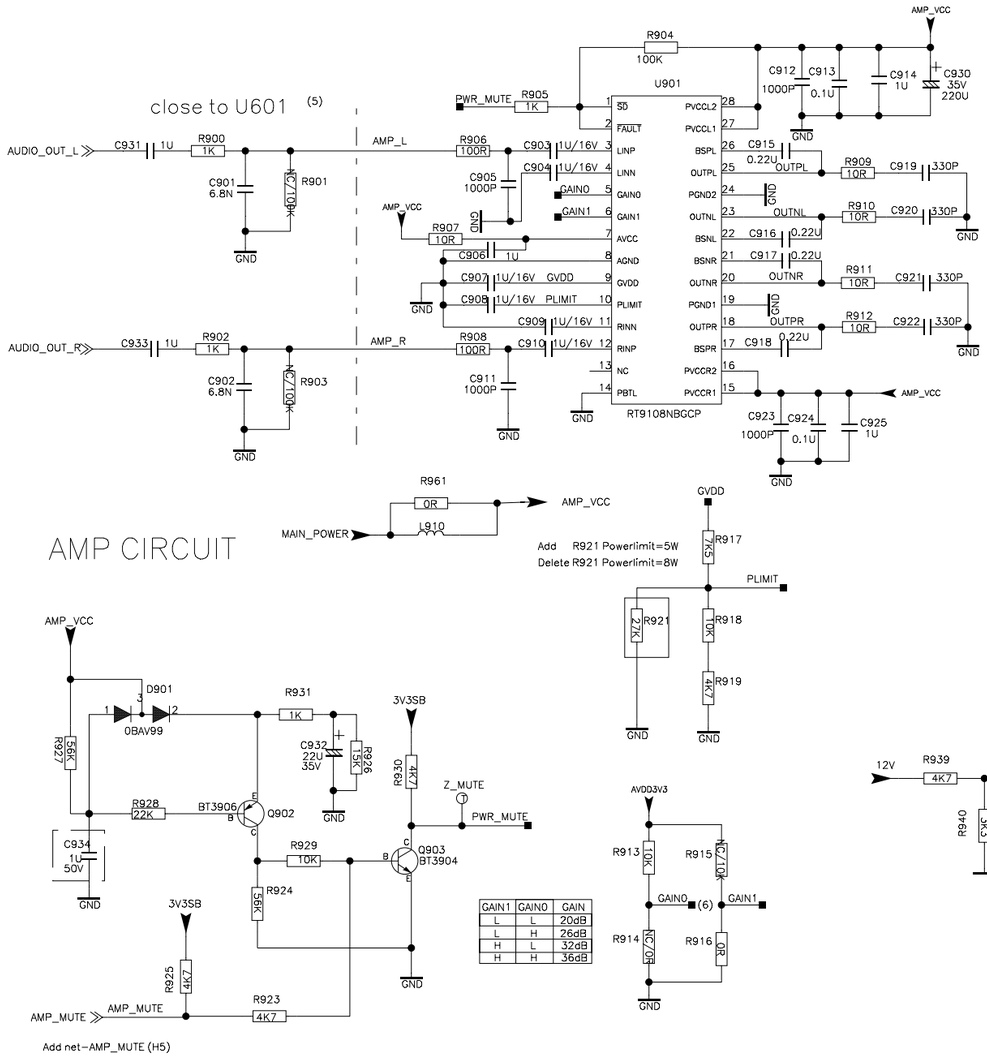

Serial Flash
DVDD3V3
U700
VCC_FLASH
C707
0.1u
CS#
PDD6_FLASH
R708
0R
R703
FLASH_WP#
R702
PDD5
NC/M25P128

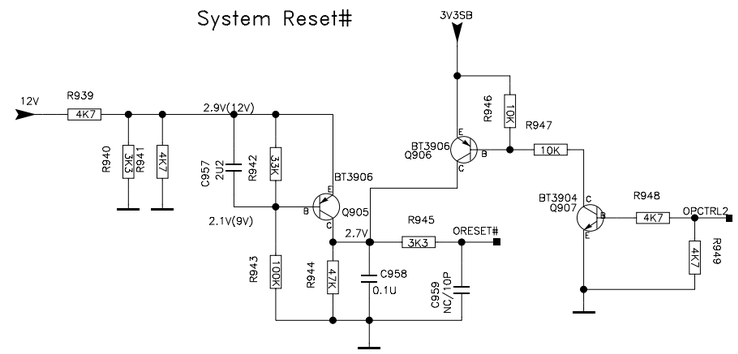

AVDD3V3
EP-WP
EP-VCC
EP-SCL
EP-SDA
SYS_EP_WP
OSCLO
OSDAO
U703
M24C32MN
C713
0.1U
C714
0.1U
Z701

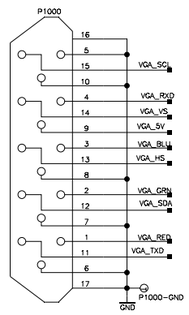

VCC_FLASH
C706
0.1U
R712
U702
W25Q64FV
CS#
PDD6_FLASH
FLASH_WP#
C710
0.1U
R711
R710
POOE#
PDD7

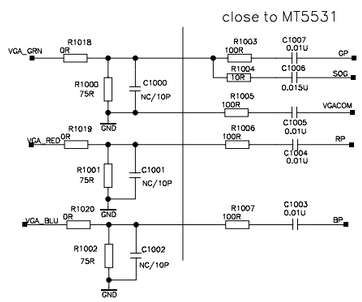

HDMI
P800
L803 EXC24C
L800 EXC24C
L801 EXC24C
L802 EXC24C
RX_0_2
RX_0_2B
RX_0_1
RX_0_1B
RX_0_0
RX_0_0B
RX_0_C
RX_0_CB
HDMI_CEC
RX2+
GND1
RX2-
RX1+
GND2
RX1-
RX0+
GND3
RX0-
RXC+
GND4
RXC-
NC1
NC2
DDCCLK
DDCDA
GND5
VCC
HPD
HDMI_GND
F809 HDMI-0-SCL
F806 HDMI-0-SDA
F807 HDMI-0-HPD
F808 OPWR0_5V
R829 4.7K
R817 4.7K
HDMI_ARC
HDMI-0-SCL
HDMI-0-SDA
R815 100R
R816 100R
HDMI_0_SCL
HDMI_0_SDA
R830 4.7K
OPWR0_5V
R831 1K
HDMI-0-HPD
HDMI_0_HPD
R837 3.3R
HPD1
3V3SB
R804 4.7K
Q801 BT3904
Q802 BT3904
R832 100K
HDMI-0-HPD
U401
MT5531
HDMI_0_RX_CB
HDMI_0_RX_C
HDMI_0_RX_0B
HDMI_0_RX_0
HDMI_0_RX_1B
HDMI_0_RX_1
HDMI_0_RX_2B
HDMI_0_RX_2
HDMI_0_SCL
HDMI_0_SDA
HDMI_0_HPD
HDMI_1_RX_CB
HDMI_1_RX_C
HDMI_1_RX_0B
HDMI_1_RX_0
HDMI_1_RX_1B
HDMI_1_RX_1
HDMI_1_RX_2B
HDMI_1_RX_2
HDMI_1_SCL
HDMI_1_SDA
HDMI_1_HPD
HDMI_2_RX_CB
HDMI_2_RX_C
HDMI_2_RX_0B
HDMI_2_RX_0
HDMI_2_RX_1B
HDMI_2_RX_1
HDMI_2_RX_2B
HDMI_2_RX_2
HDMI_2_SCL
HDMI_2_SDA
HDMI_2_HPD_CBUS
MHL_SENCE
HDMI_CEC
CEC
R806 100R
AVDD3V3
R10
AVDD033_HDMI
AVDD1V2
AVDD012_HDMI_0
AVDD012_HDMI_1
C803 0.1U
C802 0.1U
C804 0.1U
P801
F803 HDMI-2-SCL
F800 HDMI-2-SDA
F801 HDMI-2-HPD
F802 OPWR5V
R852 4R7
R853 4R7
MHL_DET
R807 5R1
R854 4R7
R855 4R7
R856 4R7
R857 4R7
R858 4R7
R859 4R7
OPWR5V
D803 BAT54C
OPWR2_5V
R800 0R
+5V
R805
HDMI_CEC
R841 2K7
R842 4K7
HDMI-2-SCL
HDMI-2-SDA
R808 100R
R809 100R
HDMI_2_SCL
HDMI_2_SDA
OPWR5V
HDMI-2-HPD
R833 10K
Q805 PMV65XP
D804 1N4148
R866 10K
R834 20K
Q804 BT3904
R836 2K2
R844 47K
R803 47K
Q800 BT3904
R862 100K
R802 100K
R863 100K
HDMI_2_HPD_CBUS
R835 0R
R840 10K
R848 NC/0R
R849 0R
R850 NC/0R
R851 10K
C800 10U
C806 10U
C801 NC/10U
USB_MHL_OC
3.3V: Normal
0V:MHL power Over Current
When RT9711:NC R849&R851
When RT9721:NC R848&R850
RT9711 U800
FLG
VOUT
GND
EN/EN#
VIN
HPD2
HDMI-2-HPD
C805 2U2
HDMI_ARC
R846 180R
ARC_OUT
R847 10K

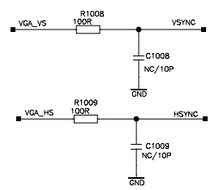
AMP CIRCUIT

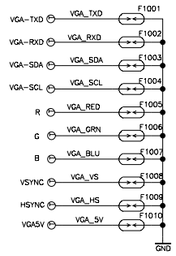

close to U601 (5)
AUDIO_OUT_L
AUDIO_OUT_R
C931 1U
C933 1U
R900 1K
R902 1K
C901 6.8N
C902 6.8N
R901 NC/100R
R903 NC/100R
GND
AMP_L
AMP_R
R906 100R
R908 100R
C903 1U/16V
C904 1U/16V
C905 1000P
C909 1U/16V
C910 1U/16V
C911 1000P
GAIN0
GAIN1
R907 10R
C906 1U
C907 1U/16V GVDD
C908 1U/16V PLIMIT
AMP_VCC
R904 100K
PWR_MUTE
R905 1K
U901
RT9108NBGCP
SD
FAULT
LINP
LINN
GAIN0
GAIN1
AVCC
AGND
GVDD
PLIMIT
RINN
RINP
NC
PBTL
PVCCL2
PVCCL1
BSPL
OUTPL
PGND2
OUTNL
BSNL
BSNR
OUTNR
PGND1
OUTPR
BSPR
PVCCR2
PVCCR1
C912 1000P
C913 0.1U
C914 1U
C930 35V 220U
C915 0.22U
C916 0.22U
C917 0.22U
C918 0.22U
C923 1000P
C924 0.1U
C925 1U
R909 10R
R910 10R
R911 10R
R912 10R
C919 330P
C920 330P
C921 330P
C922 330P
OUTPL
OUTNL
OUTPR
OUTNR
L900 22UH
L901 NC/220R
L906 22UH
L907 NC/220R
L902 22UH
L903 NC/220R
L904 22UH
L905 NC/220R
L+
L-
R+
R-
P900
P902
C936 1U 50V
C926 0.1U
C927 0.1U
C935 50V 1U
C928 0.1U
C929 0.1U
R961 0R
L910
MAIN_POWER
Add R921 Powerlimit=5W
Delete R921 Powerlimit=8W
R917 7K5
R921 27K
R918 10K
R919 4K7
R931 1K
C932 22U 35V
R926 15K
R927 56K
R928 22K
R929 10K
R924 56K
R930 4K7
Z_MUTE
BT3906 Q902
Q903 BT3904
D901 0BAV99
C934 1U 50V
3V3SB
R925 4K7
R923 4K7
AMP_MUTE
Add net-AMP_MUTE (H5)
GAIN1 GAIN0 GAIN
L L 20dB
L H 26dB
H L 32dB
H H 36dB
AVDD3V3
R913 10K
R914 NC/0R
R915 NC/10K
R916 0R
(6)

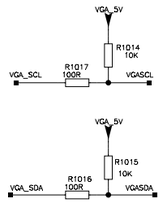

System Reset#
3V3SB
12V
R939 4K7
R940 3K3
R941 4K7
2.9V(12V)
C957 2U2
R942 3K3
2.1V(9V)
BT3906 Q905
R943 100K
R944 47K
C958 0.1U
2.7V
R945 3K3
ORESET#
C959 NC/10P
R946 10K
BT3906 Q906
R947 10K
BT3904 Q907
R948 4K7
OPCTRL2
R949 4K7

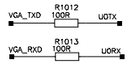

P1000
16
5
15
10
4
14
9
3
13
8
2
12
7
1
11
6
17
VGA_SCL
VGA_RXD
VGA_5V
VGA_BLU
VGA_HS
VGA_GRN
VGA_SDA
VGA_RED
VGA_TXD
P1000-GND
GND

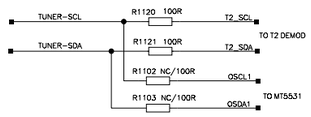

close to MT5531
VGA_GRN
R1018
0R
R1000
75R
C1000
NC/10P
GND
R1003
100R
C1007
0.01U
GP
R1004
10R
C1006
0.015U
SOG
R1005
100R
VGACOM
VGA_RED
R1019
0R
R1001
75R
C1001
NC/10P
GND
R1006
100R
C1005
0.01U
RP
C1004
0.01U
VGA_BLU
R1020
0R
R1002
75R
C1002
NC/10P
GND
R1007
100R
C1003
0.01U
BP

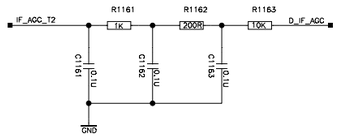

VGA_VS
R1008
100R
VSYNC
C1008
NC/10P
GND
VGA_HS
R1009
100R
HSYNC
C1009
NC/10P
GND

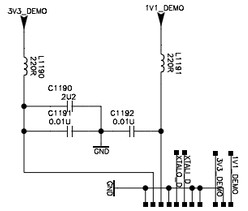

VGA-TXD
VGA_TXD
F1001
VGA-RXD
VGA_RXD
F1002
VGA-SDA
VGA_SDA
F1003
VGA-SCL
VGA_SCL
F1004
R
VGA_RED
F1005
G
VGA_GRN
F1006
B
VGA_BLU
F1007
VSYNC
VGA_VS
F1008
HSYNC
VGA_HS
F1009
VGA5V
VGA_5V
F1010
GND

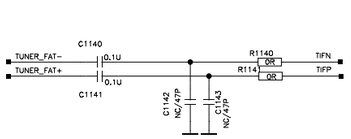

VGA_5V
R1014
10K
VGA_SCL
R1017
100R
VGASCL
VGA_5V
R1015
10K
VGA_SDA
R1016
100R
VGASDA

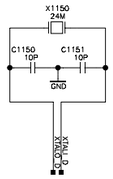

VGA_TXD
R1012
100R
U0TX
VGA_RXD
R1013
100R
U0RX

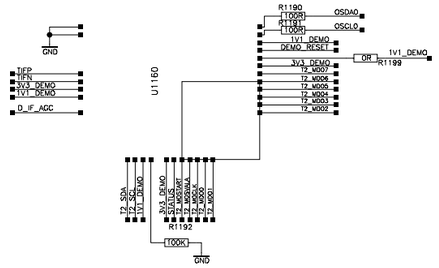

TUNER-SCL
R1120 100R
T2_SCL
TUNER-SDA
R1121 100R
T2_SDA
TO T2 DEMOD
R1102 NC/100R
OSCL1
R1103 NC/100R
OSDA1
TO MT5531

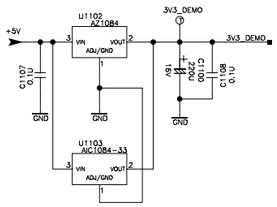

IF_AGC_T2
R1161
1K
R1162
200R
R1163
10K
D_IF_AGC
C1161
0.1U
C1162
0.1U
C1163
0.1U
GND

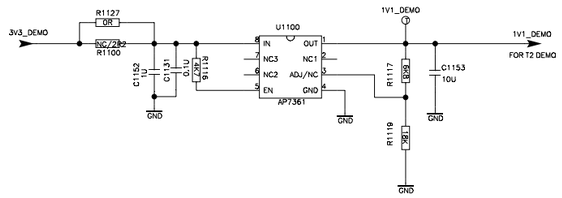

3V3_DEMO
1V1_DEMO
R1188
220K
R1191
220K
C1190
2U2
C1191
0.01U
C1192
0.01U
GND
XTALO
XTALI
3V3_GND
1V1_GND

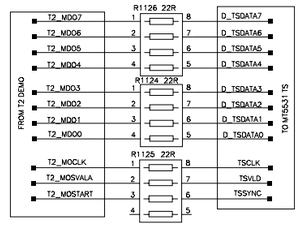

C1140
TUNER_FAT-
0.1U
TUNER_FAT+
0.1U
C1141
R1140
0R
R1141
0R
TIFN
TIFP
C1142
NC/47P
C1143
NC/47P

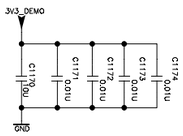

X1150
24M
C1150
10P
C1151
10P
GND
XTALO
XTALI

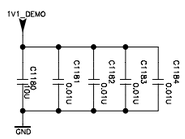

GND
TIFP
TIFN
3V3_DEMO
1V1_DEMO
D_IF_AGC
U1160
R1190
100R
R1191
100R
OSDA0
OSCL0
1V1_DEMO
DEMO_RESET
3V3_DEMO
T2_MDO7
T2_MDO6
T2_MDO5
T2_MDO4
T2_MDO3
T2_MDO2
0R
R1199
1V1_DEMO
T2_SDA
T2_SCL
1V1_DEMO
3V3_DEMO
STATUS
T2_MOSTART
T2_MOSVALA
T2_MDO0
T2_MDO1
R1192
100K
GND

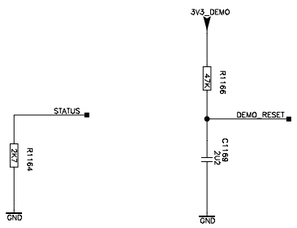

U1102
AZ1084
+5V
VIN
VOUT
ADJ/GND
3V3_DEMO
C1107
0.1U
C1100
220U
C1108
0.1U
GND
U1103
AIC1084-33
VIN
VOUT
ADJ/GND

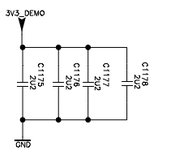

3V3_DEMO
R1127
0R
NC/2R2
R1100
U1100
IN
NC3
NC2
EN
OUT
NC1
ADJ/NC
GND
AP7361
1V1_DEMO
1V1_DEMO
FOR T2 DEMO
C1152
1U
C1151
0.1U
R1116
10K
R1117
10K
C1153
10U
R1119
10K
GND

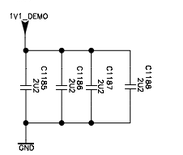

FROM T2 DEMO
T2_MDO7
T2_MDO6
T2_MDO5
T2_MDO4
R1126 22R
T2_MDO3
T2_MDO2
T2_MDO1
T2_MDO0
R1124 22R
T2_MOCLK
T2_MOSVALA
T2_MOSTART
R1125 22R
D_TSDATA7
D_TSDATA6
D_TSDATA5
D_TSDATA4
D_TSDATA3
D_TSDATA2
D_TSDATA1
D_TSDATA0
TSCLK
TSVLD
TSSYNC
TO MT5531 T5

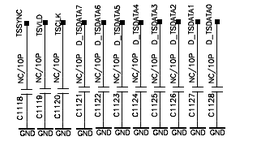

3V3_DEMO
C1170
10U
C1171
0.01U
C1172
0.01U
C1173
0.01U
C1174
0.01U
GND

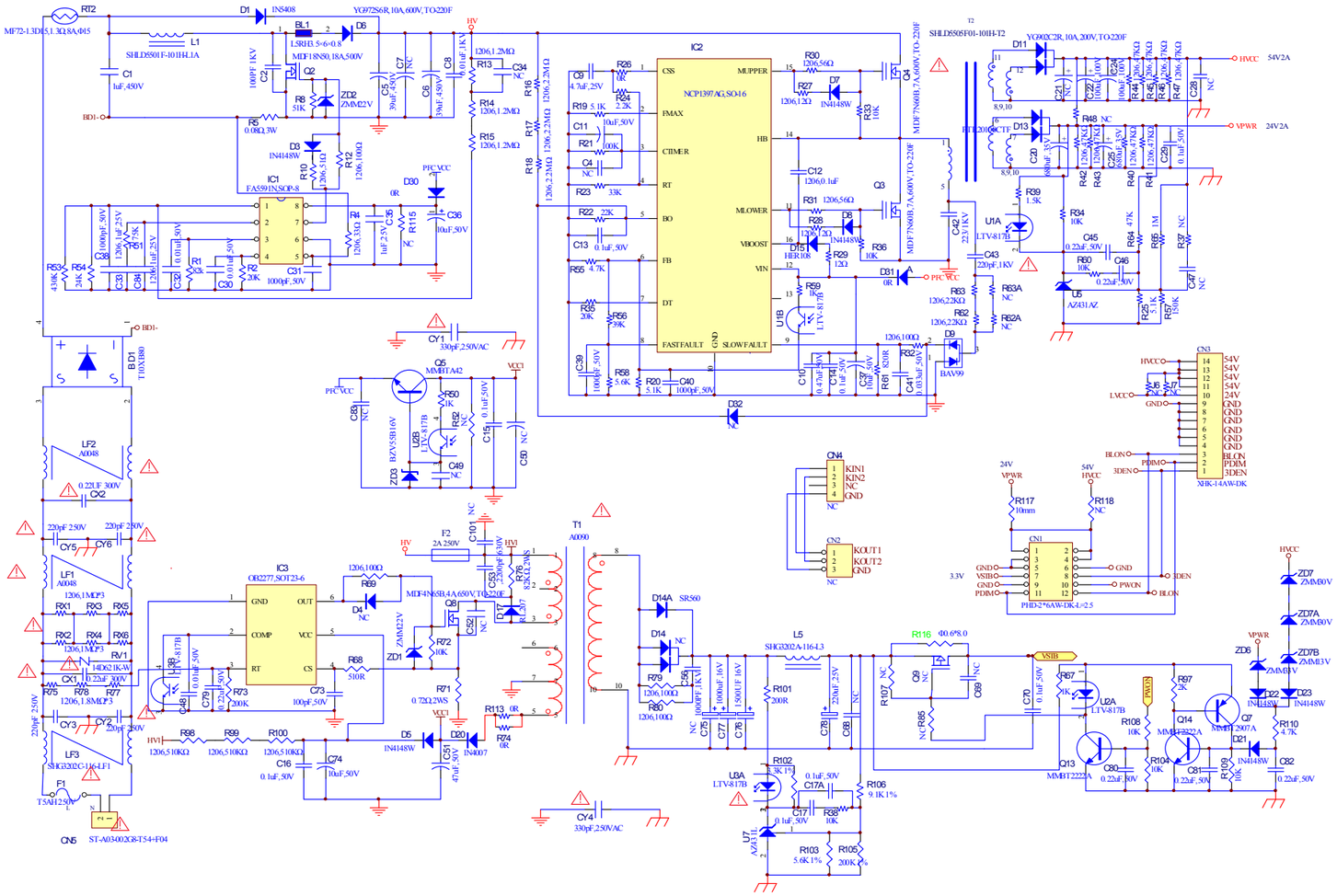

1V1_DEMO
C1180
10U
C1181
0.01U
C1182
0.01U
C1183
0.01U
C1184
0.01U
GND


3V3_DEMO
R1166
2K2
DEMO_RESET
C1169
2U2
GND
STATUS
R1164
2K2
GND


3V3_DEMO
C1175
2U2
C1176
2U2
C1177
2U2
C1178
2U2
GND

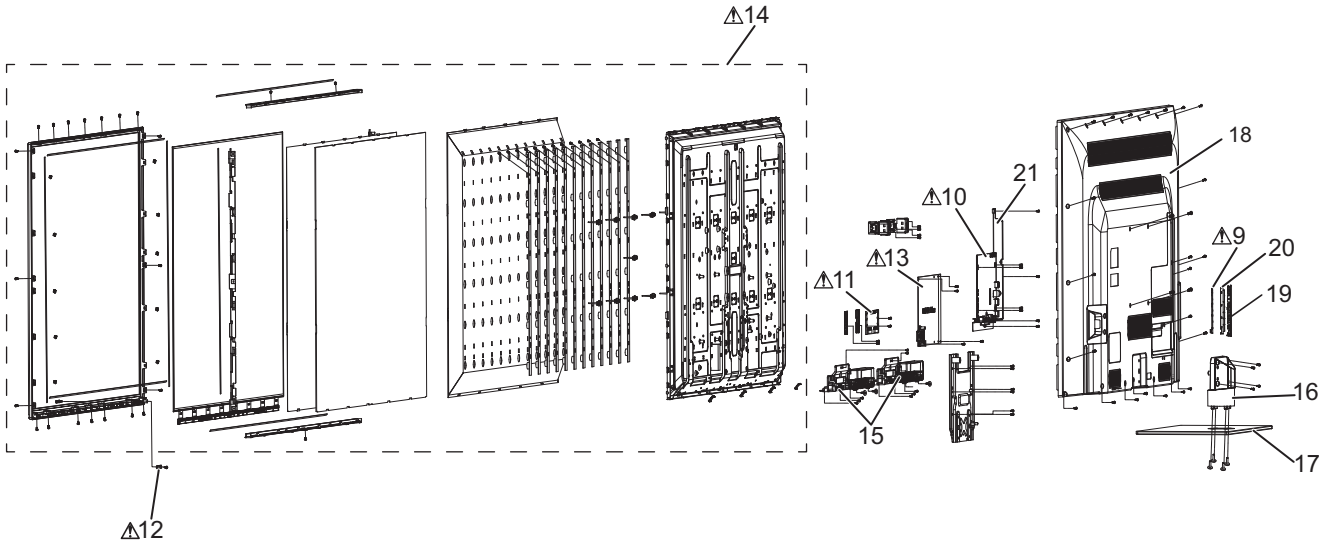

1V1_DEMO
C1185
2U2
C1186
2U2
C1187
2U2
C1188
2U2
GND

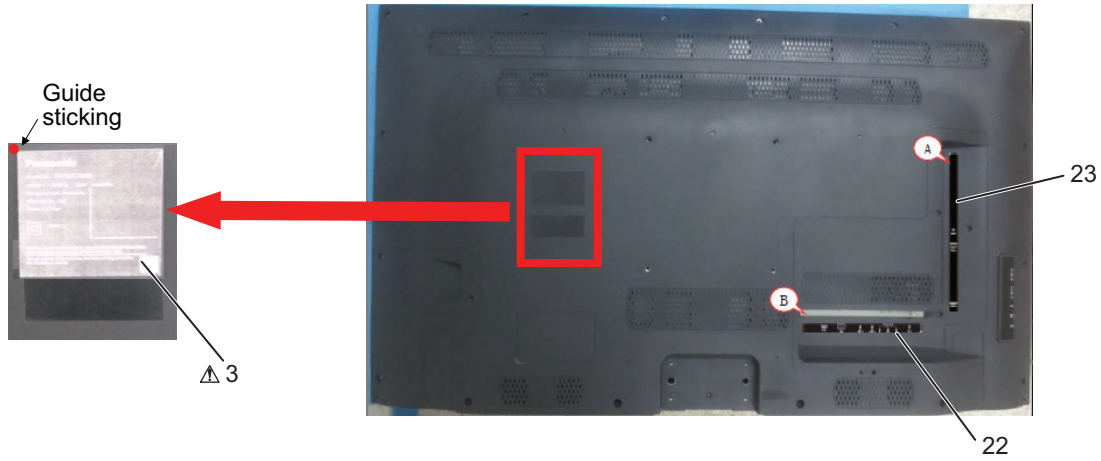

TSSYNC
TSVLD
TSCLK
D_TSDATA7
D_TSDATA6
D_TSDATA5
D_TSDATA4
D_TSDATA3
D_TSDATA2
D_TSDATA1
D_TSDATA0
NC/10P
C1118
C1119
C1120
C1121
C1122
C1123
C1124
C1125
C1126
C1127
C1128
GND

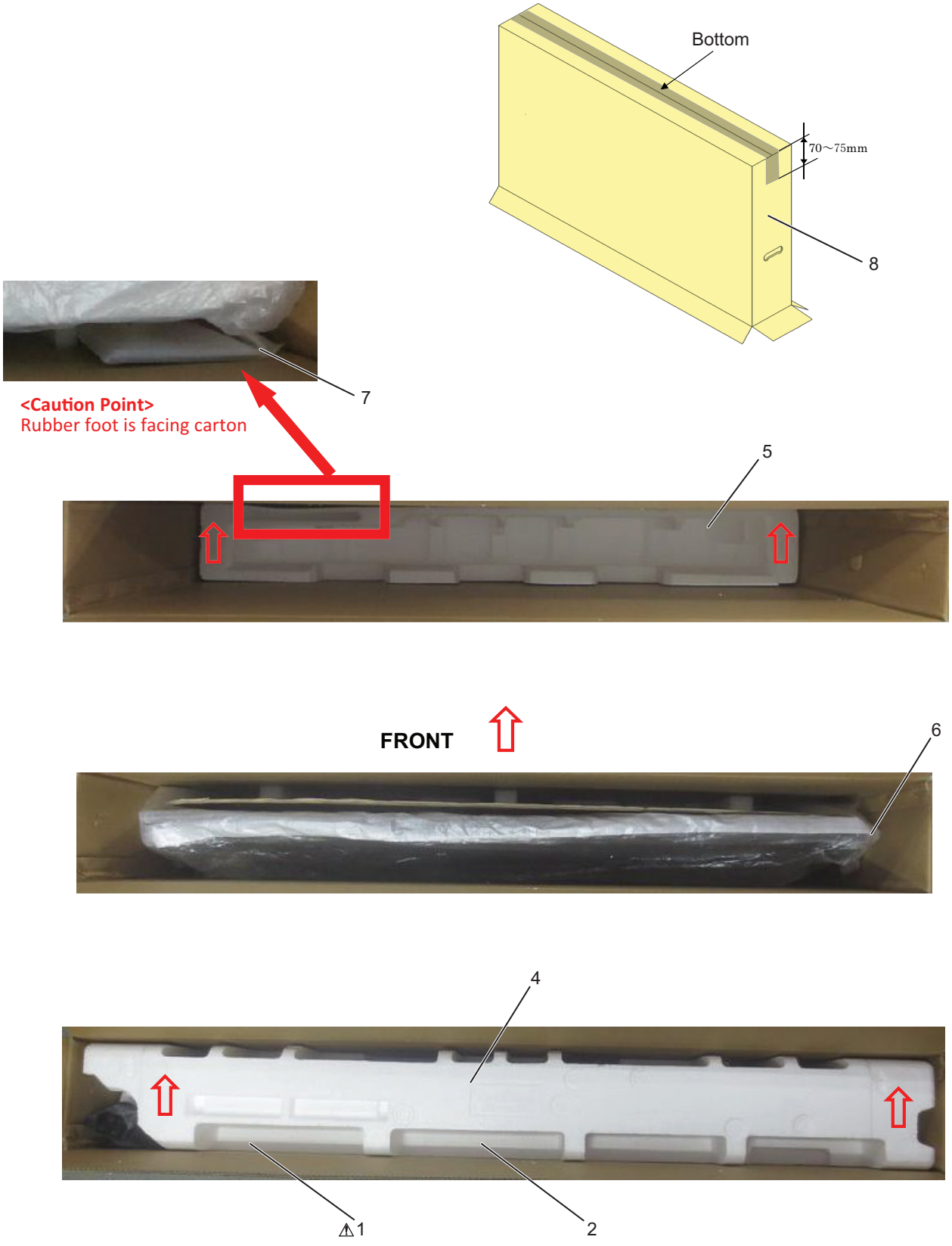

RT2
MF72-1.3D15.1.3Ω18A/045
L1
SHLD8501F-101H-1A
C1
1uF,450V
BD1-
D1
1N5408
YG972S6R,10A,600V,TO-220F
BL1
L5RH3.5×6×0.8
MDF18N50,18A,500V
HV
1206,1.2MΩ
R13
C34
NC
R14
1206,1.2MΩ
R15
1206,1.2MΩ
R16
R17
R18
1206,2.2MΩ
C2
100PF,1KV
Q2
C5
39uF,450V
C7
NC
C6
33uF,450V
C8
0.01uF,1KV
ZD2
2V/MZ2V
R8
51K
R6
0.08Ω,3W
D3
1N4148W
R10
1206,5.1Ω
R12
1206,100Ω
IC1
FA5591N,SOP-8
D30
PFC_VCC
0R
C36
10uF,50V
R53
430K
R54
24K
C38
1000pF,50V
C33
1206,1uF,25V
R51
75K
C34
1206,1uF,25V
C32
0.01uF,50V
R1
82k
R2
30K
C30
0.01uF,50V
C31
1000pF,50V
R4
1206,50Ω
C18
1uF,25V
R115
0R
C36
10uF,50V
IC2
NCP1397AG,SOP16
CSS
FMAX
CTIMER
RT
BO
FB
DT
FASTFAULT
MUPPER
HB
MLOWER
VBOOST
VIN
GND
SLOWFAULT
C9
4.7uF,25V
R26
0R
R24
2.2K
R19
5.1K
C11
10uF,50V
R21
100K
C4
NC
R23
33K
R22
22K
C13
0.1uF,50V
R55
4.7K
R35
20K
R56
39K
C39
1000pF,50V
R58
5.6K
R20
5.1K
C40
1000pF,50V
R30
1206,56Ω
D7
1N4148W
R27
1206,12Ω
R33
10K
C12
1206,0.1uF
R31
1206,56Ω
D8
1N4148W
R28
1206,2Ω
D15
HER108
R29
12Ω
R36
10K
D31
0R
PFC_VCC
R59
1K
U1B
LTV-817B
C10
0.47uF,50V
C14
0.1uF,50V
C37
0.1uF,50V
R61
620R
C41
0.033uF,50V
1206,100Ω
D9
BAV99
R62
1206,22KΩ
R63
1206,22KΩ
R63A
NC
R62A
NC
C42
223/1KV
U1A
LTV-817B
C43
220pF,1KV
R39
1.5K
R34
10K
C45
0.22uF,50V
R60
10K
C46
0.22uF,50V
U5
AZ431AZ
R64
47K
R65
1M
R37
NC
C48
NC
R25
1K
R57
150K
T2
SHLD5505F01-101H-T2
D11
YG982C2R,10A,200V,TO-220F
C21
NC
C22
100uF,25V
C24
100uF,25V
R44
1206,47KΩ
R45
1206,47KΩ
R46
1206,47KΩ
R47
1206,47KΩ
C28
NC
HVCC
54V2A
D13
HER208CTF
C20
680uF,35V
C25
680uF,35V
R48
NC
R42
1206,47KΩ
R43
1206,47KΩ
C29
1206,47KΩ
R49
1206,47KΩ
R41
1206,47KΩ
C29
0.1uF,50V
VPWR
24V2A
MDF7N60B,7A,600V,TO-220F
Q3
Q4
C42
223/1KV
C49
NC
CY1
330pF,250VAC
Q5
MMBTA42
PFC_VCC
VCC1
C83
NC
U2B
TCS417B
R50
1K
R52
NC
C15
0.1uF,50V
C50
NC
ZD3
BZV55B16V
C49
NC
CN4
KIN1
KIN2
NC
GND
NC
CN2
KOUT1
KOUT2
GND
NC
24V
VPWR
R117
10mm
54V
HVCC
R118
NC
CN1
GND
VSTB
GND
PDIM
GND
PWON
BLON
3DEN
PHD-2*6AW-DK-4-2.5
CN3
HVCC
LVCC
GND
BLON
PDIM
3DEN
XHK-14AW-DK
54V
54V
54V
54V
24V
GND
GND
GND
GND
GND
BD1
T10X1000
LF2
A0048
0.22UF,300V
CX2
220pF,250V
CY5
CY6
LF1
A0048
1206,1.8MDF3
RX1
RX3
RX5
RX2
RX4
RX6
1206,1.8MDF3
RV1
14D621K-W
CX1
0.22uF,300V
RX5
RX6
RX7
1206,1.8MDF3
220pF,250V
CY3
CY2
220pF,250V
LF3
SHG2032C-U6-LF1
F1
T5AH250V
CN5
ST-A03-002C8-T54-F04
IC3
OB2277,SOT23-6
GND
COMP
RT
OUT
VCC
CS
R69
1206,100Ω
D4
NC
MDF4N65B,4A,650V,TO-220F
Q8
C52
NC
ZMM22V
ZD1
R72
10K
R68
510R
C73
100pF,50V
R71
0.72Ω,2WS
R113
0R
R74
0R
VCC1
D5
1N4148W
D20
1N4007
C51
47uF,50V
C101
NC
F2
2A,250V
HV
HV1
C53
2200pF,630V
R76
82KΩ,2WS
T1
A0090
D14A
SR560
D14
NC
R79
1206,100Ω
R80
1206,100Ω
C55
NC
C75
1000uF,16V
C77
1000uF,16V
C76
1500UF,16V
L5
SHG3202A-116-L3
R101
200R
C78
220uF,25V
NC
C68
R107
NC
R85
NC
C9
NC
C69
NC
R16
40.6*8.0
C70
0.1uF,50V
VSTB
R67
1K
U2A
LTV-817B
PWON
R97
2K
R108
10K
Q14
MMBT2222A
Q7
MMBT2907A
D21
1N4148W
R104
10K
C81
0.22uF,50V
R109
10K
C82
0.22uF,50V
D22
1N4148W
D23
1N4148W
ZD6
ZMM8V
ZD7
ZMM30V
ZD7A
ZMM30V
ZD7B
ZMM13V
HVCC
R110
4.7K
Q13
MMBT2222A
C80
0.22uF,50V
R102
3K 1%
C17A
0.1uF,50V
R28
10K
R106
9.1K 1%
U3A
LTV-817B
U7
AZ431L
0.1uF,50V
R103
5.6K 1%
R105
200K 1%
CY4
330pF,250VAC
D32
NC
C10
0.47uF,50V
C14
0.1uF,50V
C37
0.1uF,50V
R61
620R
C41
0.033uF,50V
R20
5.1K
C40
1000pF,50V
C39
1000pF,50V
R58
5.6K
R56
39K
R55
4.7K
R35
20K
C13
0.1uF,50V
R22
22K
R23
33K
C4
NC
R21
100K
C11
10uF,50V
R19
5.1K
R24
2.2K
R26
0R
C9
4.7uF,25V
C16
0.1uF,50V
C74
10uF,50V
R66
1206,510KΩ
R99
1206,510KΩ
R98
1206,510KΩ
C48
0.1uF,50V
C79
0.22uF,50V
R73
200K
HV1
R53
430K
R54
24K
C38
1000pF,50V
C33
1206,1uF,25V
R51
75K
C34
1206,1uF,25V
C32
0.01uF,50V
C30
0.01uF,50V
R4
1206,50Ω
C18
1uF,25V
R115
0R
C36
10uF,50V
C31
1000pF,50V

12 Exploded View and Replacement Parts List

12.1. Exploded View and Mechanical Replacement Parts List





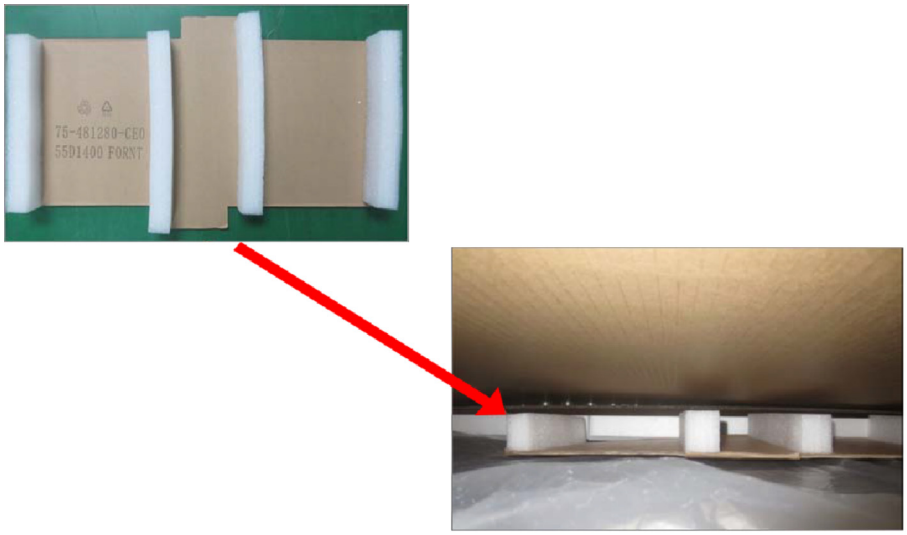

Bottom
70~75mm
8
7
<Caution Point>
Rubber foot is facing carton
5
FRONT
6
4
⚠1
2

12.2. Packing procedure

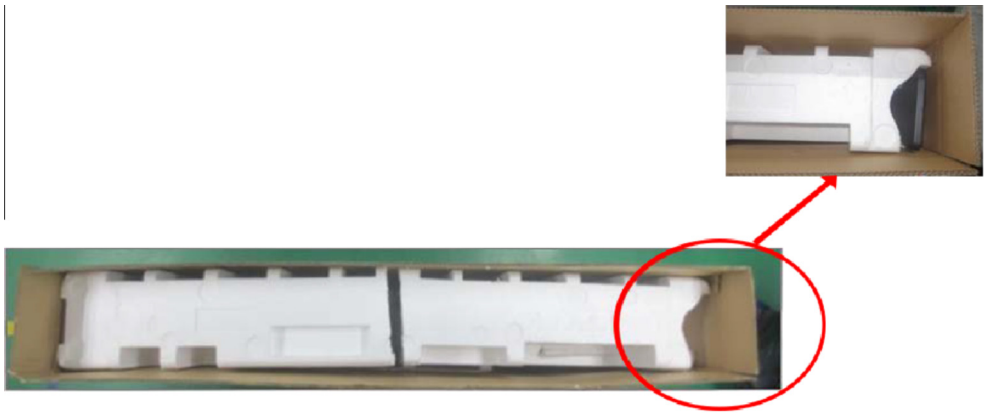
1. Put in the paper tray carefully. Don’t damage the bottom styrofoams of the paper tray.

2. Put the base into the styrofoam.

3. Put the EPE into the box, the EPE is toward to box.



4. Put the base neck into the top styrofoams.



12.2.1. Common Part List for all TH-50C300 Series

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	2	N2QAYB000976	REMOTE TRANSMITTER		
	4	TPD4GA07001	TOP CUSHION		
	5	TPD4GA07011	BOTTOM CUSHION		
	6	TPE4GH080	SET COVER		
⚠	9	TZZ00001827A	KEYBOARD (T8-50D14KI-KE1)		
⚠	11	TZZ00001829A	DRIVE BOARD (T8-55E211-DR2)		
⚠	12	TZZ00001830A	IR BOARD (T8-50D14KI-IR3)		
⚠	13	TZZ00001831A	POWER BOARD (81-PBE055-H07)		
	15	TZZ00001836A	SPEAKER (L+R) (42-WDF318-XX3G)		
	16	TZZ00001842A	STAND NECK (56-508400-0HQ6QG)		
	17	TZZ00001843A	STAND (68-525160-200Z4CK)		
	18	TZZ00001844A	BACK COVER (55-522380-0UL6RG)		
	19	TZZ00001845A	SUPPORT OF KEY (56-523100-0HQZ6G)		
	20	TZZ00001846A	BOTTOM OF KEY (56-523090-0HQ6QG)		
	21	TZZ00001847A	AV SUPPORT (67-522730-8G0CK)		
	22	TZZ00001848A	DOWN LABEL OF AV (58-525900-80JZ1)		
	23	TZZ00001849A	RIGHT SIDE LABEL OF AV (58-525890-80JZ1)		
		TZZ00001834A	CABLE MAIN BOARD TO DRIVE BOARD (46-CF040L-13U01G)		
		TZZ00001835A	CABLE MAIN BOARD TO KEY BOARD (46-FM060L-04P01G)		
		TZZ00001837A	CABLE MAIN BOARD TO IR BOARD (46-FM060L-07P01G)		
		TZZ00001838A	CABLE FOR SPEAKER (46-CV015L-02J01G)		
		TZZ00001839A	CABLE FOR LEFT SPEAKER (46-BV040L-02J01G)		
		TZZ00001840A	POWER SUPPLY WIRE (46-LL065L-12X01G)		
		TZZ00001841A	LVDS CABLE (46-60FC35-CFB01G)		

12.2.2. For TH-50C300K Only (Malaysia)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	K2CQ2YY00122	AC CORD		
⚠	3	TBM4GD7001	MODEL NAME PLATE		
	7	TQZ4GB971	FAN BAG ASSEMBLY		
	8	TXFPC01WFUK	CARTON ASSEMBLY		
⚠	10	TZZ00001828A	MAIN BOARD (T8-50D14KI-MA2)		
⚠	14	TZZ00001833A	LCD PANEL (T8-50D1400-LPP3)		

12.2.3. For TH-50C300S Only (Singapore)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	K2CQ2YY00122	AC CORD		
⚠	3	TBM4GD6792	MODEL NAME PLATE		
	7	TQZ4GB972	FAN BAG ASSEMBLY		
	8	TXFPC01UJUS	CARTON ASSEMBLY		
⚠	10	TZZ00001828A	MAIN BOARD (T8-50D14KI-MA2)		
⚠	14	TZZ00001832A	LCD PANEL (T8-50C300M-LPP1)		

12.2.4. For TH-50C300T Only (Thailand)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	K2CP2YY00060	AC CORD		
⚠	3	TBM4GD6793	MODEL NAME PLATE		
	7	TQZ4GB973	FAN BAG ASSEMBLY		
	8	TXFPC01USUT	CARTON ASSEMBLY		
⚠	10	TZZ00001850A	MAIN BOARD (T8-50D14KI-MA5)		
⚠	14	TZZ00001832A	LCD PANEL (T8-50C300M-LPP1)		

12.2.5. For TH-50C300X Only (Singapore Re-Export)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	K2CQ2YY00122	AC CORD		
⚠	3	TBM4GD6794	MODEL NAME PLATE		
	7	TQZ4GB974	FAN BAG ASSEMBLY		
	8	TXFPC01DRVX	CARTON ASSEMBLY		
⚠	10	TZZ00001828A	MAIN BOARD (T8-50D14KI-MA2)		
⚠	14	TZZ00001832A	LCD PANEL (T8-50C300M-LPP1)		

12.2.6. For TH-50C300M Only (Middle East)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	K2CT2YY00091	AC CORD		
⚠	3	TBM4GD6795	MODEL NAME PLATE		
	7	TQZ4GB977	FAN BAG ASSEMBLY		
	8	TXFPC01UNUM	CARTON ASSEMBLY		
⚠	10	TZZ00001828A	MAIN BOARD (T8-50D14KI-MA2)		
⚠	14	TZZ00001832A	LCD PANEL (T8-50C300M-LPP1)		