Liquid Crystal Display Television
Service Manual

Chassis： MST9

Product Type： LCD15W57CA

LCD19W57CA

LCD32W57CA

Ver 1.0

Hisense Electric Co.， Ltd.

June. 2008

Contents

Service Manual

1. Precautions and notices

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

WHEN REPLACEMENT PARTS ARE REQUIRED, BE SURE TO USE REPLACEMENT PARTS SPECIFIED BY THE MANUFACTURER.

Proper service and repair is important to the safe, reliable operation of all Hisense Electric Co., Ltd 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. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Hisense could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Hisense has

not undertaken any such broad evaluation. Accordingly, a serviceman that uses a service procedure or tools, which are not recommended by Hisense, must first satisfy himself thoroughly that neither his safety nor the safe of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, Hisense Electric Co., Ltd will be referred to as Hisense.

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 substitute replacement parts, which do not have the same specified safety characteristics, may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from Hisense. Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Serviceman assumes all liability.

DANGERCAUTION CAUTION

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE GUIDE.

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, make sure that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.

1. Never replace modules or other components while the unit is switched on.

2. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

1.1.3

To prevent electrical shock, do not use this polarized ac plug with an extension cord, receptacle, or the outlet unless the blades can be fully inserted to prevent blade exposure.

To prevent electrical shock, match wide blade or plug to wide slot, fully insert.

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.

1.1.5

Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points.

-Note: The wire trees should be routed correctly and fixed with the mounted

cable clamps.

-The insulation of the mains lead should be checked for external damage.

1.1.6

(1) Do not touch Signal and Power Connector while this product operates. Do not touch EMI ground part and Heat Sink of Film Filter.

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

(3) Do not use this product in locations where the humidity is extremely high, where it may be splashed with water, or where flammable materials surround it. Do not install or use the product in a location that does no satisfy the specified environmental conditions. This may damage the product and may cause a fire.

(4) 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.

(5) 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.

(6) Do not disconnect or connect the connector while power to the product is on. It takes some time for the voltage to drop to a sufficiently low level after the power has been turned off. Confirm that the voltage has dropped to a safe level before disconnecting or connecting the connector.

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

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

(9) 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.

(10) 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.

(11) 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 activation of the leakage-detection 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.

• When handling the circuit board, be sure to remove static electricity from your body before handling the circuit board.

• 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.

• Routing of the wires and fixing them in position must be done in accordance with

the original routing and fixing configuration when servicing is completed. All the wires are routed far away from the areas that become hot (such as the heat sink). These wires are fixed in position with the wire clamps so that the wires do not move, thereby ensuring that they are not damaged and their materials do not deteriorate over long periods of time. Therefore, route the cables and fix the cables to the original position and states using the wire clamps.

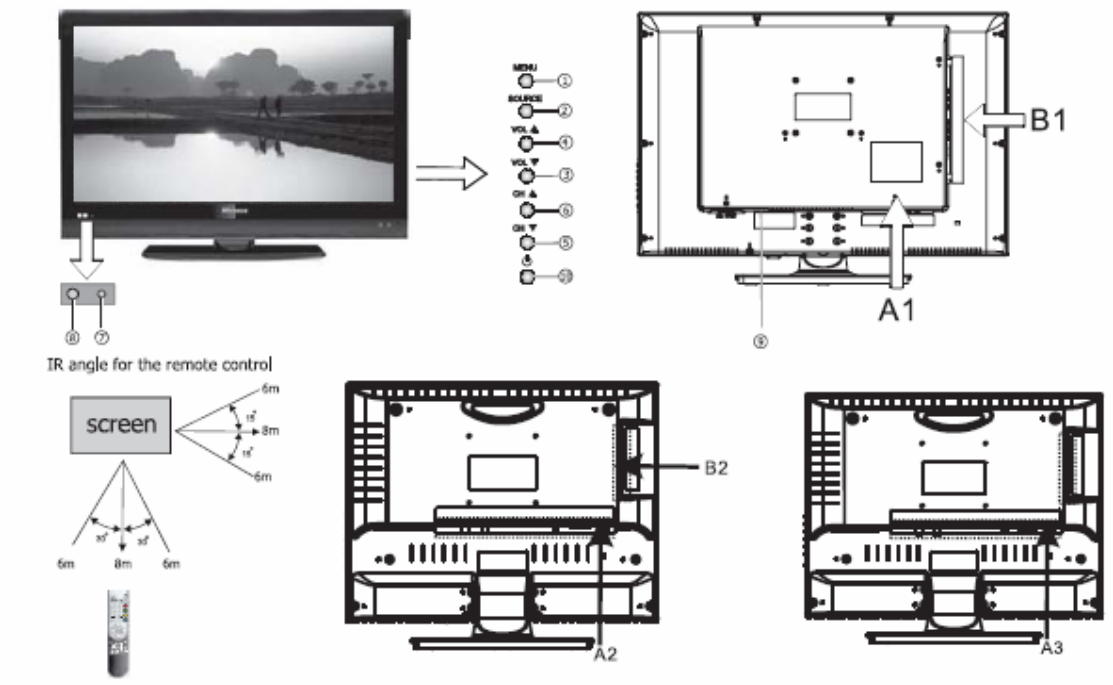
• Perform a safety check when servicing is completed. Verify that the peripherals of the serviced points have not undergone any deterioration during servicing. Also verify that the screws, parts and cables removed for servicing purposes have all been returned to their proper locations in accordance with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

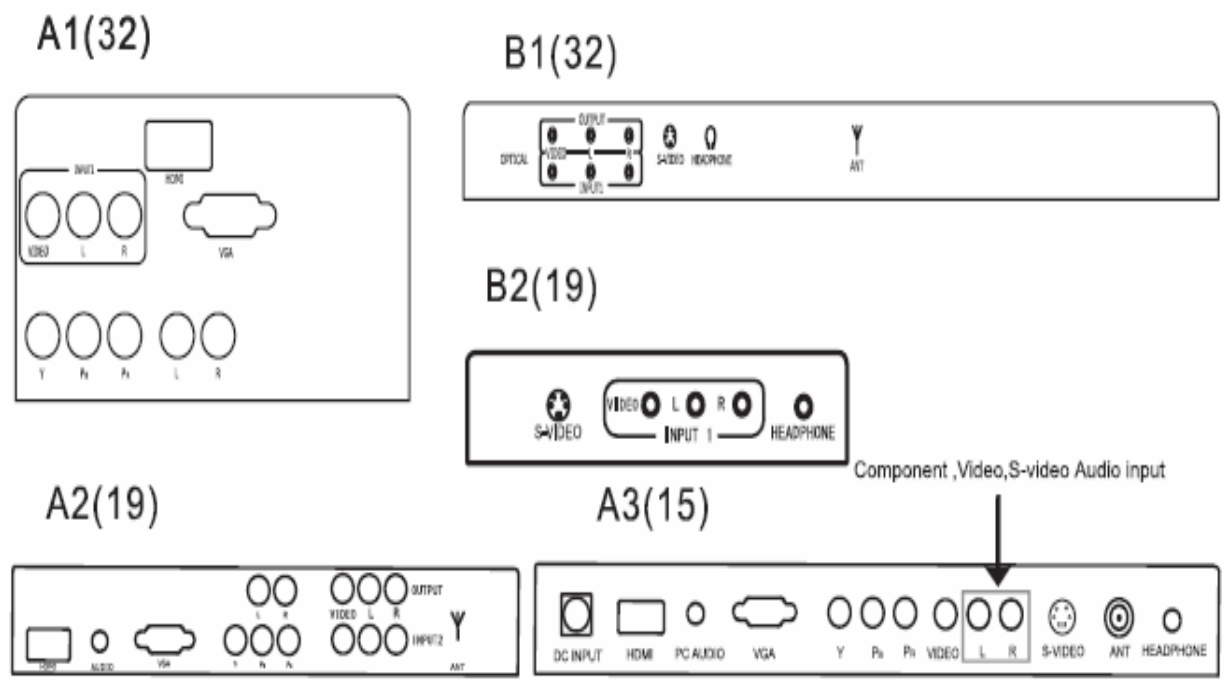
The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Product Function Specifications

2.1 Product Function





1 Menu button:Activate OSD menu
2 Source button:Activate OSD source select
3 VOL▼： volume decrease/Left button
4 VOL▲： volume increase/Right button
5 CH▼： previous channel/Down button
6 CH ▲： Next channel /up button
7 Power indicatior
8 Remote sensing window
9 AC power socket
10 Power switch(standby)
11 Power switch(on/off)

Note:
The above figures are reference only, please refer to the actual units to determine the appearances.

2.2 Specifications

Model		LCD15W57CA	LCD19W57CA	LCD32W57CA
Product dimension (W×H×D)	not including base	400X277X61	468X356.5X75	800X545X106.5
	including base	400X312 X140	468X399X178	800X596X240
Product weight(kg)	not including base	2.8	5	12
	including base	3.1	5.5	14
Display screen min size of diagonal of visual pictures(cm)		39	48	80
Display screen Resolution		1366X768	1440X900	1366X768
Unit power consumption		Refer to the rating label		
Sound-matching power		1.5W+1.5W	1.5W+1.5W	5W+5W
Power (input)		Refer to the rating label		
Receiving system	RF	NTSC		
	AV	NTSC		
Environmental conditions		Operating temperature 5℃～35℃ Operating humidity : 20%-80%RH Atmospheric pressure: 86kPa-106kPa		

Interface storage battery features:

Interface name	Interface type	Terminal(jack)	Storage battery	Impedance
Video input	Compound video	Video	1.0Vp-p	75Ω
S-VIDEO	Brightness and colour separation video	Y	1.0Vp-p	75Ω
		C	0.286Vp-p	75Ω
Component input	Analog component video	Y	1.0Vp-p	75Ω
		PB.PR	0.7Vp-p	75Ω
VGA	VGA	R.G.B	0.7Vp-p	75Ω
		HD.VD	TTL	High impedance
Audio input	Analog audio	Left.right	1Vrms	More than 10kΩ

Video signal format with component input:

50HZ 576i,576p,720p,1080i;
60HZ 480i,480p,720p,1080i.

PC signal format with VGA interface:

60HZ 640×480,800×600,1024×768.

Video signal format with HDMI input:

RGB 60HZ 640×480,800×600,1024×768;
YUV 50HZ 576p,720p,1080i;
YUV 60HZ 480p,720p,1080i.

3. LCD Panel Spec

3.1 **LCD15W57CA：**

General Description ：

SN:1051642

OVERVIEW

M156B1-L01 is a 15.6" TFT Liquid Crystal Display module with 2 CCFL Backlight unit and 30pin 1ch-LVDS interface. This module supports 1366 x 768 WXGA mode and can display up to 16.7M colors. The inverter module for Backlight is not built in.

FEATURES

- Contrast ratio 500:1
- Response time 8ms.
- Brightness 250nits
- Color saturation NTSC 65%.
- WXGA (1366 x 768 pixels) resolution.
- DE (Data Enable) only mode.
- LVDS (Low Voltage Differential Signaling) interface.
- RoHS compliance.
- TCO'03 compliance.

APPLICATION

- TFT LCD Monitor

General Features

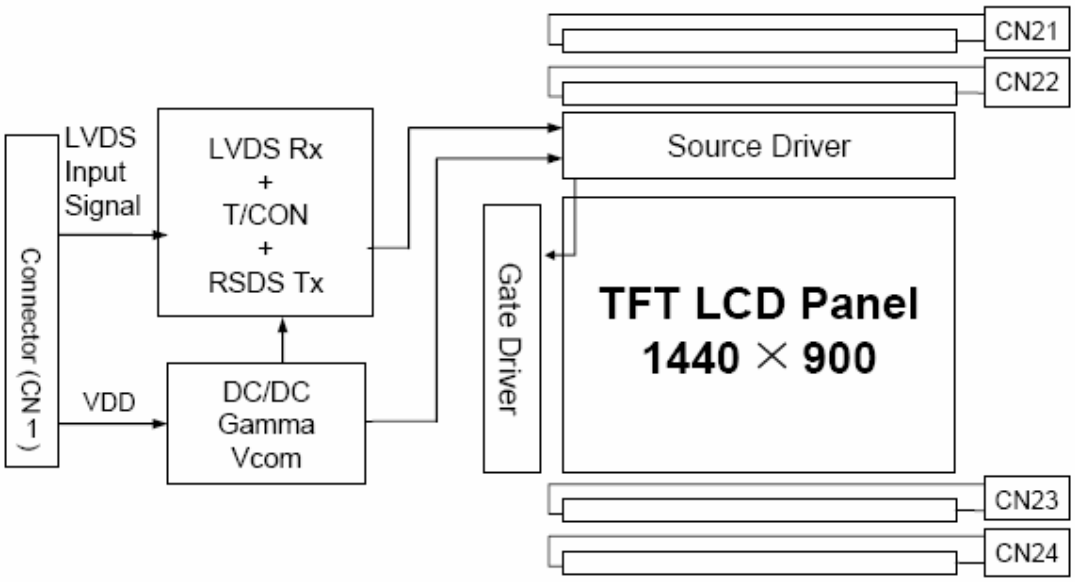
Item	Specification	Unit
Active Area	344.232(H) × 193.536(V) (15.6" diagonal)	mm
Bezel Opening Area	347.5(H)x196.8(V)	mm
Driver Element	a-Si TFT active matrix	-
Pixel Number	1366 x R.G.B. x 768	pixel
Pixel Pitch	0.252 (H) x 0.252 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally White	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-

3.2 **LCD19W57CA：**

General Description：

SN：1043774

HT190WG1-100 is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 19.0 inch diagonally measured active area with WXGA+ resolutions (1440 horizontal by 900 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16,7 M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.



General Features

- LVDS Interface with 2 pixel / clock
- High-speed response
- Low power consumption
- 6-bit (Hi-FRC) color depth, display 16,7 M colors
- Incorporated edge type back-light (Four lamps)
- High luminance and contrast ratio, low reflection and wide viewing angle
- DE (Data Enable) only
- RoHS Compliant

3.3 LCD32W57CA：

General Description：

SN：1043774

V315B1-L01 is a 31.5” TFT Liquid Crystal Display module with 16-CCFL Backlight unit and a ch LVDS interface.
This module supports 1366 x 768 WXGA format and can display 16.7M colors (8-bits colors).The inverter module for backlight is built-in.

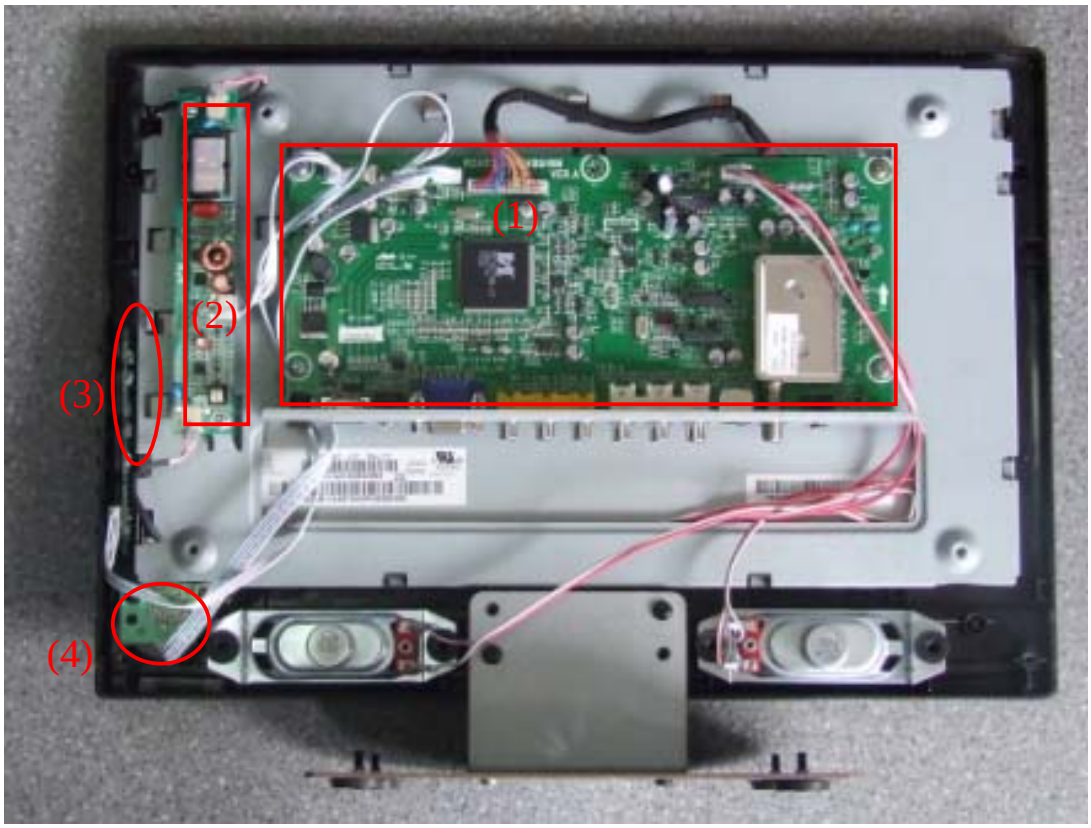
-High brightness (500 nits)
- Ultra-high contrast ratio (1500:1)
- Faster response time (gray to gray average 6.5ms)
- High color saturation NTSC 72%
- Ultra wide viewing angle : 176(H)/176(V) (CR>20) with Super MVA technology
- DE (Data Enable) only mode
- LVDS (Low Voltage Differential Signaling) interface
- 180 degree rotation display (option)
- Color reproduction (nature color)
- Low color shift function

Item	Specification	Unit
Active Area	697.6845 (H) x 392.256 (V) (31.51" diagonal)	mm
Bezel Opening Area	703.8 (H) x 398.4 (V)	mm
Driver Element	a-si TFT active matrix	-
Pixel Number	1366 x R.G.B. x 768	pixel
Pixel Pitch (Sub Pixel)	0.17025(H) x 0.51075 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Display Operation Mode	Transmissive mode / Normally black	-
Surface Treatment	Anti-Glare coating (Haze 25%),Hard coating (3H)	-

4. Chassis Layout and Overall Wiring Diagrams

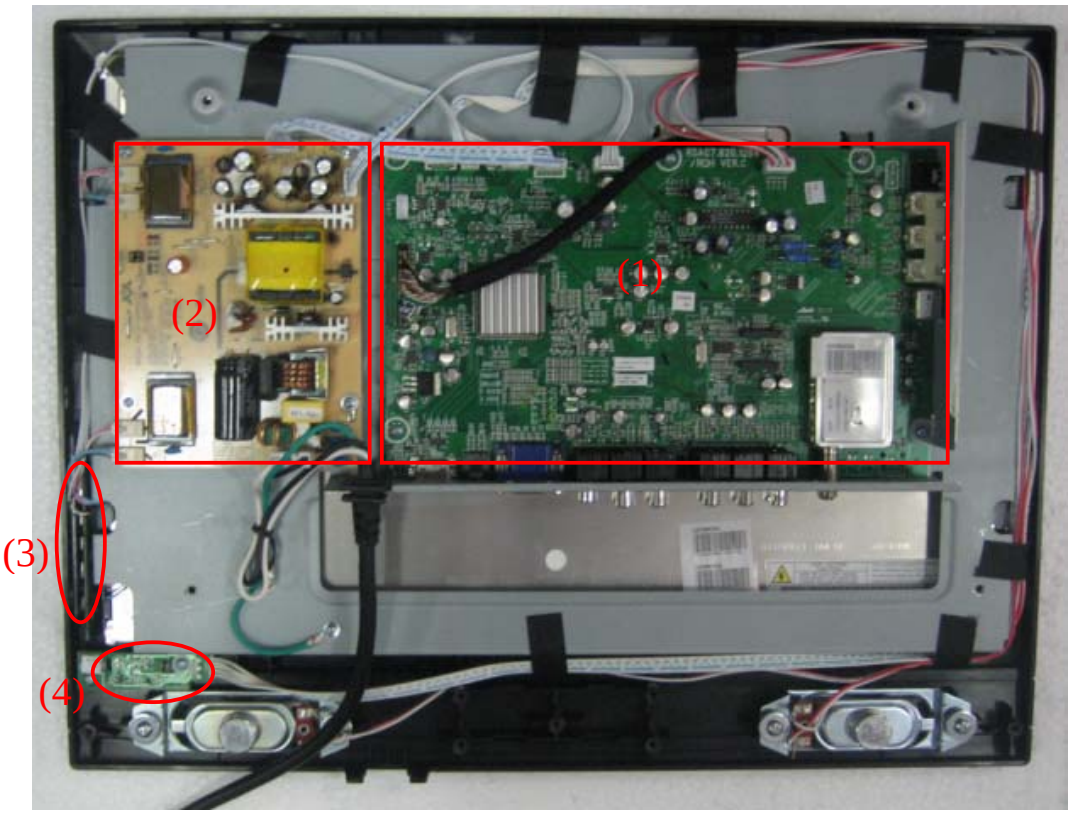
4.1 Chassis Layout

LCD15W57CA：



No	Description	Part No	Type/Model	PCB/ Model
(1)	Main BD	116927	RSAG2.908.1294-2\ROH	RSAG7.820.1499\VERB\ROH
(2)	Inverter BD	1051600	JSY-150202A\ROH\JK	outsourcing
(3)	Keypad PCA	117480	RSAG2.908.1168-7\ROH	RSAG7.820.1214\VER.A\ROH
(4)	IR Board	117146	RSAG2.908.1169-1\ROH	RSAG7.820.1526\VER.B\ROH

LCD19W57CA:



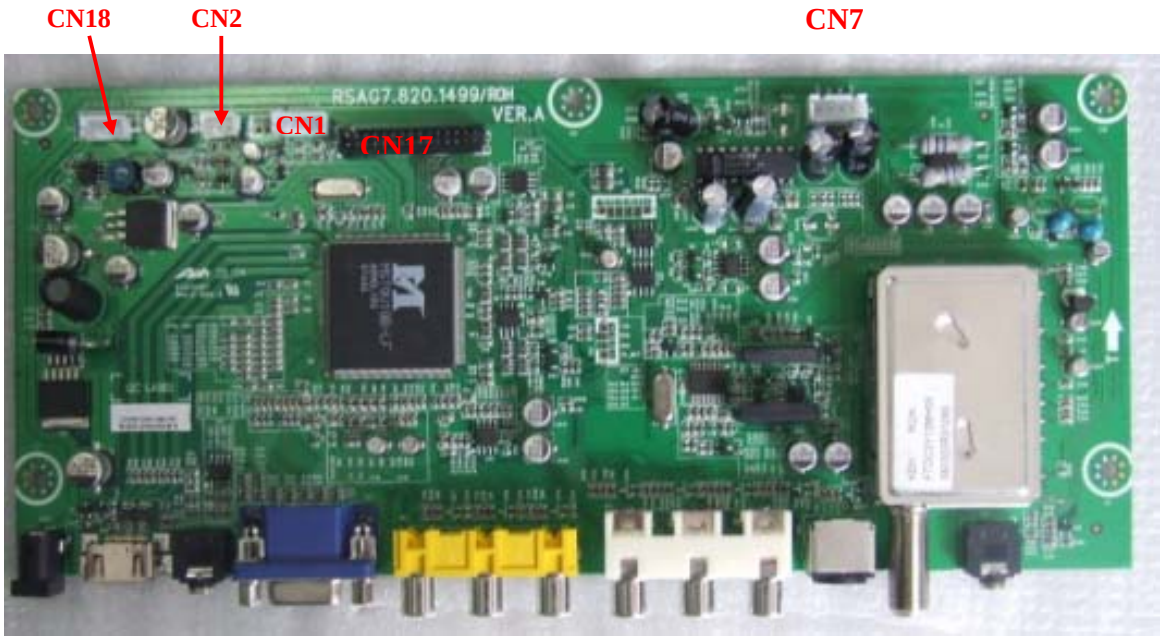
No	Description	Part No	Type/Model	PCB/ Model
(1)	Main BD	116509	RSAG2.908.1294-1\ROH	RSAG7.820.1264
(2)	Inverter BD	1041467	JSI-190411B\ROH\JK	outsourcing
(3)	Keypad PCA	114552	RSAG2.908.1168-2\ROH	0RSAG7.820.1214\VER.A
(4)	IR Board	114175	RSAG2.908.1169	RSAG7.820.1213\VER.A

LCD32W57CA:

No	Description	Part No	Type/Model	PCB/ Model
(1)	Main BD	116660	RSAG2.908.1295-2\ROH	RSAG7.820.1269\VERC\ROH
(2)	Power BD	112129	RSAG2.908.916-4\ROH	RSAG7.820.848A\VER.H\ROH
(3)	Keypad PCA	117301	RSAG2.908.1088-1\ROH	RSAG7.820.1101\VER.B\ROH
(4)	IR Board	116295	RSAG2.908.1260-2\ROH	RSAG7.820.1337\VER.B\ROH

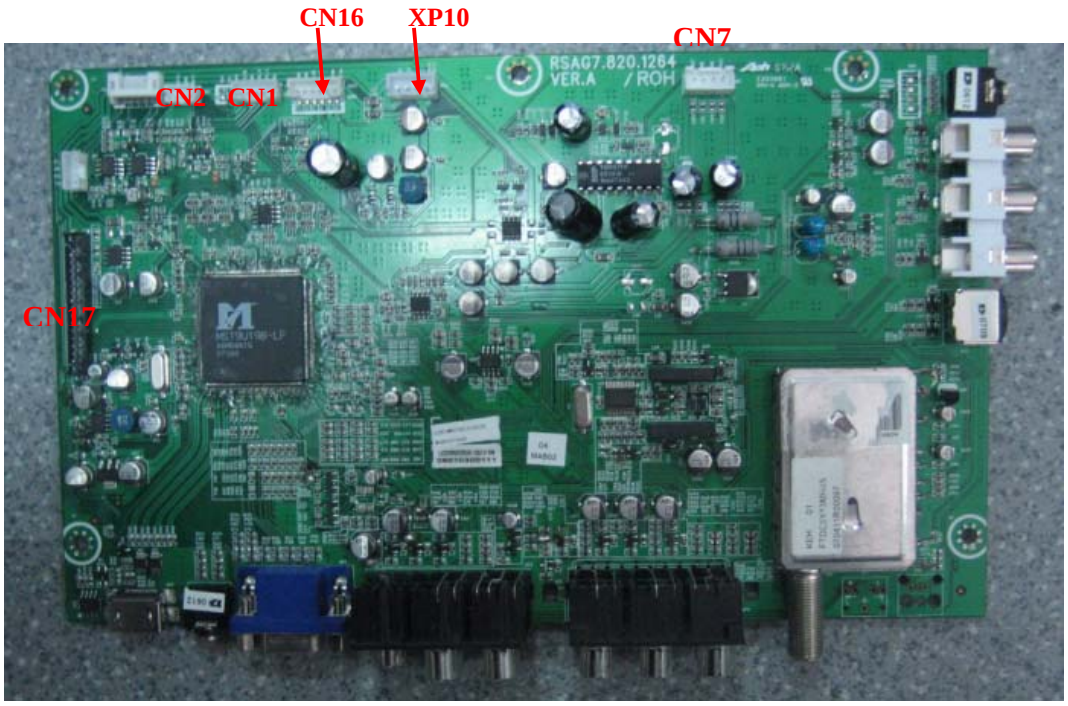
4.2 Main BD

LCD15W57CA：



Location No.	SPECIFICATION	Description
CN18	TJC10-4A\ROH	connect Main BD and Inverter BD
CN2	TJC10-3A\ROH	buttons
CN1	TJC10-5A\ROH	IR&Led
CN17	FF-HX19-10\ROH	LVDS
CN7	TJC3-4A\ROH	Speakers

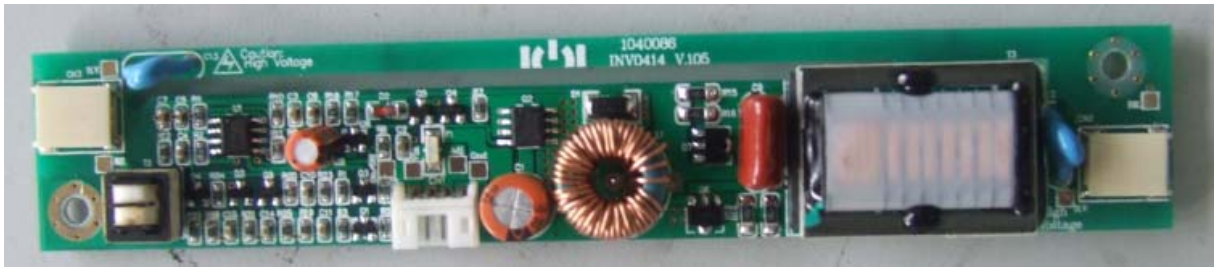
LCD19W57CA：



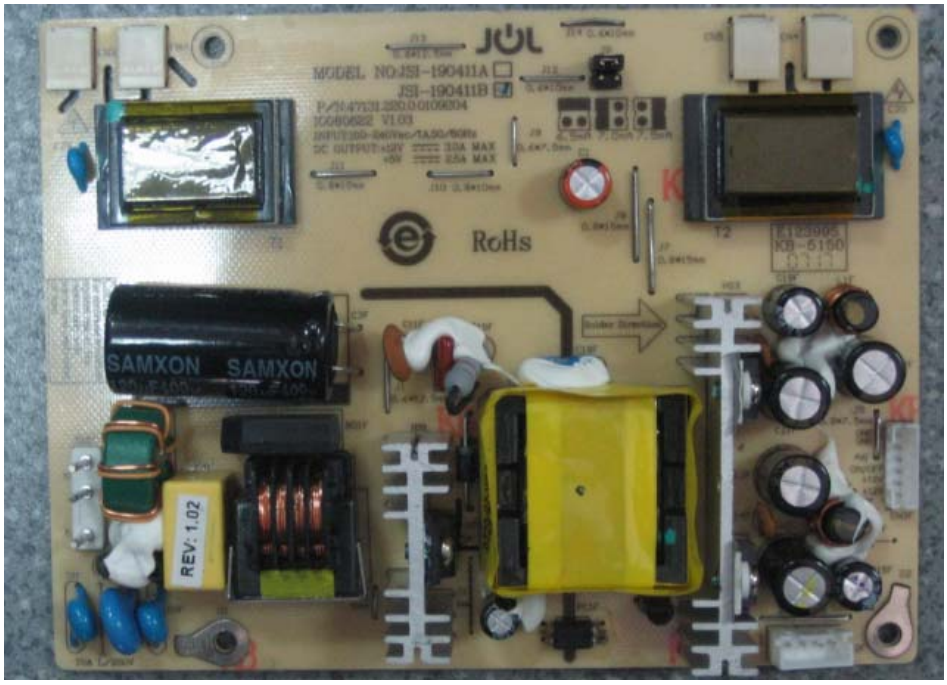
Location No.	SPECIFICATION	Description
CN2	TJC10-3A\ROH	buttons
CN1	TJC10-5A\ROH	IR&Led
CN16	TJC10-6A\ROH	connect Main BD and Inverter BD
XP10	TJC3-4A\ROH	connect Main BD and Inverter BD
CN7	TJC3-4A\ROH	Speakers
CN17	FF-HX19-02\ROH	LVDS

4.3 Power BD

LCD15W57CA：

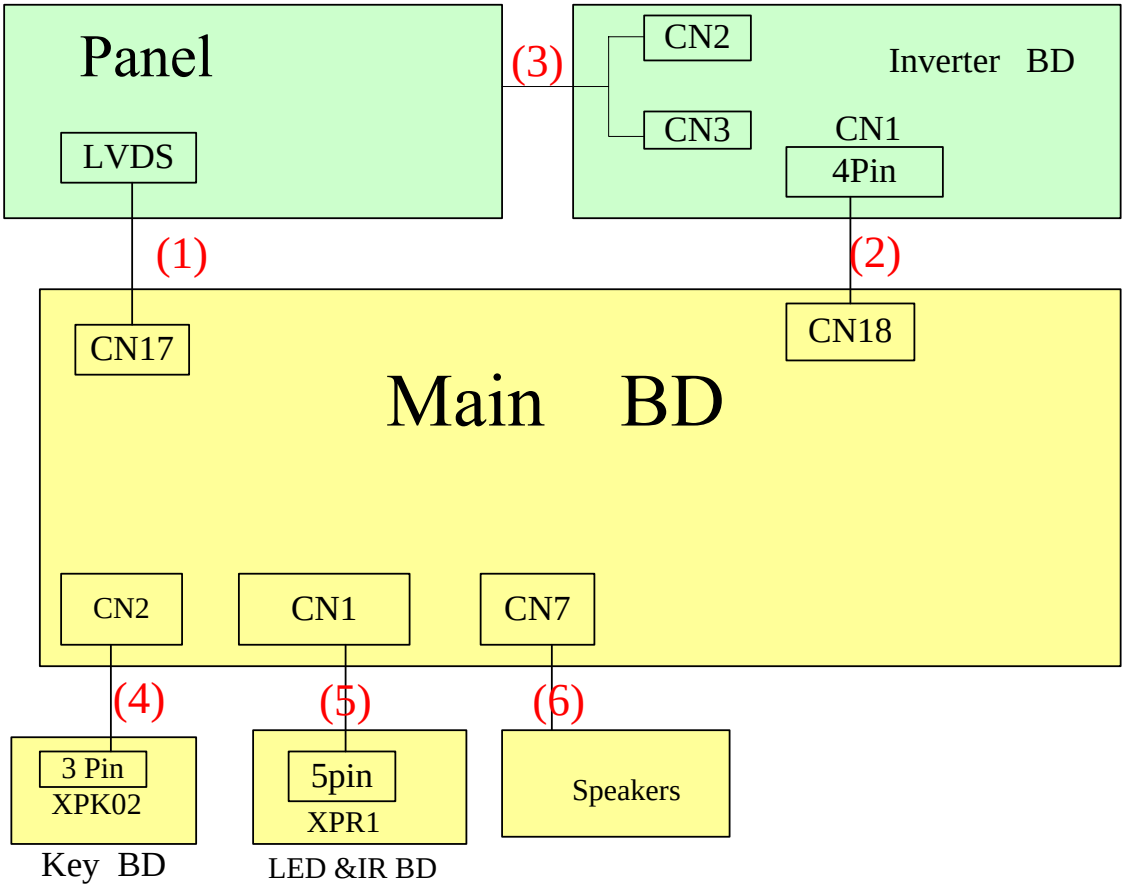


LCD19W57CA：



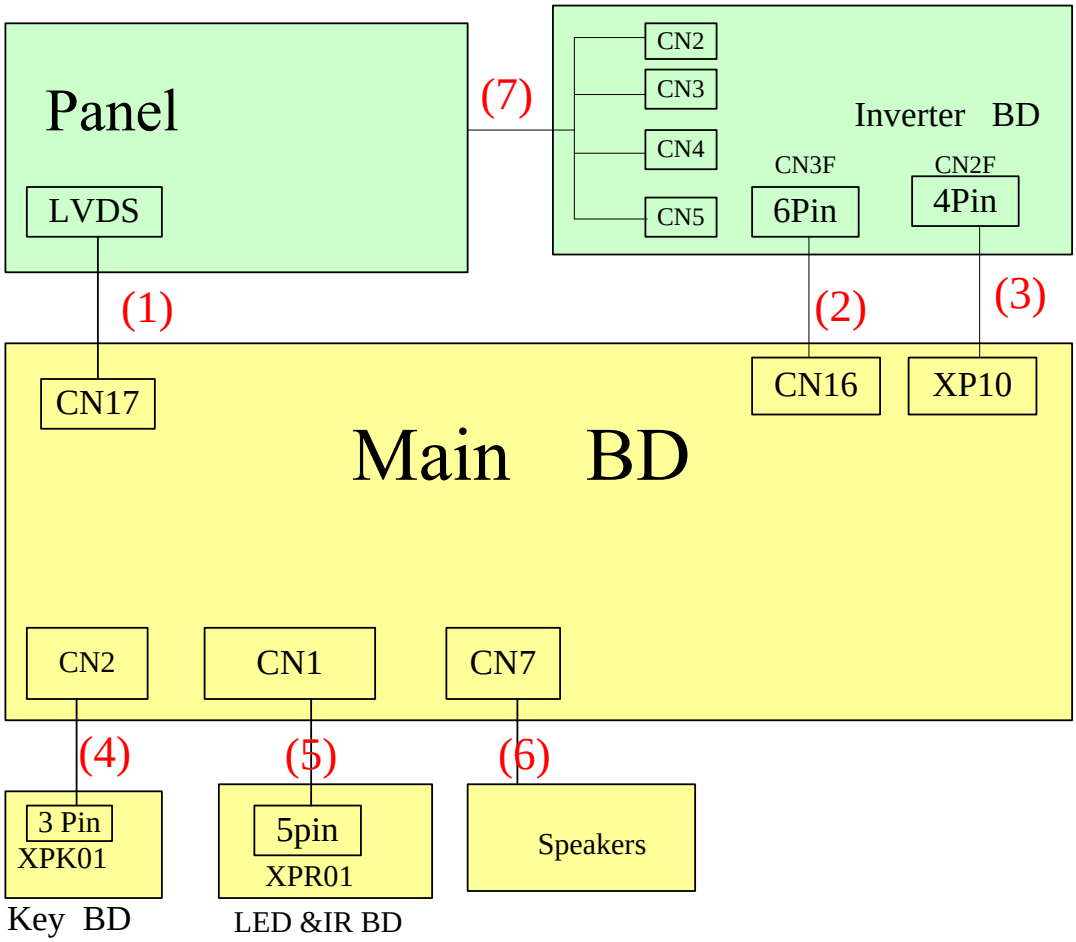
4.4 Wires and Cables Overall Wiring Diagrams

LCD15W57CA：



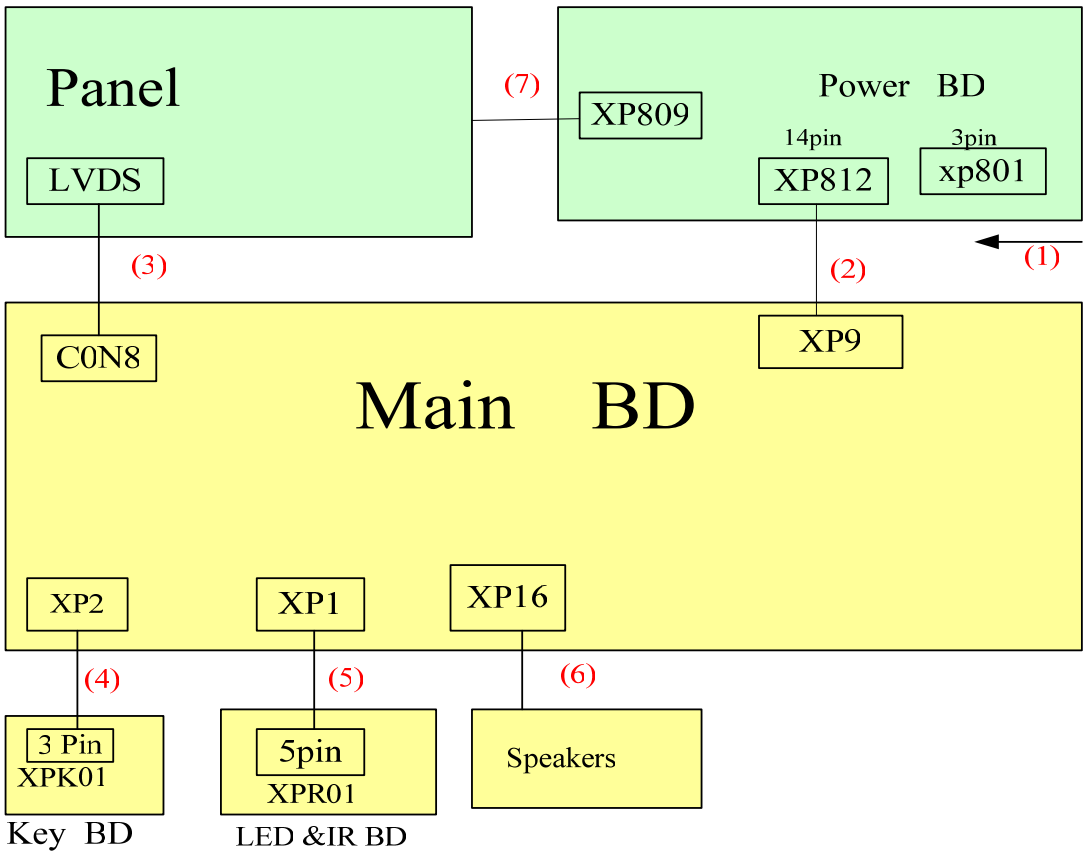
No	DESCRIPTION	SPECIFICATION	NOTE
1	LVDS signal	HX-0146\ROH	Main BD CN17<-->Panel
2	5V,12V power and communication between Main BD and Inverter BD	TJC10T-4Y-100\ROH	Inverter BD CN1<--> Main BD CN18
3	Back light power	The Connectors on the panel	Inverter BD CN2 、 CN3<--> Panel backlight port
4	Buttons	TJC10T-3Y-350\ROH	Main BD CN2<--> Key BD XPK02
5	IR	TJC10T-5Y-300\ROH	Main BD CN1<-->IR BD XPR1
6	Audio (input/output)	TJC3H-4Y-400-600\ROH	Main BD CN7<--> Speakers

LCD19W57CA：



No	DESCRIPTION	SPECIFICATION	NOTE
1	LVDS signal	FF-HX19-19\ROH	Main BD CN17<-->Panel
2	12V power and communication between Main BD and Inverter BD	TJC10T-6Y-150\ROH	Inverter BD CN3F<--> Main BD CN16
3	5V power and communication between Main BD and Inverter BD	TJC3T-4Y-200\ROH	Inverter BD CN2F<--> Main BD XP10
4	Buttons	TJC10T-3Y-400\ROH	Main BD CN2<--> Key BD XPK01
5	IR	TJC10T-5Y-1000\ROH	Main BD CN1<-->IR BD XPR01
6	Audio (input/output)	TJC3H-4Y-650-900\ROH	Main BD CN7<--> Speakers
7	Back light power	The Connectors on the panel	Inverter BD CN2、CN3、CN4、CN5<--> Panel backlight port

LCD32W57CA：



No	DESCRIPTION	SPECIPICATION	NOTE
1	Main Power	TJC2-3Y-250-2\ROH	Power Inlet-->Power BD XP801
2	5V,12V power and communication between Main BD and Power BD	TJC10T-14Y-150\ROH	Power BD XP812<-->Main BD XP9
3	LVDS signal	HX2-2x15KLB350P-CMO\ROH	Main BD C0N8<-->Panel
4	Buttons	TJC10T-3Y-650\ROH	Main BD XP2<--> Key BD XPK1
5	IR &Led	TJC10T-5Y-400\ROH	Main BD XP1<-->IR BD XPR01
6	Audio out put (R/L)	TJC3H-4Y-800-600\ROH	Main BD XP16<-->Speaker L/R
7	Back light power	HX-3006B550\ROH	Power BD XP809<-->Panel

5. Factory/Service OSD Menu and Adjustment

5.1 To enter the Factory OSD Menu

a. With factory RC (remote control)

1. Press “M” button and enter factory mode.
2. Press “Menu” button and enter factory OSD menu.
3. Press “CH+”/“CH-” button select the function menu, press “VOL+”/“VOL-” enter the selected function menu. Press “VOL+”/“VOL-” button adjust values in the menu.
4. Press “M” button exit factory mode in the factory OSD menu.

When TV outgoing factory,user can not enter factory OSD menu with Factory Remote

b. With user’s RC

1. Power TV On
2. Press Menu button and call up User OSD Menu
3. Select Sound-> Balance
4. When Balance value is “0”,Enter 0->5->3 ->2 in sequence.
   Note: If necessary, re-do number keys.
5. Factory OSD appears.
6. Press the standby button then AC turn off and restart the TV, which can exit factory OSD menu.

5.2 Factory OSD Menu

The Factory OSD Menu comprises Factory Menu and Design Menu .

5.2.1、Factory Menu

Factory Menu
White Balance
Auto Test
Auto Calibration
LOGO
OSD Language
Country
Option
Factory Init
Test Pattern
Version:

White Balance
R DRV
G DRV
B DRV
R CUT
G CUT
B CUT
BRIGHT_H
CONTRAST _H
BRIGHT_L
CONTRAST_L

Auto Calibration

Auto Color	
Color Temp.	Standard
RED COLOR	
GREEN COLOR	
BLUE COLOR	

LOGO

NULL	
HISENSE	
WELCOME	
EGYPT	OFF

Option

SOURCE	TV
BRIGHT 0	10
BRIGHT 50	100
BRIGHT 100	150
CONTRAST 0	60
CONTRAST 50	100
CONTRAST 100	150
TOFAC	M
HDMI Cable	Standard
DQS PHASE	3

Factory Init

QingDao
HuangDao
Guiyang
shunde
Hungary
France
Australia
CLEAR PROTECTLY
CLEAR UNPROTECTLY
Turkey

Test Pattern

BLUE

Version

Version:
Panel Type:
FLASH :

5.2.2、Design Menu

Design Menu

Picture Mode
Sound Mode
Sound Settings
Power Save
PIP Option
EMI
MOVESHARPNESS
LipSync

Picture Mode		
Standard	Brightness	50
	Contrast	50
	Colour	50
Bright	Brightness	60
	Contrast	60
	Colour	55
Soft	Brightness	45
	Contrast	45
	Colour	45

Sound Mode		
Standard	120Hz	12
	500Hz	10
	1.5KHz	11
	5KHz	8
	10KHz	15
Music	120Hz	19
	500Hz	11
	1.5KHz	12
	5KHz	14
	10KHz	20
Speech	120Hz	4
	500Hz	10
	1.5KHz	12
	5KHz	7
	10KHz	5

Sound Settings	
VOLUME 0	128
VOLUME 1	79
VOLUME 20	27
VOLUME 40	23
VOLUME 100	8
TVPRE SCALER	6
VOLUME SCALER	0

Note：

The above “Factory/Service OSD Menu” are reference only, please refer to the actual units to determine the appearances.

6. Software Upgrading

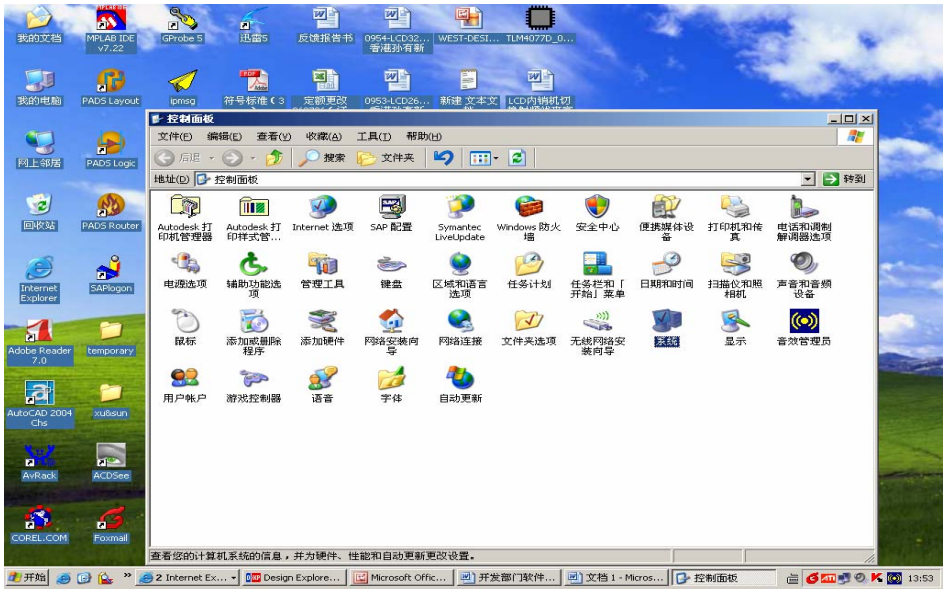
The software is upgraded by a burning tool- ISP_TOOL4.0.9, which can burn the program file “*. bin ” to the main board of the unit

6.1 Get ready for upgrading

6.1.1 Install the ISP_TOOL4.0.9-------only for the first time update.

1、 Port Setting：

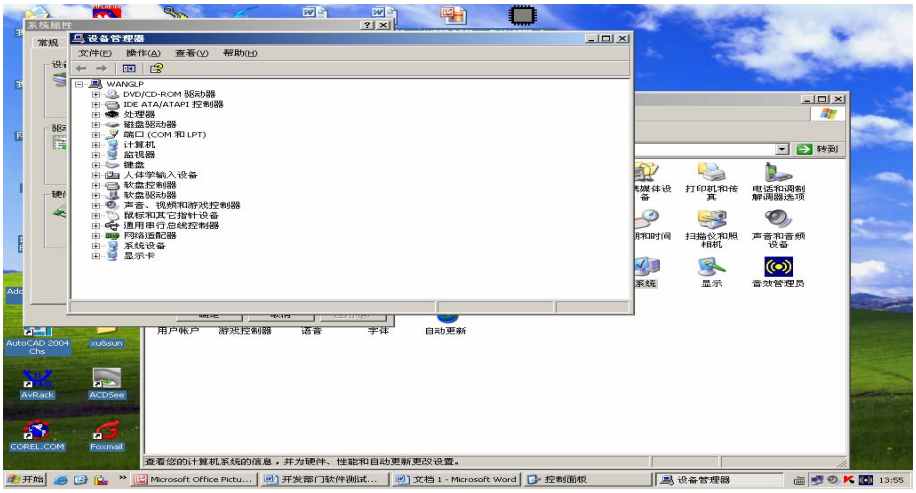
Choose “system”option from the “control panel”



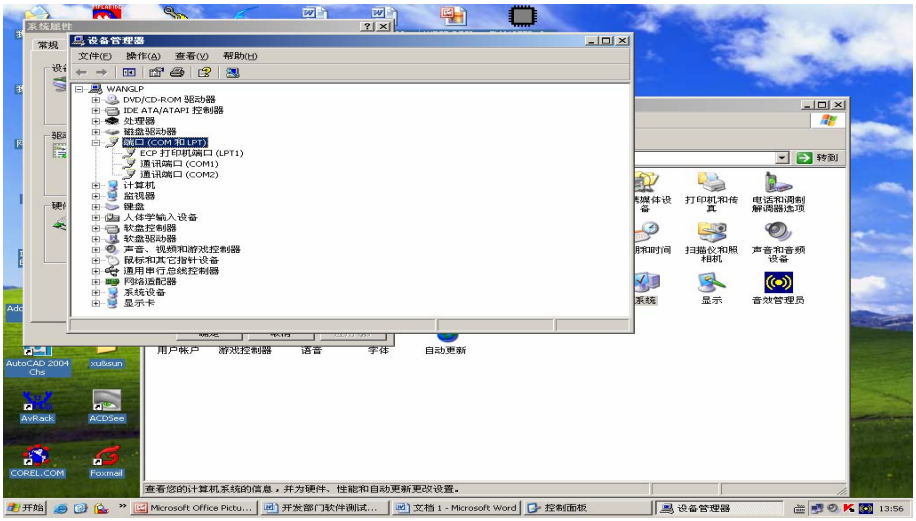
Click the “system” icon as the following

Choose the “hardware” option from the dialog window

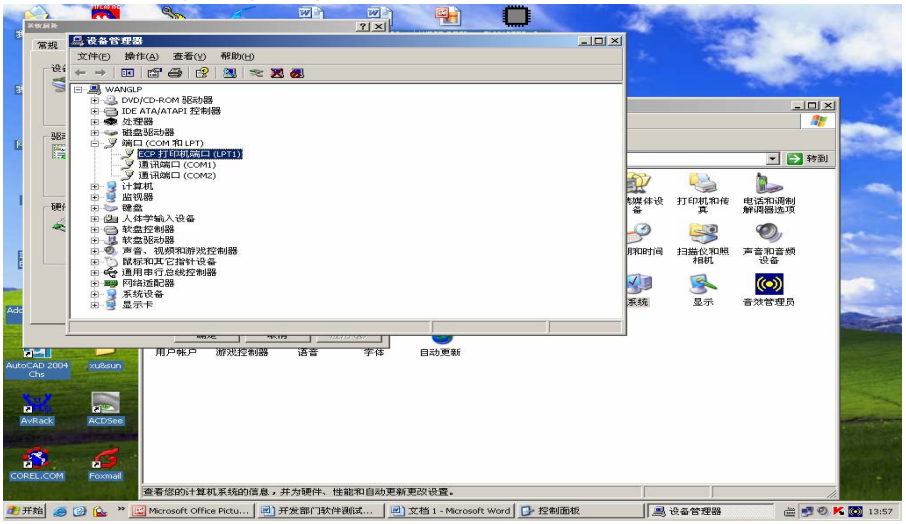
Click“device management” icon as the following



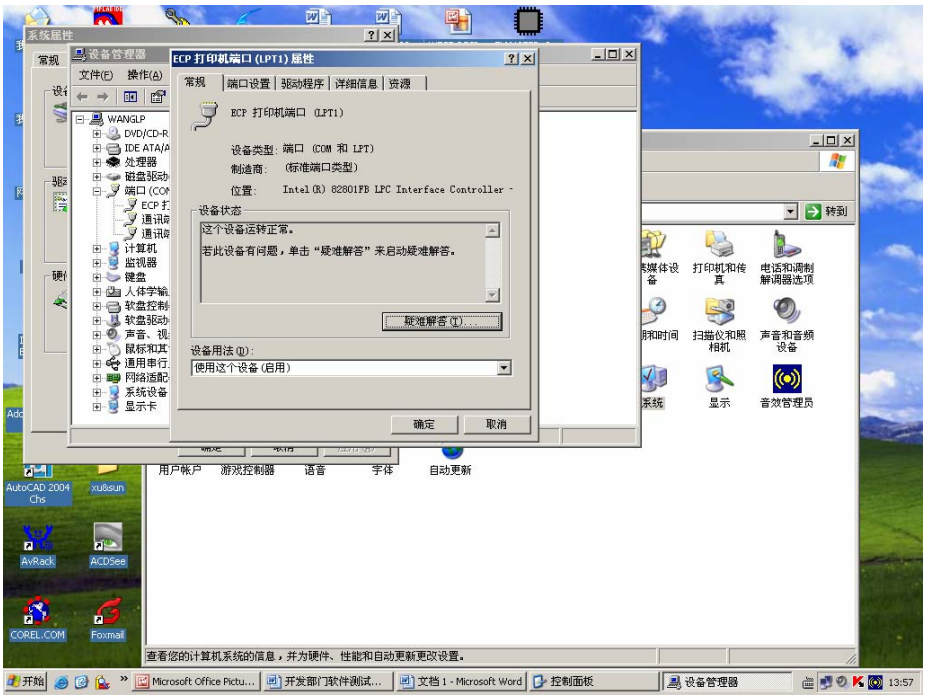
Choose the port (COM and LPT1)



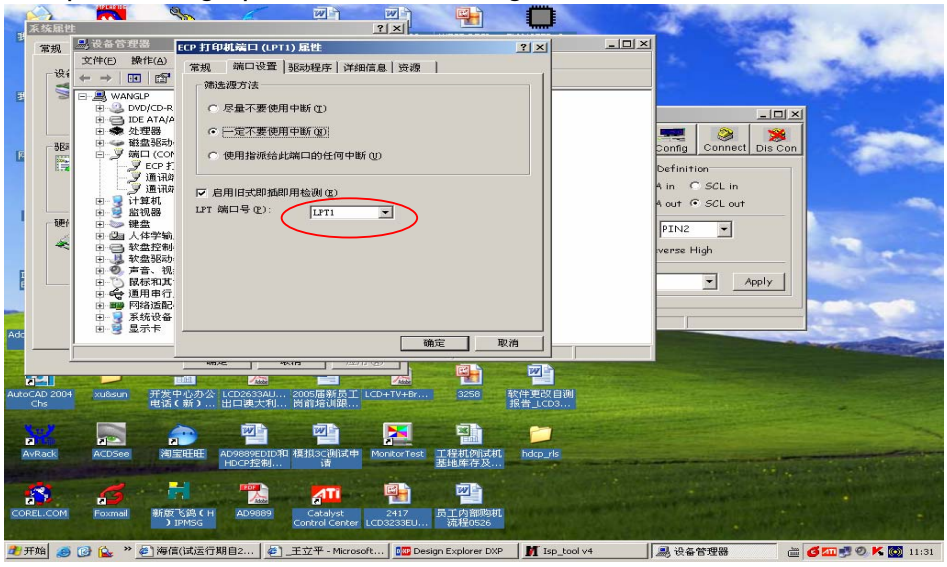
Choose the ECP print port (LPT1）



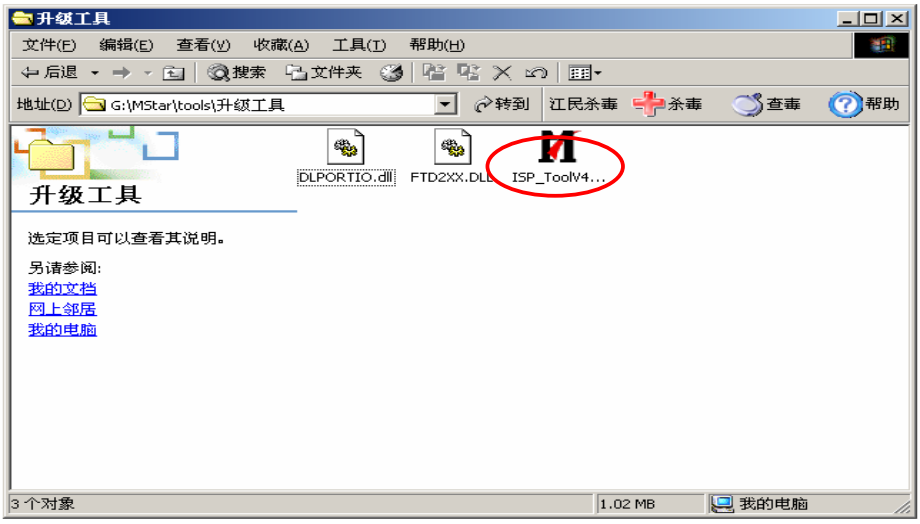
Click the port of print （LPT1）as the following



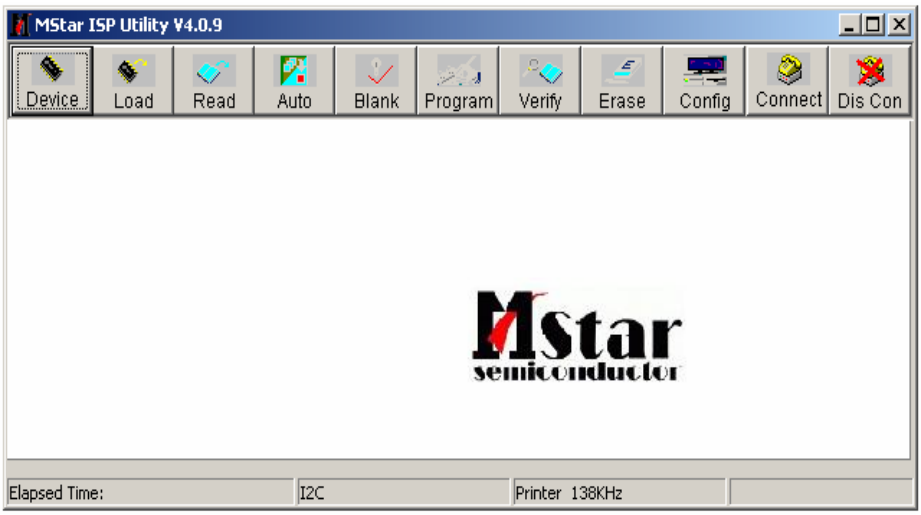
Choose “port setting”option as the following



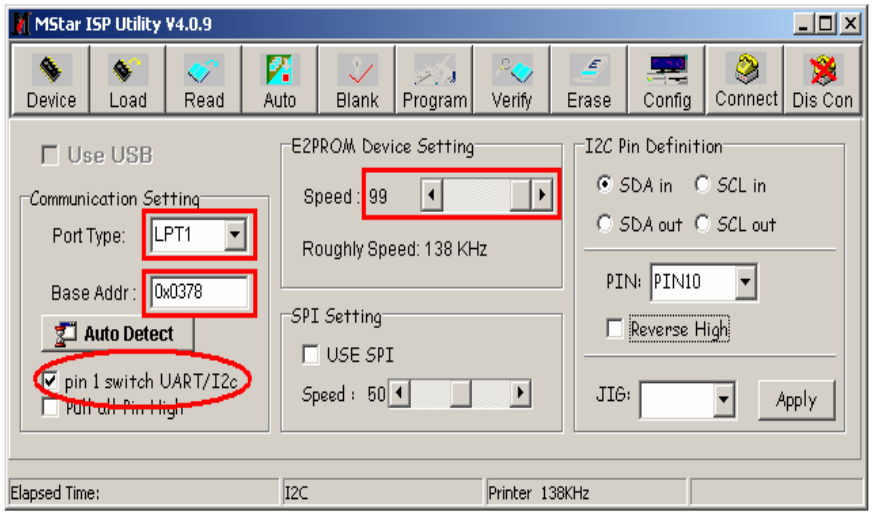
2、 Find the folder where the ISP_TOOL4.0.9 lies in.
There are three folders/files in this folder together.
DLPORTIO.dll and FTD2XX.DLL must be in the same folder



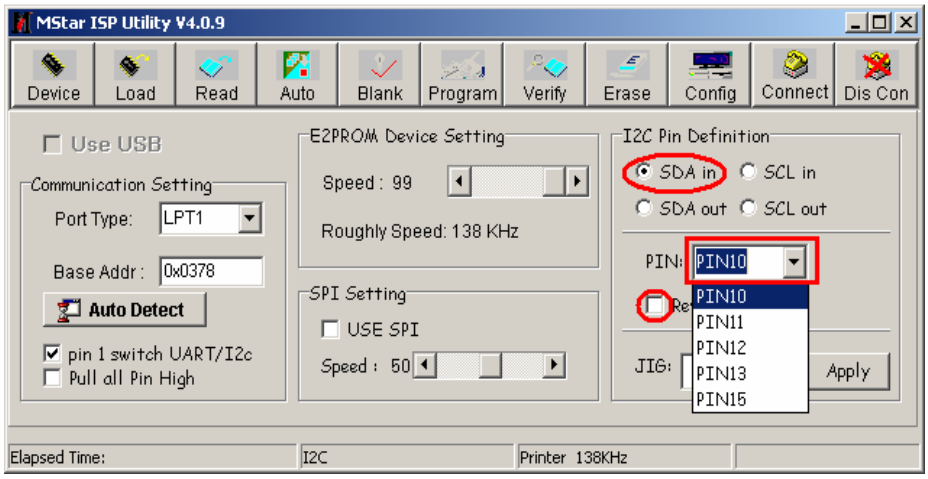
Double click the ISP_TOOL4.0.9 icon, and then a dialog window will show as below.



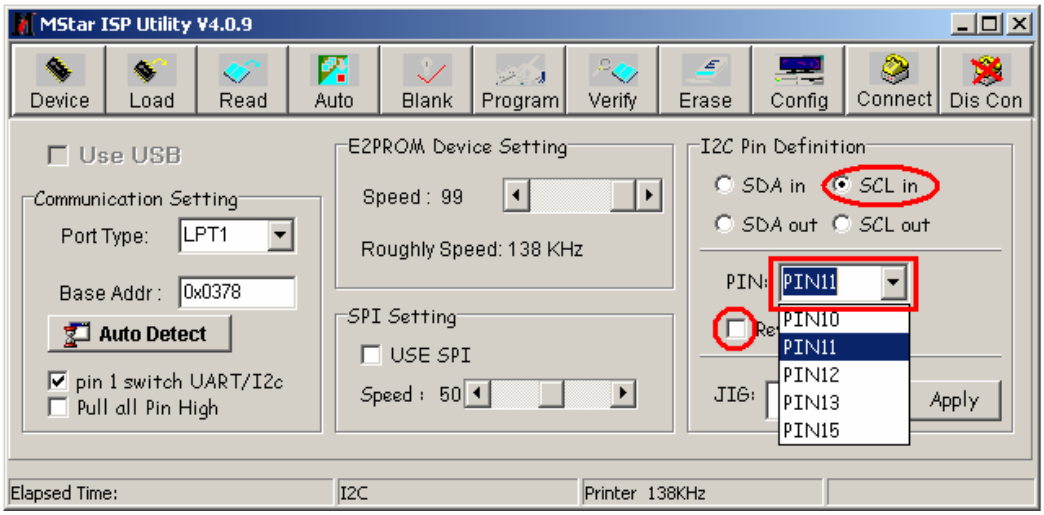
Click the **Config** button. And then a dialog window will show as below.
Port Type setting is LPT1
Base Addr setting is 0x378
Draw ✔ on the front of “pin 1 switch UART/I2c”
Speed setting is 99
As following



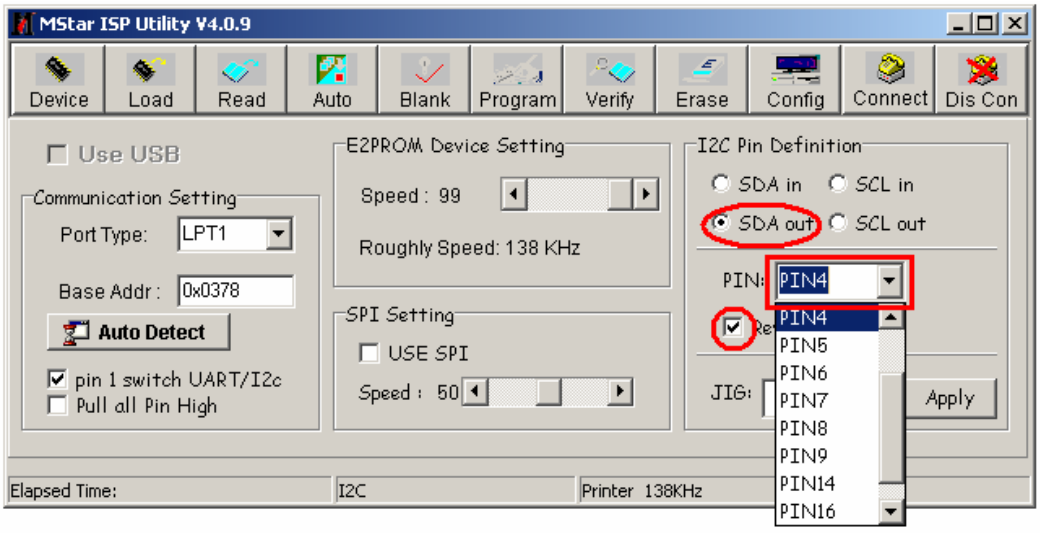
Choose“SDA in”and setting “PIN” is “PIN10”。
Notes:
Do not draw ✔ on the front of “Reverse High”。
As following



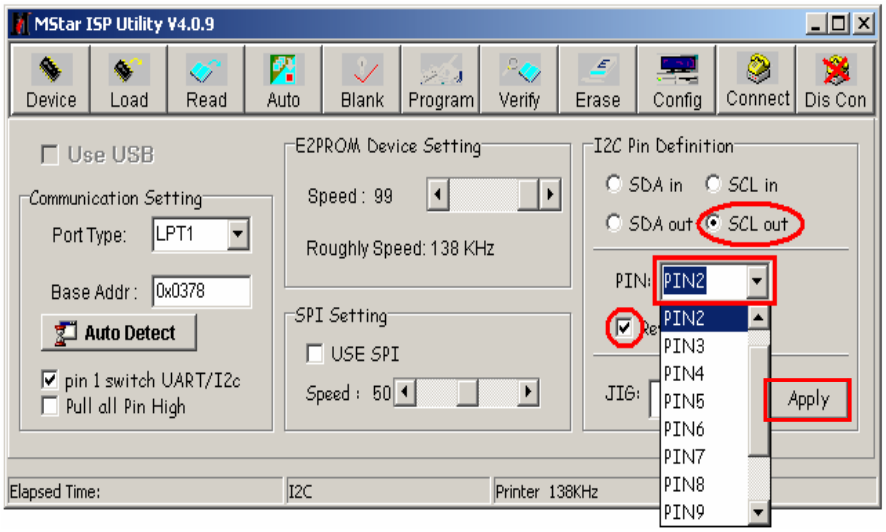
Choose “SCL in”and setting “PIN” is “PIN11”。
Notes:
Do not draw ✔ on the front of “Reverse High”。
As following



Choose “SDA out”and setting “PIN” is “PIN4”
Notes:
Draw ✔ on the front of “Reverse High”。
As following。



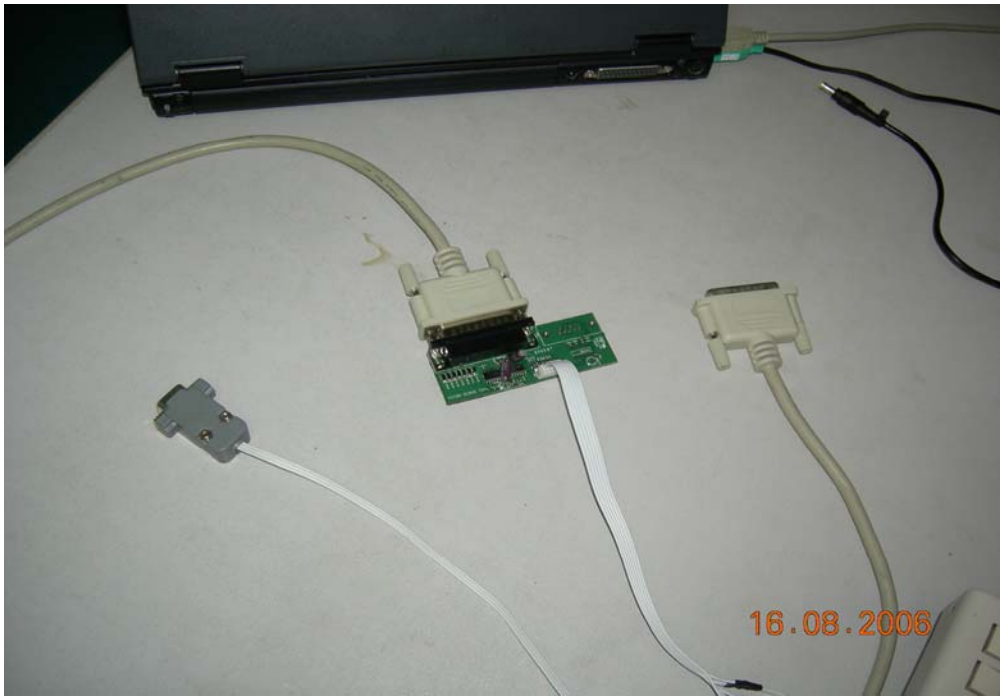
Choose “SCL out”and setting “PIN” is “PIN2”
Notes:
Draw ✔ on the front of “Reverse High”
As following



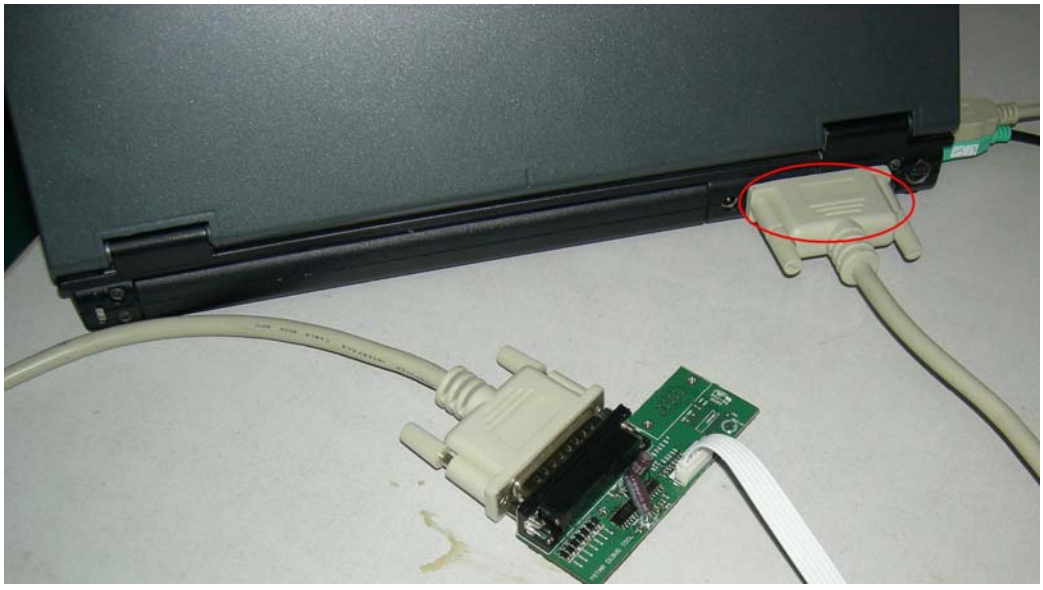
After having finished all above, clicking the “Apply ”button to complete the configuration。

6.1.2 Hardware connecting

You can update the software through a special tool (as following)

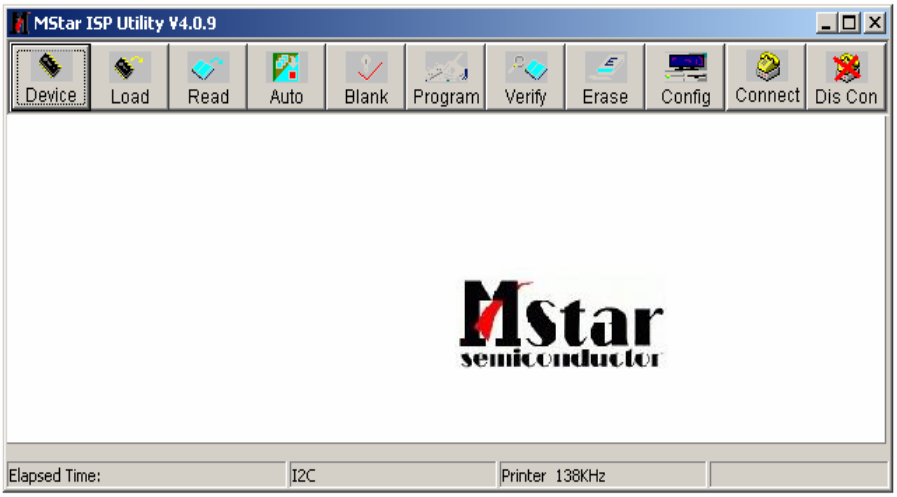


Connect the Debug board to the TV use VGA interface, the other parallel port to the computer, just as the following。

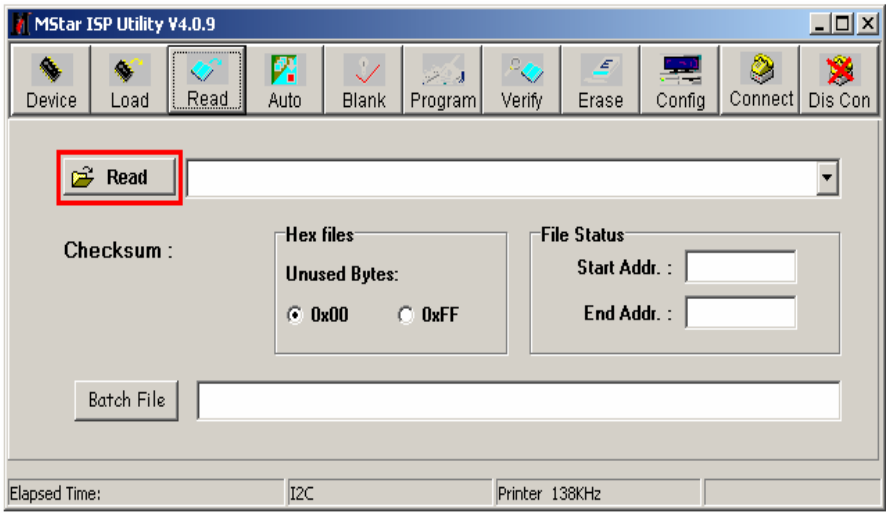


6.2 Upgrading with the ISP_TOOL4.0.9

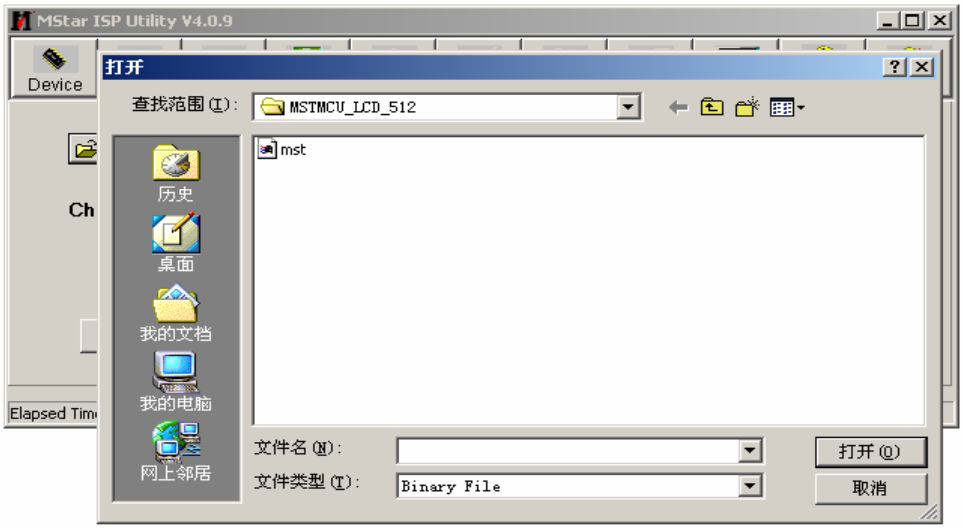
6.2.1 Double click the ISP_TOOL4.0.9 icon and a dialog window will show as following。

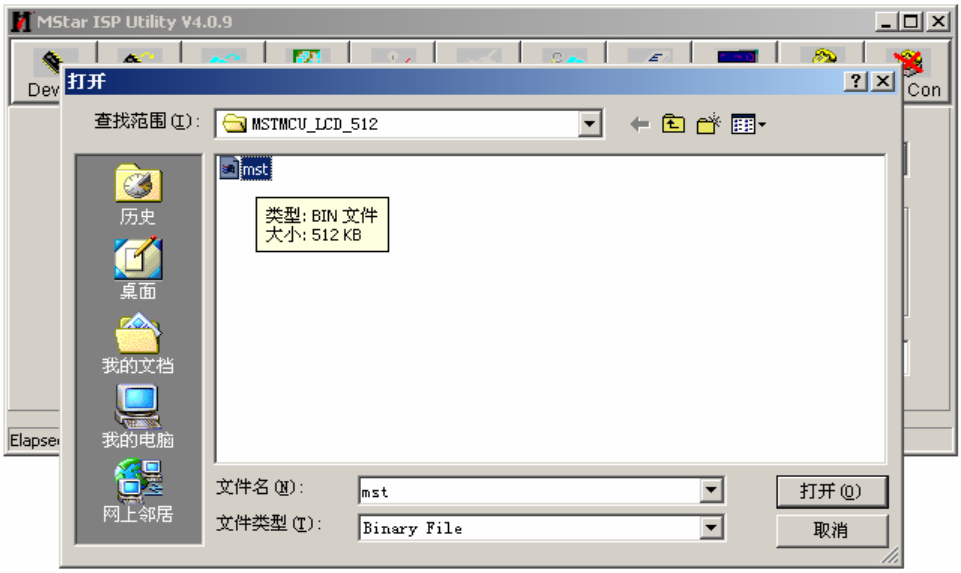


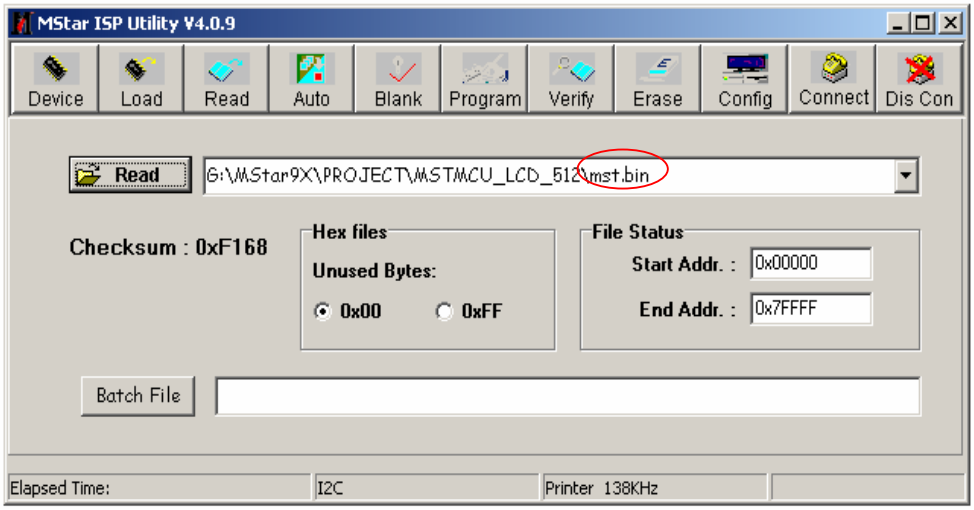
Click the“Read ”button。



Choose the update file from the folder。

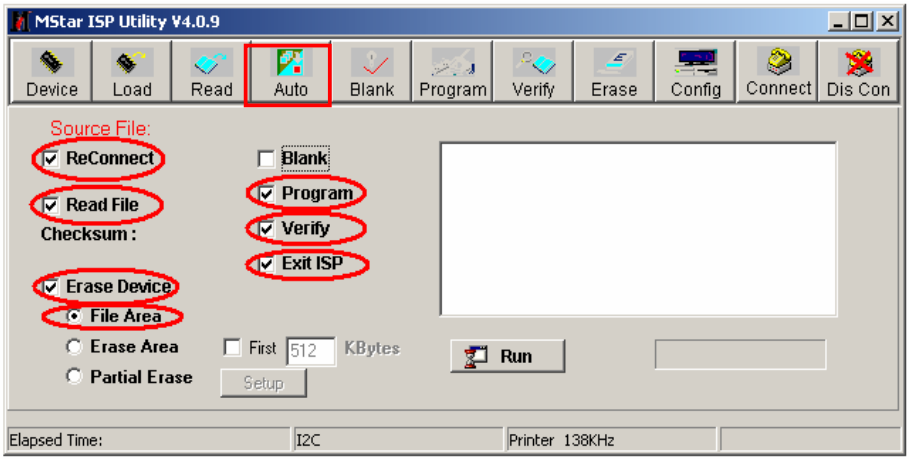




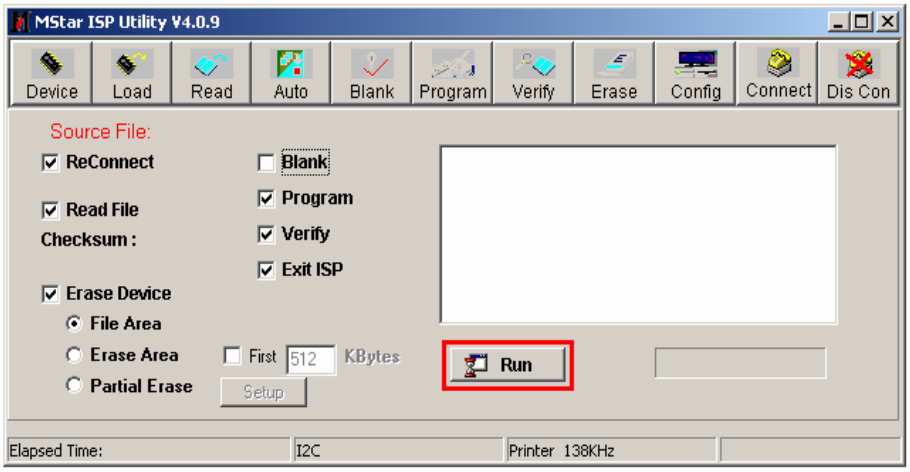


The update file has been chosen successfully。

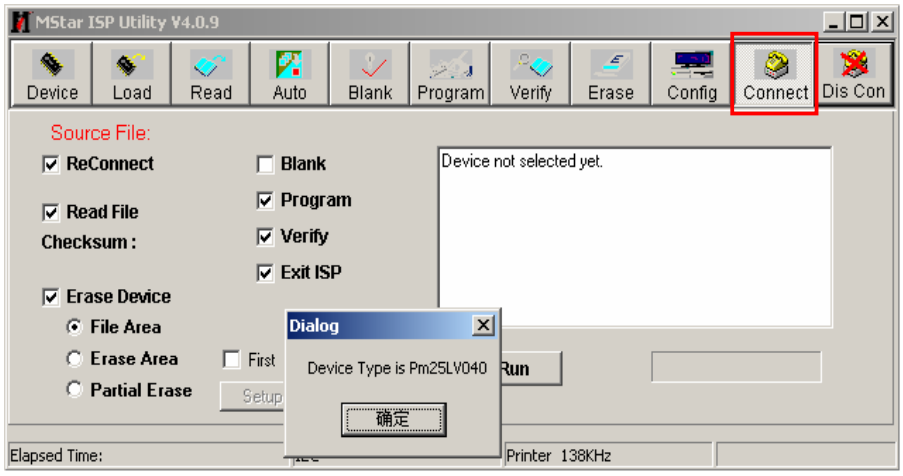
Click the“Auto”button and choose parameters as following。

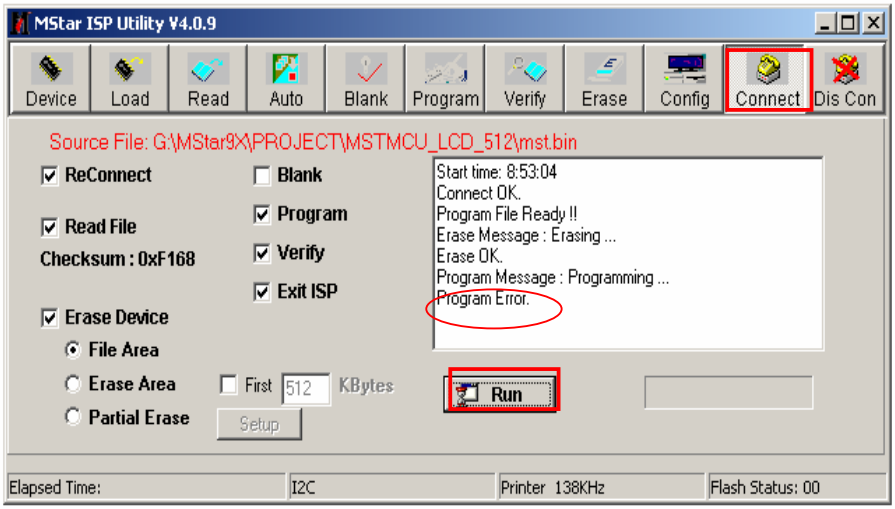


Click the“Run”button

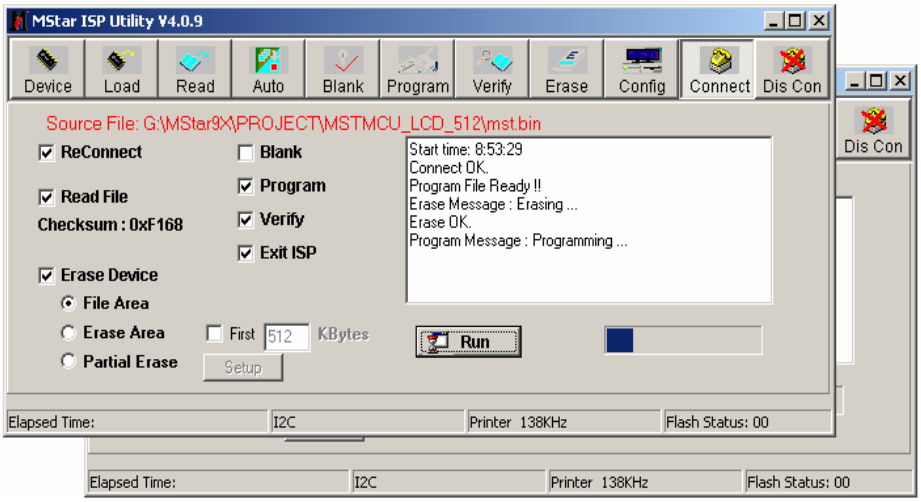


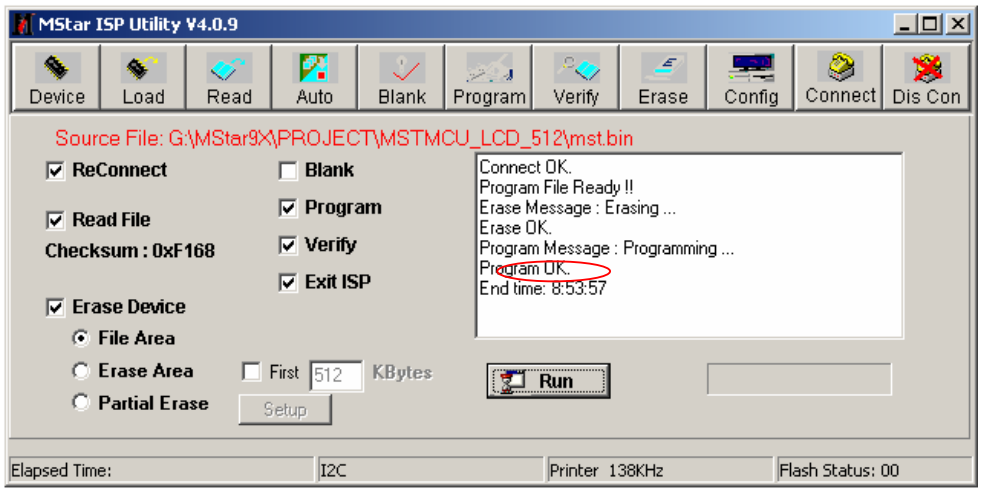
Click the“connect”button,then show a dialog box as following。





If show above then click the“Run”button again and again，till show the following dialog window。





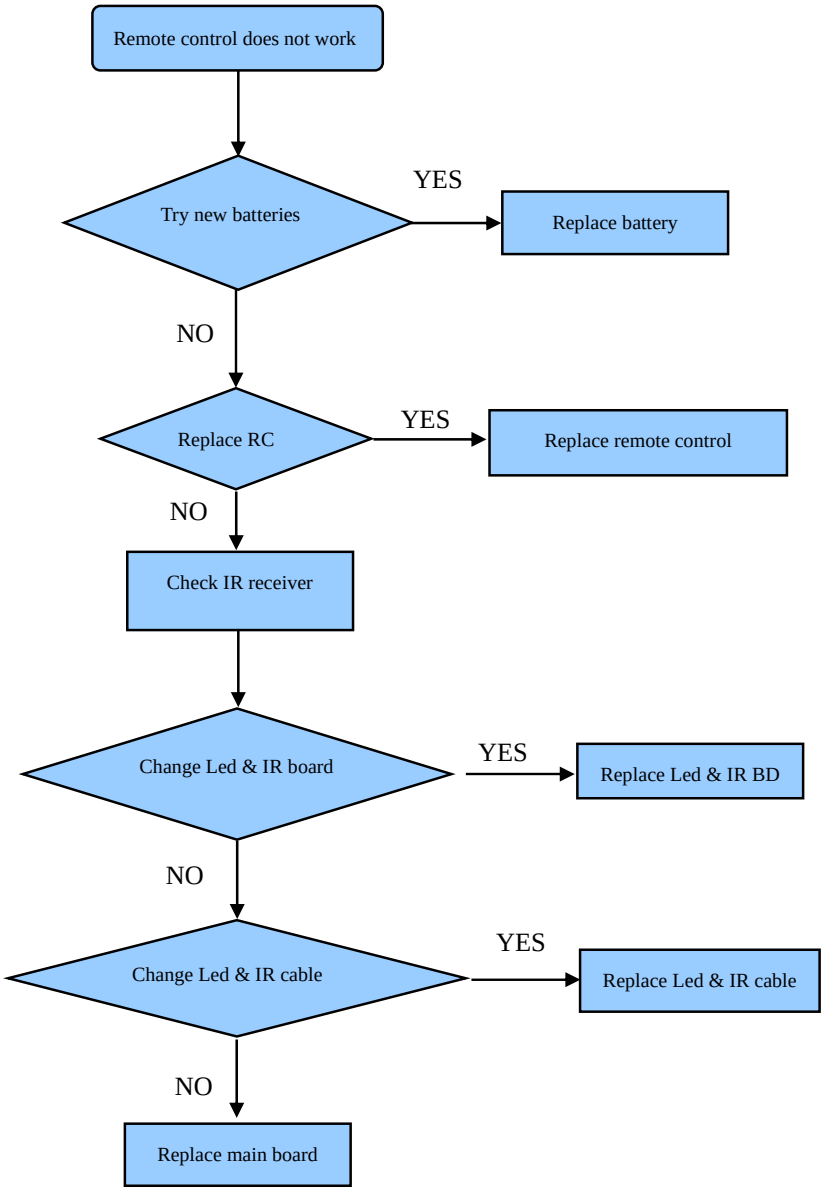
The above appears on the screen-the word “program ok”shows in the information displaying window,indicating upgrading is over。

6.2.2 After the update is over. Must Confirm the software Version in the Version Menu. If the update is successful, enter Factory Init Menu and select “Clear Unprotectly”

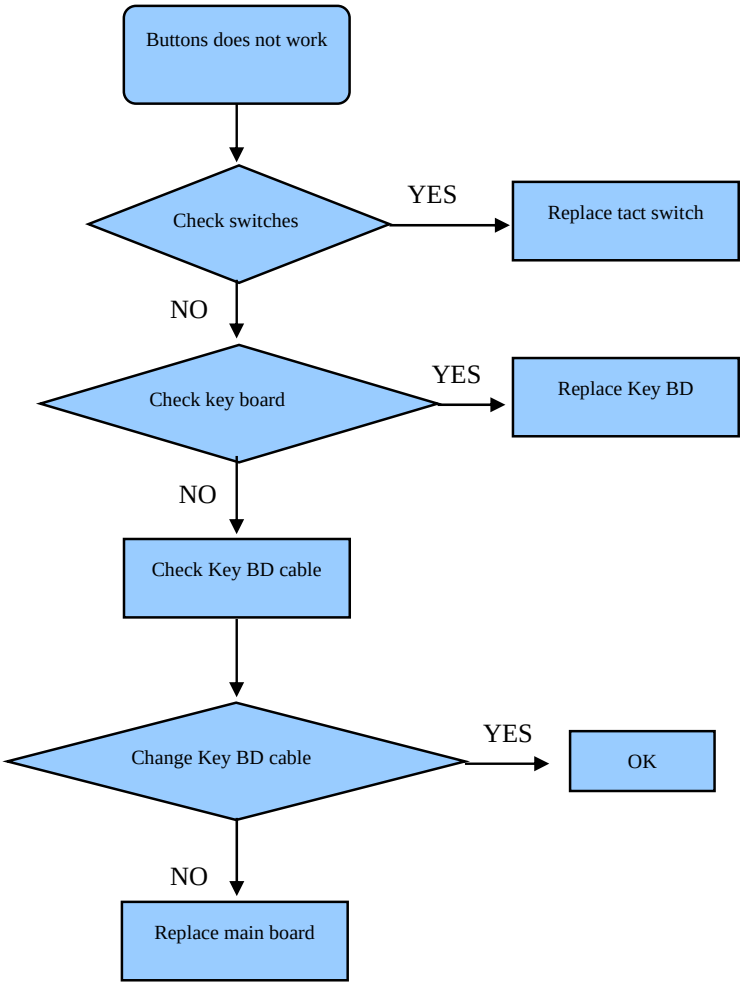
a. Press VOL+ button to clear the EEPROM data.
b. When the “Clear Unprotectly ” button becomes white, turn off the power.
c. Restart the TV.

7. Troubleshooting

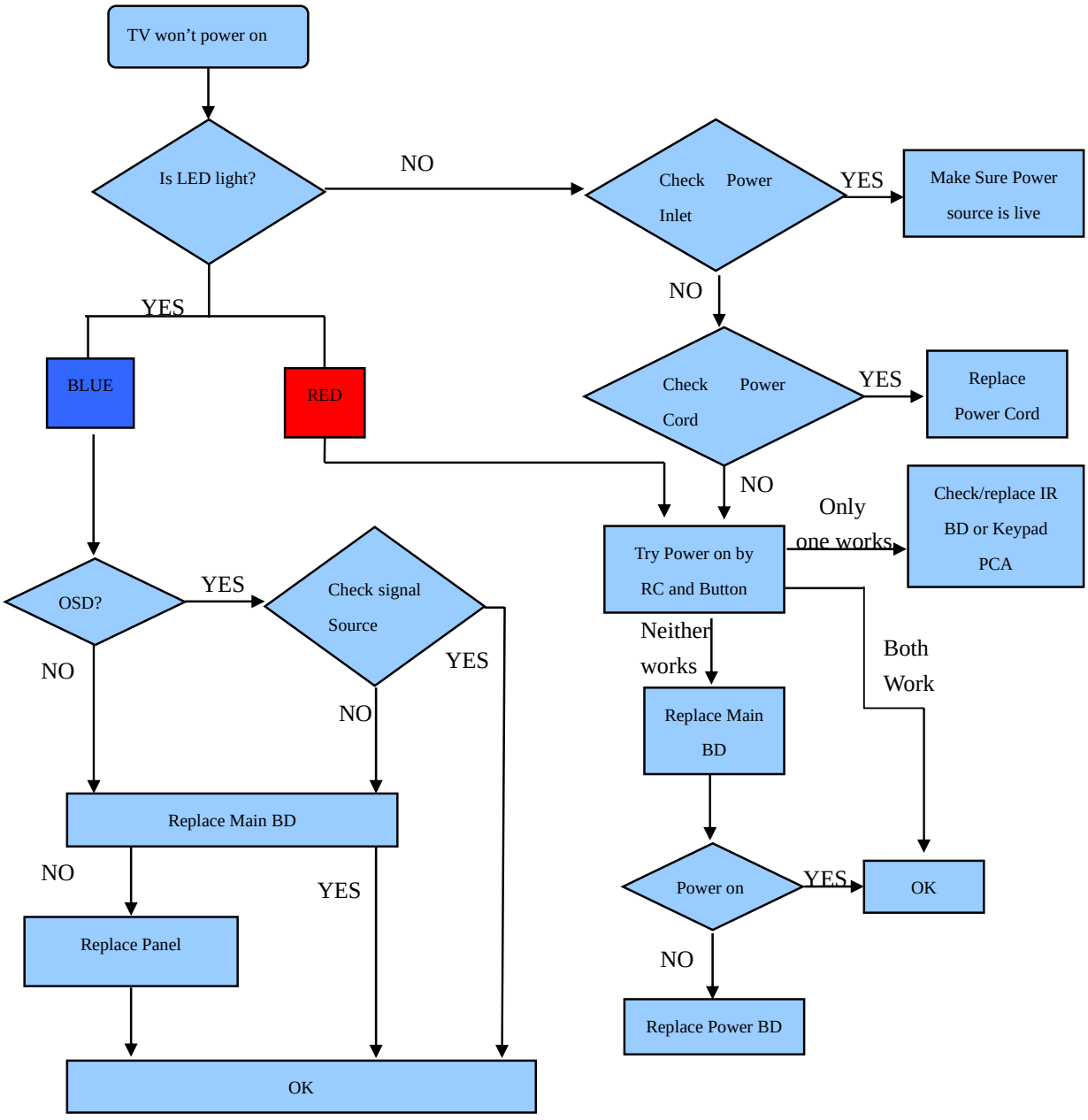
7.1 Troubleshooting for Remote Control



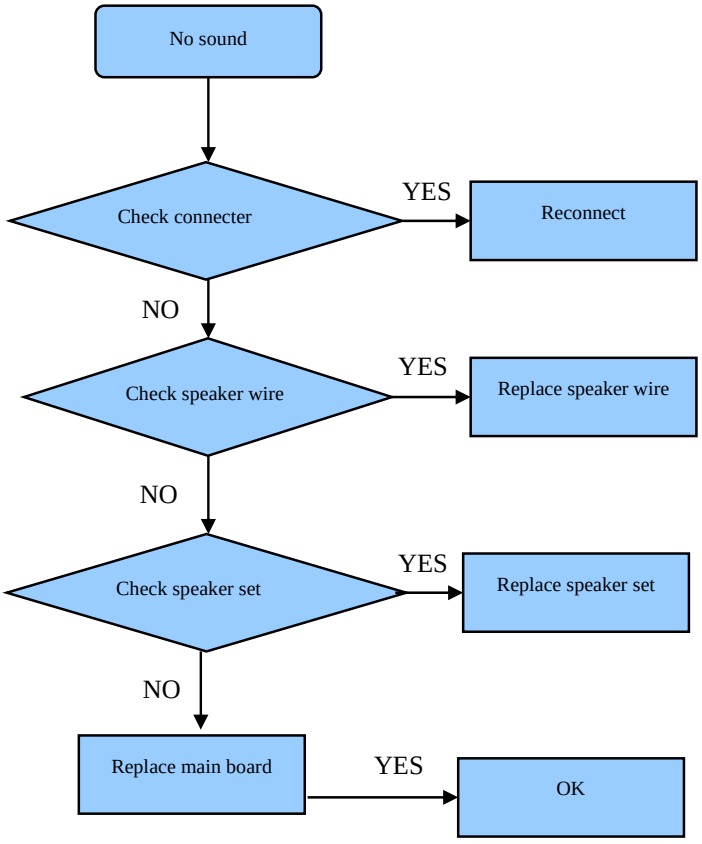
7.2 Troubleshooting for Function Key



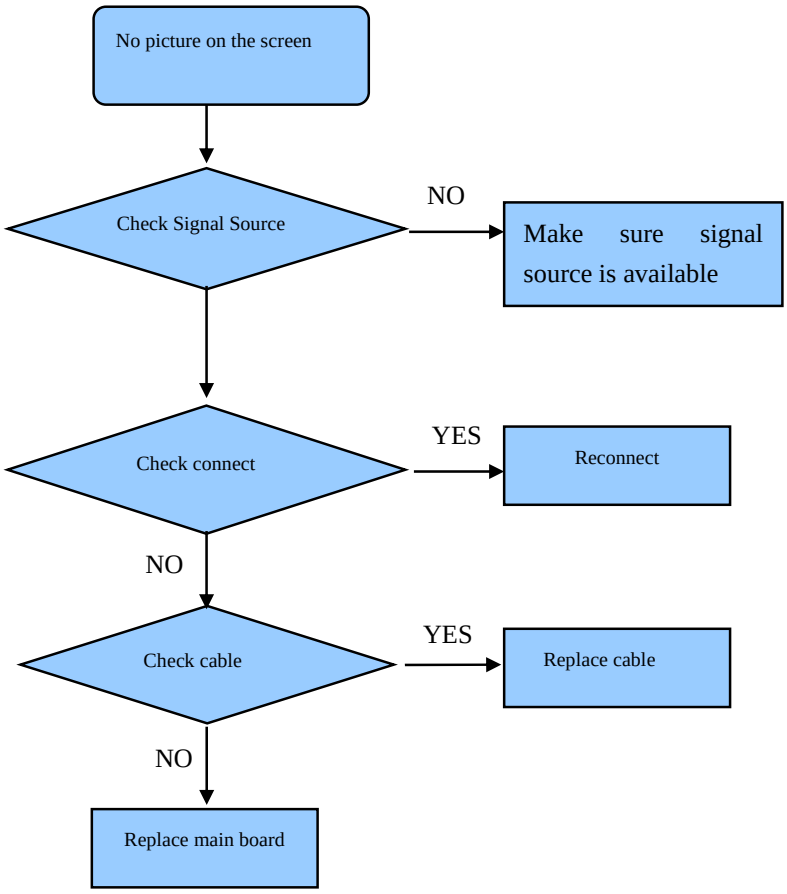
7.3 TV won’t Power On



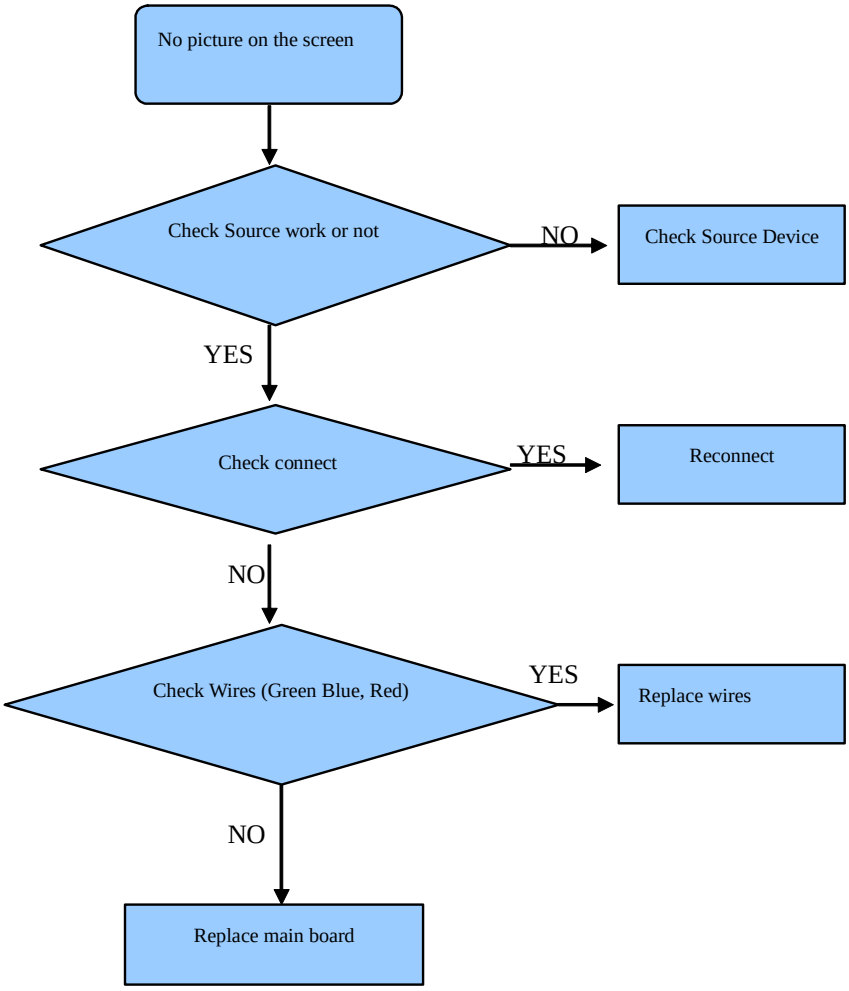
7.4 Troubleshooting for Audio



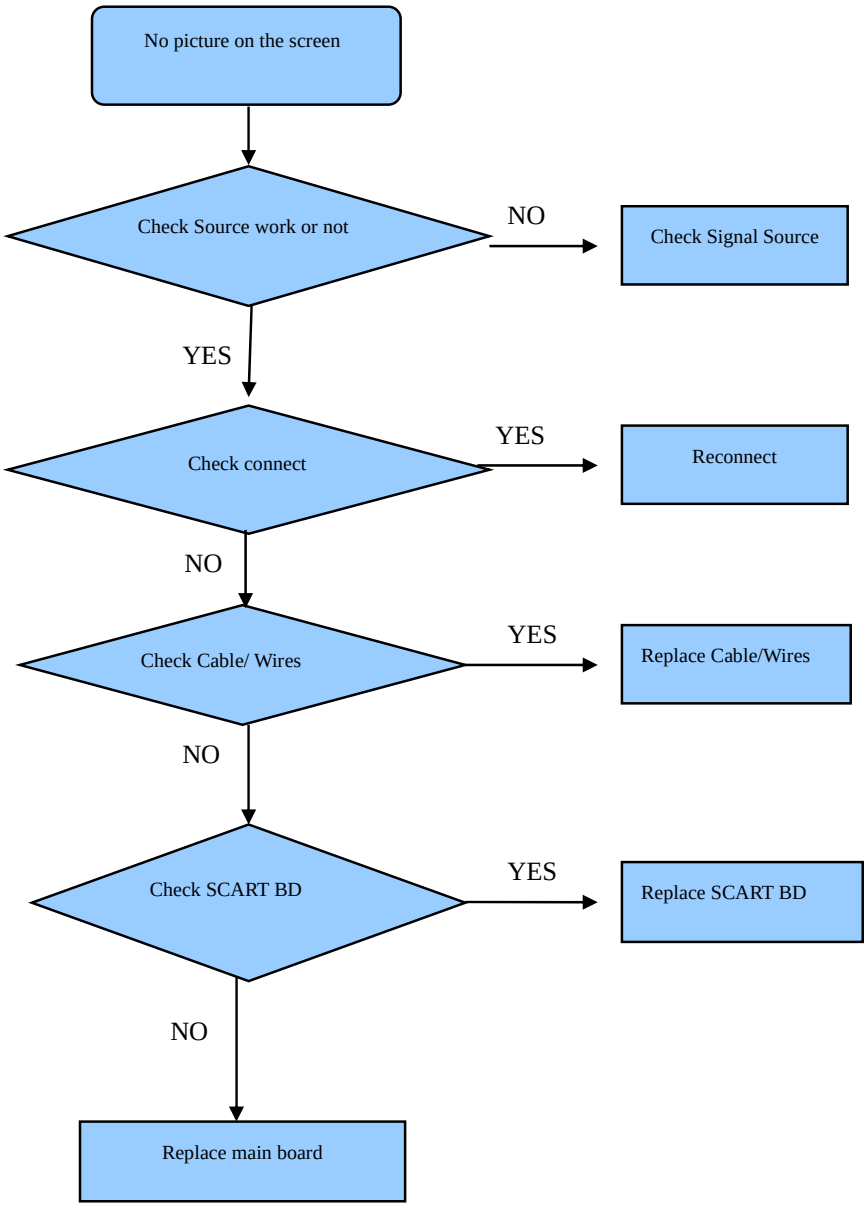
7.5 Troubleshooting for TV/VGA/HDMI input



7.6 Troubleshooting for YPbPr input



7.7 Troubleshooting for Video/S-Video/ SCART input



8. Explode View and explode BOM List

Explode BOM List:

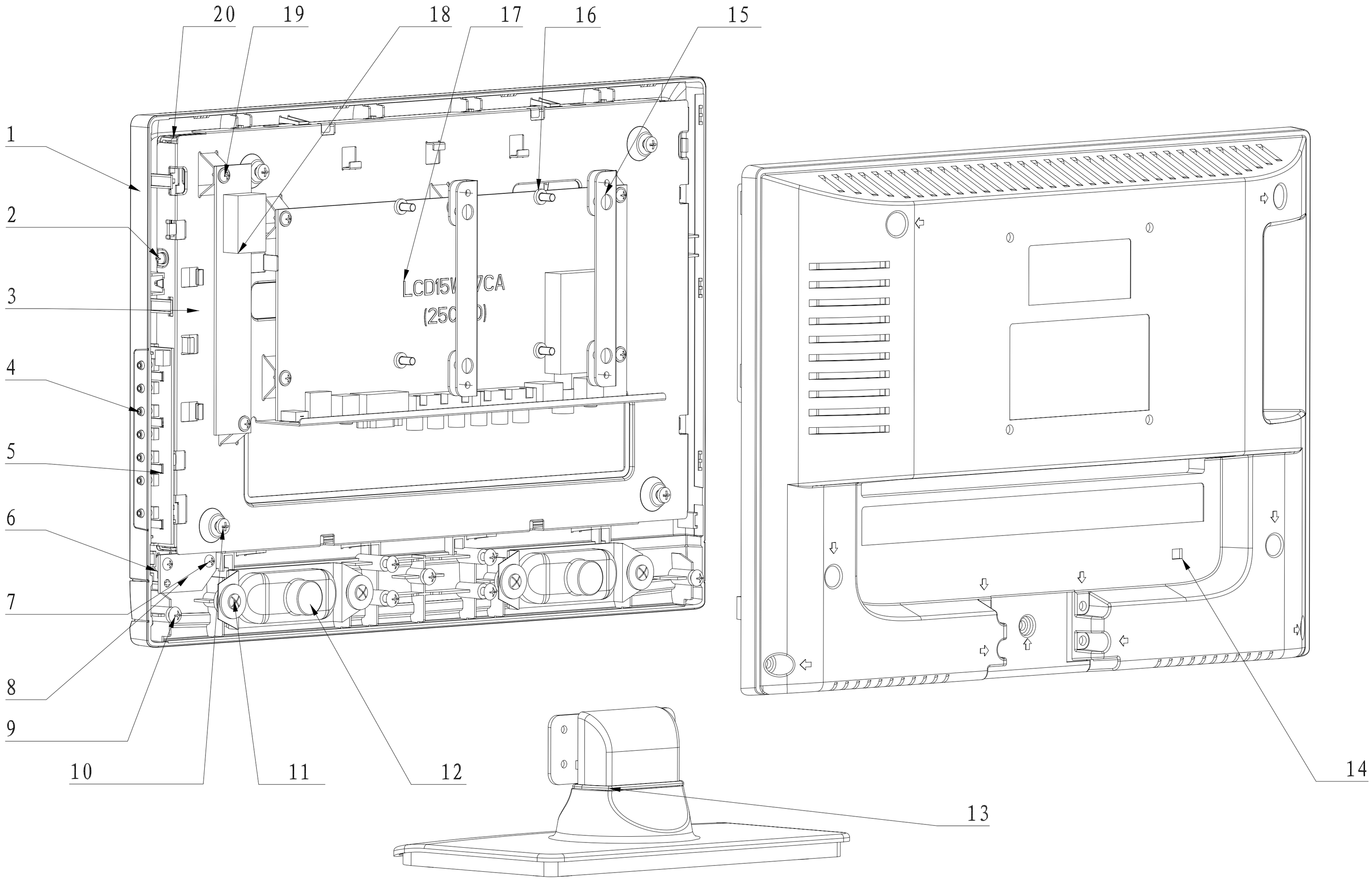
LCD15W57CA				
No.	Part Name	Qty.	Code No.	Remark
1	Front cover	1	RSAG8.074.577	
2	Screw	4	SJ2836-87 M3×6	Zincification
3	Bracket	1	RSAG8.038.1447	
4	Key	1	RSAG8.335.070	
5	Key board unit	1	RSAG2.908.1168-2	
6	Lens led	1	RSAG8.640.069	
7	Screw	2	SJ2825-87 ST3×12C	Zincification
8	IR Board Unit	1	RSAG2.908.1169-1	
9	Screw	7	SJ2824-87 ST4×14F	Black
10	Screw	4	SJ2836-87 M3×6	Zincification
11	Screw	4	SJ2838-87 ST4×12F.II	Zincification
12	Speaker	2	YDT37E-3W8R-F	
13	Pedestal	1	WG6.121.070	
14	Back cover	1	RSAG8.074.578	
15	Bracket	2	RSAG8.038.1201	
16	Screw	4	SJ2824-87 ST4×8F	Black
17	Main Board Unit	1	RSAG2.908.1294-2	
18	Inverter board	1	JSY-150202A	
19	Screw	7	SJ2831-87 ST3×8	
20	LCD Panel	1	M156B1-L01	

LCD19W57CA				
No.	Part Name	Qty.	Code No.	Remark
1	Pedestal	1	WG6.121.056	
2	Screw	3	SJ2824-87 ST4×16C	Black
3	Screw	4	SJ2824-87 ST4×16C	Black
4	Screw	4	GB/T818-2000 M4×8	Black
5	Back cover	1	RSAG8.074.486	
6	Bracket	2	RSAG8.038.1201	
7	Screw	4	SJ2824-87 ST4×8F	Black
8	Bracket	1	RSAG8.038.1351	
9	Main Board Unit	1	RSAG2.908.1294-1	
10	Screw	5	SJ2831-87 ST3×8	Zincification
11	Bracket unit	1	RSAG6.150.476	
12	Screw	4	SJ2836-87 M3×6	Zincification
13	Power Board Unit	1	JSI-190411BROHJK	
14	LCD Panel	1	HT190WG1-101JK	
15	Front cover	1	RSAG8.074.506	
16	Key	1	RSAG8.335.0732	
17	Key board unit	1	RSAG2.908.1168-2	
18	Lens led	1	RSAG8.640.062	
19	IR Board Unit	1	RSAG2.908.1169	
20	Screw	2	SJ2831-87 ST3×8C	Zincification
21	Speaker	2	YDT37E-3W8R-F	
22	Screw	4	SJ2838-87 ST4×16C.II	Zincification
23	Screw	3	SJ2825-87 ST3×12C	Black

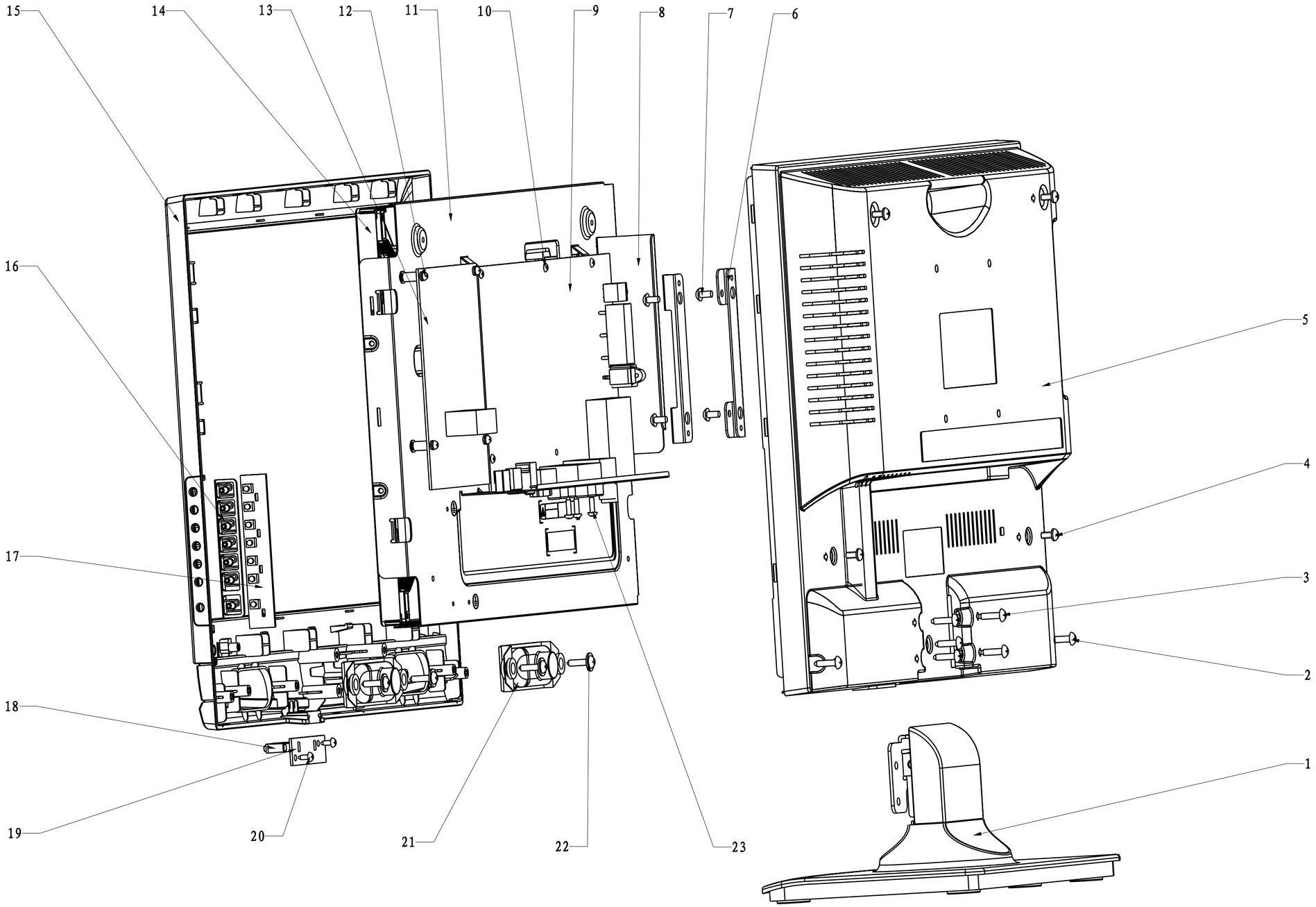
LCD32W57CA				
No.	Part Name	1	Code No.	Remark
1	Front cover	1	RSAG8.074.527	
2	Bracket	1	RSAG8.634.047	Black
3	Bracket	1	RSAG8.078.481	Black
4	Key	1	RSAG8.335.067	Black
5	Key board unit	1	RSAG2.908.1088-1	
6	Bracket	7	RSAG8.048.078	
7	Screw	4	SJ2838-87 ST4X16C.II	Zincification
8	Speaker	2	YDT5016-10W8R-A\ROH	
9	Pedestal	1	WG6.121.054	Black
10	Screw	4	GB818/2000-T M5X12	Black
11	Bracket	1	RSAG8.038.1268\ROH	Black
12	Electrical outlet	1	HF-301\ROH	
13	Bracket unit	1	RSAG4.114.047	
14	Screw	25	SJ2824-87 ST4X12F	Black
15	Scutcheon	1	RSAG8.804.3289	
16	Scutcheon	1	RSAG8.804.3234	
17	Rating label	1	RSAG8.807.3715	
18	Back cover	1	RSAG8.074.542	Black
19	Terminal bracket	1	RSAG8.081.382	Black
20	Main board unit	1	RSAG2.908.1295-2	
21	Power board unit	1	RSAG2.908.916-4	
22	Screw	2	SJ2825-87 ST3X10C	Black
23	IR Board Unit	1	RSAG2.908.1260-2	
24	Lens led	1	RSAG8.640.065	
25	LCD PANEL	1	V315B1-L01\JK	

9. Schematic circuit diagram

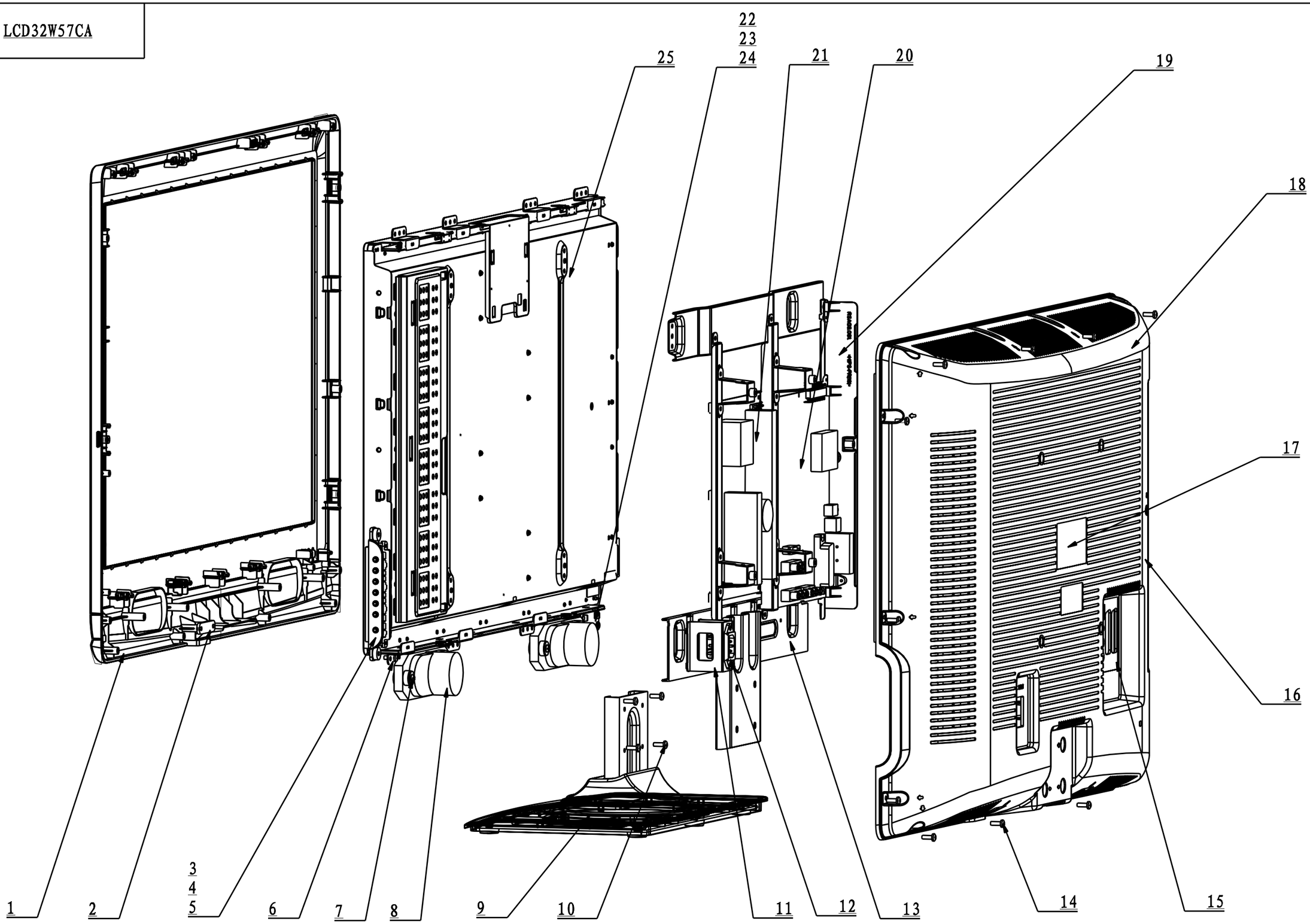
LCD15W57CA



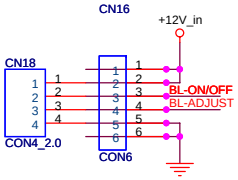
LCD19W57CA



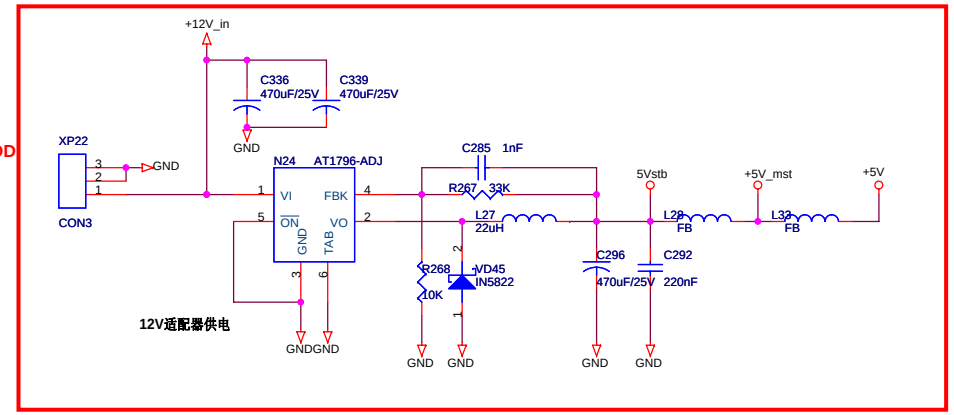
LCD32W57CA

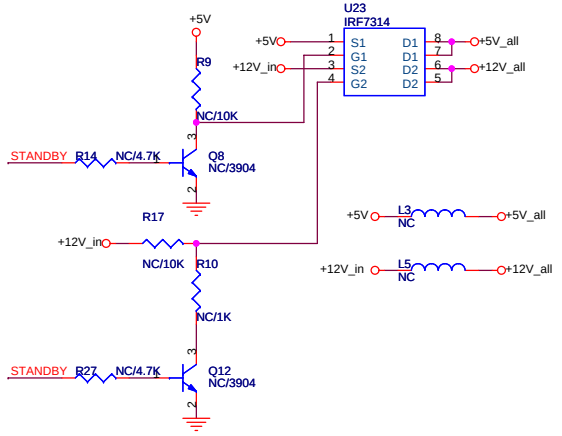


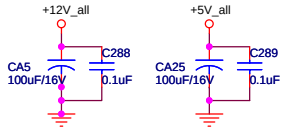
LCD15W57CA Circuit diagrams , see the following , Please!



ADD

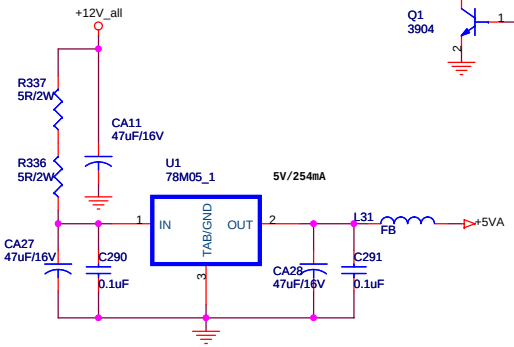


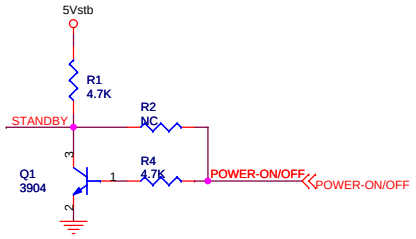


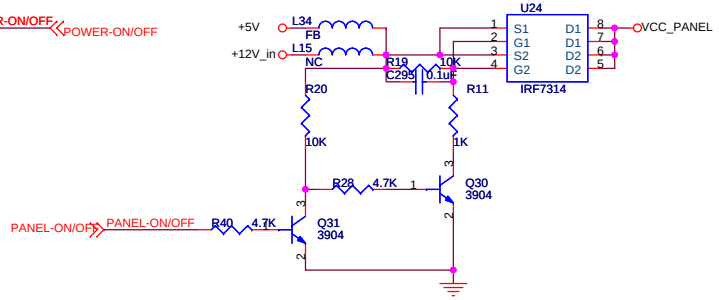


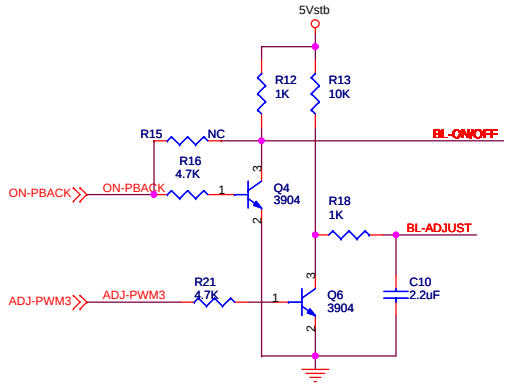
+12V_in	12V电源
+5V_stb	待机5V
BL-ON/OFF	背光开关
BL-ADJUST	背光亮度
STANDBY	待机

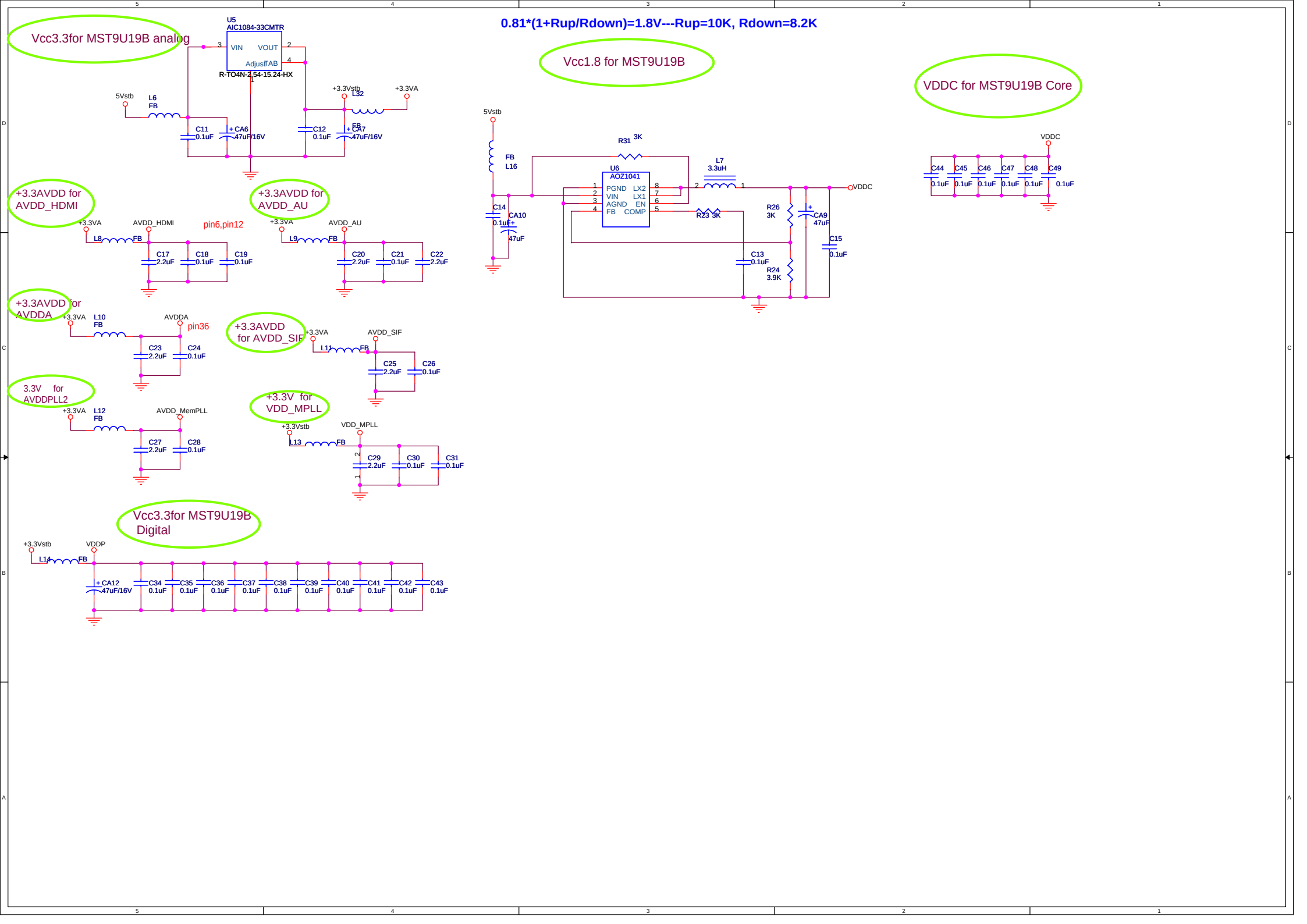
TO Inverter Board

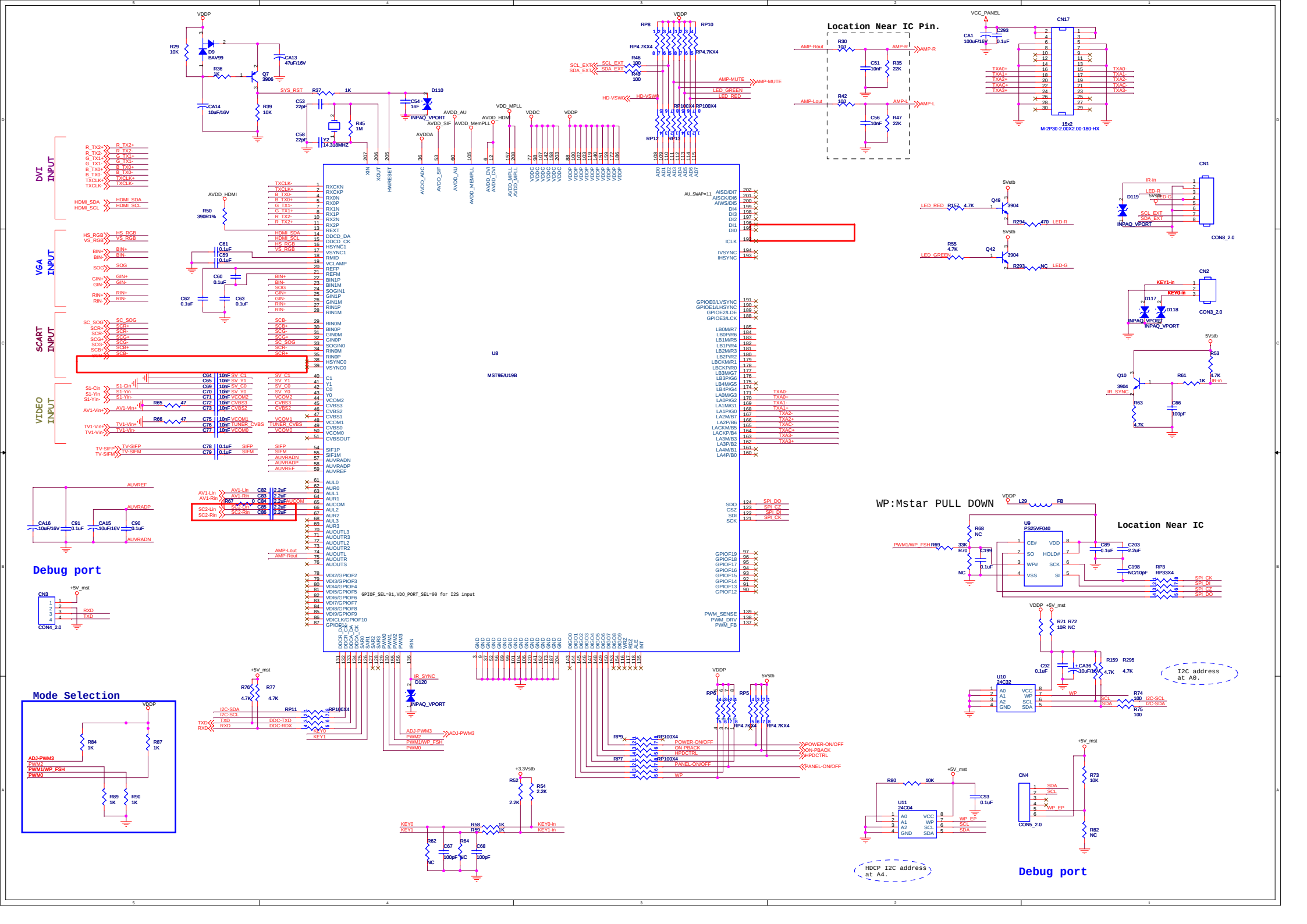


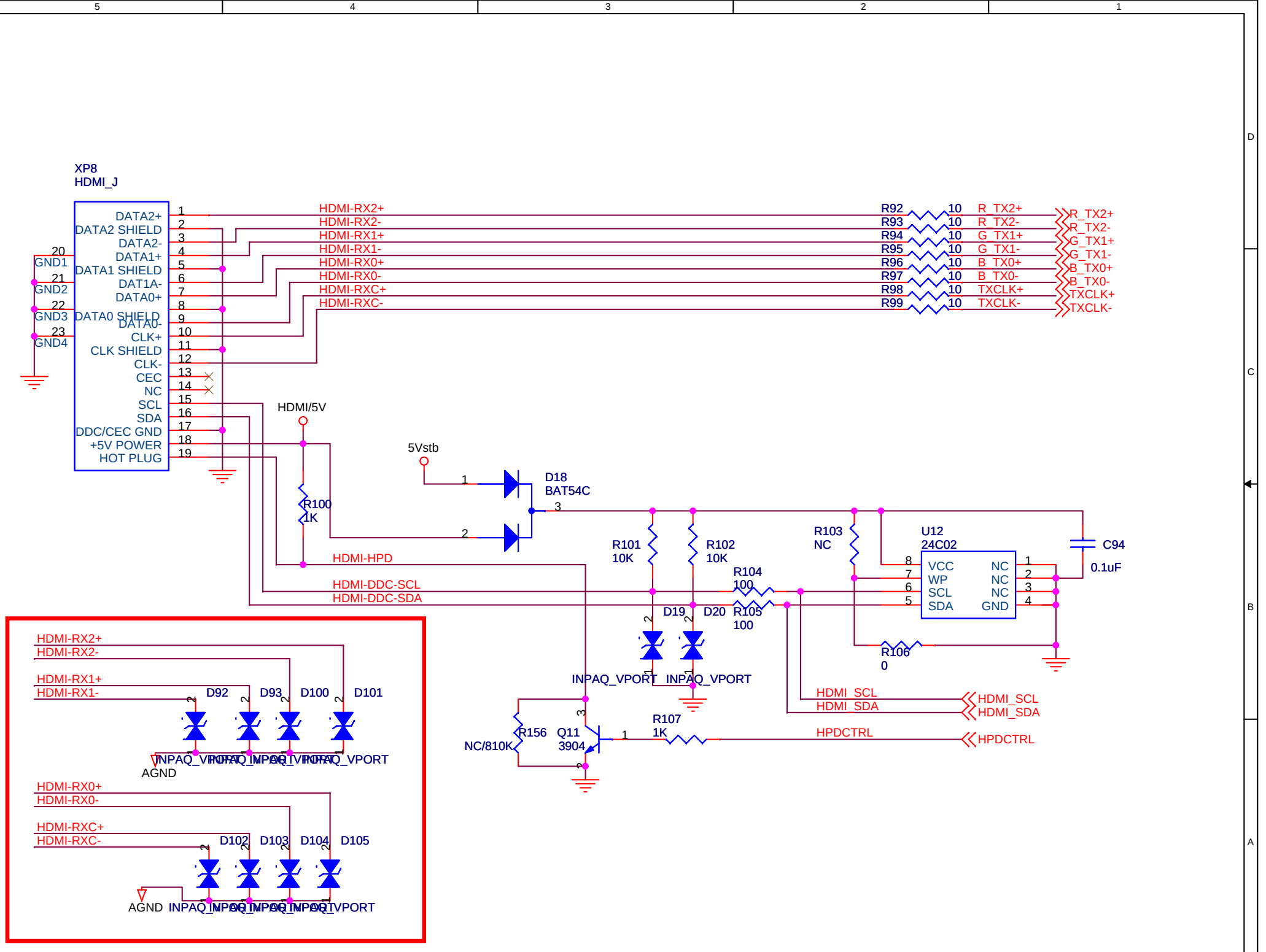


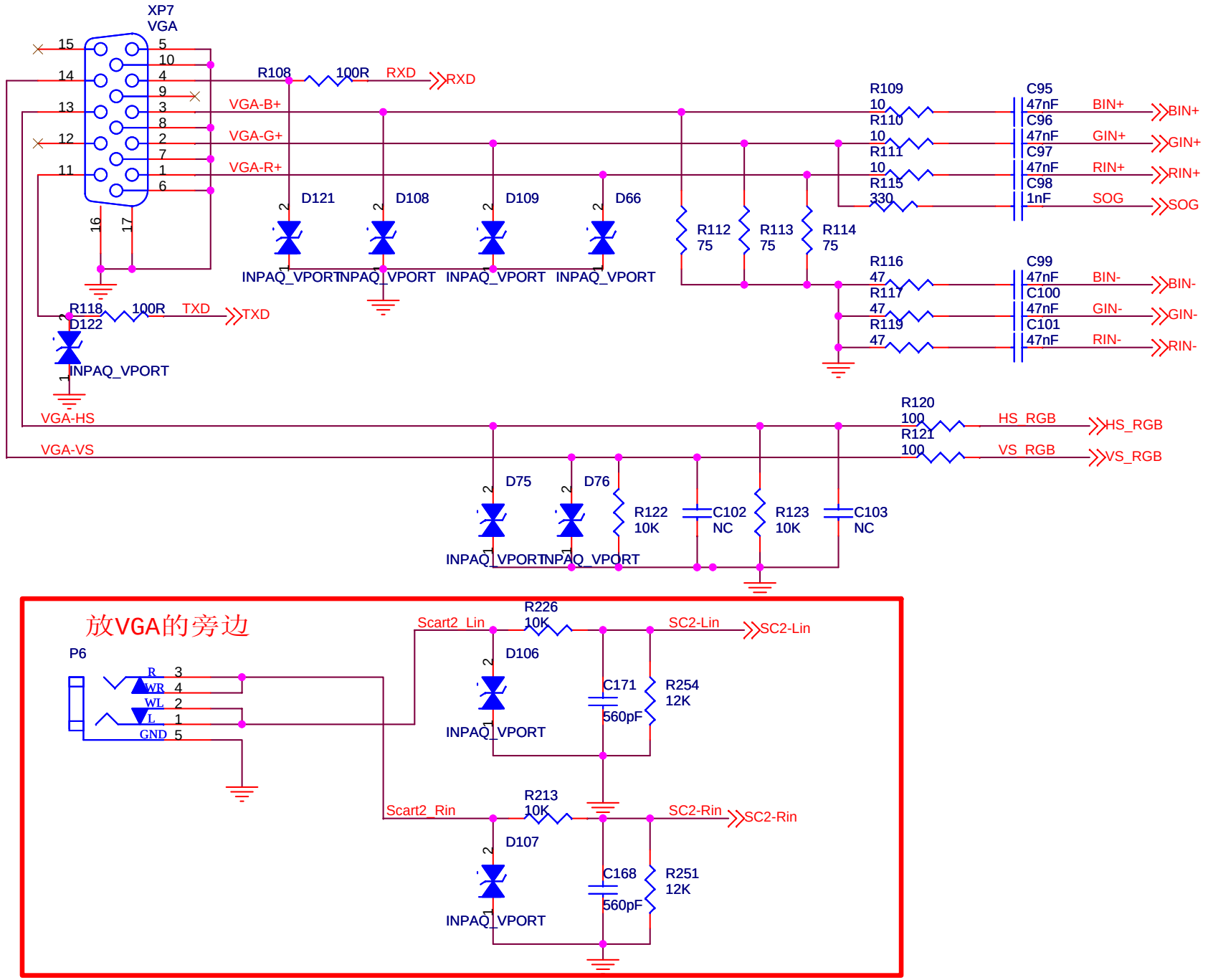


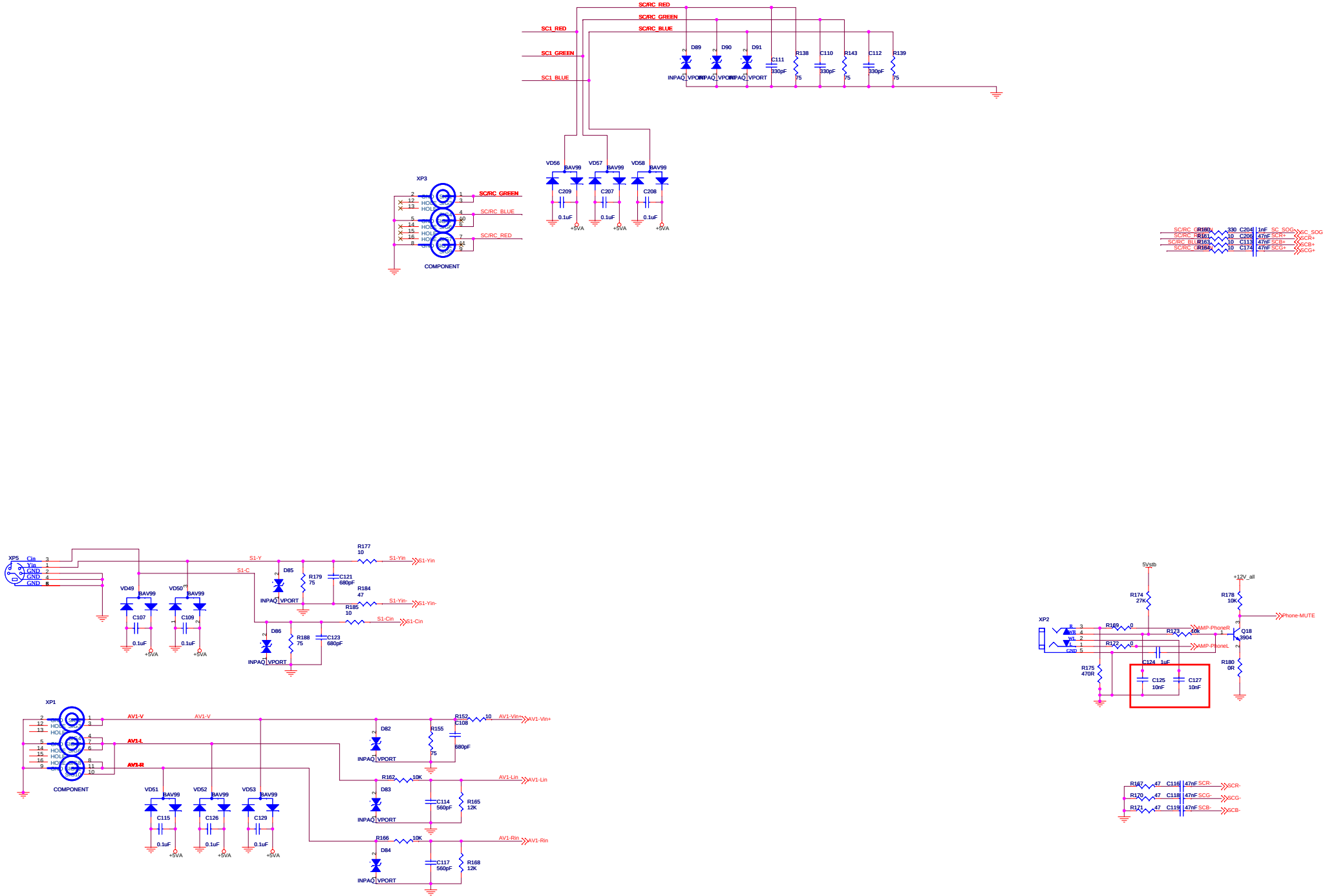



Vcc3.3for MST9U19B analog
U5
AIC1084-33CMTR
VIN
VOUT
Adjust/TAB
R-TO4N-2.54-15.24-HX
5Vstb
L6
FB
C11
0.1uF
CA6
47uF/16V
+3.3Vstb
L32
+3.3VA
C12
0.1uF
CA7
47uF/16V
0.81*(1+Rup/Rdown)=1.8V---Rup=10K, Rdown=8.2K
Vcc1.8 for MST9U19B
5Vstb
FB
L16
R31 3K
U6
AOZ1041
PGND LX2
VIN LX1
AGND EN
FB COMP
L7
3.3uH
VDDC
C14
0.1uF
CA10
47uF
R23 3K
R26
3K
CA9
47uF
C13
0.1uF
R24
3.9K
C15
0.1uF
VDDC for MST9U19B Core
VDDC
C44
C45
C46
C47
C48
C49
0.1uF
+3.3AVDD for AVDD_HDMI
+3.3VA
L8
FB
AVDD_HDMI
pin6,pin12
C17
2.2uF
C18
0.1uF
C19
0.1uF
+3.3AVDD for AVDD_AU
+3.3VA
L9
FB
AVDD_AU
C20
2.2uF
C21
0.1uF
C22
2.2uF
+3.3AVDD for AVDDA
+3.3VA
L10
FB
AVDDA
pin36
C23
2.2uF
C24
0.1uF
+3.3AVDD for AVDD_SIF
+3.3VA
L11
FB
AVDD_SIF
C25
2.2uF
C26
0.1uF
3.3V for AVDDPLL2
+3.3VA
L12
FB
AVDD_MemPLL
C27
2.2uF
C28
0.1uF
+3.3V for VDD_MPLL
+3.3Vstb
L13
FB
VDD_MPLL
C29
2.2uF
C30
0.1uF
C31
0.1uF
Vcc3.3for MST9U19B Digital
+3.3Vstb
L14
FB
VDDP
CA12
47uF/16V
C34
C35
C36
C37
C38
C39
C40
C41
C42
C43
0.1uF


DVI INPUT
VGA INPUT
SCART INPUT
VIDEO INPUT
U8
MST9E/U19B
Location Near IC Pin.
WP:Mstar PULL DOWN
Location Near IC
Debug port
Mode Selection
Debug port
I2C address at A0.
HDCP I2C address at A4.
GPIOF02_SEL=01,VD0_PORT_SEL=00 for I2S input
INPAQ_VPORT
CON8_2.0
CON3_2.0
CON4_2.0
CON5_2.0
M-2P30-2.00X2.00-180-HX

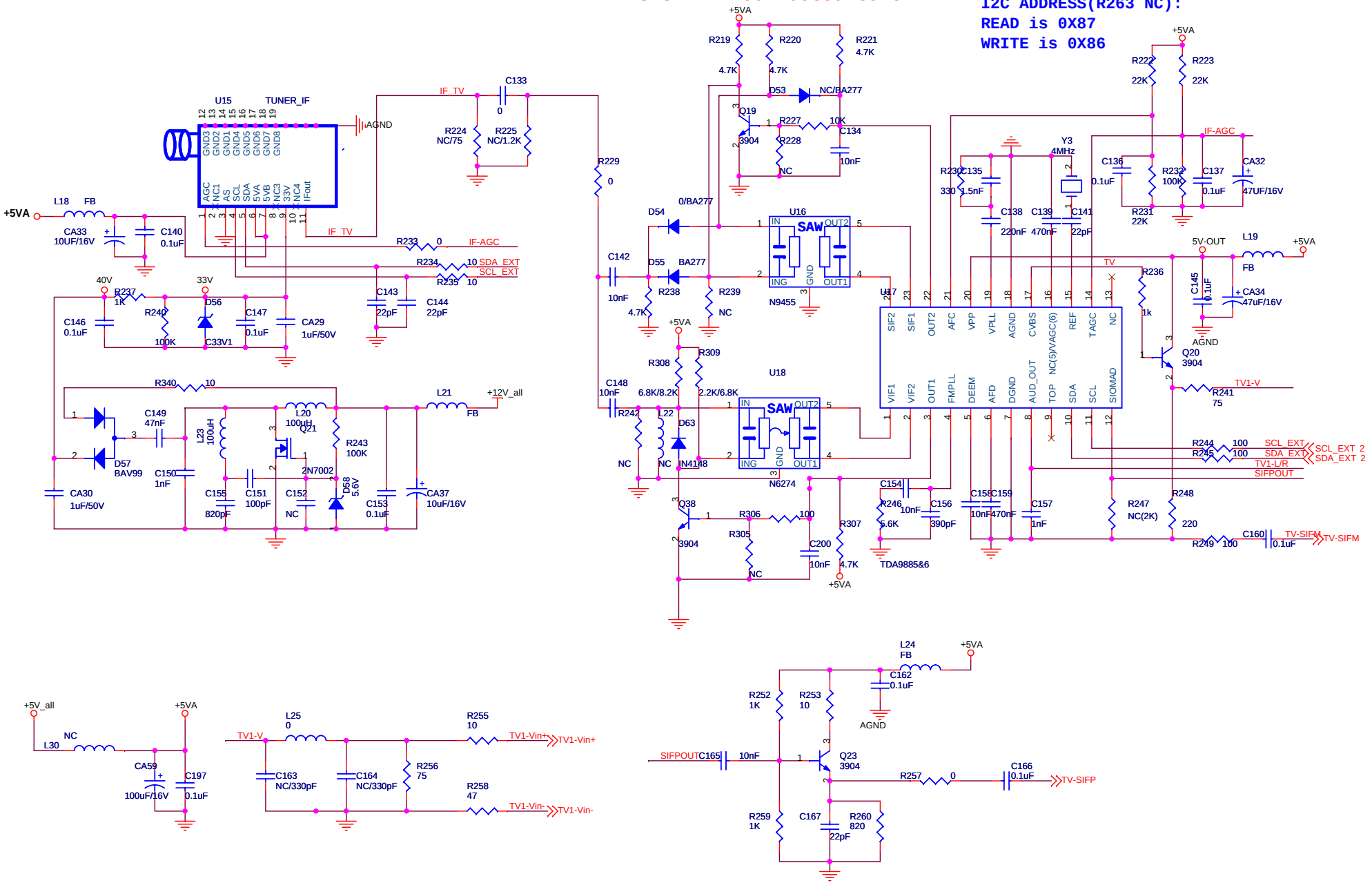

XP8
HDMI_J
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
GND1
GND2
GND3
GND4
HDMI-RX2+
HDMI-RX2-
HDMI-RX1+
HDMI-RX1-
HDMI-RX0+
HDMI-RX0-
HDMI-RXC+
HDMI-RXC-
R92 10 R_TX2+
R93 10 R_TX2-
R94 10 G_TX1+
R95 10 G_TX1-
R96 10 B_TX0+
R97 10 B_TX0-
R98 10 TXCLK+
R99 10 TXCLK-
HDMI/5V
R100 1K
5Vstb
D18 BAT54C
HDMI-HPD
HDMI-DDC-SCL
HDMI-DDC-SDA
R101 10K
R102 10K
R103 NC
U12 24C02
VCC
WP
SCL
SDA
NC
NC
NC
GND
C94 0.1uF
R104 100
R105 100
R106 0
D19
D20
INPAQ_VPORT
HDMI_SCL
HDMI_SDA
R107 1K
HPDCTRL
R156 NC/810K
Q11 3904
D92
D93
D100
D101
AGND
D102
D103
D104
D105


XP7
VGA
R108
100R
RXD
VGA-B+
VGA-G+
VGA-R+
D121
D108
D109
D66
INPAQ_VPORT
R112
75
R113
75
R114
75
R109
10
R110
10
R111
10
R115
330
C95
47nF
C96
47nF
C97
47nF
C98
1nF
BIN+
GIN+
RIN+
SOG
R116
47
R117
47
R119
47
C99
47nF
C100
47nF
C101
47nF
BIN-
GIN-
RIN-
R118
100R
TXD
D122
VGA-HS
VGA-VS
R120
100
R121
100
HS_RGB
VS_RGB
D75
D76
R122
10K
C102
NC
R123
10K
C103
NC
放VGA的旁边
P6
R
WR
WL
L
GND
Scart2_Lin
R226
10K
SC2-Lin
D106
C171
560pF
R254
12K
Scart2_Rin
R213
10K
SC2-Rin
D107
C168
560pF
R251
12K

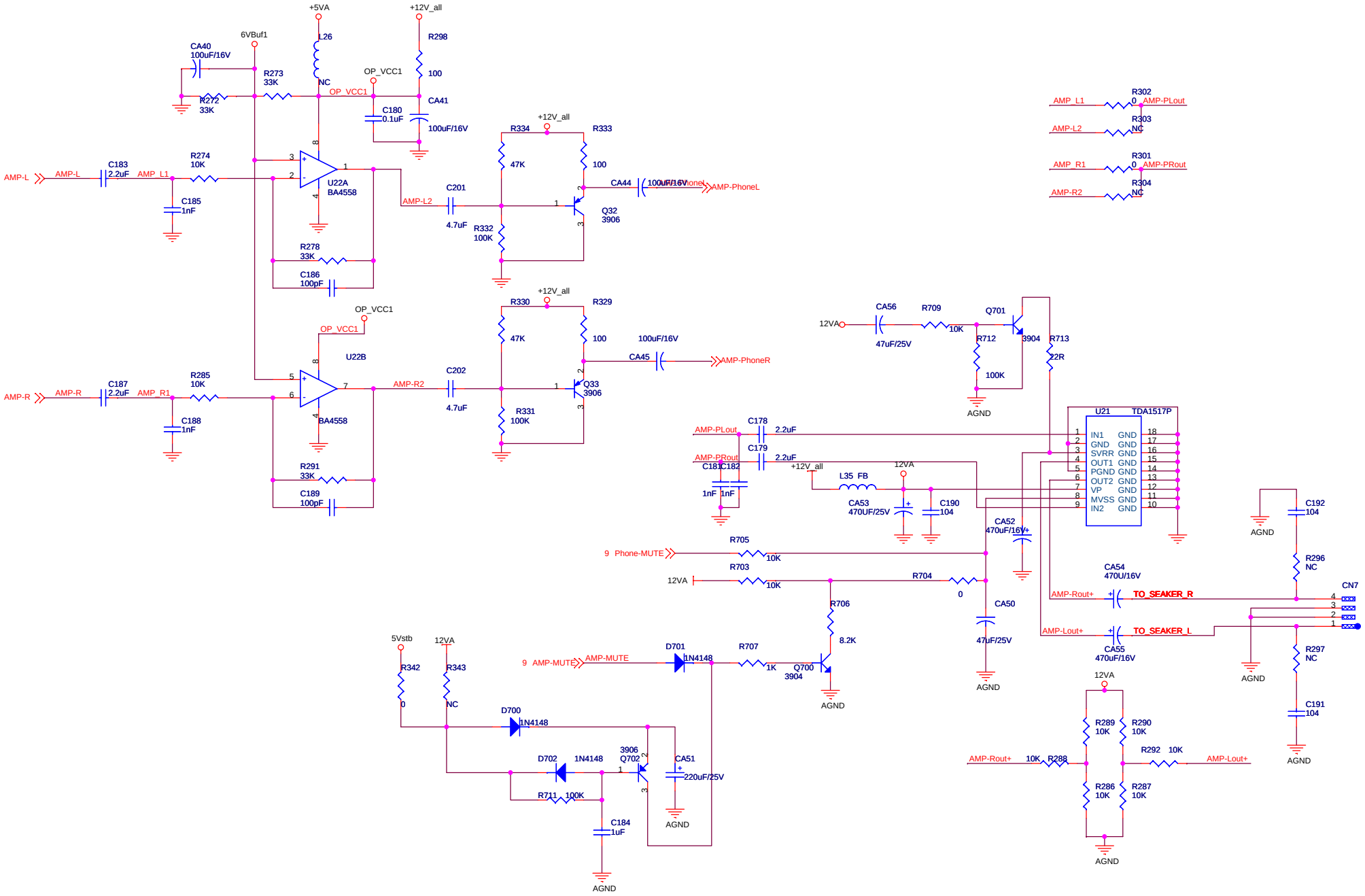

SC/RC_RED
SC/RC_GREEN
SC/RC_BLUE
SC1_RED
SC1_GREEN
SC1_BLUE
D89
D90
D91
INPAQ_VPORT
C111
330pF
R138
75
C110
330pF
R143
75
C112
330pF
R139
75
VD56
VD57
VD58
BAV99
C209
C207
C208
0.1uF
+5VA
XP3
COMPONENT
SC/RC_GREEN
SC/RC_BLUE
SC/RC_RED
R160
R161
R163
R164
330
10
C204
C209
C113
C174
1nF
47nF
SC_SOG
SCR+
SCB+
SCG+
XP5
Cin
Yin
GND
S1-Y
S1-C
VD49
VD50
C107
C109
D85
D86
R179
75
C121
680pF
R177
10
R184
47
R185
10
R188
75
C123
680pF
S1-Yin
S1-Yin-
S1-Cin
XP1
AV1-V
AV1-L
AV1-R
VD51
VD52
VD53
C115
C126
C129
D82
D83
D84
R152
R155
C108
680pF
R162
10K
C114
560pF
R165
12K
R166
C117
R168
AV1-Vin
AV1-Vin+
AV1-Lin
AV1-Rin
5Vstb
+12V_all
XP2
R174
27K
R178
10K
R169
R173
R172
R175
470R
R180
0R
C124
1uF
C125
10nF
C127
10nF
Q18
3904
AMP-PhoneR
AMP-PhoneL
Phone-MUTE
R167
R170
R171
C116
C118
C119
47
47nF
SCR-
SCG-
SCB-

U23 PIN2 connected to PIN1 B/G,DK,I,L
U23 PIN2 connected to GND L'

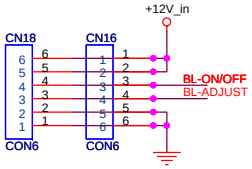
I2C ADDRESS(R263 NC):
READ is 0X87
WRITE is 0X86

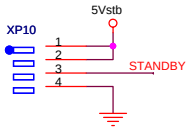


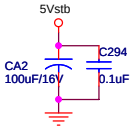
FOR TDA1308/PT2308 L26 FB,R298 NC;
FOR TL062 L26 NC,R298 0;

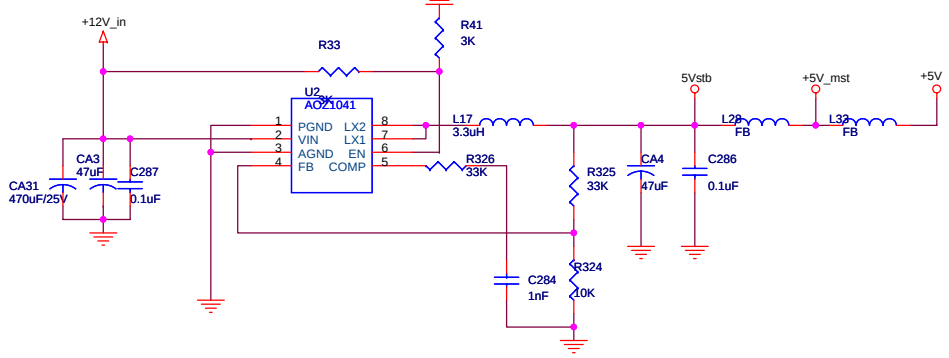


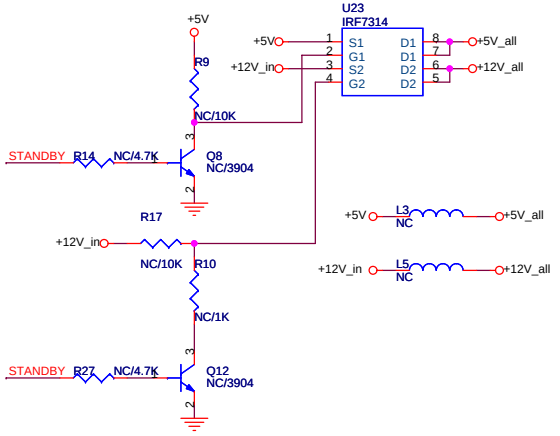
LCD19W57CA Circuit diagrams , see the following , Please!

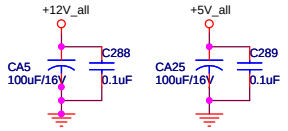






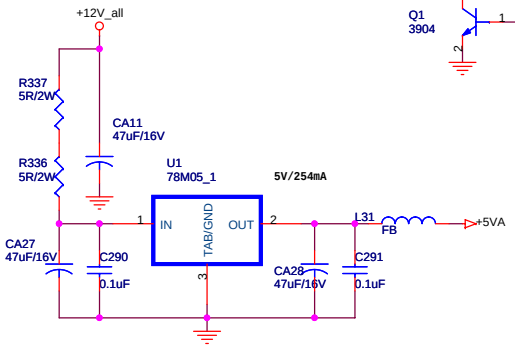


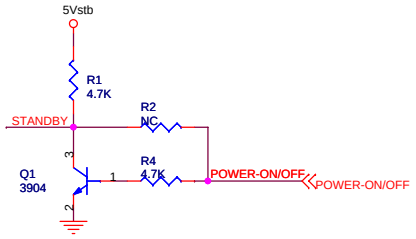


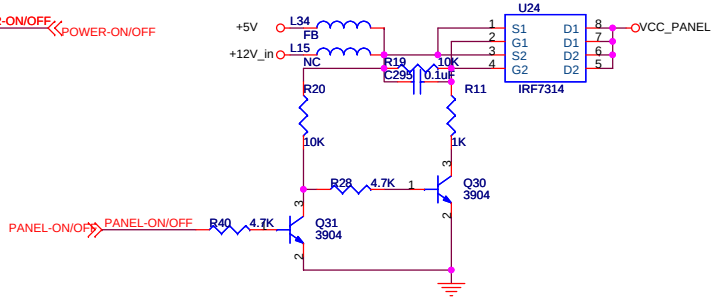


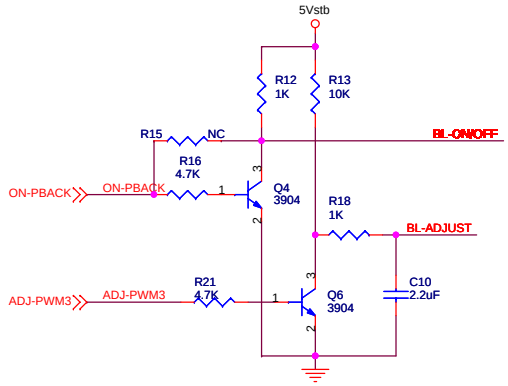
+12V_in	12V电源
+5V_stb	待机5V
BL-ON/OFF	背光开关
BL-ADJUST	背光亮度
STANDBY	待机

TO Inverter Board



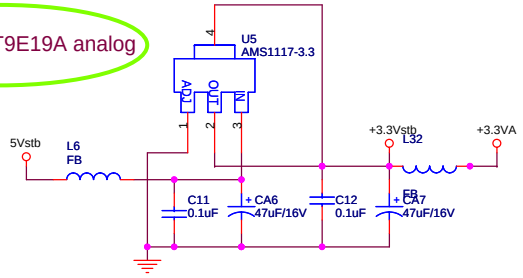




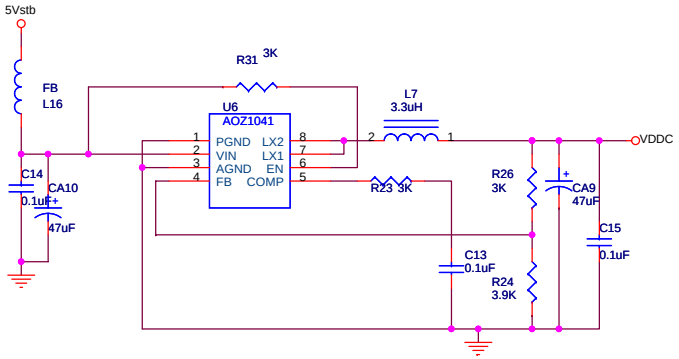


0.81*(1+Rup/Rdown)=1.8V---Rup=10K, Rdown=8.2K

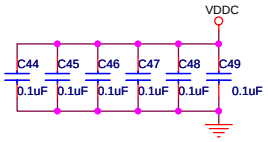
Vcc3.3for MST9E19A analog



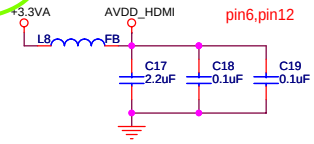
Vcc1.8 for MST9E19A



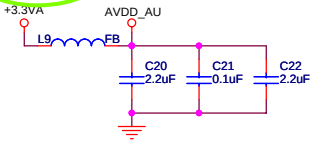
VDDC for MST9E19A Core



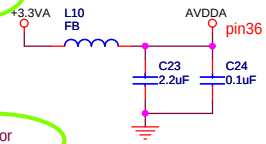
+3.3AVDD for AVDD_HDMI



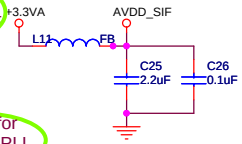
+3.3AVDD for AVDD_AU



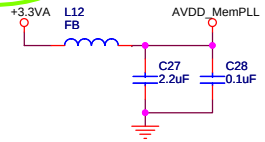
+3.3AVDD for AVDDA



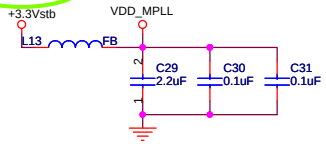
+3.3AVDD for AVDD_SIF



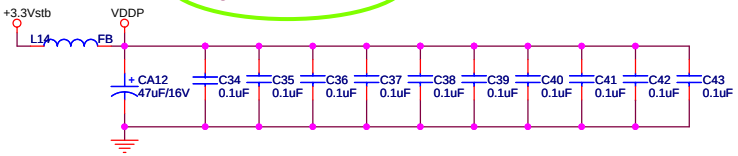
3.3V for AVDDPLL2

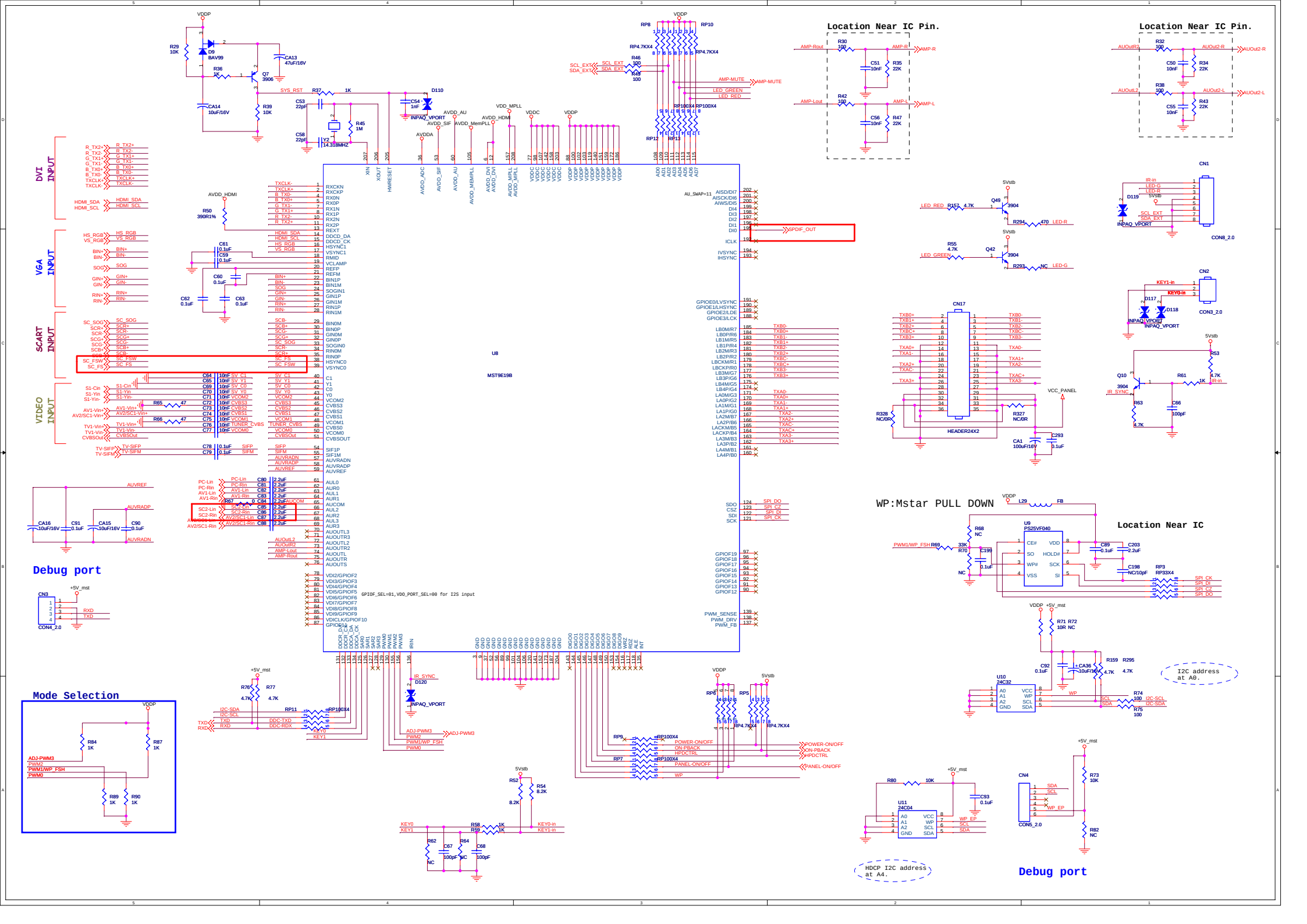


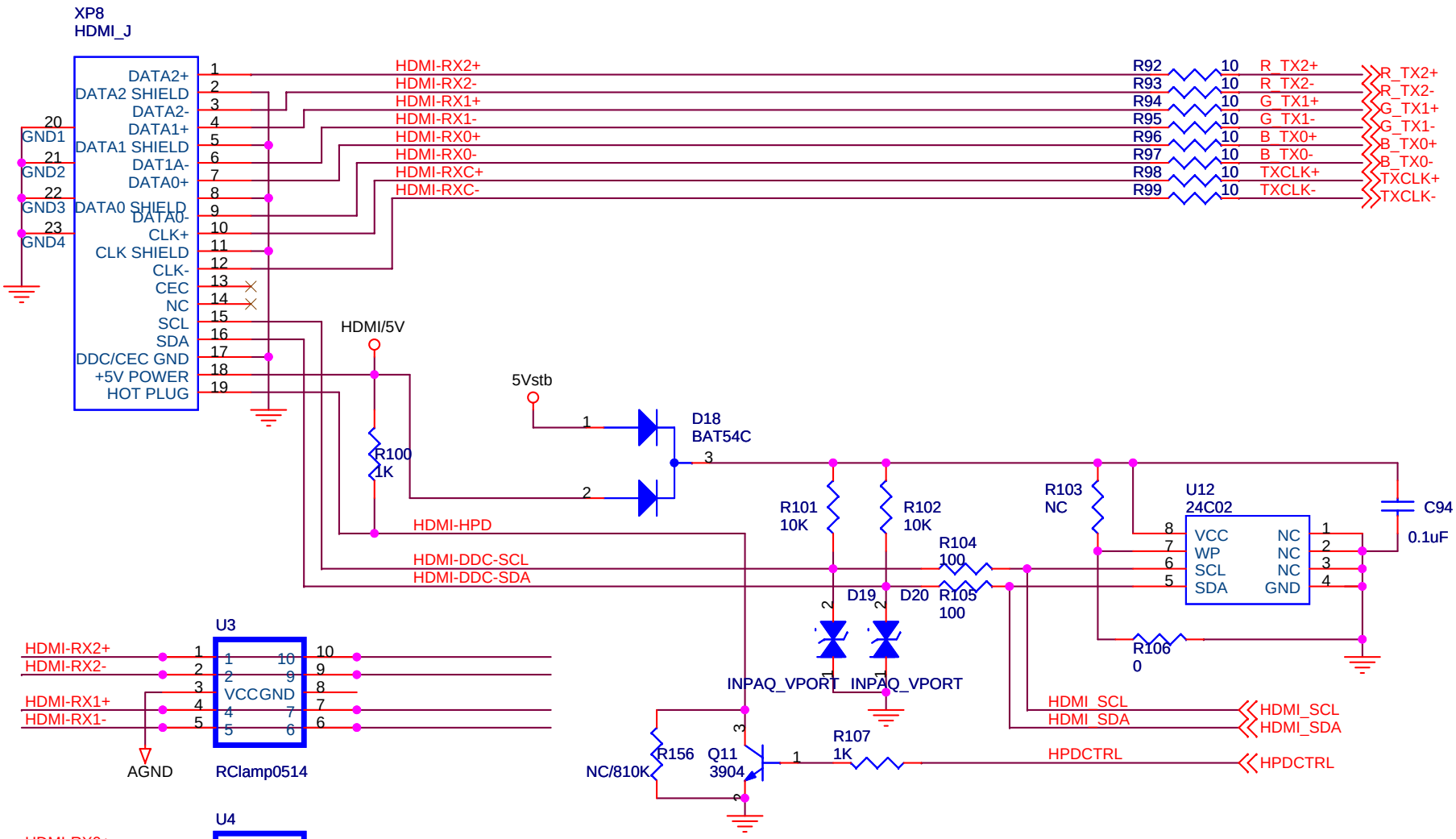
+3.3V for VDD_MPLL

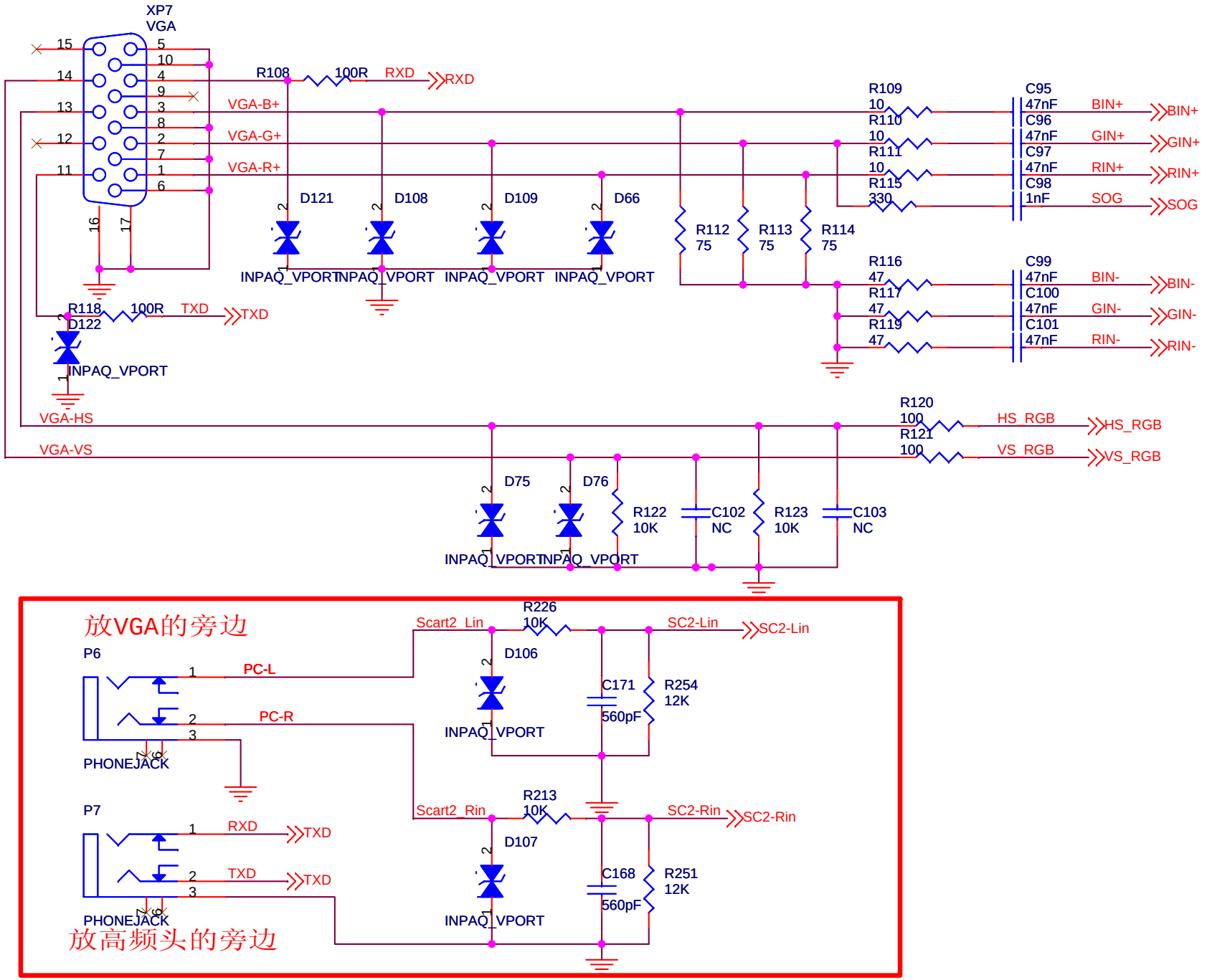


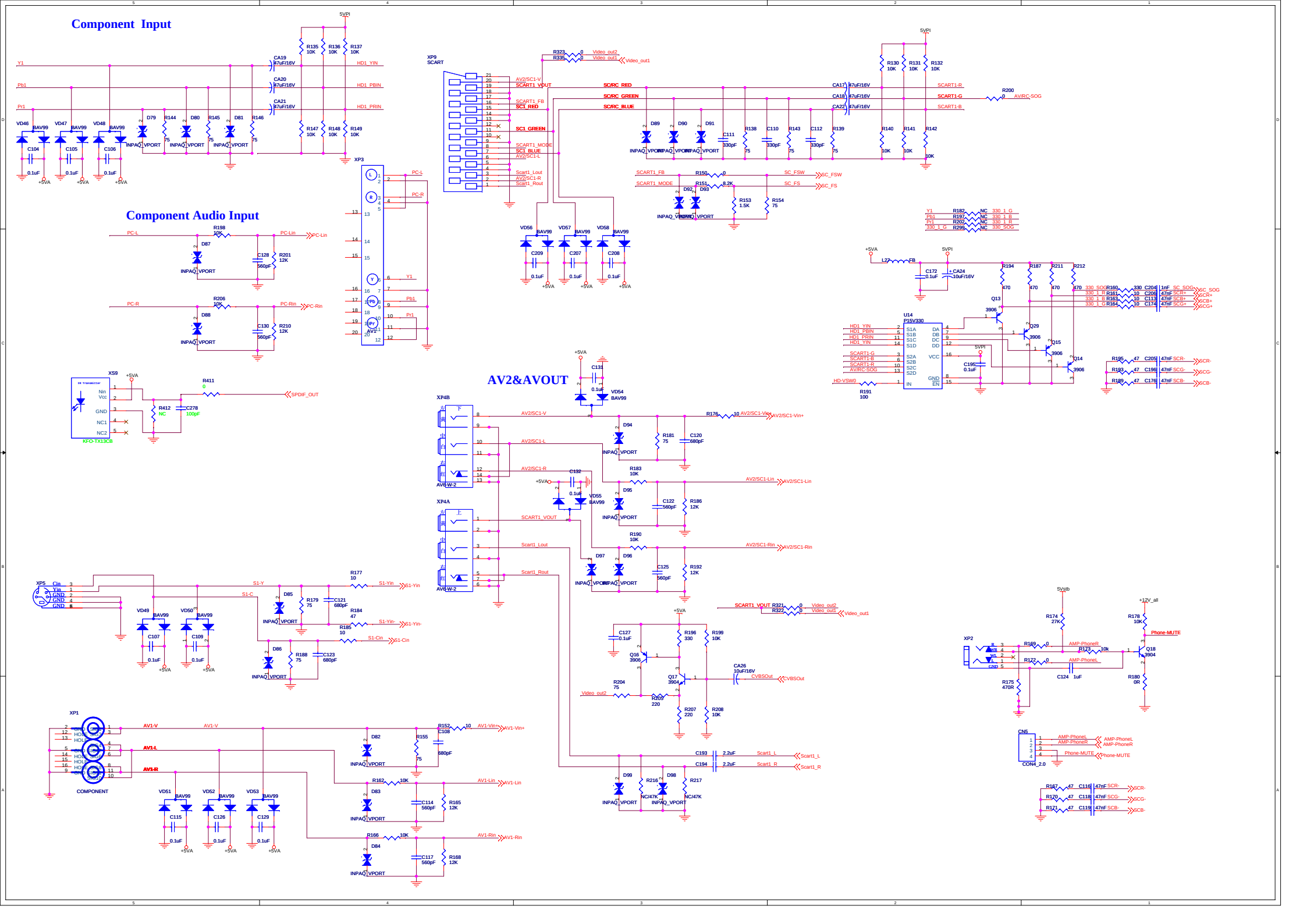
Vcc3.3for MST9E19A Digital




DVI INPUT
VGA INPUT
SCART INPUT
VIDEO INPUT
U8
MST9E19B
Location Near IC Pin.
Location Near IC Pin.
WP:Mstar PULL DOWN
Location Near IC
Debug port
Mode Selection
Debug port
I2C address at A0.
HDCP I2C address at A4.
GPIOF05 GPIOF06 GPIOF07 GPIOF08 GPIOF09 GPIOF10 GPIOF11 GPIOF12 GPIOF13 GPIOF14 GPIOF15 GPIOF16 GPIOF17 GPIOF18 GPIOF19
AU_SWAP=11
SPDIF_OUT
POWER-ON/OFF
ON-PBACK
HPDCTRL
PANEL-ON/OFF
WP
ADJ-PWM3
PWM2
PWM1/WP_FSH
PWM0
KEY0
KEY1
KEY0-in
KEY1-in
IR_SYNC
I2C-SCL
I2C-SDA
SPI_DO
SPI_CZ
SPI_DI
SPI_CK
INPAQ_VPORT
CON8_2.0
CON3_2.0
CON4_2.0
CON5_2.0
HEADER24X2
VCC_PANEL
AMP-MUTE
LED_GREEN
LED_RED
AMP-R
AMP-L
AMP-Rout
AMP-Lout
SCL_EXT
SDA_EXT
IR-in
LED-G
LED-R
KEY1-in
KEY0-in
IR_SYNC
LED_RED
LED_GREEN
SYS_RST
HDMI_SDA
HDMI_SCL
VDDP
AVDD_HDMI
AVDD_AU
AVDD_MPLL
AVDD_SIF
AVDD_MemPLL
AVDD_ADC
AVDD_DVI
AVDD_MPLL
VDDC
5Vstb
+5V_mst
AUVREF
AUVRADP
AUVRADN
HDCP I2C address at A4.

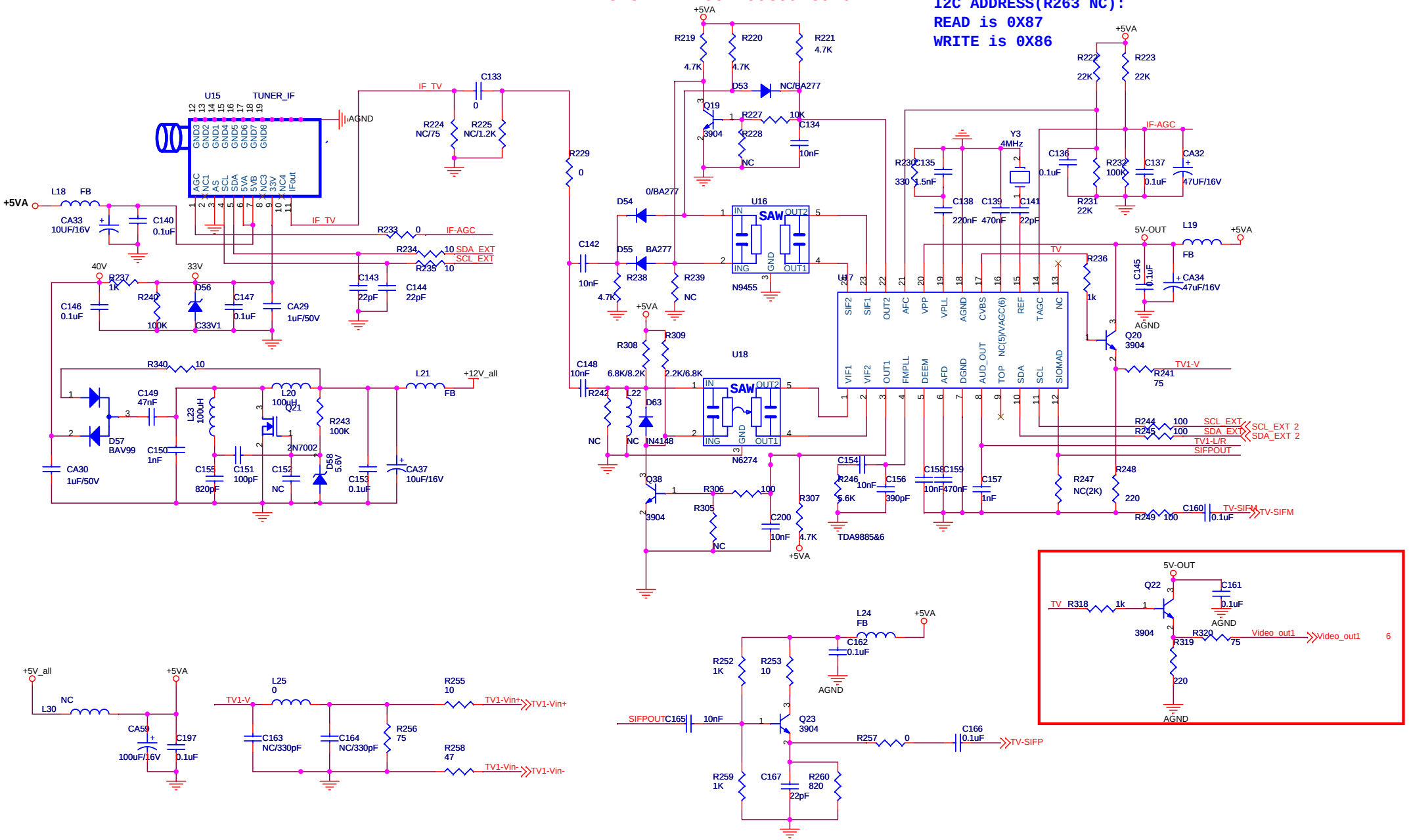

XP8
HDMI_J
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
GND1
GND2
GND3
GND4
HDMI-RX2+
HDMI-RX2-
HDMI-RX1+
HDMI-RX1-
HDMI-RX0+
HDMI-RX0-
HDMI-RXC+
HDMI-RXC-
R92 10 R_TX2+
R93 10 R_TX2-
R94 10 G_TX1+
R95 10 G_TX1-
R96 10 B_TX0+
R97 10 B_TX0-
R98 10 TXCLK+
R99 10 TXCLK-
R_TX2+
R_TX2-
G_TX1+
G_TX1-
B_TX0+
B_TX0-
TXCLK+
TXCLK-
HDMI/5V
R100
1K
5Vstb
D18
BAT54C
HDMI-HPD
HDMI-DDC-SCL
HDMI-DDC-SDA
R101
10K
R102
10K
R103
NC
U12
24C02
VCC
WP
SCL
SDA
NC
NC
NC
GND
C94
0.1uF
R104
100
R105
100
R106
0
D19
D20
INPAQ_VPORT
INPAQ_VPORT
HDMI_SCL
HDMI_SDA
HDMI_SCL
HDMI_SDA
HPDCTRL
HPDCTRL
R107
1K
R156
NC/810K
Q11
3904
U3
HDMI-RX2+
HDMI-RX2-
HDMI-RX1+
HDMI-RX1-
VCC
GND
AGND
RClamp0514
U4
HDMI-RX0+
HDMI-RX0-
HDMI-RXC+
HDMI-RXC-
VCC
GND
AGND
RClamp0514

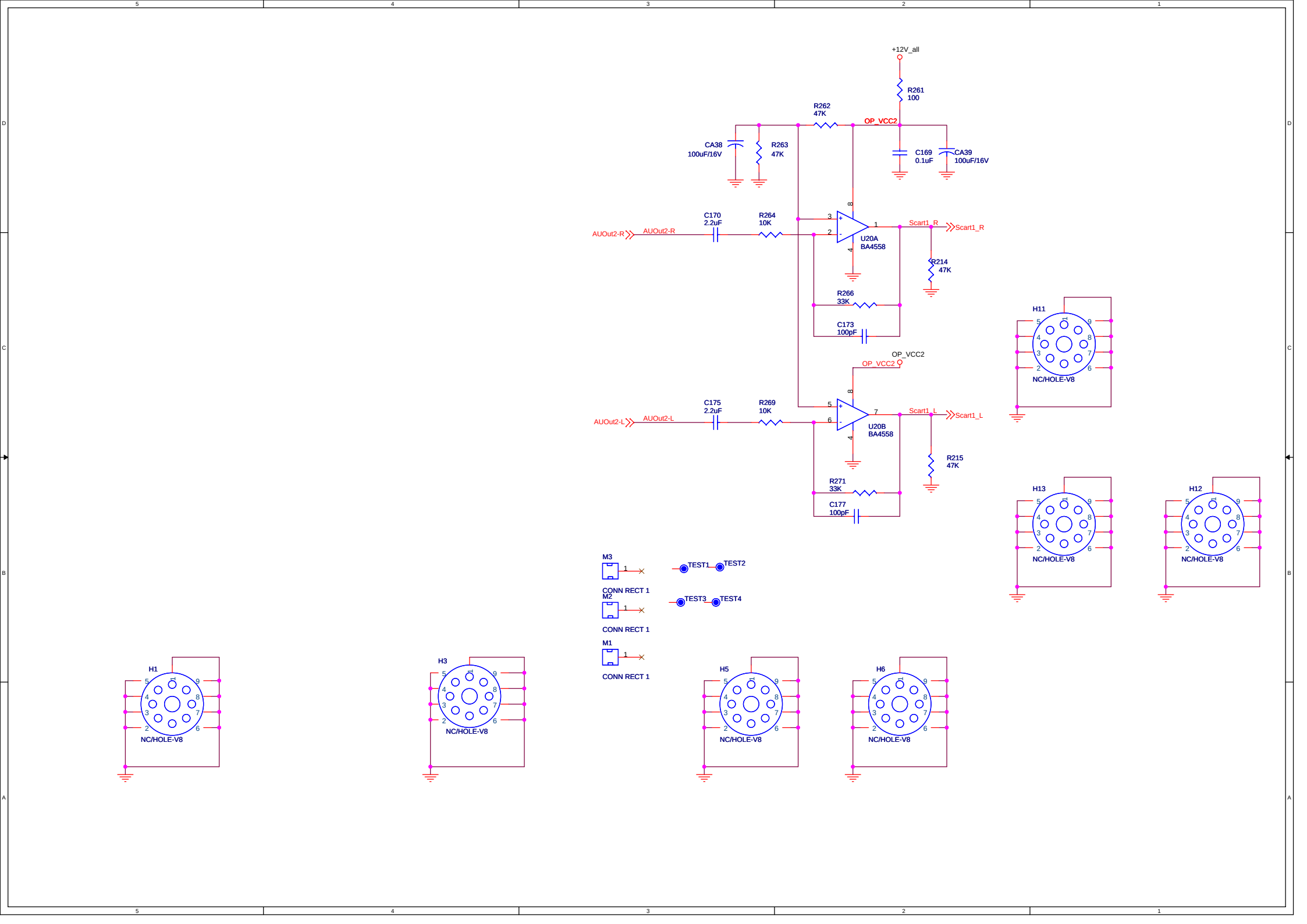

XP7
VGA
R108
100R
RXD
VGA-B+
VGA-G+
VGA-R+
D121
D108
D109
D66
R112
75
R113
75
R114
75
R109
10
R110
10
R111
10
R115
330
C95
47nF
C96
47nF
C97
47nF
C98
1nF
BIN+
GIN+
RIN+
SOG
R116
47
R117
47
R119
47
C99
47nF
C100
47nF
C101
47nF
BIN-
GIN-
RIN-
INPAQ_VPORT
R118
100R
TXD
D122
VGA-HS
VGA-VS
R120
100
R121
100
HS_RGB
VS_RGB
D75
D76
R122
10K
C102
NC
R123
10K
C103
NC
放VGA的旁边
P6
PC-L
PC-R
PHONEJACK
P7
R226
10K
Scart2_Lin
SC2-Lin
D106
C171
560pF
R254
12K
R213
10K
Scart2_Rin
SC2-Rin
D107
C168
560pF
R251
12K
放高频头的旁边


Component Input
Component Audio Input
AV2&AVOUT
XP9 SCART
XP3
XP4B
XP4A
XS9
XP5
XP1
XP2
U14 P15V330
CN5 CON4_2.0
COMPONENT
KFO-TX13CB
AV6-W-2
5VPI
+5VA
5Vstb
+12V_all
SCART1_VOUT
SC1_RED
SC1_GREEN
SC1_BLUE
SCART1_FB
SCART1_MODE
SC/RC_RED
SC/RC_GREEN
SC/RC_BLUE
AV2/SC1-V
AV2/SC1-L
AV2/SC1-R
Scart1_Lout
Scart1_Rout
Video_out1
Video_out2
CVBSOut
SC_FSW
SC_FS
AV/RC-SOG
HD1_YIN
HD1_PBIN
HD1_PRIN
SCART1-R
SCART1-G
SCART1-B
PC-L
PC-R
PC-Lin
PC-Rin
S1-Y
S1-C
S1-Yin
S1-Yin-
S1-Cin
AV1-V
AV1-L
AV1-R
AV1-Vin
AV1-Lin
AV1-Rin
SPDIF_OUT
AMP-PhoneL
AMP-PhoneR
Phone-MUTE
SC_SOG
SCR-
SCG-
SCB-
SCR+
SCG+
SCB+
INPAQ_VPORT
BAV99

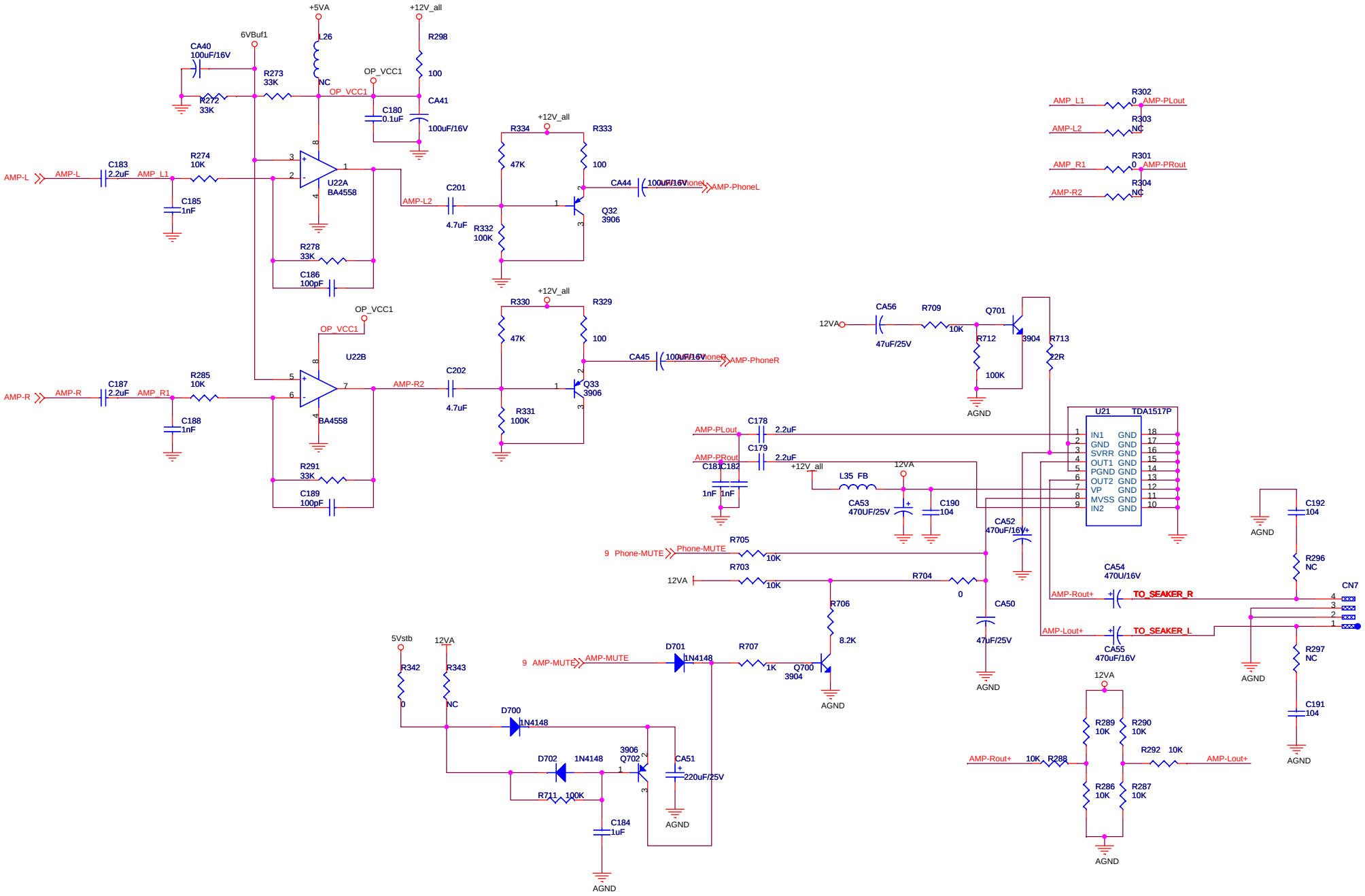
U23 PIN2 connected to PIN1 B/G,DK,I,L
U23 PIN2 connected to GND L'

I2C ADDRESS(R263 NC):
READ is 0X87
WRITE is 0X86

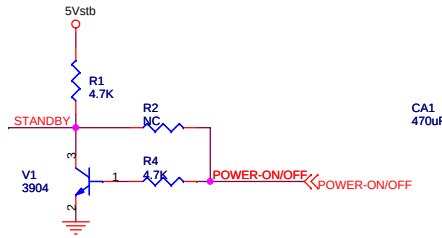


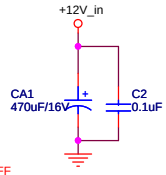

+12V_all
R261
100
R262
47K
OP_VCC2
CA38
100uF/16V
R263
47K
C169
0.1uF
CA39
100uF/16V
C170
2.2uF
R264
10K
AUOut2-R
AUOut2-R
U20A
BA4558
Scart1_R
Scart1_R
R214
47K
R266
33K
C173
100pF
OP_VCC2
OP_VCC2
C175
2.2uF
R269
10K
AUOut2-L
AUOut2-L
U20B
BA4558
Scart1_L
Scart1_L
R215
47K
R271
33K
C177
100pF
H11
NC/HOLE-V8
H13
NC/HOLE-V8
H12
NC/HOLE-V8
M3
CONN RECT 1
TEST1
TEST2
M2
CONN RECT 1
TEST3
TEST4
M1
CONN RECT 1
H1
NC/HOLE-V8
H3
NC/HOLE-V8
H5
NC/HOLE-V8
H6
NC/HOLE-V8

FOR TDA1308/PT2308 L26 FB,R298 NC;
FOR TL062 L26 NC,R298 0;

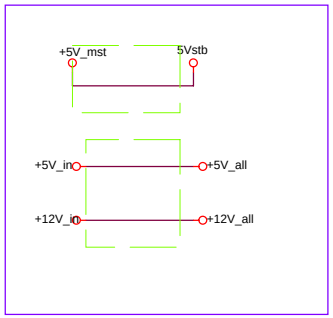


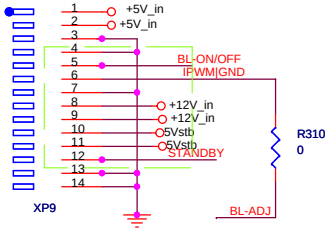
LCD32W57CA Circuit diagrams , see the following , Please!

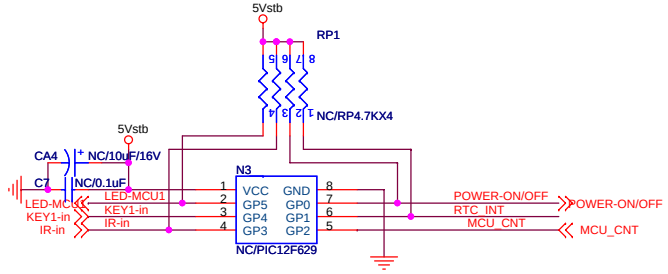




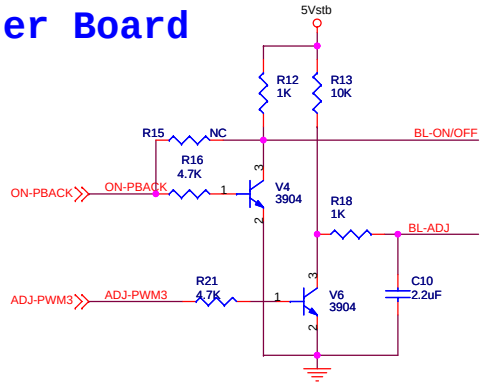
同1319 E版修改

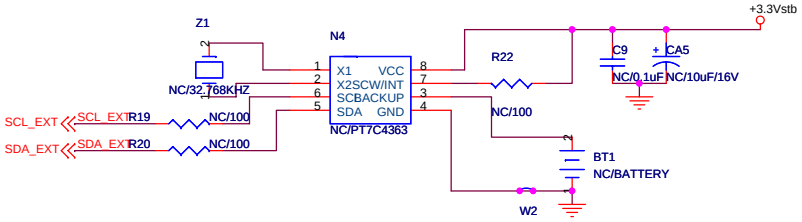






TO Inverter Board





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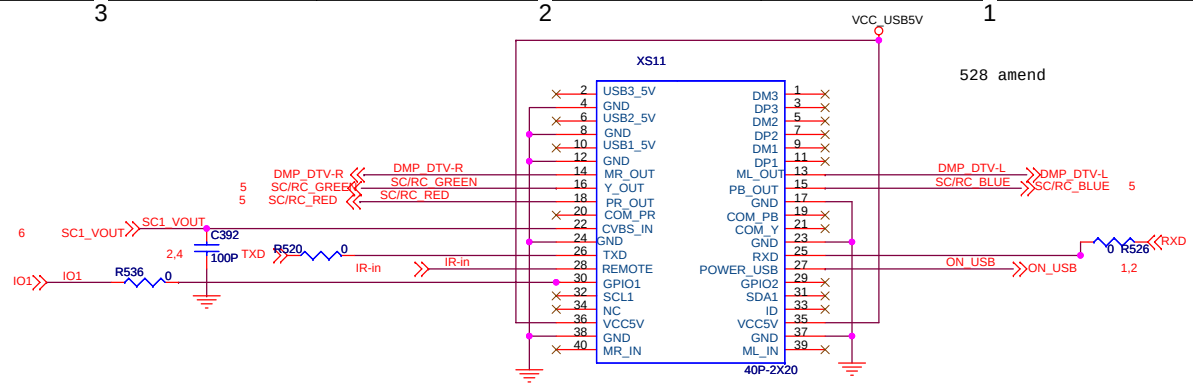
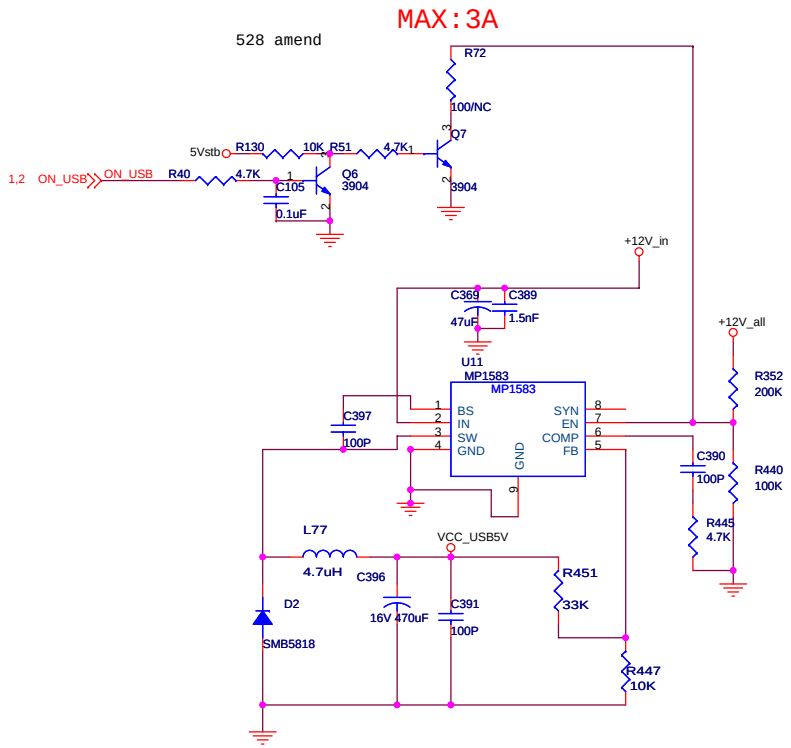
Date: Tuesday, January 22, 2008	Sheet 1 of 19	





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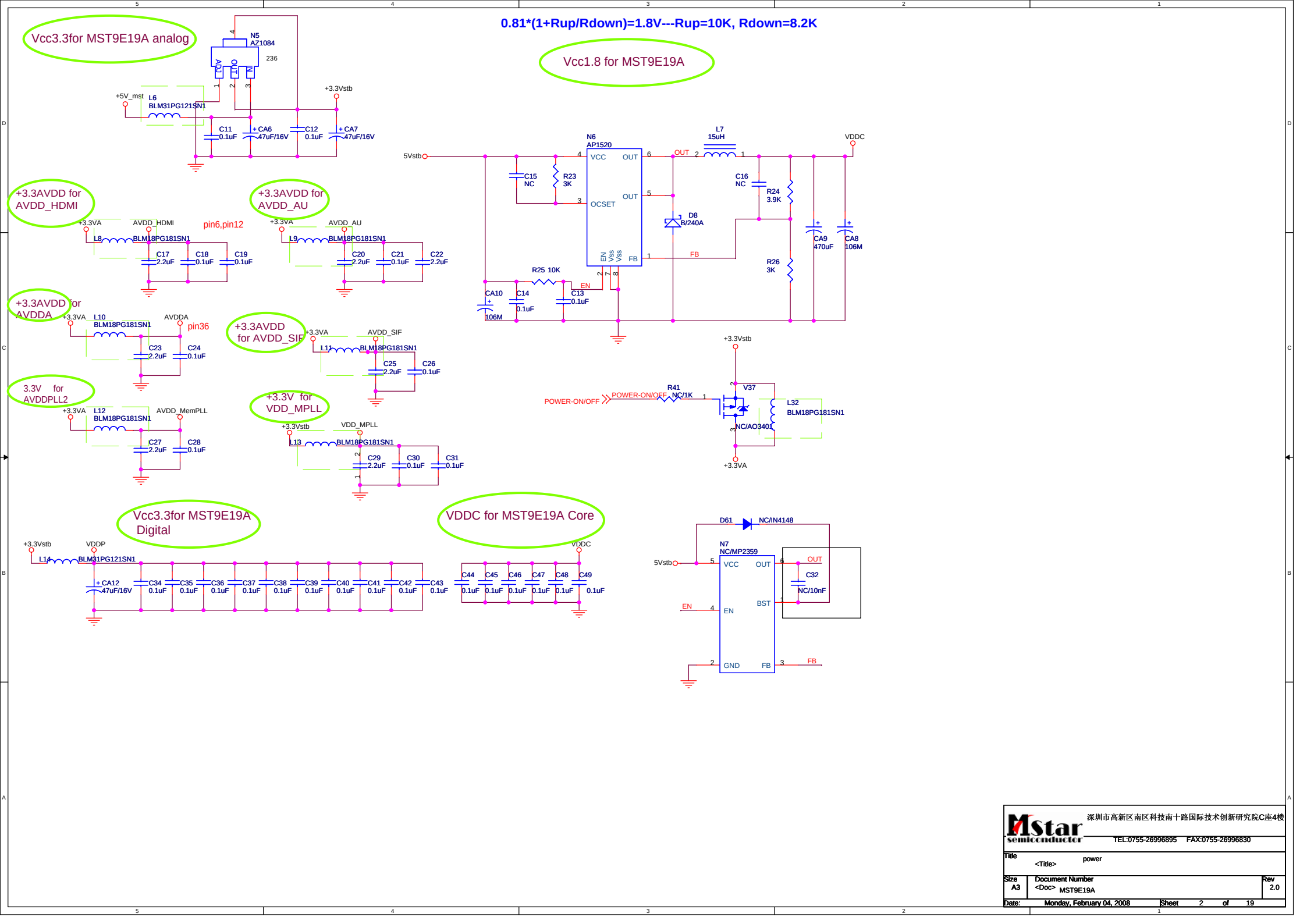

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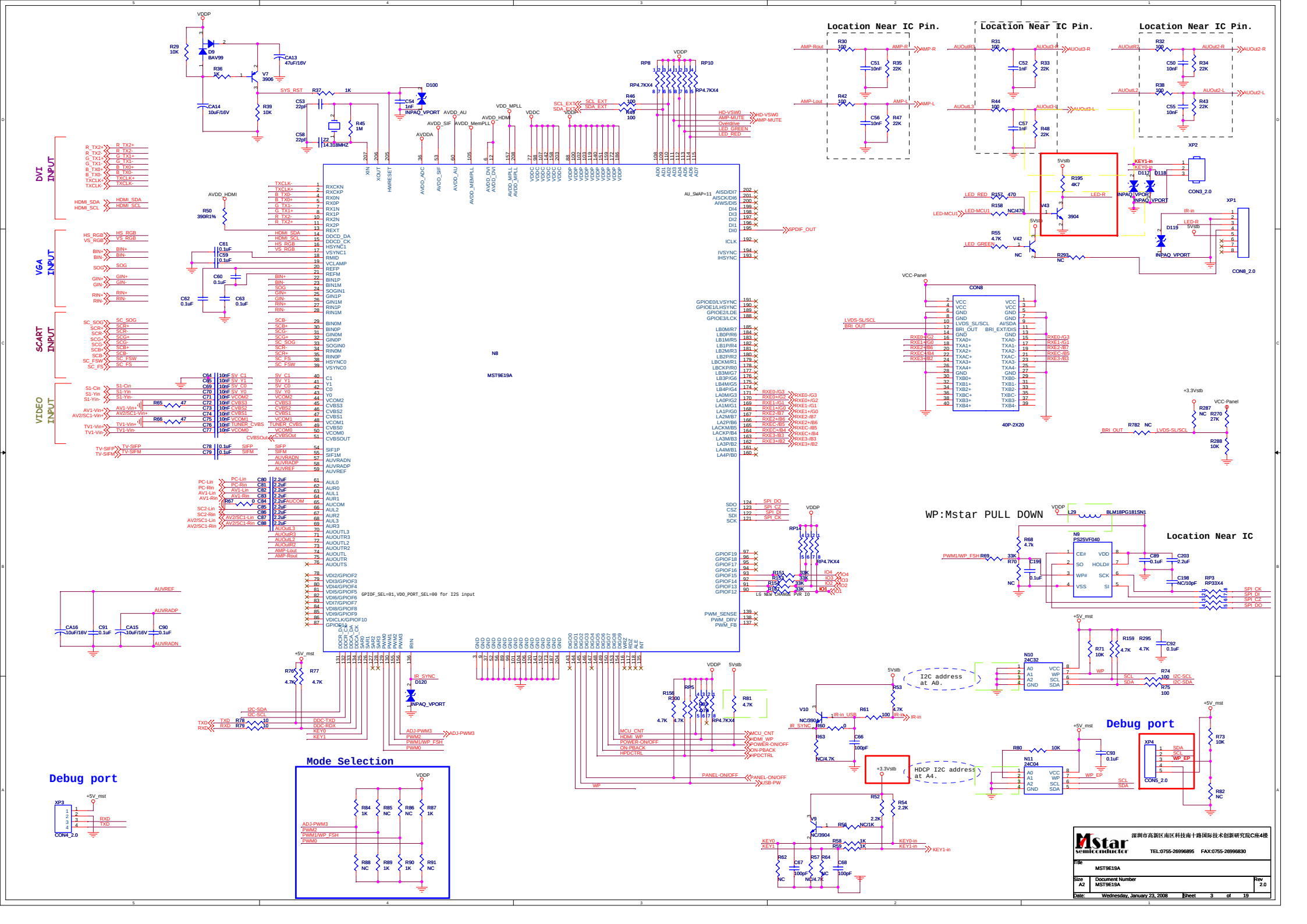
Size A3	Document Number <Doc> MST9E19A	Rev 2.0
Date: Monday, February 04, 2008	Sheet 2 of 19	


DVI INPUT
VGA INPUT
SCART INPUT
VIDEO INPUT
MST9E19A
N8
Location Near IC Pin.
Location Near IC Pin.
Location Near IC Pin.
WP:Mstar PULL DOWN
Location Near IC
Mode Selection
Debug port
Debug port
I2C address at A0.
HDCP I2C address at A4.
LG NEW CHANGE PWR IO
GPIOF[3:0]=5,VDO_PORT_SEL=00 for I2S input
SPDIF_OUT
AMP-Rout
AMP-Lout
AUOutR3
AUOutL3
AUOutR2
AUOutL2
LED_RED
LED_GREEN
LED-MCU1
IR-in
IR-in USB
INPAQ_VPORT
CON3_2.0
CON8_2.0
CON8
40P-2X20
CON4_2.0
CONS_2.0
SPI_CK
SPI_DI
SPI_CZ
SPI_DO
LVDS-SL/SCL
BRI_OUT
I2C-SCL
I2C-SDA
DDC-TXD
DDC-RDX
ADJ-PWM3
PWM2
PWM1/WP_FSH
PWM0
HD-VSW0
AMP-MUTE
Overdrive
LED_GREEN
LED_RED
PANEL-ON/OFF
MCU_CNT
HDMI_WP
POWER-ON/OFF
ON-PBACK
HPDCTRL
WP
KEY0
KEY1
KEY0-in
KEY1-in
USB-PW
VCC-Panel
LVDS-SL/SCL
BRI_OUT
SYS_RST
INPAQ_VPORT
D100
D120
XP2
XP1
XP3
XP4
N9
PS25VF040
N10
24C32
N11
24C04
L29
BLM18PG181SN1
Title
MST9E19A
Size
A2
Document Number
MST9E19A
Rev
2.0
Date:
Wednesday, January 23, 2008
Sheet
3
of
19
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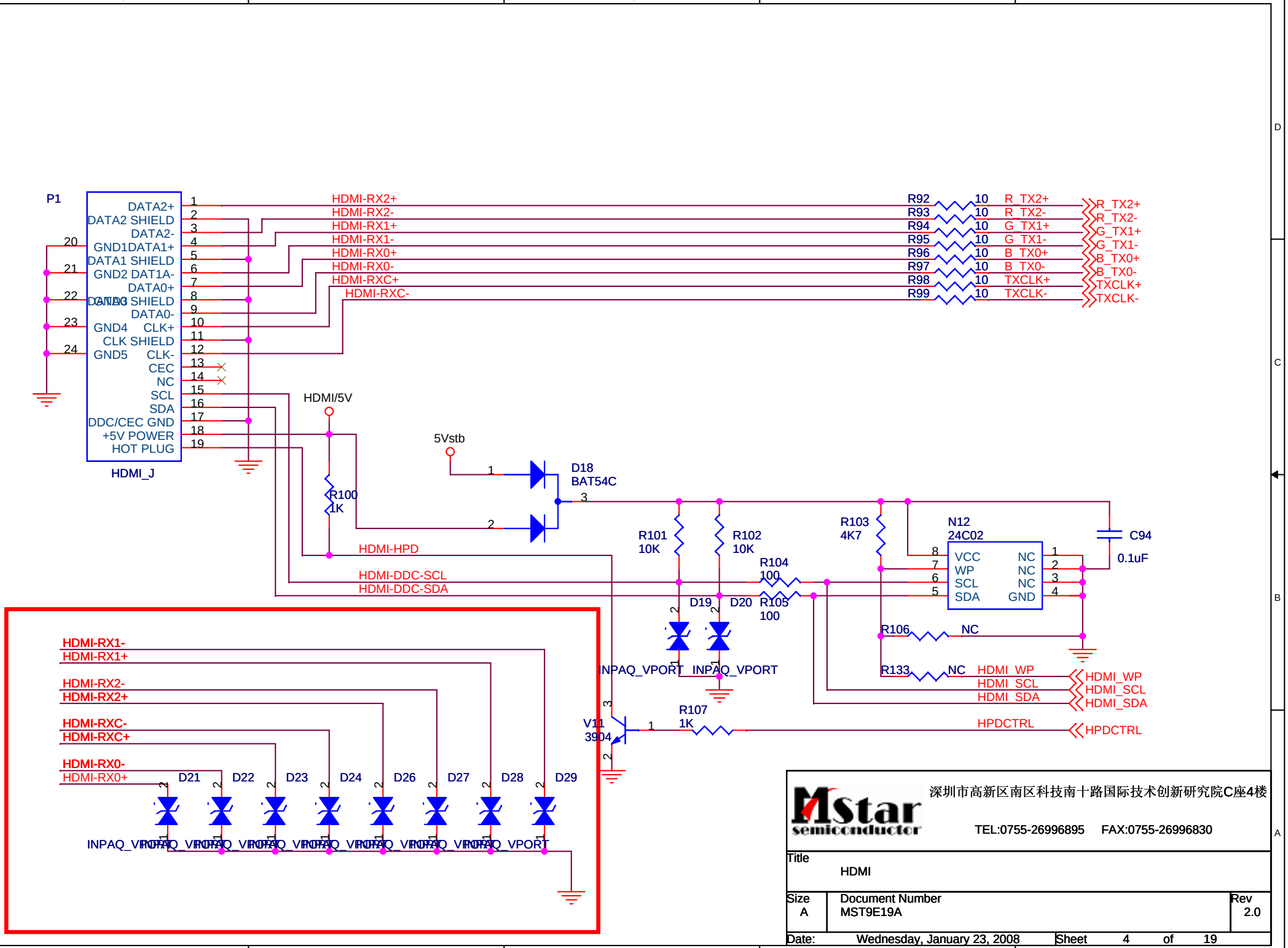
TEL:0755-26996895
FAX:0755-26996830



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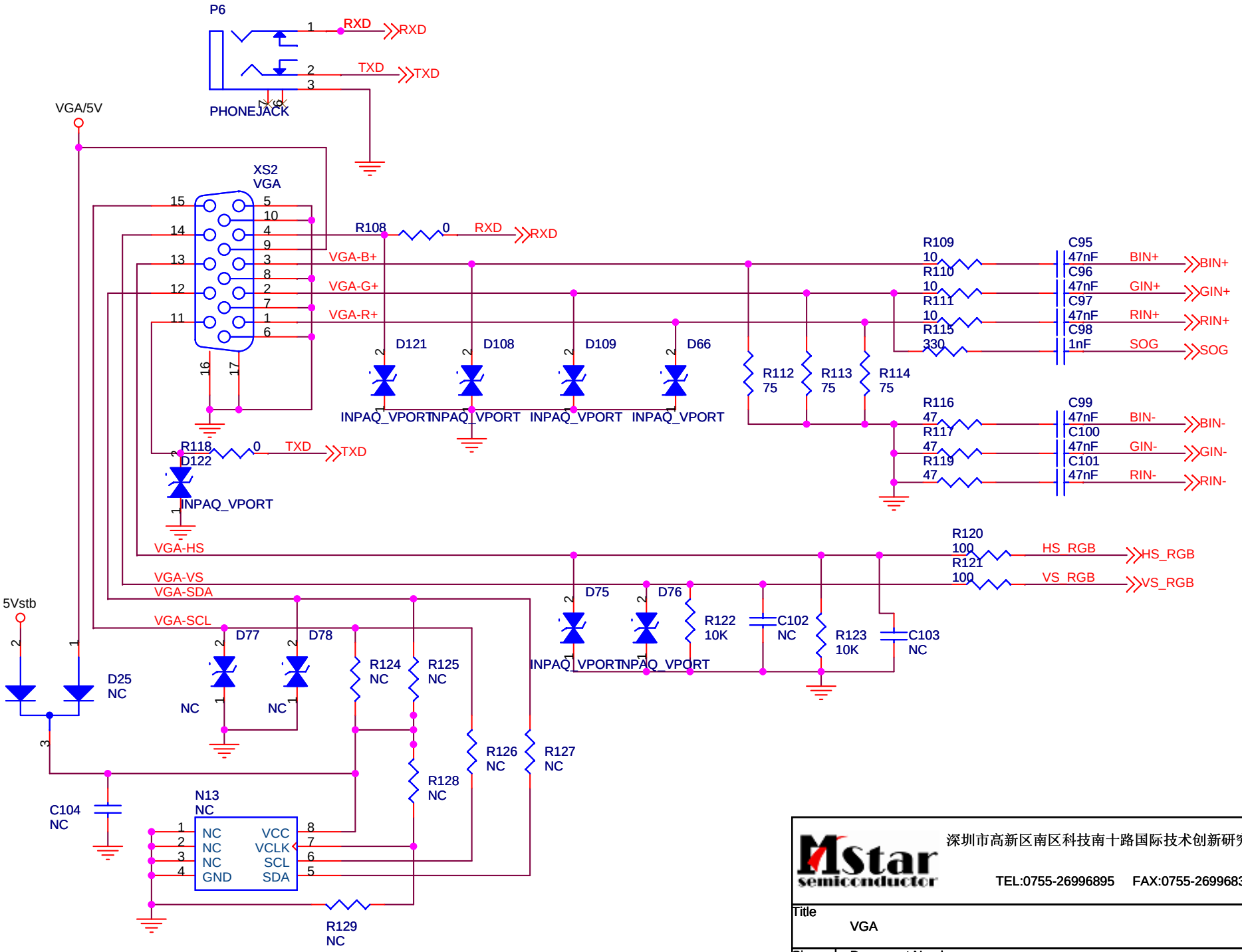
Size: A	Document Number: MST9E19A	Rev: 2.0
Date: Wednesday, January 23, 2008	Sheet 4 of 19	


P6
RXD
TXD
PHONEJACK
VGA/5V
XS2
VGA
R108
0
VGA-B+
VGA-G+
VGA-R+
D121
D108
D109
D66
INPAQ_VPORT
R112
75
R113
75
R114
75
R109
10
R110
10
R111
10
R115
330
C95
47nF
C96
47nF
C97
47nF
C98
1nF
BIN+
GIN+
RIN+
SOG
R116
47
R117
47
R119
47
C99
47nF
C100
47nF
C101
47nF
BIN-
GIN-
RIN-
R118
0
D122
VGA-HS
VGA-VS
VGA-SDA
VGA-SCL
R120
100
R121
100
HS_RGB
VS_RGB
D75
D76
R122
10K
C102
NC
R123
10K
C103
NC
5Vstb
D25
NC
D77
D78
NC
R124
NC
R125
NC
R126
NC
R127
NC
R128
NC
C104
NC
N13
NC
VCC
VCLK
SCL
SDA
R129
NC
深圳市高新区南区科技南十路国际技术创新研究院C座4楼
TEL:0755-26996895 FAX:0755-26996830
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VGA
Size
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Document Number
MST9E19A
Rev
2.0
Date:
Friday, December 07, 2007
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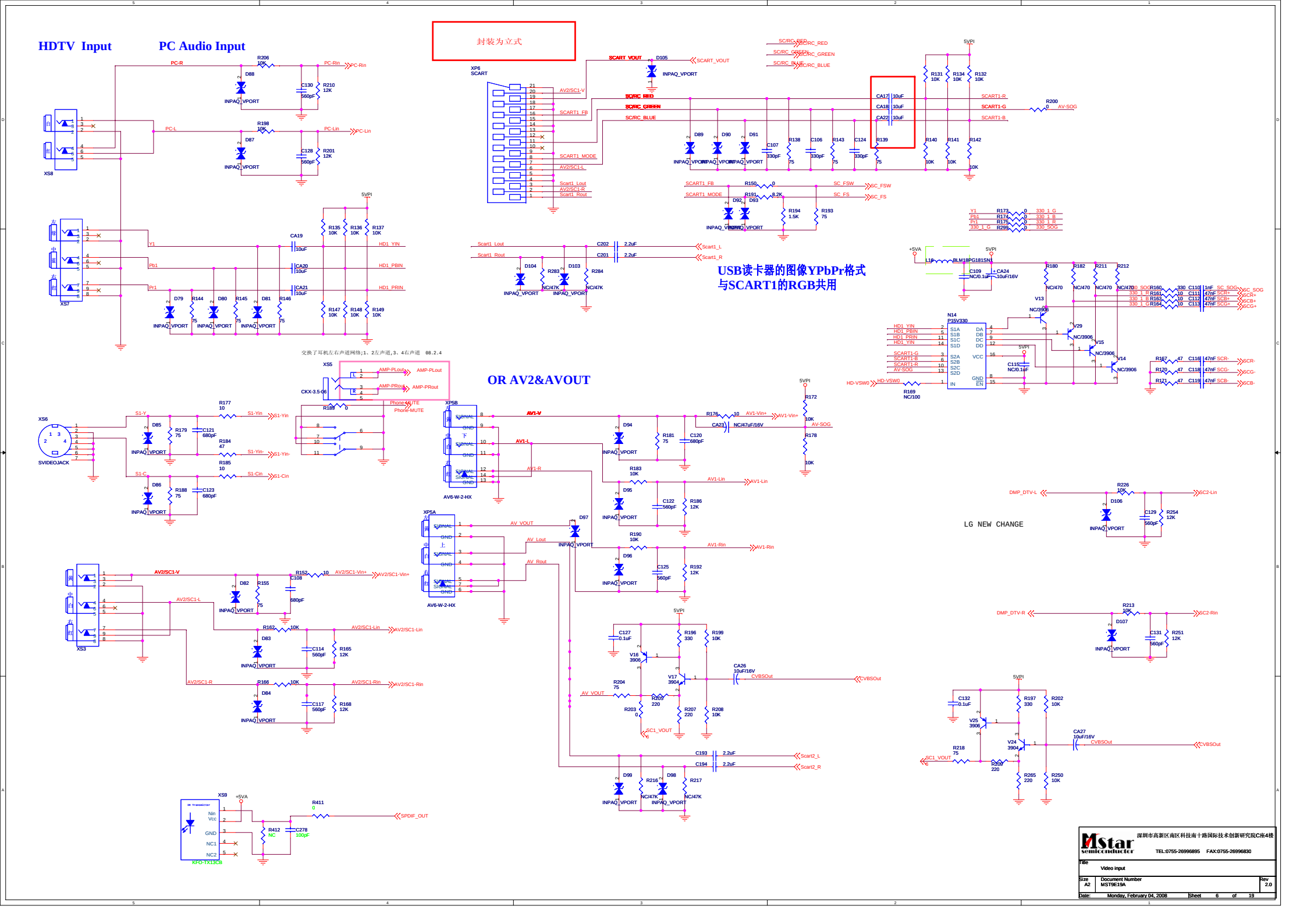
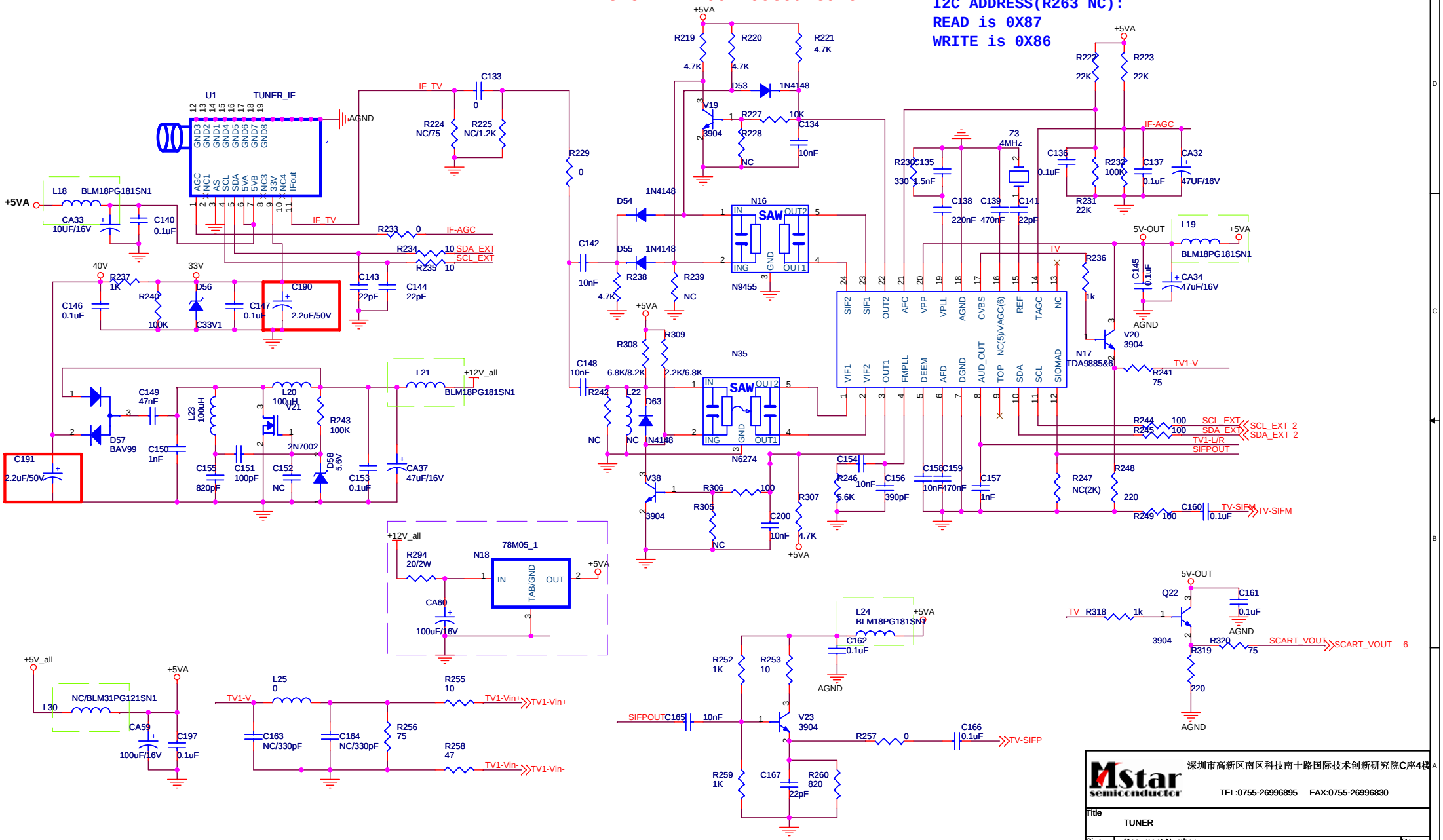
19


HDTV Input
PC Audio Input
封装为立式
USB读卡器的图像YPbPr格式
与SCART1的RGB共用
OR AV2&AVOUT
LG NEW CHANGE
交换了耳机左右声道网络;1、2左声道,3、4右声道 08.2.4
XS8
XS7
XS6
XS3
XS5
XS9
XP6 SCART
XP5B
XP5A
AV6-W-2-HX
SVIDEOJACK
CKX-3.5-06
INPAQ_VPORT
5VPI
+5VA
PC-R
PC-L
PC-Rin
PC-Lin
HD1_YIN
HD1_PBIN
HD1_PRIN
SCART1_VOUT
SC/RC_RED
SC/RC_GREEN
SC/RC_BLUE
SCART1-R
SCART1-G
SCART1-B
AV-SOG
SCART1_FB
SCART1_MODE
SC_FSW
SC_FS
Scart1_Lout
Scart1_Rout
Scart1_L
Scart1_R
AV2/SC1-V
AV2/SC1-L
AV2/SC1-R
AV2/SC1-Vin+
AV2/SC1-Lin
AV2/SC1-Rin
S1-Y
S1-Yin
S1-Yin-
S1-C
S1-Cin
AV1-V
AV1-L
AV1-R
AV1-Vin+
AV1-Lin
AV1-Rin
AV_VOUT
AV_Lout
AV_Rout
SC1_VOUT
SC2-Lin
SC2-Rin
DMP_DTV-L
DMP_DTV-R
CVBSOut
AMP-PLout
AMP-PRout
Phone-MUTE
HD-VSW0
SC_SOG
SCR+
SCG+
SCB+
SCR-
SCG-
SCB-
SPDIF_OUT
KFO-TX13CB
深圳市高新区南区科技南十路国际技术创新研究院C座4楼
TEL:0755-26996895 FAX:0755-26996830
Title
Video input
Size A2
Document Number MST9E19A
Rev 2.0
Date: Monday, February 04, 2008
Sheet 6 of 19

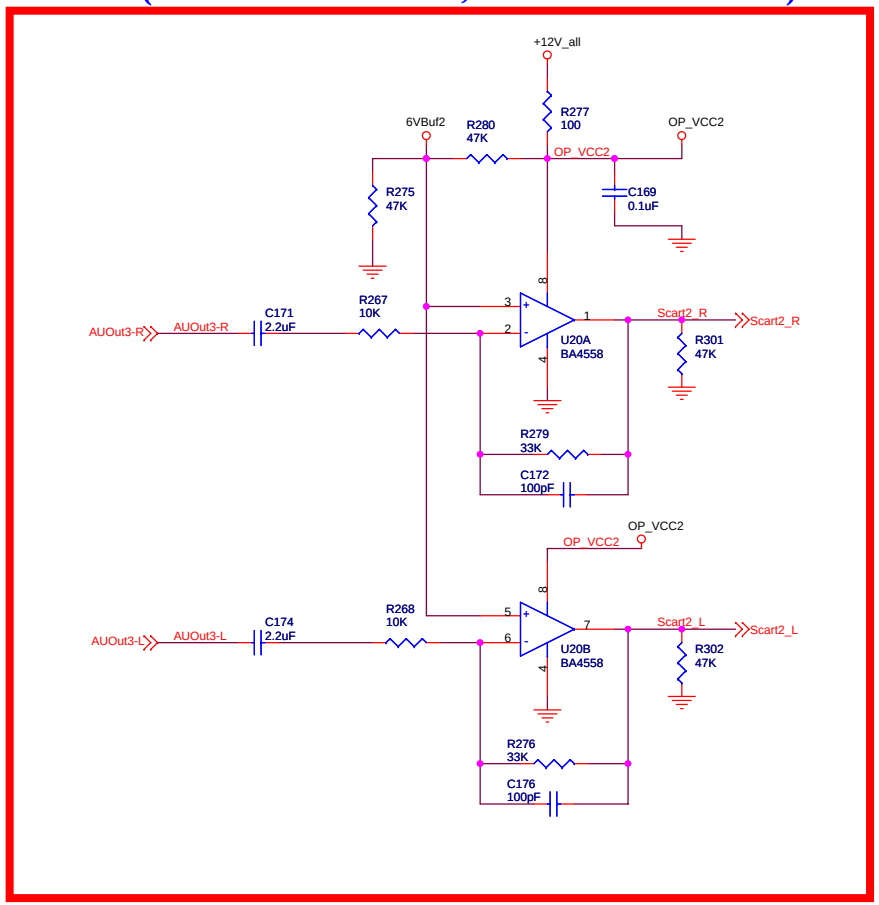
U23 PIN2 connected to PIN1 B/G,DK,I,L
U23 PIN2 connected to GND L'

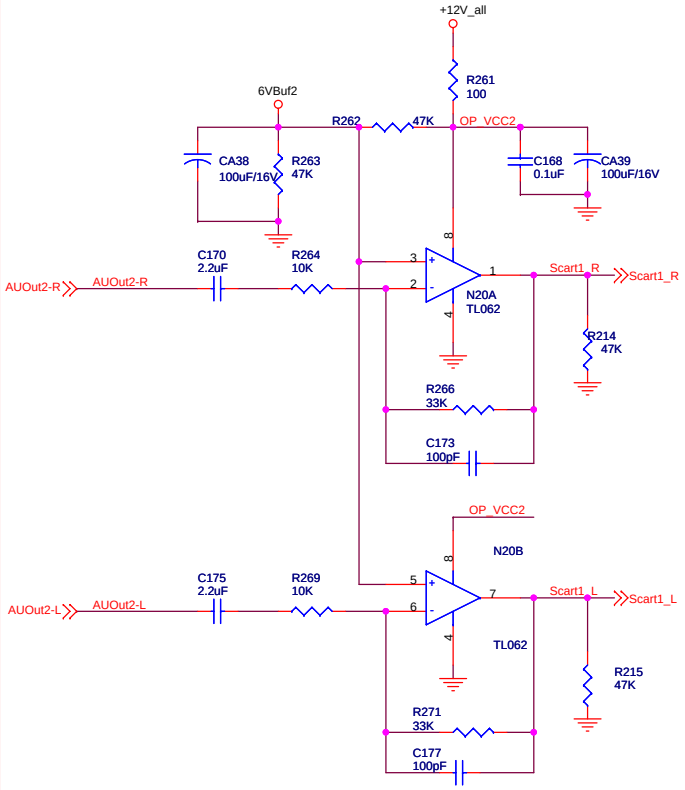
I2C ADDRESS(R263 NC):
READ is 0X87
WRITE is 0X86

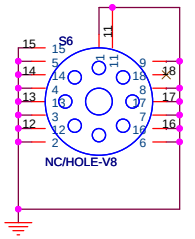


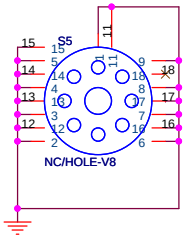
MStar semiconductor	深圳市高新区南区科技南十路国际技术创新研究院C座4楼 TEL:0755-26996895 FAX:0755-26996830	
Title: TUNER		
Size: B	Document Number: MST9X88L	Rev: 01A
Date: Monday, February 04, 2008	Sheet 7 of 19	

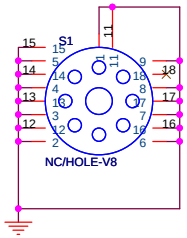
Audio OP(AUOUTL3/AUOUTR3; AUOUTL2/AUOUTR2)

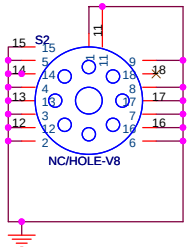


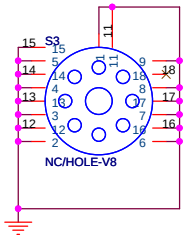


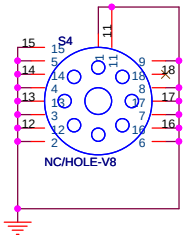


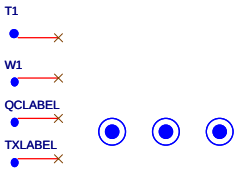












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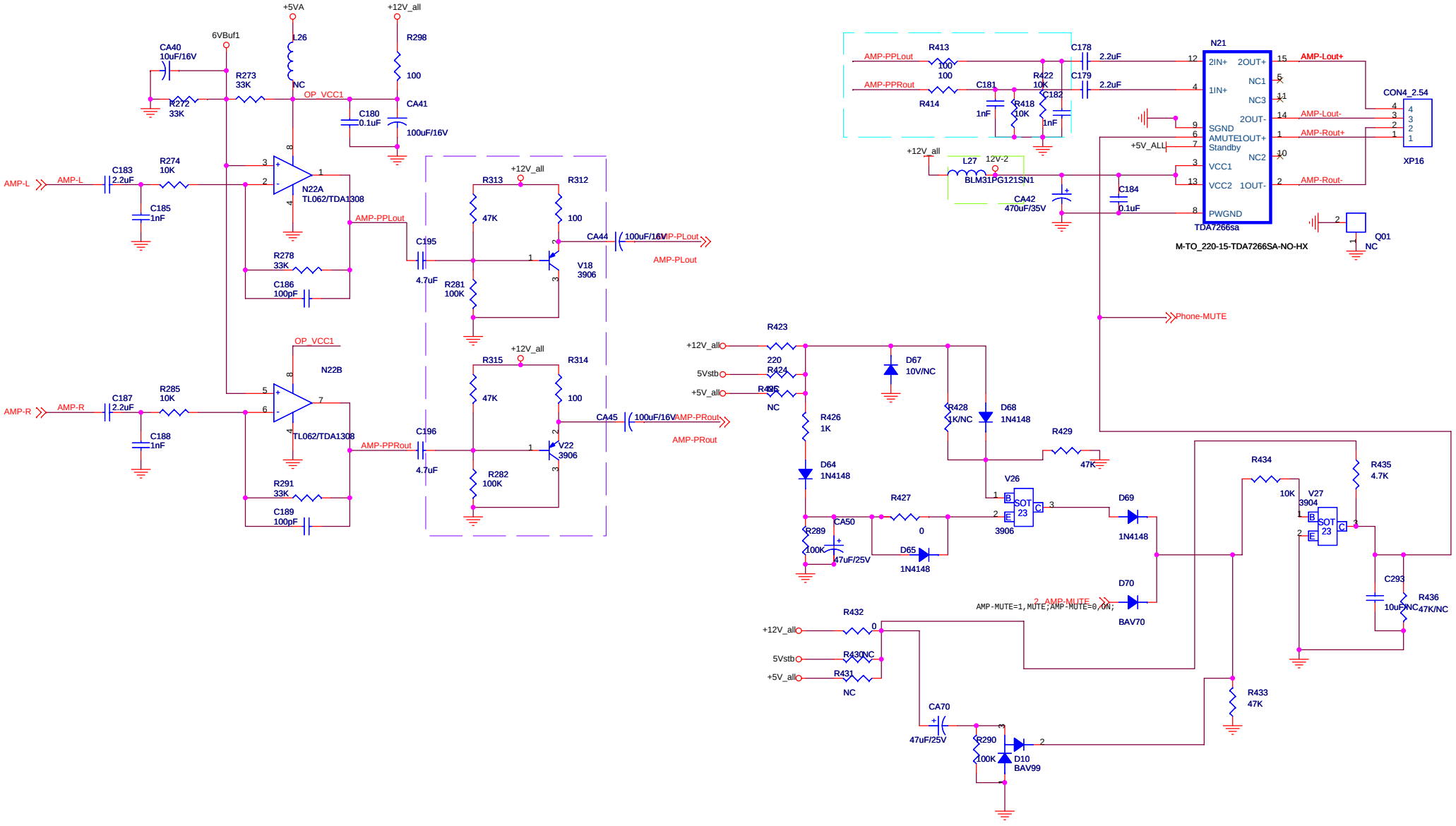
Size: A3	Document Number: MST9E19A	Rev: 0.01
Date: Monday, February 04, 2008	Sheet 8 of 19	

FOR TDA1308/PT2308 L26 FB,R298 NC;
FOR TL062 L26 NC,R298 0;



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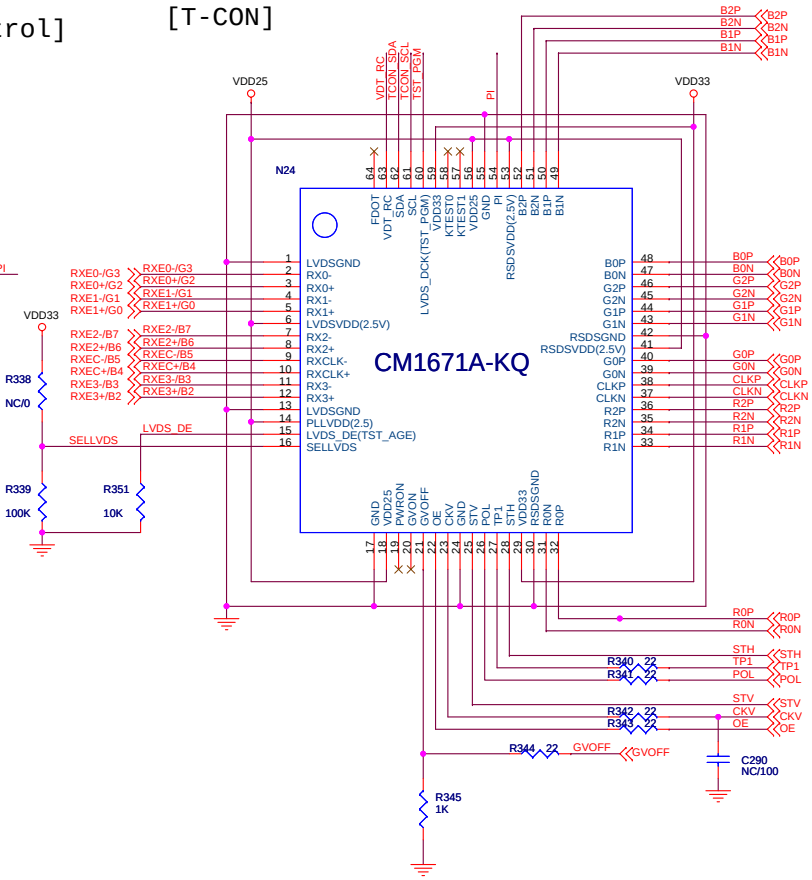
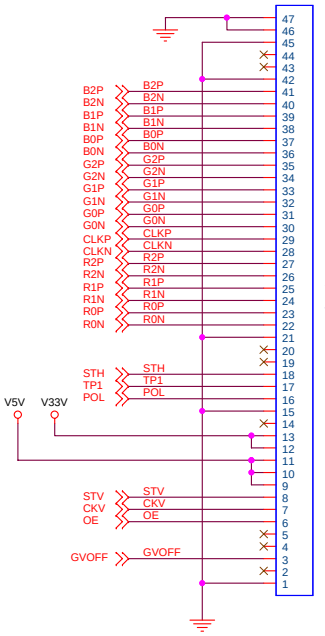
Title: TDA1517		
Size: A3	Document Number: MST9E19A	Rev: 2.0
Date: Friday, April 11, 2008	Sheet 9 of 19	

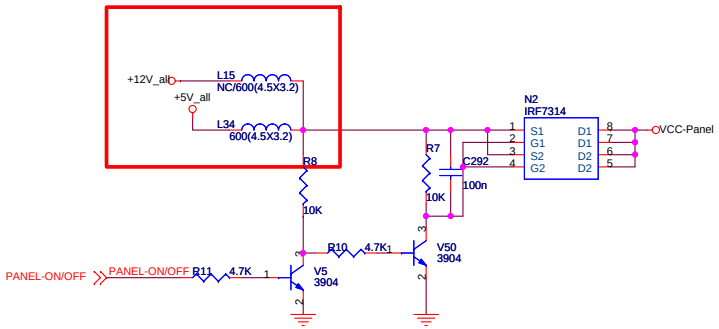
[Terminator near T-CON]

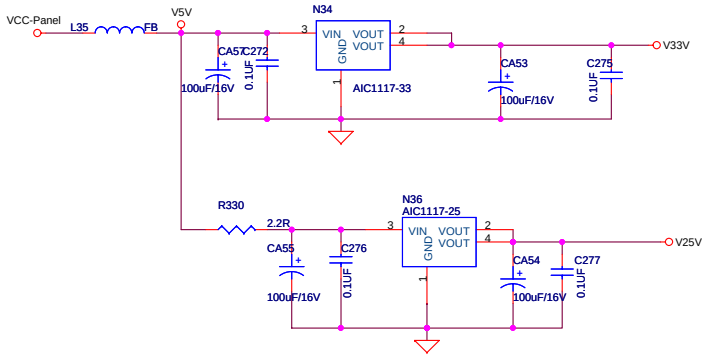
[ASIC Control]

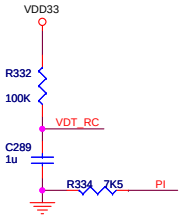
[T-CON]



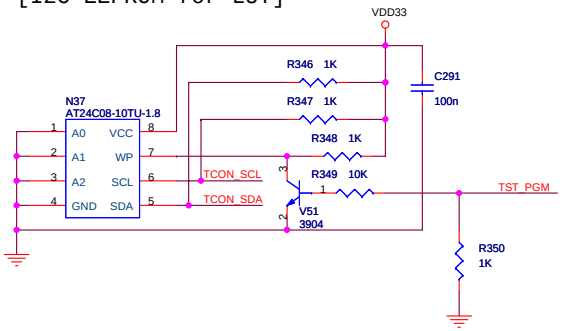




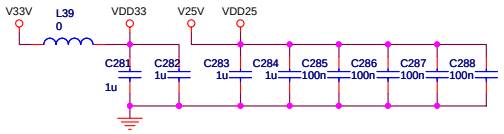




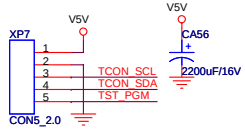
[I2C EEPROM for LUT]



[Filter near T-CON]



Debug port



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