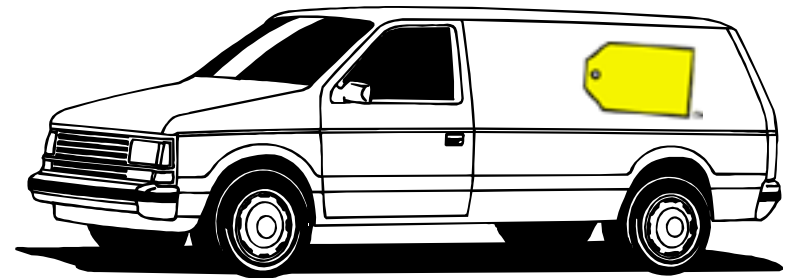


Best Buy Service Requirements for Consumer Electronics Service Manuals

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Service

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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 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 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 technician trained in the proper Television safety and service methods and procedures. 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 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 Hisense. Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicetech assumes all liability.

DANGER 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, be sure to use anti-static table mats and properly use a grounding wrist strap. 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 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

2.2 Specifications

3. Remote Control Spec

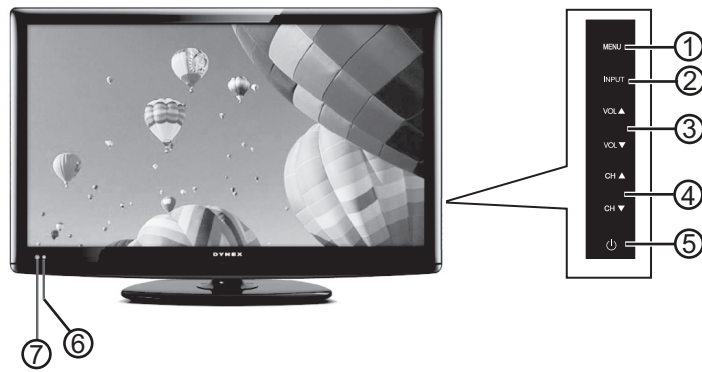
Specifications

TV model	DX-L40-10A
TV type	LCD
TV panel	40-inch TFT LCD
TV system	NTSC-M, ATSC
Channels	VHF: 2-13
	UHF: 14-69
	CATV: 1-125
	CADTV: 1-135
	DTV: 2-69
	Audio multiplex BTSC system
Audio Output	7 w x 2
Power requirement	AC 120 V~60 Hz
Power consumption	185 W
Dimensions	48 x 9 x 28.3 inches (122 x 22.9 x 71.9 cm)
Weight	53 lbs. (24 kg)
Audio/video	Composite video/left and right audio (2)
input terminals	S-Video (1)
	Component video/left and right audio (2)
	HDMI (3)
	VGA/audio (1)
	ANT/CABLE in (1)
Audio/video	Left and right audio
output terminals	Headphone jack (1)
	Optical digital audio (1)

TV components

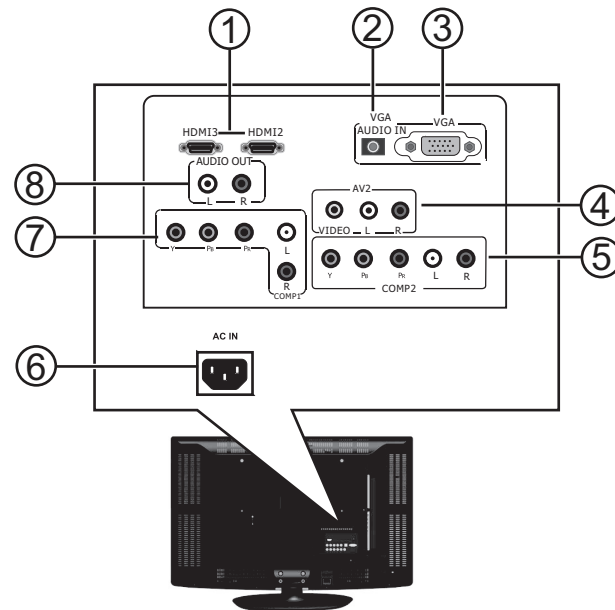
TV components

Front and side controls



#	Component	Description
1	MENU	Press to open the on-screen menu.
2	INPUT	Press to select the video input source.
3	VOL ▲/▼	Press to increase or decrease the volume.
4	CH ▲/▼	Press to go to the next or previous channel in the channel list.
5	⏻ (power) button	Press to turn on your TV. Press again to put your TV in standby mode.
6	Power/Standby indicator	Lights blue when your TV is turned on. Lights red when your TV is in standby mode.
7	Remote sensor	Receives signals from the remote control. Do not block.

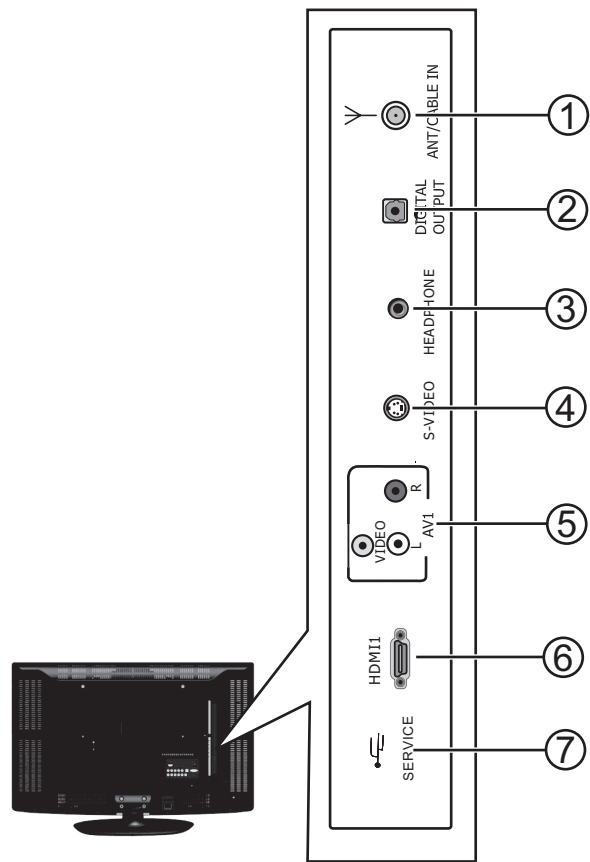
Back connections



#	Component	Description
1	HDMI3 and HDMI2 jacks	Connect an HDMI device, such as a cable box or DVD player, to one of these jacks. An HDMI cable carries both video and audio, so you do not need to make an audio connection. For more information, see "Connecting an HDMI device" on page 10.
2	VGA AUDIO IN jack	Connect the mini plug from your computer's sound card output to this jack. For more information, see "Connecting a computer" on page 12.
3	PC VGA jack	Connect a 15-pin VGA cable from a computer to this jack. For more information, see "Connecting a computer" on page 12.
4	AV2 (Video and audio jacks)	Connect the composite video and audio L and R from a VCR, game console, or camcorder to these jacks.
5	COMP2 (Y, Pb, Pr and audio L and R) jacks	Connect a component video device to these jacks. Cables are often color-coded to connectors. For more information, see "Connecting a component video device" on page 11.
6	AC IN	Connect the AC power cord to this connector.
7	COMP1 (Y, Pb, Pr and audio L and R) jacks	Connect a component video device to these jacks. Cables are often color-coded to connectors. For more information, see "Connecting a component video device" on page 11.
8	AUDIO OUT jacks (L and R)	Connect audio cables (L and R) from these jacks to an external audio amplifier or receiver.

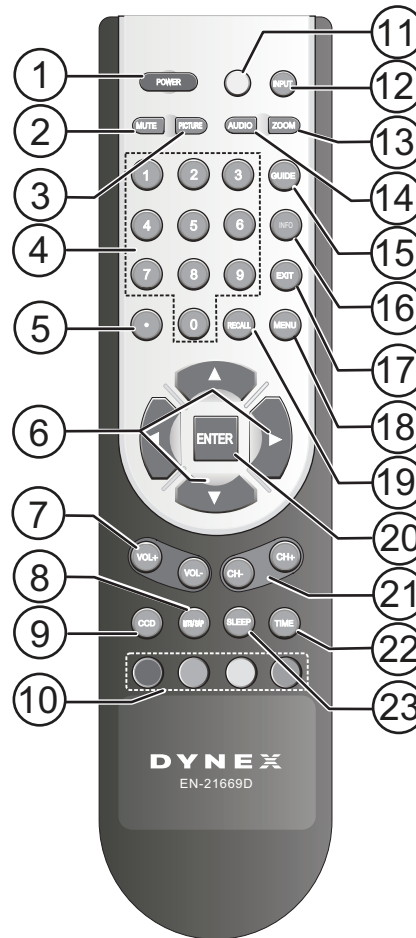
TV components

Side connections



##	Component	Description
1	ANT/CABLE IN jack	Connect an antenna, cable TV, or a satellite box to this jack. For more information, see "Connecting an antenna, cable TV, or satellite TV box" on page 9.
2	DIGITAL OUTPUT	Connect an optical audio device to this jack. (Only available in digital TV or HDMI modes.)
3	HEADPHONE jack	Plug your headphones into this jack.
4	S-VIDEO jack	Connect an S-Video cable from a VCR or DVD player to this jack. Also requires an audio connection or audio output from an amplifier (see "Connecting an S-video device" on page 11).
5	AV1 (Video and audio jacks)	Connect a composite video and audio L and R from a VCR, game console, or camcorder to these jacks.
6	HDMI1 jack	Connect an HDMI device, such as a cable box or DVD player, to this jack. An HDMI cable carries both video and audio, so you do not need to make an audio connection. For more information, see "Connecting an HDMI device" on page 10.
7	SERVICE port	For service update only. Do not use.

Remote control



#	Button	Description
1	POWER	Press to turn on your TV. Press again to put your TV in Standby mode.
2	MUTE	Press to turn off the sound. Press again to turn on the sound.
3	PICTURE	Press to select the video mode.
4	Numbers	Press to enter channel numbers or the parental control password.
5	• (dot)	Press to select a digital sub-channel.
6	▲ ▼ ▶ ◀	Press to navigate through the on-screen menus.
7	VOL+/VOL-	Press to increase or decrease the volume.
8	MTS/SAP	Press to enable the SAP (Second Audio Program) function. This lets you listen to a program using an alternative second language. Function availability depends on your TV provider.
9	CCD	Press to turn closed captioning on or off. For more information, see "Adjusting the setup" on page 18.
10	Electronic Program Guide (EPG) function buttons	After pressing the GUIDE button in the digital TV channel option, the same color buttons will appear with explanations in the on-screen display (OSD). Follow the steps illustrated in the OSD.
11	Power indicator	Lights when you turn your TV on.

Using the remote control

#	Button	Description
12	INPUT	Press to open the <i>INPUT SOURCE</i> menu, then press ▲ or ▼ to select the video input source. You can select TV, AV1, AV2, S-video, Component 1, Component 2, VGA, HDMI1, HDMI2, or HDMI3.
13	ZOOM	Press to select the video display format.
14	AUDIO	Press to select the sound mode.
15	GUIDE	Press to open the electronic program guide (EPG) function.
16	INFO	Press to display the information banner. For more information, see "Displaying additional information" on page 15.
17	EXIT	Press to close the on-screen menu.
18	MENU	Press to open the on-screen menu.
19	RECALL	Press to return to the channel you were previously viewing.
20	ENTER	During TV viewing, press to switch to the keyed in channel entry. In menu mode, press to confirm selections in an on-screen menu or to open a submenu.
21	CH+/CH-	Press to go to the next or previous channel in the channel list. For more information, see "Selecting a channel" on page 15.
22	TIME	Press to display the current time.
23	SLEEP	Press to set the sleep timer to have your TV turn off automatically.

Using the remote control

Installing remote control batteries

To install remote control batteries:

- 1 Open the battery compartment cover by sliding it off.
- 2 Insert two AAA batteries into the battery compartment. Make sure that the + and – symbols on the batteries match the + and – symbols in the battery compartment.



- 3 Replace the cover.

Notes:

Do not mix different types of batteries.

Do not mix old and new batteries.

Remove batteries when they no longer have a charge. Chemicals may leak into the battery compartment. Battery chemicals can cause a rash. If chemicals leak, clean the battery compartment with a cloth.

Remove the batteries if you do not intend to use the remote control for an extended amount of time.

Do not dispose of batteries in a fire. Dispose of them as hazardous waste.

Aiming the remote control

To use the remote control:

- Point the remote control towards the remote sensor on the front of your TV. The remote control should be used within 26 feet (7.9 m) of your TV.



Notes:

Do not expose the remote control to shock or liquids.

Do not use the remote control in an area with high humidity.

Do not place the remote control in direct sunlight.

Do not place objects, such as furniture, between the remote control and the remote sensor.

The remote control may not work if direct sunlight or bright light shines on the remote sensor. Either move your TV or change the angle at which you use the remote control.

4. LCD Panel Spec

Panel: LTA400HA07-D\JK \ROH SN: 1058853

4.1 General Description

LTA400HA07 is a color active matrix liquid crystal display (LCD) that uses amorphous silicon TFT (Thin Film Transistor) as switching components. This model is composed of a TFT LCD panel, a driver circuit and a back light unit. The resolution of a 40.0" is 1920 x 1080 and this model can display up to 16.7 Million colors with wide viewing angle of 89° or higher in all directions. This panel is intended to support applications to provide an excellent performance for Flat Panel Display such as Home-alone Multimedia TFT-LCD TV and High Definition TV.

Features

- RoHS compliance (Pb-free)
- High contrast & aperture ratio with wide color gamut
- SPVA (Super Patterned Vertical Align) mode
- Wide viewing angle ($\pm 178^\circ$)
- High speed response
- FHD resolution (16:9)
- Low Power consumption
- Direct Type 16 CCFLs (Cold Cathode Fluorescent Lamp)
- DE (Data Enable) mode
- LVDS (Low Voltage Differential Signaling) interface (2pixel/clock)

4.2 General Features

Items	Specification	Unit	Note
Module Size	952.0(H _{TYP}) x 551.0(V _{TYP})	mm	±1.0mm
	55.2(D _{MAX})		
Weight	10,000 (Max.)	g	
Pixel Pitch	0.46125(H) x 0.46125(W)	mm	
Active Display Area	885.6(H) X 498.15 (V)	mm	
Surface Treatment	Haze14% , Hard-coating (3H)	-	
Display Colors	8 bit – 16.7M	Colors	
Number of Pixels	1920 x 1080	Pixel	
Pixel Arrangement	RGB vertical stripe	-	
Display Mode	Normally Black	-	
Luminance of White	500 (Typ.)	cd/m ²	

5. Chassis Layout and Overall Wiring Diagrams

Boards and Chassis Layout

No	Description	Part No.	Type/Model	PCB/ Model
(1)	Main Board	122917	RSAG2.908.1616-3\ROH	RSAG7.820.1802\VERE\ROH
(2)	Power Board	122904	RSAG2.908.1524-4\ROH	RSAG7.820.1673\VER.E\ROH
(3)	Touch Keypad	122922	RSAG2.908.1625-8\ROH	RSAG7.820.1833\VER.B\ROH
(4)	IR Board	122920	RSAG2.908.1566-9\ROH	RSAG7.820.1725\VER.C\ROH

6. Factory/Service OSD Menu and Adjustment

6.1 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.

- b. With user’s RC
 1. Power TV On
 2. Press Menu button and call up User OSD Menu
 3. Select Audio-> Balance
 4. Enter 0->5->3 ->2 in sequence.
Note: If necessary, re-do number keys.
 5. Factory OSD appears.
 6. Press Menu again and leave factory OSD.

6.2 Factory OSD Menu

6.2.1 White Balance

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

1. Auto Color

For VGA and Component Video sources, WB values must be adjusted.

Before adjusting, prepare the signal instruments such as DVD or K-8256 first, and find the video picture with gray and color bars. Then please change to desired source.

	source	Timing	Pattern	Notes
1	ADC VGA	1024*768	gray-3color	For VGA source
2	ADC HDTV	720P	gray-3color	For Component Video

Notes:

- a、 Press “M” button and enter factory mode.
- b、 Press “Menu” button and enter factory OSD menu.
- c、 Select the item “Auto Color” .
- d、 Press VOL+ button to auto color.
- e、 Close the OSD menu after 5 seconds.

6.2.2 Factory Option

	Item	Default	Options	Notes
1	MODE	M	M, U	M-Can enter factory mode with factory RC or user RC. U-Can enter factory mode only with user' s RC.

Note: MODE “M” is only used for factory production.

6.2.3 Version Info

	Item	Default	Options	Note
1	Version			Software version
2	Date			The date of current version

Note: Software version info of the TV, readable only.

6.2.4 Clear the EEPROM

Item	Meaning	Note
Clean Protected	Clear partly	Clean data except WB data and Auto Color data
Clean All	Clear completely	Clean all data

Note: The factory menu date varies according to different sources. Incase changing the factory data by error, you can choose to “Clean Protected”, by which you can resume the default value.

To clear the EEPROM:

- Select the item “Clean All” .
- Press VOL+ button to clear the EEPROM data.
- Close the OSD menu after 5 seconds.
- Restart the TV.

6.3 Designer Menu

6.3.1 Video Mode

Standard:

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	119	119	119	141	127	120
G Gain	125	125	125	145	120	122
B Gain	130	130	130	145	130	132

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Offset:

	TV	AV	S-Video	Component	VGA	HDMI
R Offset	116	116	116	121	124	120
G Offset	124	124	124	125	126	128
B Offset	124	124	124	125	127	128

Cool:

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	119	119	119	141	127	120
G Gain	125	125	125	145	120	122
B Gain	145	145	145	160	145	147

Warm:

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	134	134	134	156	142	135
G Gain	125	125	125	145	120	122
B Gain	130	130	130	145	130	132

6.3.2 Video Curve:

	TV	AV	S-Video	Component	VGA	HDMI
Bright Max	600	650	650	700	700	650
Bright Min	0	0	0	0	0	0
Bright Mid	520	550	550	550	590	530
Contrast Max	650	600	600	550	600	600
Contrast Min	0	0	0	0	0	0
Contrast Mid	500	480	480	460	440	470
Saturation Max	800	800	800	800	800	800
Saturation Min	0	0	0	0	0	0
Saturation Mid	570	550	550	500	630	500
Hue Max	1000	1000	1000	1000	1000	1000
Hue Min	0	0	0	0	0	0
Hue Mid	471	471	471	471	471	471

6.3.3 Picture Mode

	TV	AV	S-Video	Component	VGA	HDMI
Vivid Bright	55	55	55	55	55	55
Vivid Contrast	55	55	55	55	55	55
Vivid Saturation	55	55	55	55	55	55
Std Bright	50	50	50	50	50	50
Std Contrast	50	50	50	50	50	50
Std Saturation	50	50	50	50	50	50
Movie Bright	45	45	45	45	45	45
Movie Contrast	45	45	45	45	45	45
Movie Saturation	45	45	45	45	45	45

6.3.4 Volume Curve:

	Min	20	Mid	80	Max
TV	0	24	34	49	80
AV/ S-Video	0	23	30	47	67
component	0	23	30	47	67
HDMI	0	19	24	35	52
VGA	0	23	30	47	67

Note: Set Downmix to “Lt/Rt”.

6.4 To Exit the Aging Mode

If There is a red “M” moving on the screen, it means the TV is in Aging mode. To exit the Aging mode, use your user RC, and enter 8->0->8 ->7 in sequence.

Note:

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

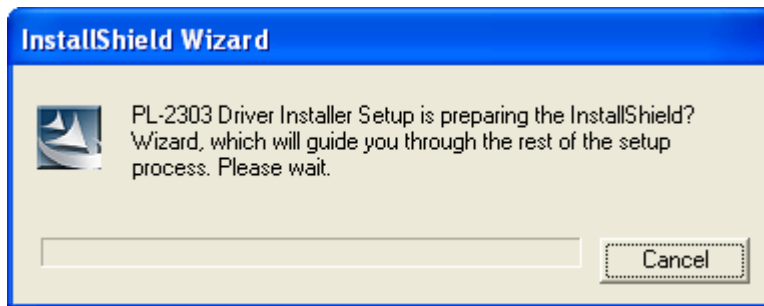
7. Software Upgrading

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

7.1 Get ready for upgrading

7.1.1 Install the driver

Double click the icon  , install the driver.



Select the default value, the driver will be installed step by step.

7.1.2 Hardware connecting

Connect the unit to your pc with a USB-to-serial port cable. USB port connects to your pc, and serial port to the TV's RS232 port.

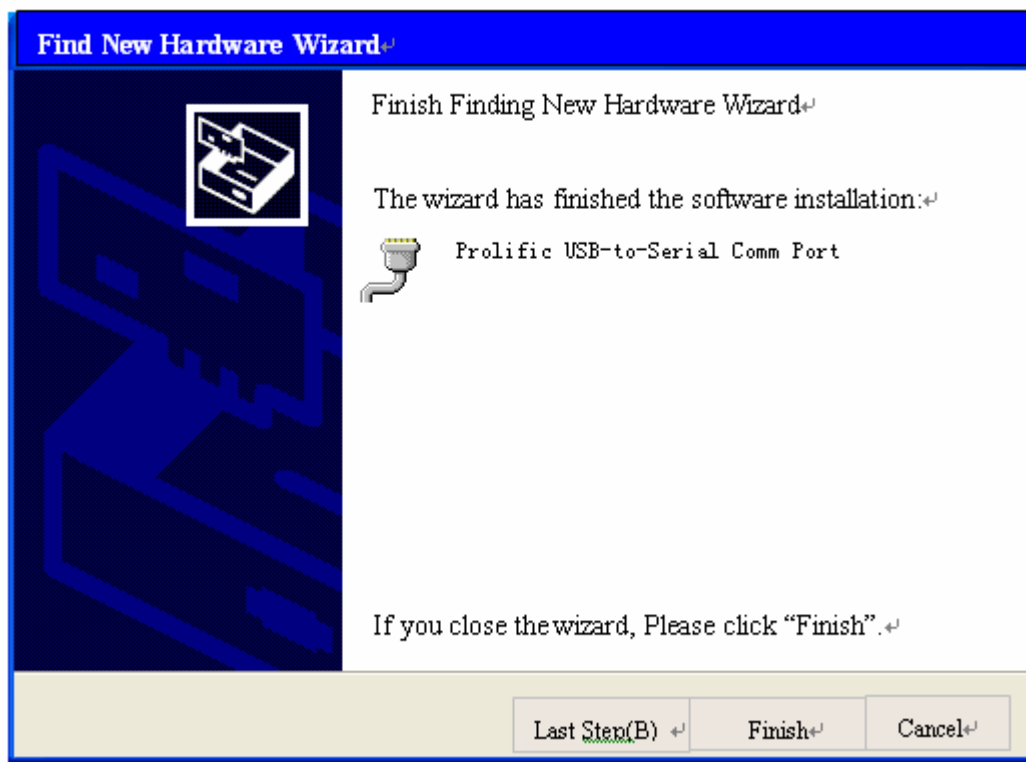


USB connector: to PC.

Serial connector: to TV's RS232 port.

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For the first connecting, the pc will recognize and automatically install the USB device. The process is just like the installation of a mini disk, see the following picture.



7.2 Upgrading with the MtkTool

Mtktool is a green program needing no installation. It is saved in the folder



MTKTOOL_20061027

. There are five folders/files in this folder altogether.



MtkLog



flashinf.ini
配置设置
17 KB



MtkTool.exe

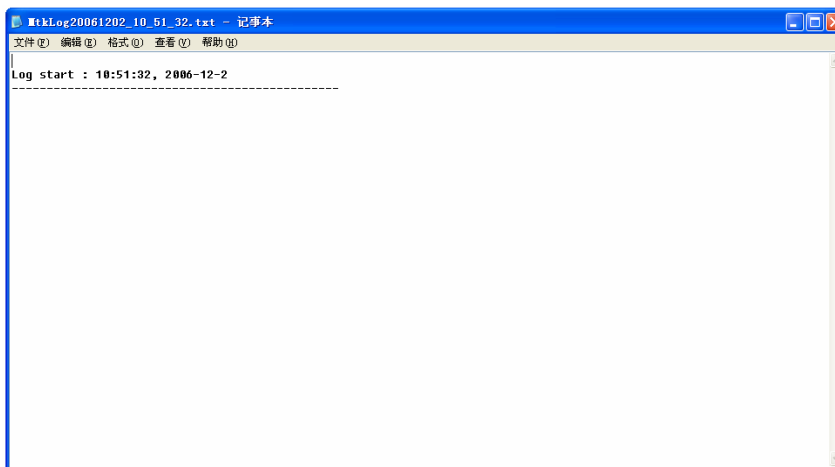


MtkTool.ini
配置设置
1 KB




Shortcut to
MtkTool.exe
快捷方式

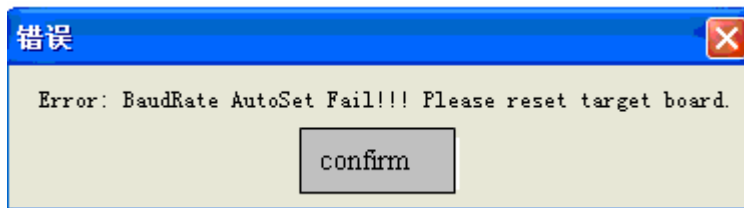
The MtkTool using log is restored in the MtkLog folder. It records the running time and date whenever the tool is used. The log will be a txt file named by the date and time.



MtkTool.exe

After connecting the TV with your PC, double click  icon, open the MtkTool.

If following error appears, it means the related port is not be set properly.



Ignore these errors, click “Confirm” and enter the MtkTool main interface, see the following picture.

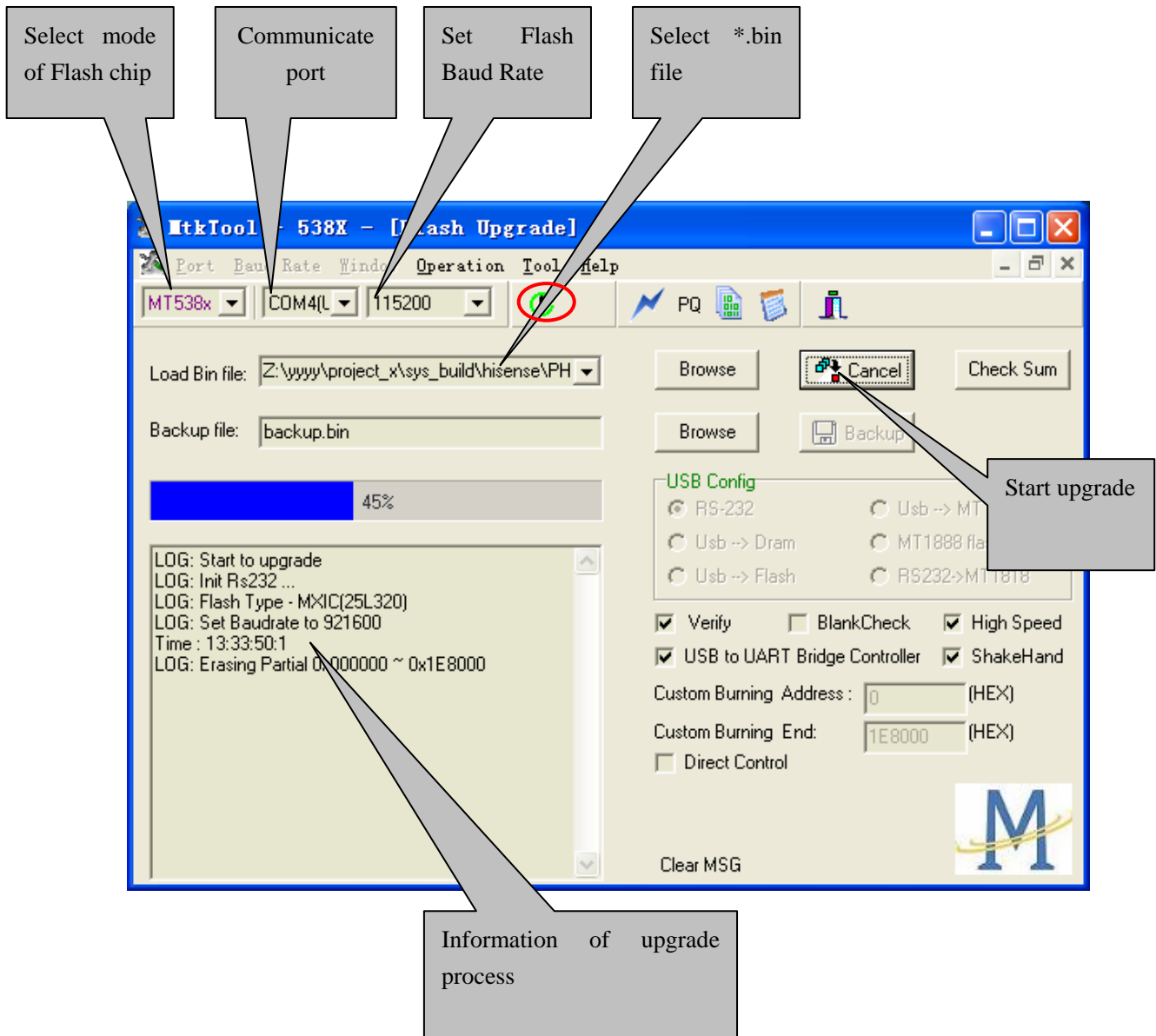
Flash chip model

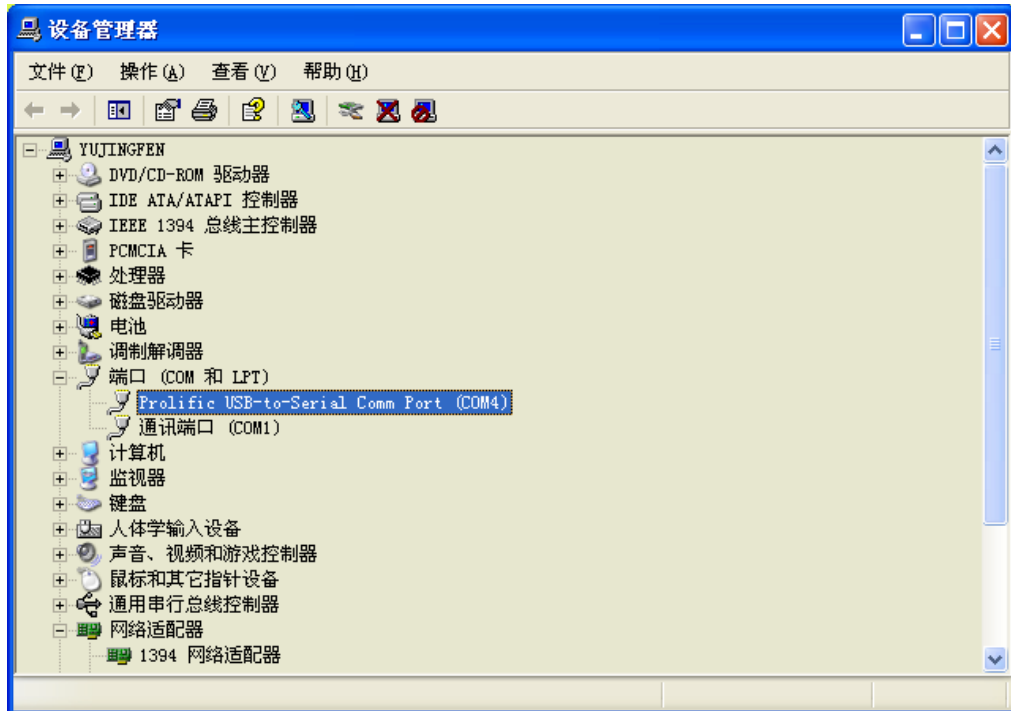
Please refer to follow steps to update the software:

- 1—Select mode of Flash chip to MT538X as the below picture.
- 2—Refer to the next page instruction to select the communicate port.
- 3—Press the icon beside the baud rate and make sure it is green as the below picture.
- 4—Set the flash baud rate to 115200 as the below picture.

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- 5—Click the browse button to select the *.bin file that will be updated.
- 6—Click the “start” button to update software.

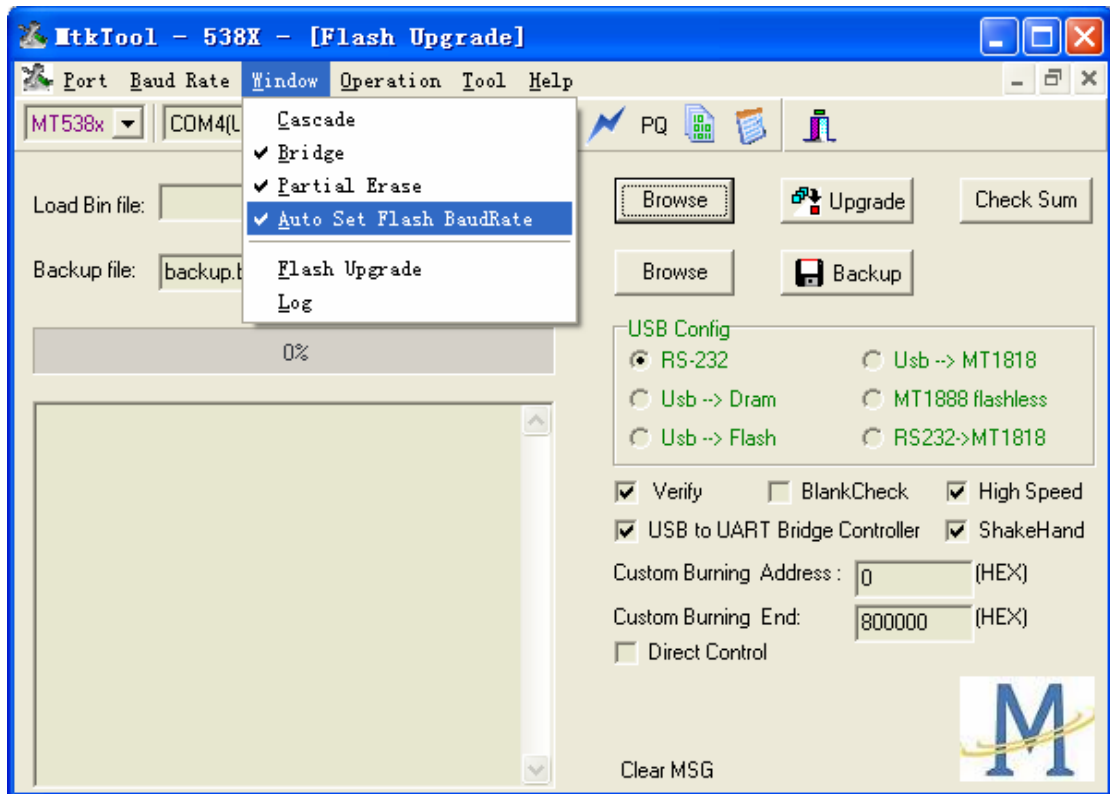




Open “Device Manager” and find which port is connected with the TV. In above picture, COM4 is connected to the TV; so, select “COM4” in the MtkTool main interface. Select the right baud rate according to chip model. For this unit(chip model is MT538X), select 115200.

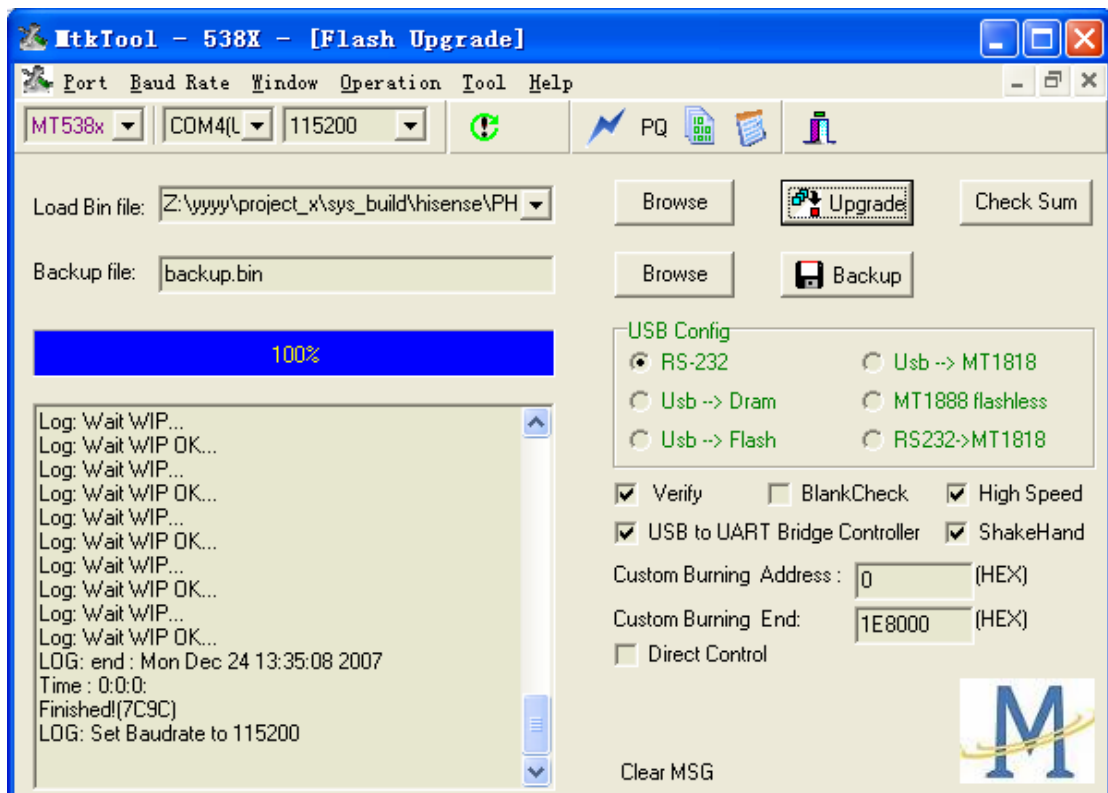
Note: Where or not click the “Auto Set Flash Baud Rate” in the “window” menu depends on the chip type. If the flash chip does not support high speed transport, do not select this option; otherwise, reserve the selected mood.

LCD TV Service Manual



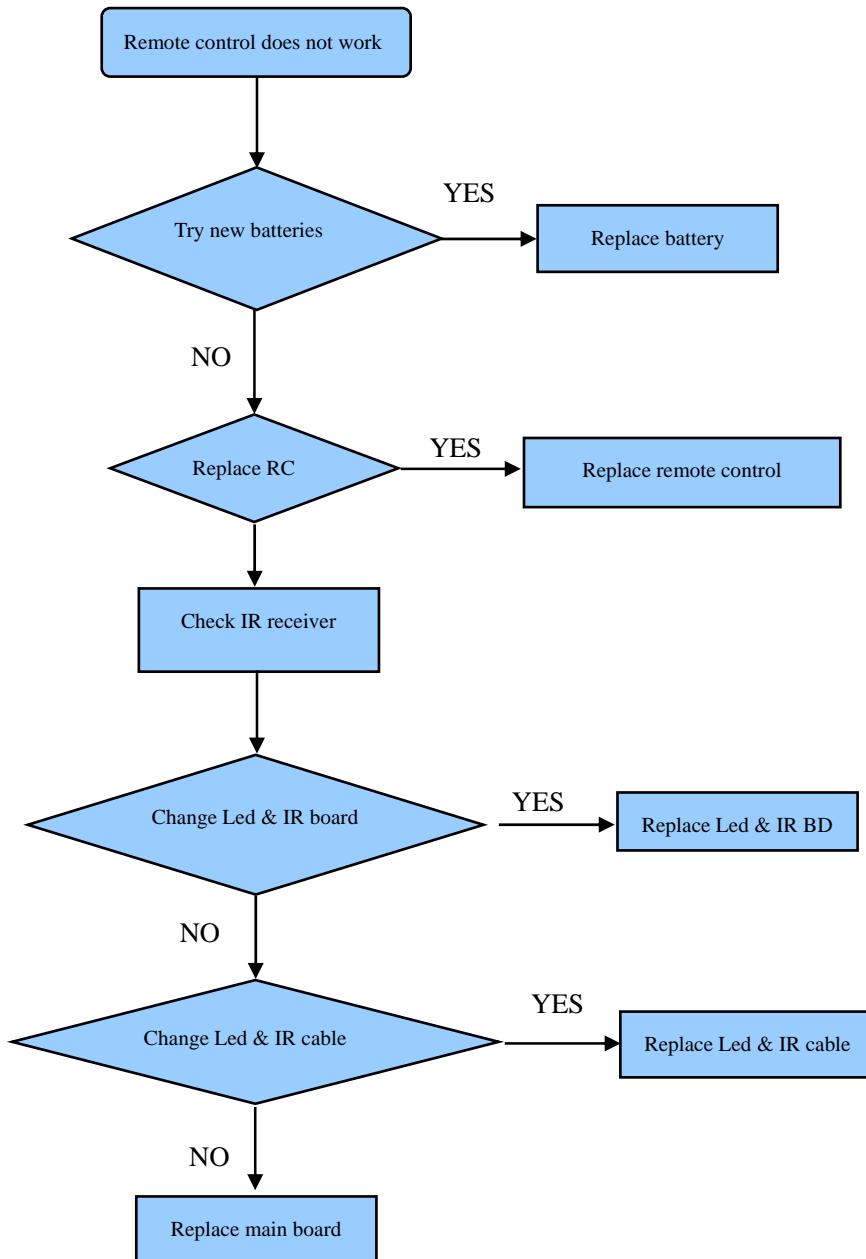
Click “Browse” button, find the upgrading program file, and select it. Press “Upgrade” button and start upgrading.

The following interface appears on the screen, indicating upgrading successfully.

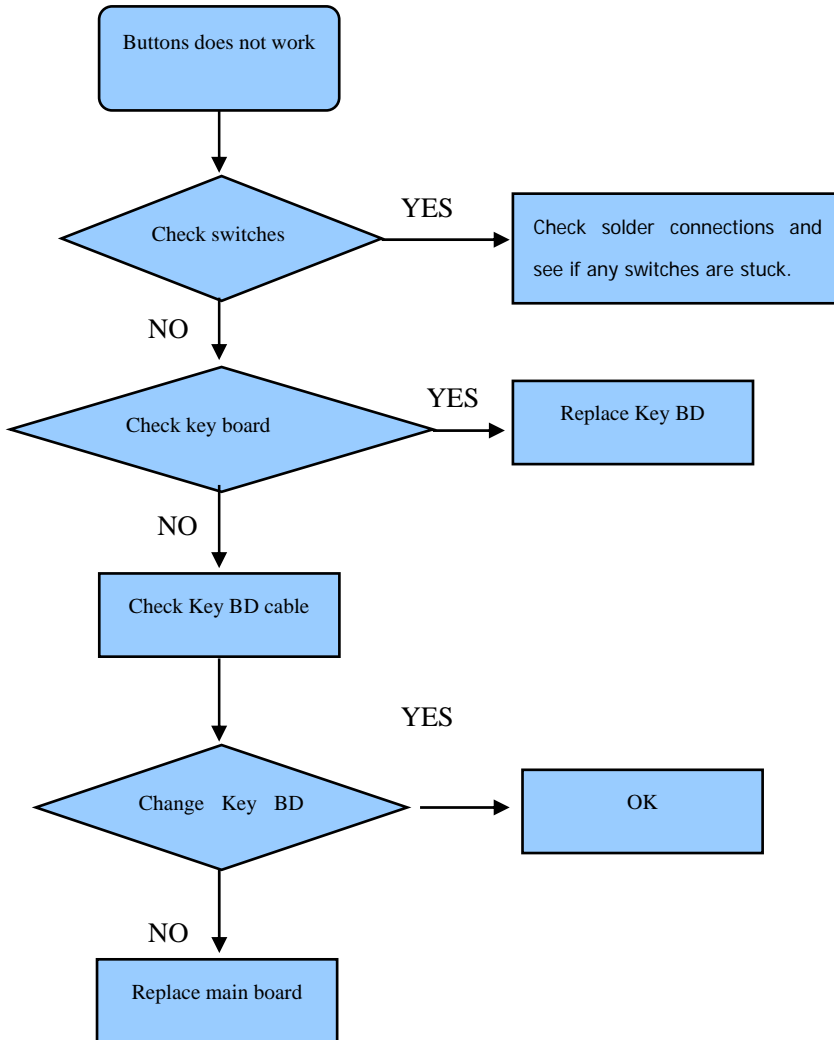


8. Troubleshooting

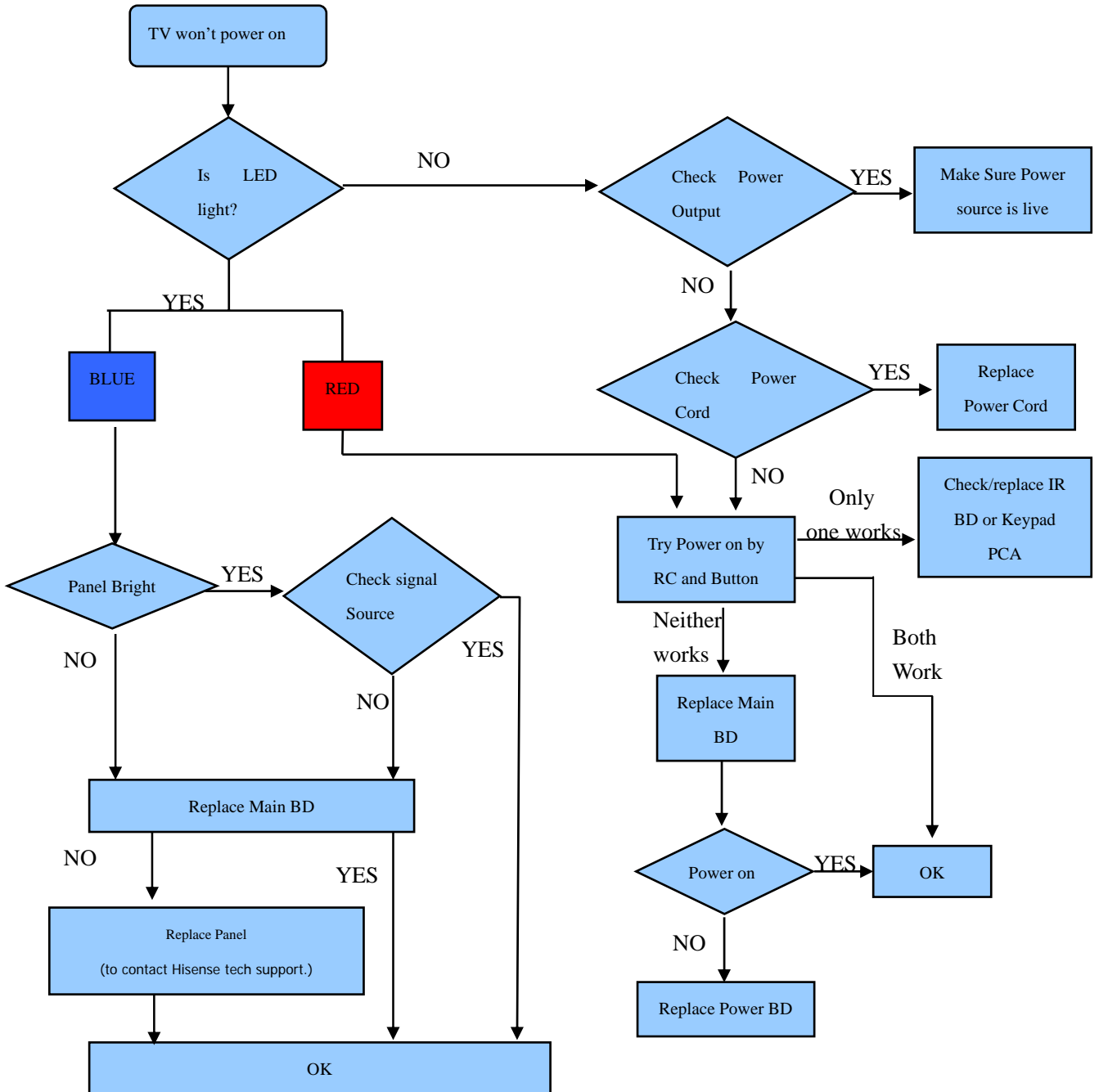
8.1 Troubleshooting for Remote Control



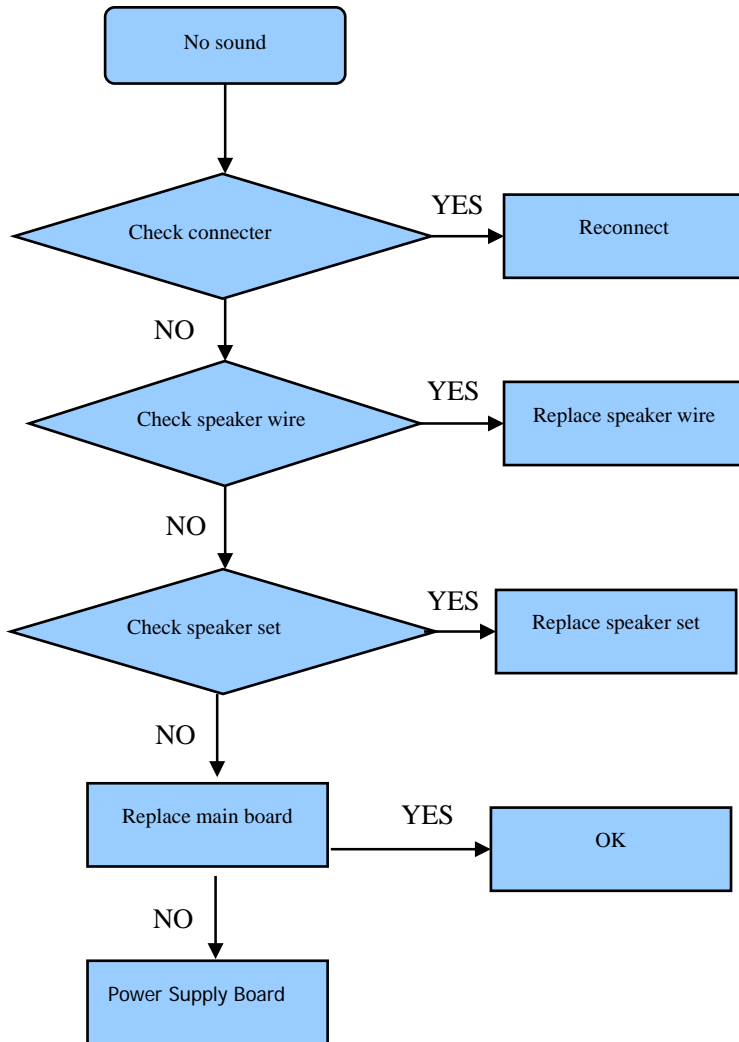
8.2 Troubleshooting for Function Key



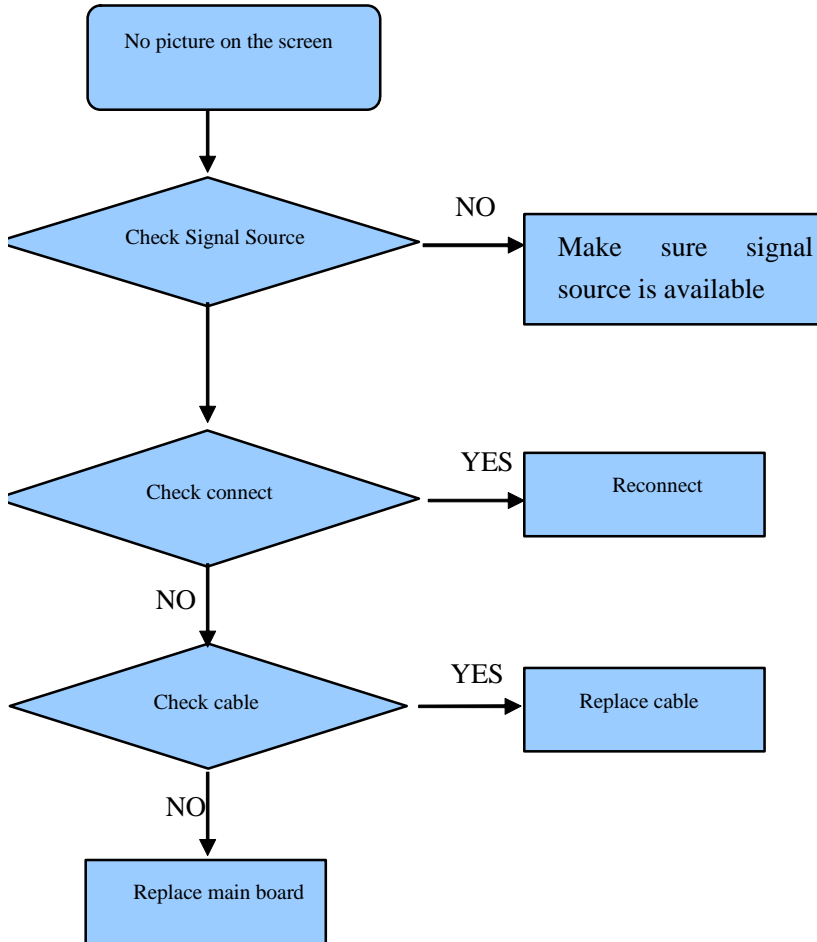
8.3 TV won't Power On



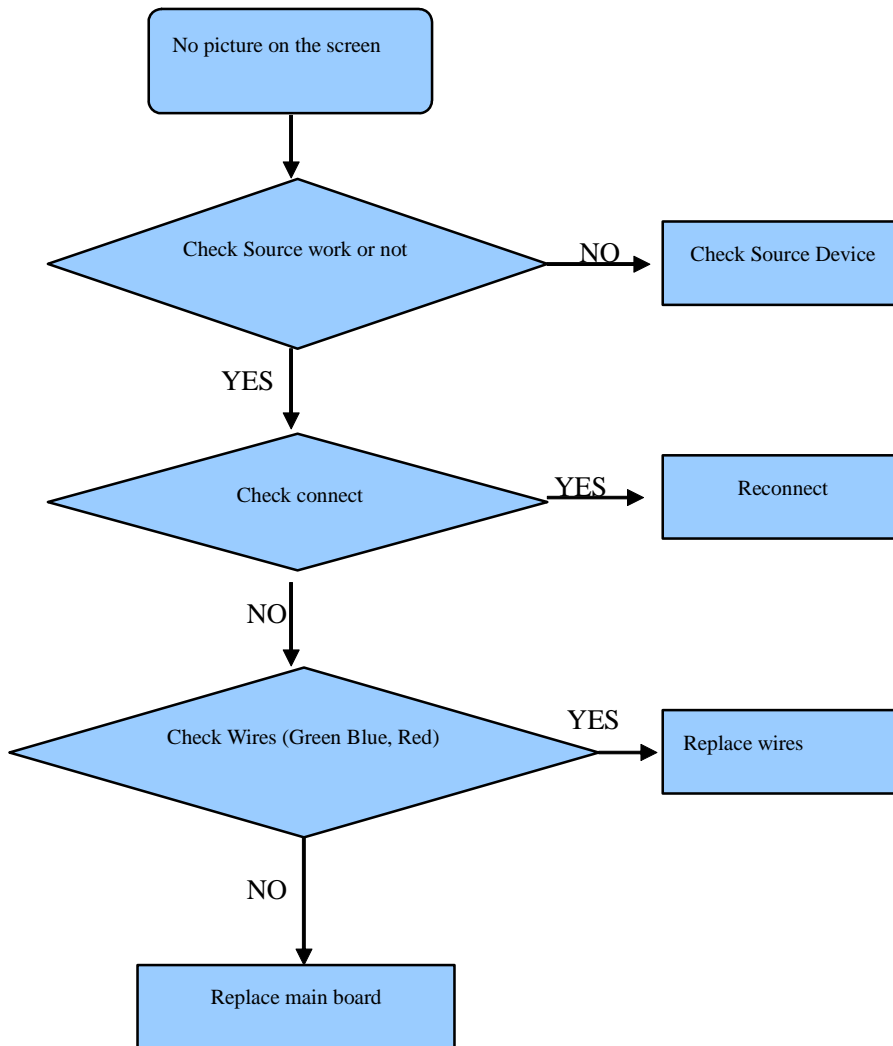
8.4 Troubleshooting for Audio



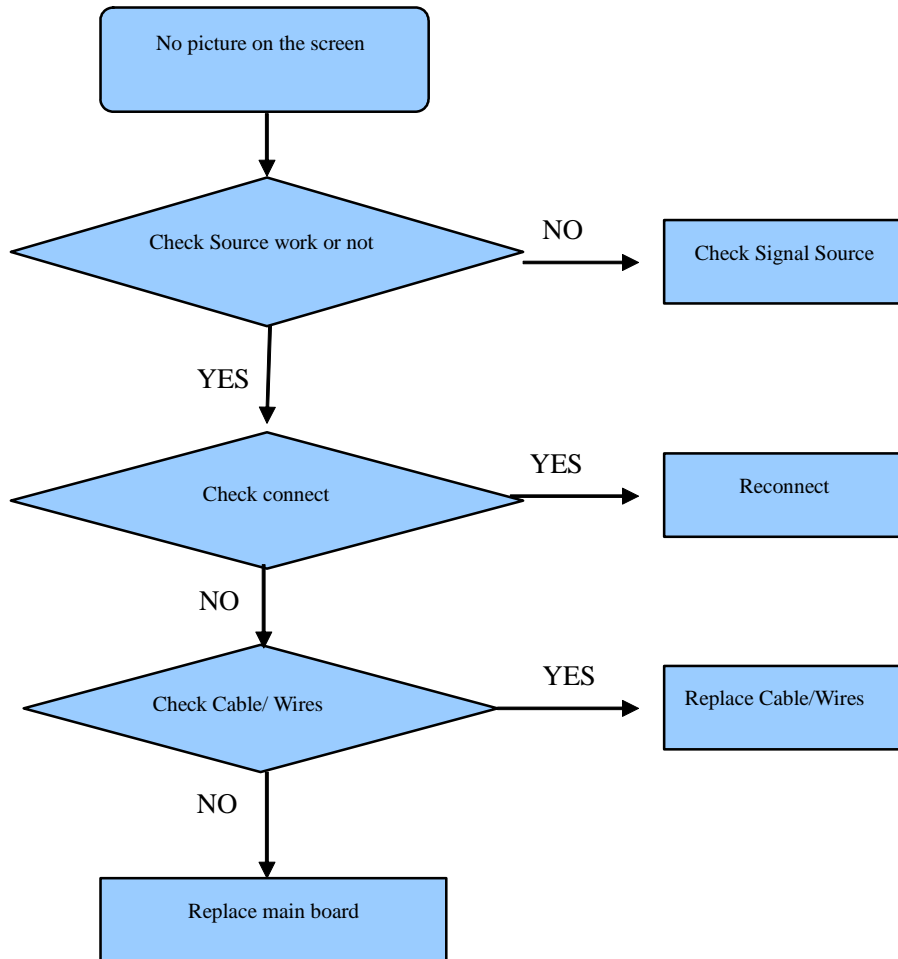
8.5 Troubleshooting for TV/VGA/HDMI input



8.6 Troubleshooting for YPbPr input



8.7 Troubleshooting for Video/S-Video input

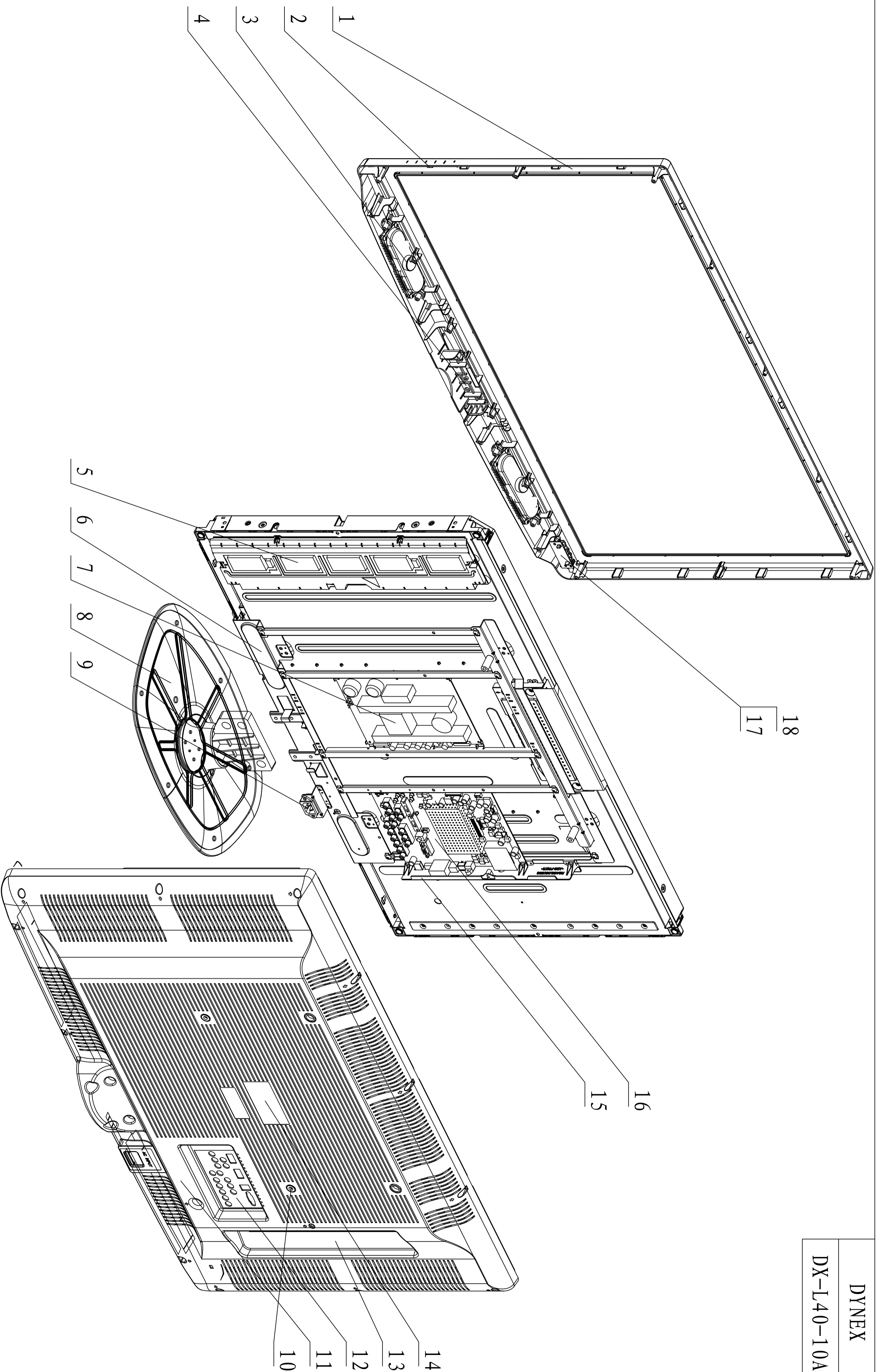


9. Explode View and Explode Bom List

10. Schematic circuit diagram

DYNEX

DX-L40-10A



DYNEX DX-L40-10A PARTS LIST

No.	Part No.	Description	Qty.	Code Number	Remark
1	122158	Front Cover	1	RSAG6.179.258-3\ROH	*
2	122922	Keypad PCA	1	RSAG2.908.1625-8\ROH	
3	1062103	Speaker	2	YDT4015PE-10W8R-A\BBY\ROH	
4	1060134	Bracket	1	RSAG8.078.554\B2\ROH	*
5	1058853	LCD Panel	1	LTA400HA07-D\JK\ROH	*
6	1061786	Bracket Unit	1	RSAG4.114.088A\ROH	*
7	122904	Power Board	1	RSAG2.908.1524-4\ROH	
8	1055703	Stand	1	WG6.121.052\ROH	*
9	1062106	Electrical Outlet	1	HF-301-BBY\ROH	*
10	1061359	Bracket	2	RSAG6.150.685\ROH	*
11	121720	Rear Cover	1	RSAG8.074.733\Z0\ROH	Please order them together
12	1060115	Bottom Label	1	RSAG8.804.3518\ROH	
13	1060114	Side Label	1	RSAG8.804.3513\ROH	
14	1051670	Rating Label	1	RSAG8.804.3293\ROH	
15	1060122	Terminal Bracket	1	RSAG8.081.566\Z0\ROH	*
16	122917	Main Board	1	RSAG2.908.1616-3\ROH	
17	122920	IR Board	1	RSAG2.908.1566-9\ROH	*
18	1062541	Led Lens	1	RSAG8.640.090\ROH	*

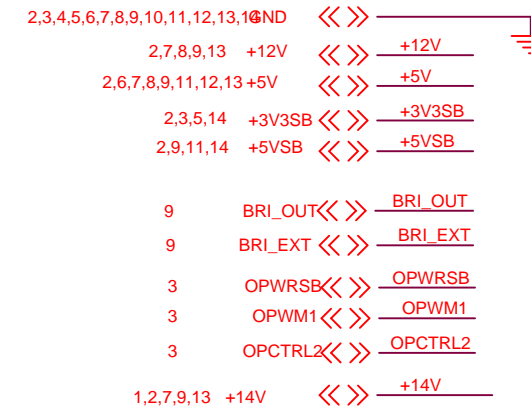
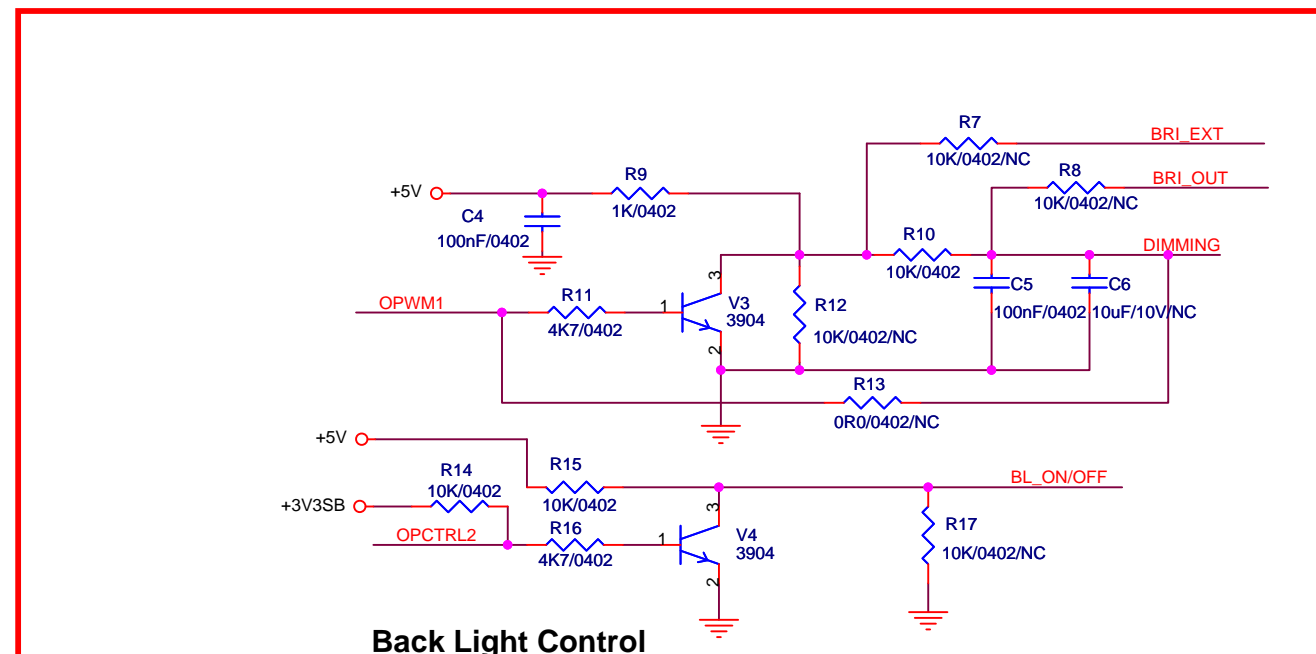
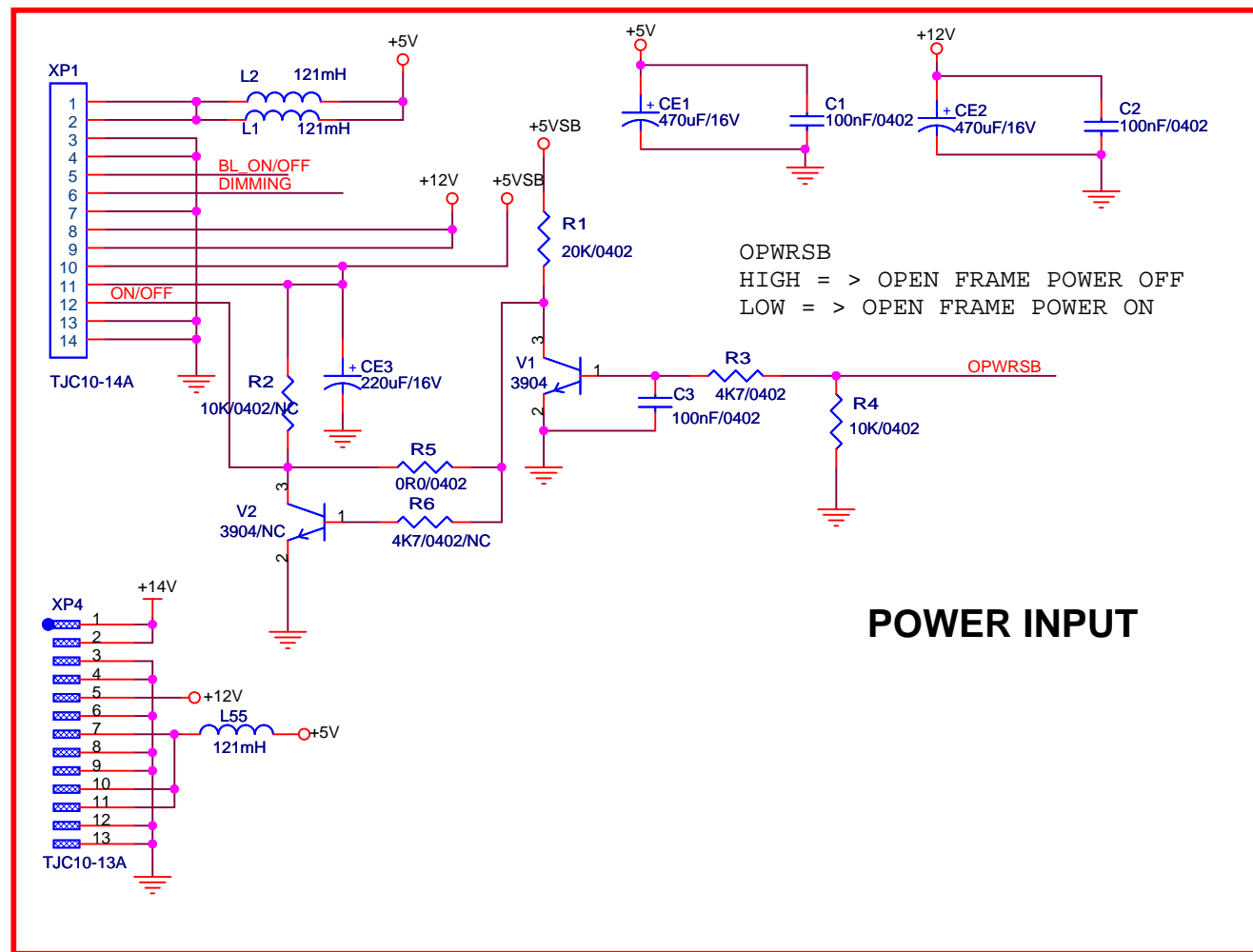
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02:DIGITAL/ANALOG POWER
03:MT5380PERIPHERAL
04:DDR1 MEMORY
05:FLASH/JTAG/UART
06:ANALOG PLL/USB2.0/TUNER
07:LINE OUT/HP
08:AMP/MUTE
09:LVDS/HEADPHONE
10:YPBPR INPUT
11:VGA IN/LR
12:HDMI INPUT
13:AV/SV IN FROM AV BOARD
14:IR/KEY

GPIO Definition	
GPIO_0	SYSTEM EEPROM WP PROTECT
GPIO_1	HDMI EDID WP
GPIO_3	USB POWER EN
GPIO_4	NC
GPIO_5	NC
GPIO_6	VGA DDC WP PROTECT
GPIO_7	HDMI HDP
GPIO_8	HDMI POWER SWITCH
GPIO_9	TCOM POWER CONTROL
GPIO_10	USB POWER PROTECT
GPIO_11	NC
GPIO_12	TMDS351 S2
GPIO_13	TMDS351 S1
OPCTRL0	CEC FUNCTION
OPCTRL1	POWER LED
OPCTRL2	BLK ON/OFF
OPCTRL3	SOFT MUTE CONTROL
OPCTRL4	TRAP MODE
OPCTRL5	TRAP MODE
OPWRSB	POWER IN ON/OFF
ADIN0	PWRDET
ADIN1,2	KEY BOAD
ADIN3	TUNER AFT
ADIN4	NC
OIRI	IR

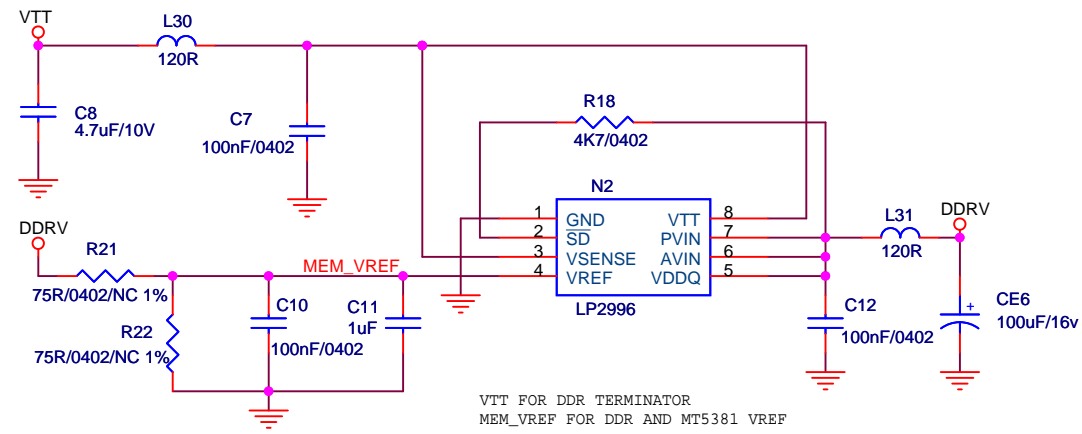
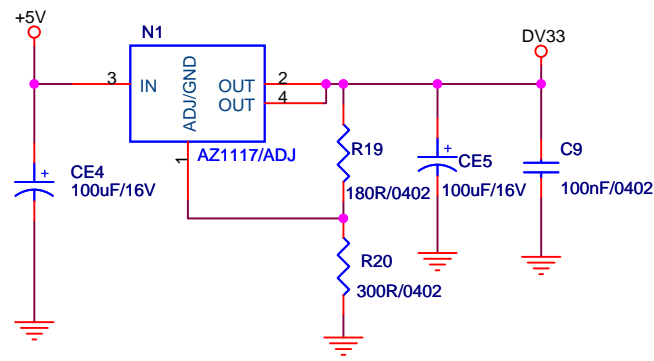
GPIO Definition	
RF_AGC	NC
IF_AGC	IF AGC FOR TUNER

LHD3229US_V1.1_MT5380_2LAYERS

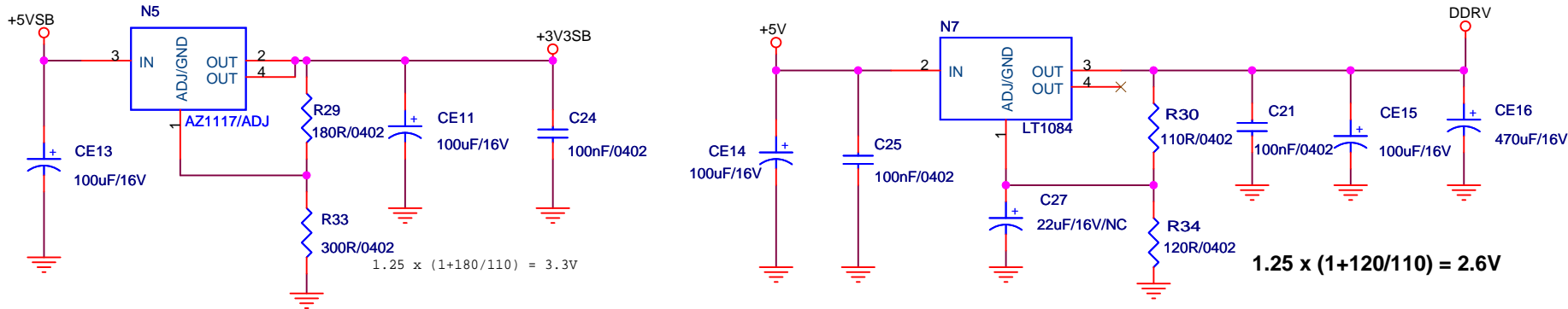
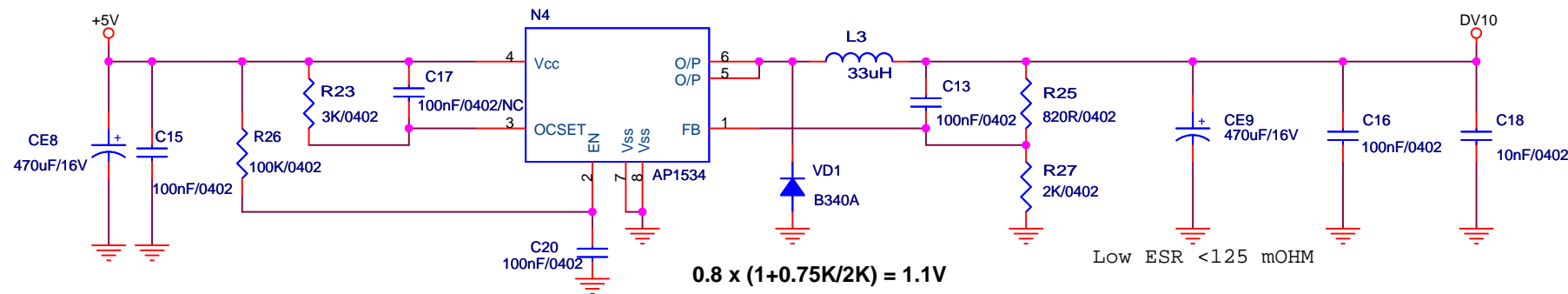


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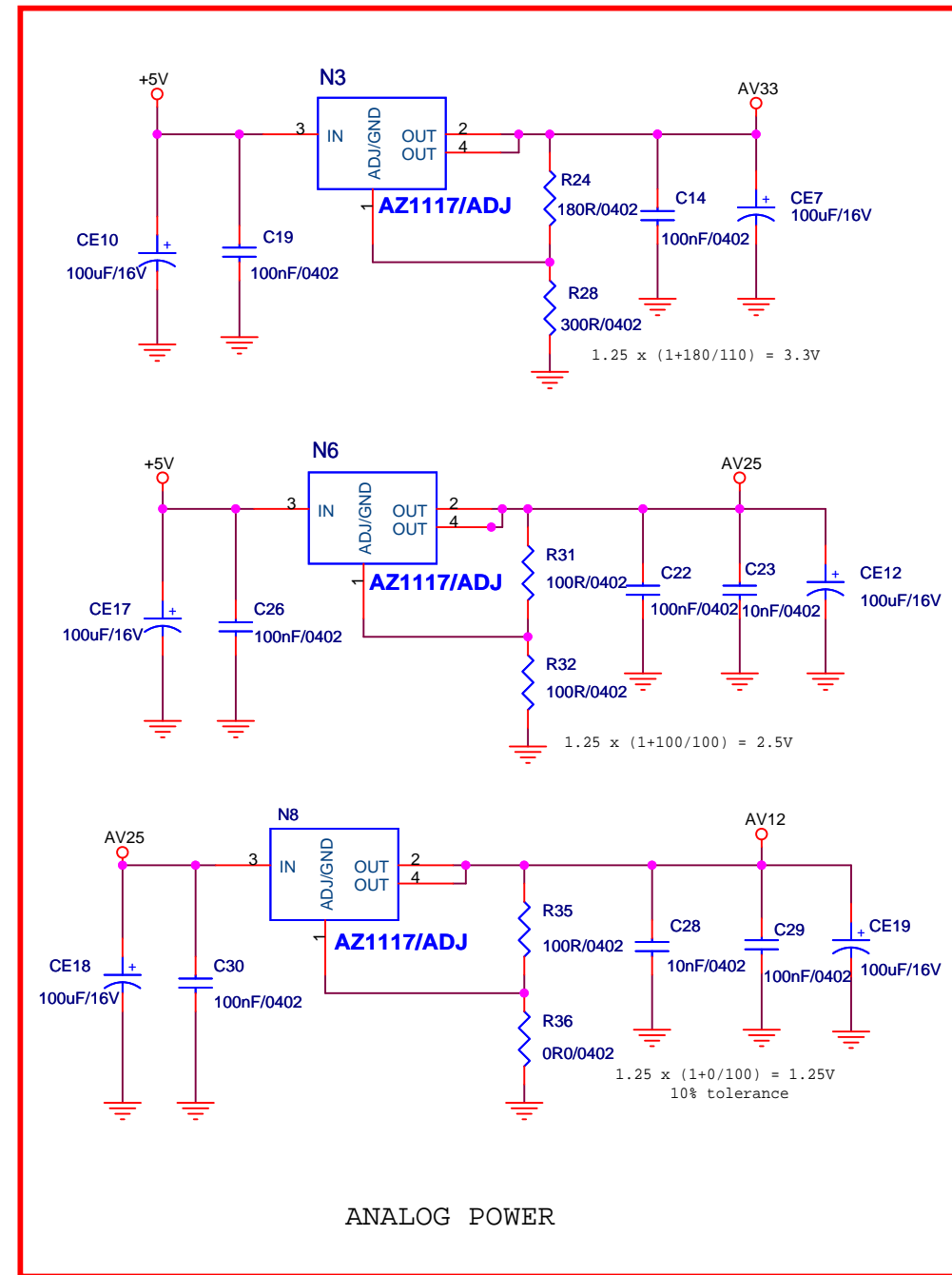
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Tel:86-755-26532018		
Fax:86-755-26532013		
Title		
INDEX/POWER IN		
Size	Document Number	Rev
A3	<Doc>	1.1
Date:	Monday, June 01, 2009	Sheet 1 of 14



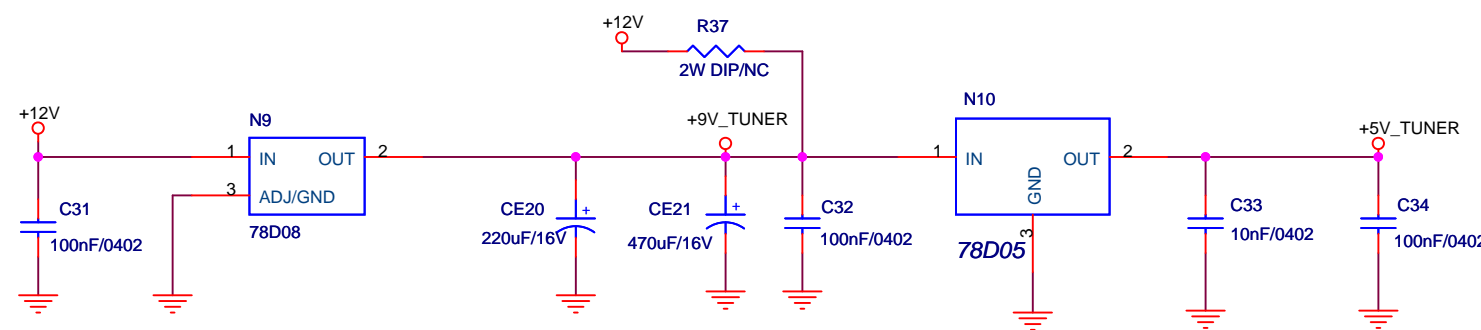
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1,6,7,8,9,11,12,13	+5V	+5V
5	DV10	DV10
4	MEM_VREF	MEM_VREF
4	VTT	VTT
4	MEM_VREF	MEM_VREF
4,5	DDRV	DDRV
3,5	DV33	DV33
3,6,7,9,12	AV33	AV33
1,7,8,9,13	+12V	+12V
6,13	AV25	AV25
6,10,12	AV12	AV12
6,7,13	+5V_TUNER	+5V_TUNER
1,3,5,14	+3V3SB	+3V3SB
1,9,11,14	+5VSB	+5VSB



DIGITAL POWER



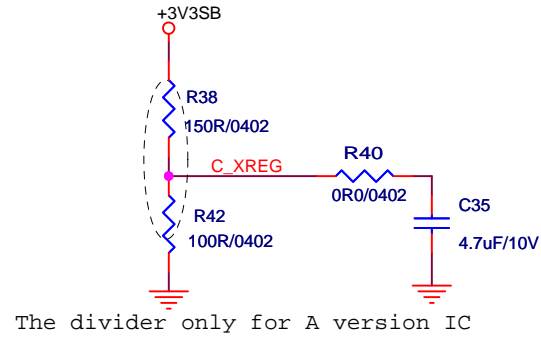
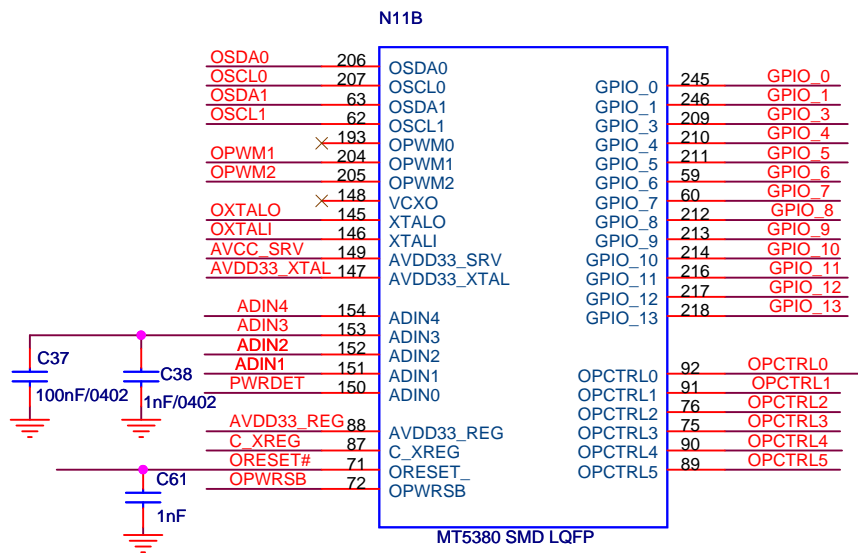
ANALOG POWER



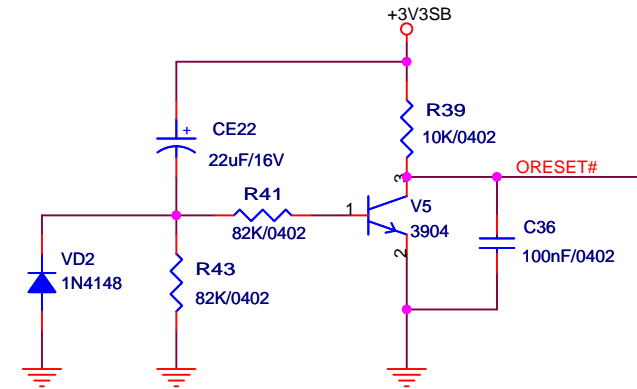
POWER SUPPLY +5V FOR TUNER

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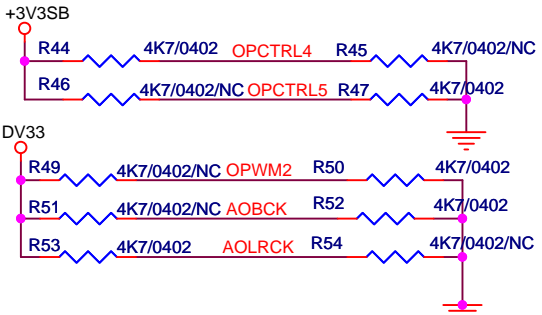
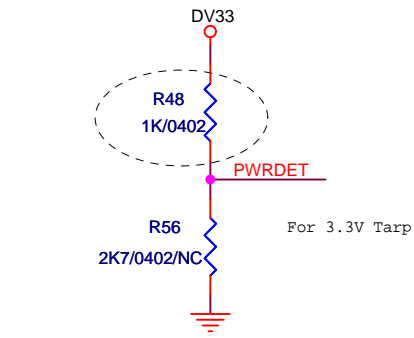
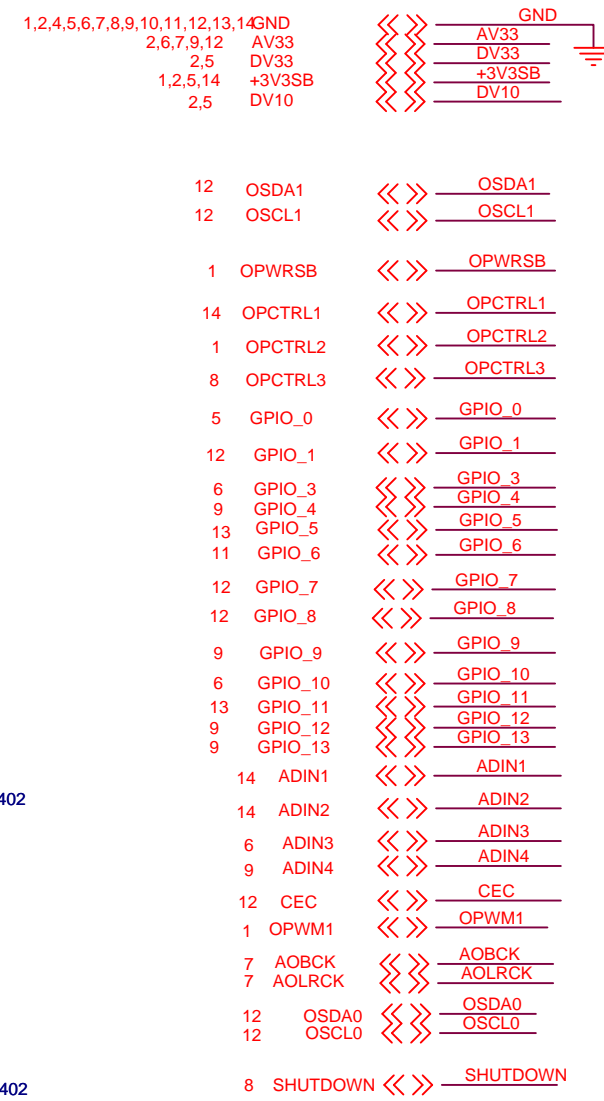
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Tel:86-755-26532018		
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Date:	Monday, June 01, 2009	Sheet 2 of 14



The divider only for A version IC

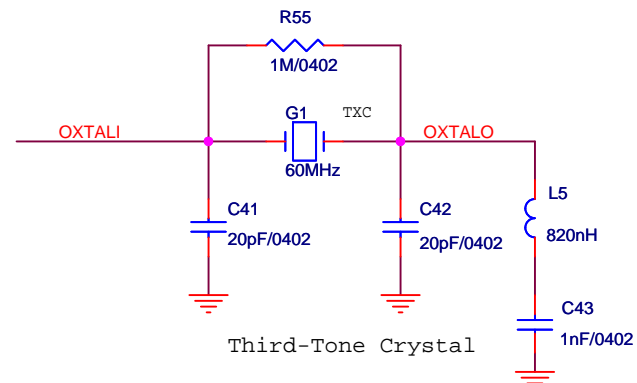


Adjust the power on timing

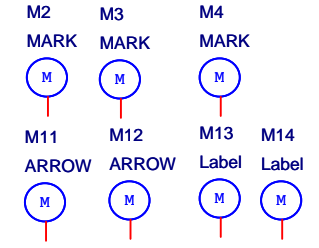
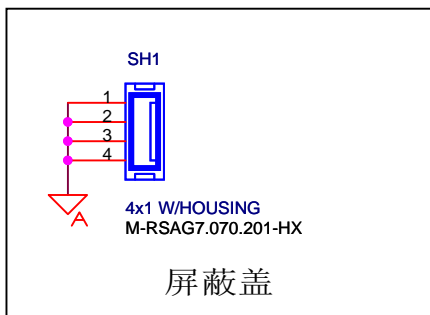
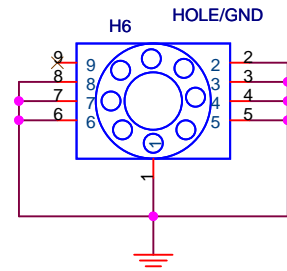
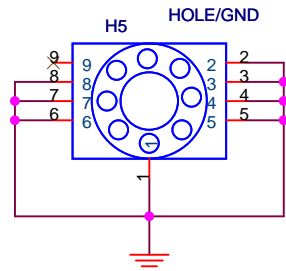
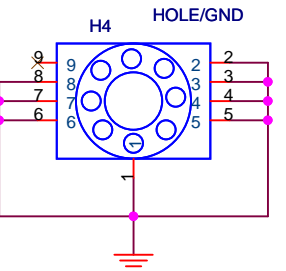
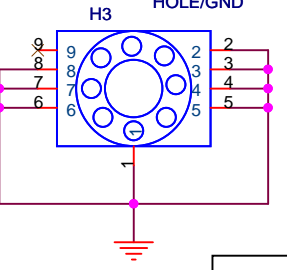
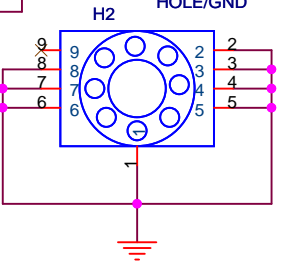
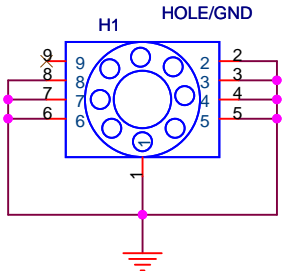
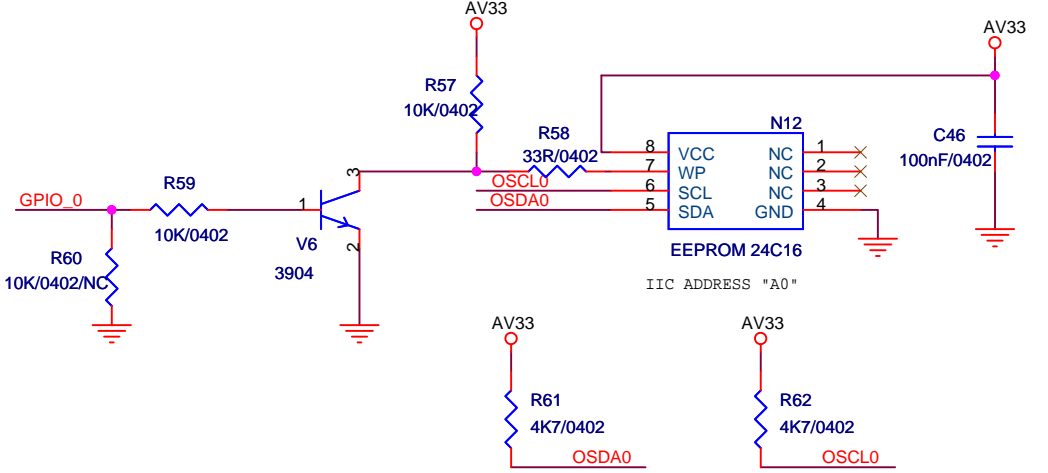
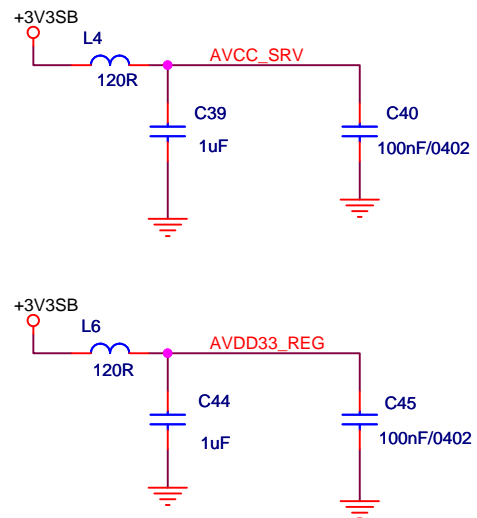


Trap Mode	OPWM2	AOBCK	AOLRCK
Normal mode	0	0	0
ICE mode	0	0	1

Trap Mode	OPCTRL5	OPCTRL4
Core Reset 1 us	0	1

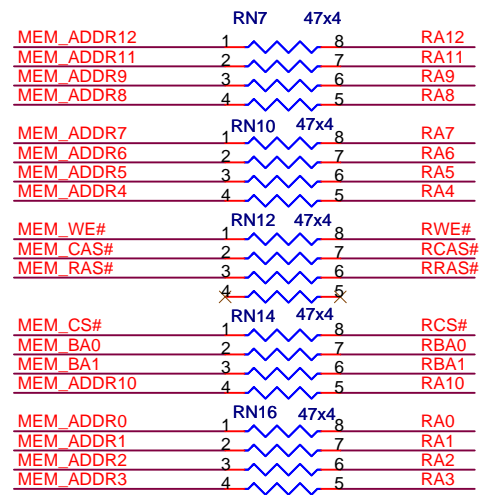
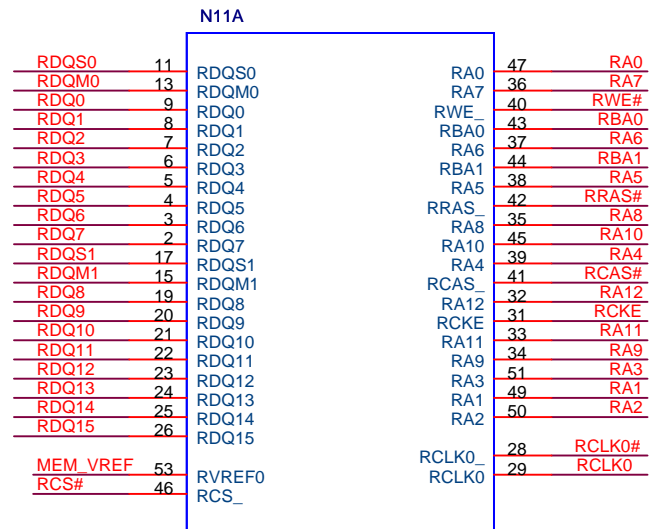


Third-Tone Crystal

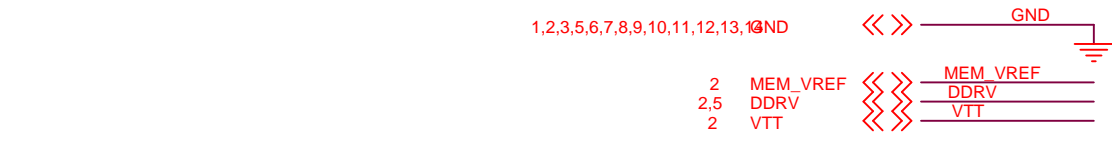
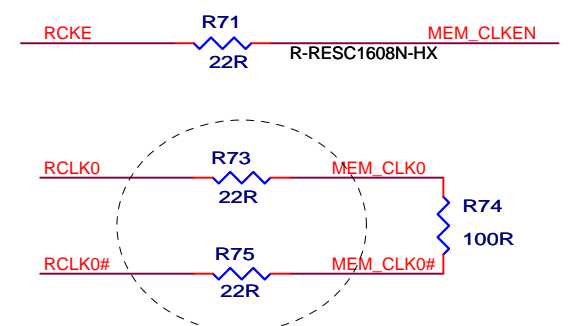
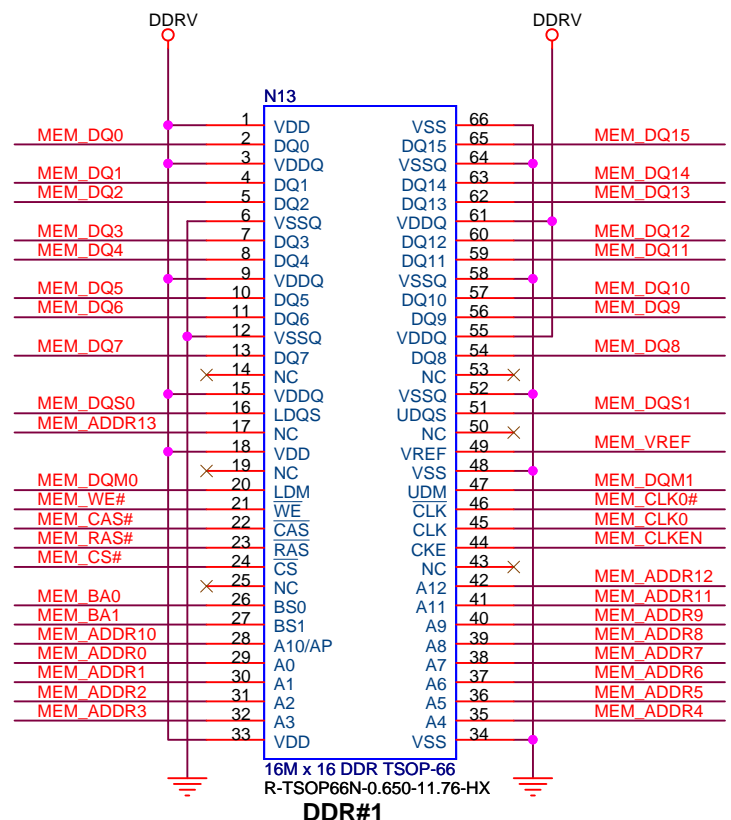


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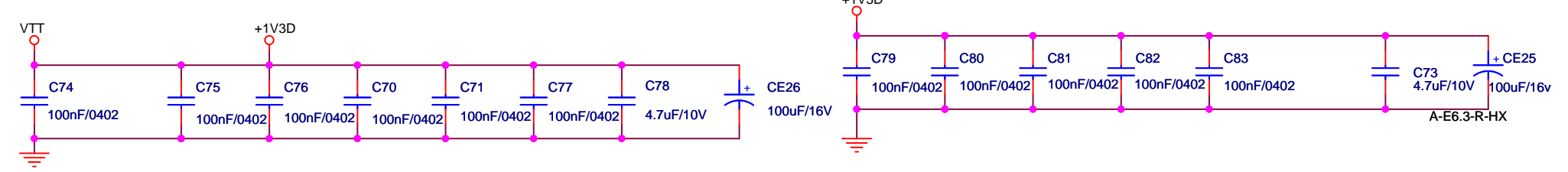
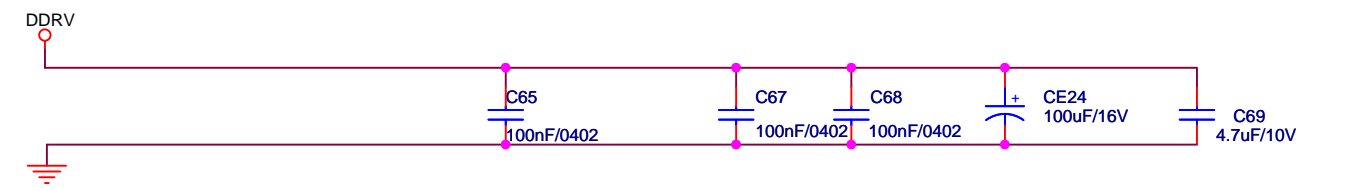
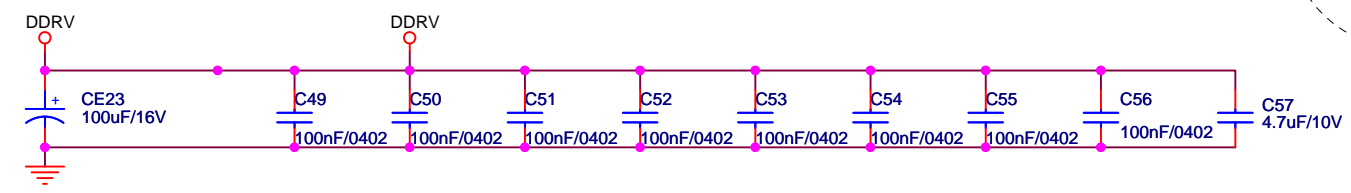
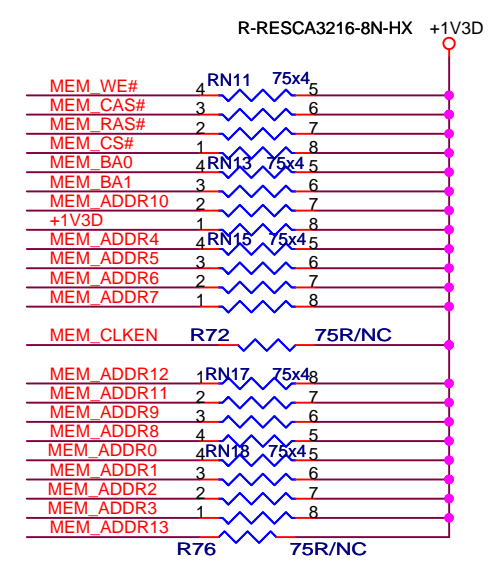
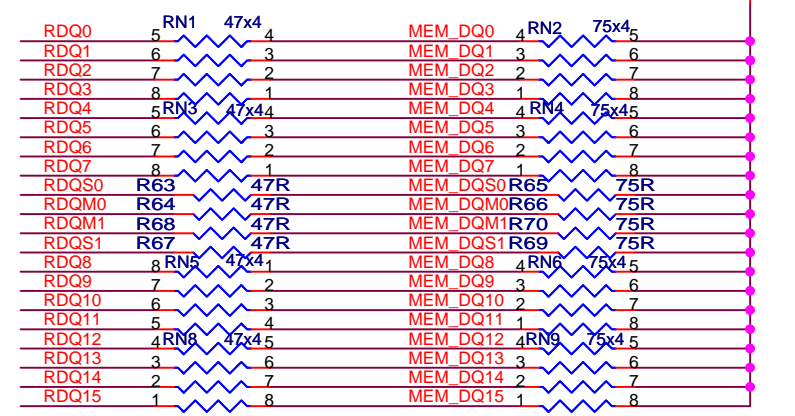
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 Fax:86-755-26532013



Add serial resistors for DRAM

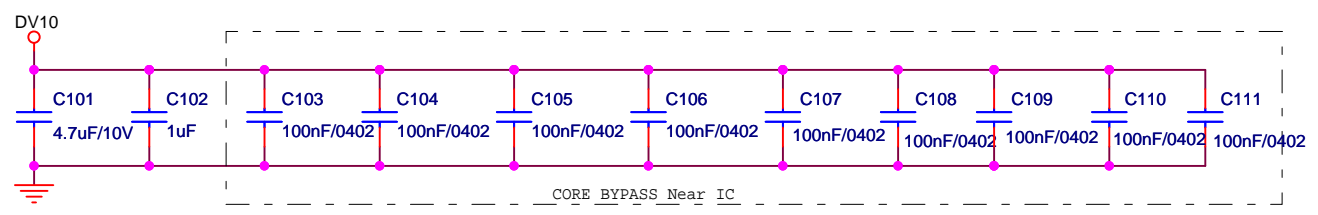
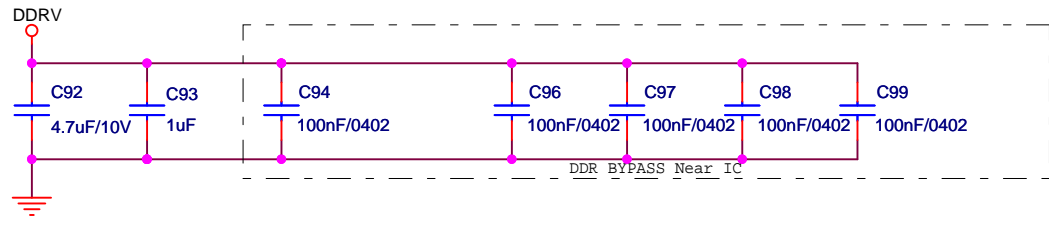
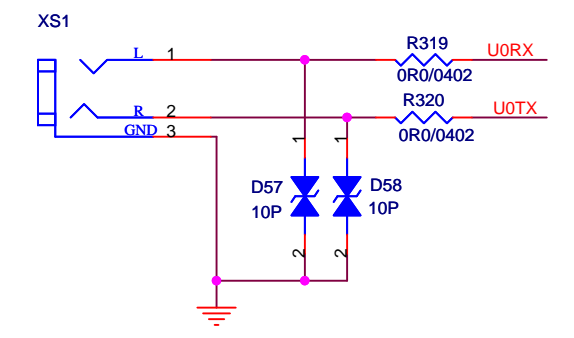
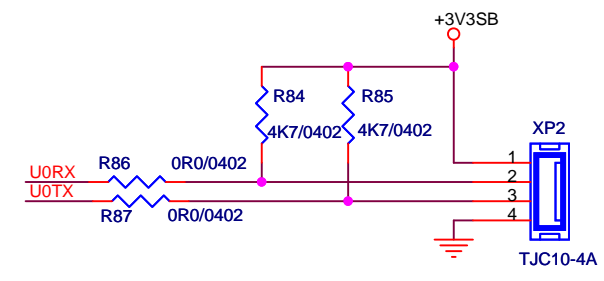
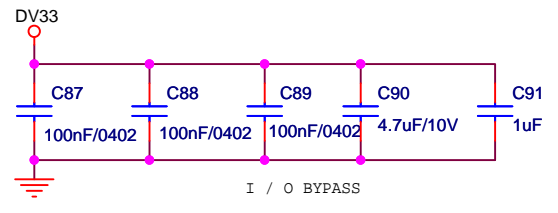
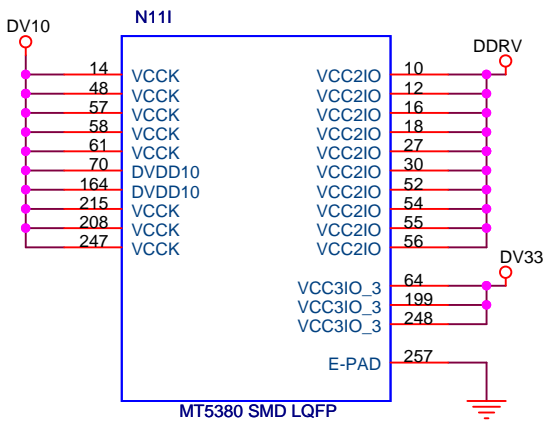
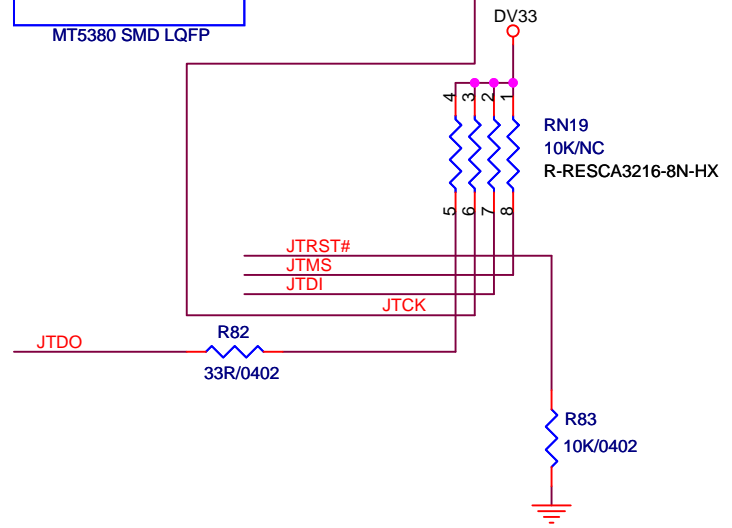
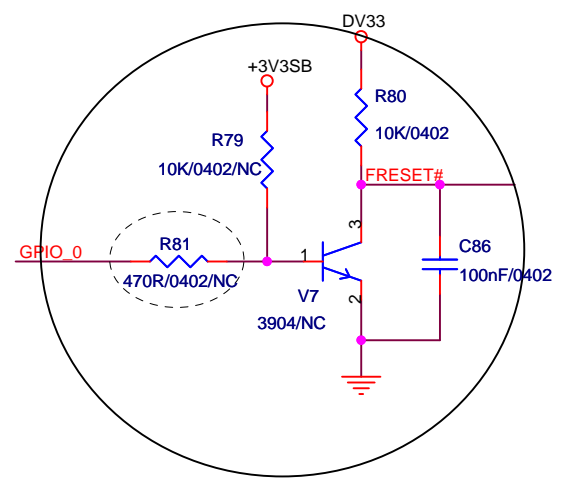
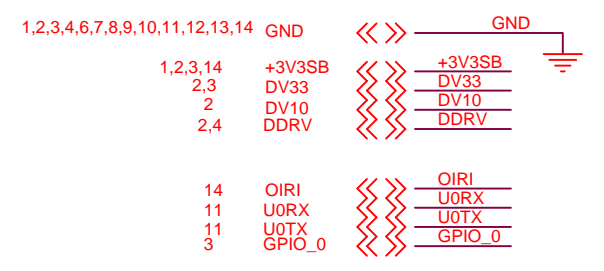
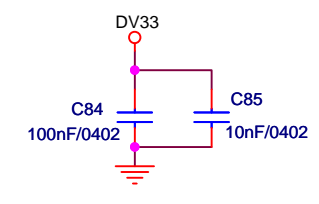
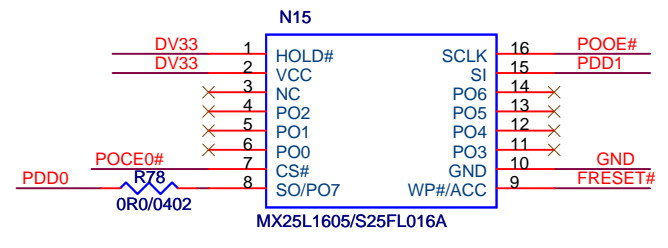
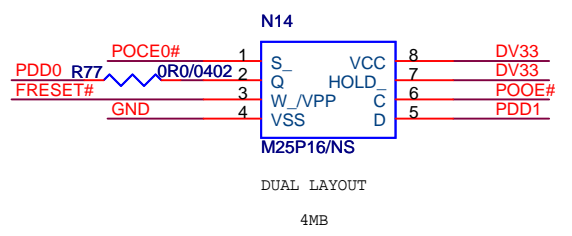
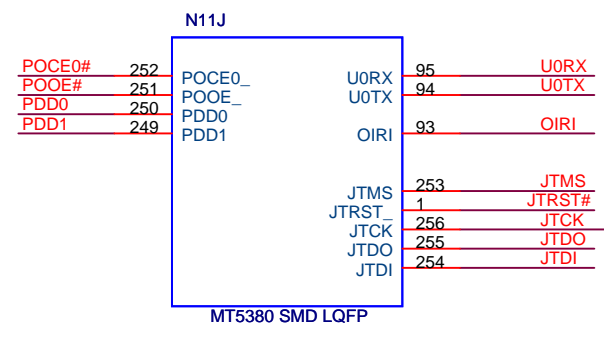


Add serial resistors for DRAM



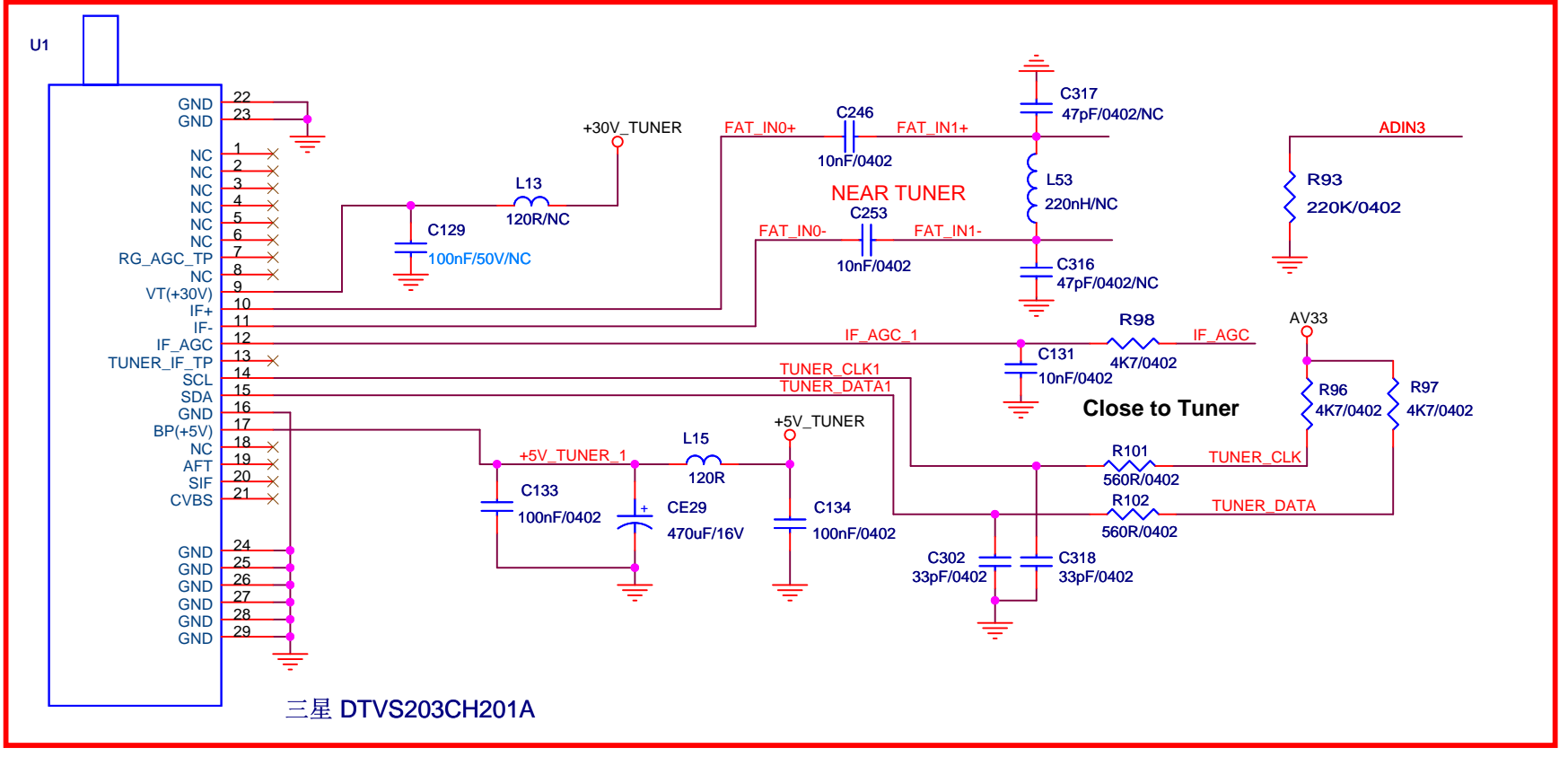
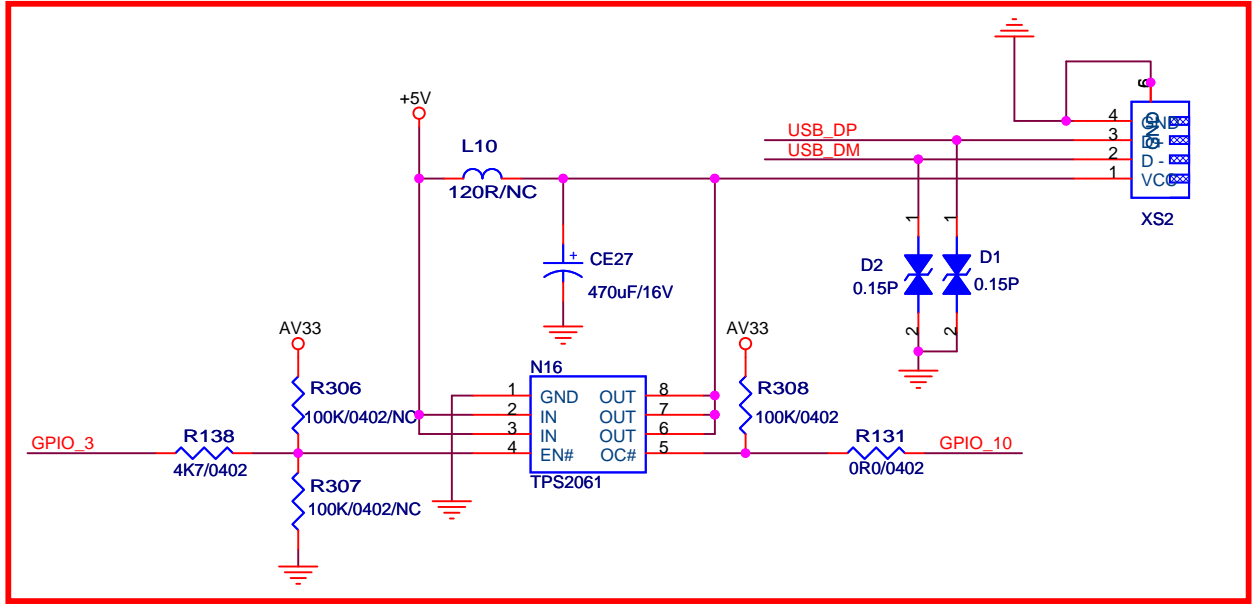
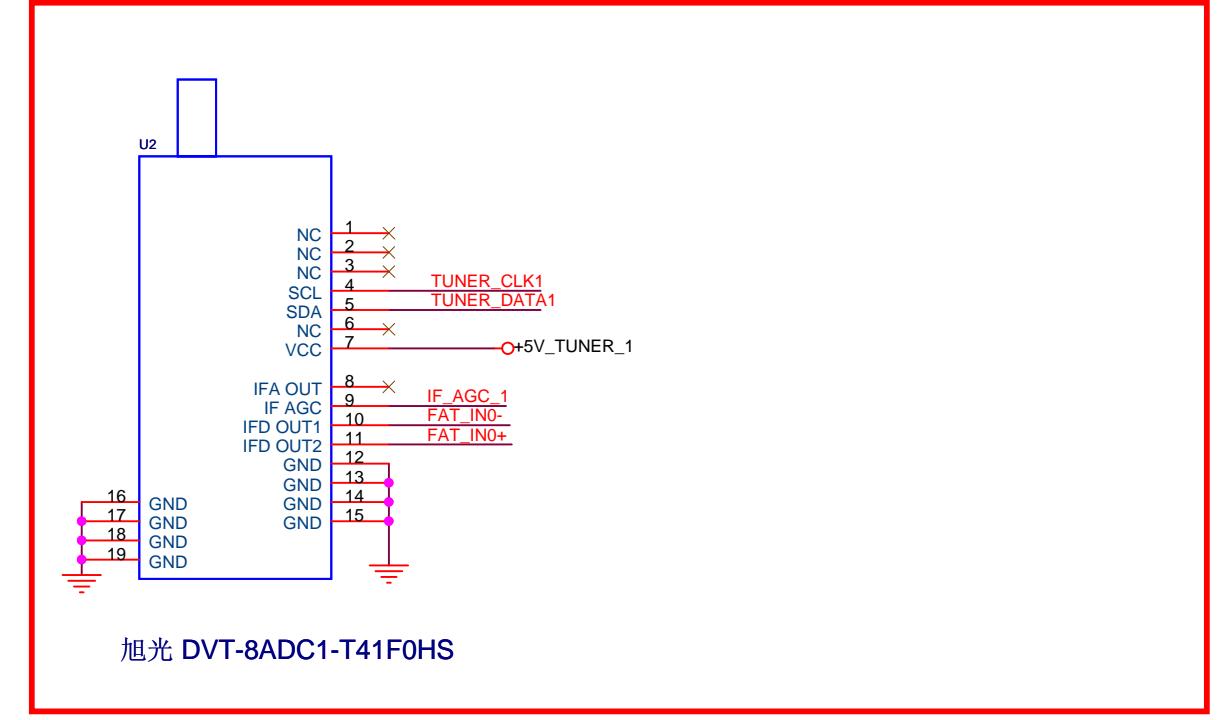
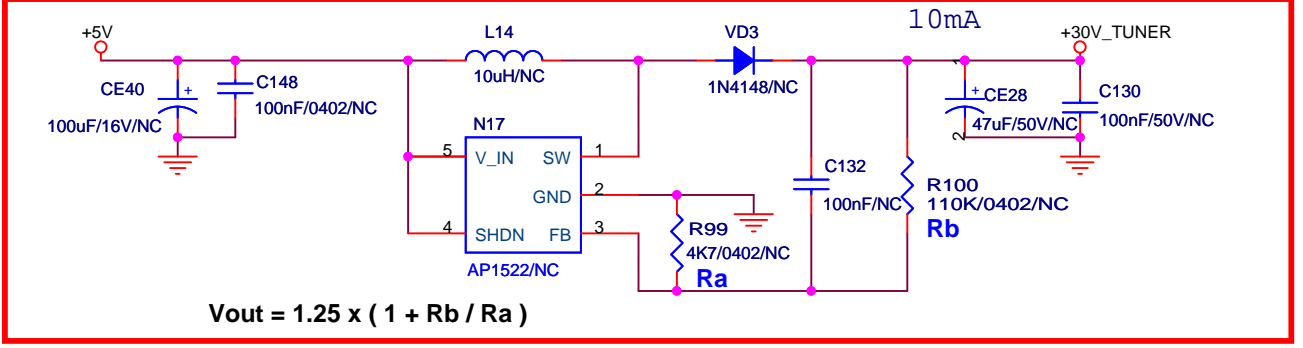
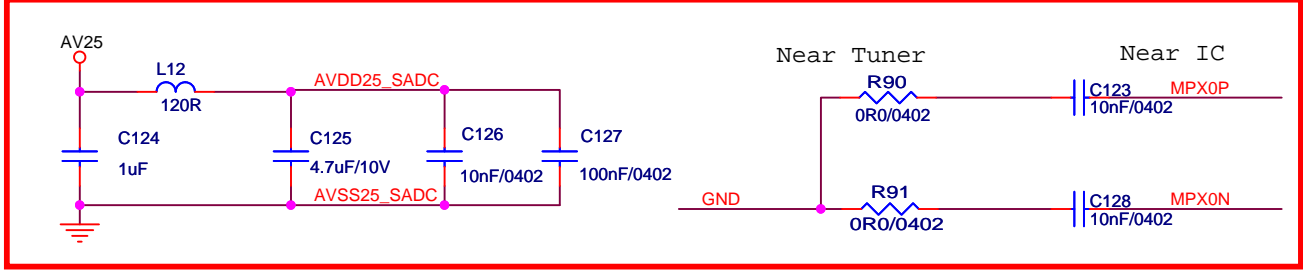
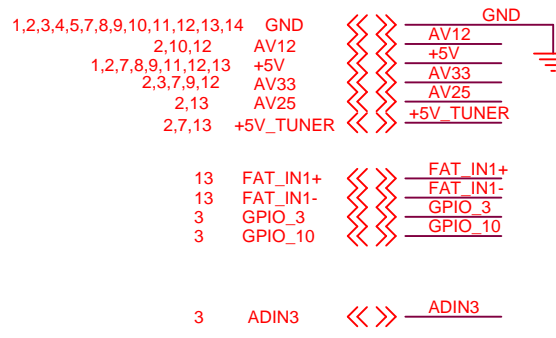
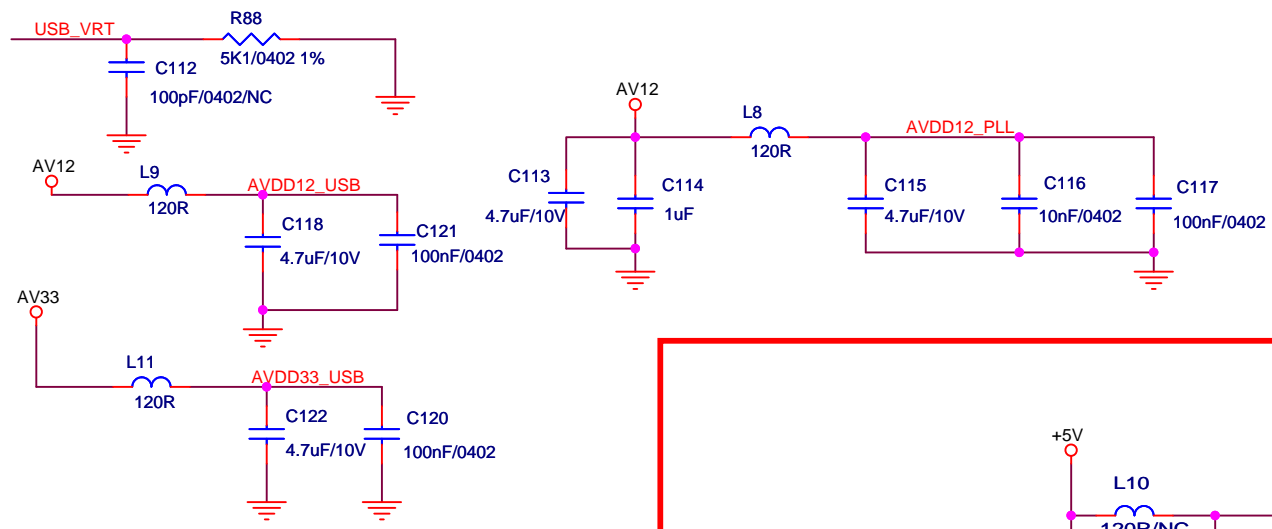
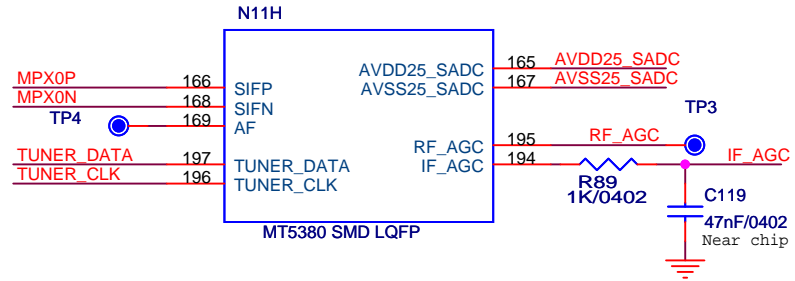
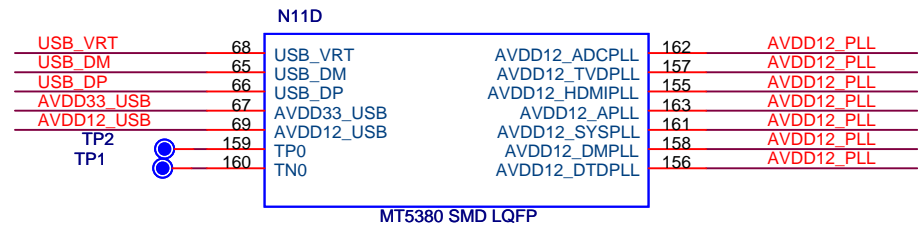
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Tel:86-755-26532018		
Fax:86-755-26532013		
Title DDR MEMORY		
Size A3	Document Number <Doc>	Rev 1.0
Date: Monday, June 01, 2009	Sheet 4	of 14



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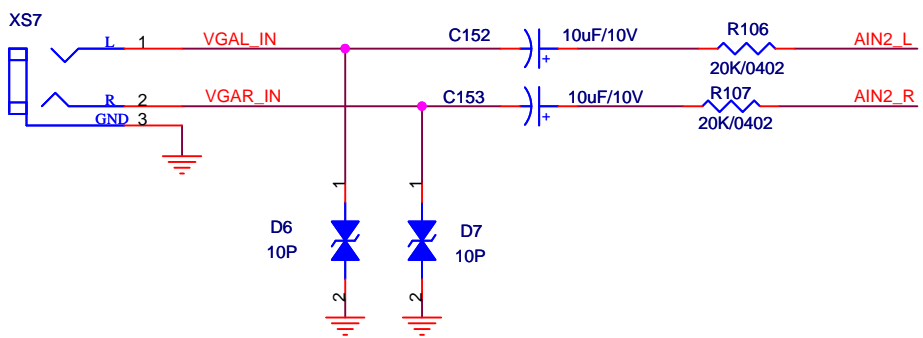
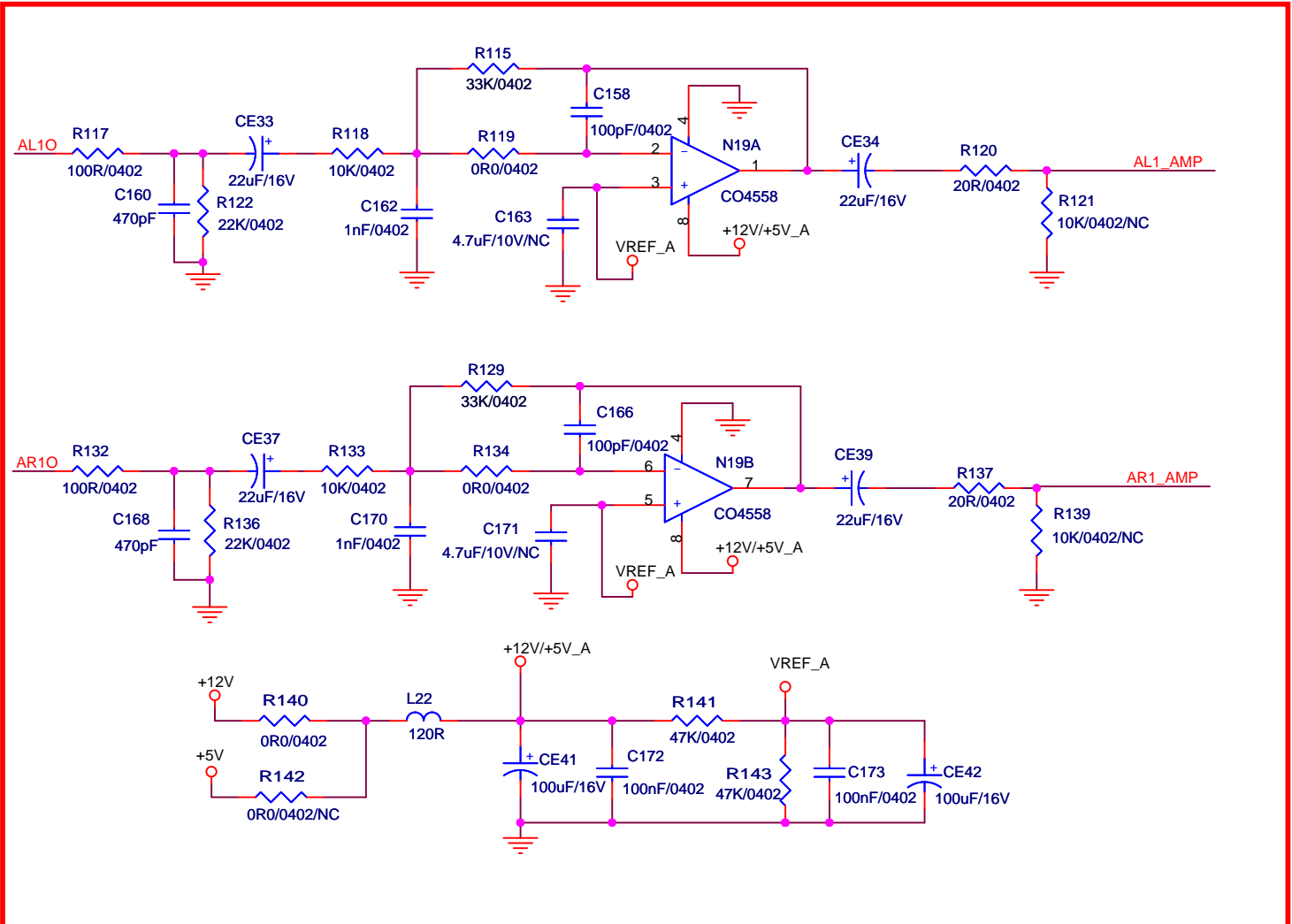
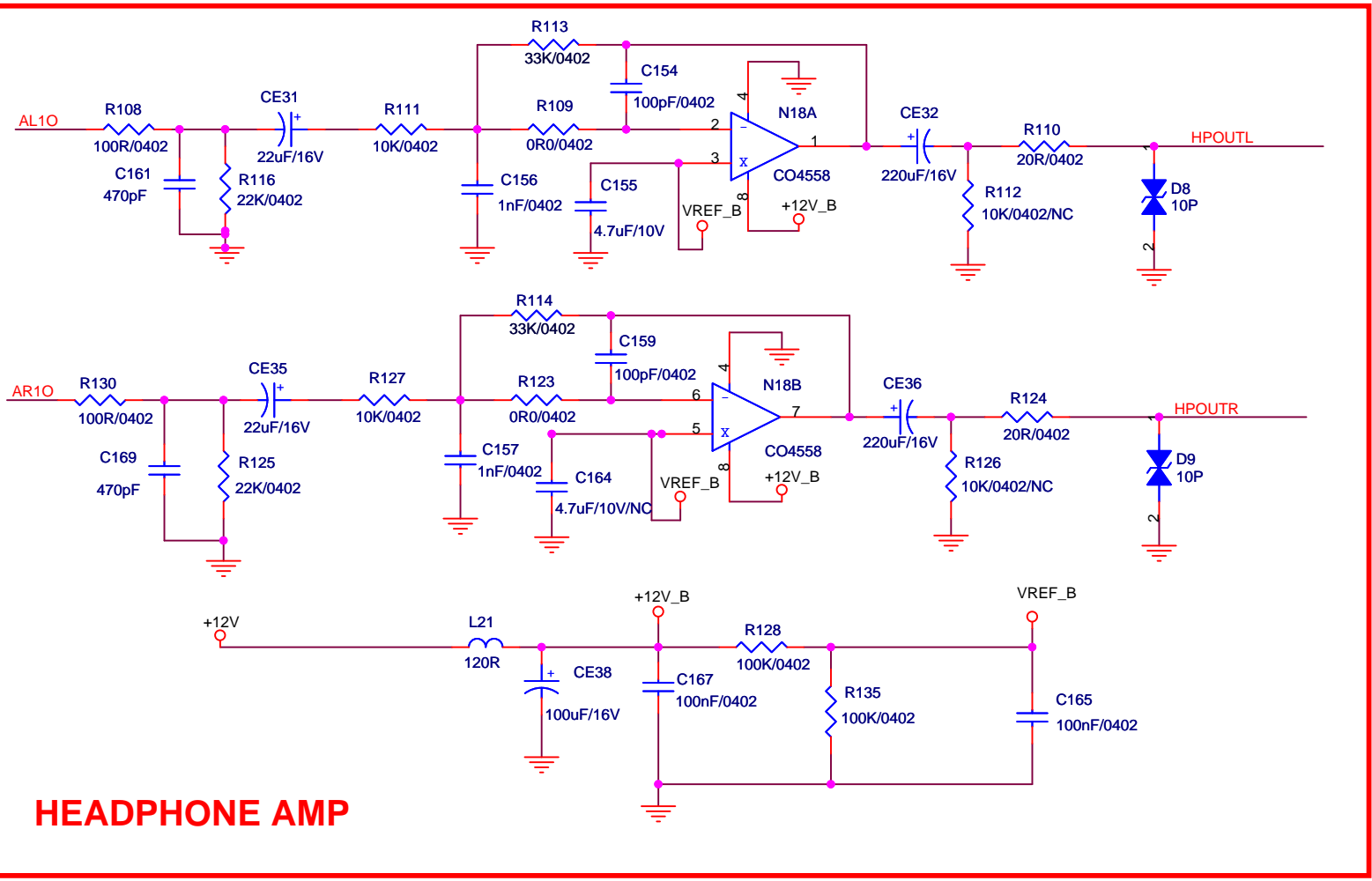
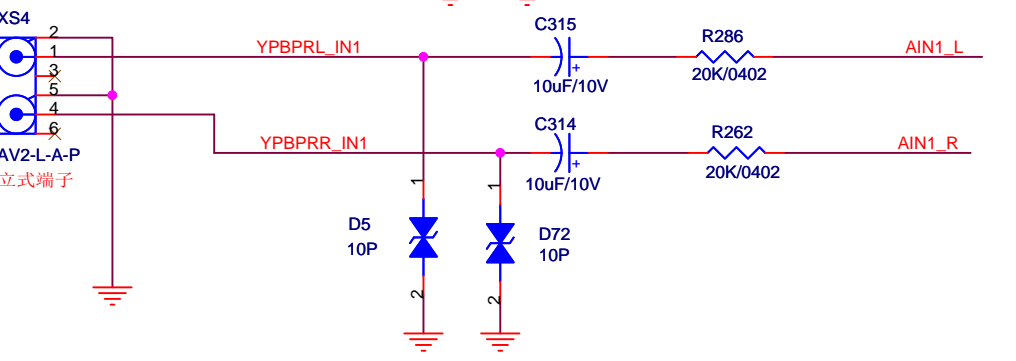
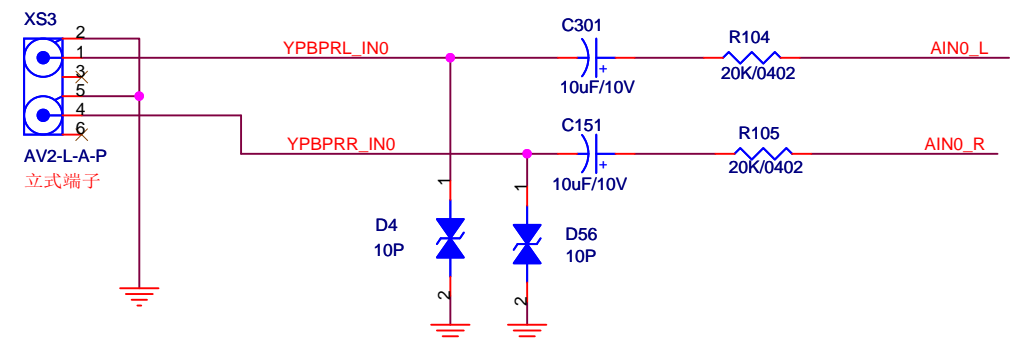
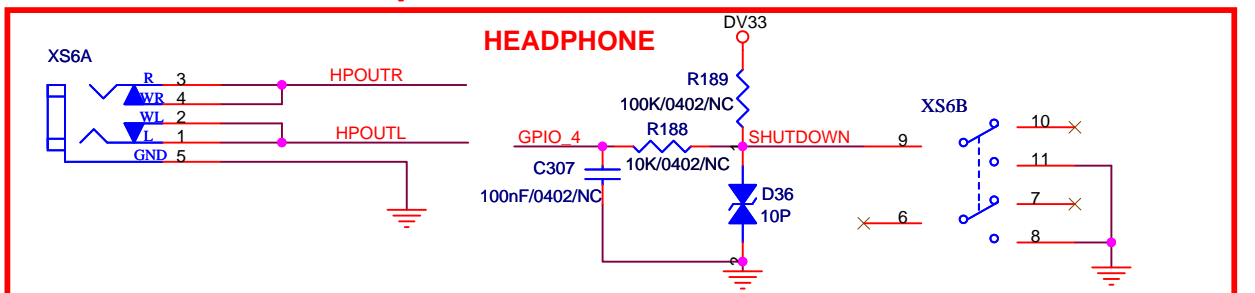
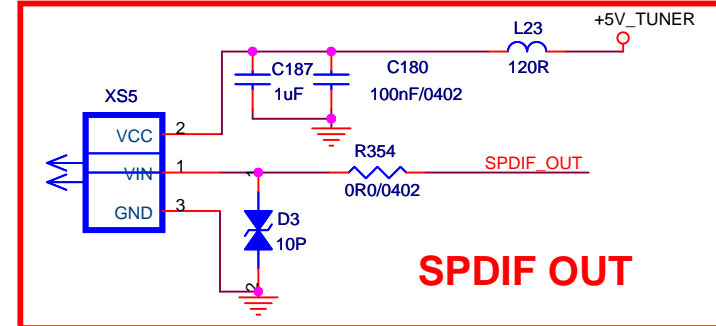
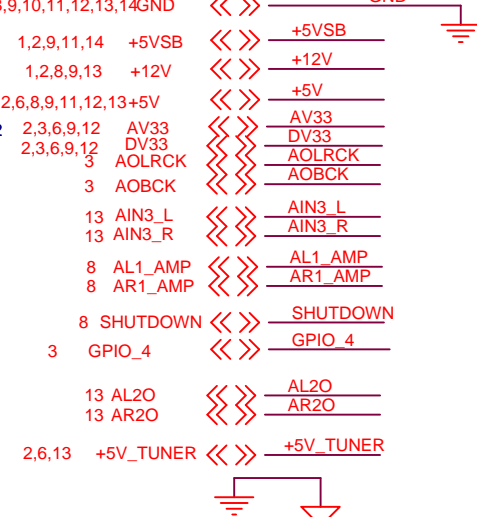
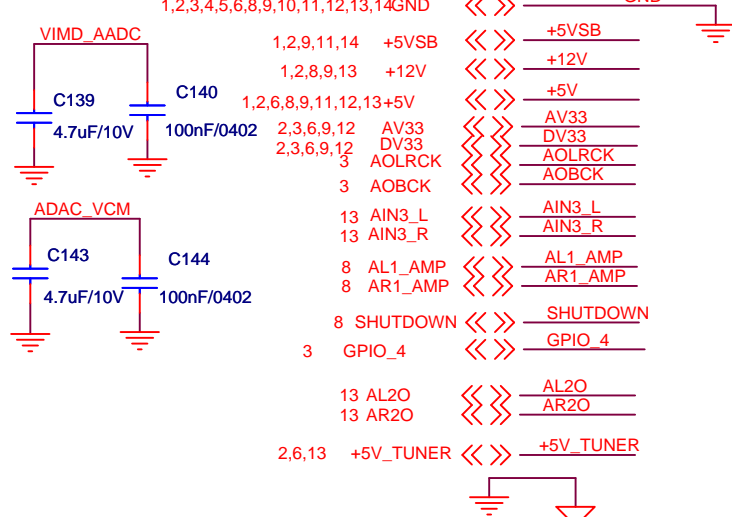
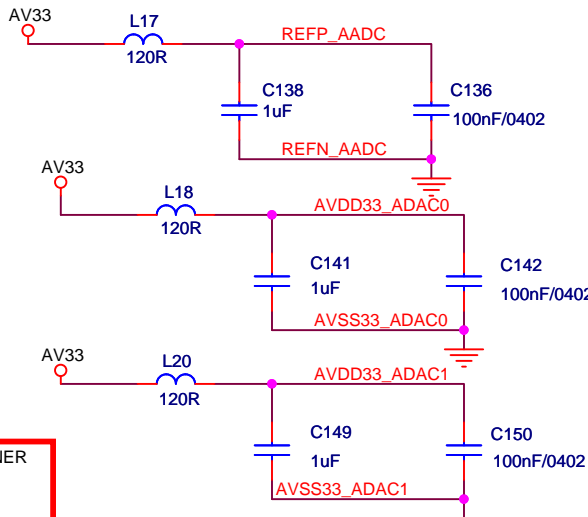
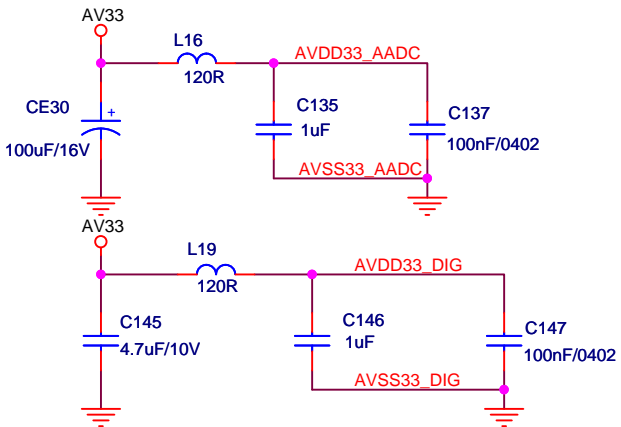
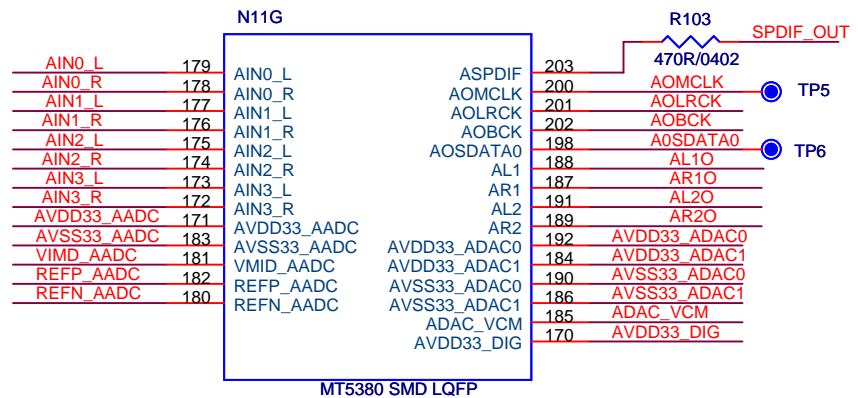
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FLASH/JTAG/UART		
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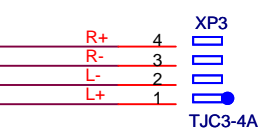
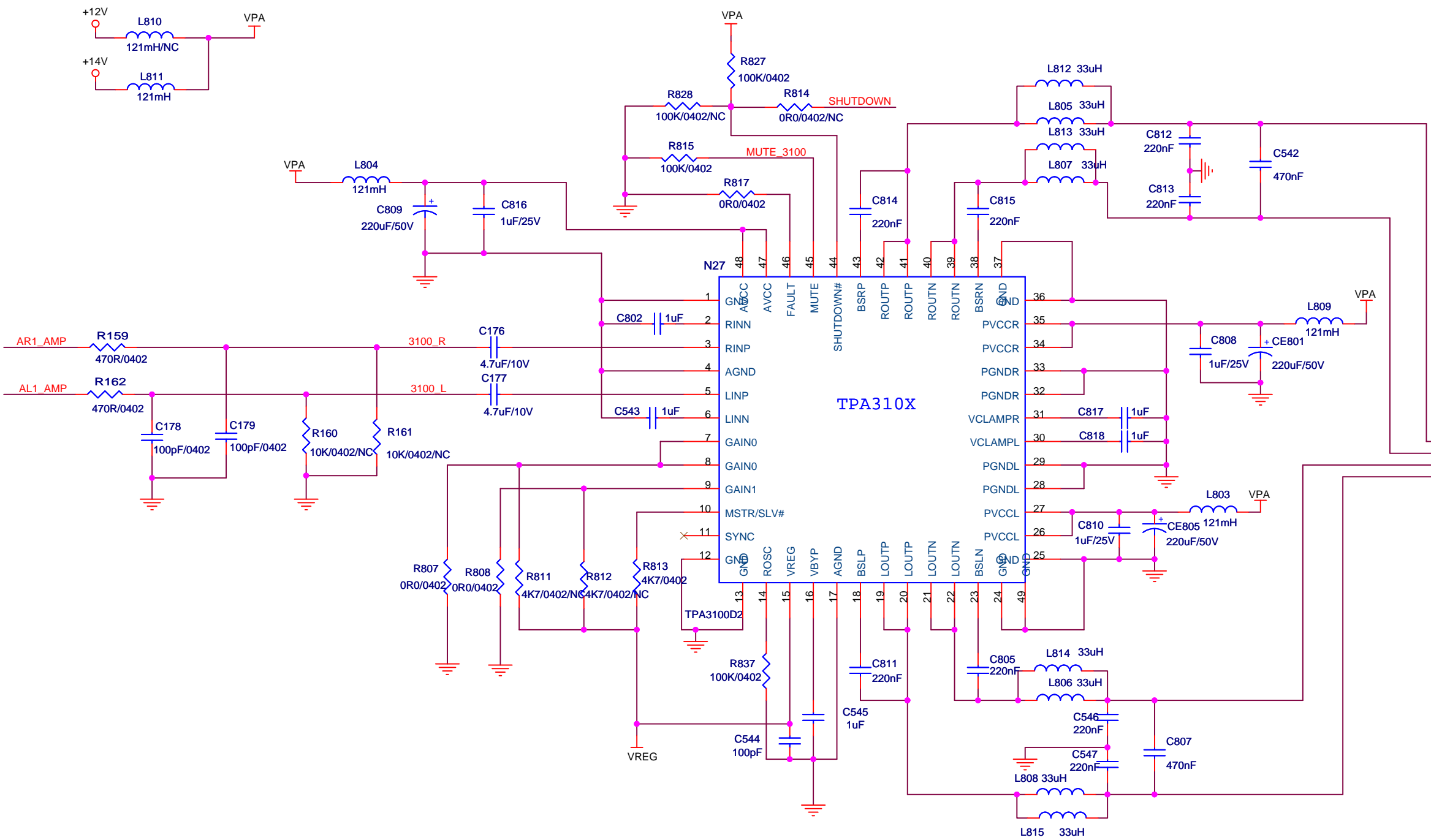
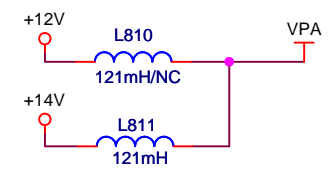
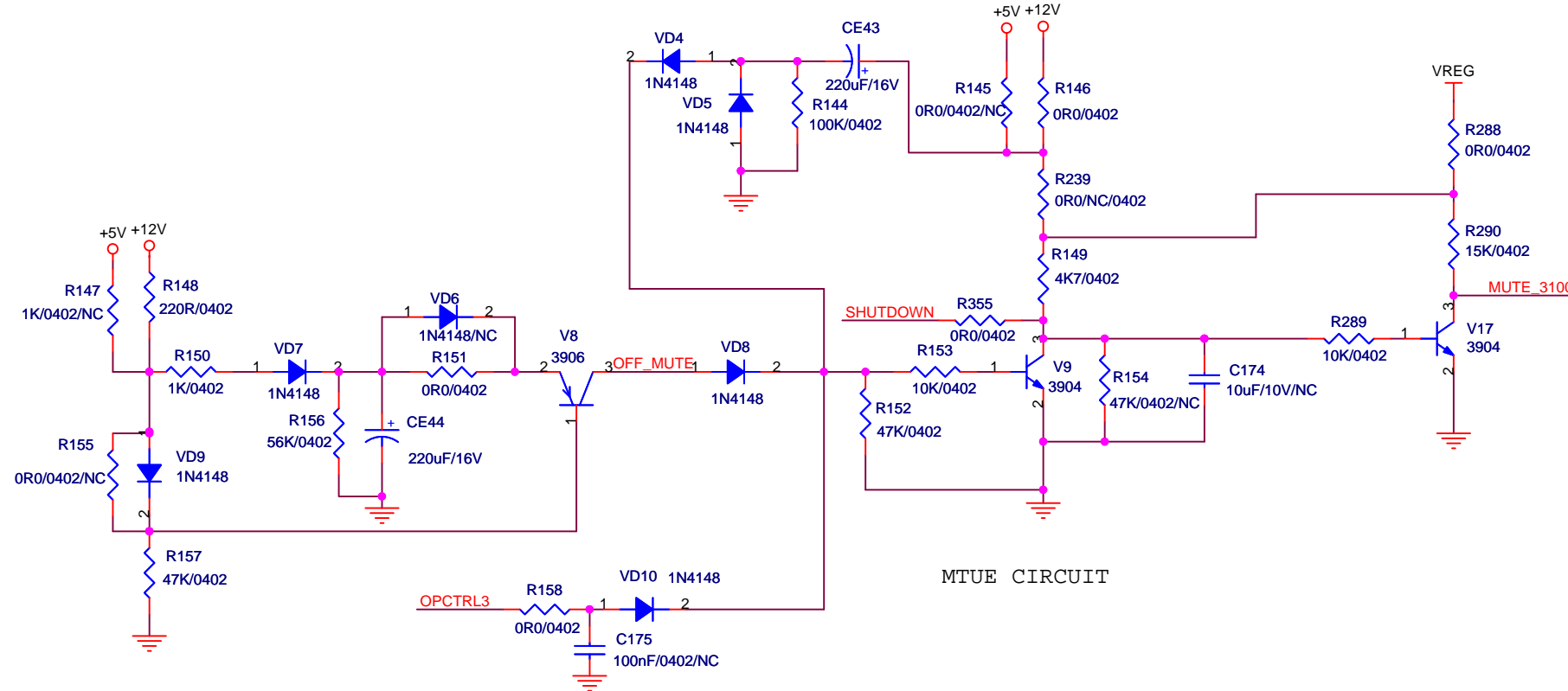
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- 1,2,3,4,5,6,7,9,10,11,12,13,14 GND <<>> GND
- 1,2,6,7,9,11,12,13,+5V <<>> +5V
- 1,2,7,9,13 +12V <<>> +12V
- 14 AL1_AMP <<>> AL1_AMP
- 14 AR1_AMP <<>> AR1_AMP
- 9 SHUTDOWN <<>> SHUTDOWN
- 3 OPCTRL3 <<>> OPCTRL3
- 1,2,7,9,13 +14V <<>> +14V



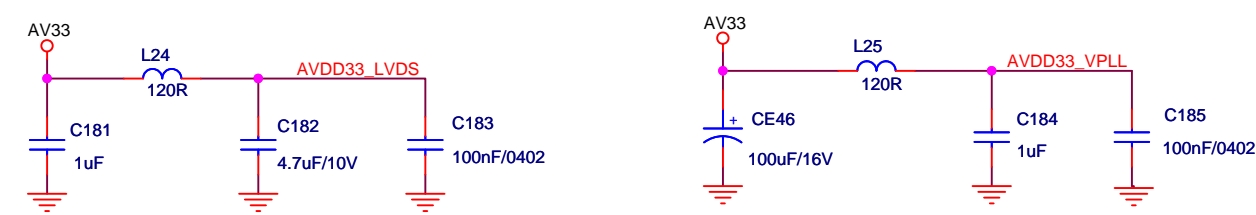
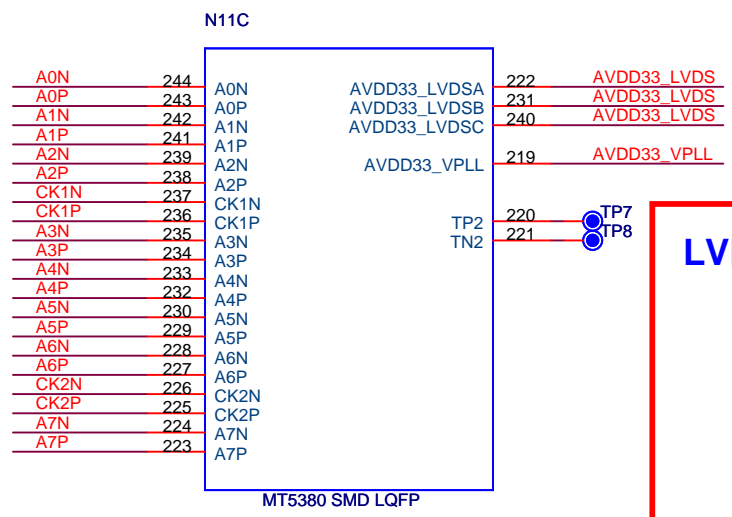
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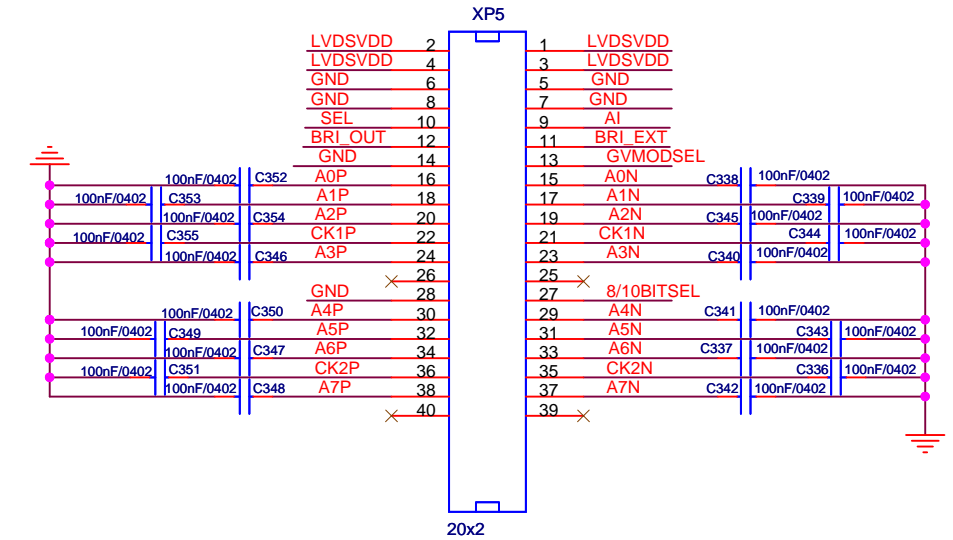
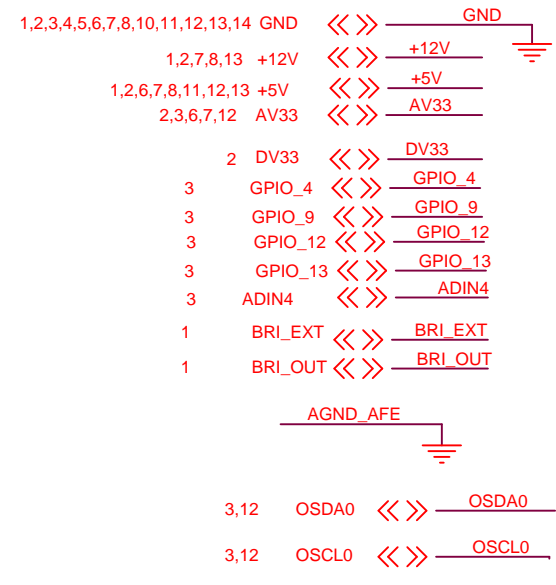
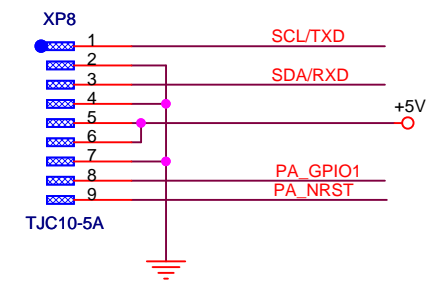
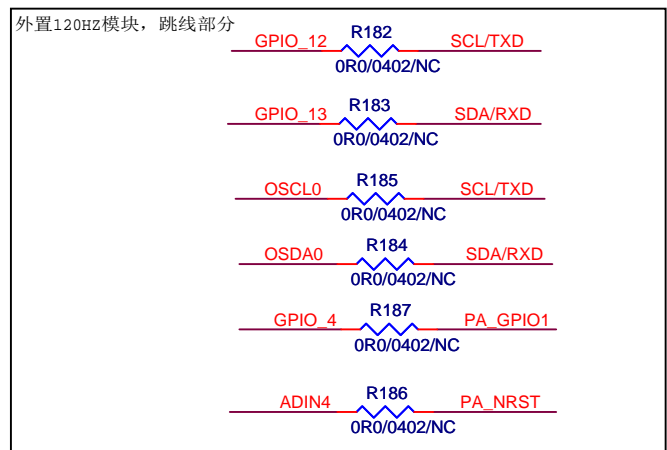
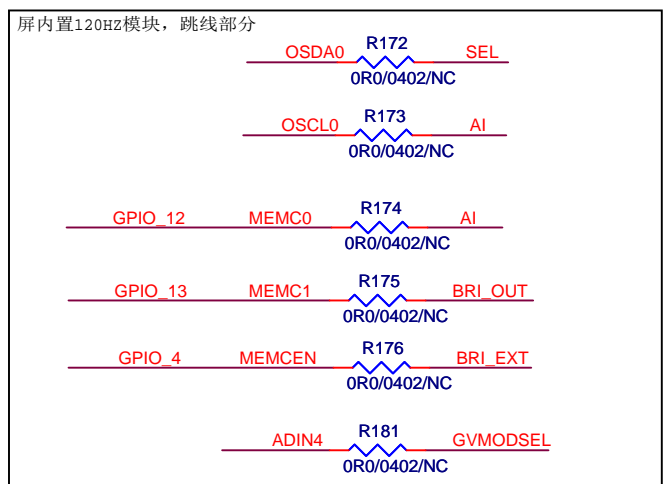
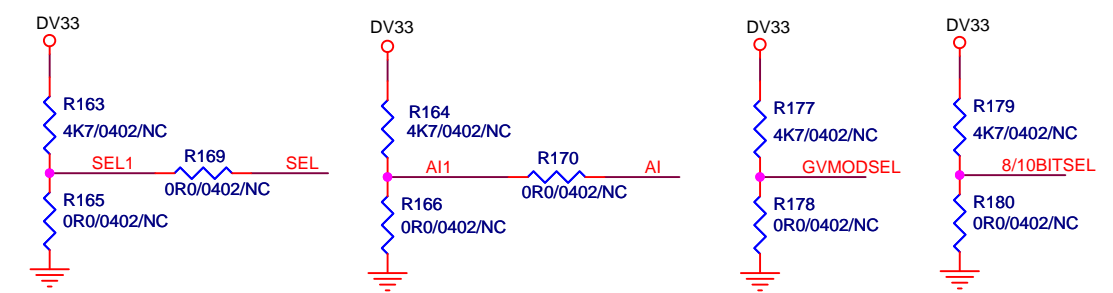
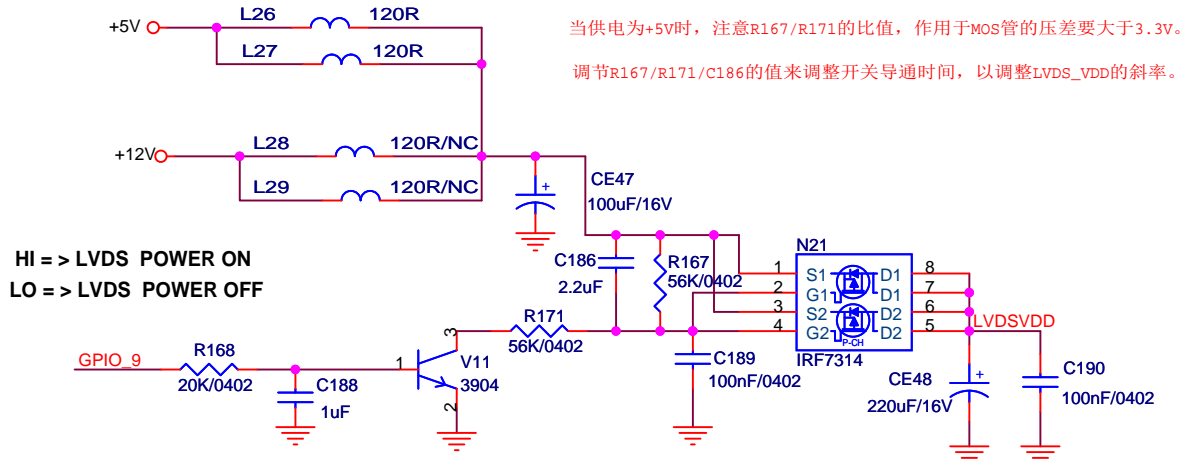
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Title: **AMP/MUTE**

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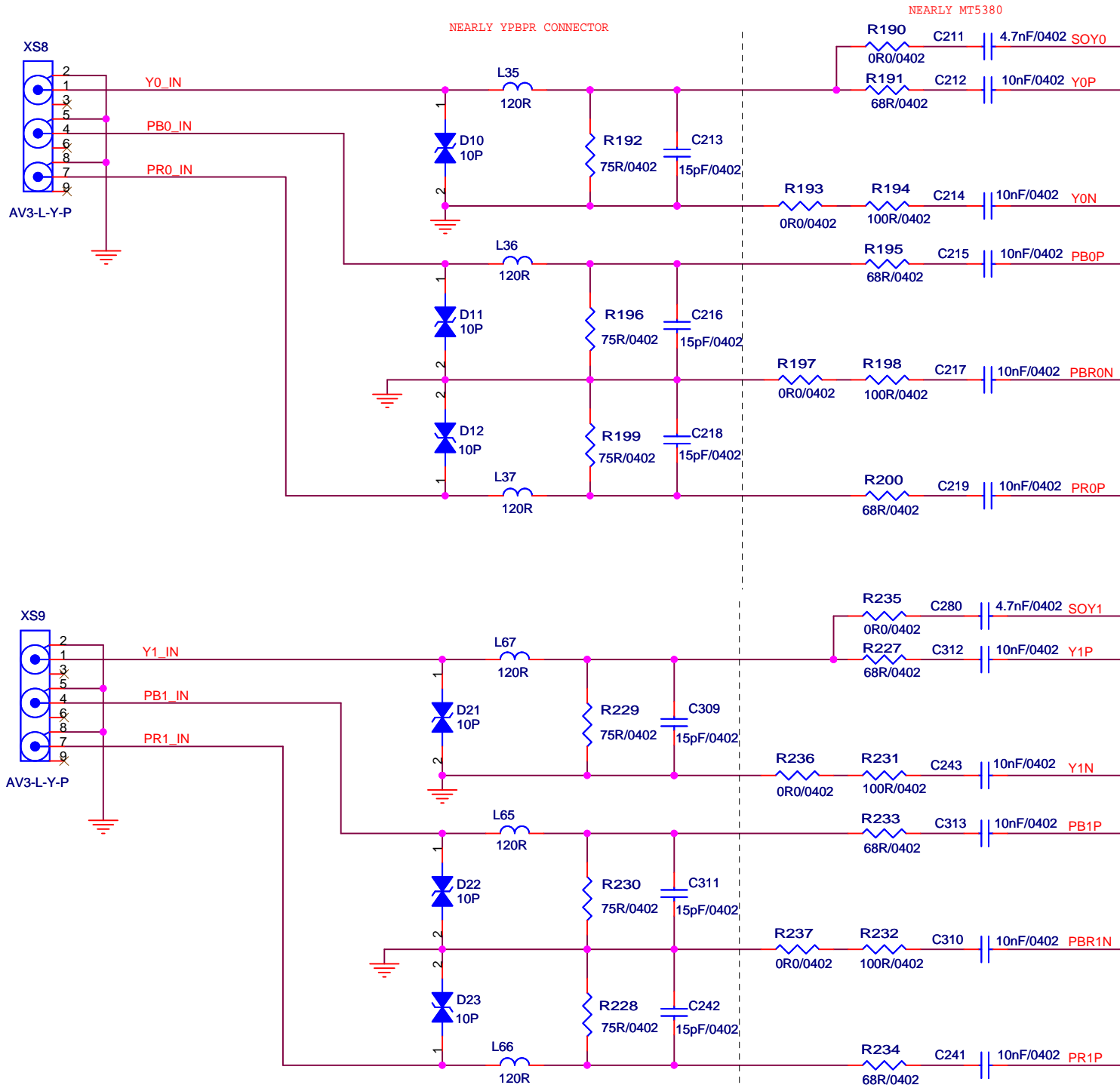
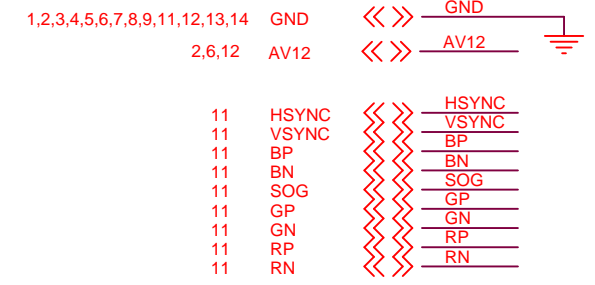
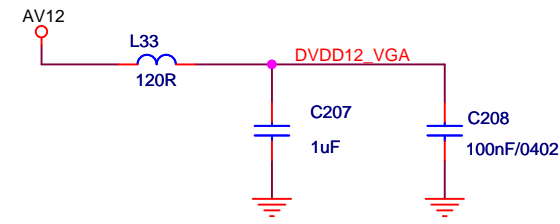
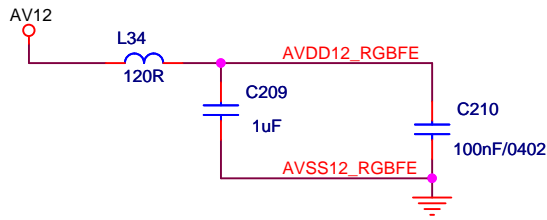
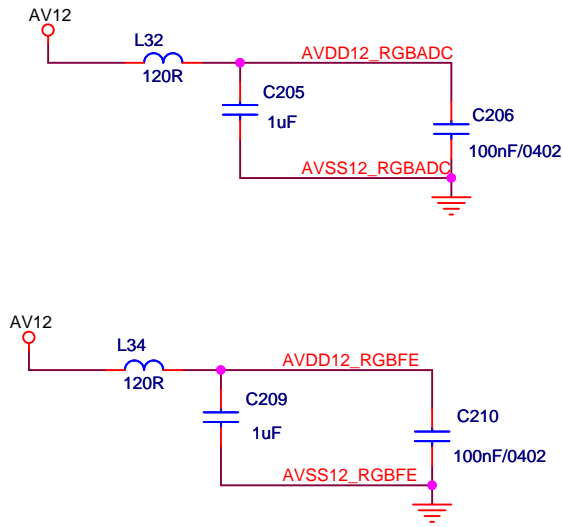
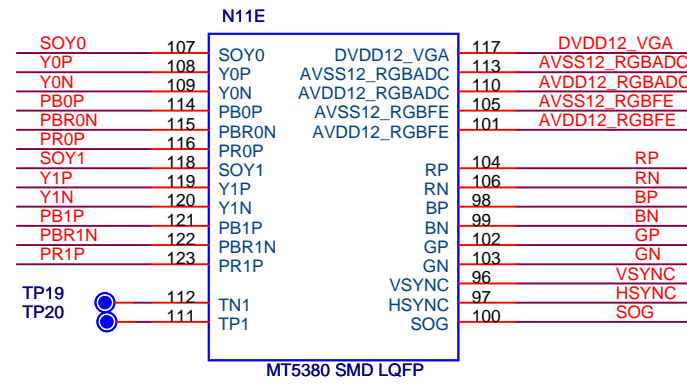
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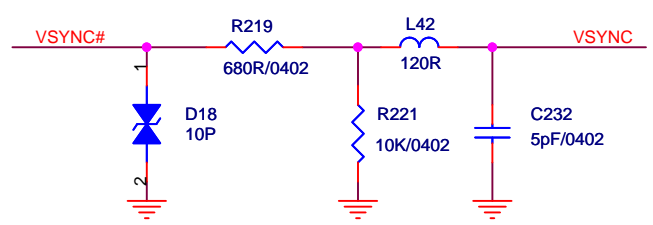
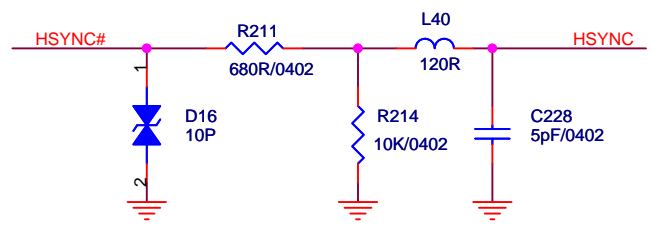
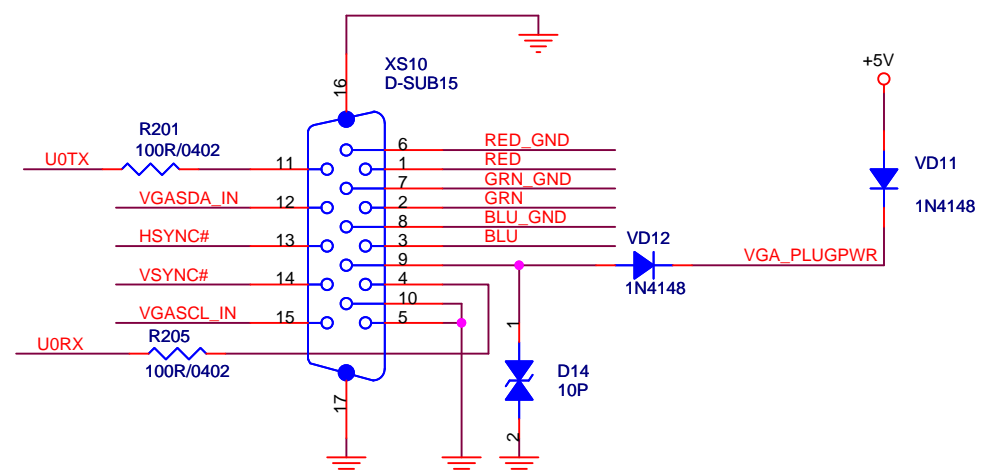
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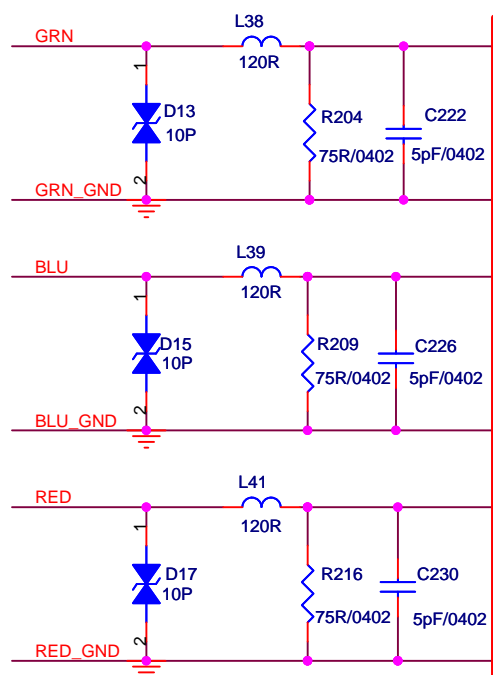
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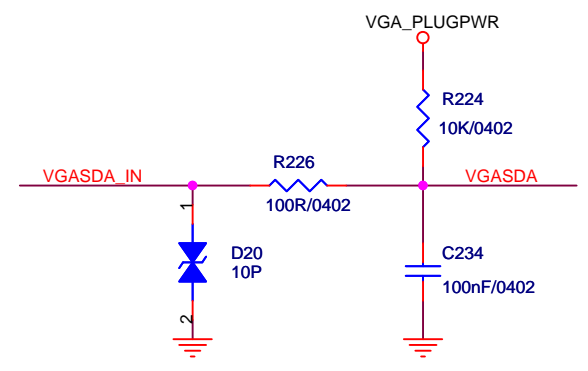
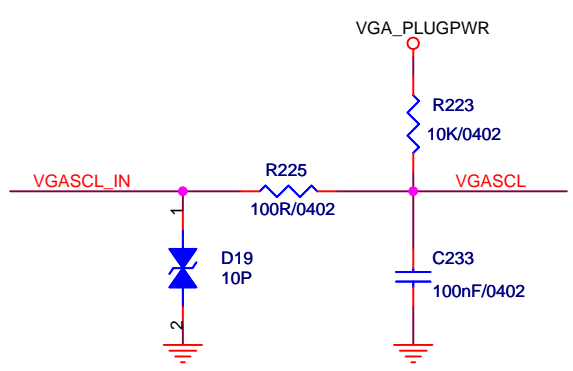
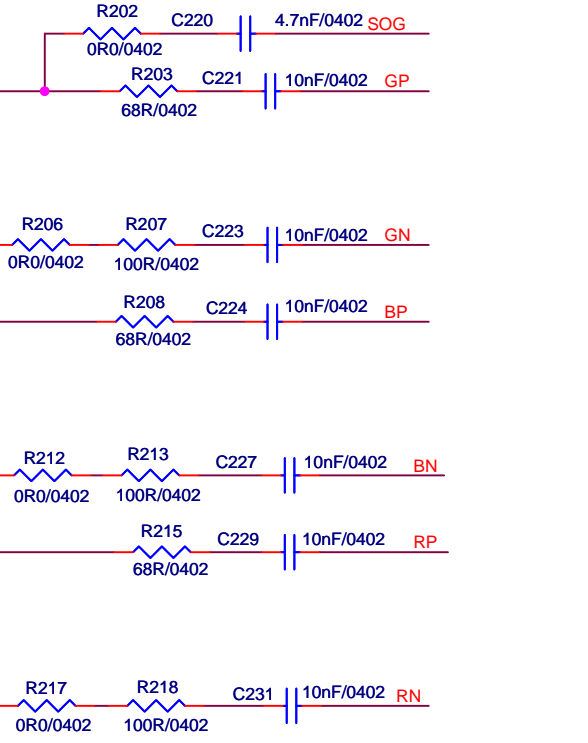
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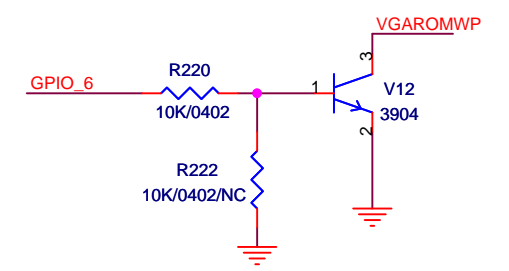
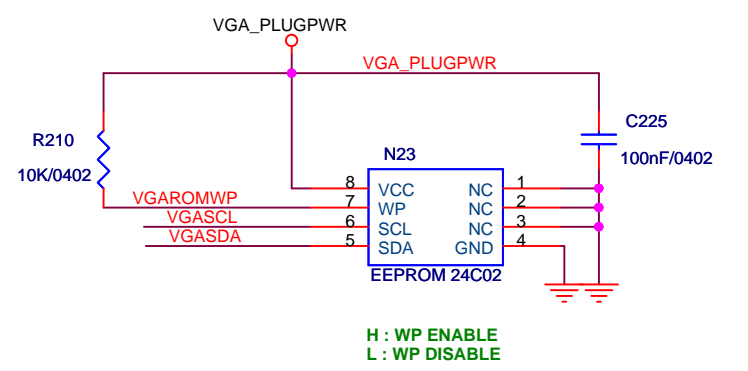
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NEARLY IC



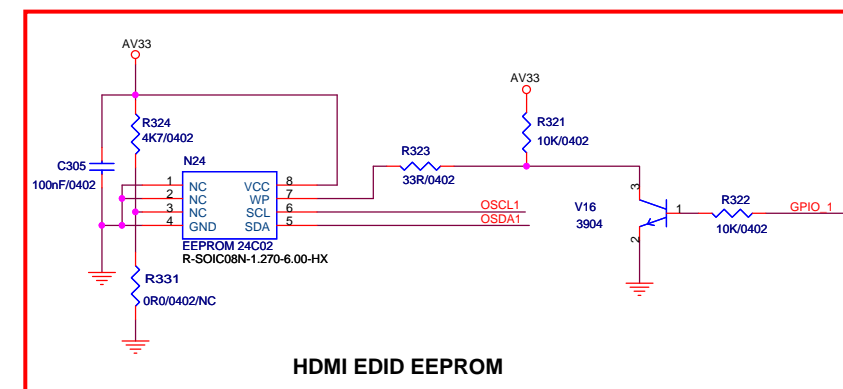
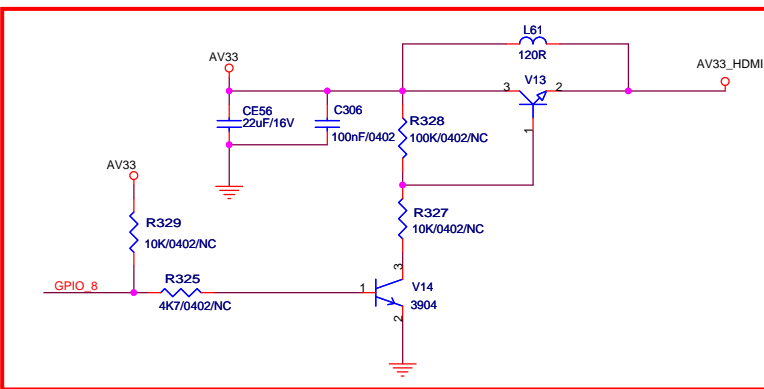
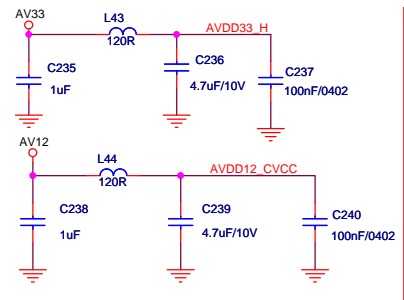
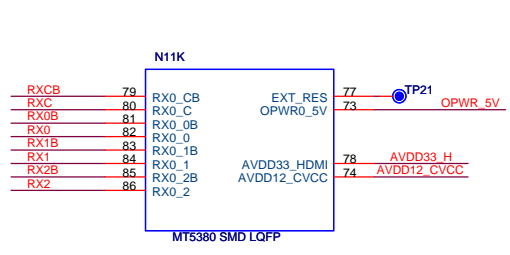
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10	HSYNC	<<>	HSYNC
10	SOG	<<>	SOG
10	GP	<<>	GP
10	GN	<<>	GN
10	BP	<<>	BP
10	BN	<<>	BN
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5	U0TX	<<>	U0TX
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3	GPIO_6	<<>	GPIO_6



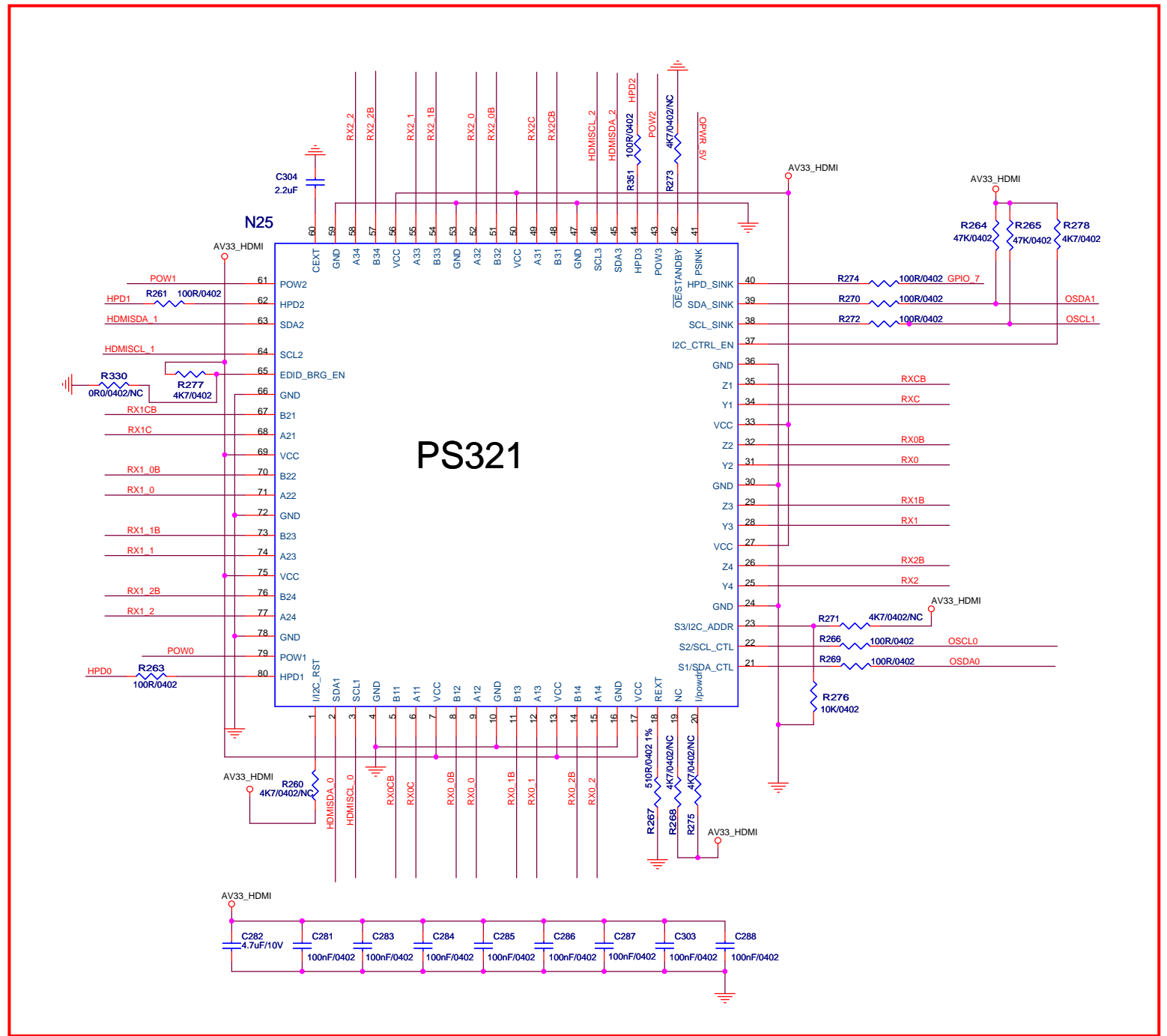
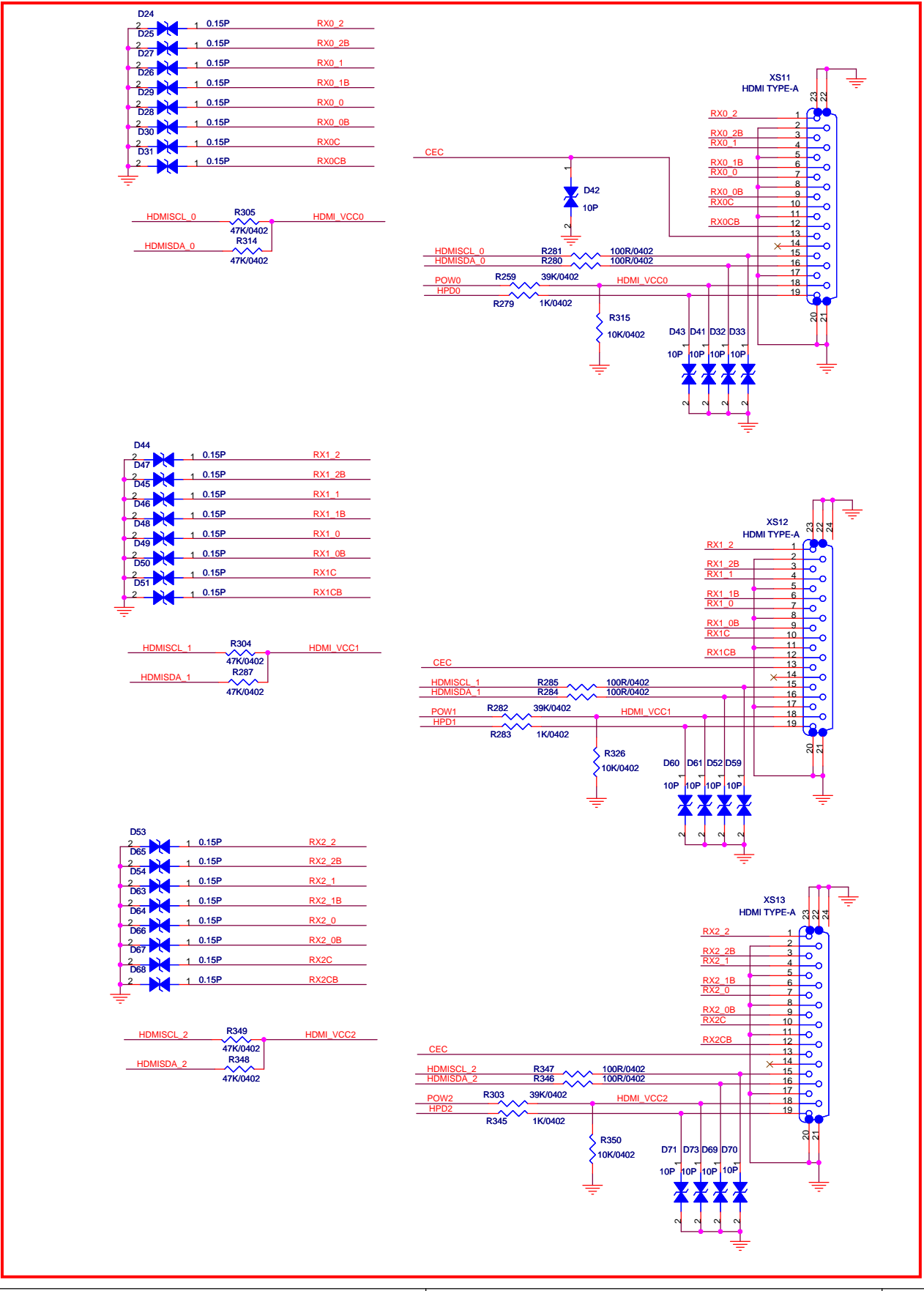
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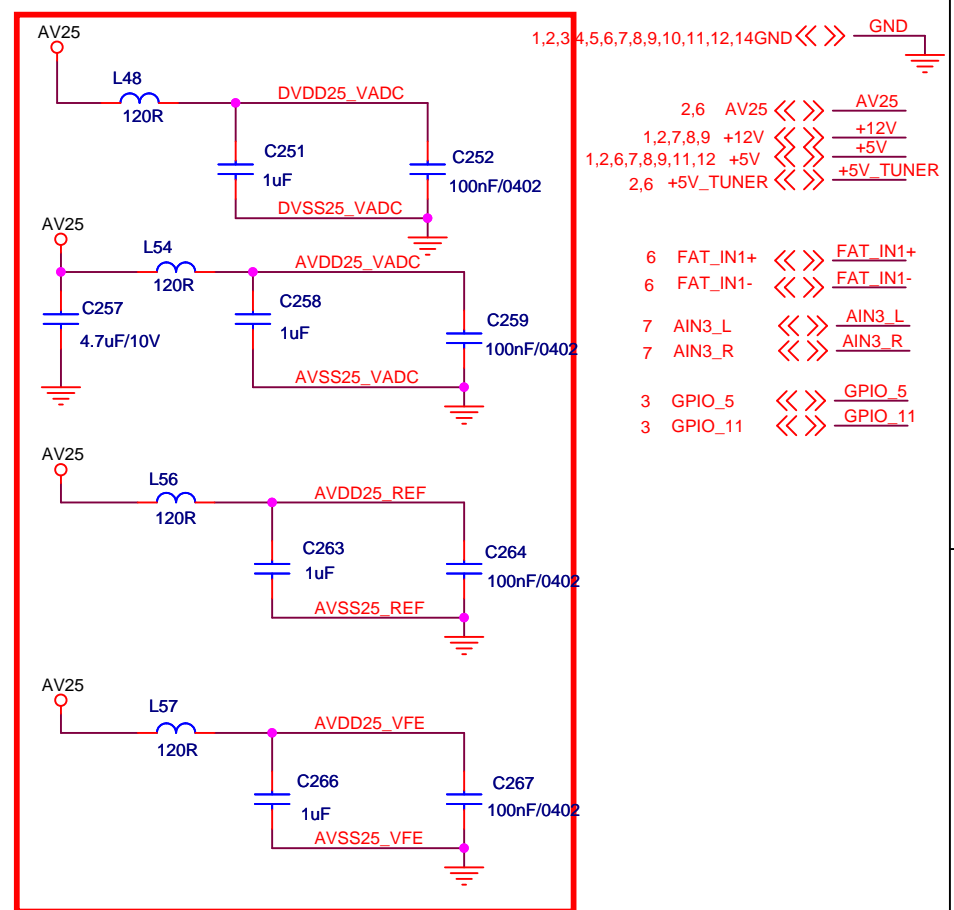
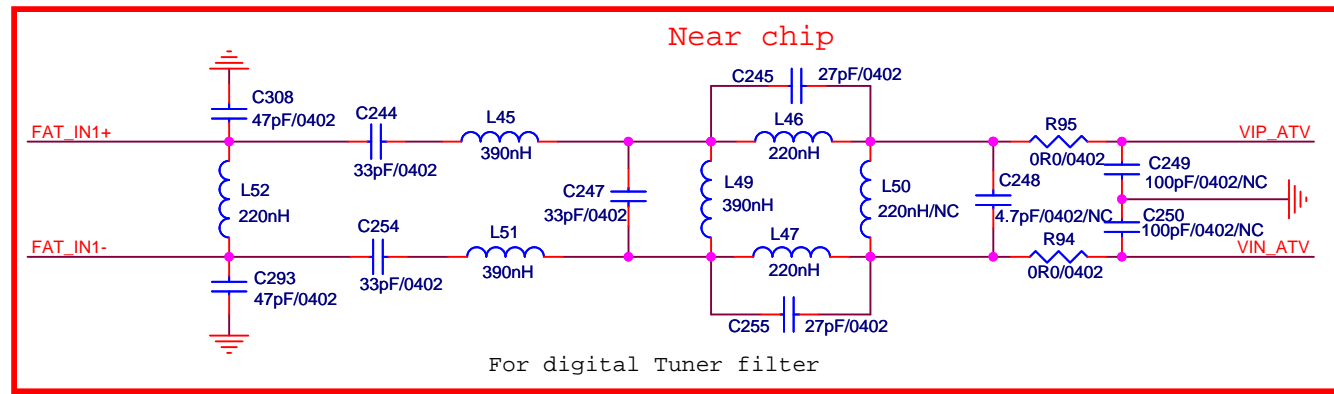
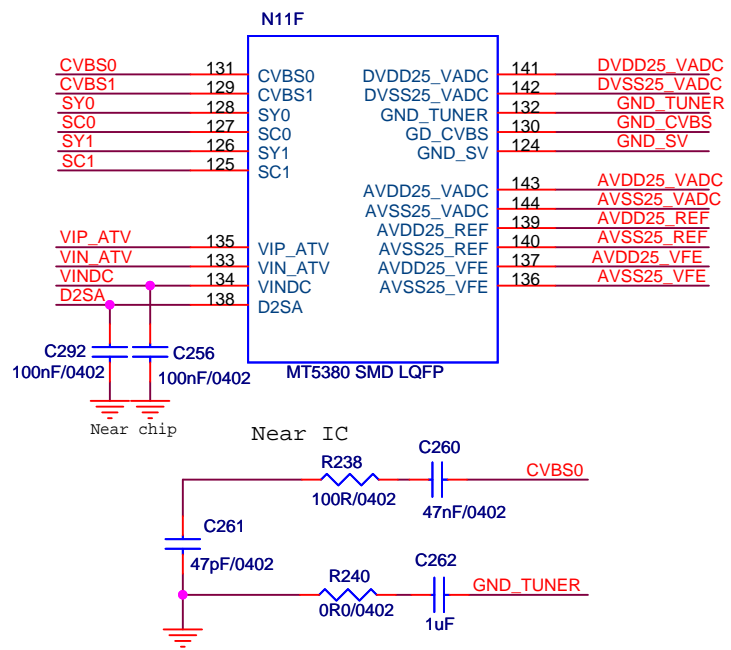
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Title		
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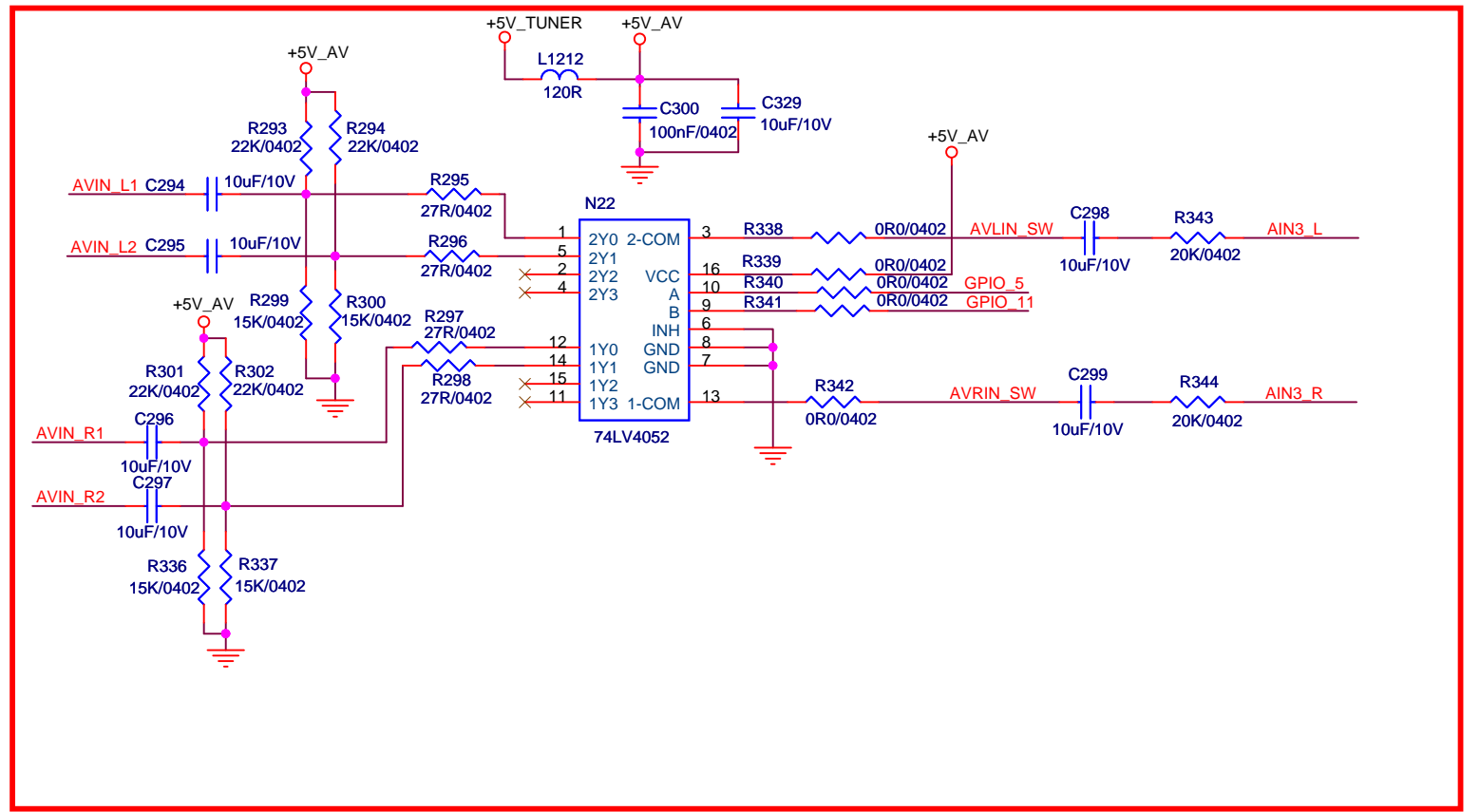
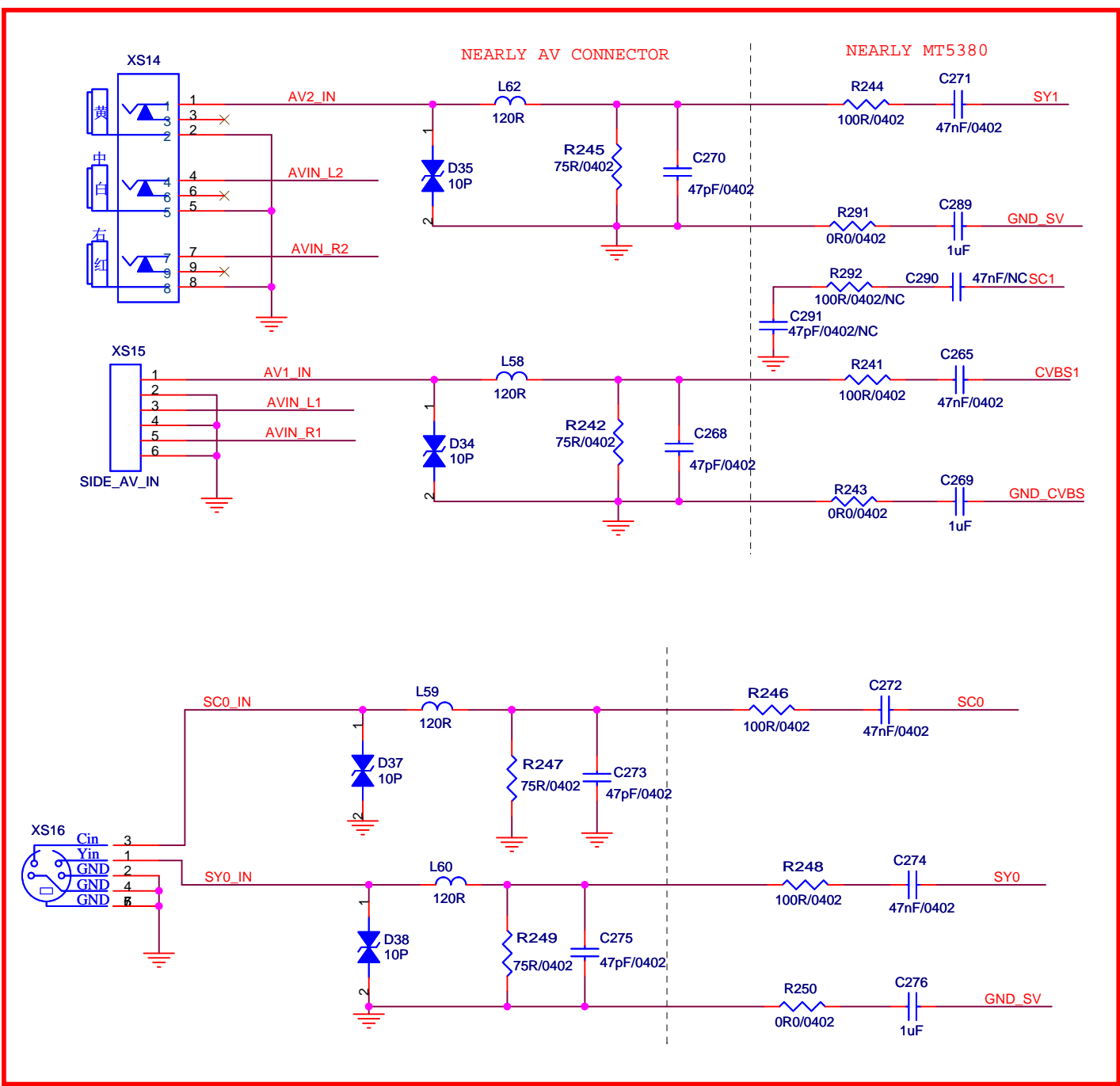


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2,6,10	AV12	<<>	AV12
2,6,10	+3V3SB	<<>	+3V3SB
3	GPIO_1	<<>	GPIO_1
3	GPIO_7	<<>	GPIO_7
3	GPIO_8	<<>	GPIO_8
3	CEC	<<>	CEC
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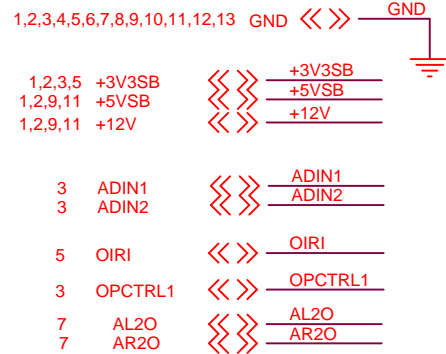
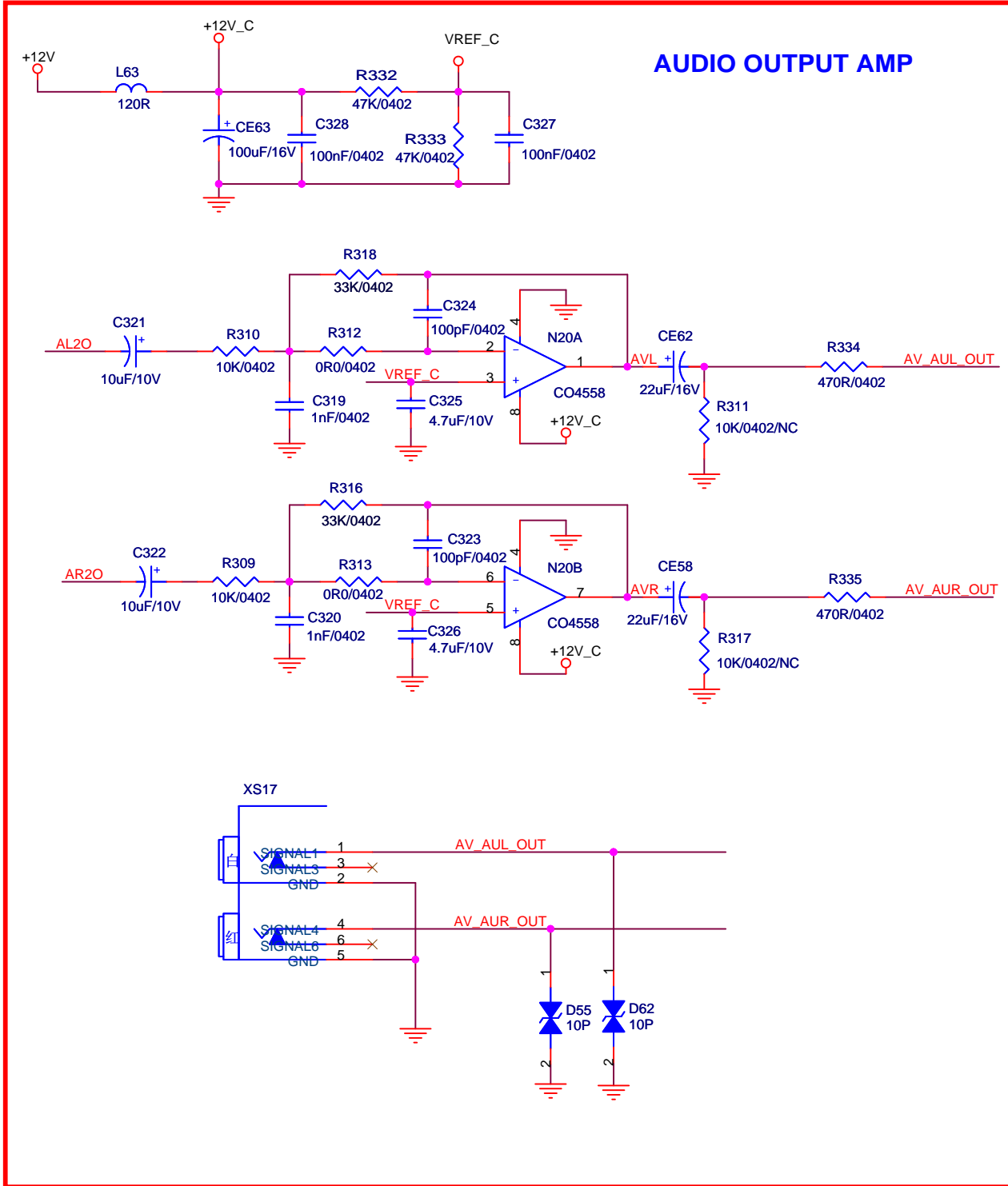
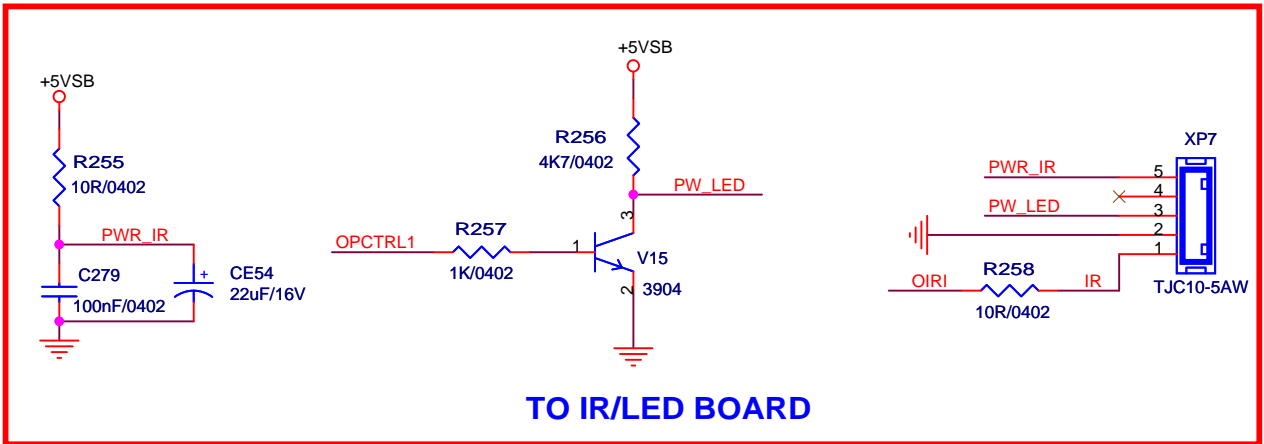
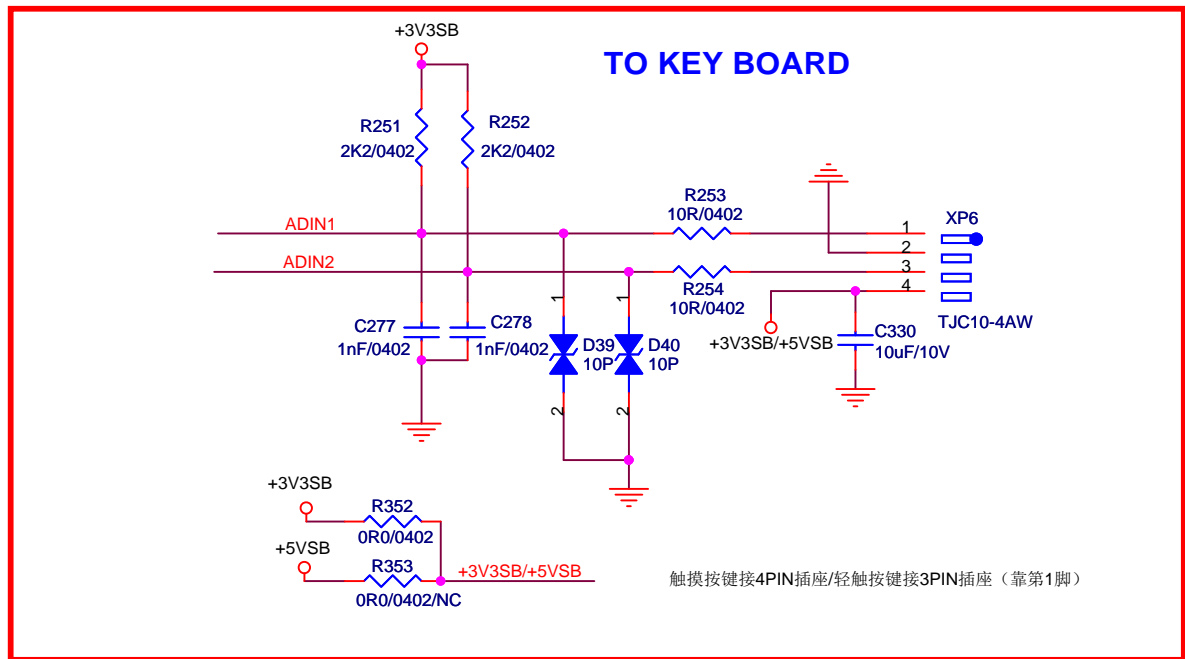
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- 1,2,7,8,9 +12V <<>> +12V
- 1,2,6,7,8,9,11,12 +5V <<>> +5V
- 2,6 +5V_TUNER <<>> +5V_TUNER
- 6 FAT_IN1+ <<>> FAT_IN1+
- 6 FAT_IN1- <<>> FAT_IN1-
- 7 AIN3_L <<>> AIN3_L
- 7 AIN3_R <<>> AIN3_R
- 3 GPIO_5 <<>> GPIO_5
- 3 GPIO_11 <<>> GPIO_11



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