LCD Television

Service Manual

TV Chassis : MSD6486T(CVTE)

Chassis:	MSD6486T(CVTE)
TV produce:	HX32N2170WTS
	HX39N2170WTS
	HX40N2170NWTS
	HX43N2170WTS
	HX49N2170WTS
	HX55K305FWTS
	……

Version: V 1.01

Hisense Electric Co.， Ltd.

January, 2018,

REVISION HISTORY			
Version	Revise content	Reviser	Date
V1.00	First issued		2017-01-06
V1.01	Add board: MS6486.758 &board MS6486.PC759 configure	Zhang Shujuan	2018-1-29

Contents

Service Manual

1. Precautions and notices

BEFORE SERVICING THE LCD TV, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.

USE OF NON-AUTHORIZED PARTS WILL VOID THE MANUFACTURE'S WARRANTY

Proper service and repair is important to the safe, reliable operation of all Hisense Equipment. The service procedures recommended by Hisense and described in this Service Guide are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment and pose risk of personal injury

. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Service should only be performed by an experienced electronics techician trained in the proper Television safety and service methods and procedures Hereafter throughout this manual, HISENSE will be referred to.

1.1 Warning

1.1.1

Critical components having special safety characteristics are identified with a ⚠ by the Ref. No. in the parts list. Use of non-manufacturer's recommended parts may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from RCA. Hisense Eassumes no liability, express or implied, arising out of any unauthorized modification of design. Servicetech assumes all liability.

1.1.2.

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, be sure to use anti-static table mats and properly use a grounding wrist stra. Keep components and tools also at this same potential.

IMPORTANT:

Always disconnect the power cord from AC outlet before replacing parts or modules.

1.1.3

To prevent electrical shock, use only a properly grounded 3 prong outlet or extension cord.

1.1.4

When replacement parts are required, be sure to use replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards and will void the manufacturer's warranty.

1.1.5

Safety regulations require that after a repair the set must be returned in its original condition. In addition, prior to closing set, check that:

-Note:

>All wire harnesses and flex cables are properly routed and secured with factory tape and/or mounted cable clamps.

> All cables and connectors are properly insulated and do not have any bare wires/lead exposed

1.1.6

(1) Do not supply a voltage higher than that specified to this product. This may damage the product and may cause a fire.

(2) Do not use this product:

> High humidity areas

> In an area where any water could enter or splash into the unit.

High humidity and water could damage the product and cause fire.

(3) If a foreign substance (such as water, metal, or liquid) gets inside the panel module, immediately turn off the power. Continuing to use the product may cause fire or electric shock.

(4) If the product emits smoke, and abnormal smell, or makes an abnormal sound, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.

(5) Do not pull out or insert the power cable from/to an outlet with wet hands. It may cause electric shock.

(6) Do not damage or modify the power cable. It may cause fire or electric shock.

(7) If the power cable is damaged, or if the connector is loose, do not use the product: otherwise, this can lead to fire or electric shock.

(8) If the power connector or the connector of the power cable becomes dirty or dusty, wipe it with a dry cloth. Otherwise, this can lead to fire.

(9) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over

1.2 Notes

Notes on Safe Handling of the LCD panel and during service

The work procedures shown with the Note indication are important for ensuring the

safety of the product and the servicing work. Be sure to follow these instructions.

• Before starting the work, secure a sufficient working space.

• At all times other than when adjusting and checking the product, be sure to turn OFF the POWER Button and disconnect the power cable from the power source of the TV during servicing.

• To prevent electric shock and breakage of PC board, start the servicing work at least 30 seconds after the main power has been turned off. Especially when installing and removing the power board, start servicing at least 2 minutes after the main power has been turned off.

• While the main power is on, do not touch any parts or circuits other than the ones specified. If any connection other than the one specified is made between the measuring equipment and the high voltage power supply block, it can result in electric shock or may trip the main circuit breaker When installing the LCD module in, and removing it from the packing carton, be sure to have at least two persons perform the work.

• When the surface of the panel comes into contact with the cushioning materials, be sure to confirm that there is no foreign matter on top of the cushioning materials before the surface of the panel comes into contact with the cushioning materials. Failure to observe this precaution may result in, the surface of the panel being scratched by foreign matter.

• Be sure to handle the circuit board by holding the large parts as the heat sink or transformer. Failure to observe this precaution may result in the occurrence of an

abnormality in the soldered areas.

• Do not stack the circuit boards. Failure to observe this precaution may result in problems resulting from scratches on the parts, the deformation of parts, and short-circuits due to residual electric charge.

• Perform a safety check when servicing is completed. Verify that the peripherals of the serviced points have not undergone any deterioration during servicing. Also verify that the screws, parts and cables removed for servicing purposes have all been returned to their proper locations in accordance with the original setup.

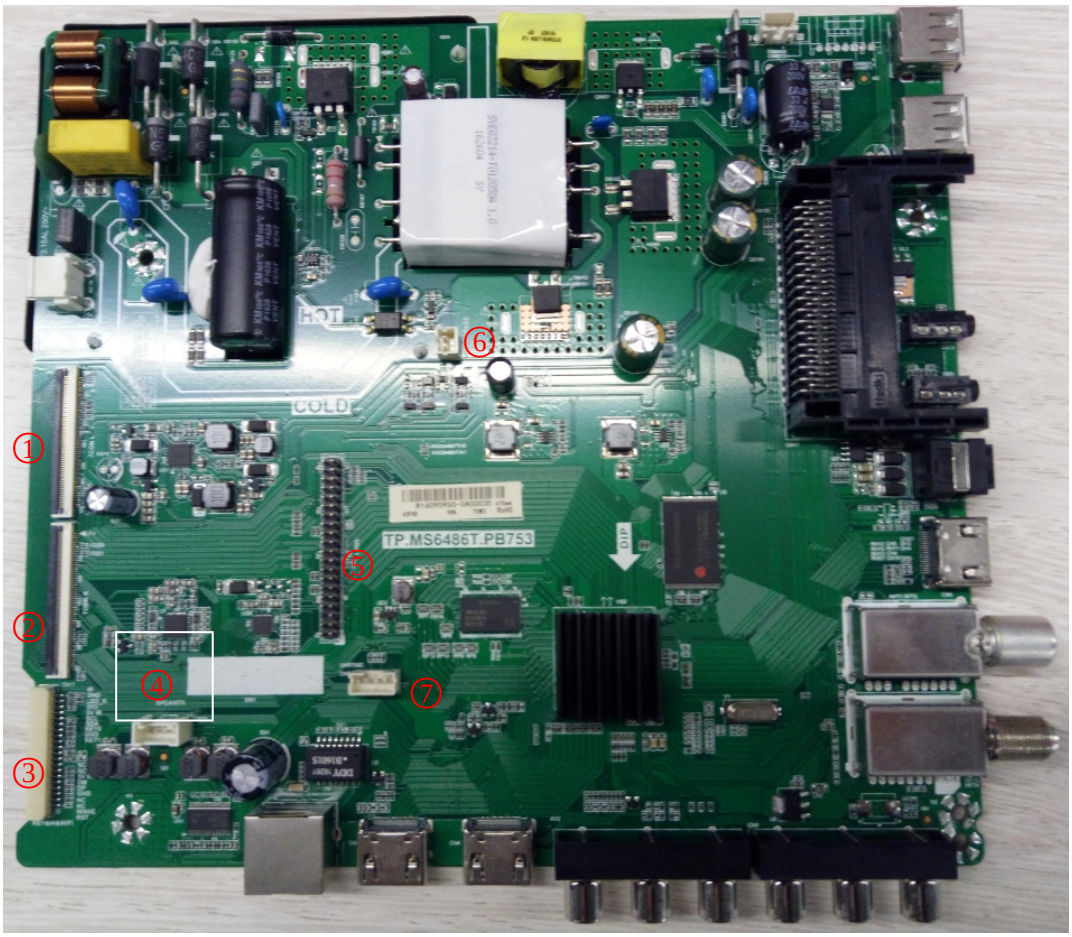
The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature. .

2. TV boards:

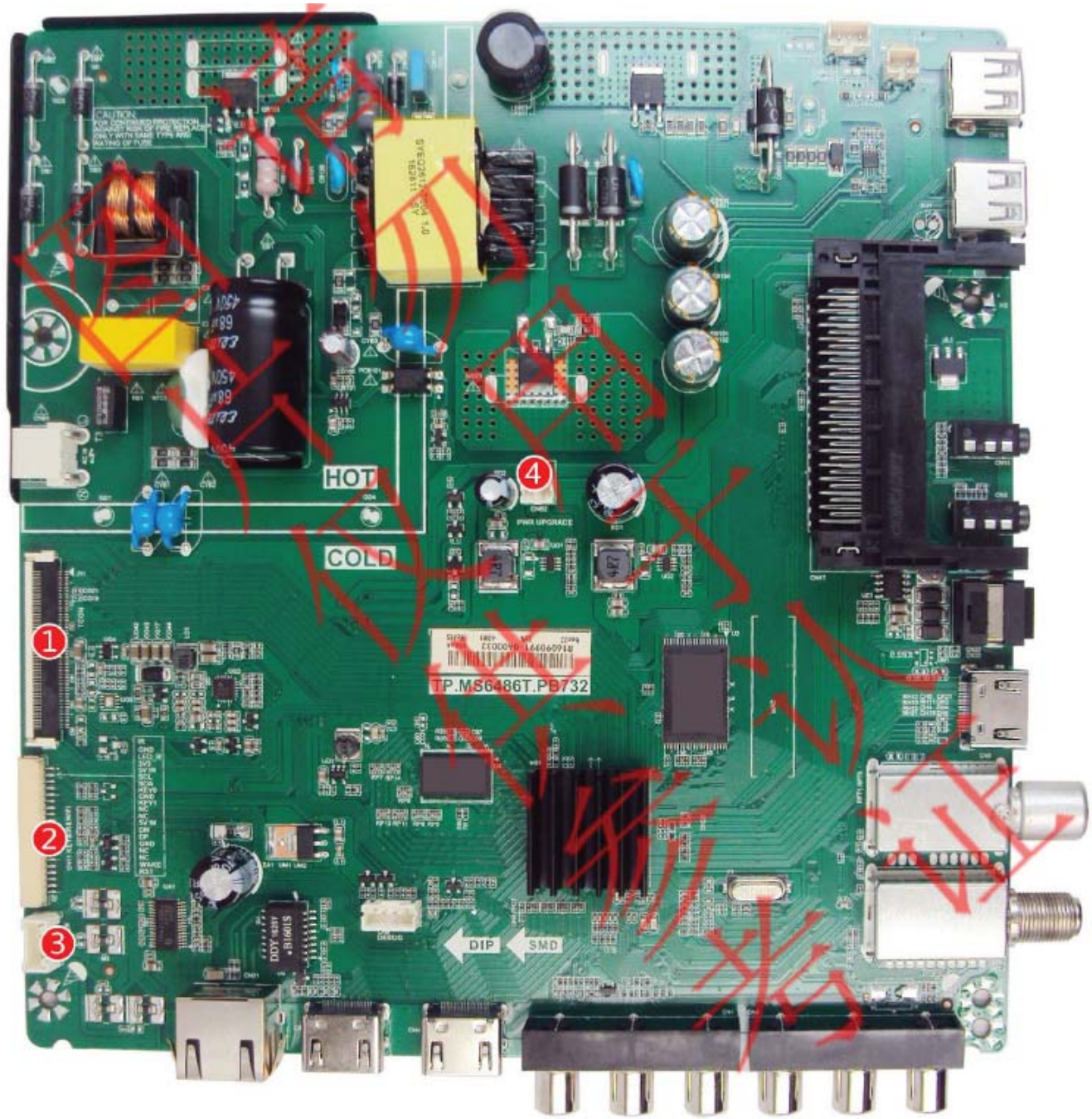
2.1 Main board layout

2.1.1 The top of complex board (TP.MS6486T.PB753)



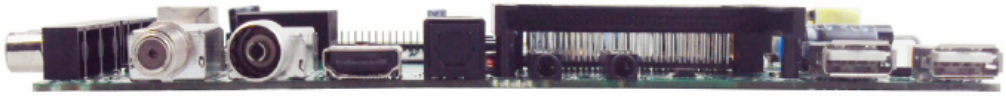
No.	Position	Description
1	J12	TCON L
2	J11	TCON R
3	CN11	KEY &IR &WIFI
4	CN10	SPEAKER
5	CN1	LVDS
6	CNB2	PWR UPGRADE
7	CN9	I2C

2.1.2 The top of complex board (TP.MS6486T.PB732)

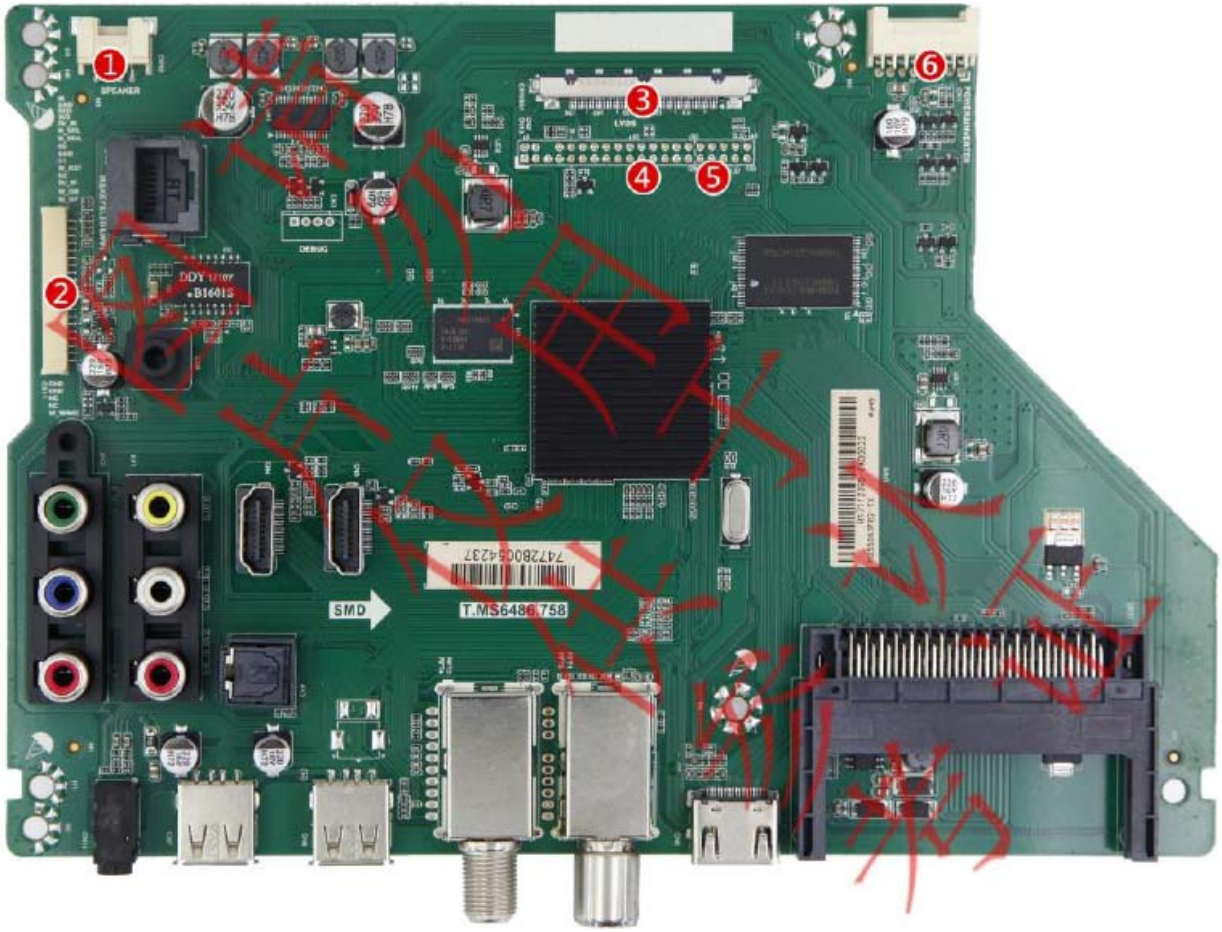


No.	Position	Description
1	J11	TCON
2	CN11	IR&KEY
3	CN10	SPEAKER
4	CNB2	PWR UPGRADE

2.1.3 Terminals configure: DVB-S2,HDMI*3, No MHL,USB*2,Optical

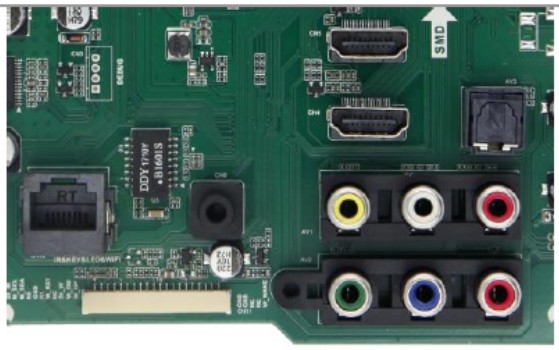
FUNCTIONS	【PB753_A6】RJ45,HDMI#1,HDMI#2,CVBS/AUDIO IN,YPbPr,DVB-S/S2,ATV/DVB-T /C/T2,HDMI#3,OPTICAL OUT,(Mini)RS232,EARPHONE OUT,USB#1,USB#2
Notes	--
FRONT VIEW	
SIDE VIEW	

2.2.1 The top of complex board (TP.MS6486T.PB758)

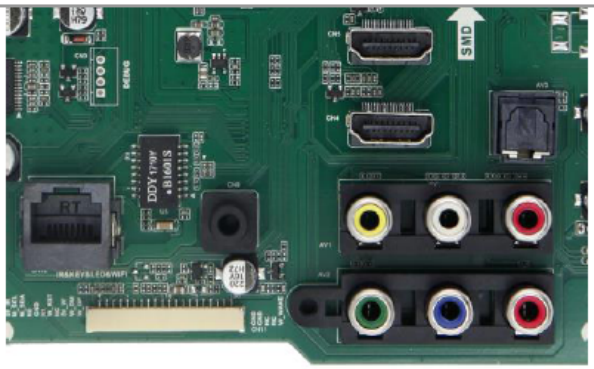


No.	Position	Description
1	CN10	SPEAKER
2	CN11	IR&KEY
3	CNW8A1	LVDS(51PIN/0.5)
4	*CN13	LVDS(2×15PIN/2.0)
5	*CN2	LVDS(2×20PIN/2.0)
6	CN1	POWER&INVERTER

2.2.2 TP.MS6486T.PB758 Terminals configure-1：**D**VB-S/S2,HDMI*3, USB*2,optial

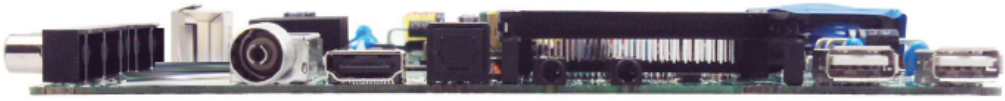
FUNCTIONS	【758_A1】RJ45(立式),(Mini)UART 立式,HDMI#1(立式),HDMI#2(立式),OPTICAL OUT(立式),CVBS/AUDIO IN(立式),YPBPR(立式),EARPHONE OUT(卧式),USB#1(卧式),USB#2(卧式),DVB-S/S2(卧式),DVB-T/C/T2(卧式),HDMI#3（卧式）
Notes	CI
TERMINAL VIEW	
FRONT VIEW	

TP.MS6486T.PB758 Terminals configure-2：DVB-S2 ,HDMI*3, USB*2,Optial

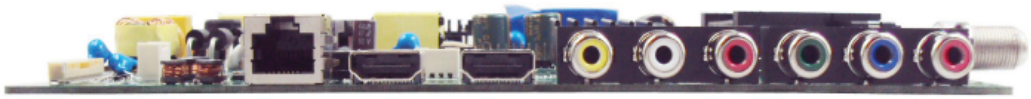
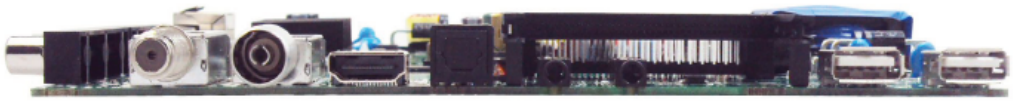
FUNCTIONS	【758_A2】RJ45(立式),(Mini)UART 立式,HDMI#1(立式),HDMI#2(立式),OPTICAL OUT(立式),CVBS/AUDIO IN(立式),YPBPR(立式),EARPHONE OUT(卧式),USB#1(卧式),USB#2(卧式),无 DVB-S/S2(卧式),DVB-T/C/T2(卧式),HDMI#3（卧式）
Notes	CI
TERMINAL VIEW	
FRONT VIEW	

2.3.1 The top of complex board (TP.MS6486T.PB759)

MS6486T.PB759 Terminals configure-1: No DVB-S2,HDMI*3, No MHL,USB*2, Optical

FUNCTIONS	【PC759_A1】RJ45,HDMI#1,HDMI#2,CVBS/AUDIO IN,YPbPr,无 DVB-S/S2, ATV/DVB-T/C/T2,HDMI#3,OPTICAL OUT,(Mini)RS232,EARPHONE OUT,USB#1,USB#2
Notes	--
FRONT VIEW	
SIDE VIEW	

MS6486T.PB759 Terminals configure-2: DVB-S2,HDMI*3, No MHL,USB*2, Optical

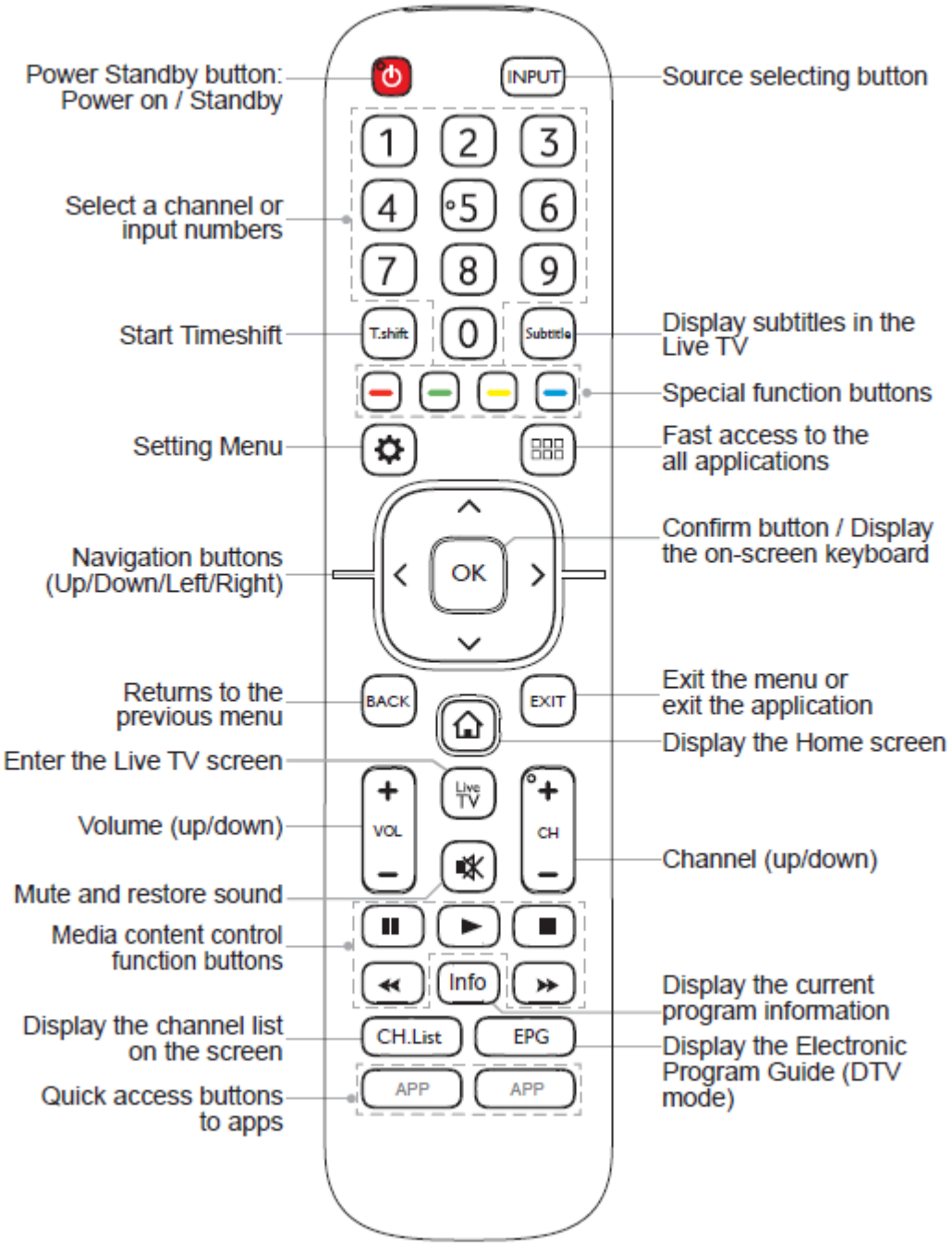
FUNCTIONS	【PC759_A2】RJ45,HDMI#1,HDMI#2,CVBS/AUDIO IN,YPbPr,DVB-S/S2, ATV/DVB-T/C/T2,HDMI#3,OPTICAL OUT,(Mini)RS232,EARPHONE OUT,USB#1,USB#2
Notes	--
FRONT VIEW	
SIDE VIEW	

2.5 TV boards part list

TV produce：	Complex PCB Part name
HX32N2170WTS	COMPLEX board： MSD6486\ PB732\ HX32N2170WTS
HX39N2170WTS	COMPLEX board：\TP.MS6486T.PB753\HX39N2170WTS
HX40N2170NWTS	COMPLEX board：\TP.MS6486T.PB753\HX40N2170NWTS
HX43N2170WTS	COMPLEX board：\TP.MS6486.PB753\HX43N2170WTS
HX49N2170WTS	COMPLEX board：\TP.MS6486.PC759\HX49N2170WTS
HX55K305FWTS	COMPLEX board：\T.MS6486.758\HX55K305FWTS

3. Factory/Service OSD Menu and Adjustment

3.1 Remote Control



Note:

Only for reference, logo and button silk-screen can vary for customer.

3.2 How to enter the Factory OSD Menu

. With user's RC

1. Power TV on
2. Press  button on the RC then call up "**Menu**" option

3 Select **Settings** ->**Sound**-> **Advanced setting** -> **Balance**

4 When Balance is "0" , Input 1->9->6->9 in sequence on RC.

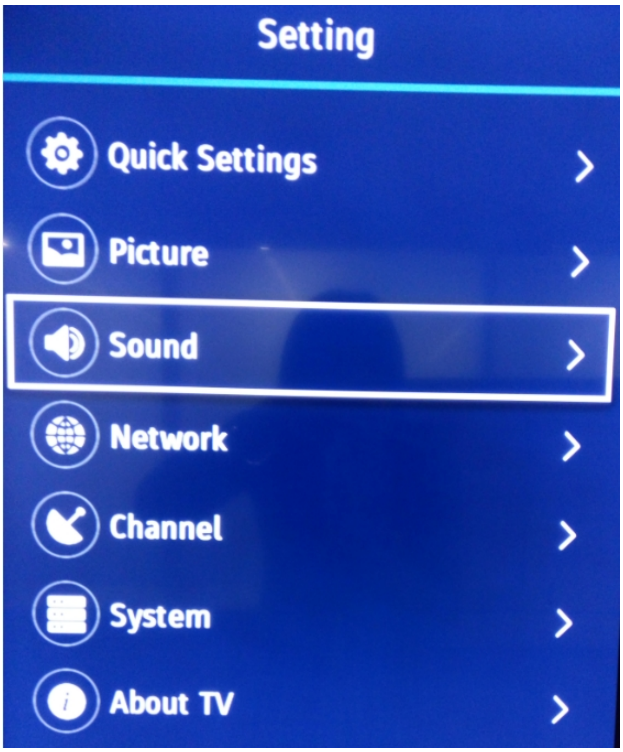
Note: It is important to remind that the hand fingers can't shield the RC emitter diode. If necessary ,re-enter number keys.

5 Factory OSD appears.

6 DC power off and DC power on the TV, which can exit Factory OSD.

Figures as following:

Settings ->Sound



Next

Sound-> Advanced setting -> Balance

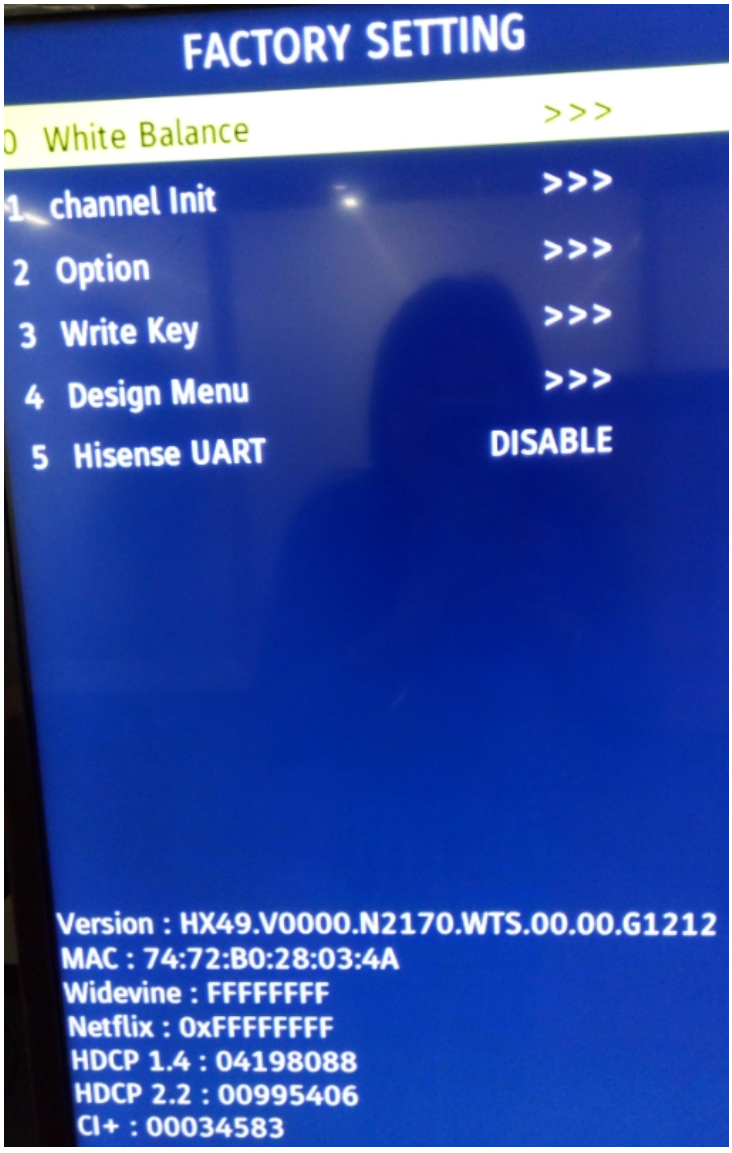
Next： Balance

Input “1969” in sequence, when balance is “0”.

When Balance is “0” ,Enter figure “1->9->6->9” in sequence with remote control..

3.3 Factory OSD Menu

Factory OSD menu list: if you want to learn more about TV, you'd better read it but would not adjust the value please. The Factory menu may be has difference for diverse market and customer.



	Factory menu	Description	Remark
Meun	**White Balance**	White Balance data adjusting, different source has different WB values. Before adjusting, please change to desired source.	
	channel init	TV Produce signal preset, during the factory produce using.	
	Option	can choose	
	Clear all	intialize the factory signal ，EEPROM reset	
	Automatic	auto color adjust with Component and VGA channels.	
	Test Pattern	red\blue\white\green\black five colors,for factory panel testing.	
	soft version	current software version information	
	inside pattern	Factory white balance adjust	
	Version for example ：HX49.V0000.2170.WTS.00.00.G1212	software Version information	Software information
	MAC adr:C8：16：BD:B2：34：69 country ，language，Logo	MAC address information	
	Widevine	YOU TUB key information	
	Netflix	Netflix key information	
	HDCP1.4	HDCP key information	
	HDCP2.2	HDCP key information	
	CI	CI key information	no

White Balance	BIN B1	can choose B1/B2/B3/B4/B5/B6
	R Gain 128	High Brightness Red
	G Gain 128	High Brightness Green
	B Gain 128	High Brightness Blue
	R Offset 128	Low Brightness Red
	G Offset 128	Low Brightness Green
	B Offset 128	Low Brightness Blue

Channel init	huangdao old	
	Qing Dao	TV Produce signal preset, during the factory produce using.
	huangdao new	
	……	

Option	ToFAC M/U	"M" used in factory product. "U" used in exit factory state,
	LNB POWER	Not all,the chassis that must support the satellite signal for example: Europe TV :13V，18V，OFF；Japan：15V
	count y	country choose
	Language	language choose
	Logo	region logo choose
	power mode	remember mode/Power on mode/standby mode
	set MAC	set MAC address
	USB up rade	If the TV has the function of USB disk upgrade directly in the factory menu then can use the item.
	PQ upgrade	if the panel parameter of smart TV is not right then can USB upgrade directly .
	URAT on/off	when choose "on" then can serial port connect with Tool
	Mirror enable	Only for paneL testing
	Flip enable	

Note:

The Factory menu may be have difference for diverse market and customer, above Factory menu only for reference.

3.2.1

White Balance:

Different source has different WB values. Before adjusting, please change to desired source.

Option:

Clear all function in it.

Write Key Include:

0	All
1	MAC
2	CI+
3	HDCP 1.4
4	HDCP 2.2
5	Widevine
6	Netflix

Note: The factory menu date varies according to different sources. Incase changing the factory data by error, you can choose to "Clear all", by which you can resume the default value.

To clean the EEPROM:

a. Select the item "**Option**"--"**Clear all**" in Factory mode.

b. Press VOL+ button to clear the EEPROM data.

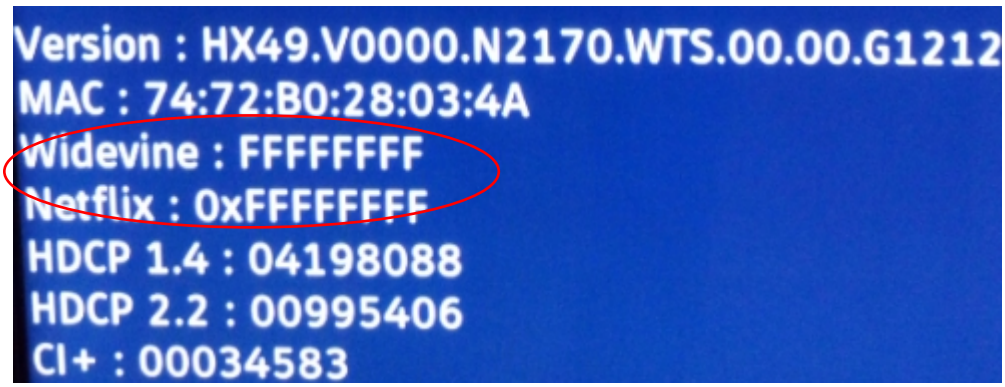
c. Close the OSD menu after 5 seconds.

d. Restart the TV.

e Also the Keys information must been checked, if appear "NG", then must rewrite key code.

Note:

check whether the Key information under the current Version is OK, if appears "NG" or as following red surround information then need rewrite the key.



4. Software Upgrading

4.1 USB Upgrading

Main software upgrading directly with USB

When TV has print message, the main software can be upgraded with USB Disk. Take `HX49N2170WTS` for example.

- First, copy the main software “HX49N2170WTS.bin” file to the USB root Disk.
- Second, ensure there are no other “*.bin” files in the root directory of USB Disk , AC power off ,Insert the USB Disk to TV USB port, then AC power on the TV.
- The TV will identify the software and update automatically then pop up the update process bar. It need about spend 8 minutes to complete the update.
- After update success, TV can automatically restart.
- Enter the Factory OSD Menu and ensure the main software version. then choose “option”→“Clear All” to clean the EEPROM.

4.2 Mstar Tool upgrading

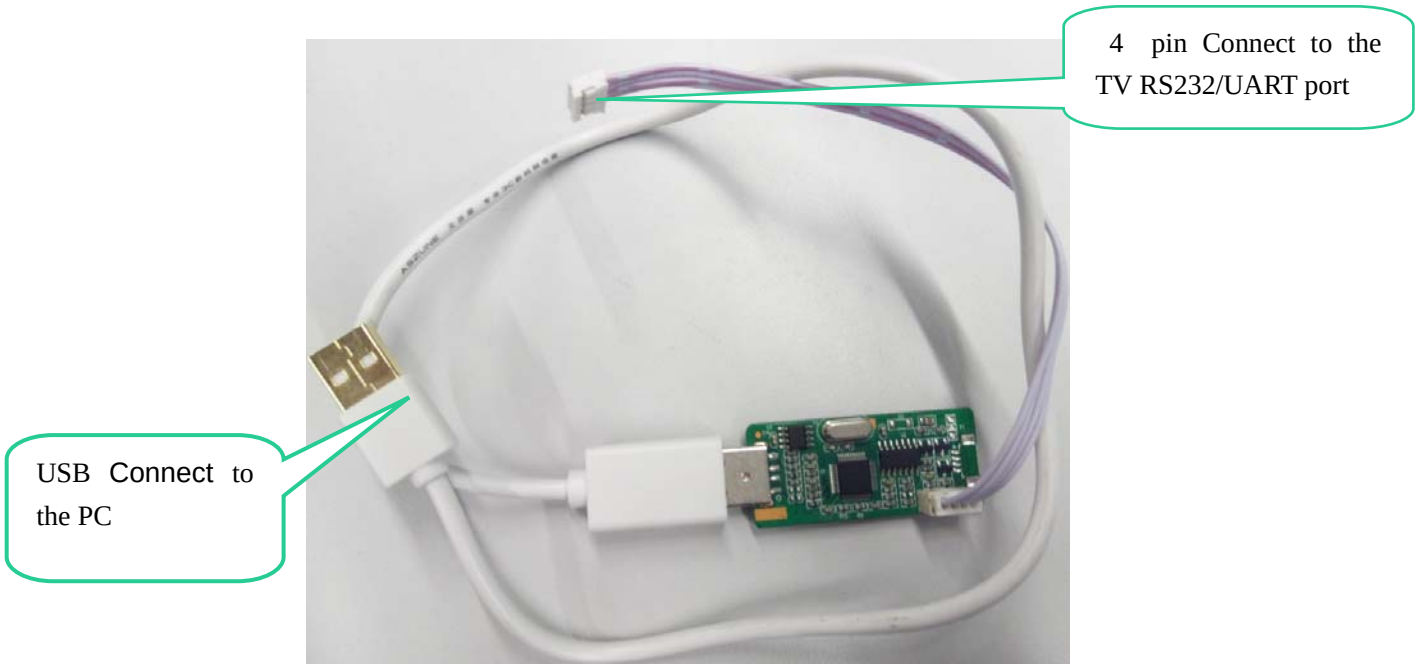
If USB upgrades failure, TV crashed and SecureCRT no print message. Then we must burn the Mboot program the flash first. then USB disk to upgrade the "MstarUpgrade.bin" file.

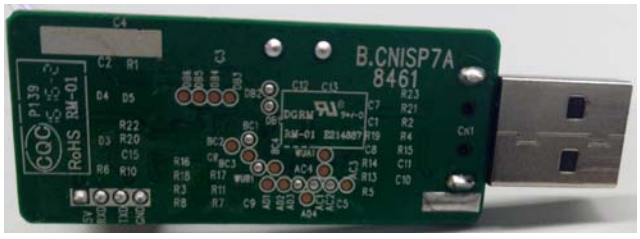
4.2.1 Hardware connecting

Connect the unit to your pc with a USB-to-serial port cable. USB port connects to your PC and earphone port to the TV's CN7(earphone hole). As following

Note:

Service must use CVTE update debug tool, can't use Hisense debug tool of. If use Hisesen update debug tool,the Security IC Device ID will appear error (not 22 bit)





The back of the debug board

4.2.2 Mstar USB-serial driver

First use Mstar bebug Tool, and you have to install drive software for bebug board.

If your PC is Windows XP system:

First install FTCUNIN.EXE of FTC100103(MSTAR) rar file in your PC.

This is a drive software of Mstar

Another:

If your PC is Win7 system, you will have to install CDM20802_Setup_WIN7 rar file，and then open the software of SecureCRT in your PC.

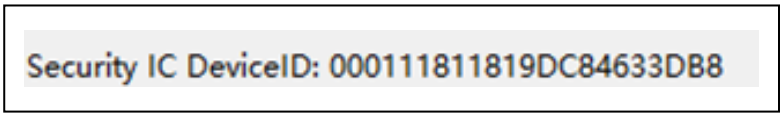
4.2.3 Mstar Tool upgrading

1) How to get the Device ID password?

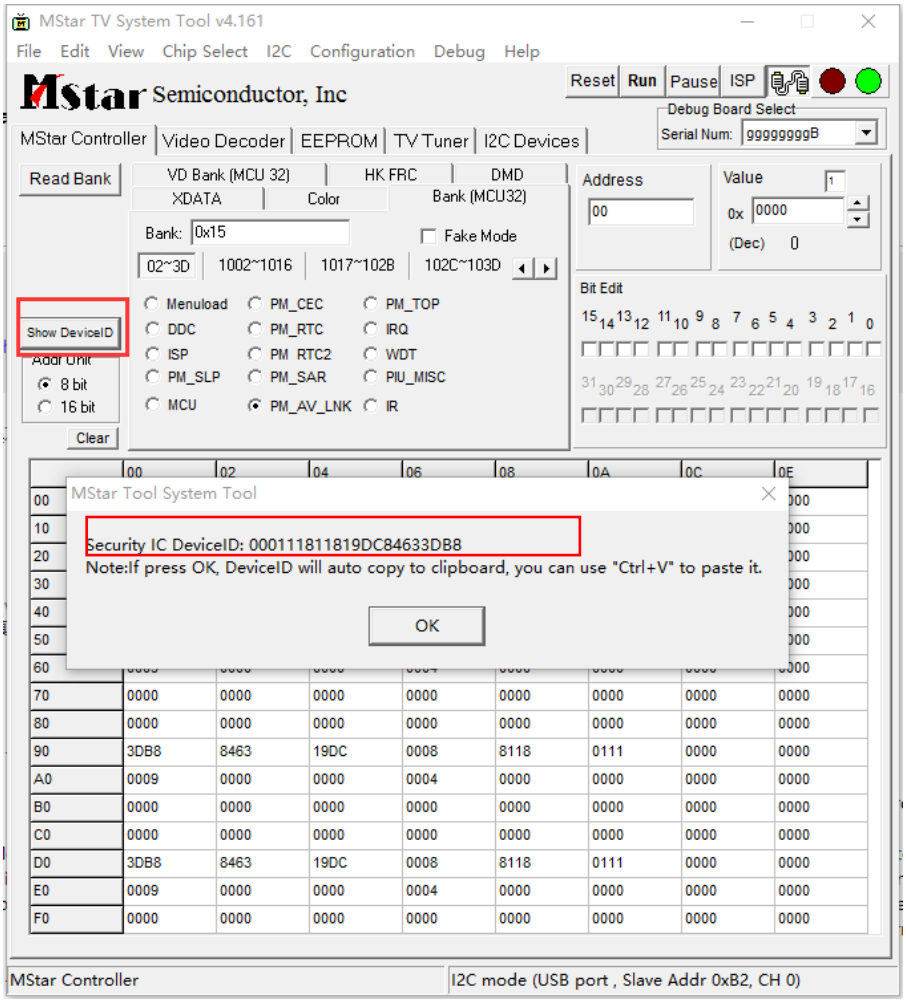
● Connect the board with your PC via the debug tool,With MSTV_Tool_4161 tool , run MSTV_Tool.exe

● Ensure “  ” button connected correctly,then Click "Show DeviceID"button，you will get 22 bit device ID。

To ensure that the Device ID whether is 22 bit ,if not 22 bit, indicates that’s wrong.



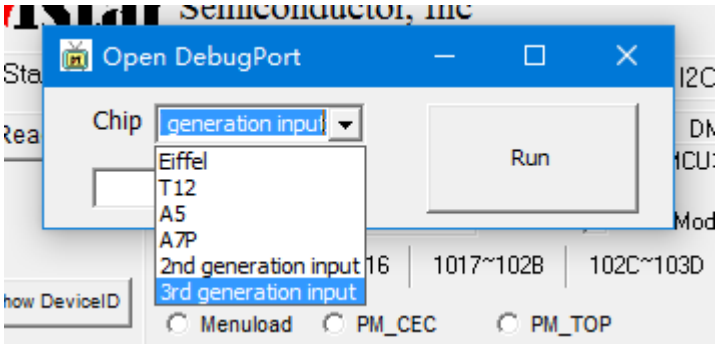
● Send the ID to the IC developer， Waiting for the IC developer feedback the IC proper ID password.



2）deciphering

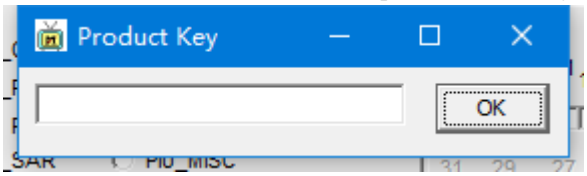
● Use MST_260C_D01A_Secure tool ,run MSTV_Tool.exe，Click "Show DeviceID"button to inspect the Device ID.

● Click “View”->“Open DebugPort” choose “3rd generation input”，input the ID password from the IC developer then click “Run”



3) Burn the romboot.bin software.

- With MSTV_Tool_4161 tool ,click Help -> Product Key

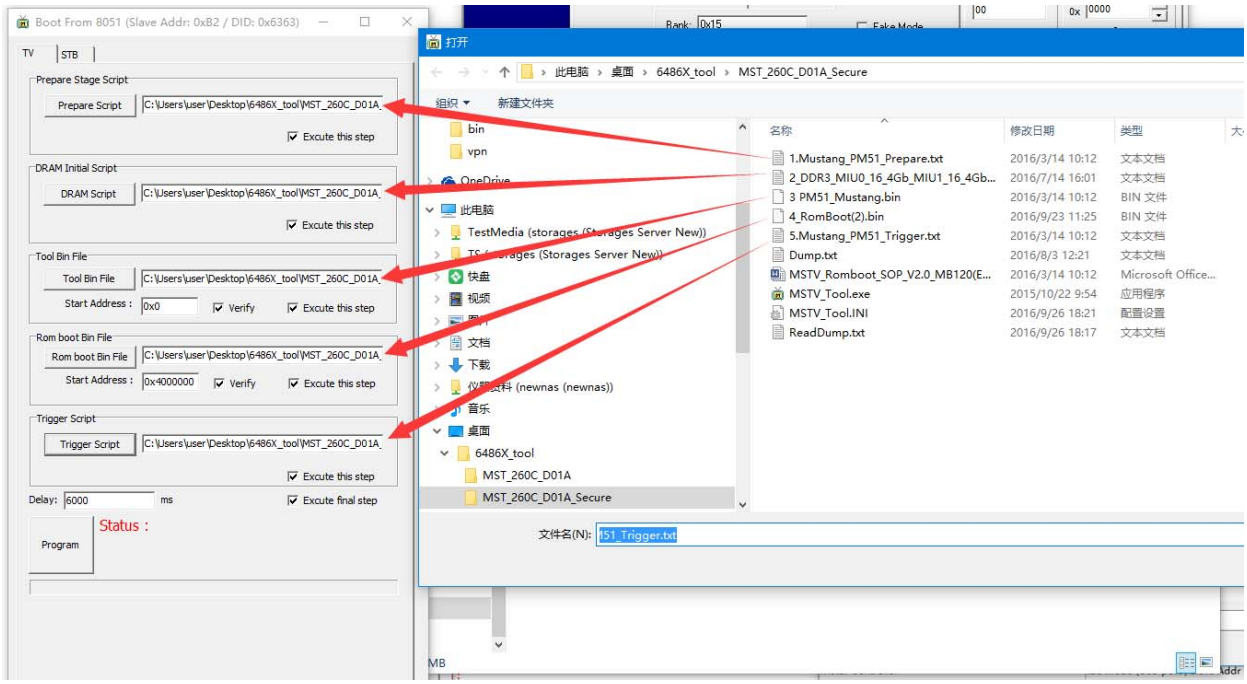


Input “prognand then click “OK” button.

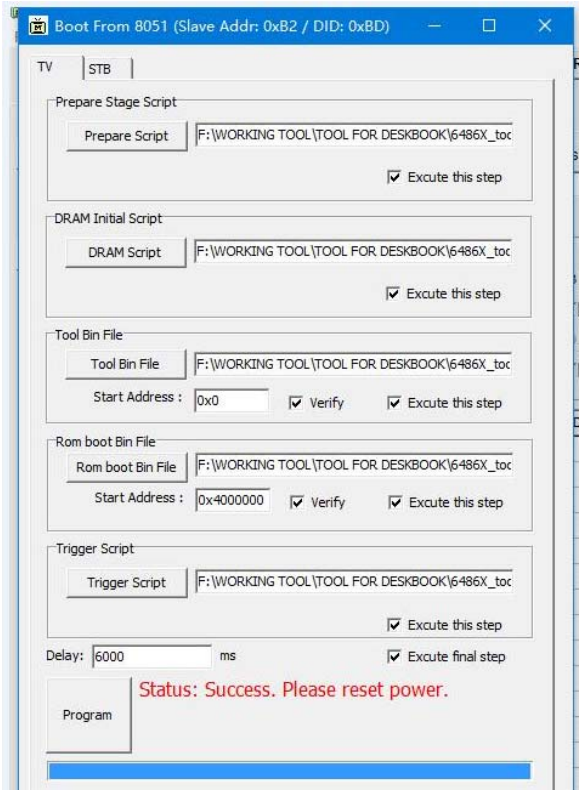
- Click View -> NAND Prognand(8051) .

in the bouncing windows, load the specified five files from MST_260C_D01A_Secure catalogue to the left blank space.

- Click “Program”to burn the romboot. It need about spend 2-3 minutes to complete burning.

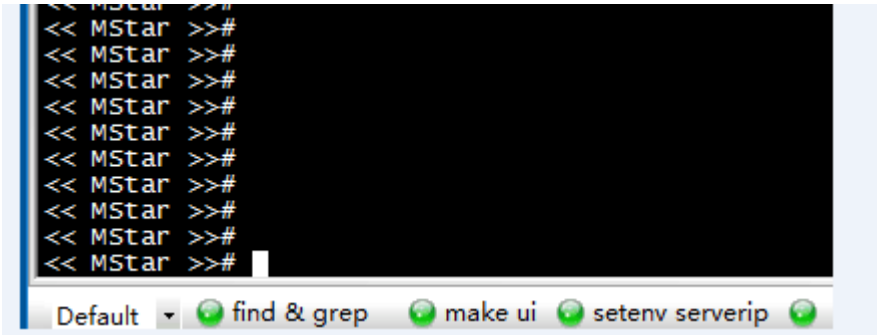


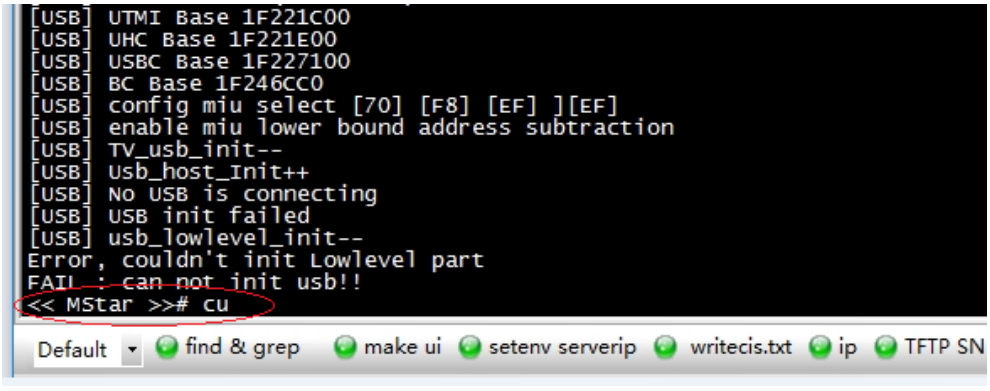
- It need about spend 2-3 minutes to complete burning. When status appears:success,please reset power,it indicates that the burning sueeeed.



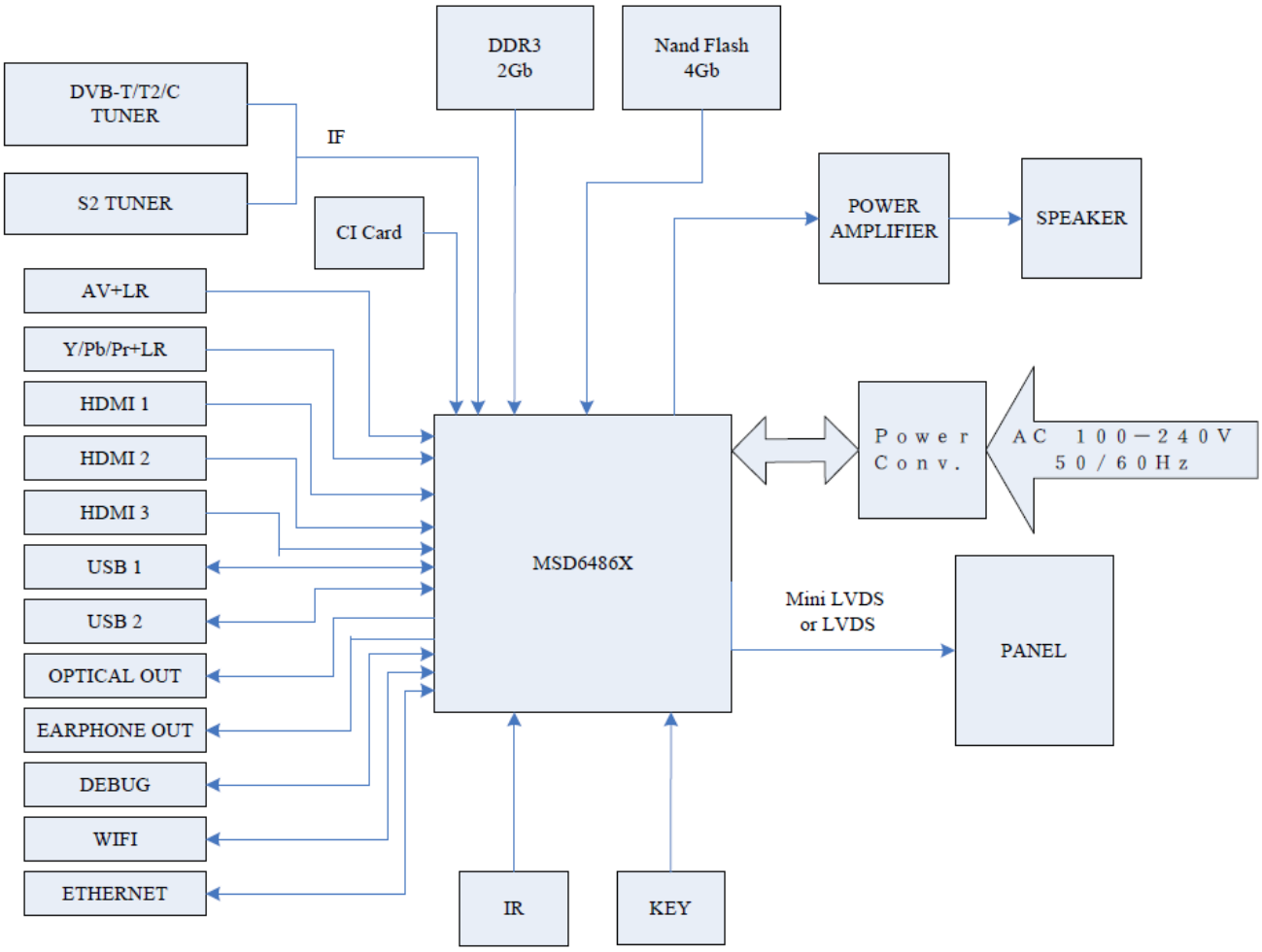
- Run SecureCRT, appearing the print information;copy the main software rename “MstarUpgrade.bin.” to the USB root Disk, ensure there are no other “*.bin” files in the root directory of USB Disk ;behind the “mstar >>#” ,input lower-case letter “cu” then “enter” to update the main software.
- How to enter “mstar >># “of SecureCRT?

First: Connect the debug Tool board;Second:press the “ enter” key on the keyboard of PC; and the last TV restart.then enter “ mstar >>#” interface.





5. Signal process:



6. Trouble shooting

7. Schematic diagram :

TP.MS6486T.PB753
Trouble Shooting

—Power supply

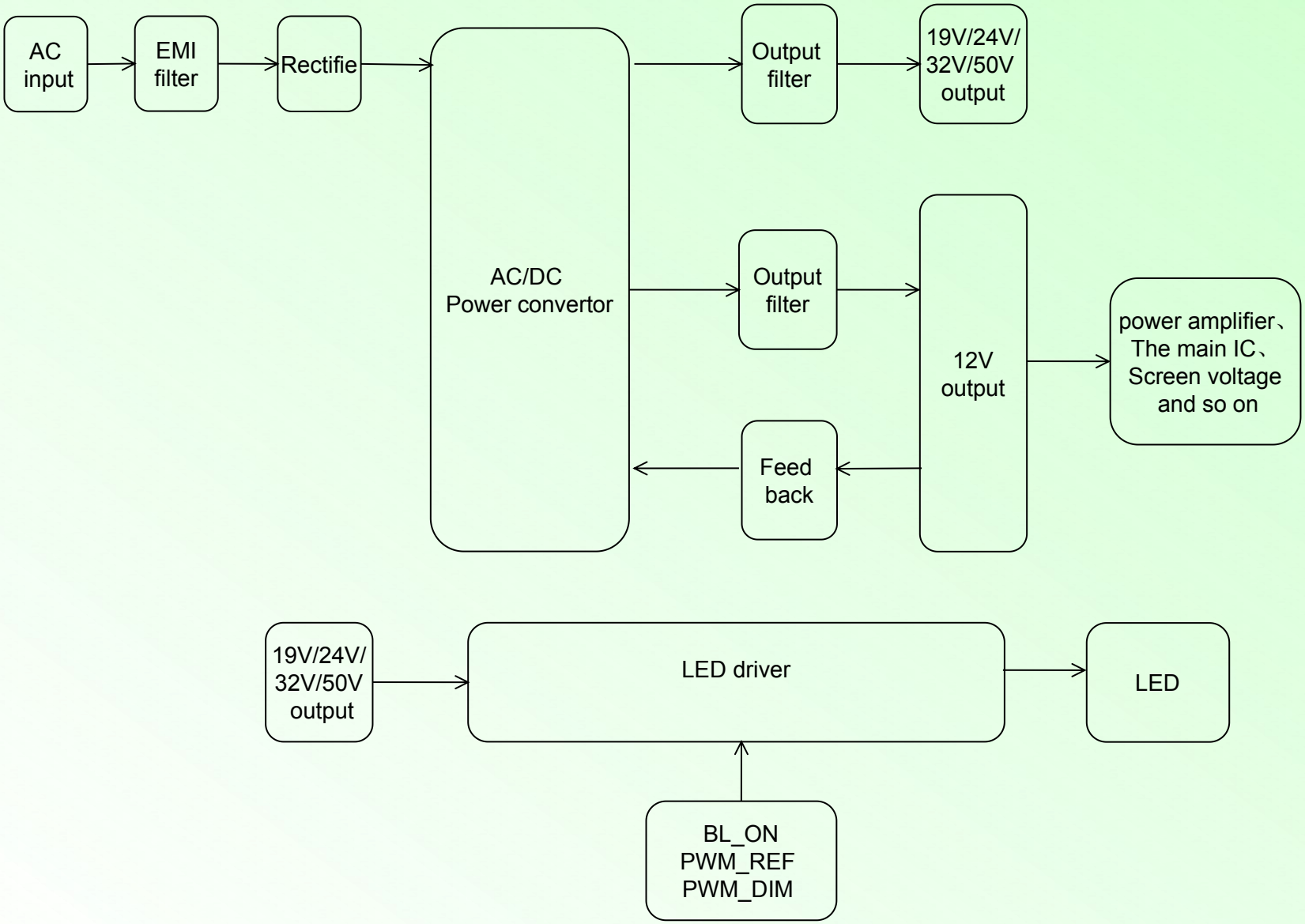
—Display

—Audio

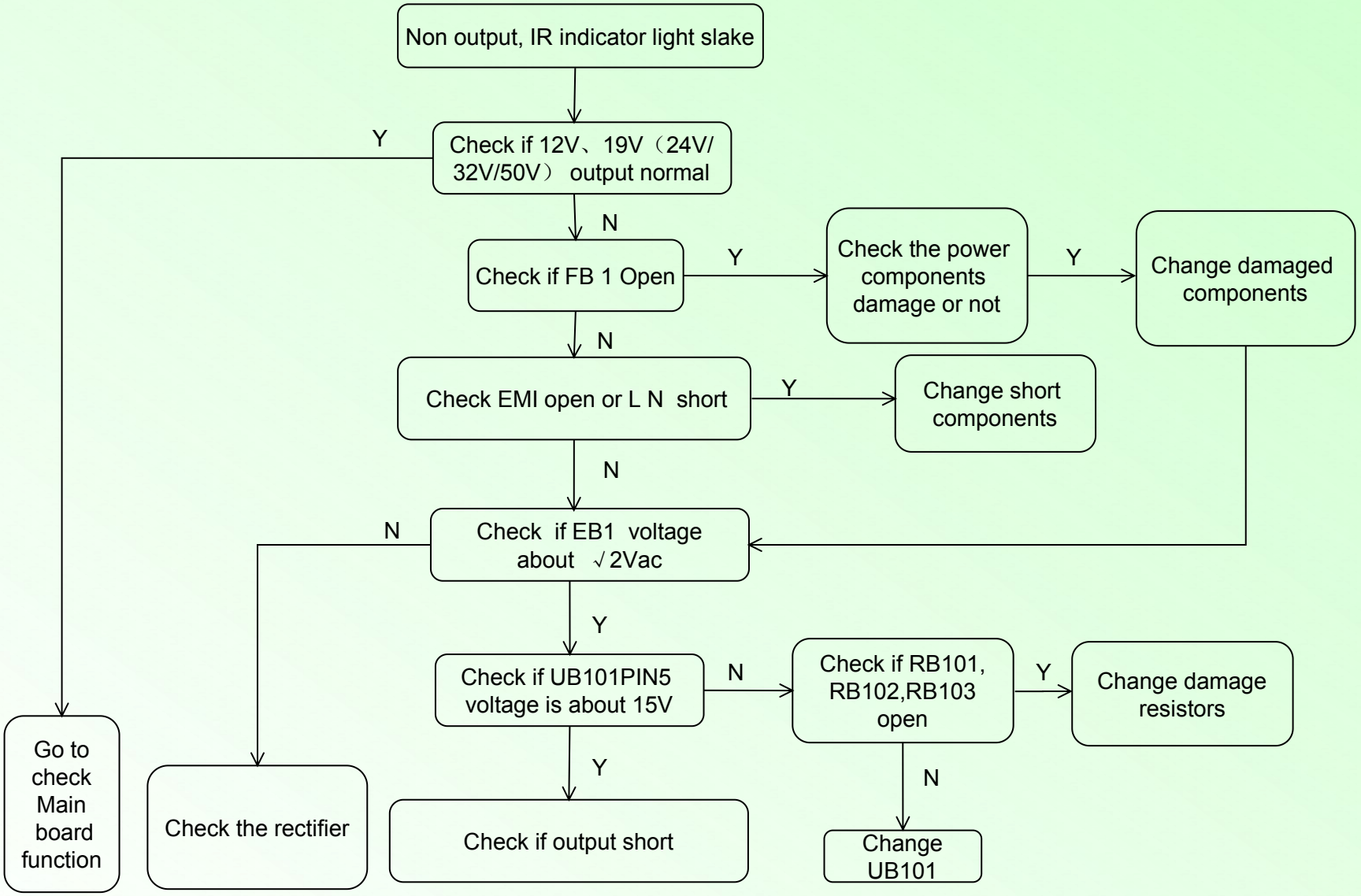
—Function

TV Author : xiongfei Checked By :
POWER Author : Lin Wentian Checked By :

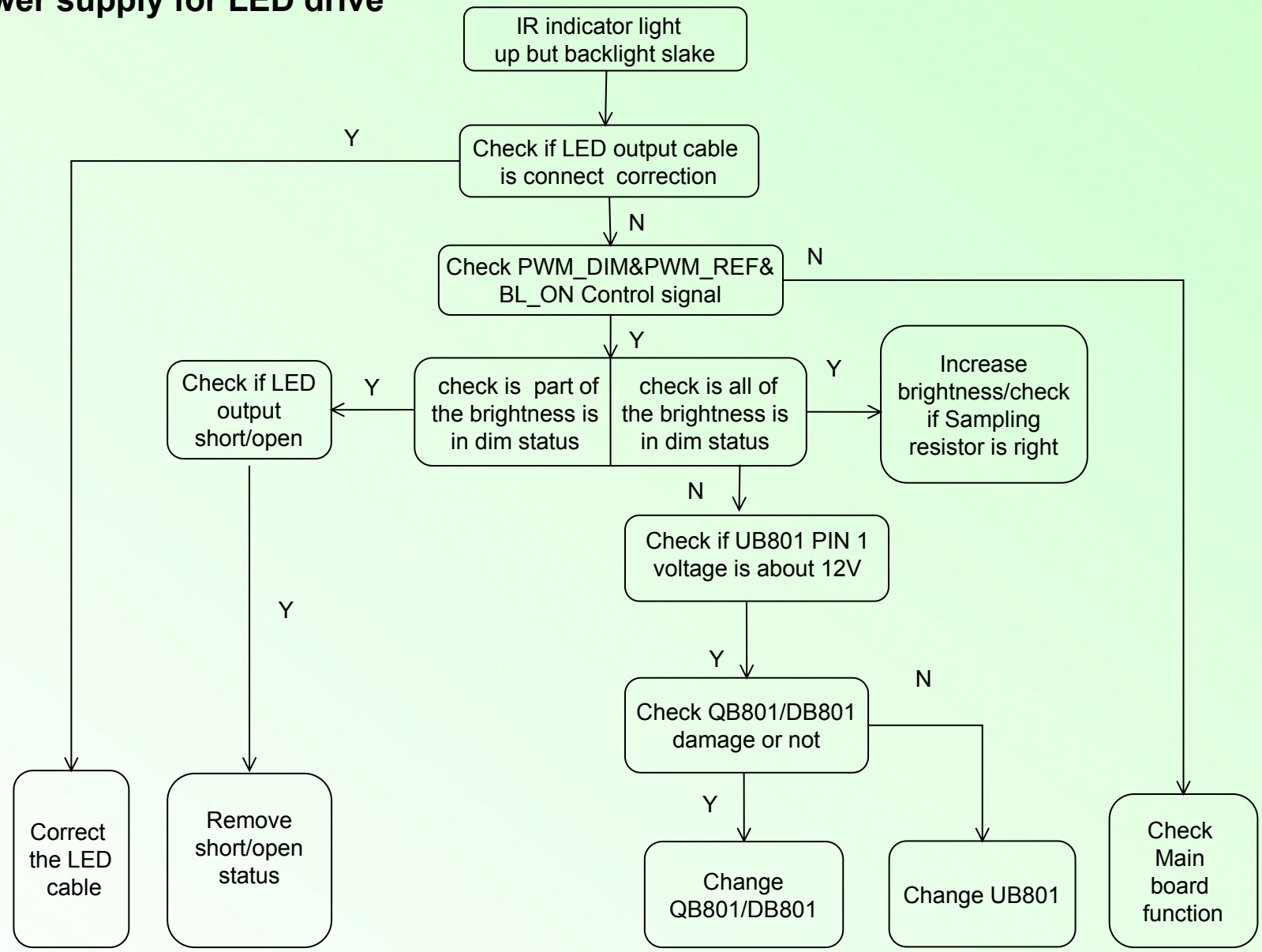
1. Power circuit diagram



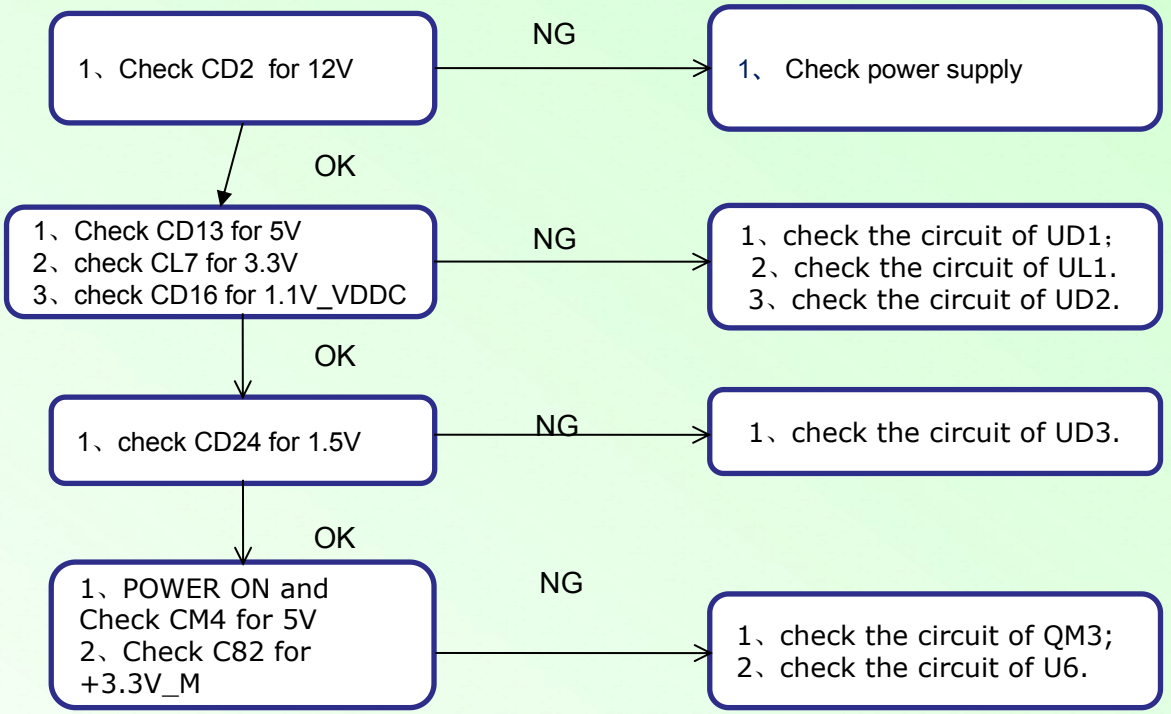
2.Power Supply Trouble 1



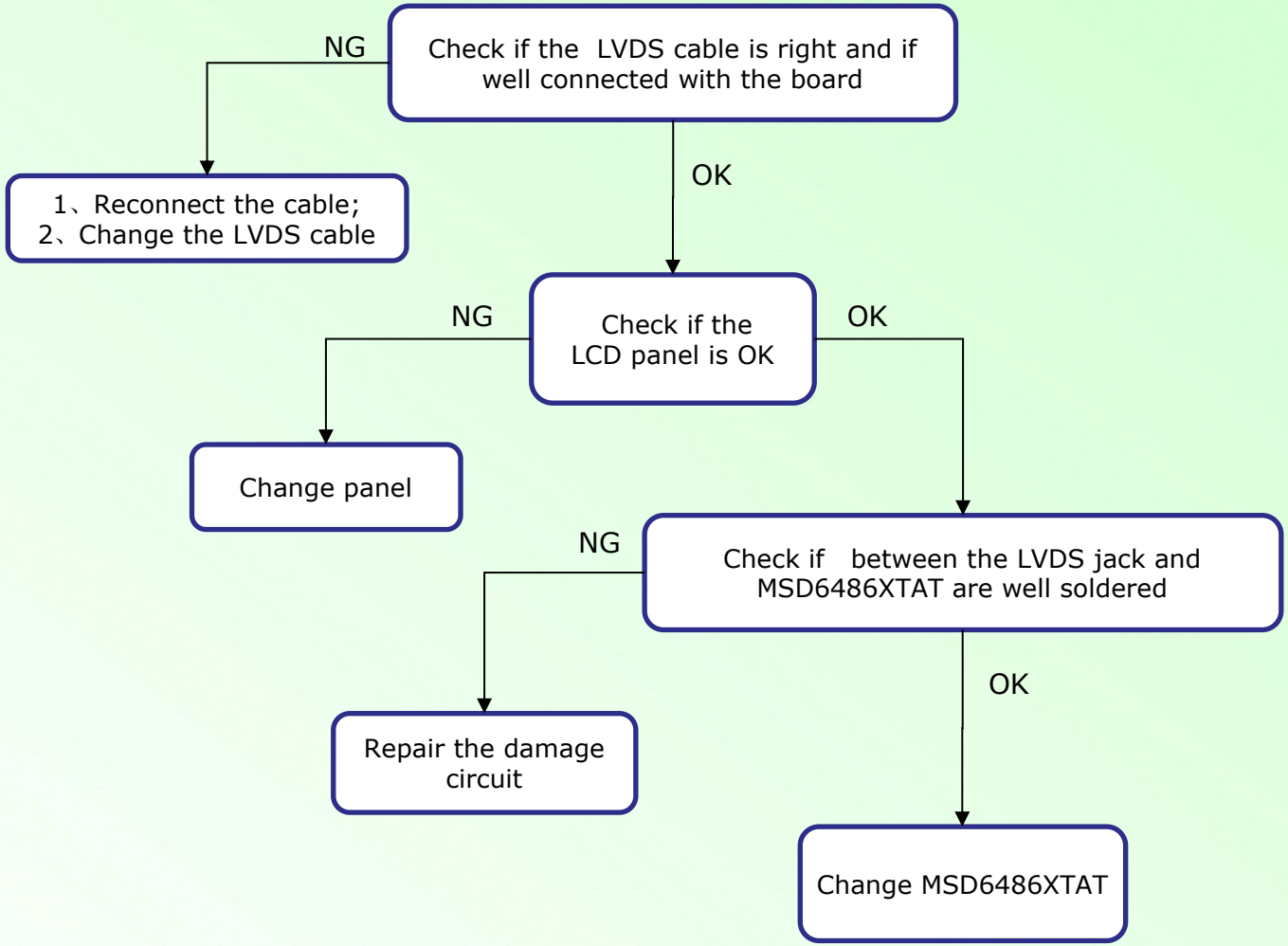
3.Power supply for LED drive



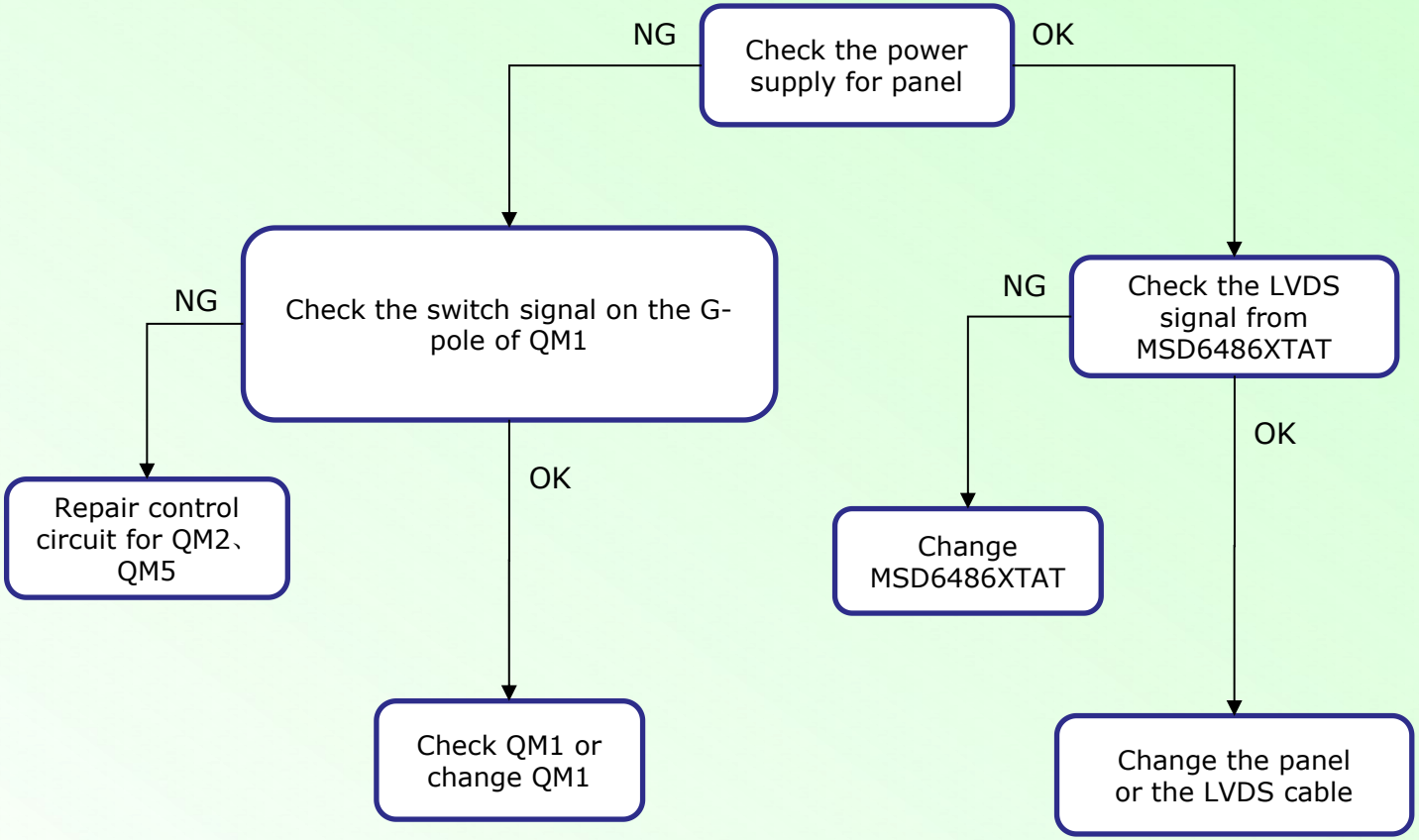
4. Power supply Trouble



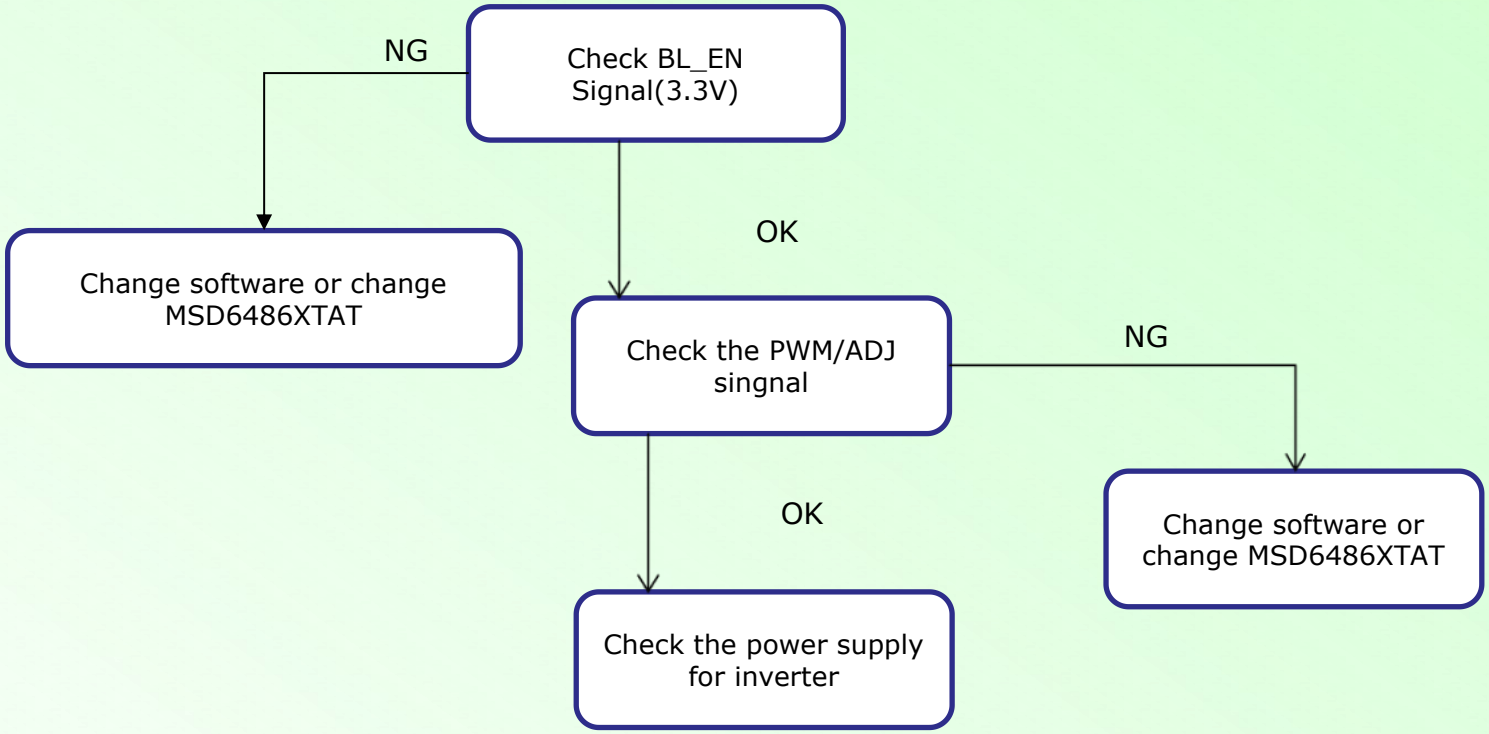
5. Display Trouble(abnormal screen)



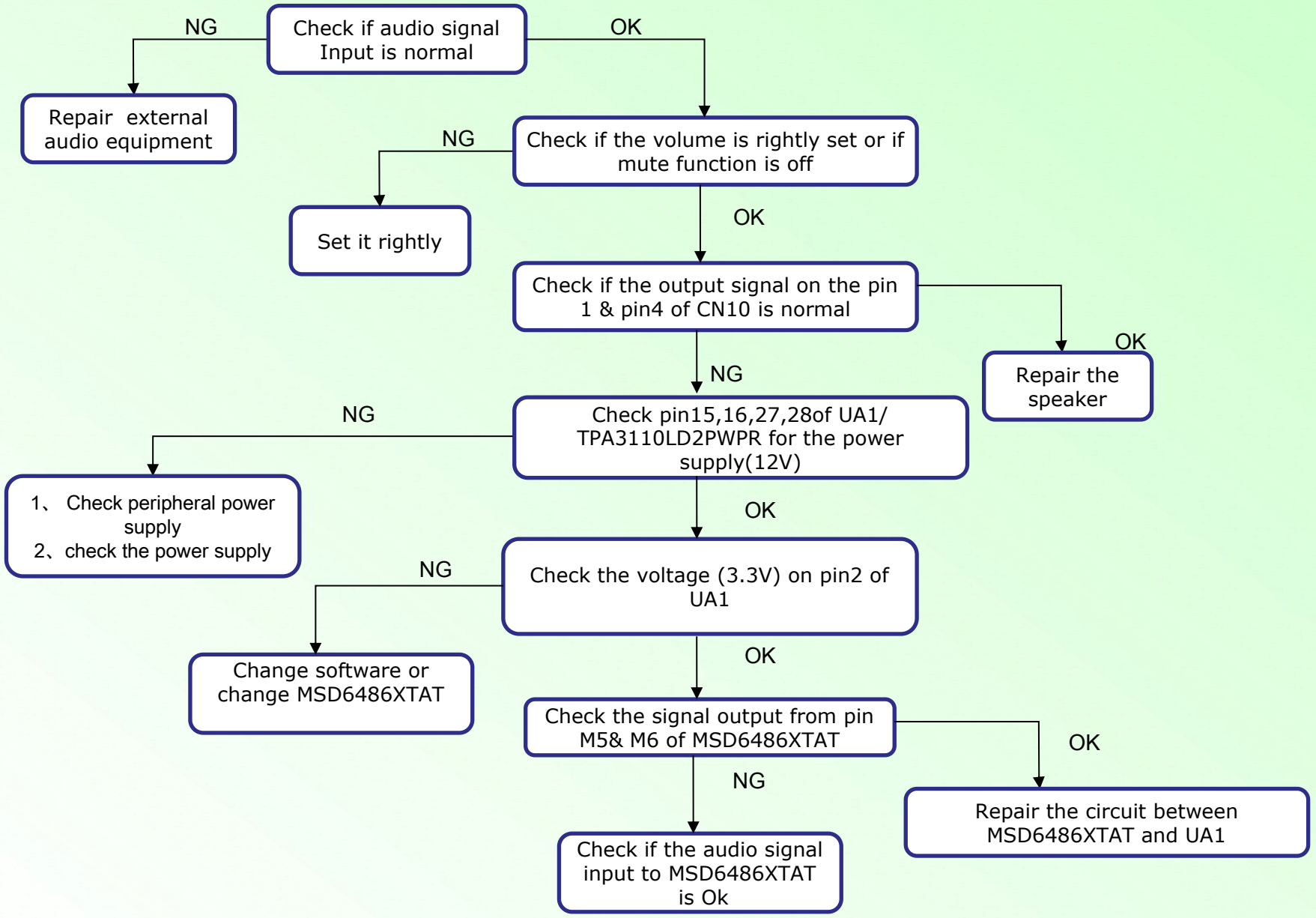
6. Display Trouble(white screen)



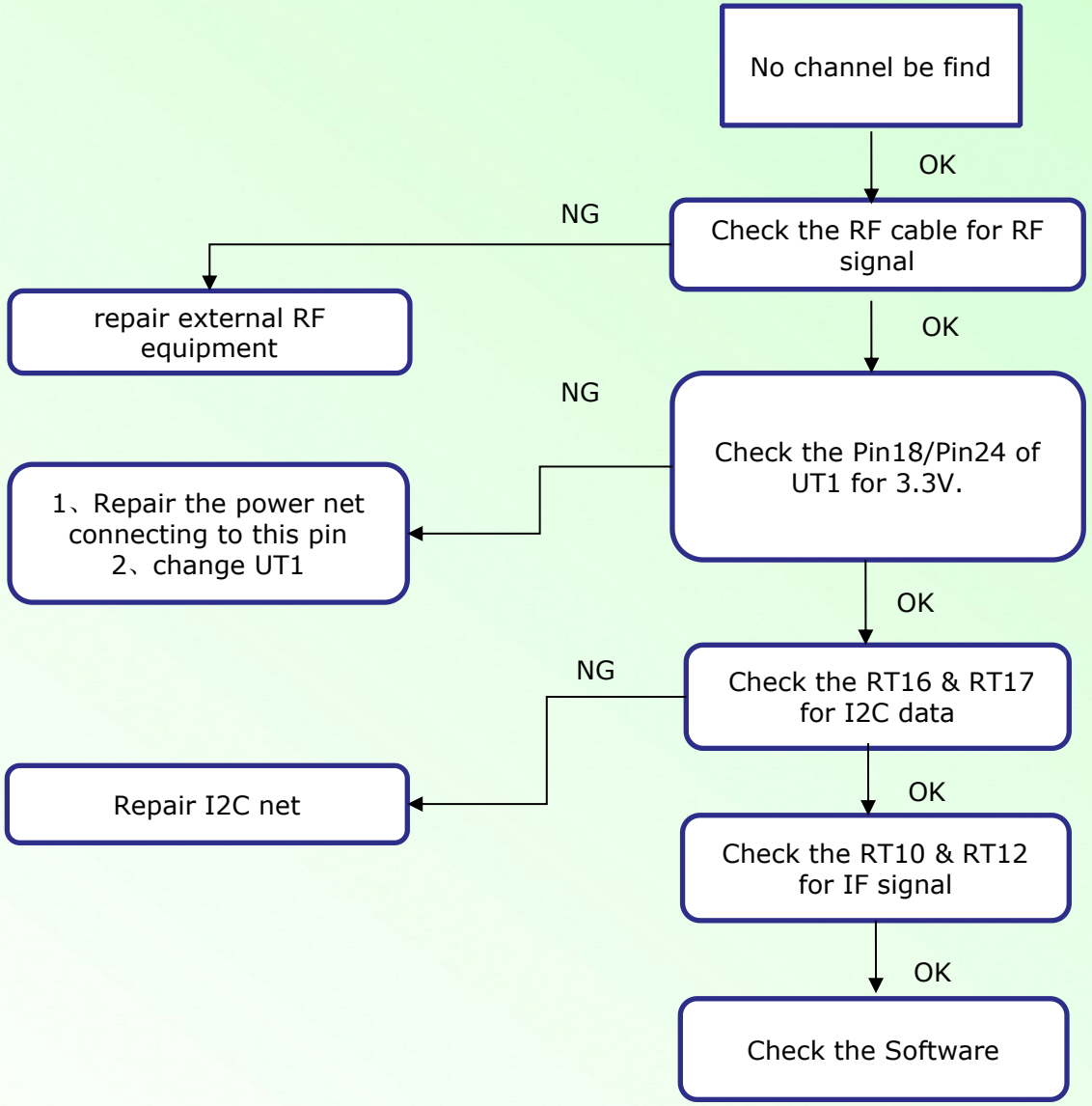
7. Display Trouble(black screen)



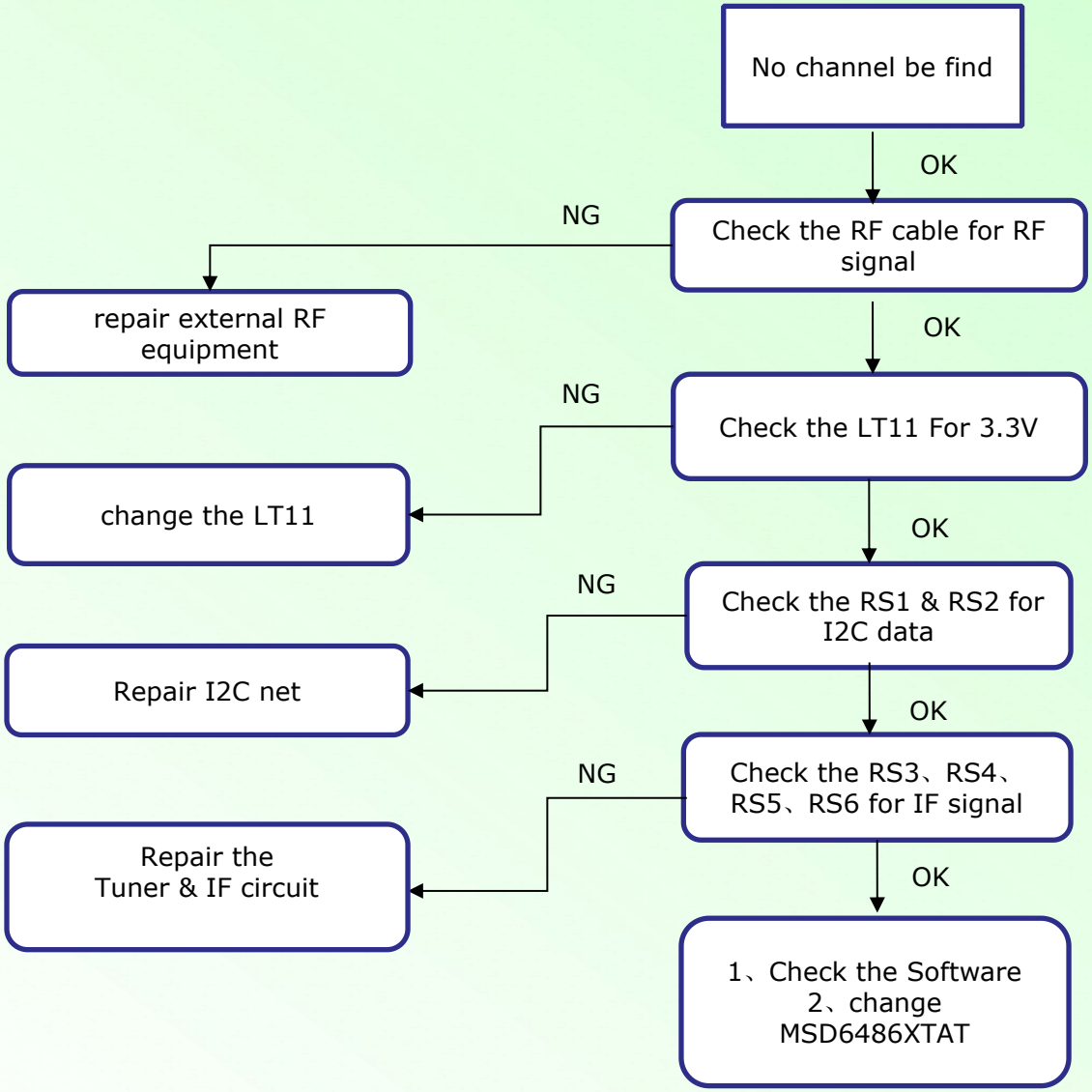
8. Audio Trouble(no sound)



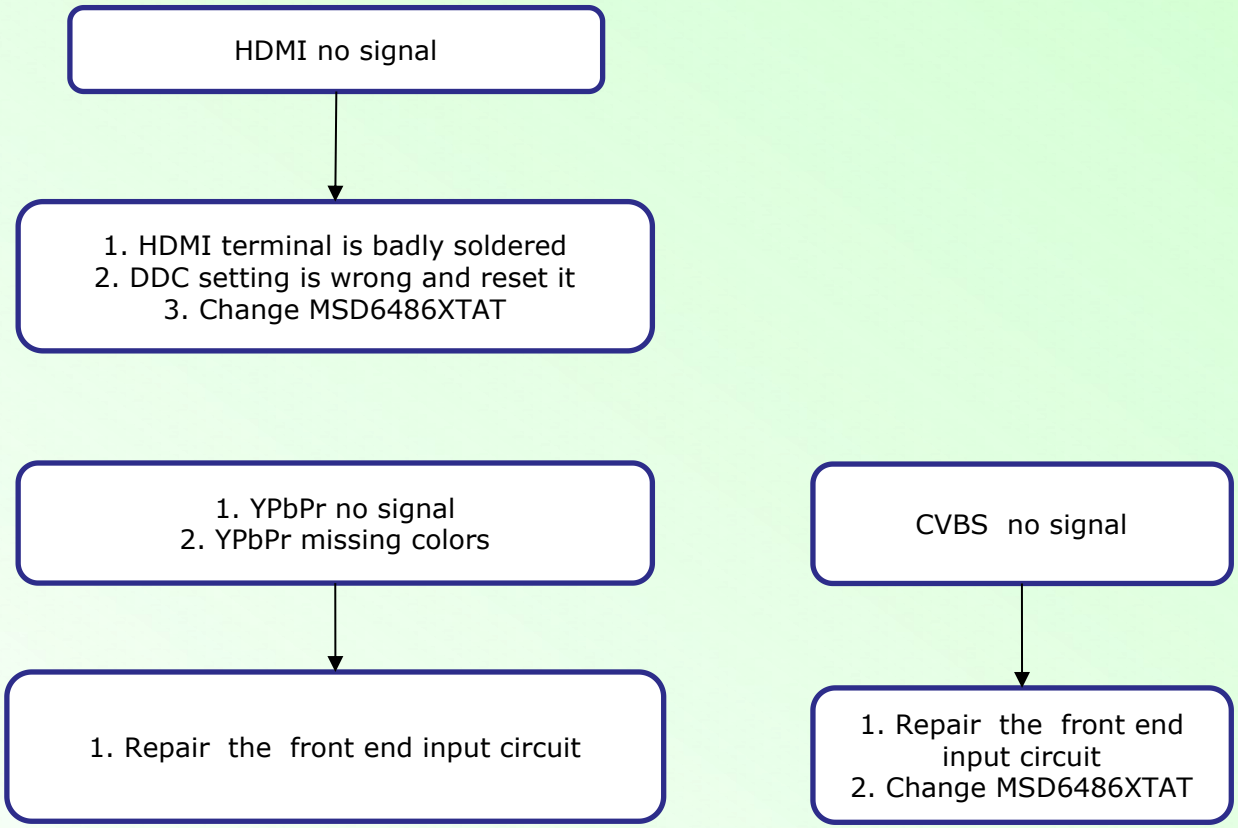
9. Function Trouble(ATV)

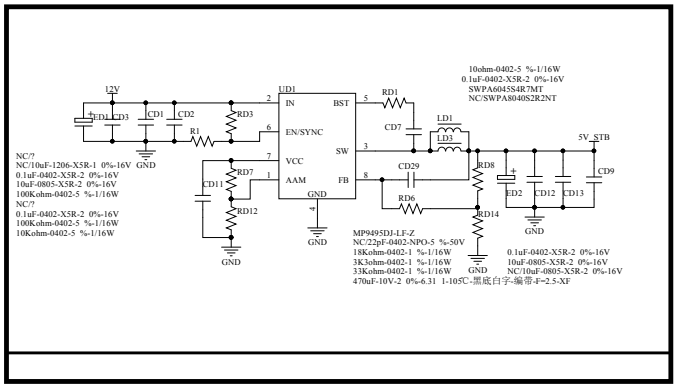


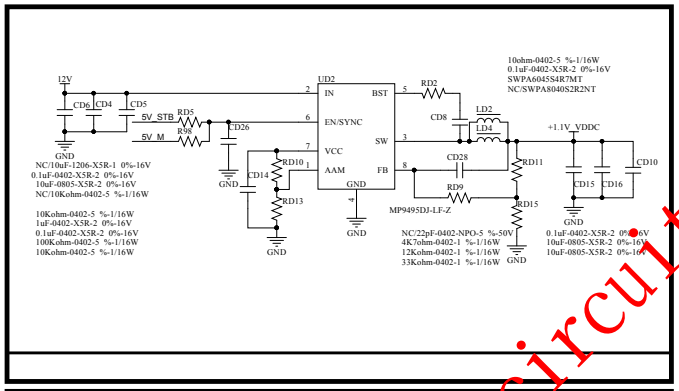
10. Function Trouble(DTV)

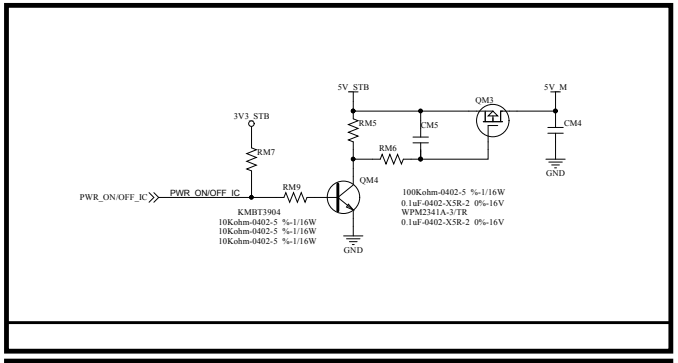


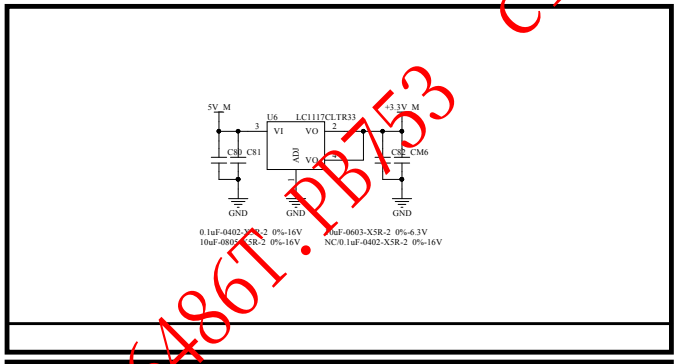
11. Function Trouble(HDMI, YPbPr, CVBS)

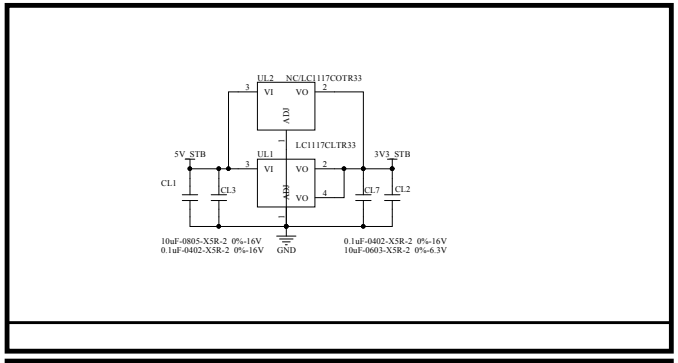


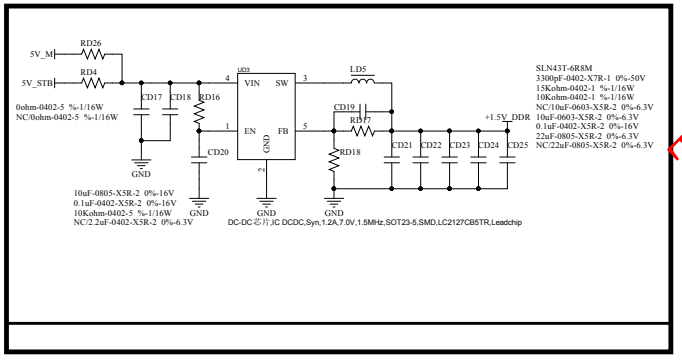


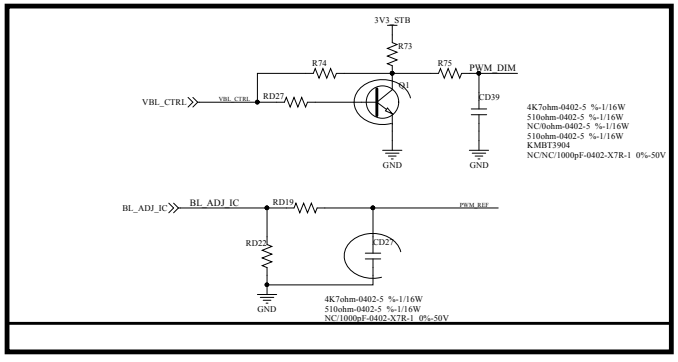


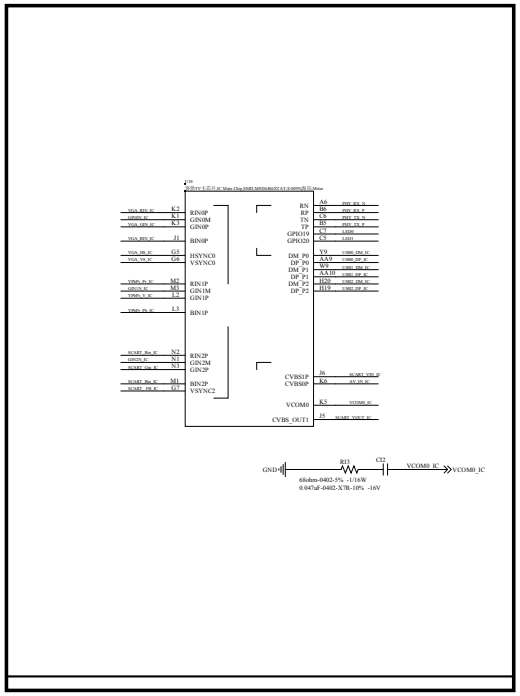


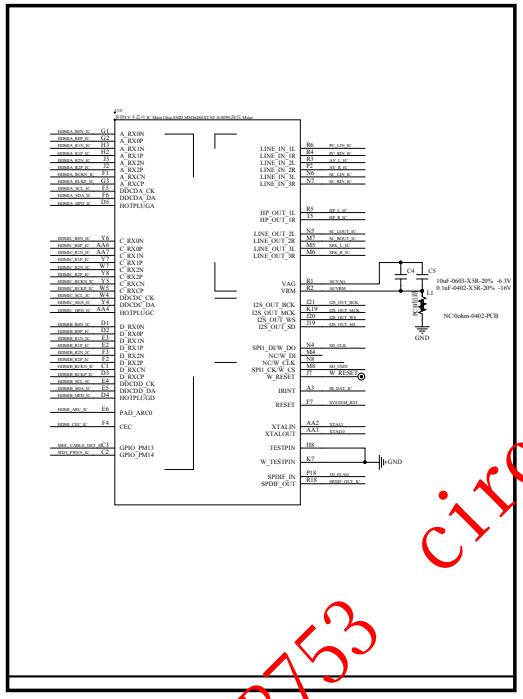


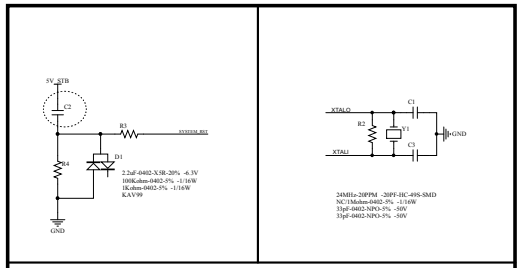


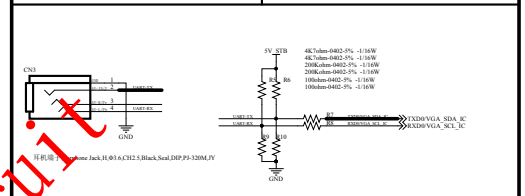


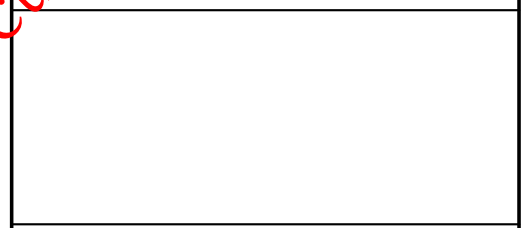


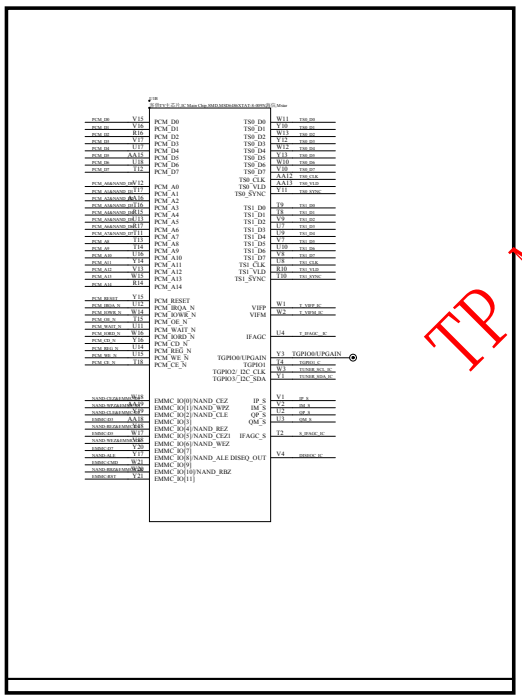


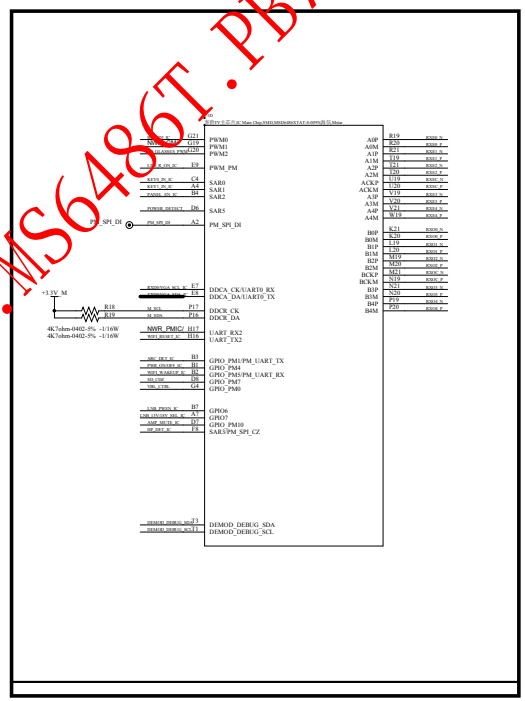


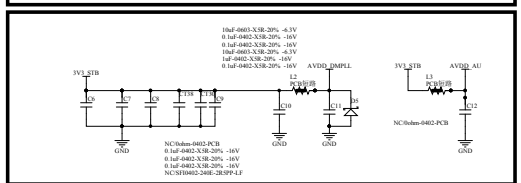


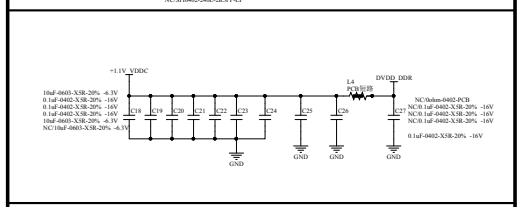


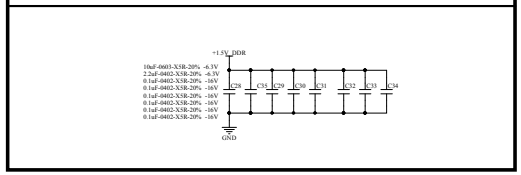


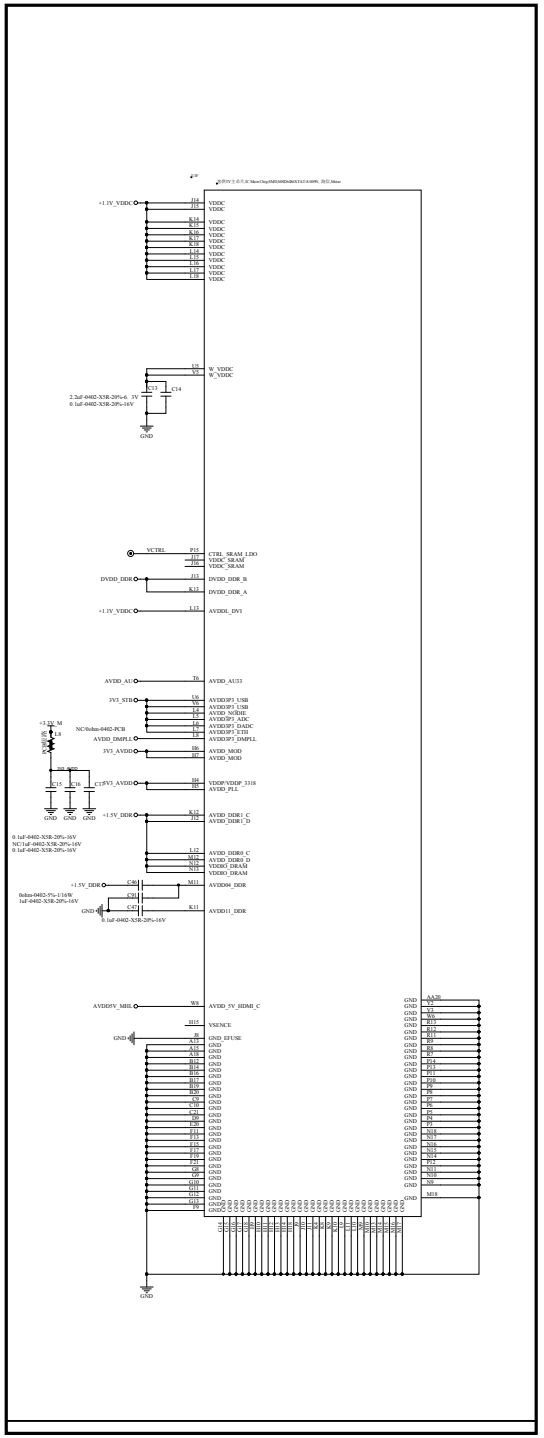


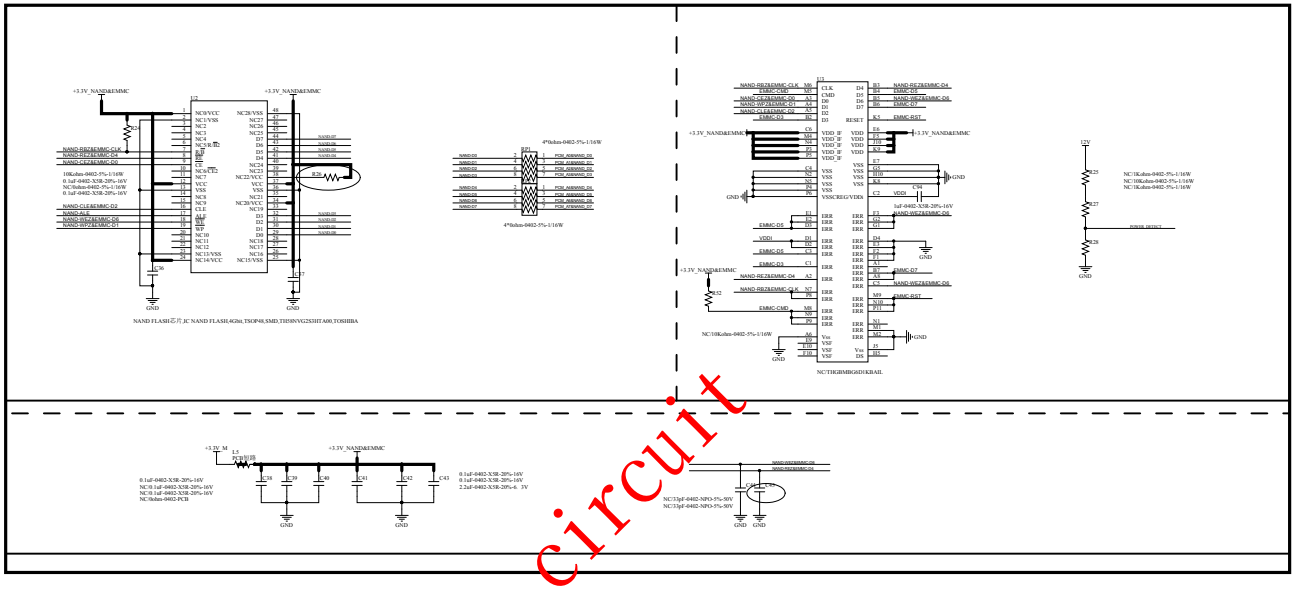


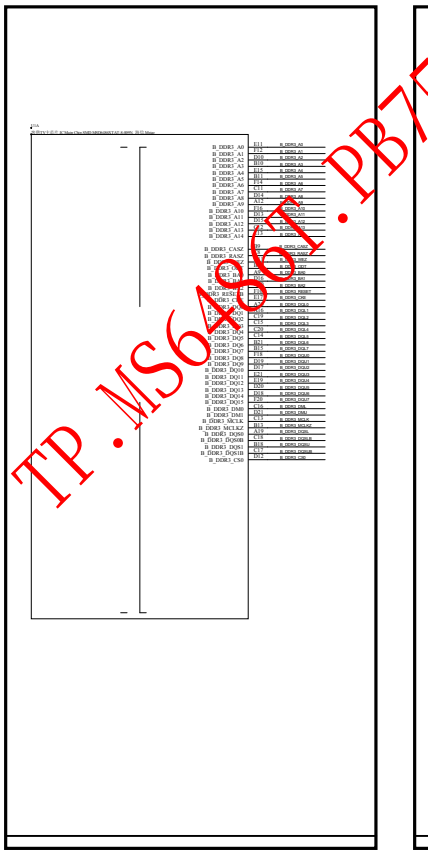


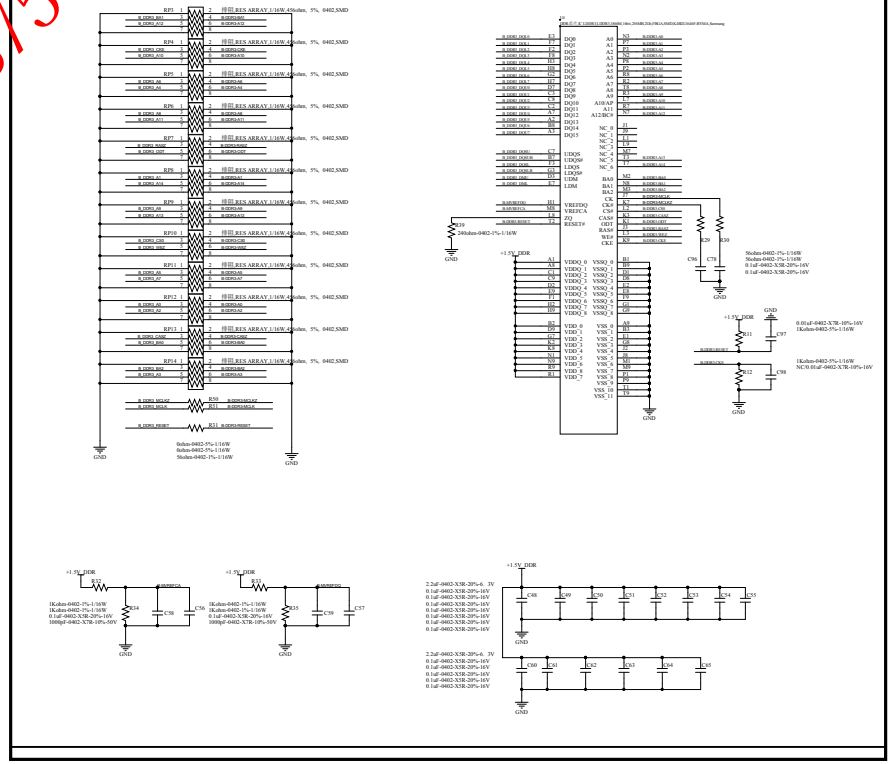


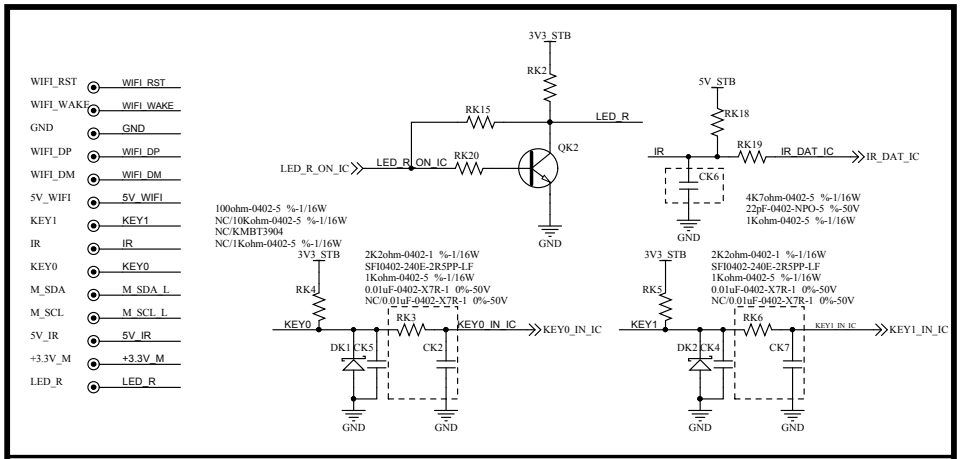


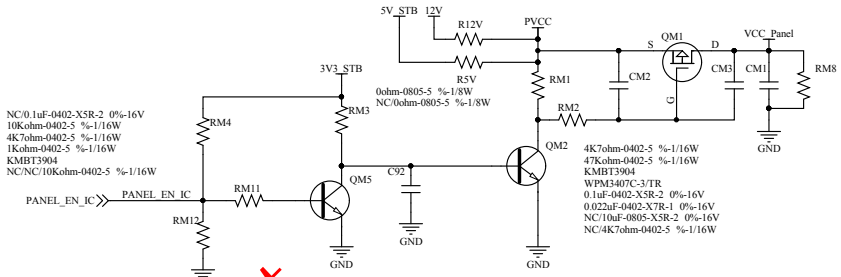


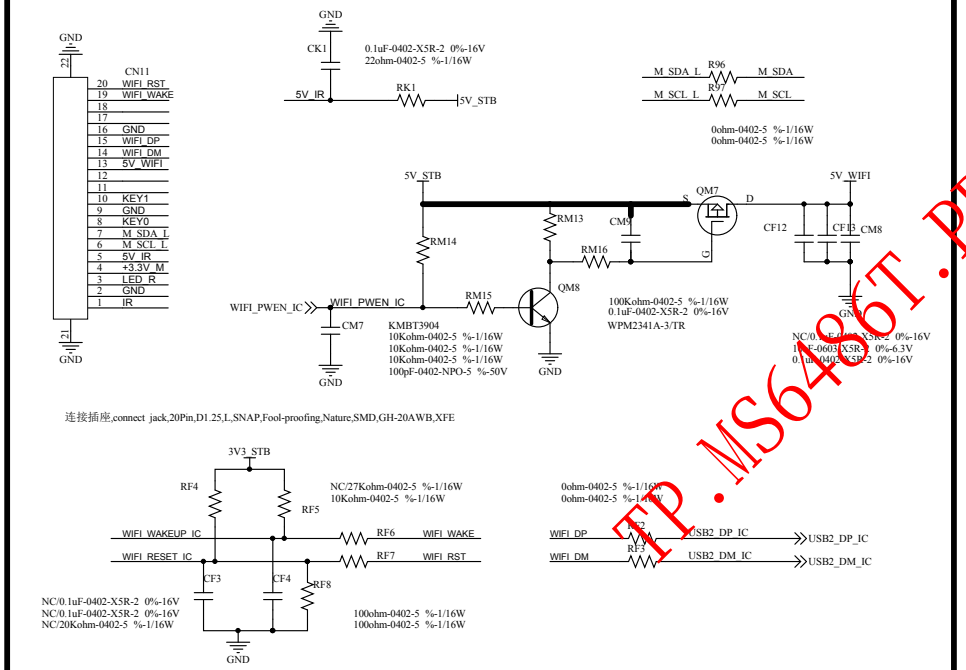


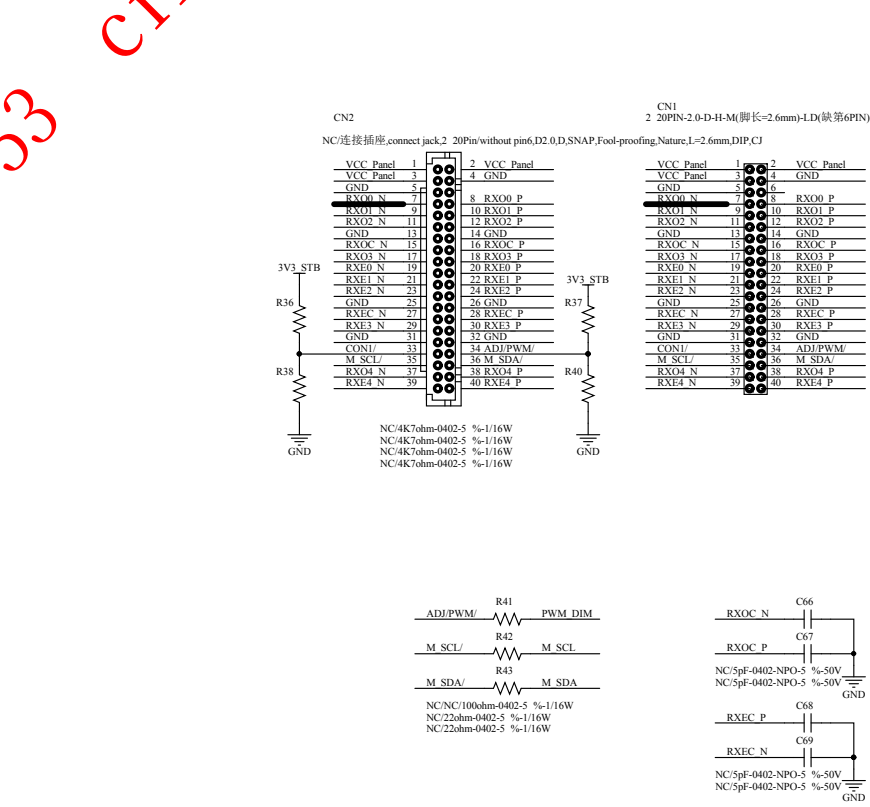


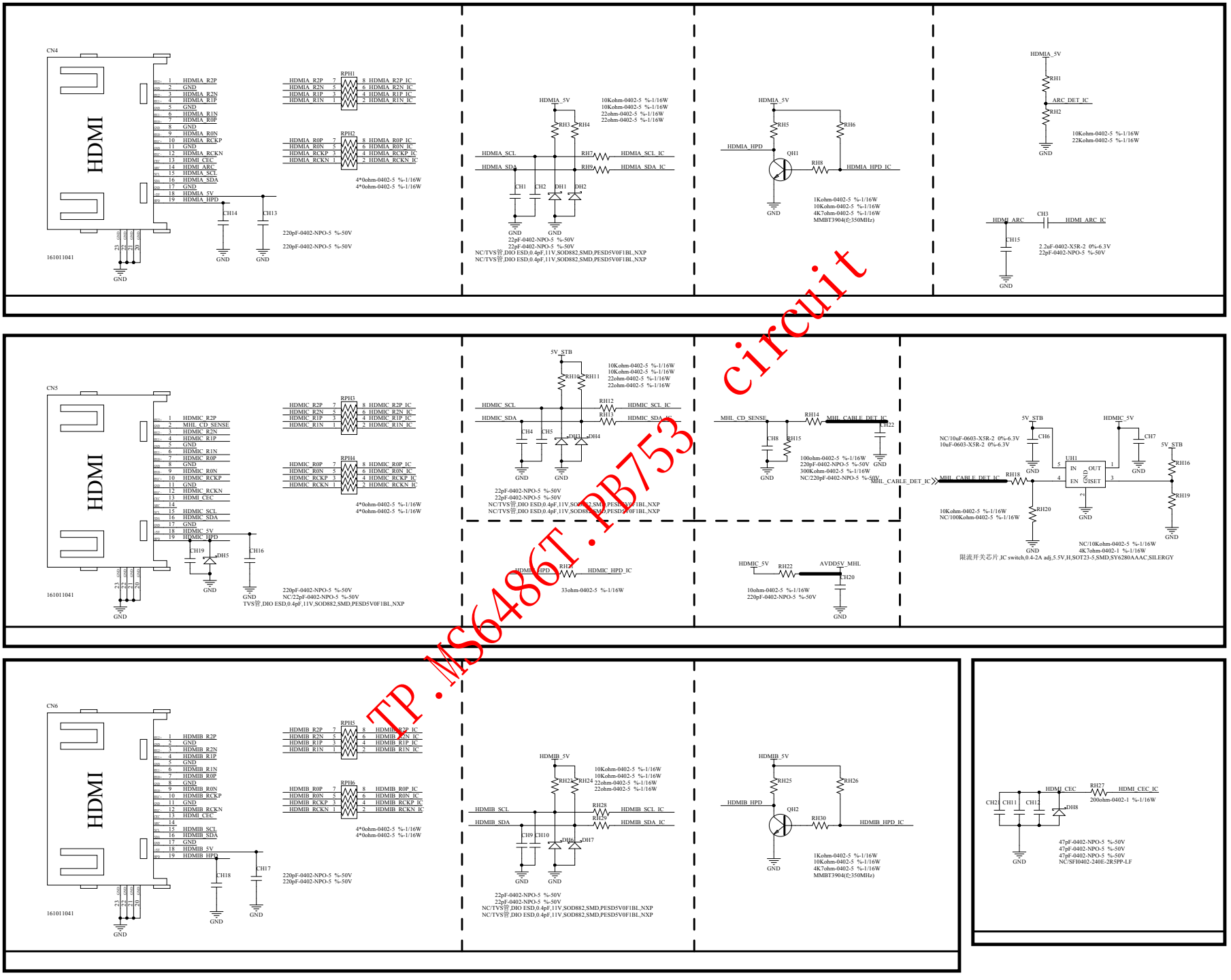


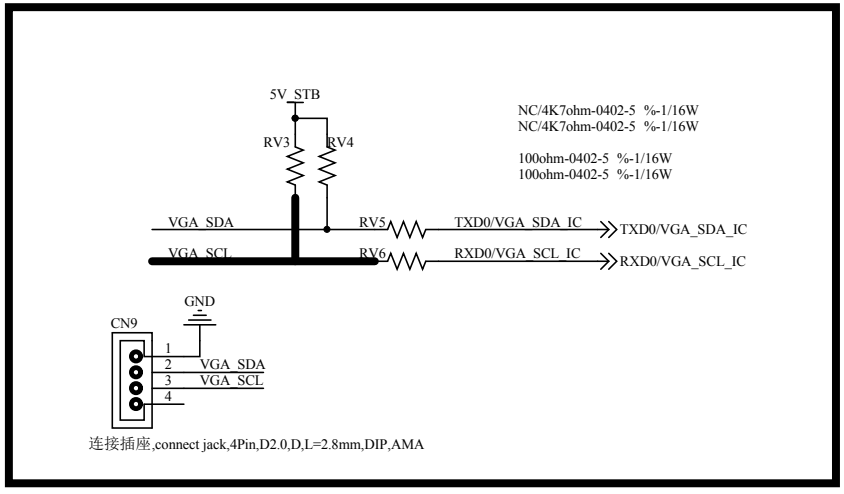


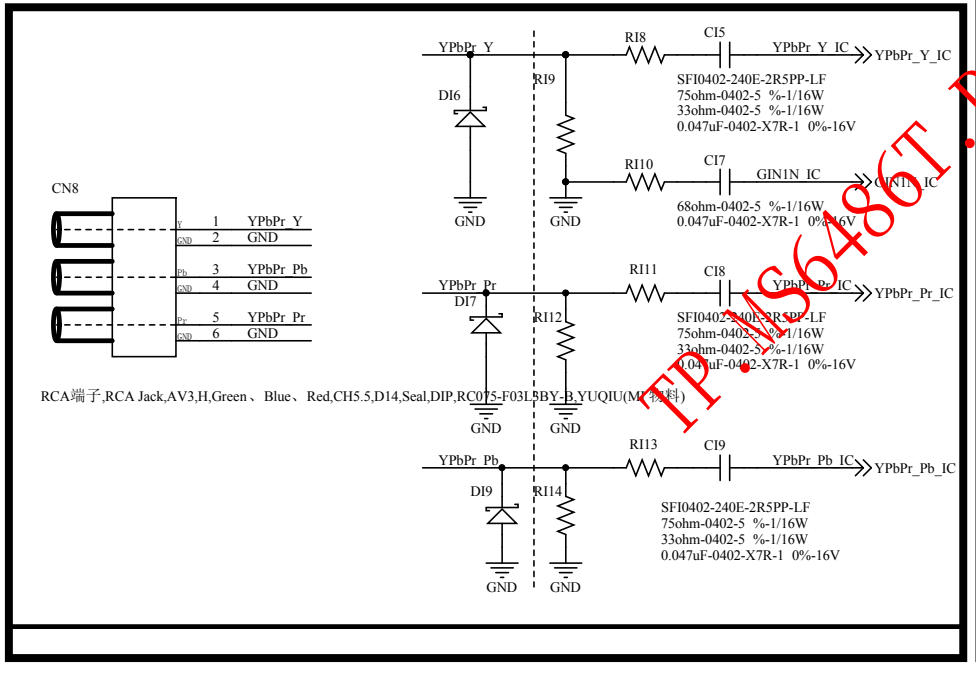


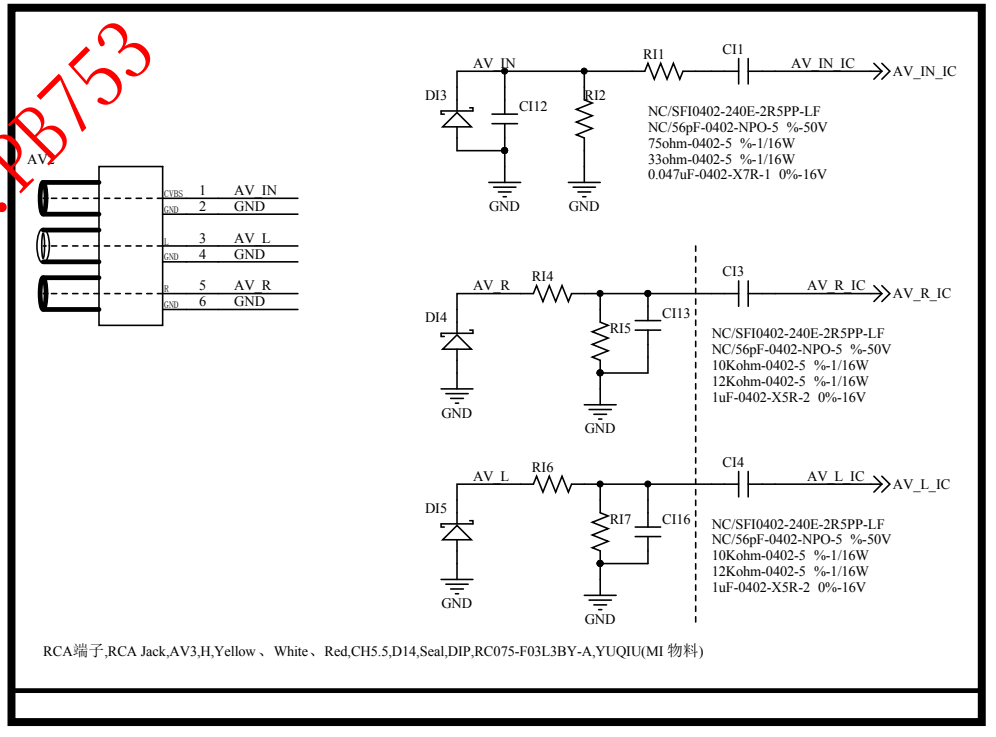


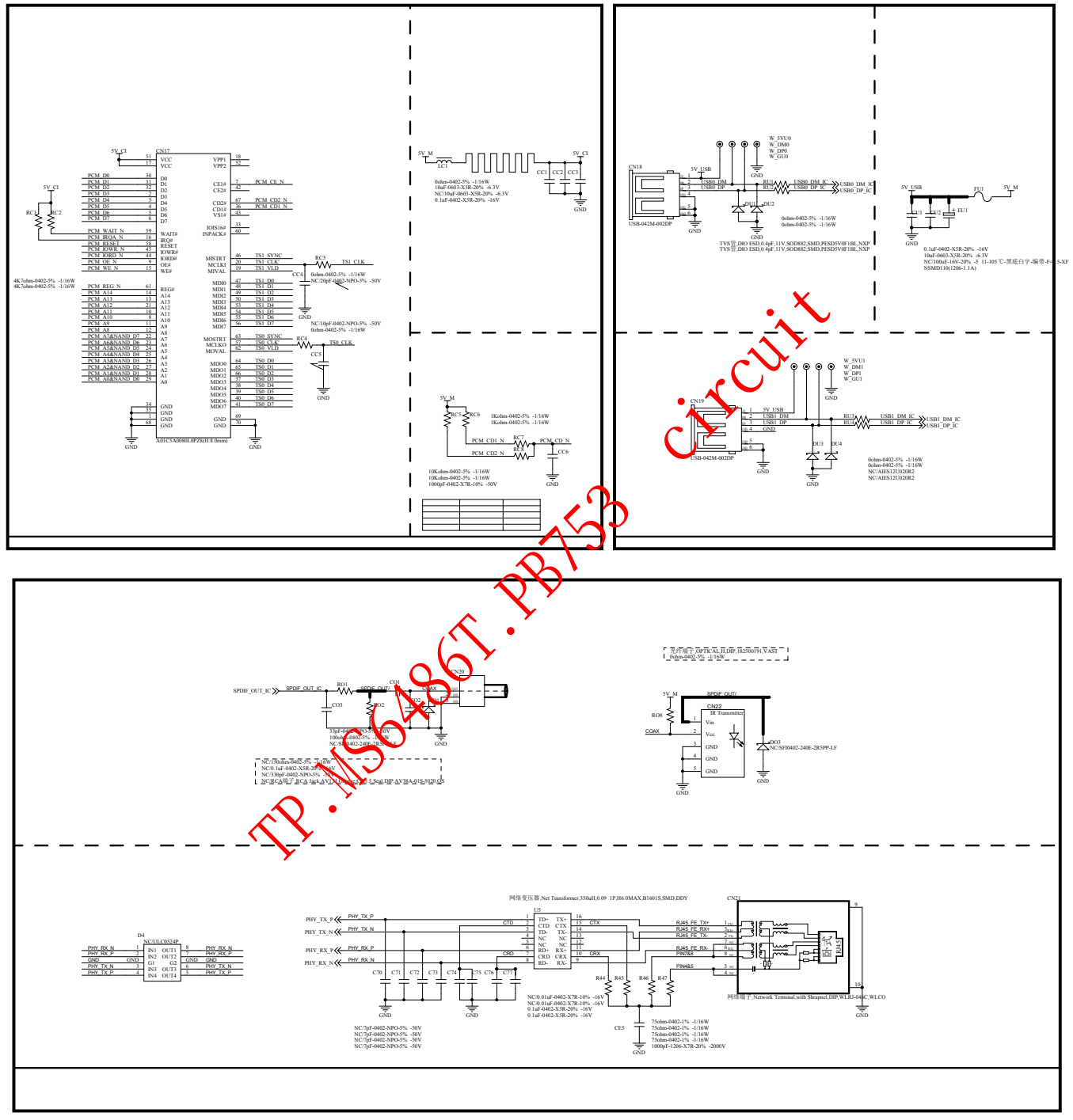


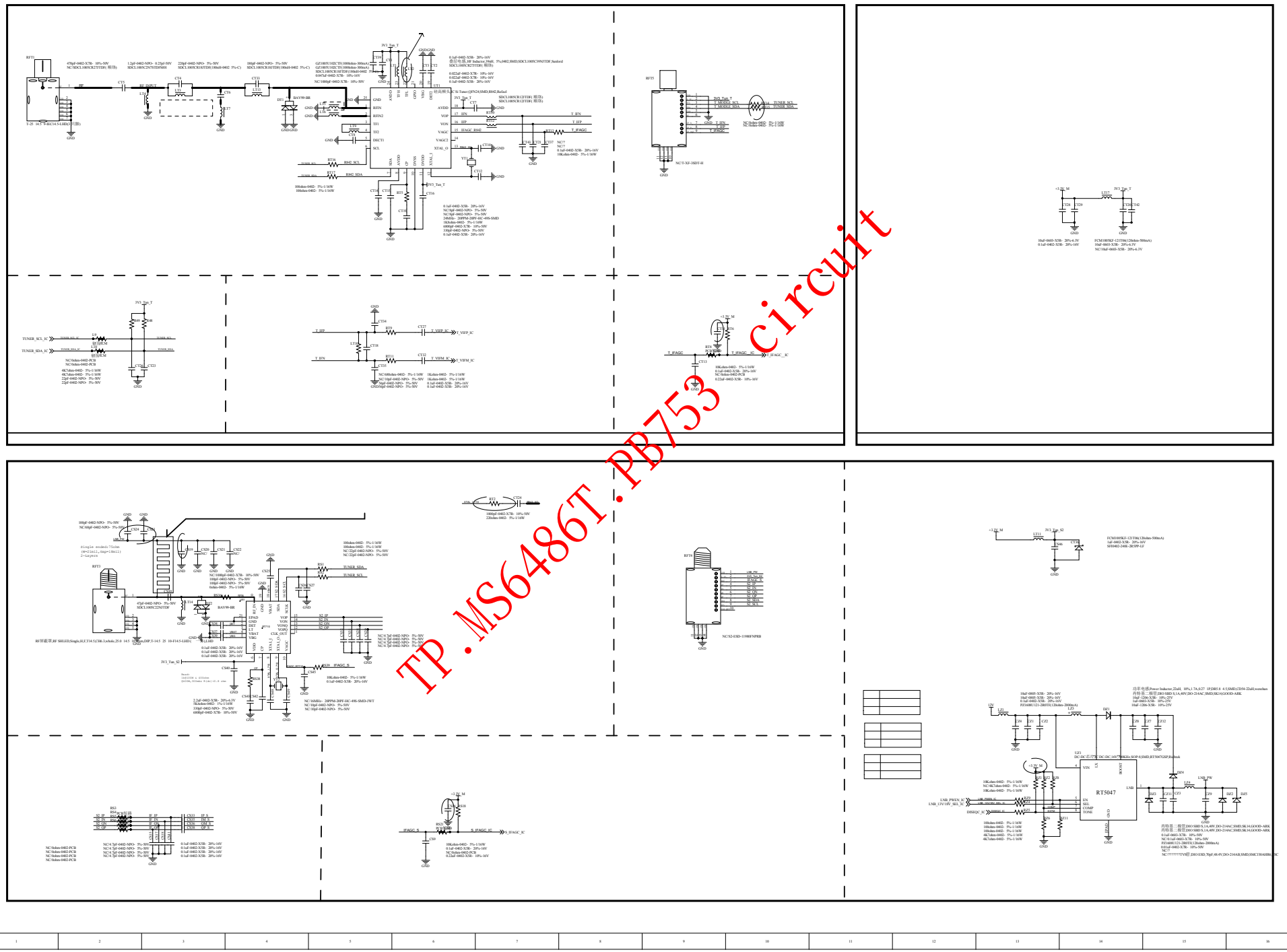


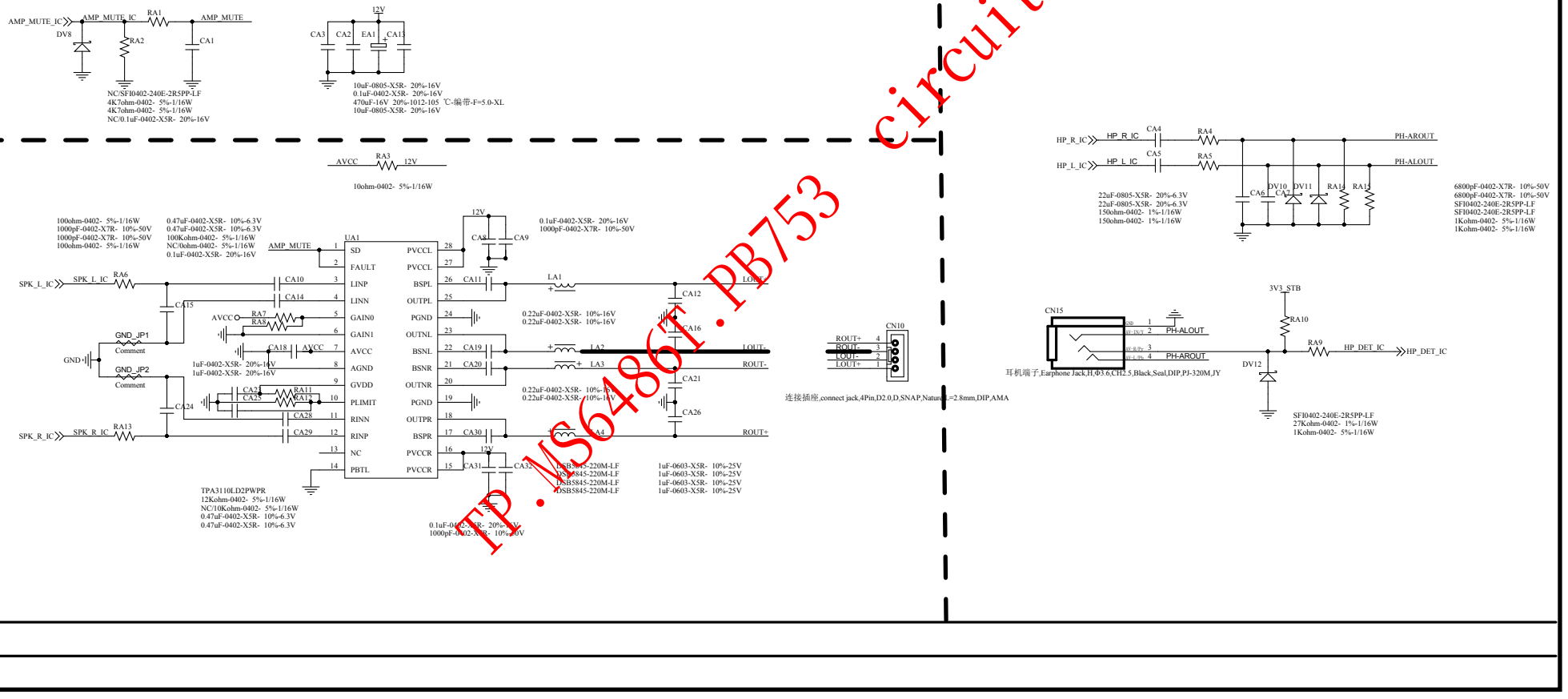


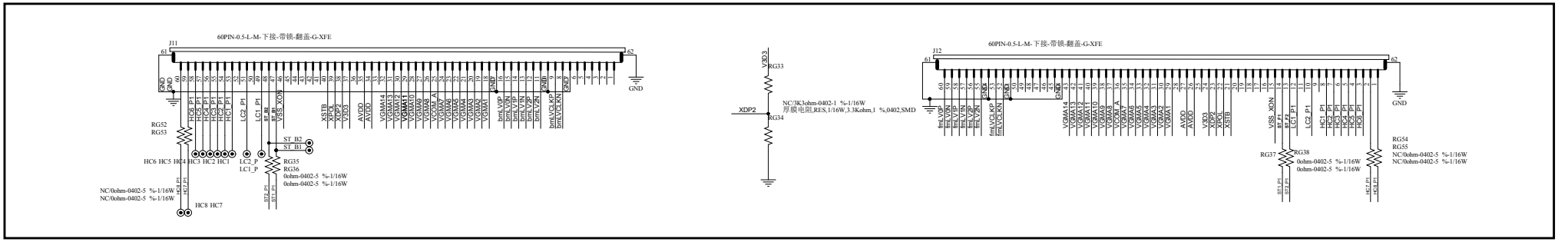


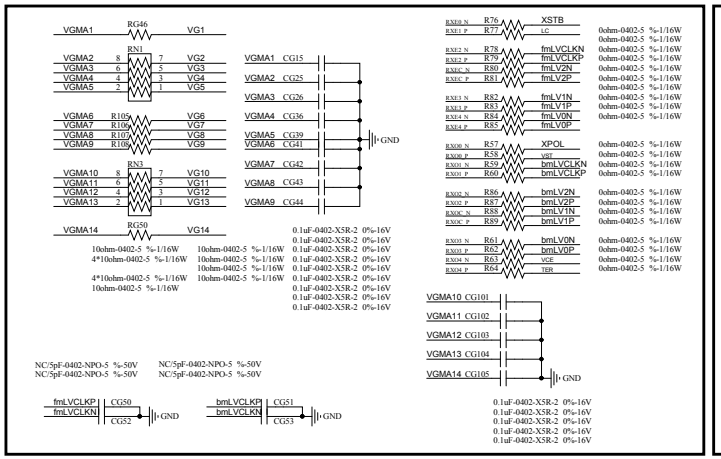


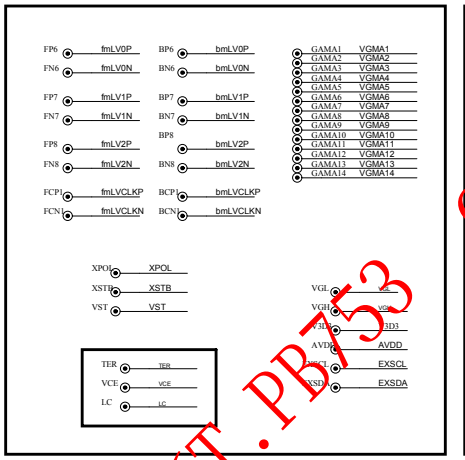


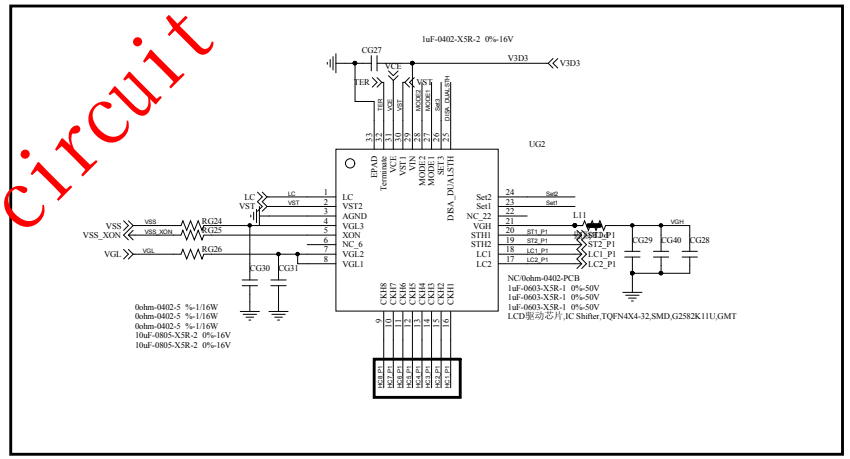

TP.MS6486T.PB753 circuit

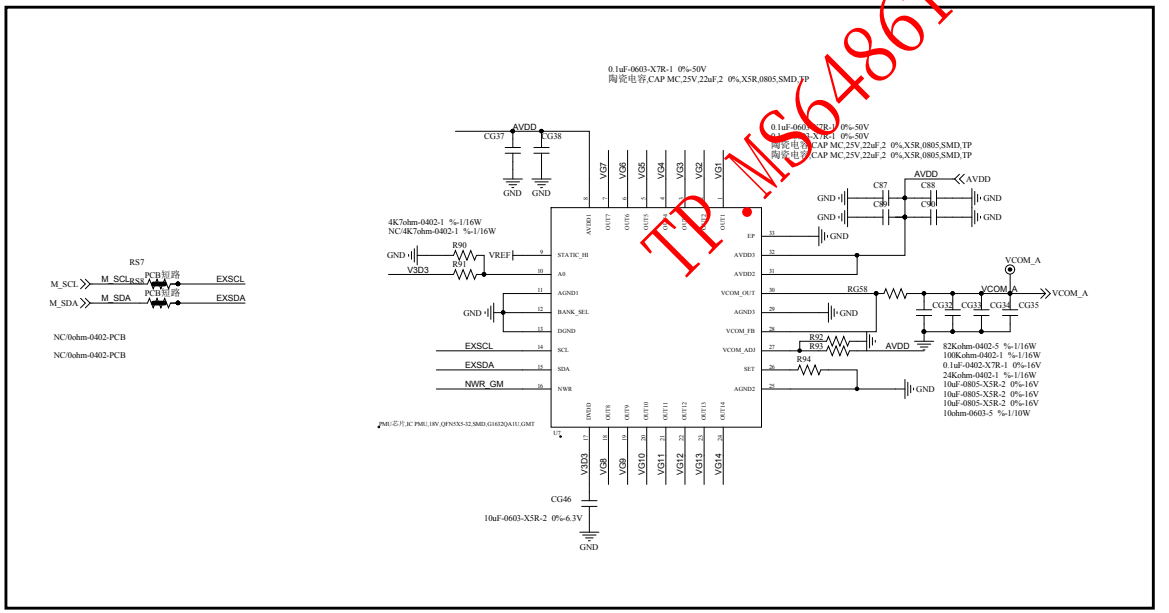


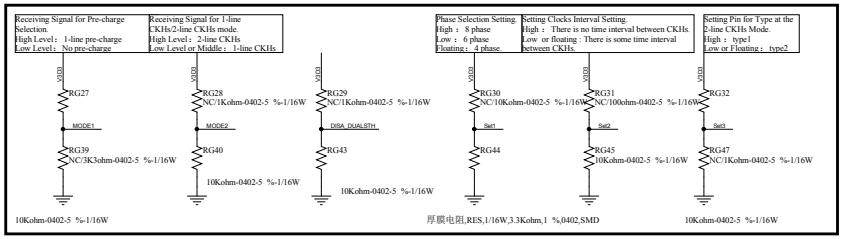


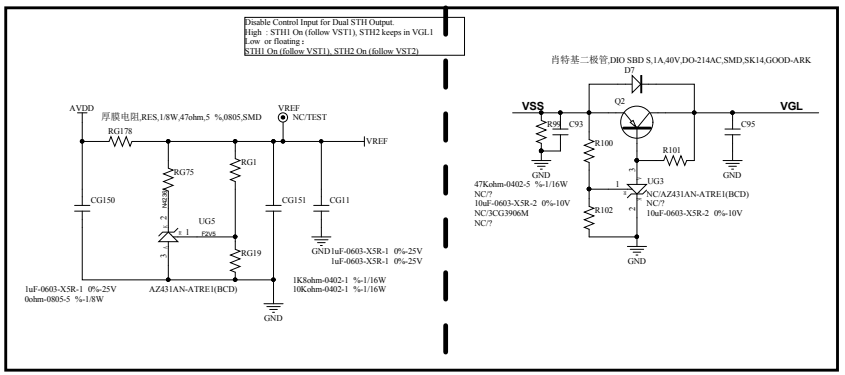


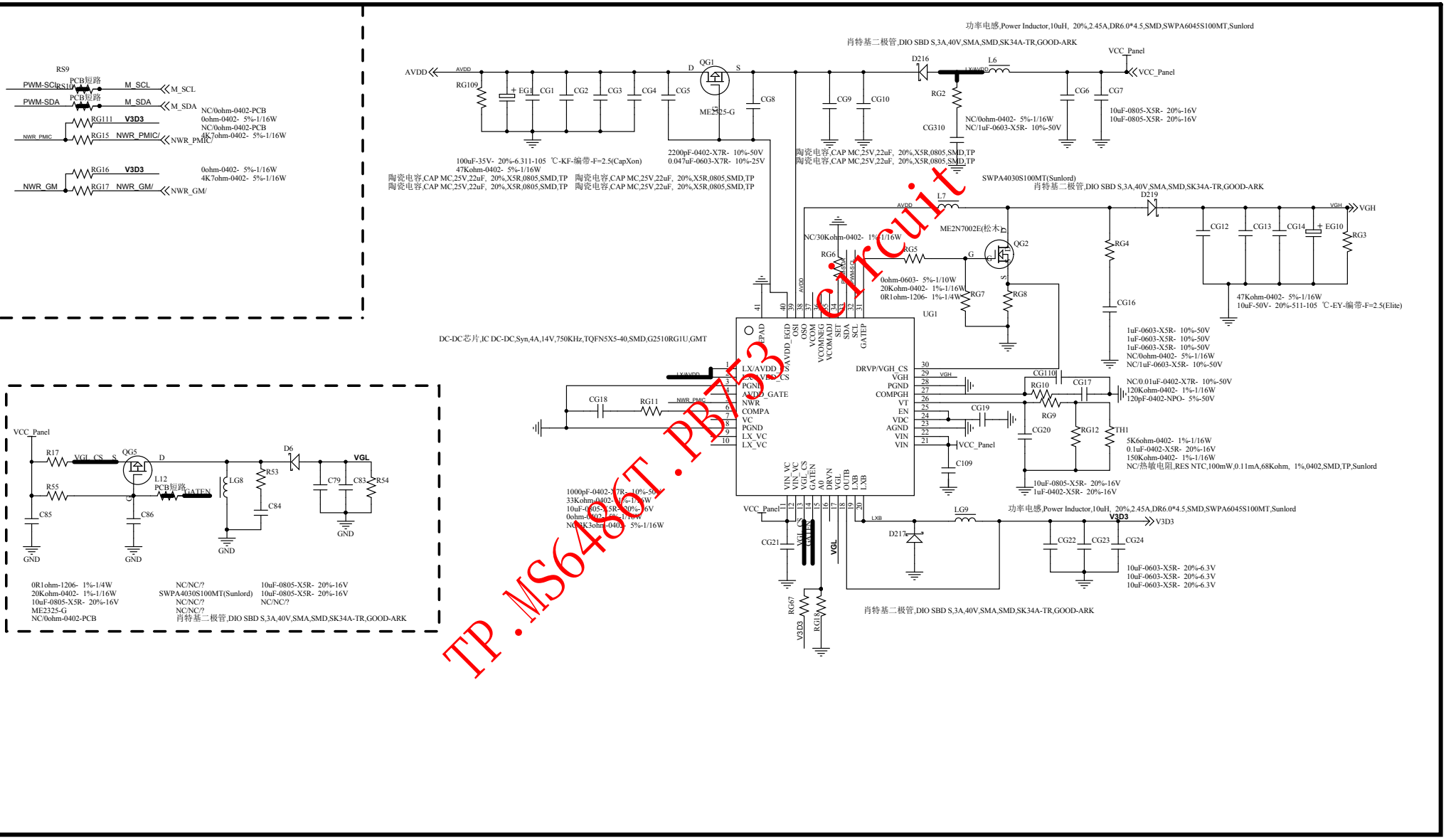


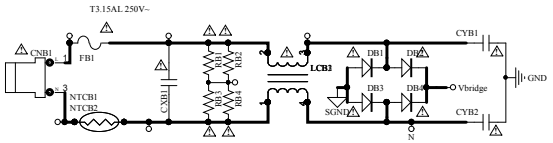




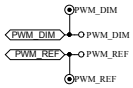




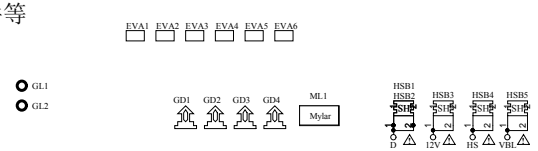

RS9
PWM-SCL
PCB短路
M_SCL
M_SCL
PWM-SDA
PCB短路
M_SDA
M_SDA
NC/0ohm-0402-PCB
0ohm-0402- 5%-1/16W
RG111 V3D3
NC/0ohm-0402-PCB
4K7ohm-0402- 5%-1/16W
NWR_PMIC
RG15 NWR_PMIC/
NWR_PMIC/
RG16 V3D3
0ohm-0402- 5%-1/16W
4K7ohm-0402- 5%-1/16W
NWR_GM
RG17 NWR_GM/
NWR_GM/
功率电感,Power Inductor,10uH, 20%,2.45A,DR6.0*4.5,SMD,SWPA6045S100MT,Sunlord
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
AVDD
RG109
EG1
CG1
CG2
CG3
CG4
CG5
QG1
ME2325-G
CG8
CG9
CG10
D216
L6
LX/AVDD
RG2
CG310
NC/0ohm-0402- 5%-1/16W
NC/1uF-0603-X5R- 10%-50V
CG6
CG7
VCC_Panel
10uF-0805-X5R- 20%-16V
10uF-0805-X5R- 20%-16V
100uF-35V- 20%-6.311-105 ℃-KF-编带-F=2.5(CapXon)
47Kohm-0402- 5%-1/16W
2200pF-0402-X7R- 10%-50V
0.047uF-0603-X7R- 10%-25V
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
SWPA4030S100MT(Sunlord)
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
L7
D219
VGH
ME2N7002E(松木)
QG2
NC/30Kohm-0402- 1%-1/16W
RG6
RG5
0ohm-0603- 5%-1/10W
20Kohm-0402- 1%-1/16W
0R1ohm-1206- 1%-1/4W
RG7
RG8
UG1
RG4
CG16
CG12
CG13
CG14
EG10
RG3
47Kohm-0402- 5%-1/16W
10uF-50V- 20%-511-105 ℃-EY-编带-F=2.5(Elite)
1uF-0603-X5R- 10%-50V
1uF-0603-X5R- 10%-50V
1uF-0603-X5R- 10%-50V
NC/0ohm-0402- 5%-1/16W
NC/1uF-0603-X5R- 10%-50V
DC-DC芯片,IC DC-DC,Syn,4A,14V,750KHz,TQFN5X5-40,SMD,G2510RG1U,GMT
EPAD
LX/AVDD
DRVP/VGH_CS
PGND
AVDD_GATE
NWR
COMPA
VC
PGND
LX_VC
LX_VC
VGH
PGND
COMPGH
VT
EN
VDC
AGND
VIN
VIN
CG18
RG11
CG110
CG17
RG10
NC/0.01uF-0402-X7R- 10%-50V
120Kohm-0402- 1%-1/16W
120pF-0402-NPO- 5%-50V
CG19
RG9
CG20
RG12
TH1
5K6ohm-0402- 1%-1/16W
0.1uF-0402-X5R- 20%-16V
150Kohm-0402- 1%-1/16W
NC/热敏电阻,RES NTC,100mW,0.11mA,68Kohm, 1%,0402,SMD,TP,Sunlord
C109
10uF-0805-X5R- 20%-16V
1uF-0402-X5R- 20%-16V
VIN_VC
VIN_VC
VGL_CS
GATEN
AO
DRVN
VGL
OUTB
LXB
LXB
1000pF-0402-X7R- 10%-50V
33Kohm-0402- 1%-1/16W
10uF-0805-X5R- 20%-16V
0ohm-0402- 5%-1/16W
NC/3ohm-0402- 5%-1/16W
VCC_Panel
CG21
LG9
功率电感,Power Inductor,10uH, 20%,2.45A,DR6.0*4.5,SMD,SWPA6045S100MT,Sunlord
D217
V3D3
CG22
CG23
CG24
10uF-0603-X5R- 20%-6.3V
10uF-0603-X5R- 20%-6.3V
10uF-0603-X5R- 20%-6.3V
RG67
RG18
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
VCC_Panel
R17
VGL_CS
QG5
D
D6
VGL
R55
L12
PCB短路
GATEN
LG8
R53
C79
C83
R54
C85
C86
C84
GND
0R1ohm-1206- 1%-1/4W
20Kohm-0402- 1%-1/16W
10uF-0805-X5R- 20%-16V
ME2325-G
NC/0ohm-0402-PCB
NC/NC/?
SWPA4030S100MT(Sunlord)
NC/NC/?
NC/NC/?
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
10uF-0805-X5R- 20%-16V
10uF-0805-X5R- 20%-16V
NC/NC/?
TP.MS64GT.PB713
Circuit



与TV端连接网络

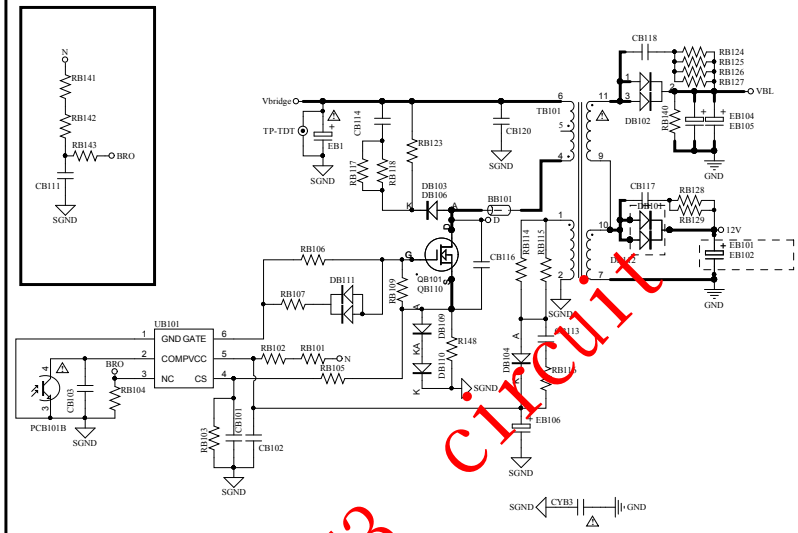


辅料及结构件等

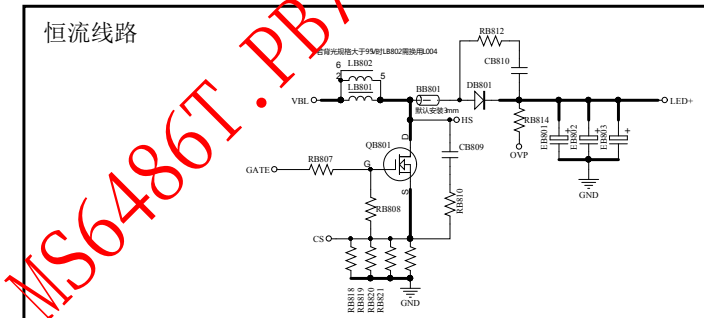


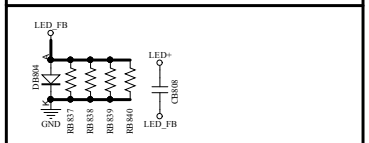
原理图中未体现的辅料及特殊生产工艺	
工艺	位号
卧倒点胶	EB1、EB803(MI)
XXX	XXX
XXX	XXX
XXX	XXX

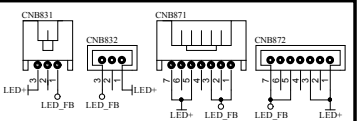
反激线路



恒流线路







Model Name:	TP.MS6486T.PB753 B16357	VERSION:	V1.0
DRAWN:	林文添	DATE:	2016-09-01
CHKD:	李林杰	DATE:	2016-09-01

TP.MS6486T.PB753
Trouble Shooting

—Power supply

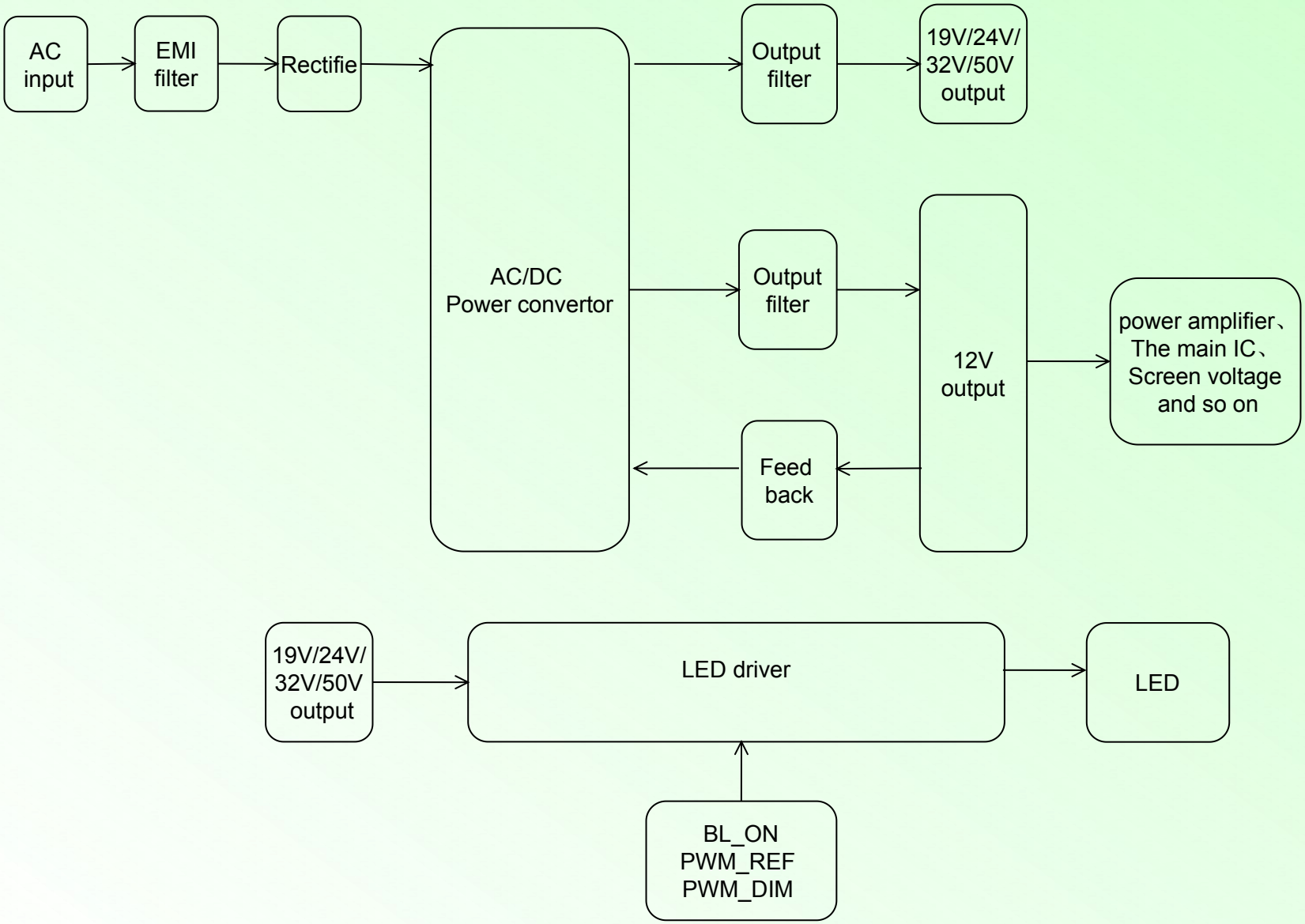
—Display

—Audio

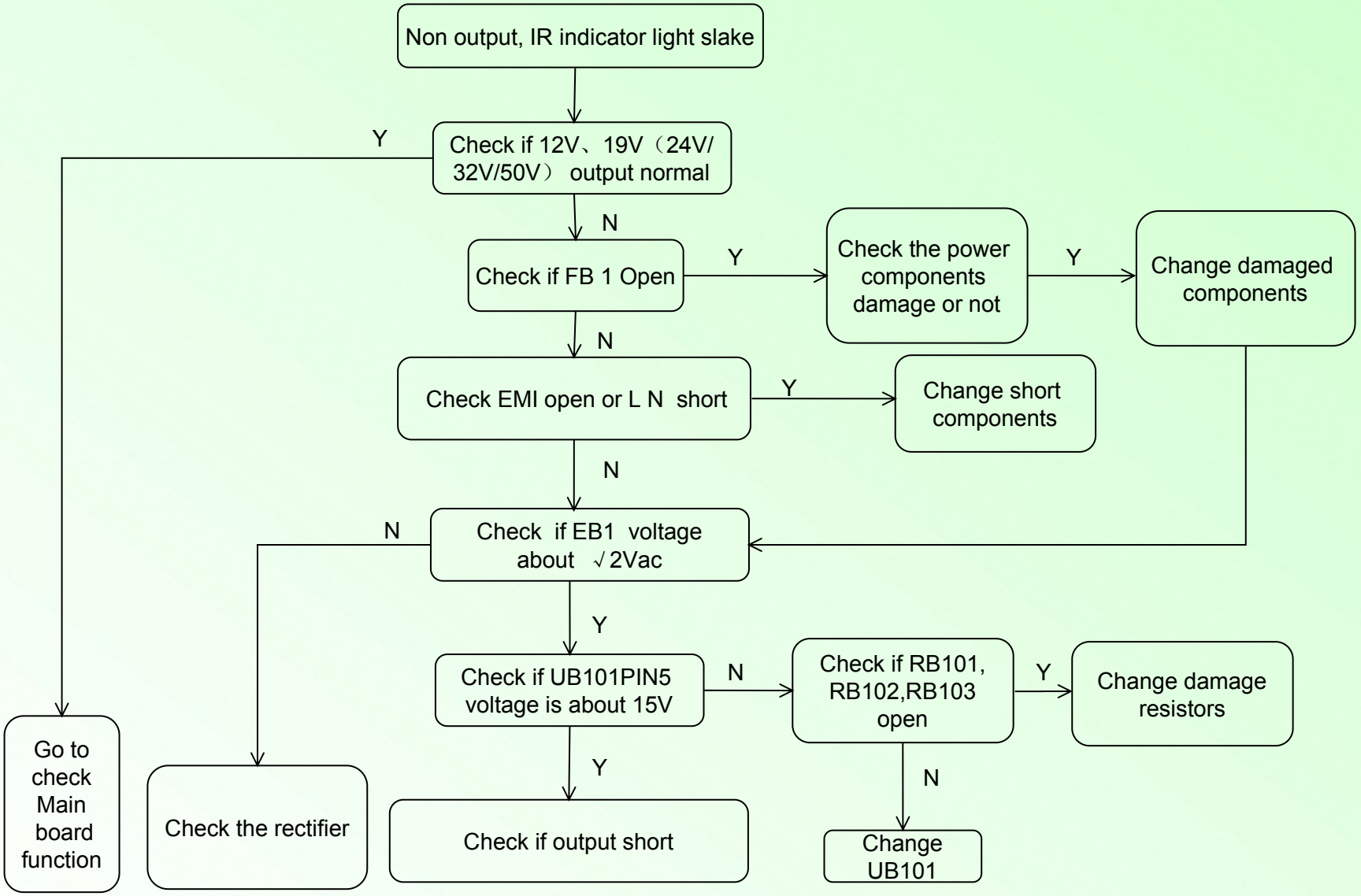
—Function

TV Author : xiongfei Checked By :
POWER Author : Lin Wentian Checked By :

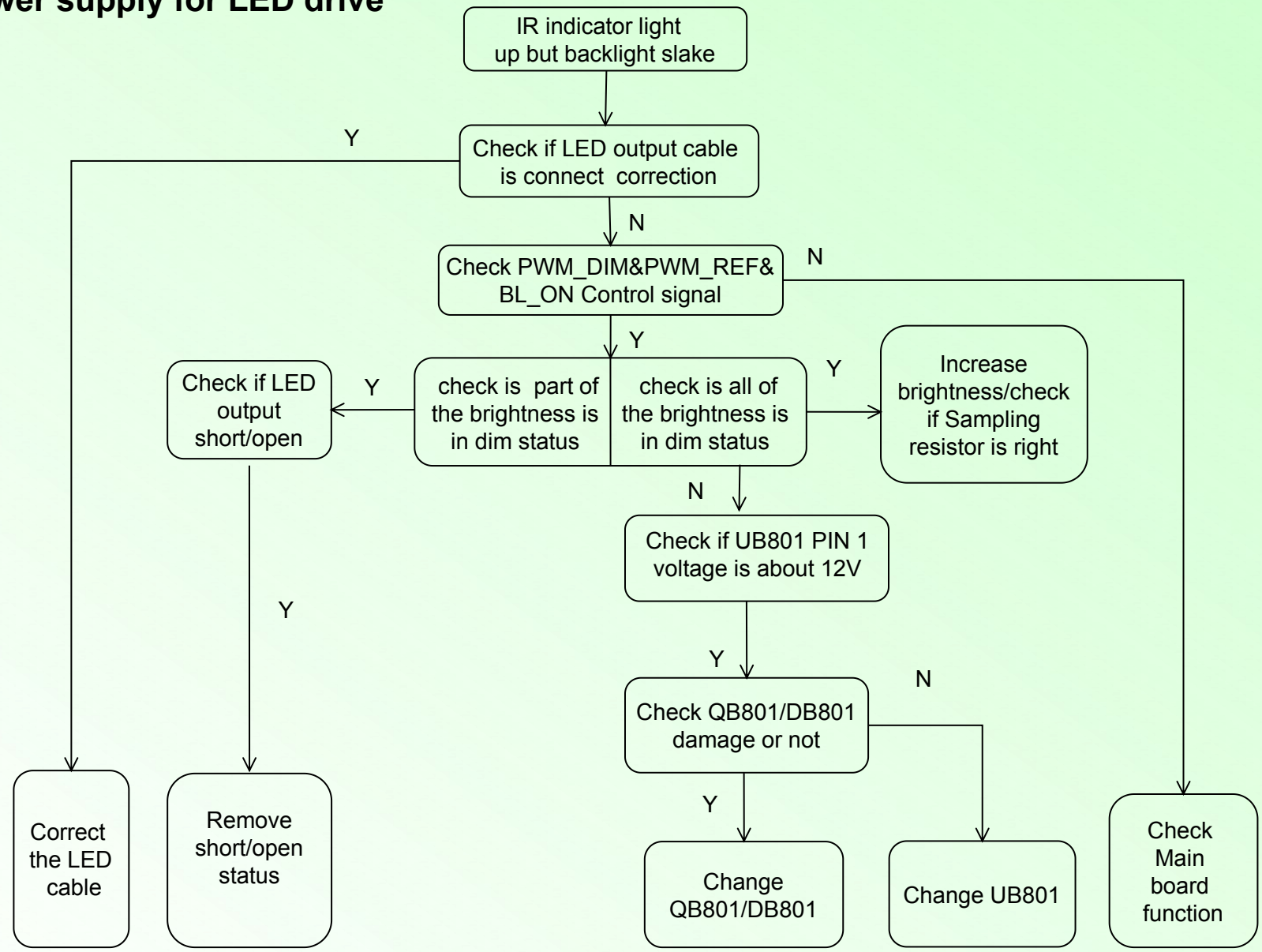
1. Power circuit diagram



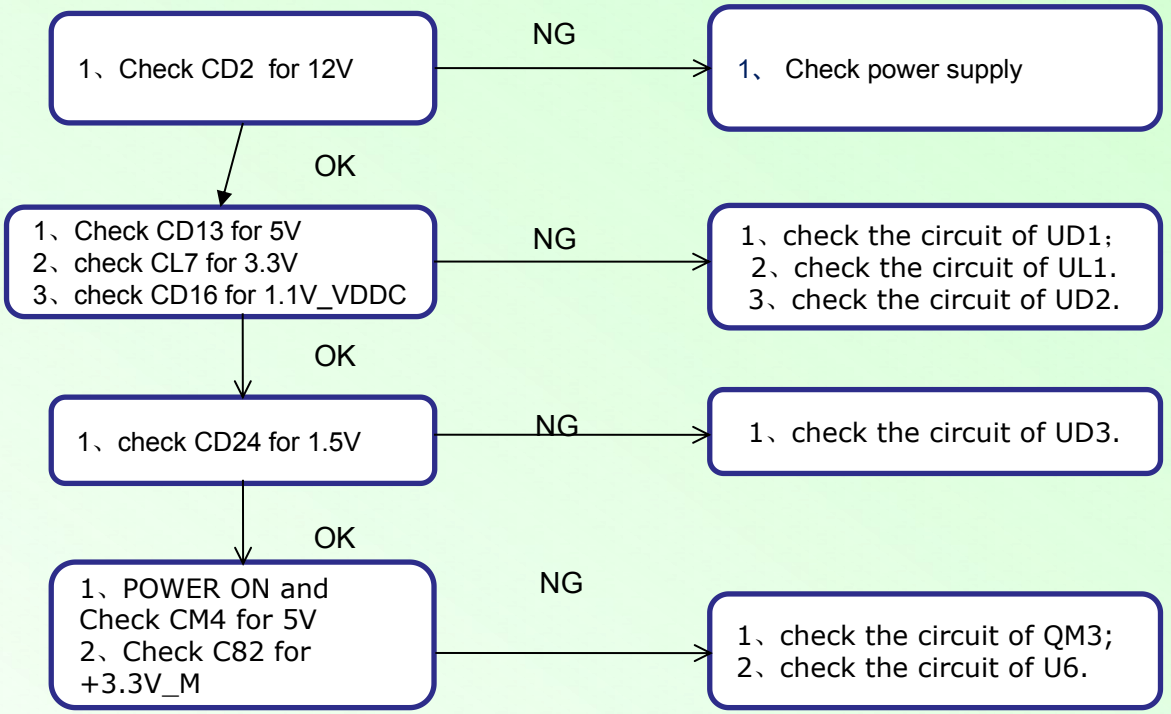
2.Power Supply Trouble 1



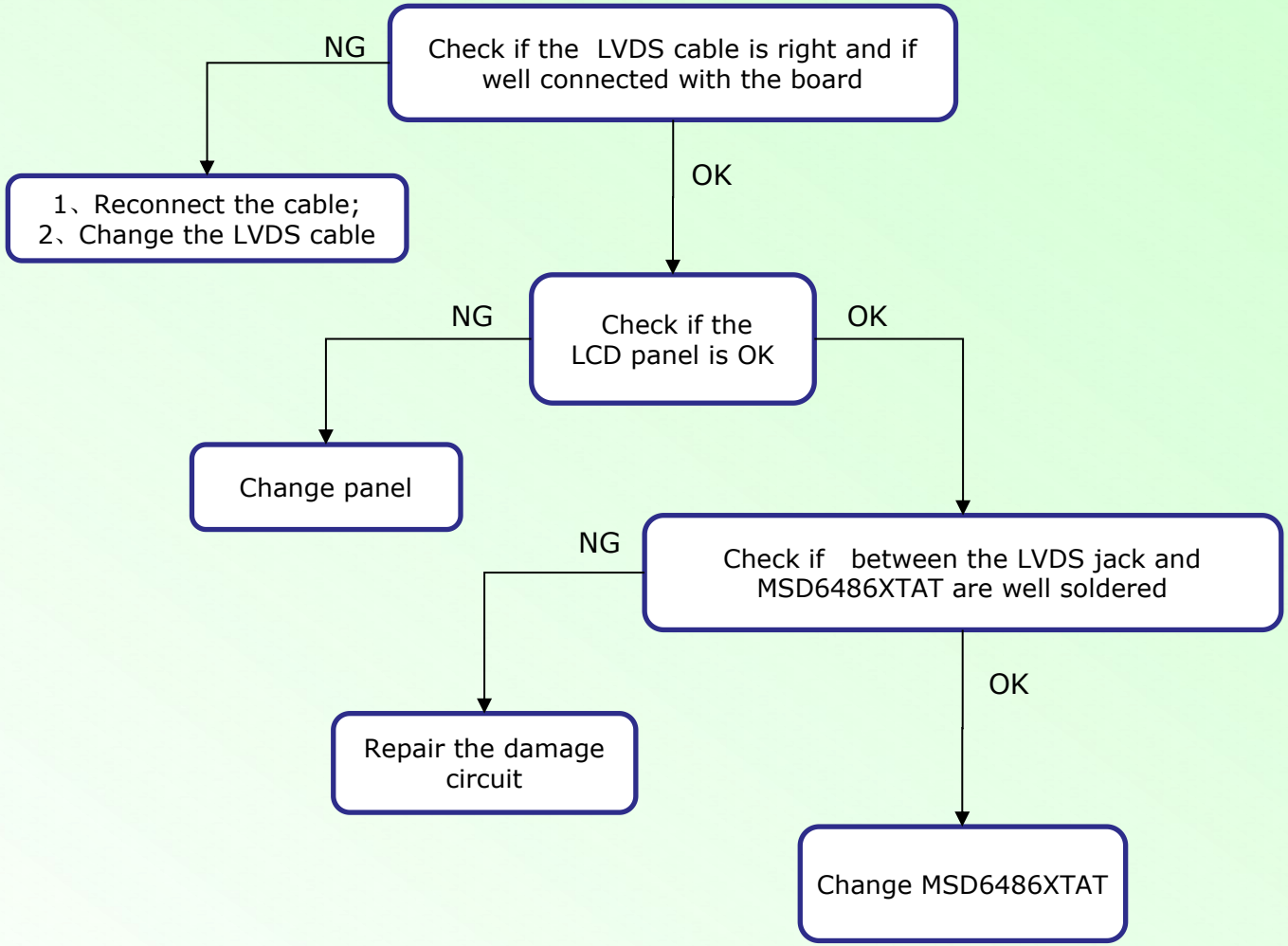
3.Power supply for LED drive



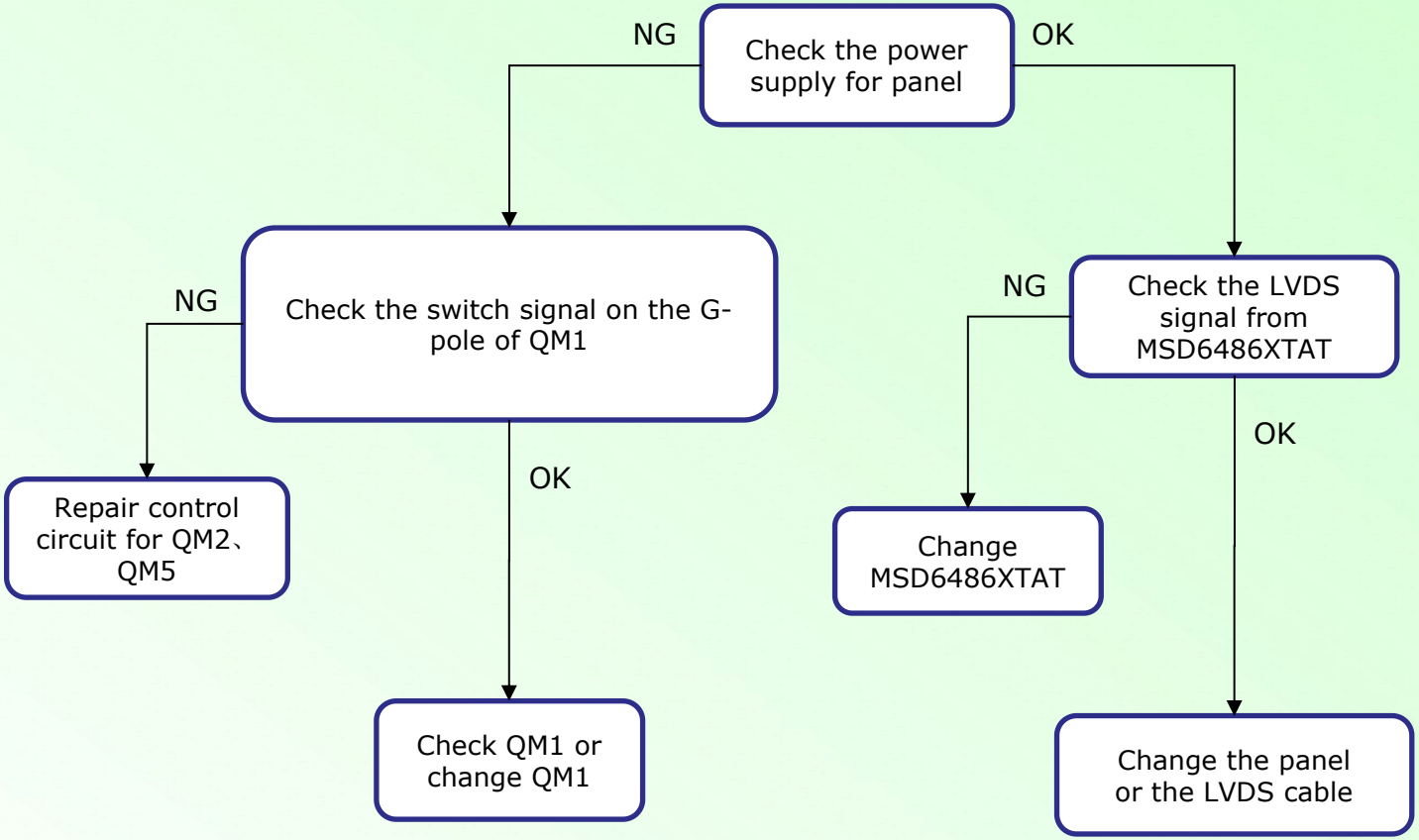
4. Power supply Trouble



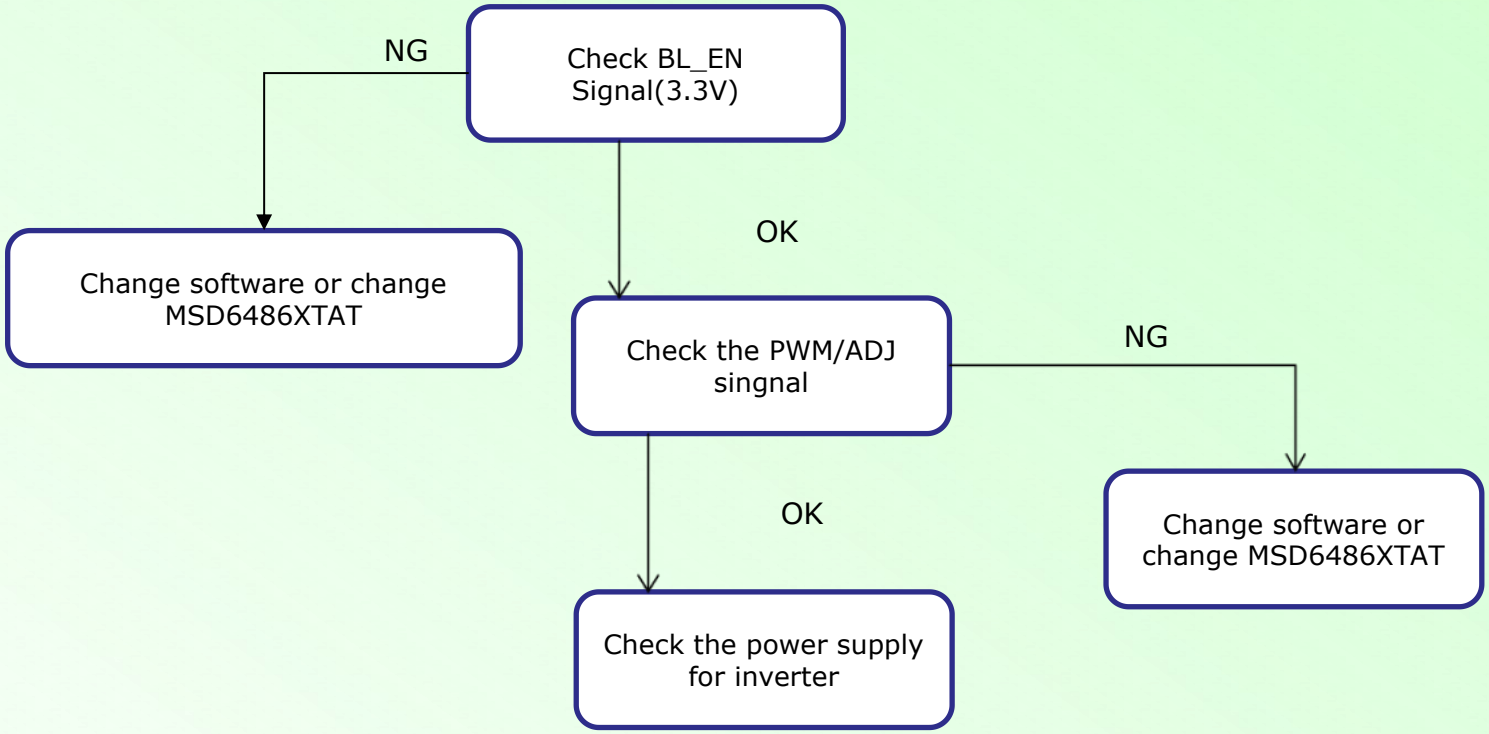
5. Display Trouble(abnormal screen)



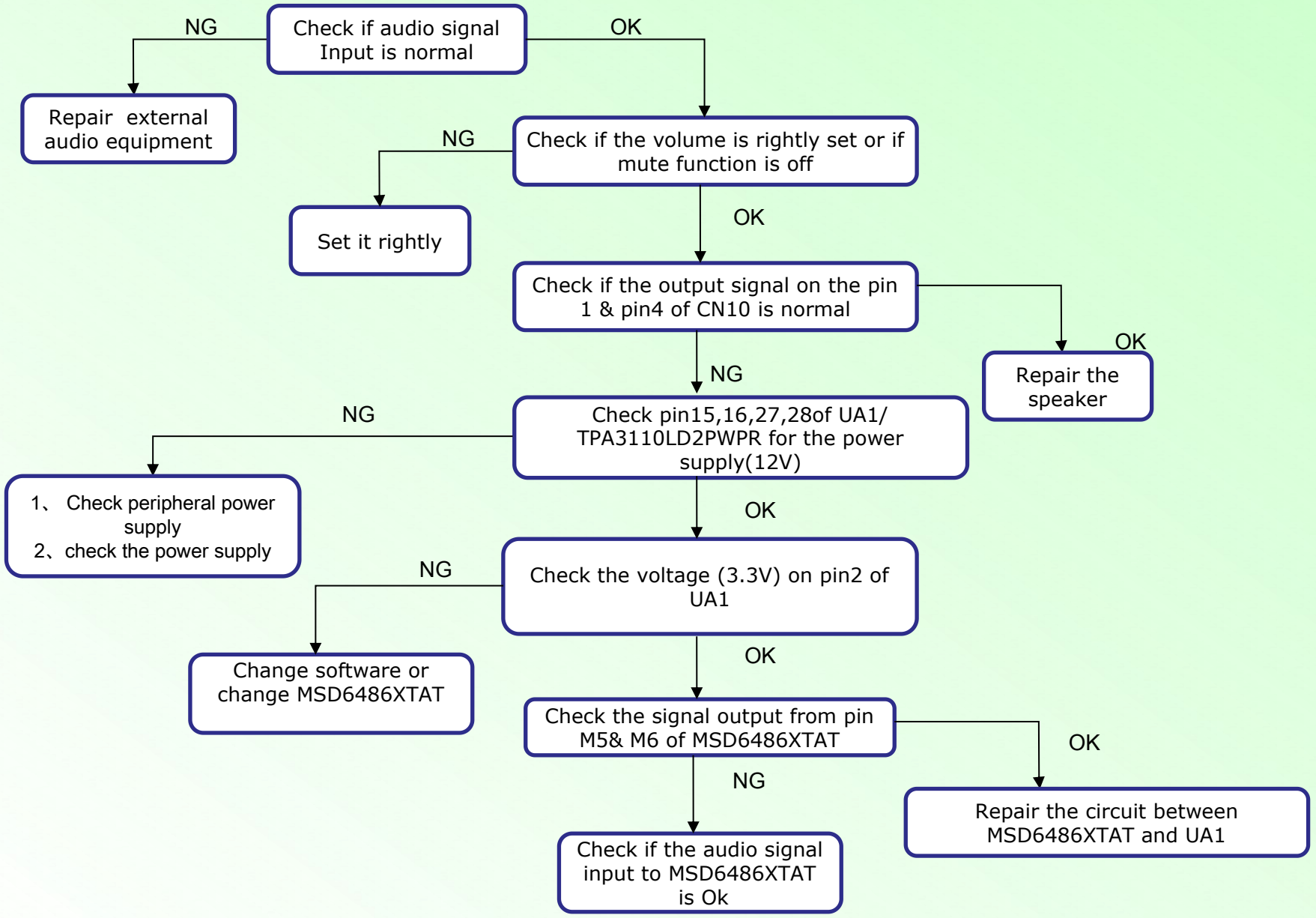
6. Display Trouble(white screen)



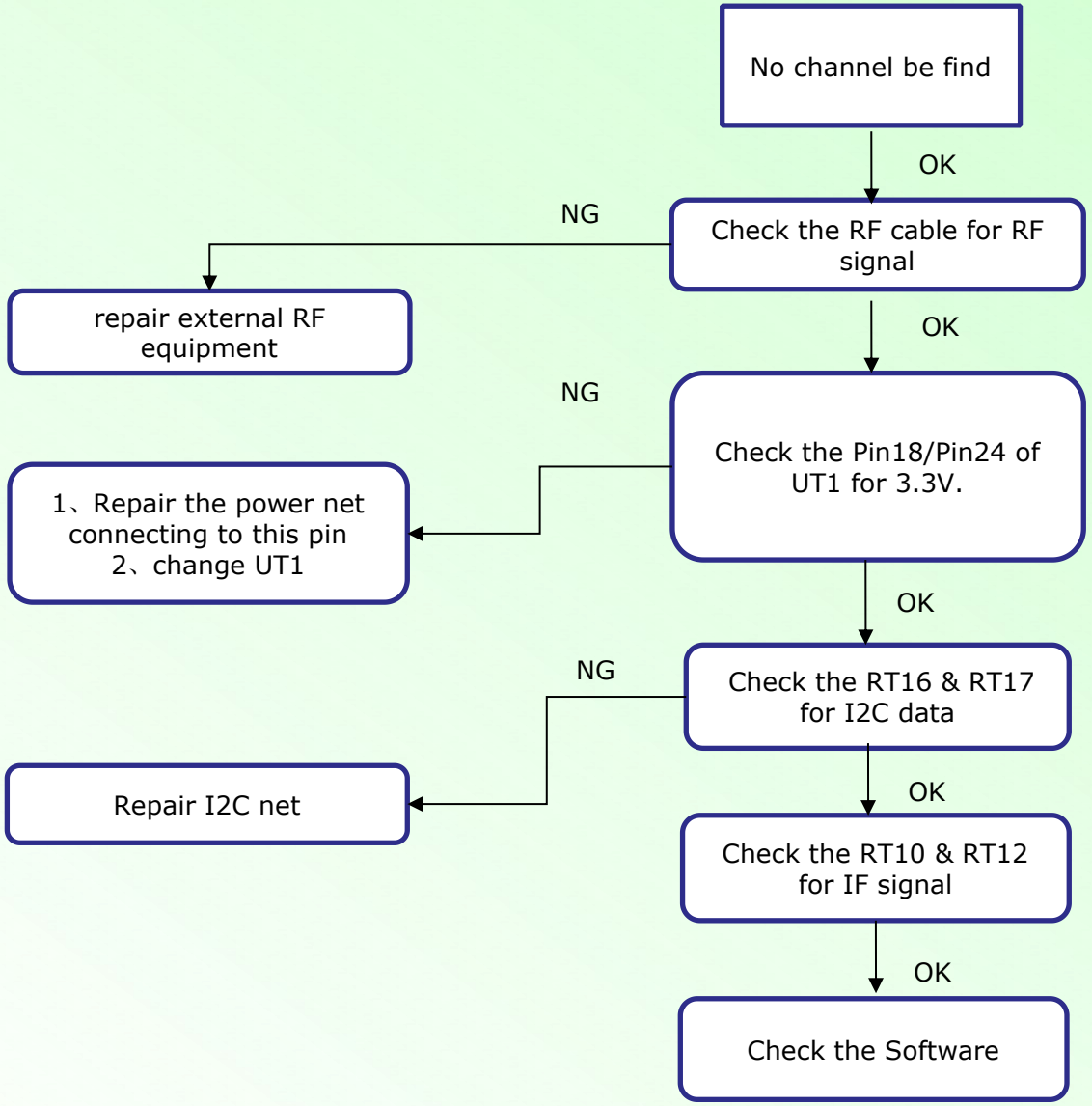
7. Display Trouble(black screen)



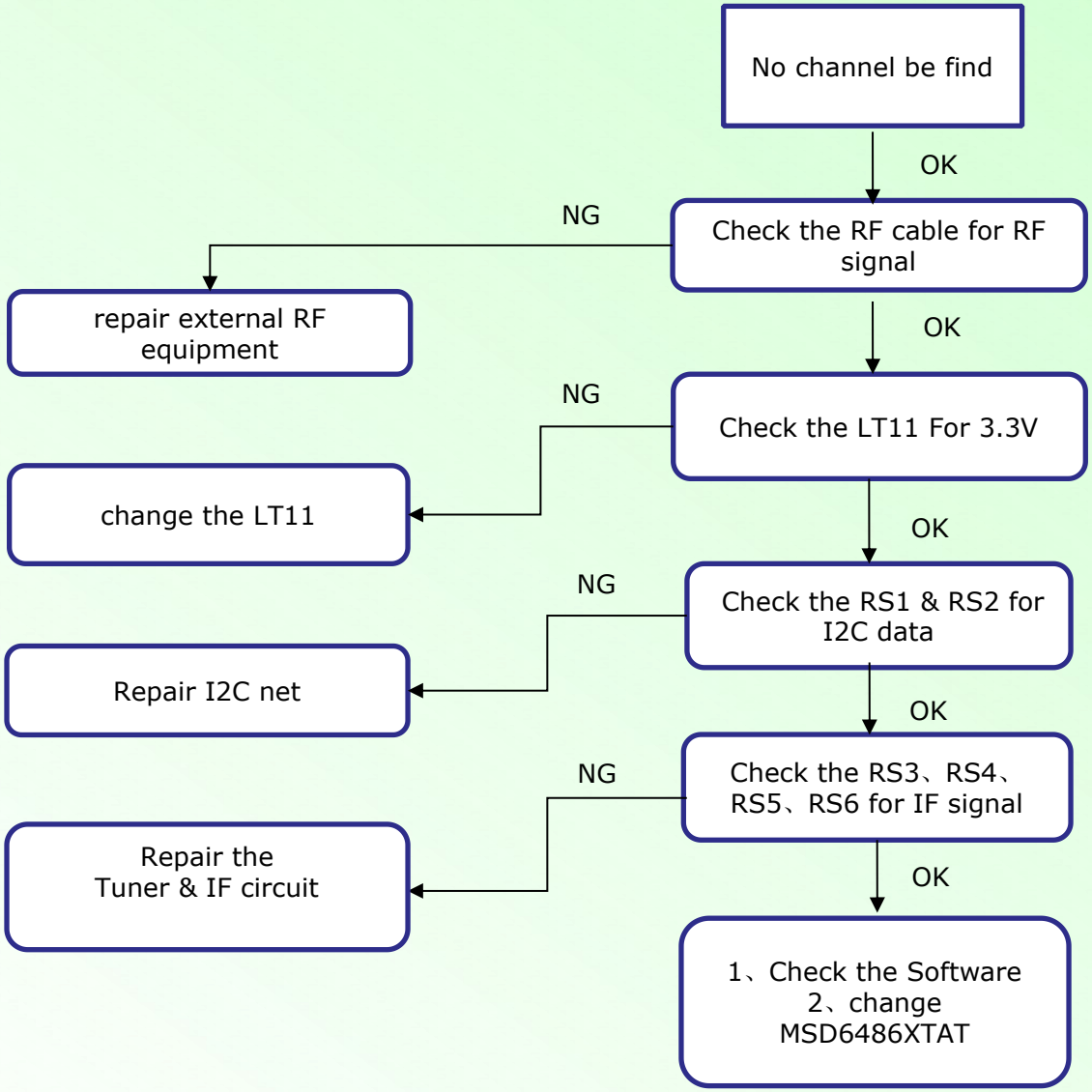
8. Audio Trouble(no sound)



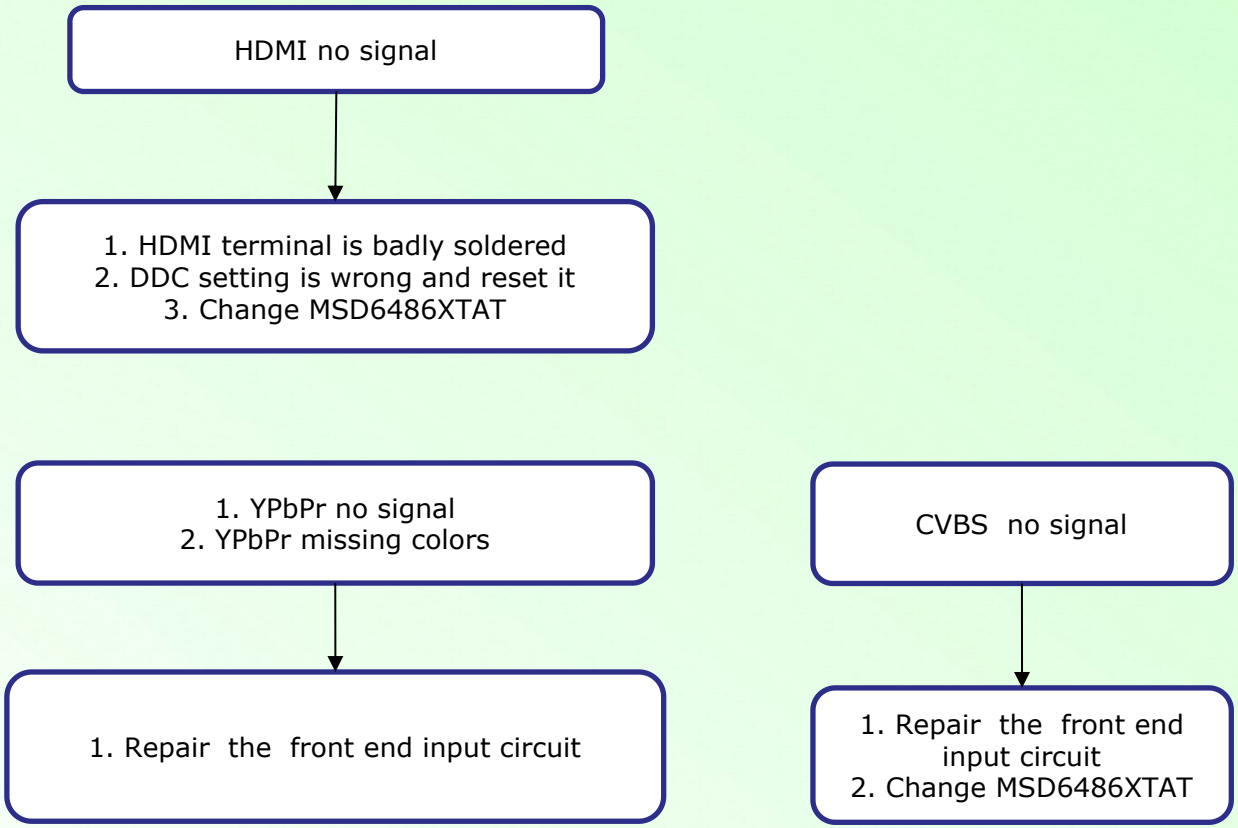
9. Function Trouble(ATV)

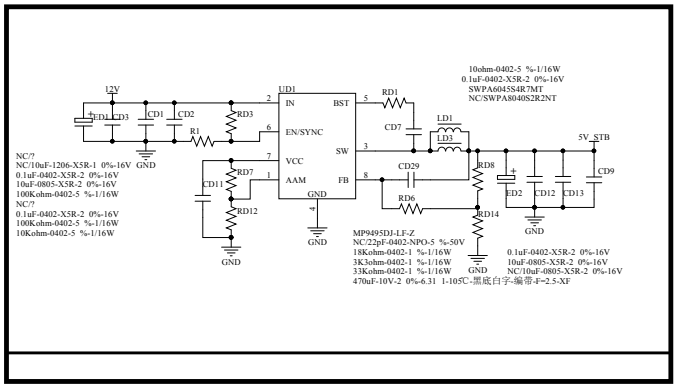


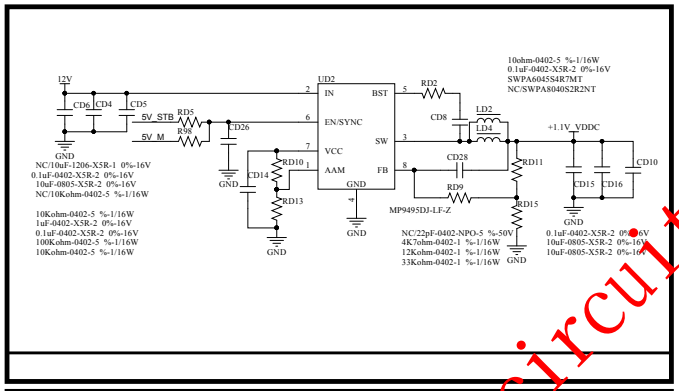
10. Function Trouble(DTV)

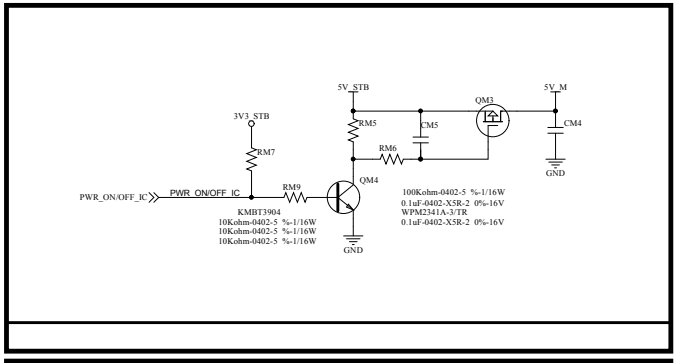


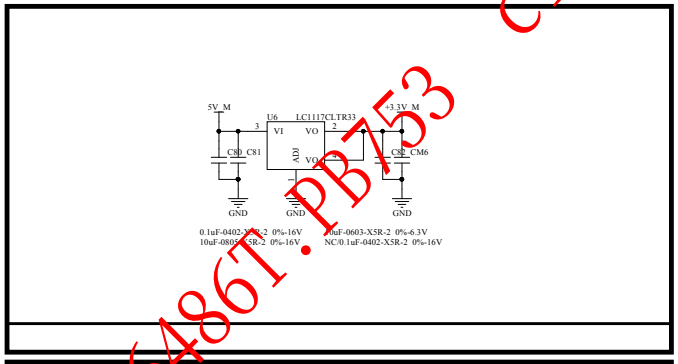
11. Function Trouble(HDMI, YPbPr, CVBS)

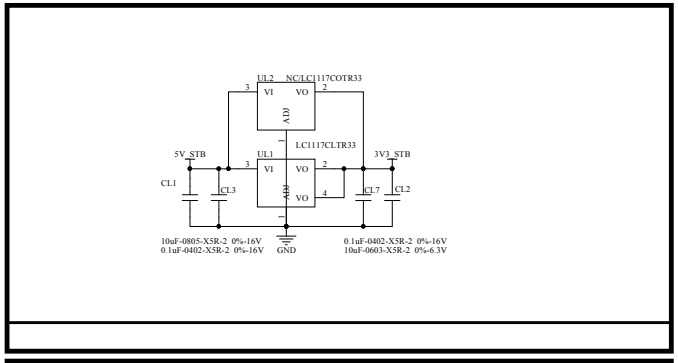


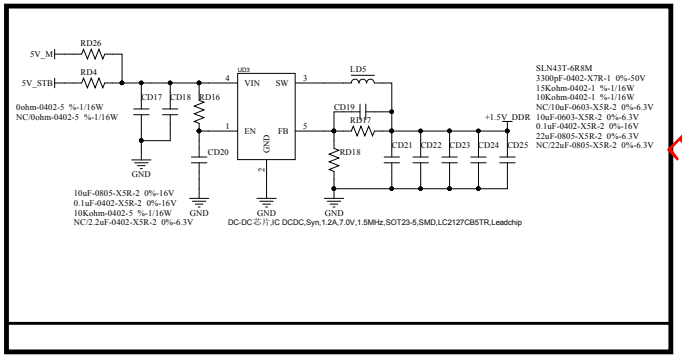


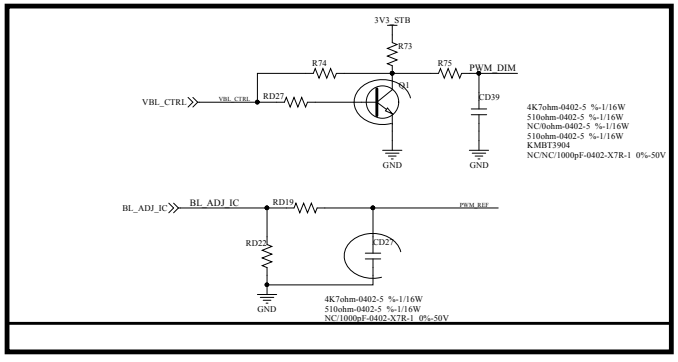


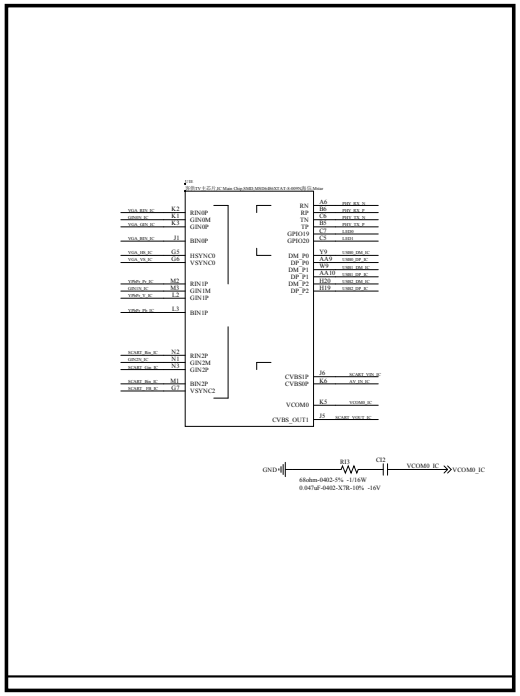


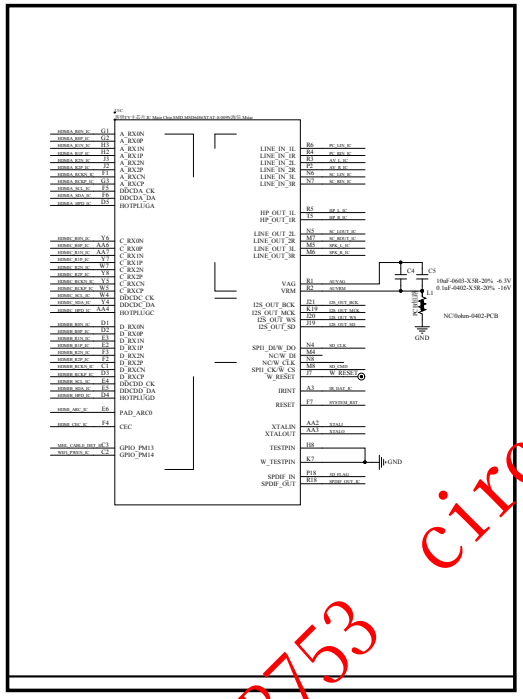


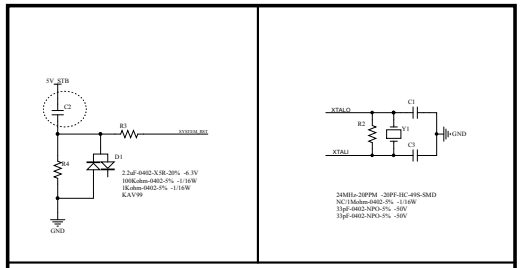


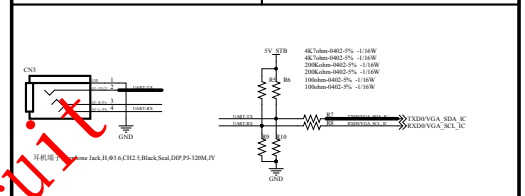


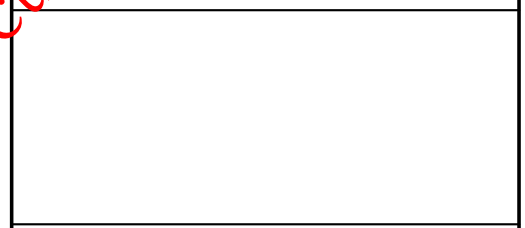


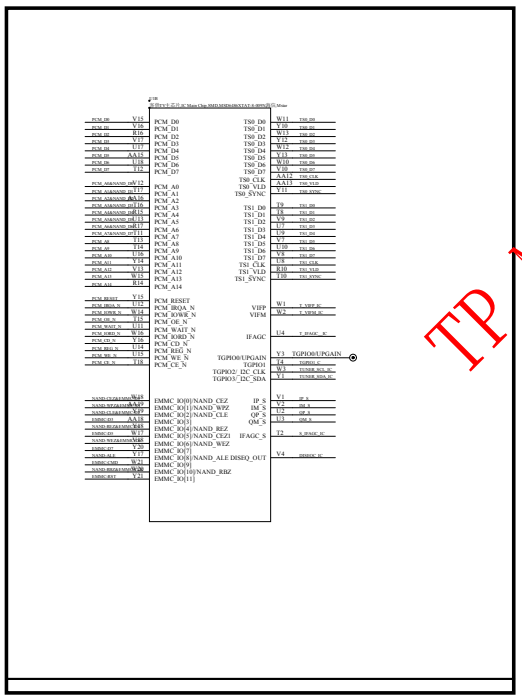


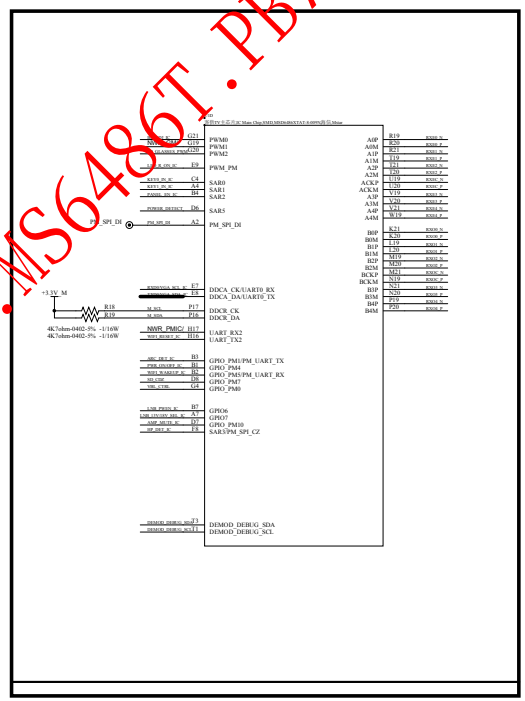


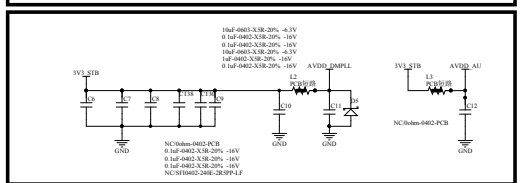


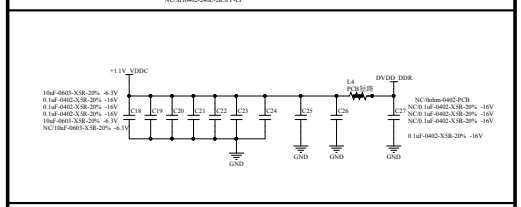


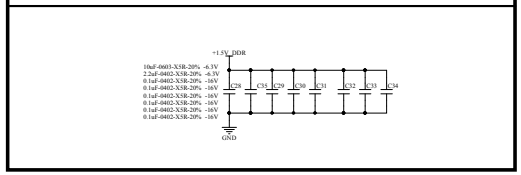


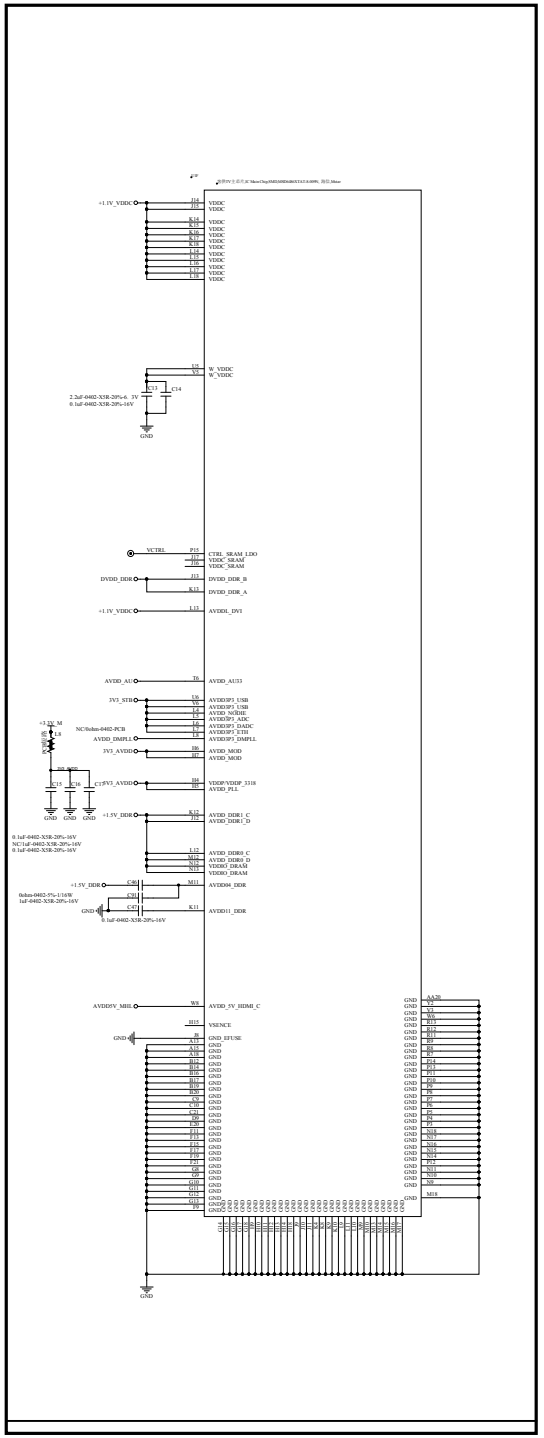


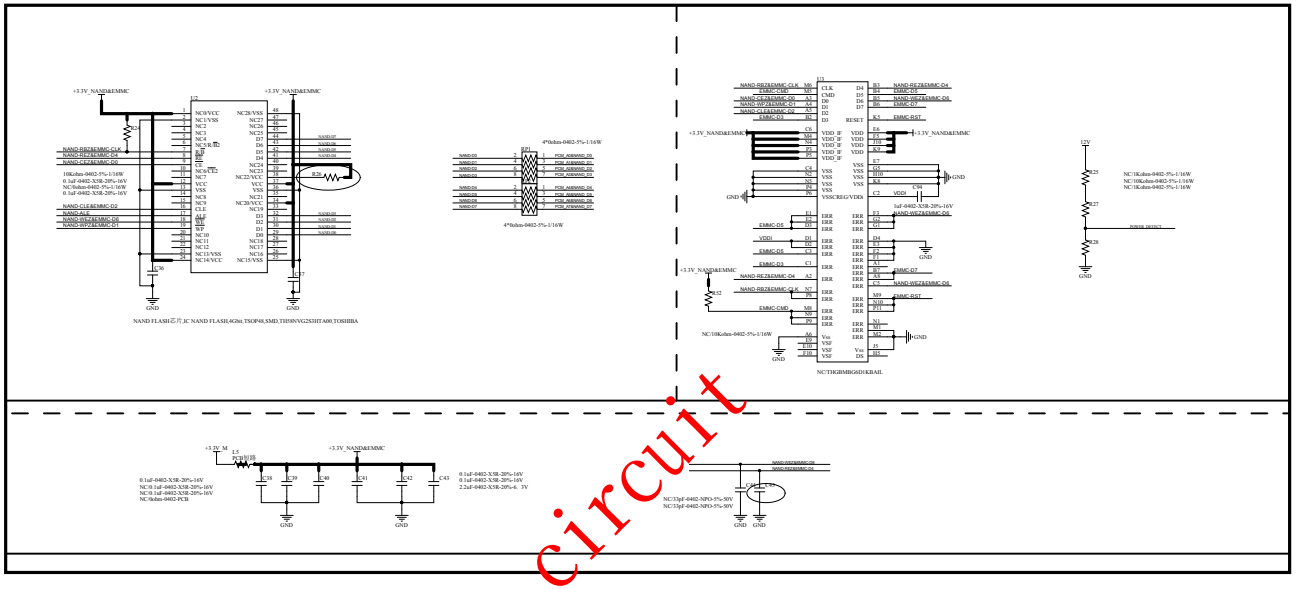


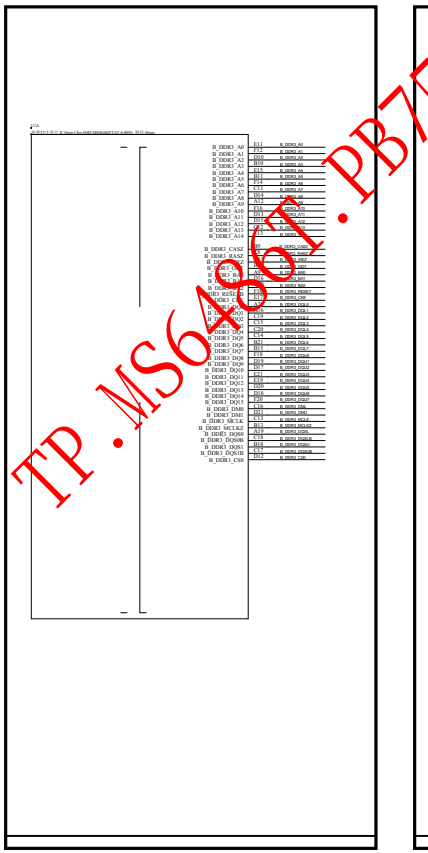


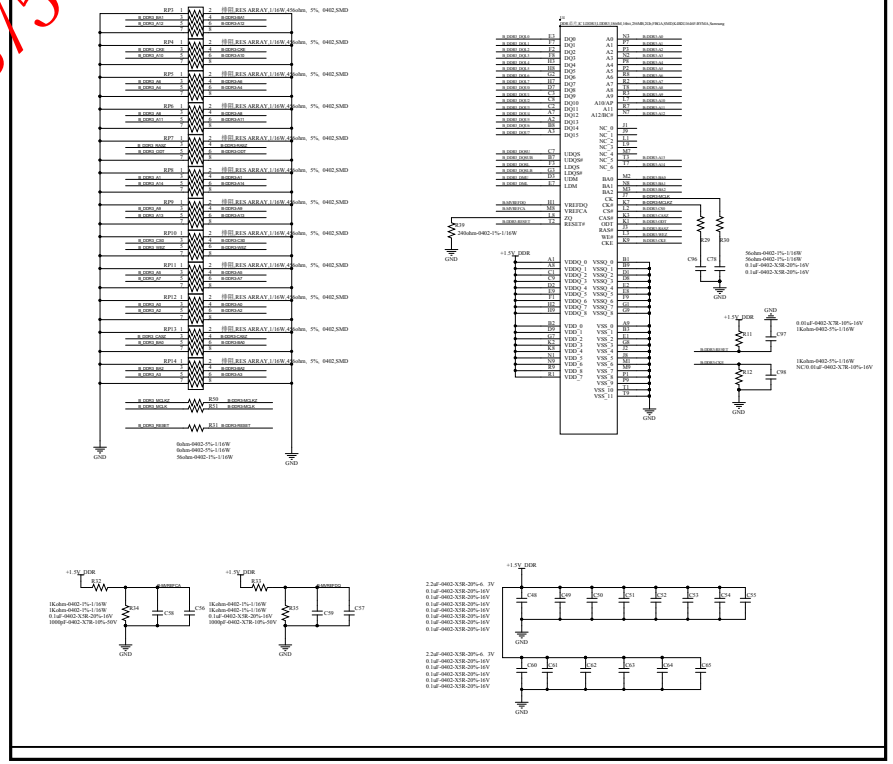


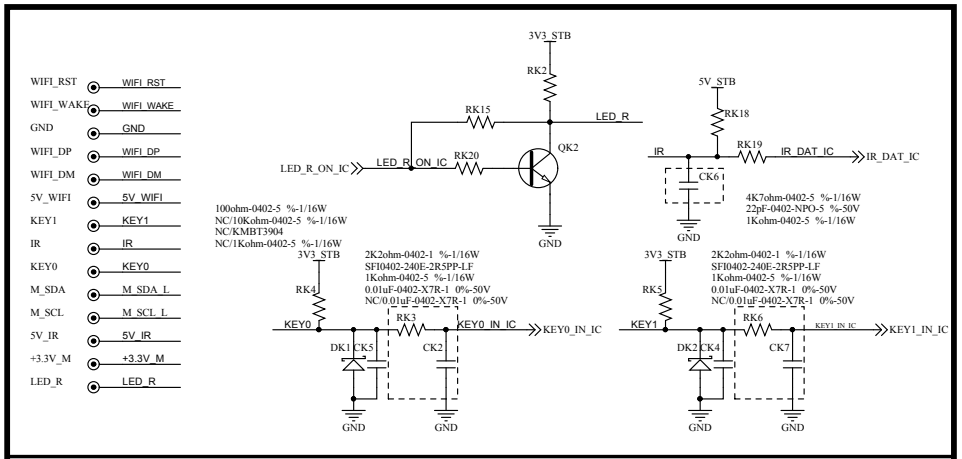


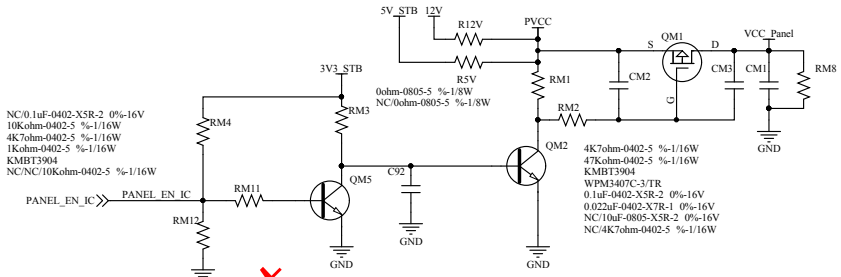


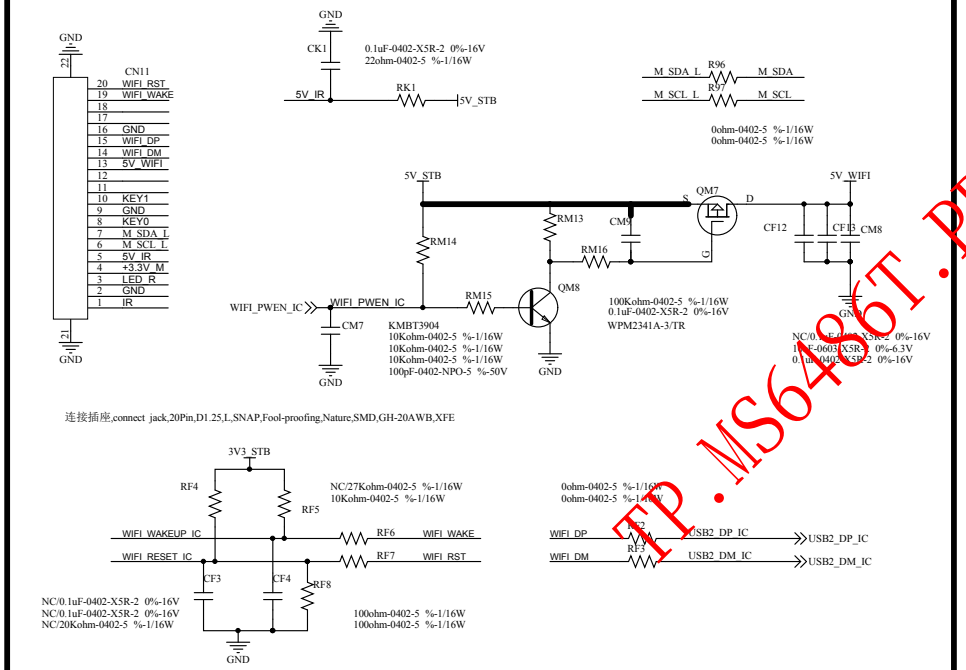


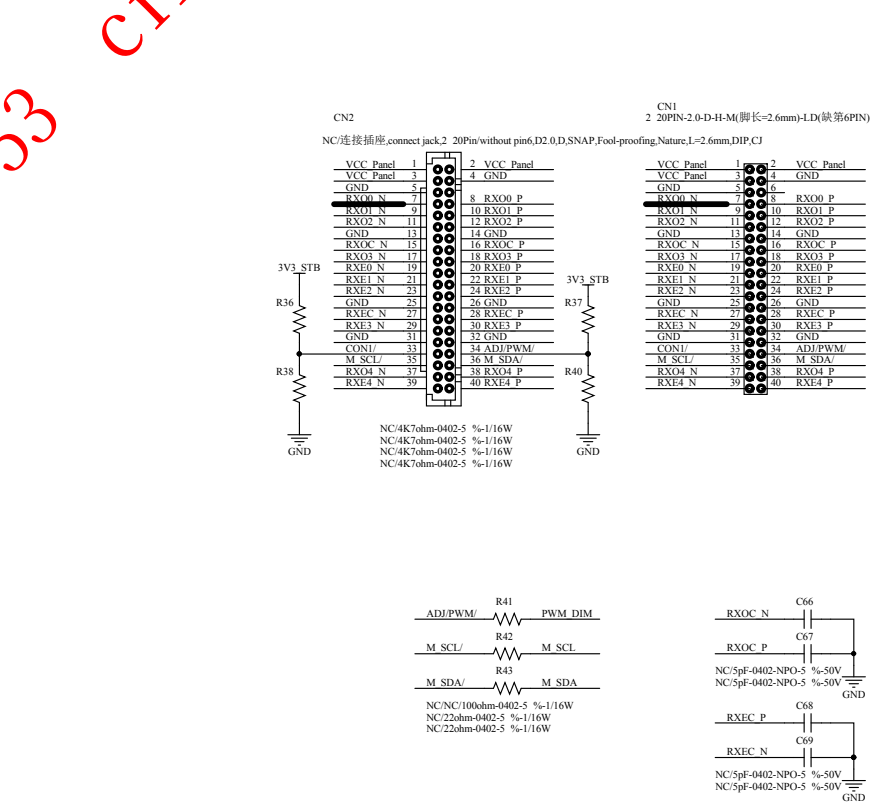


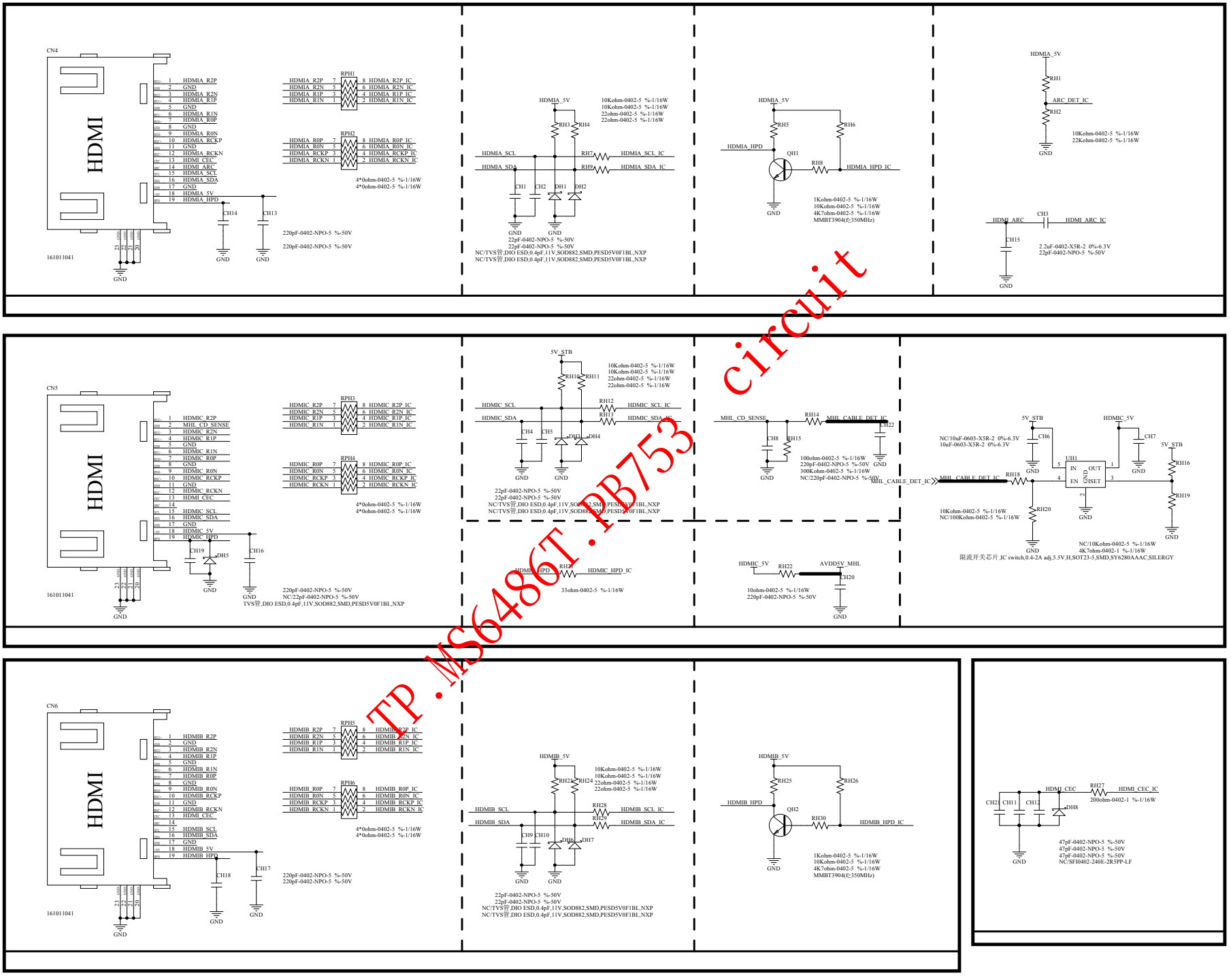


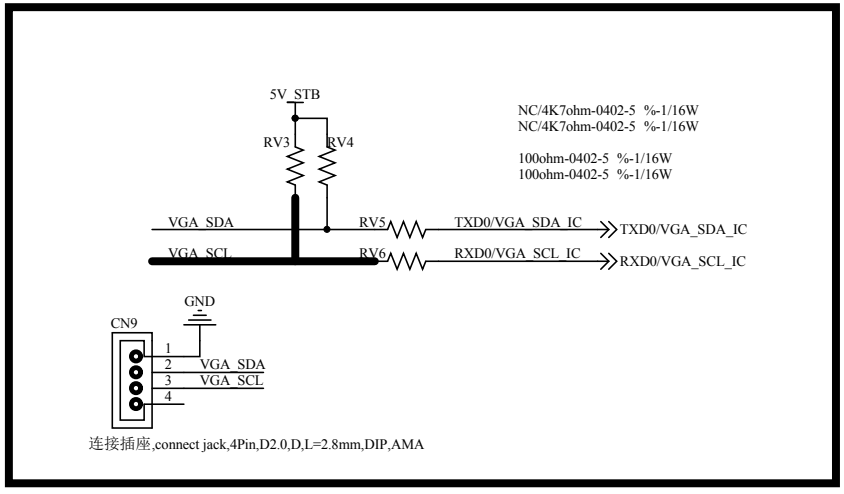


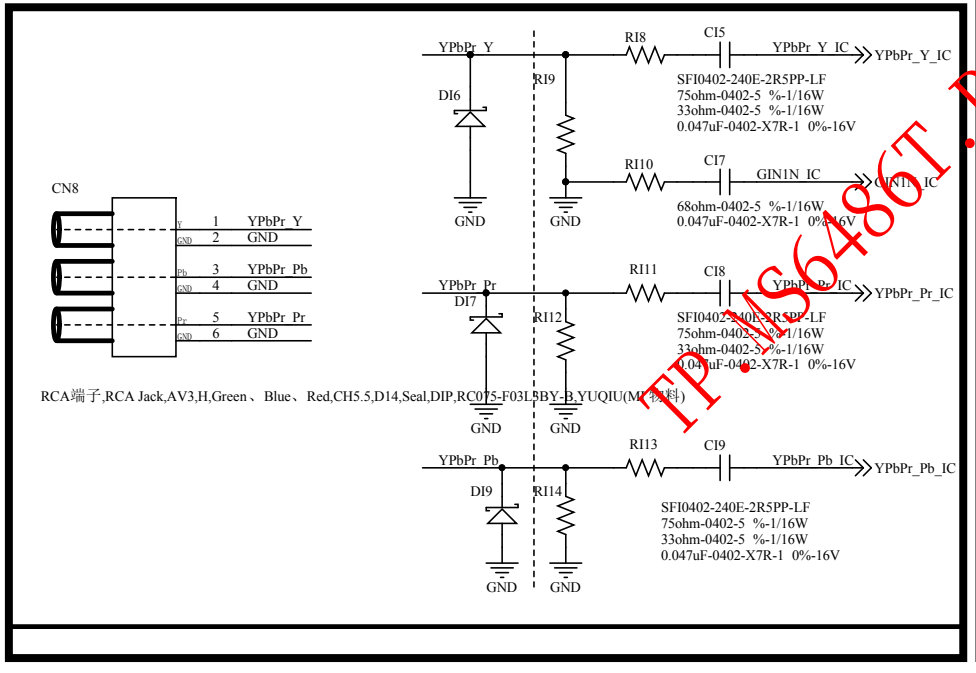


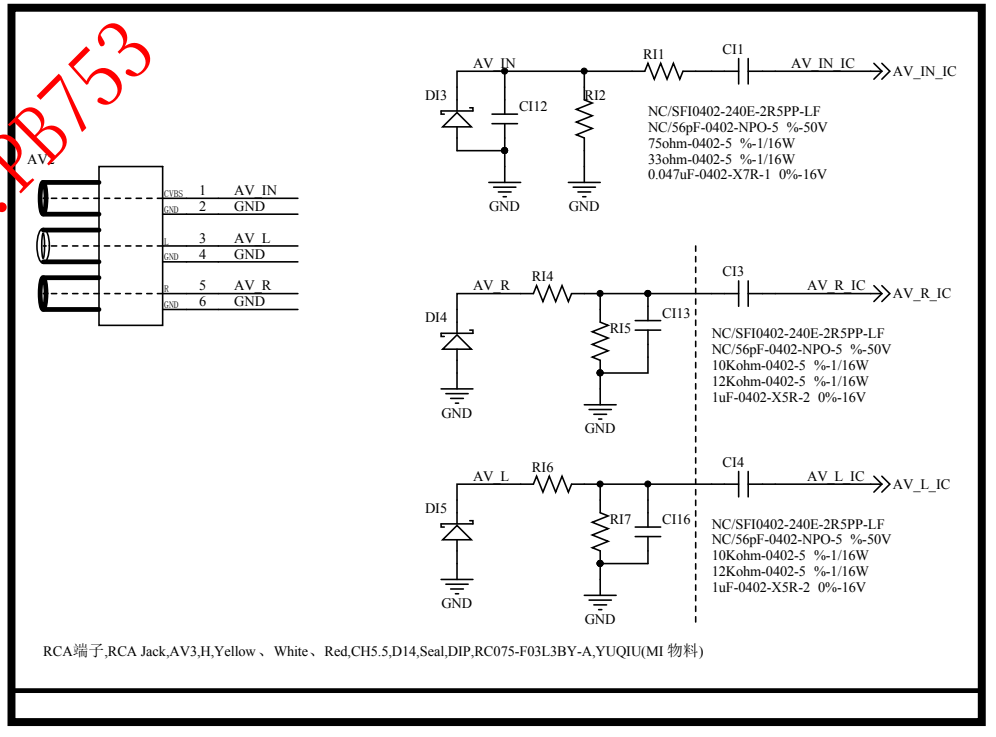


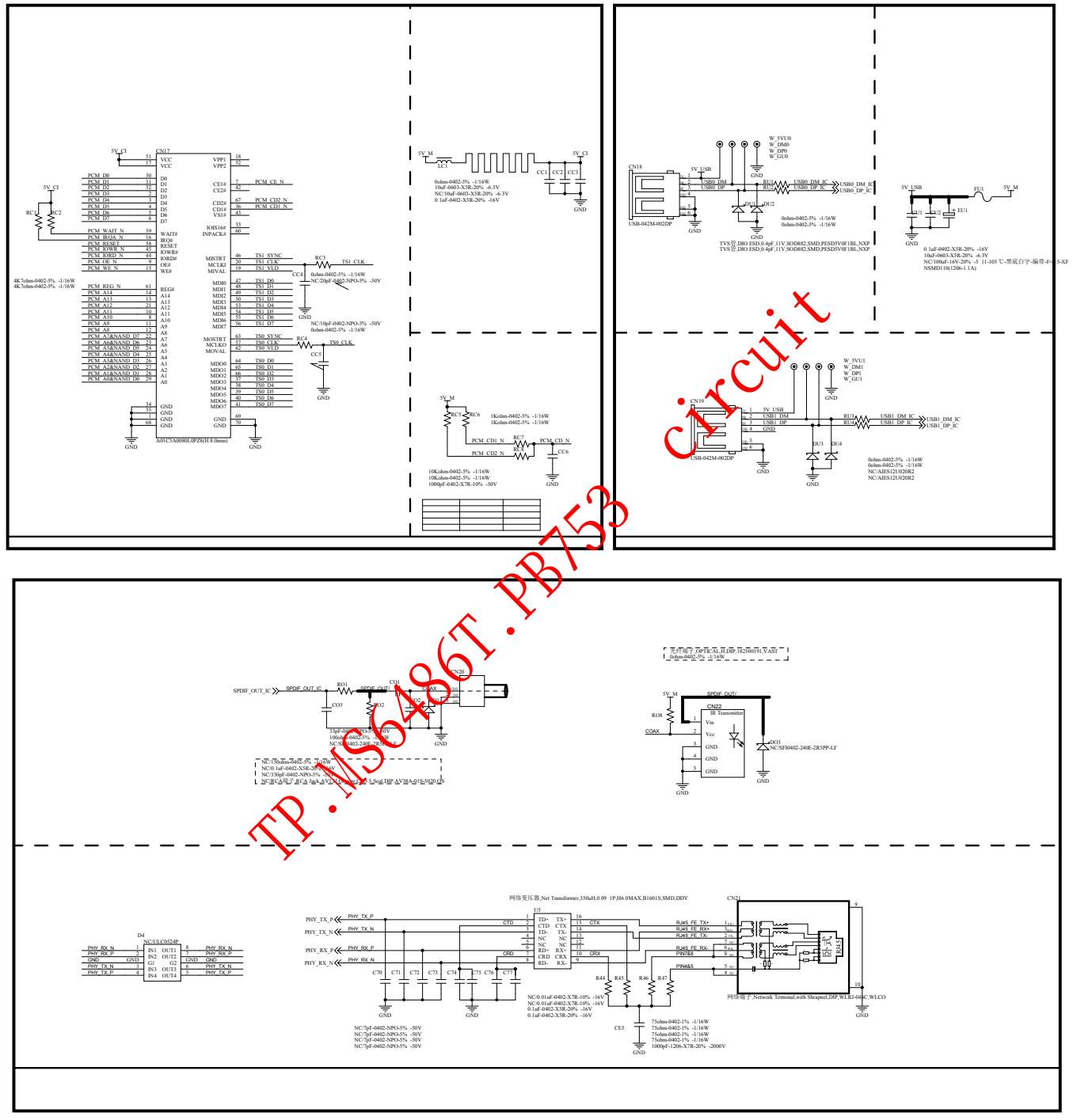


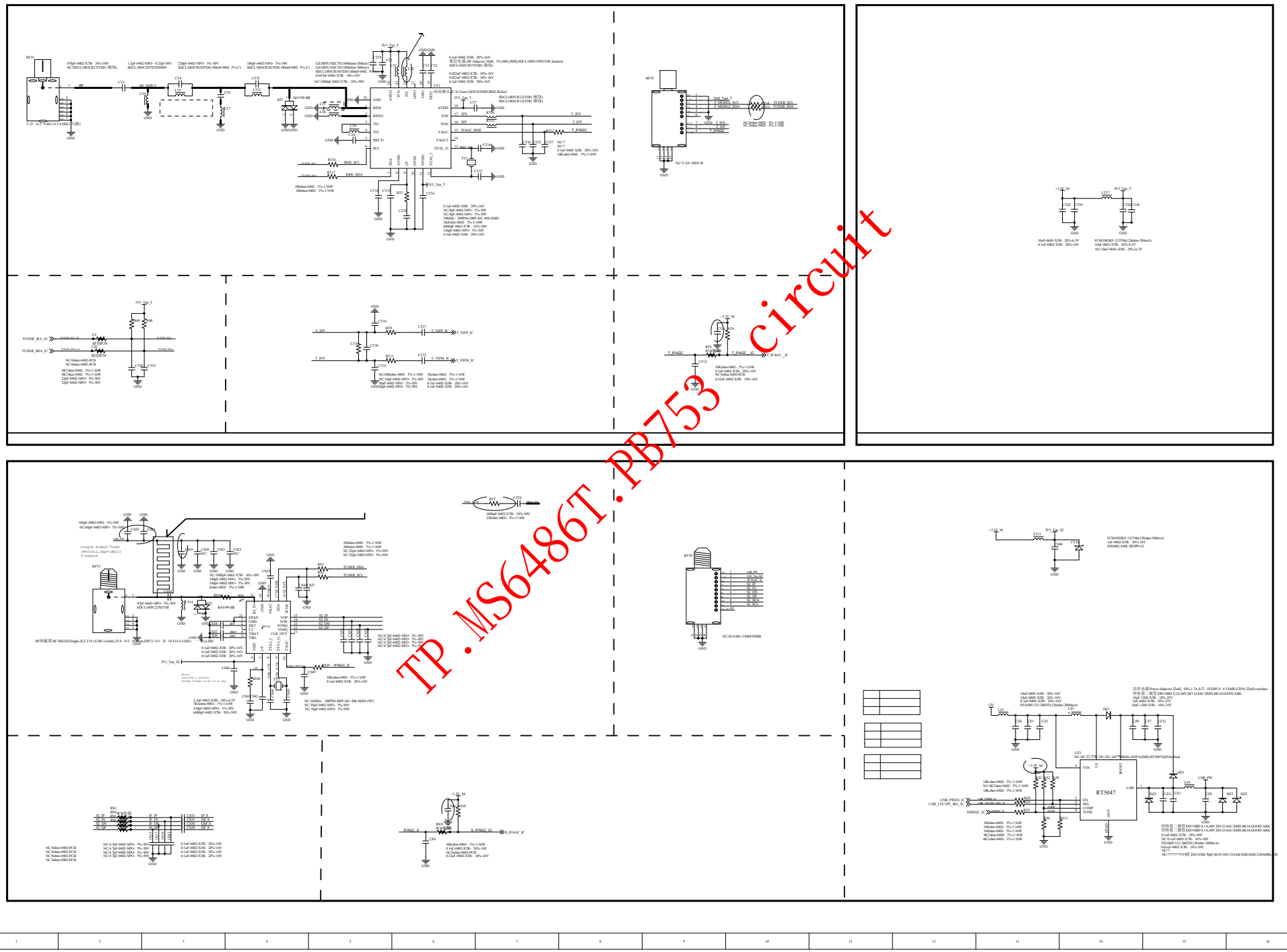


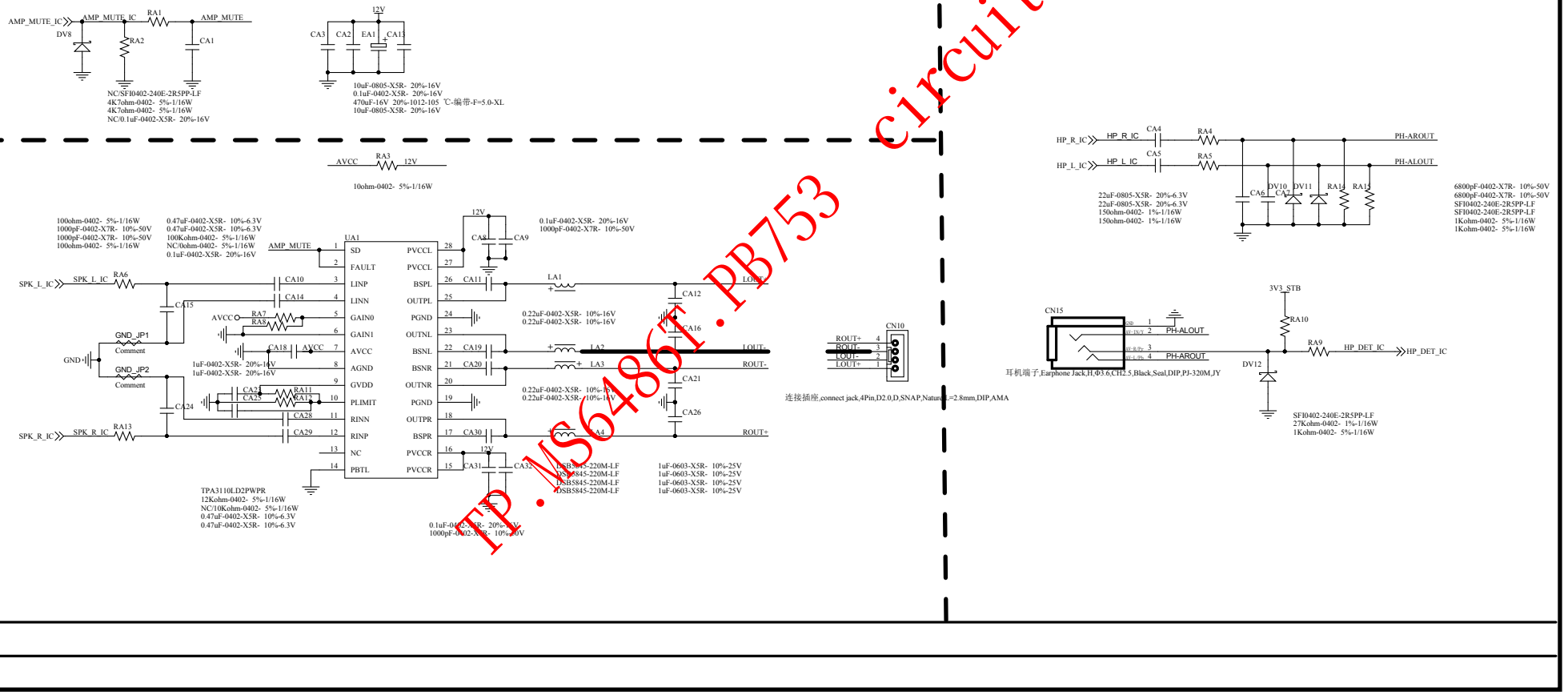


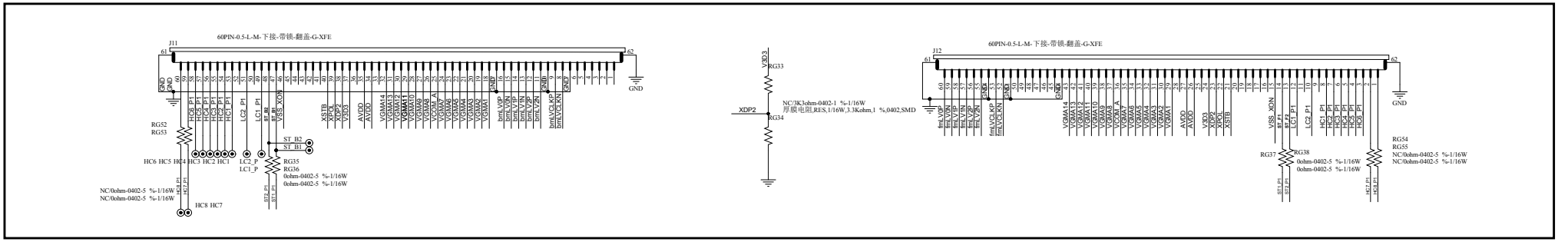


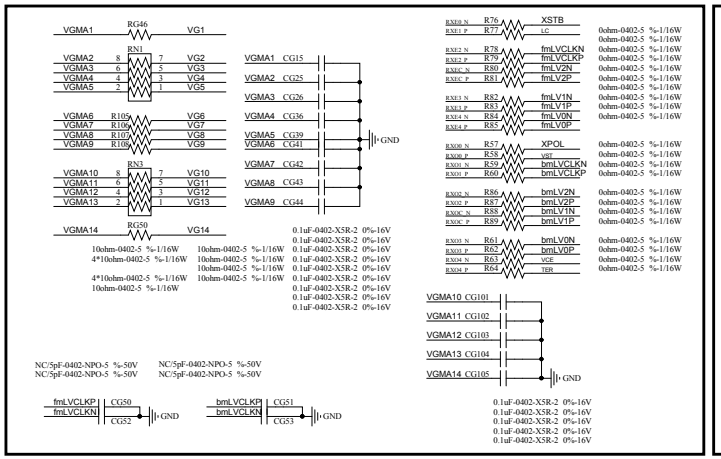


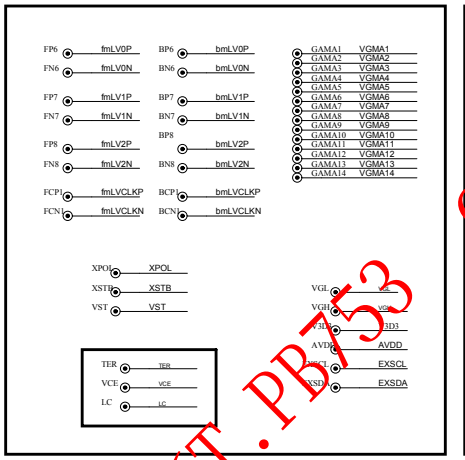


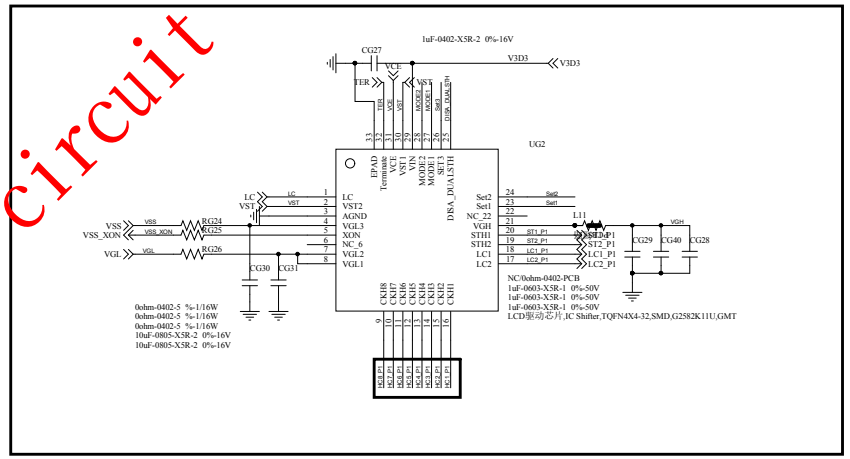

TP.MS6486T.PB753 circuit

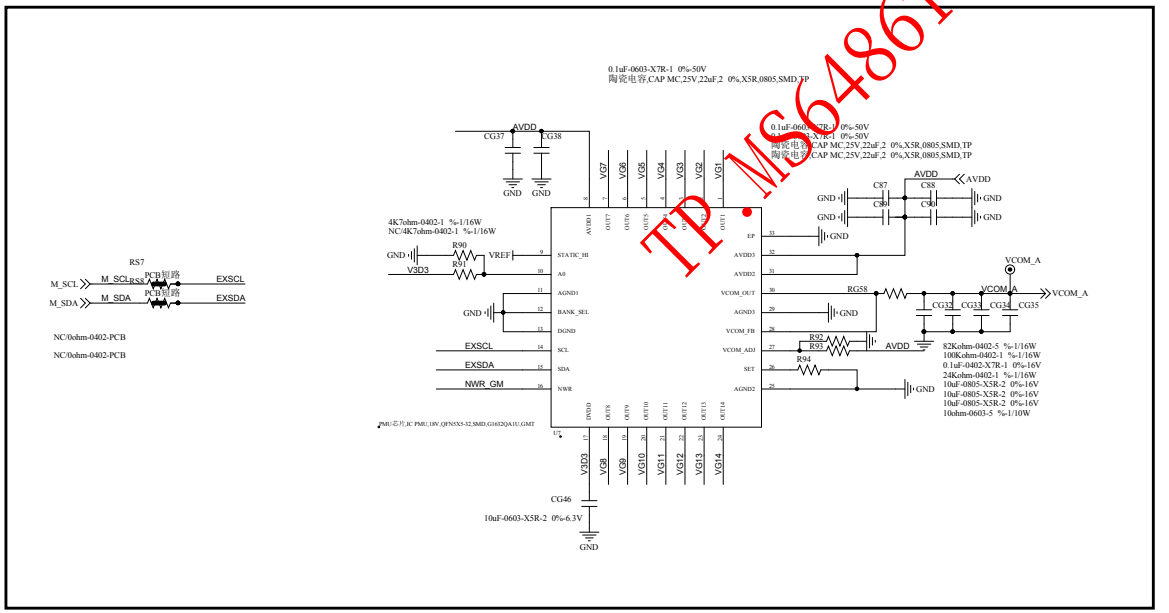


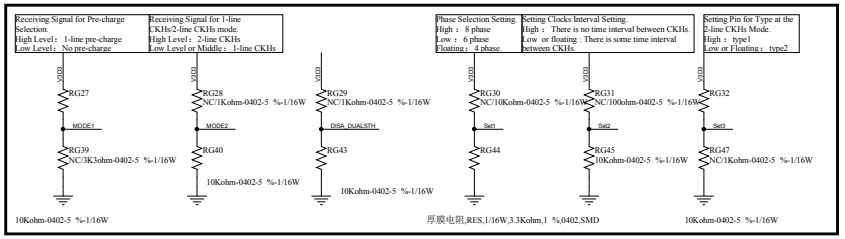


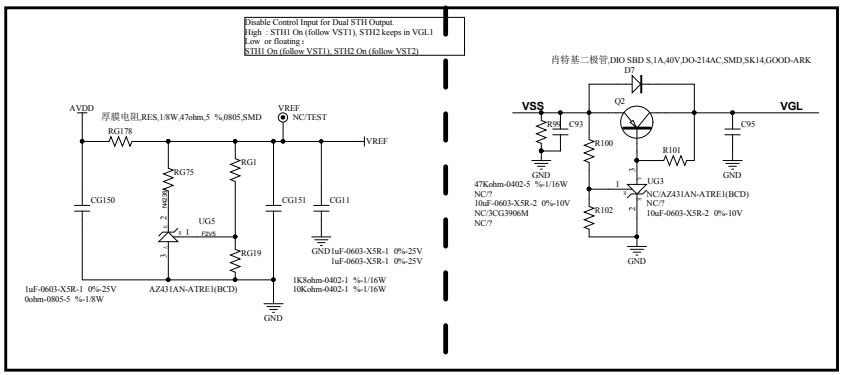


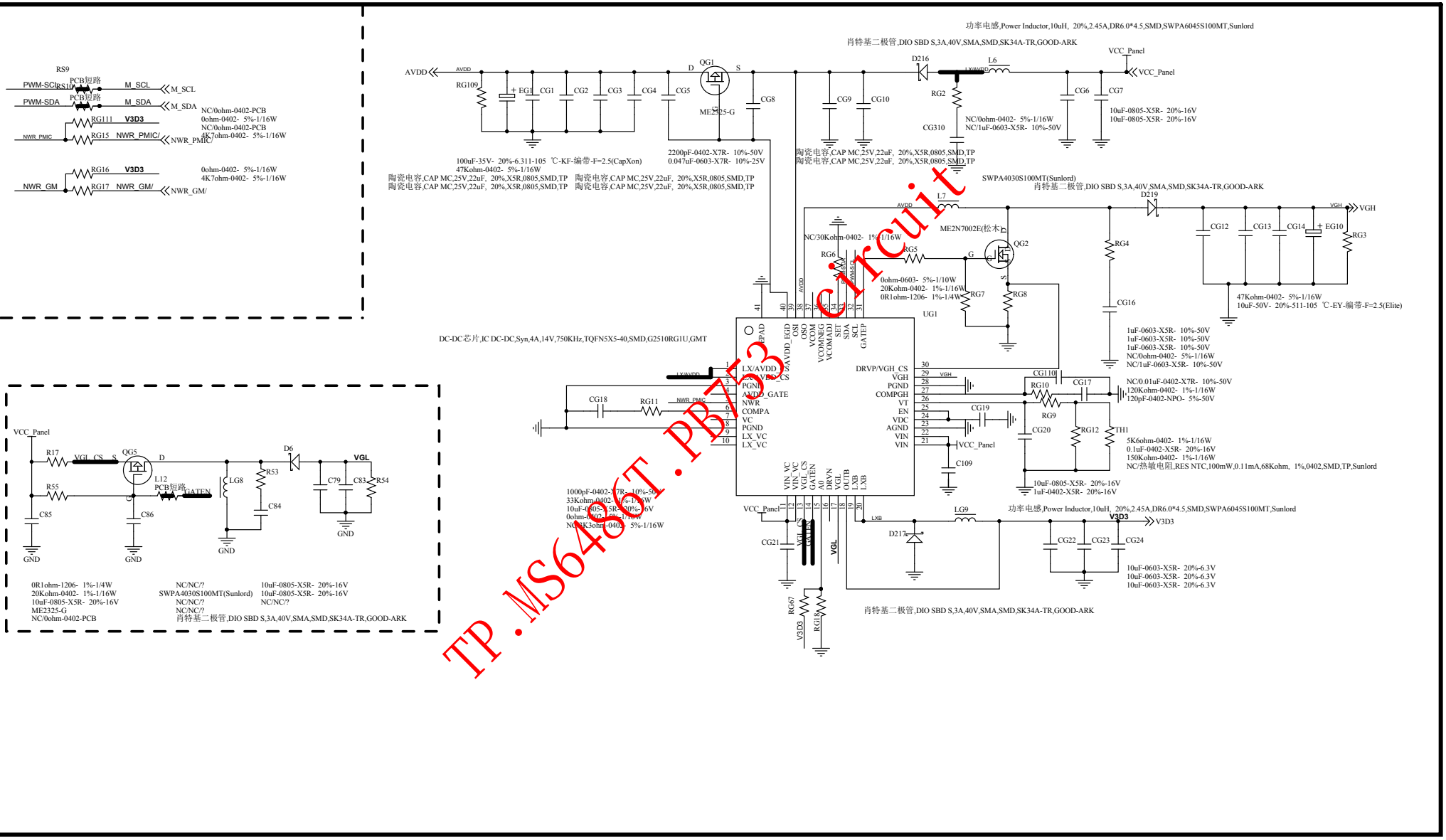


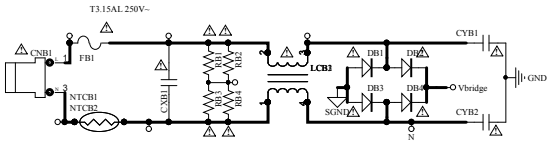




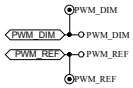




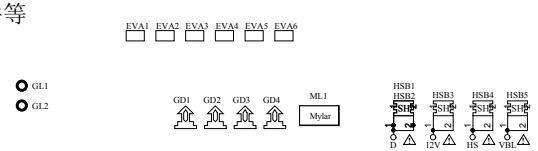

RS9
PWM-SCL
PCB短路
M_SCL
M_SCL
PWM-SDA
PCB短路
M_SDA
M_SDA
NC/0ohm-0402-PCB
0ohm-0402- 5%-1/16W
RG111 V3D3
NC/0ohm-0402-PCB
4K7ohm-0402- 5%-1/16W
NWR_PMIC
RG15 NWR_PMIC/
NWR_PMIC/
RG16 V3D3
0ohm-0402- 5%-1/16W
4K7ohm-0402- 5%-1/16W
NWR_GM
RG17 NWR_GM/
NWR_GM/
功率电感,Power Inductor,10uH, 20%,2.45A,DR6.0*4.5,SMD,SWPA6045S100MT,Sunlord
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
AVDD
RG109
EG1
CG1
CG2
CG3
CG4
CG5
QG1
ME2325-G
CG8
CG9
CG10
D216
L6
LX/AVDD
RG2
CG310
NC/0ohm-0402- 5%-1/16W
NC/1uF-0603-X5R- 10%-50V
CG6
CG7
VCC_Panel
10uF-0805-X5R- 20%-16V
10uF-0805-X5R- 20%-16V
100uF-35V- 20%-6.311-105 ℃-KF-编带-F=2.5(CapXon)
47Kohm-0402- 5%-1/16W
2200pF-0402-X7R- 10%-50V
0.047uF-0603-X7R- 10%-25V
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
陶瓷电容,CAP MC,25V,22uF, 20%,X5R,0805,SMD,TP
SWPA4030S100MT(Sunlord)
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
L7
D219
VGH
ME2N7002E(松木)
QG2
NC/30Kohm-0402- 1%-1/16W
RG6
RG5
0ohm-0603- 5%-1/10W
20Kohm-0402- 1%-1/16W
0R1ohm-1206- 1%-1/4W
RG7
RG8
UG1
RG4
CG16
CG12
CG13
CG14
EG10
RG3
47Kohm-0402- 5%-1/16W
10uF-50V- 20%-511-105 ℃-EY-编带-F=2.5(Elite)
1uF-0603-X5R- 10%-50V
1uF-0603-X5R- 10%-50V
1uF-0603-X5R- 10%-50V
NC/0ohm-0402- 5%-1/16W
NC/1uF-0603-X5R- 10%-50V
DC-DC芯片,IC DC-DC,Syn,4A,14V,750KHz,TQFN5X5-40,SMD,G2510RG1U,GMT
EPAD
LX/AVDD
DRVP/VGH_CS
PGND
AVDD_GATE
NWR
COMPA
VC
PGND
LX_VC
LX_VC
VGH
PGND
COMPGH
VT
EN
VDC
AGND
VIN
VIN
CG18
RG11
CG110
CG17
RG10
NC/0.01uF-0402-X7R- 10%-50V
120Kohm-0402- 1%-1/16W
120pF-0402-NPO- 5%-50V
CG19
RG9
CG20
RG12
TH1
5K6ohm-0402- 1%-1/16W
0.1uF-0402-X5R- 20%-16V
150Kohm-0402- 1%-1/16W
NC/热敏电阻,RES NTC,100mW,0.11mA,68Kohm, 1%,0402,SMD,TP,Sunlord
C109
10uF-0805-X5R- 20%-16V
1uF-0402-X5R- 20%-16V
VIN_VC
VIN_VC
VGL_CS
GATEN
AO
DRVN
VGL
OUTB
LXB
LXB
1000pF-0402-X7R- 10%-50V
33Kohm-0402- 1%-1/16W
10uF-0805-X5R- 20%-16V
0ohm-0402- 5%-1/16W
NC/3ohm-0402- 5%-1/16W
VCC_Panel
CG21
LG9
功率电感,Power Inductor,10uH, 20%,2.45A,DR6.0*4.5,SMD,SWPA6045S100MT,Sunlord
D217
V3D3
CG22
CG23
CG24
10uF-0603-X5R- 20%-6.3V
10uF-0603-X5R- 20%-6.3V
10uF-0603-X5R- 20%-6.3V
RG67
RG18
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
VCC_Panel
R17
VGL_CS
QG5
D
D6
VGL
R55
L12
PCB短路
GATEN
LG8
R53
C79
C83
R54
C85
C86
C84
GND
0R1ohm-1206- 1%-1/4W
20Kohm-0402- 1%-1/16W
10uF-0805-X5R- 20%-16V
ME2325-G
NC/0ohm-0402-PCB
NC/NC/?
SWPA4030S100MT(Sunlord)
NC/NC/?
NC/NC/?
肖特基二极管,DIO SBD S,3A,40V,SMA,SMD,SK34A-TR,GOOD-ARK
10uF-0805-X5R- 20%-16V
10uF-0805-X5R- 20%-16V
NC/NC/?
TP.MS64GT.PB713
Circuit



与TV端连接网络

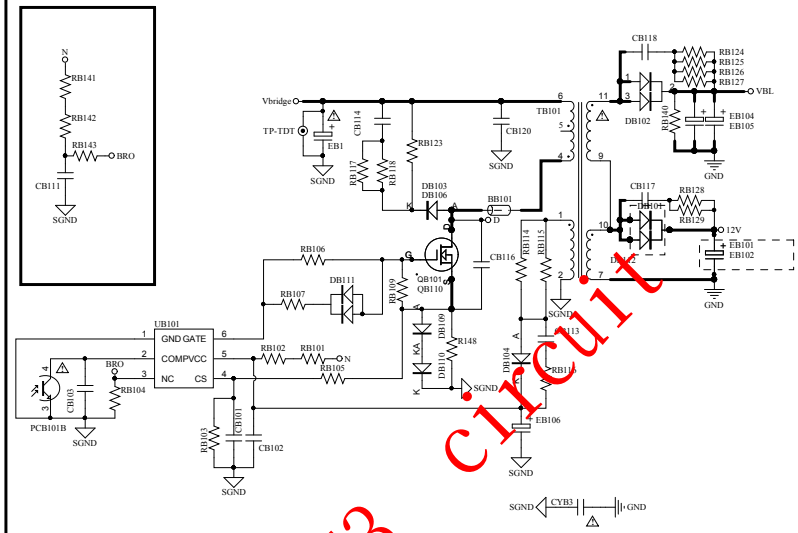


辅料及结构件等

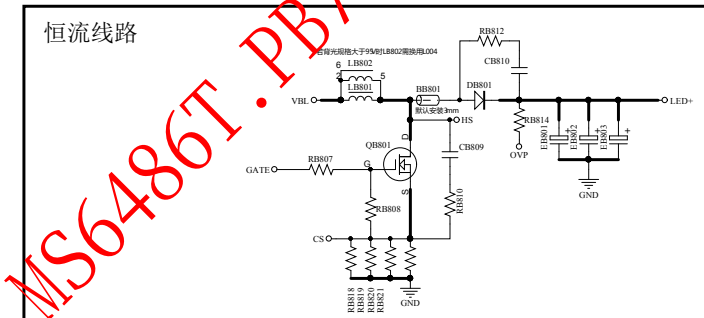


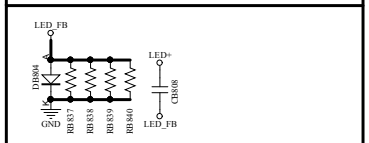
原理图中未体现的辅料及特殊生产工艺	
工艺	位号
卧倒点胶	EB1、EB803(MI)
XXX	XXX
XXX	XXX
XXX	XXX

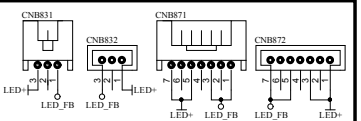
反激线路



恒流线路







Model Name:	TP.MS6486T.PB753 B16357	VERSION:	V1.0
DRAWN:	林文添	DATE:	2016-09-01
CHKD:	李林杰	DATE:	2016-09-01