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**CAUTION:**

READ THIS MANUAL CAREFULLY  
TO DIAGNOSE TROUBLE CORRECTLY  
BEFORE OFFERING SERVICE

# **SERVICE MANUAL**

COLOR TV

**MODEL: NS-LTDVD19**



**THIS MANUAL IS USED BY QUALIFIED APPLIANCE TECHNICIANS ONLY.  
HAIER DOES NOT ASSUME ANY RESPONSIBILITY FOR  
PROPERTY DAMAGE OR  
PERSONAL INJURY FOR IMPROPER SERVICE PROCEDURES DONE  
BY ONE UNQUALIFIED PERSON.**

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# **C O N T E N T**

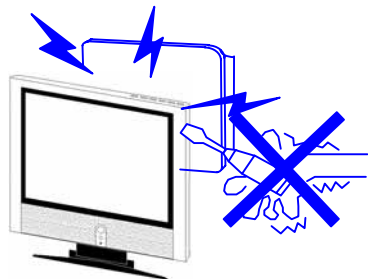
- 1. Features**
- 2. Safety Precautions**
- 3. Images of Module and Circuit Boards**
- 4. Key IC Description & Trouble Shooting Guide**
- 5. Signal Flowing Chart**
- 6. Bus Control Adjustment**
- 7. Circuit Diagram**

# Features

NO.	Functions	Model
		NS-LTDVD19
1	TFT	SAMSUNG
2	Screen size	19inch
3	Aspect ratio	16:310
4	Resolution	1440x900
5	Brightness	300cd/m <sup>2</sup>
6	Contrast(Darkroom)	1000:1
7	Response time(ms)	5
8	Color system	NTSC
9	NO. of preset channels	181
10	Picture mode	Yes
11	Angel of view	H:160° / V:160°
12	Color display	16,777,216
13	Color level	16
14	OSD languages	ENGLISH \ FRENCH \ SPANISH
15	AV stereo	Yes
16	Surrounding sound	No
17	Audio system	M
18	Bass	Yes
19	Balance	Yes
20	Sound mode	Yes
21	Mute	Yes
22	BTSC	Yes
23	AV input	Yes
24	AV output	No
25	Y CB CR	Yes
26	Y PB PR	Yes
27	S-video jack	Yes
28	TV in	Yes

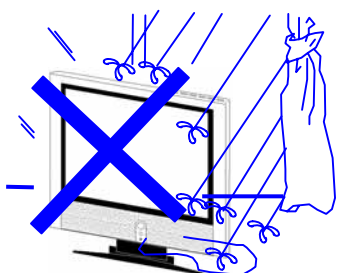
<b>NO.</b>	<b>Functions</b>	<b>Model</b>
		<b>NS-LTDVD19</b>
29	D-SUB jack	Yes
30	DVI socket	No
31	SCART socket	No
32	Ear-Phone Out	Yes
33	CCD,V-CHIP	Yes
34	Semitransparent menu	Yes
35	ZOOM	No
36	16:9 mode	Yes
37	Child Lock	Yes
38	Quick View	Yes
39	NO. of built-in speakers	2
40	Audio output power(Built-in)(W)	2*1.5
41	Total power input ( W )	80
42	Voltage range ( V )	120
43	Power frequency ( Hz )	60
44	Time of sleep timer(MINS)	240
45	Approval	UL
46	Suitable market	U.S.A

# Safety Precautions



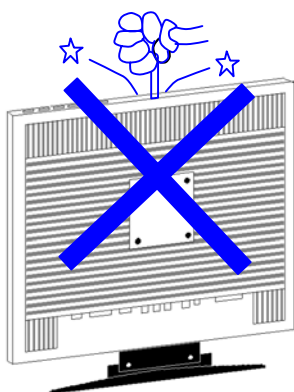
## Warning

High voltages are used in the operation of this product. Do not remove the cabinet back from your set. Refer servicing to qualified service personnel.



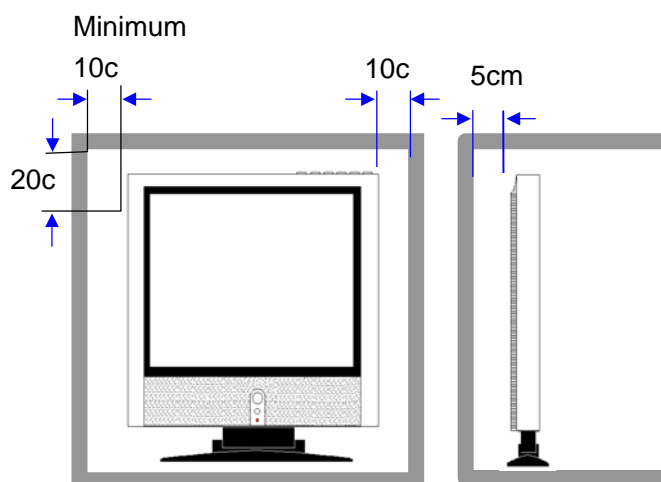
## Warning

To prevent fire or electrical shock hazard, Do not expose the main unit to rain or moisture.



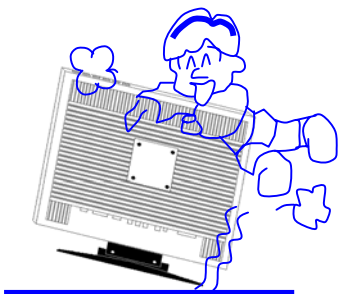
## Warning

Do not drop or push objects into the television cabinet slots or openings. Never spill any kind of liquid on the television receiver.



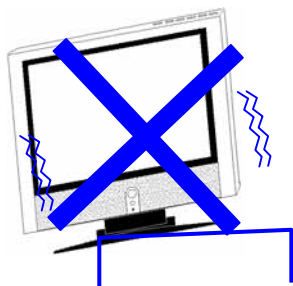
## Caution

If the television is to be built into a compartment or similarly enclosed, the minimum distances must be maintained. Heat build-up can reduce the service life of your television, and can also be dangerous.



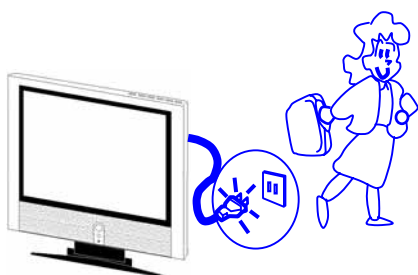
**Caution**

Never stand on, lean on, push suddenly the product or its stand. You should pay special attention to children to children.



**Caution**

Do not place the main unit on an unstable cart stand, shelf or table. Serious injury to an individual, and damage to the television, may result if it should fall.



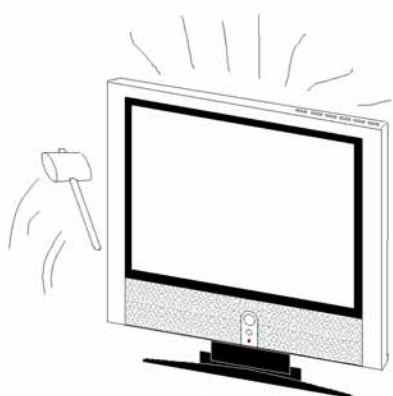
**Caution**

When the product is not used for an extended period of time, it is advisable to disconnect the AC power cord from the AC outlet.



**Caution**

Avoid exposing the main unit to direct sunlight and other source of the heat. Do not stand the television receiver directly on other produces which give off heat. E. g. video cassette players, Audio amplifiers. Do not block the ventilation holes in the back cover. Ventilation is essential to prevent failure of electrical component. Do not squash power supply cord under the main unit.



**Caution**

The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.

# Images of Module and Circuit Boards

## 1.images of Remote Board Subassembly



## 2.images of Control Panel Subassembly



## 3.images of Main Board



## 4.images of Power Supply



## *Chapter 1. SupraHD-760 Overview*

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### *1.1 SupraHD Family*

The ZR396xx family consists of:

- SupraHD-680 IC (ZR39680) - Digital TVs for the ATSC/DVB/OpenCable Market
- SupraHD-660 IC (ZR39660) - Digital TVs for the ATSC Market
- SupraHD-640 IC (ZR39640) - Digital ATSC upgrade for Analog TVs

The ZR397xx family consists of:

- SupraHD-760 IC (ZR39760) - Digital Flat Panel TVs for the ATSC Market
- SupraHD-740 IC (ZR39740) - Digital ATSC upgrade for Analog TVs

### *1.2 SupraHD-760 IC Description*

The SupraHD-760 IC is a members of the SupraHD family of DTV controllers developed by Zoran. These devices are intended to be used in ATSC-compliant television implementations. These devices include all of the functionality required to support the television implementations shown in the following system block diagrams.



Figure 2 shows a typical system implementation using the SupraHD-760. This system can be designed and manufactured in a very low-cost manner.

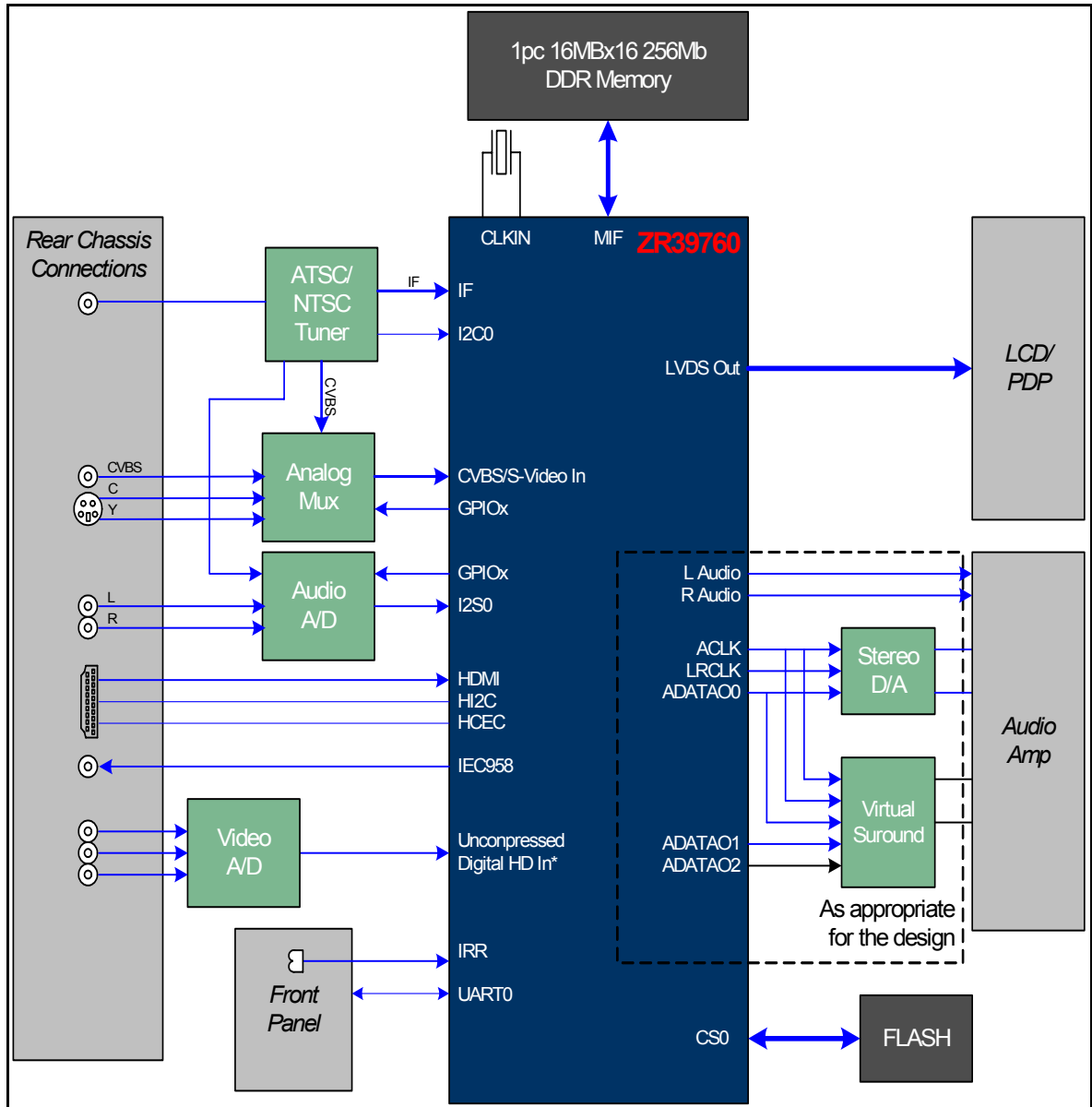


Figure 2: SupraHD-760 DTV System Diagram - FTA Implementation

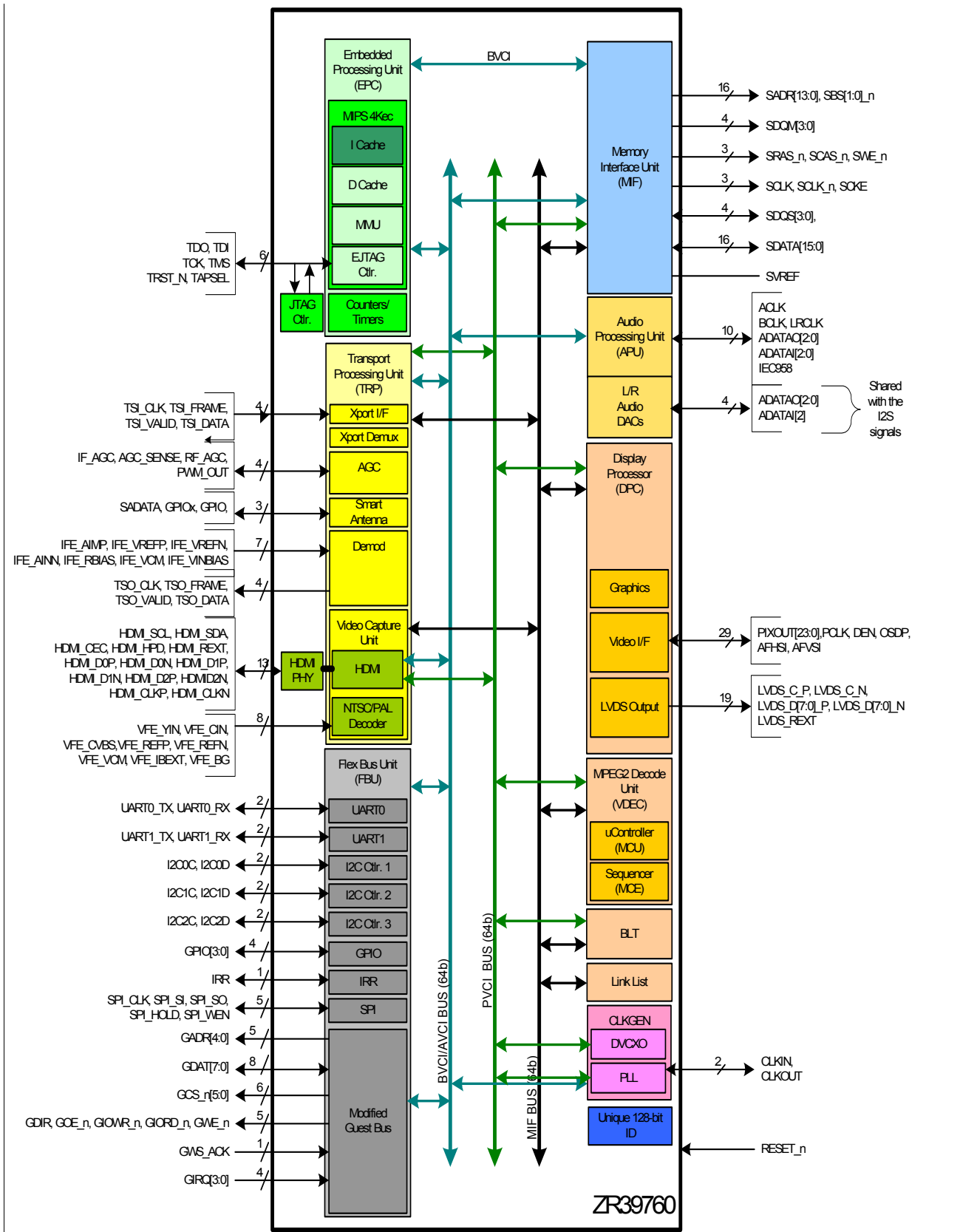


Figure 3: SupraHD-760 Detailed Block Diagram

## 1.3 I/O Options

Figure 4 shows the four major I/O options available:

- video input and output
- audio input and output

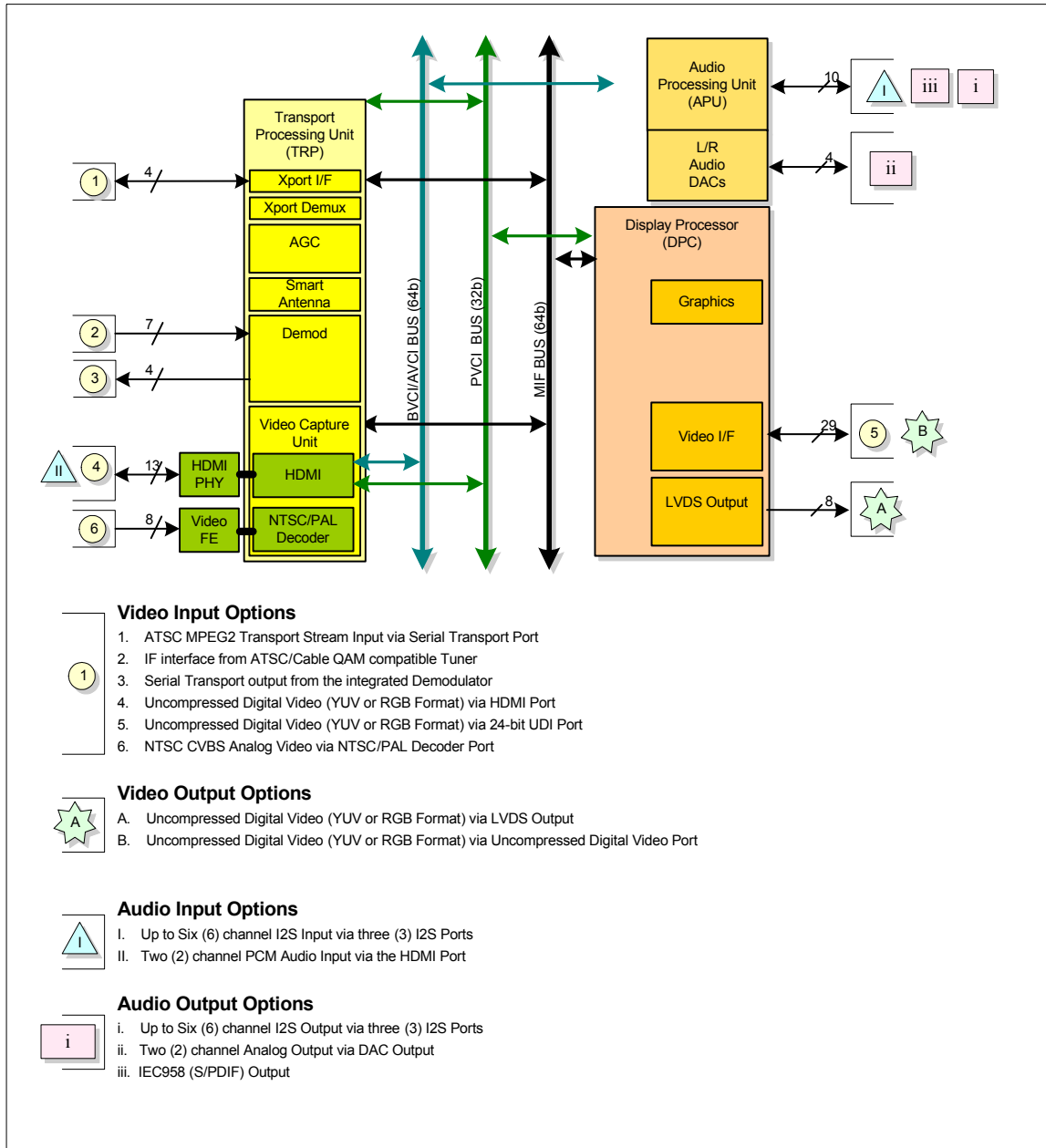
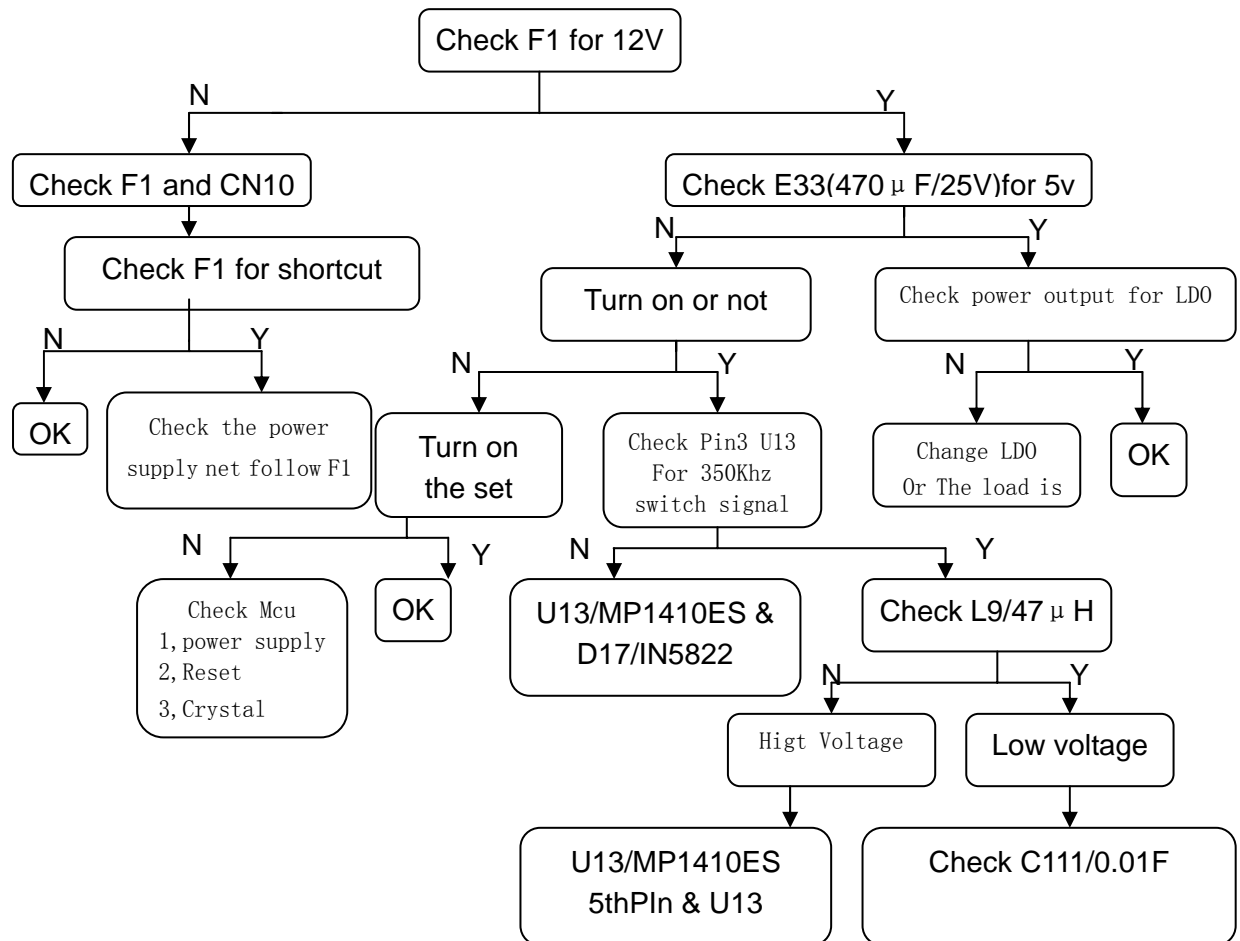


Figure 4: I/O Option Dataflows

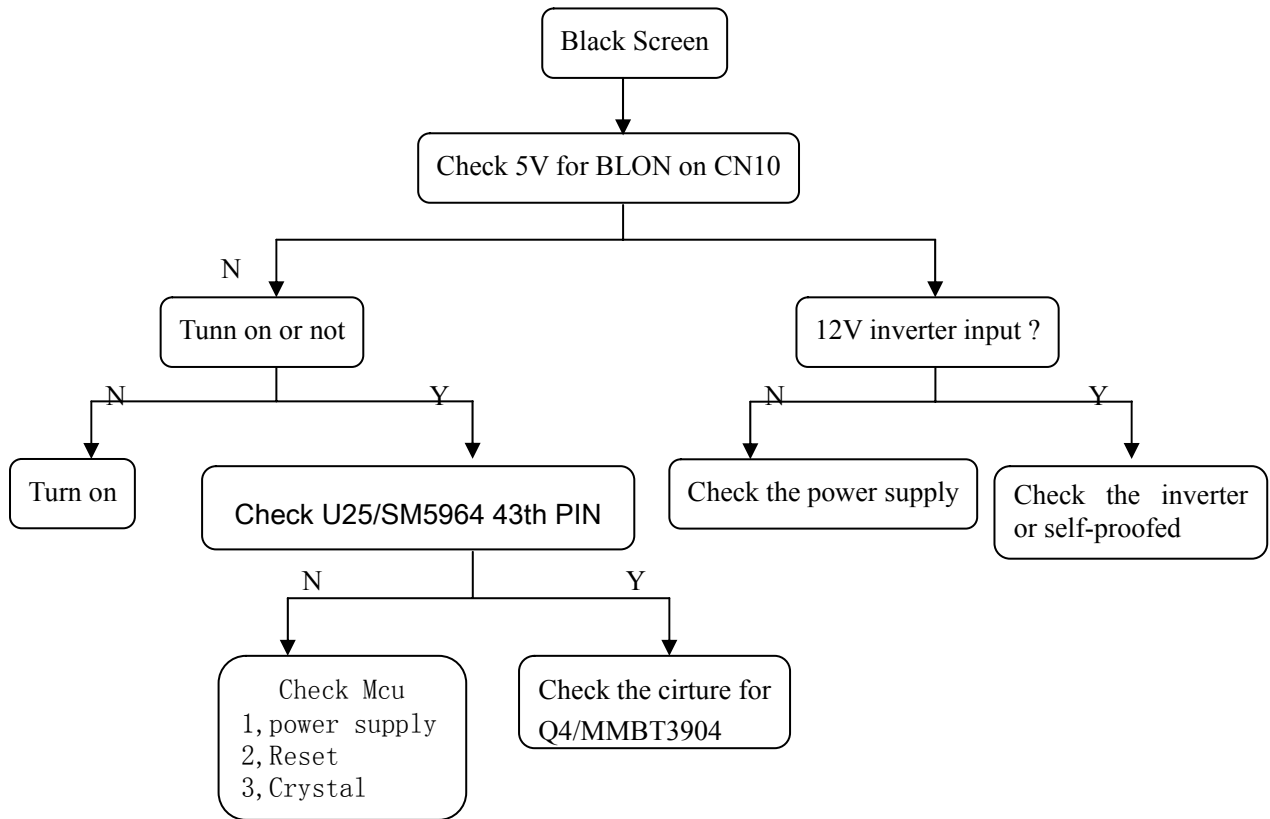
# Trouble shooting Guide

## 1.Power Supply Trouble

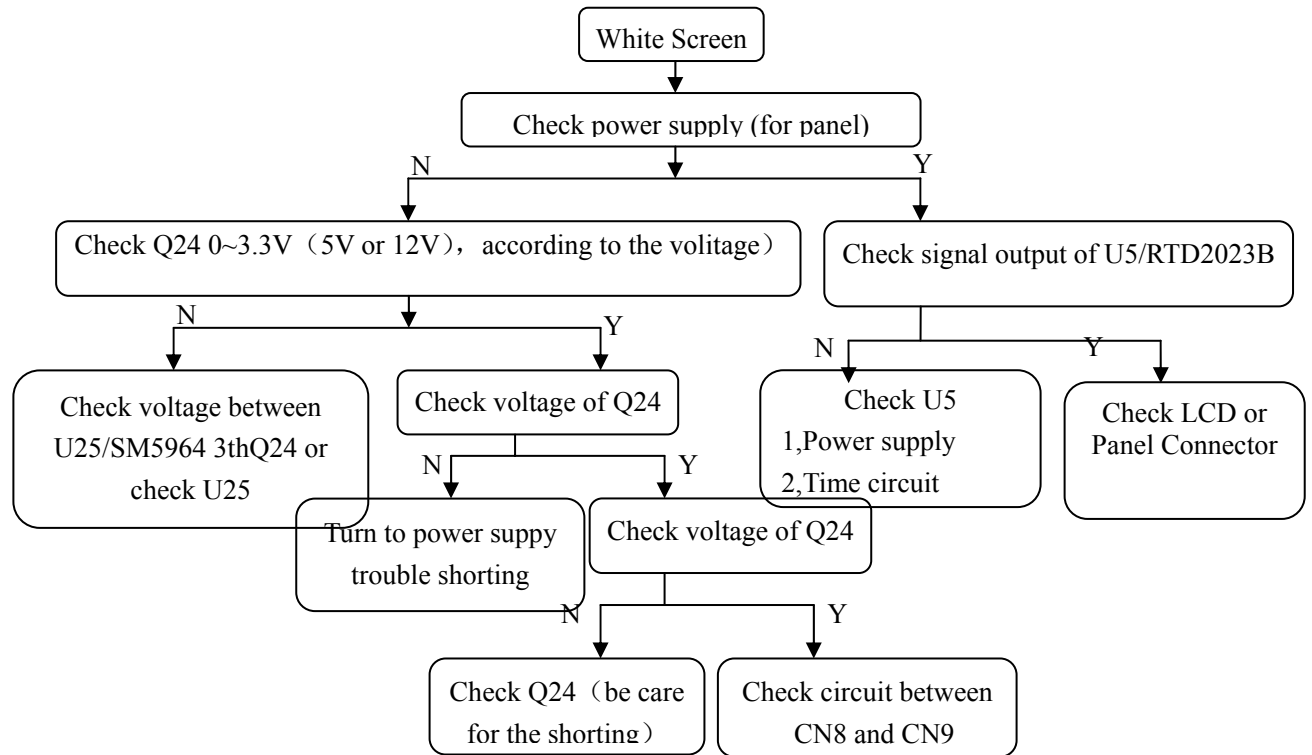


## 2. Display Trouble

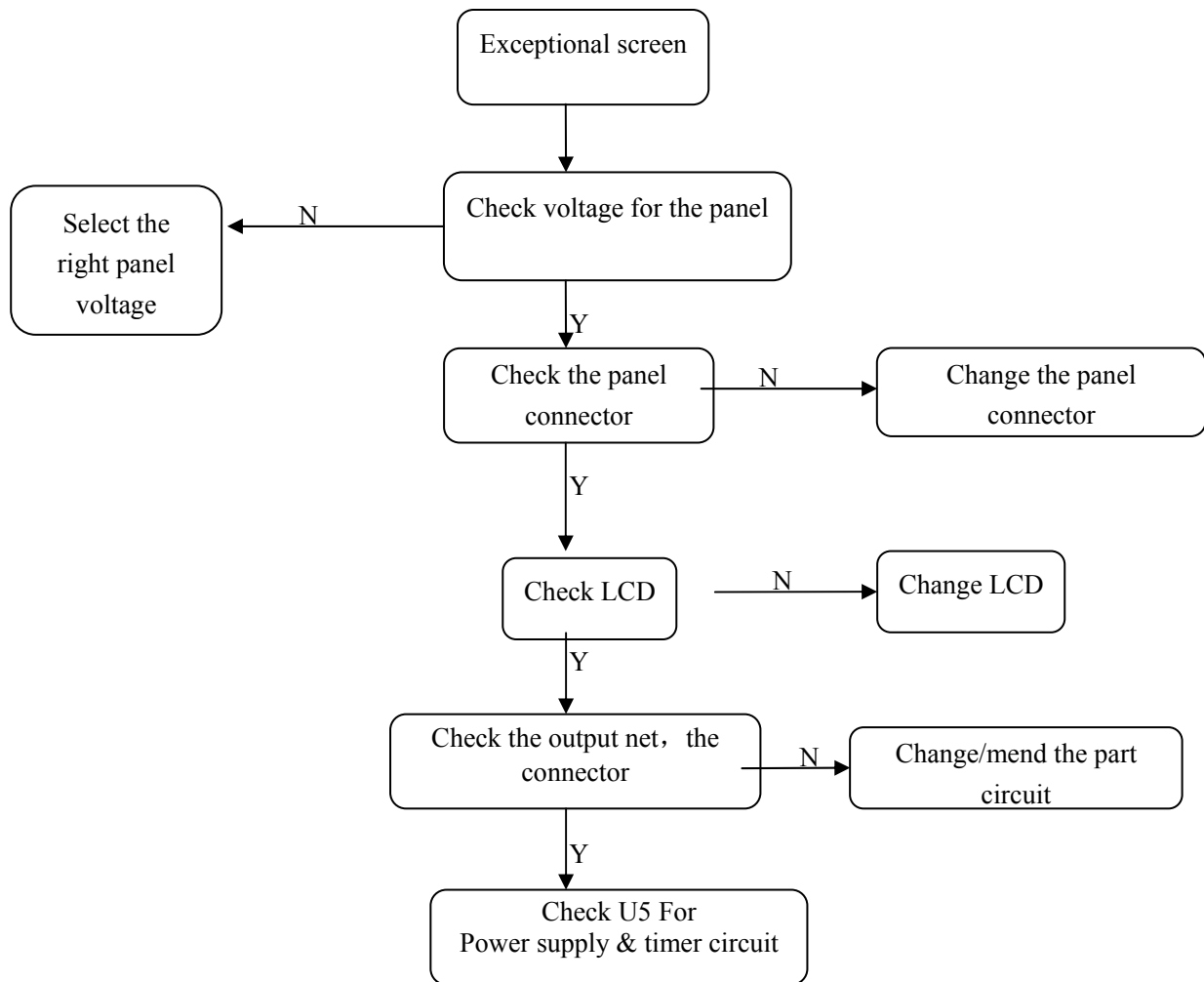
### 2.1 Black



## 2.2 White

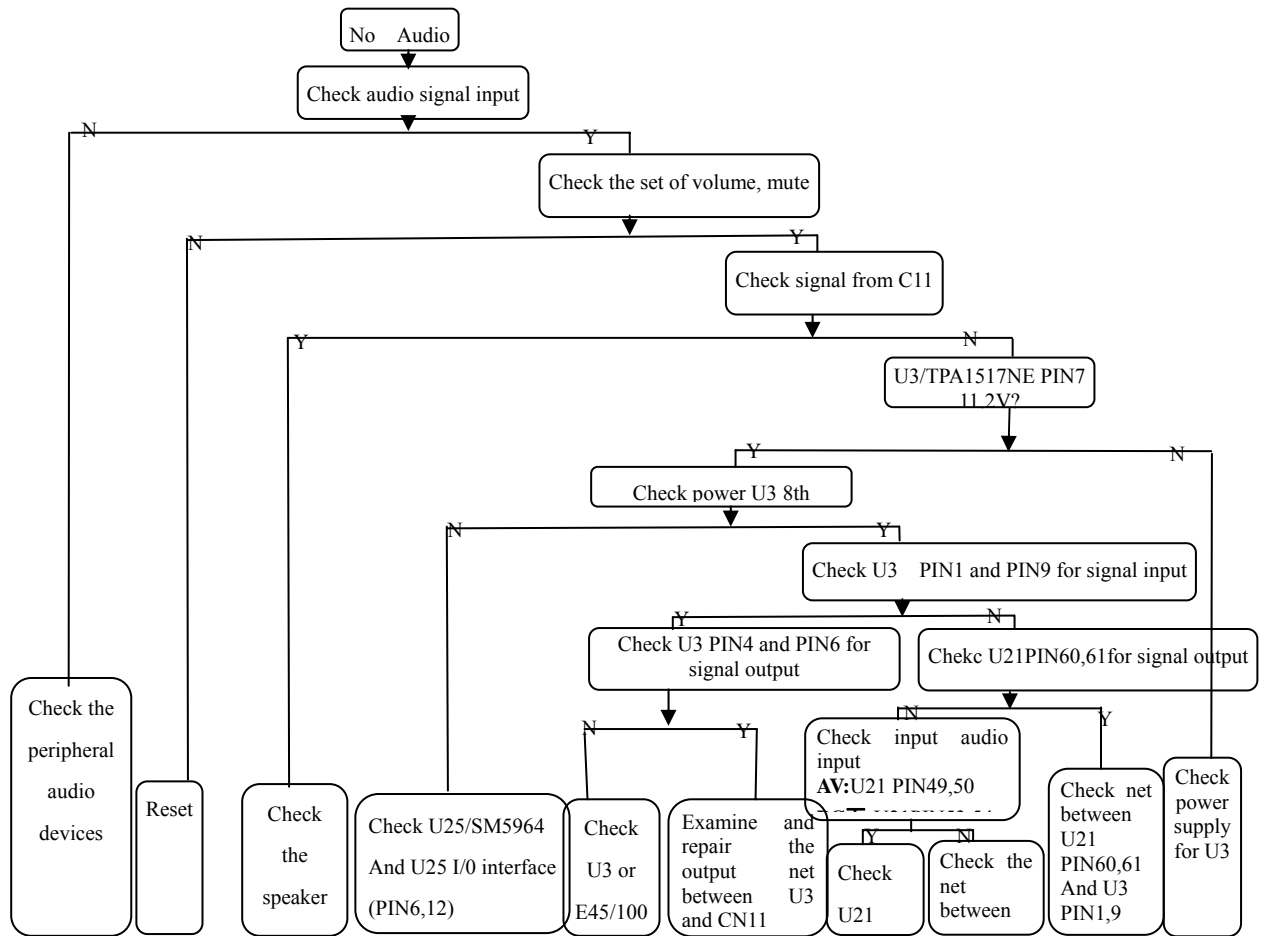


## 2.3 Exceptional screen



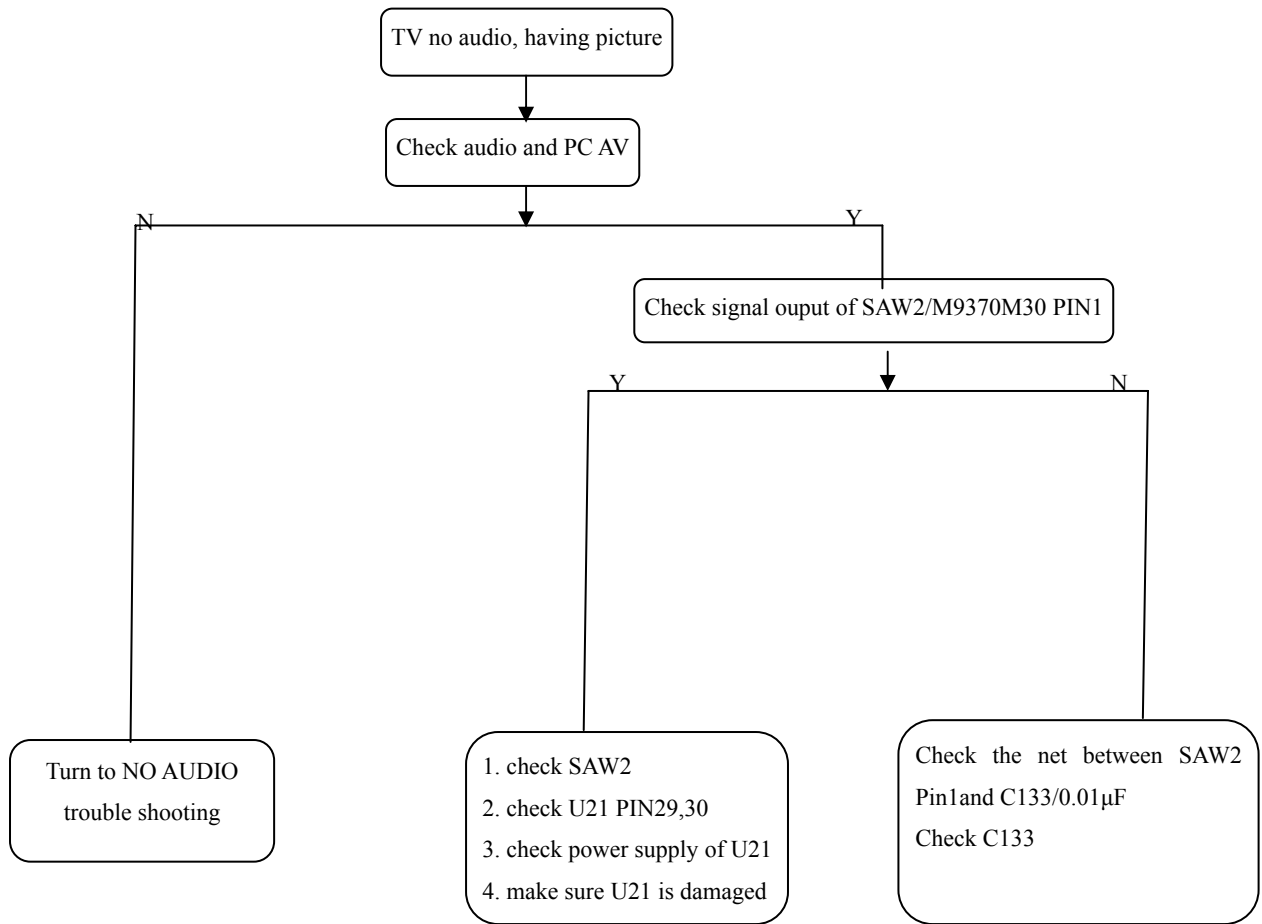
# 3.Audio Trouble

## 3.1 No Audio

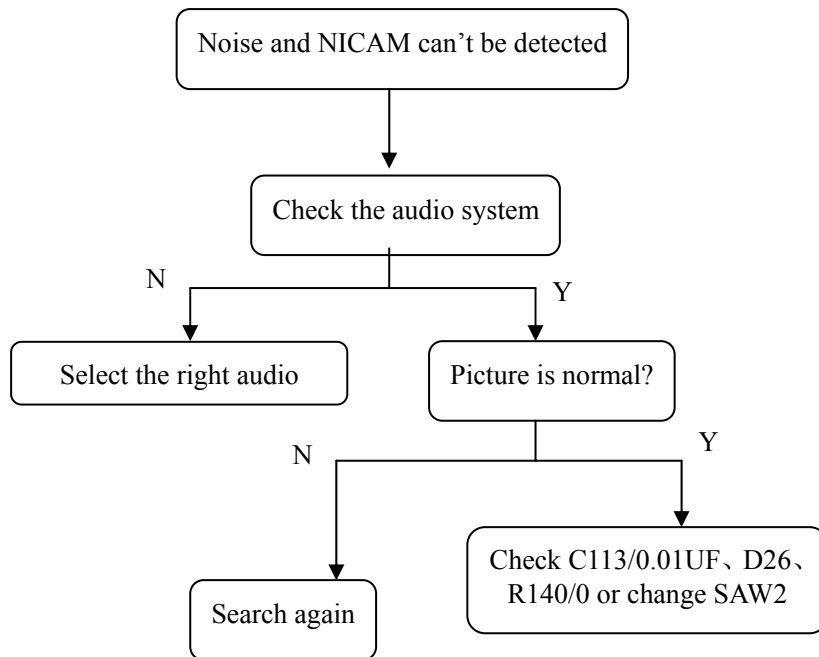




### 3.2 TV No Audio

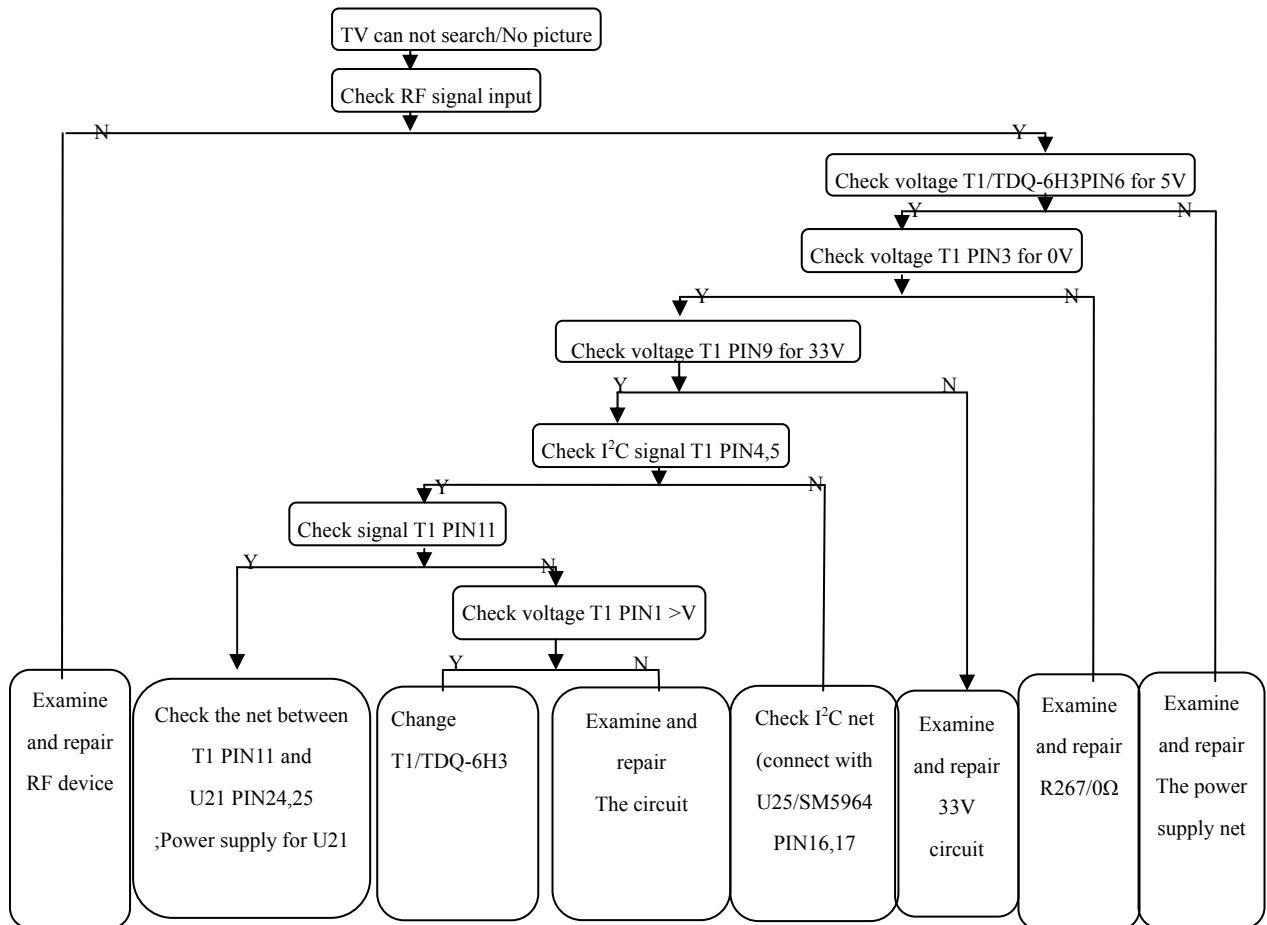


### 3.3 TV Audio Unnormal

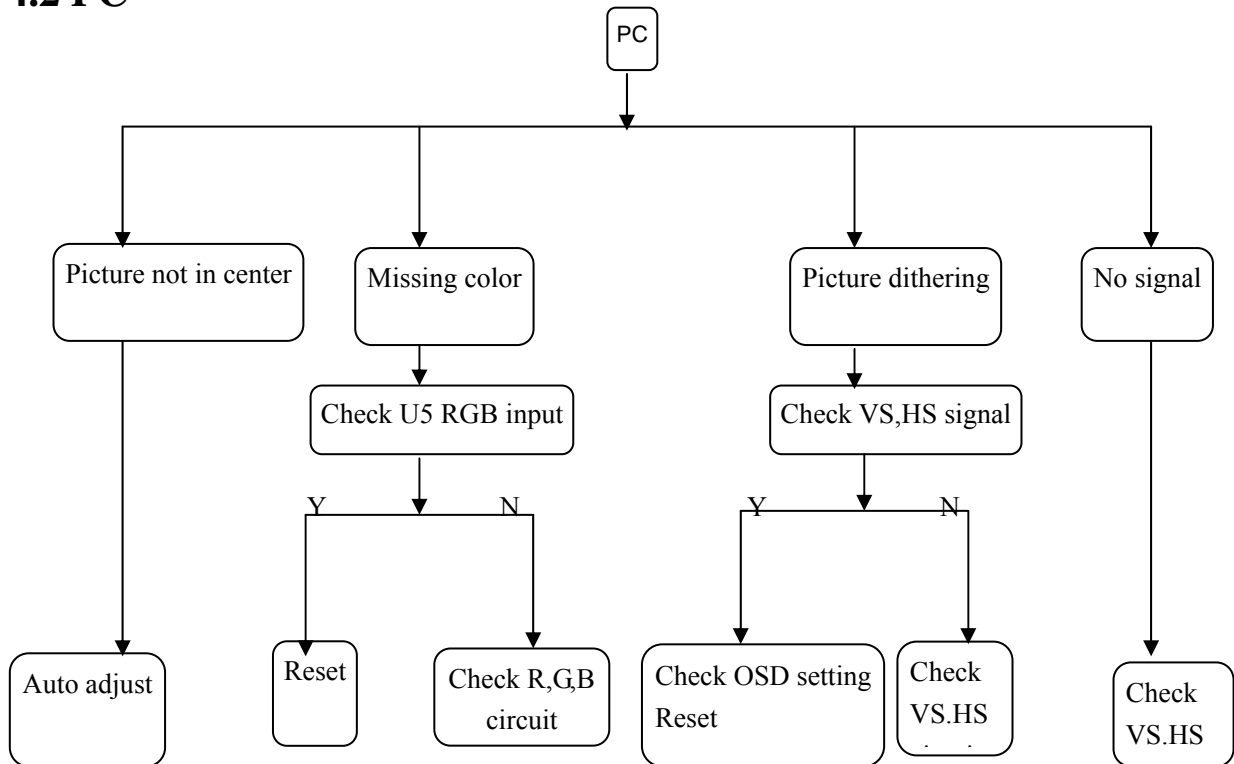


## 4.Function Trouble

### 4.1 TV

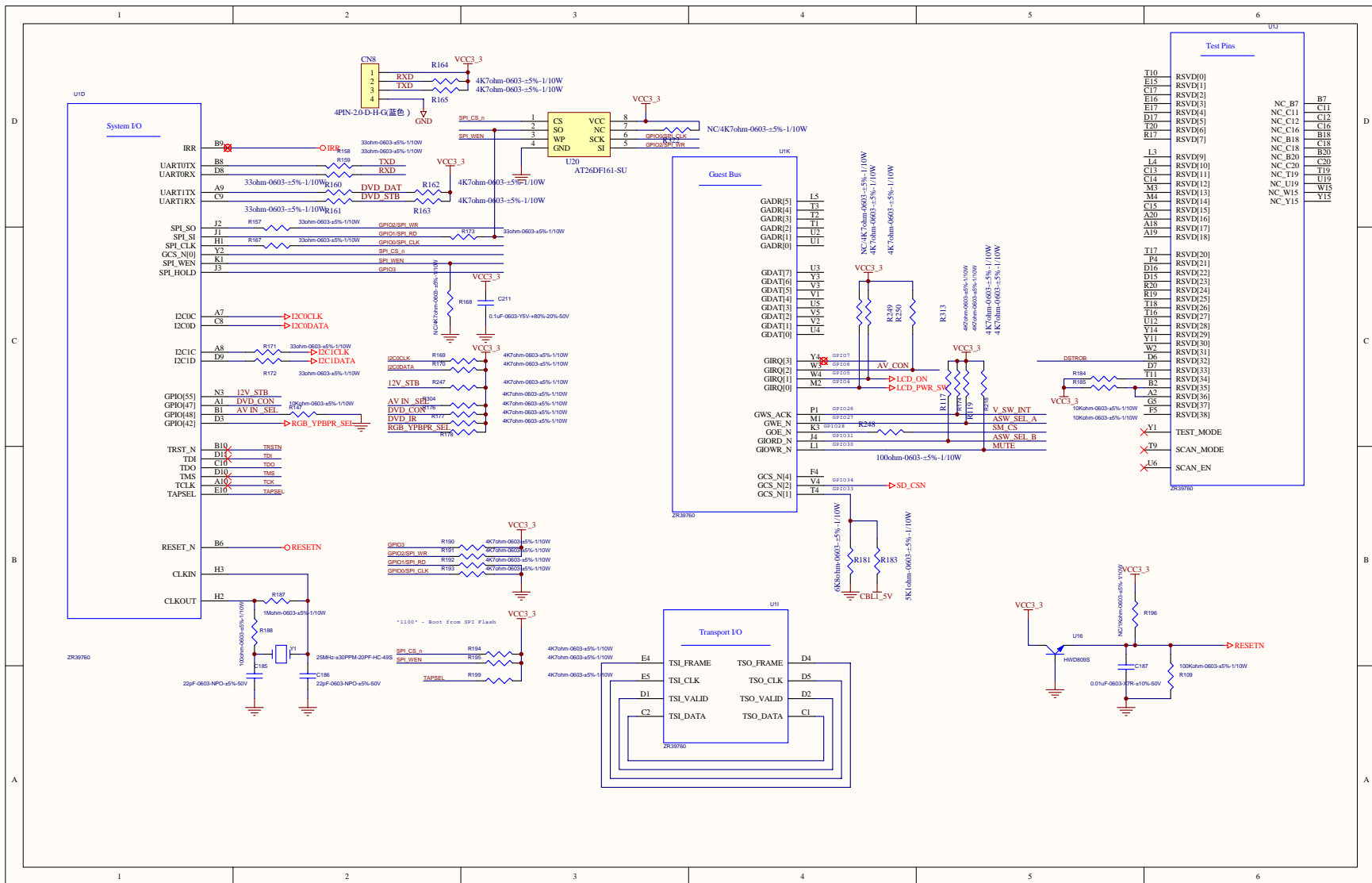


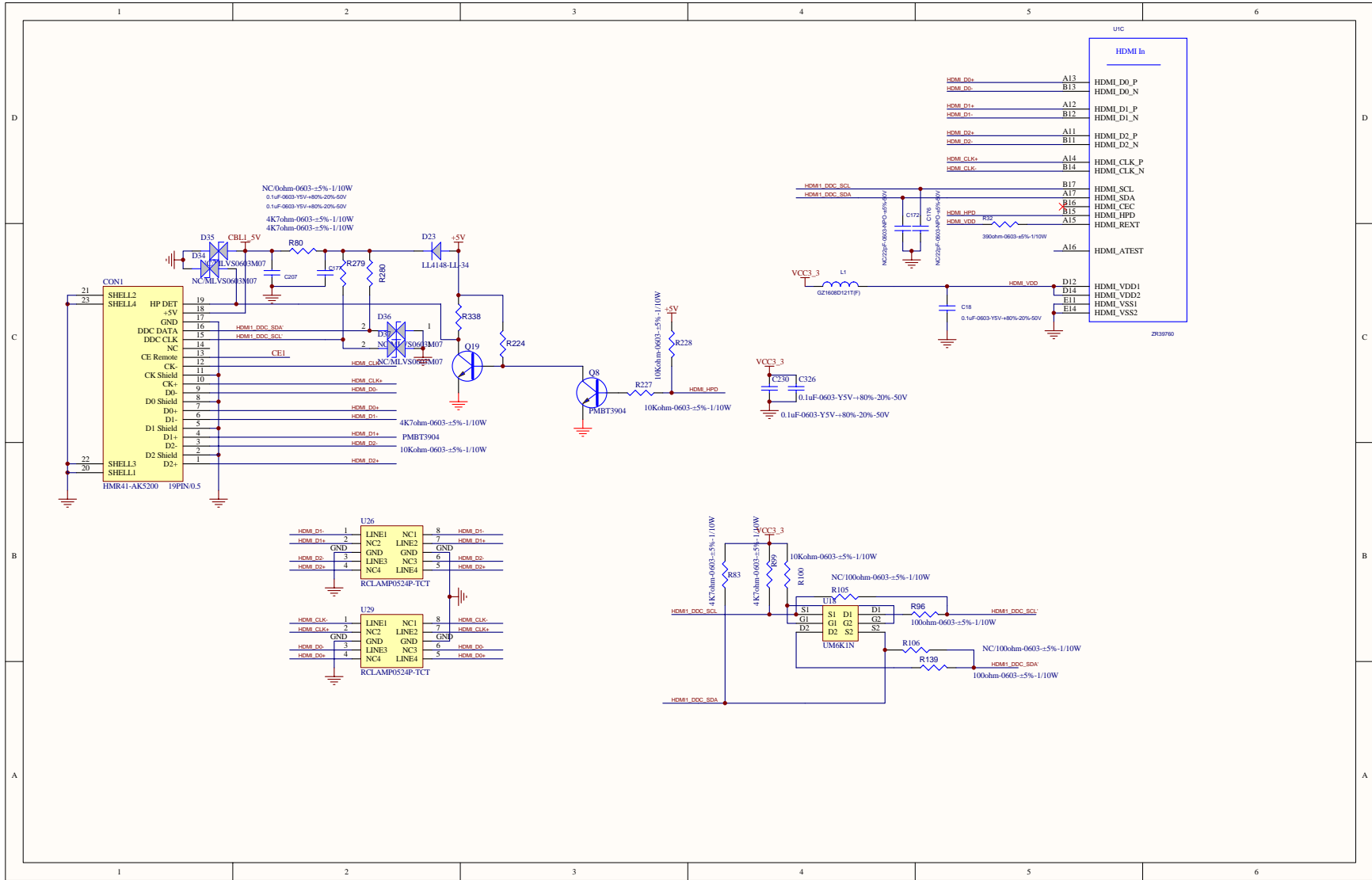
## 4.2 PC



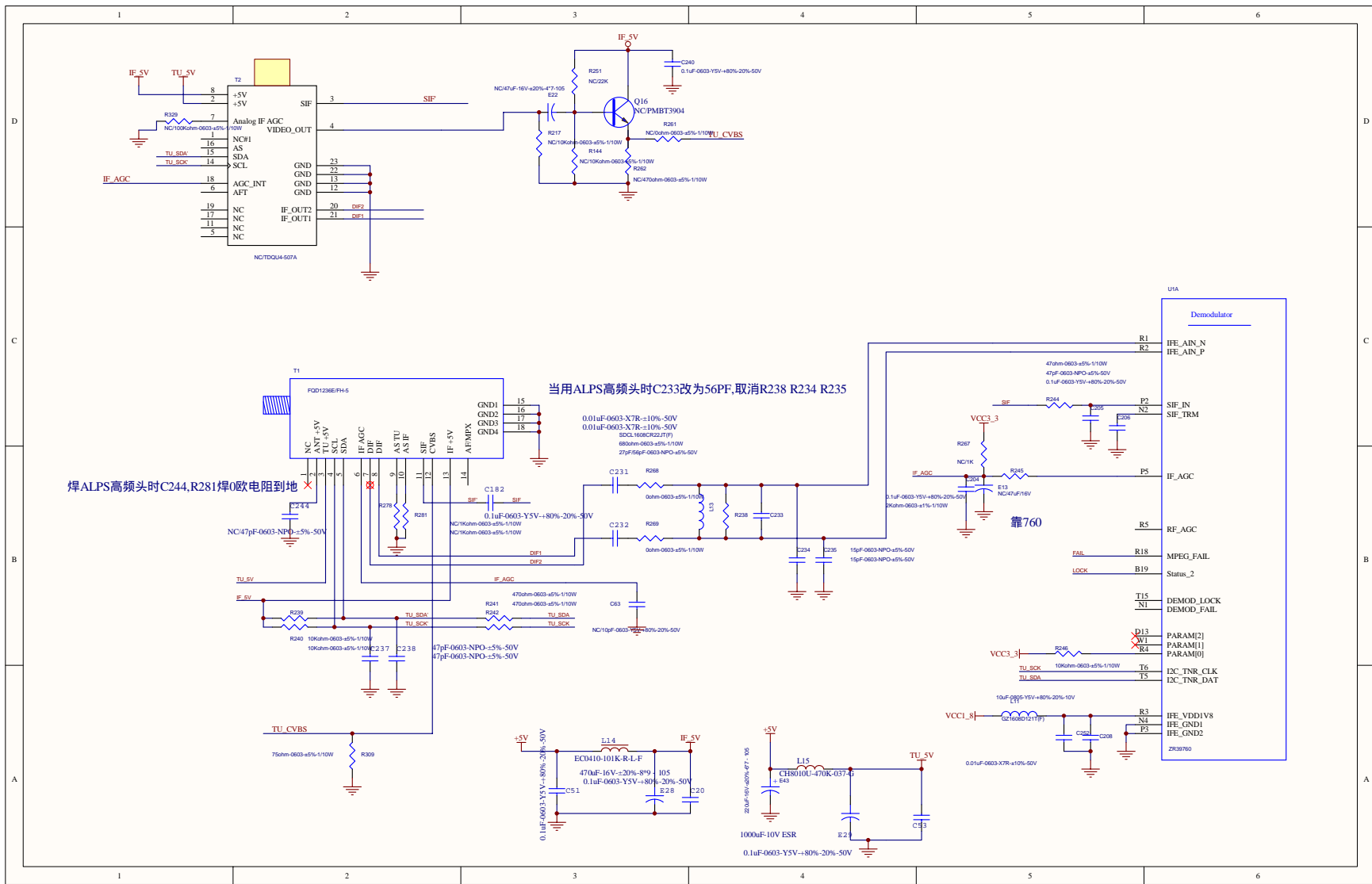








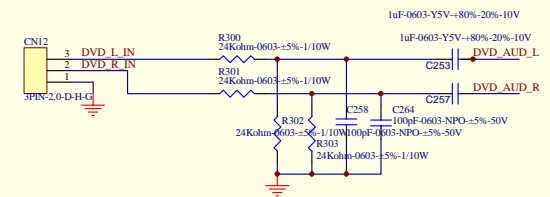
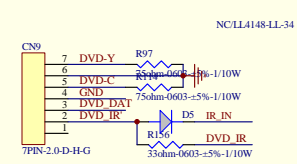
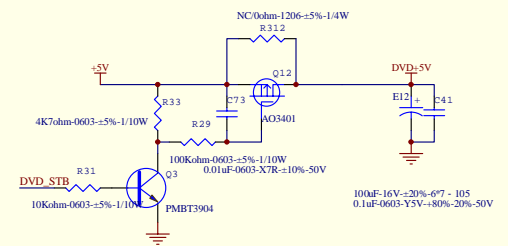




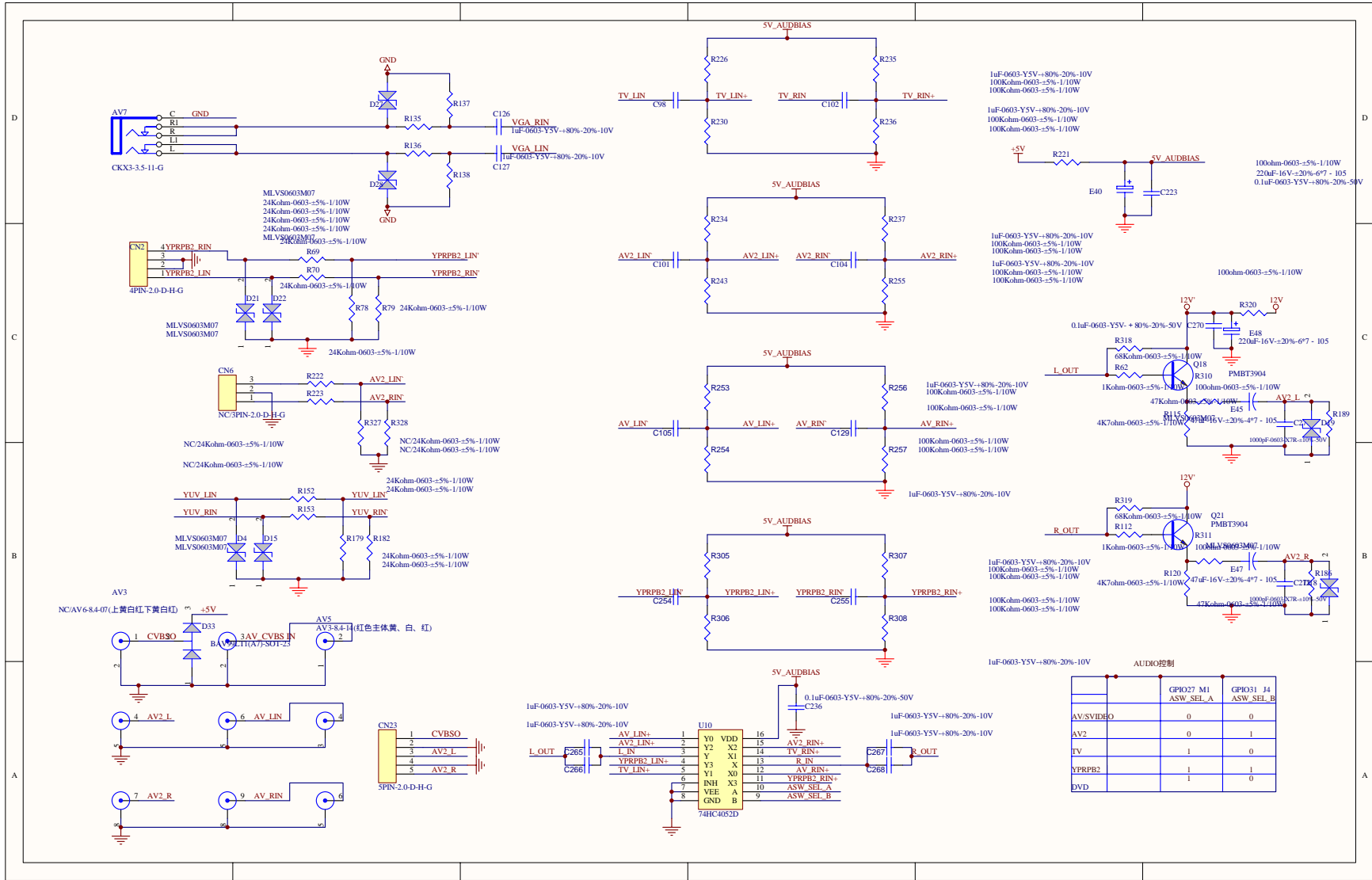
焊ALPS高频头时C244,R281焊0欧姆电阻到地

当用ALPS高频头时C233改为56PF,取消R238 R234 R235

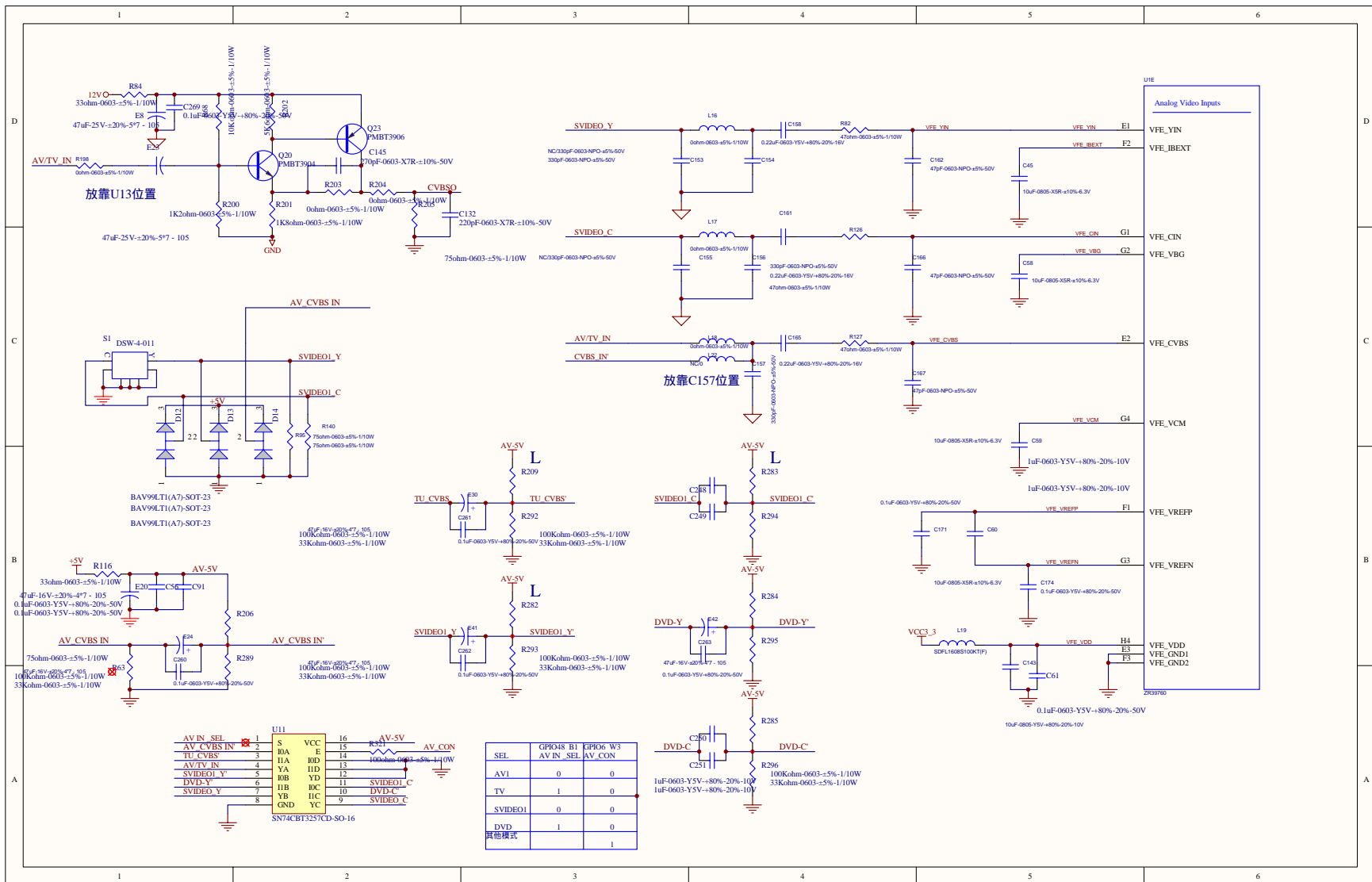
靠760



Title		
Size	Number	Revision
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Date:	29-Apr-2007	Sheet of
File:	F:\zoran760\BESTBUY-ZORAN760\B.ZRATSC\B.ZRATSC.Ddb	

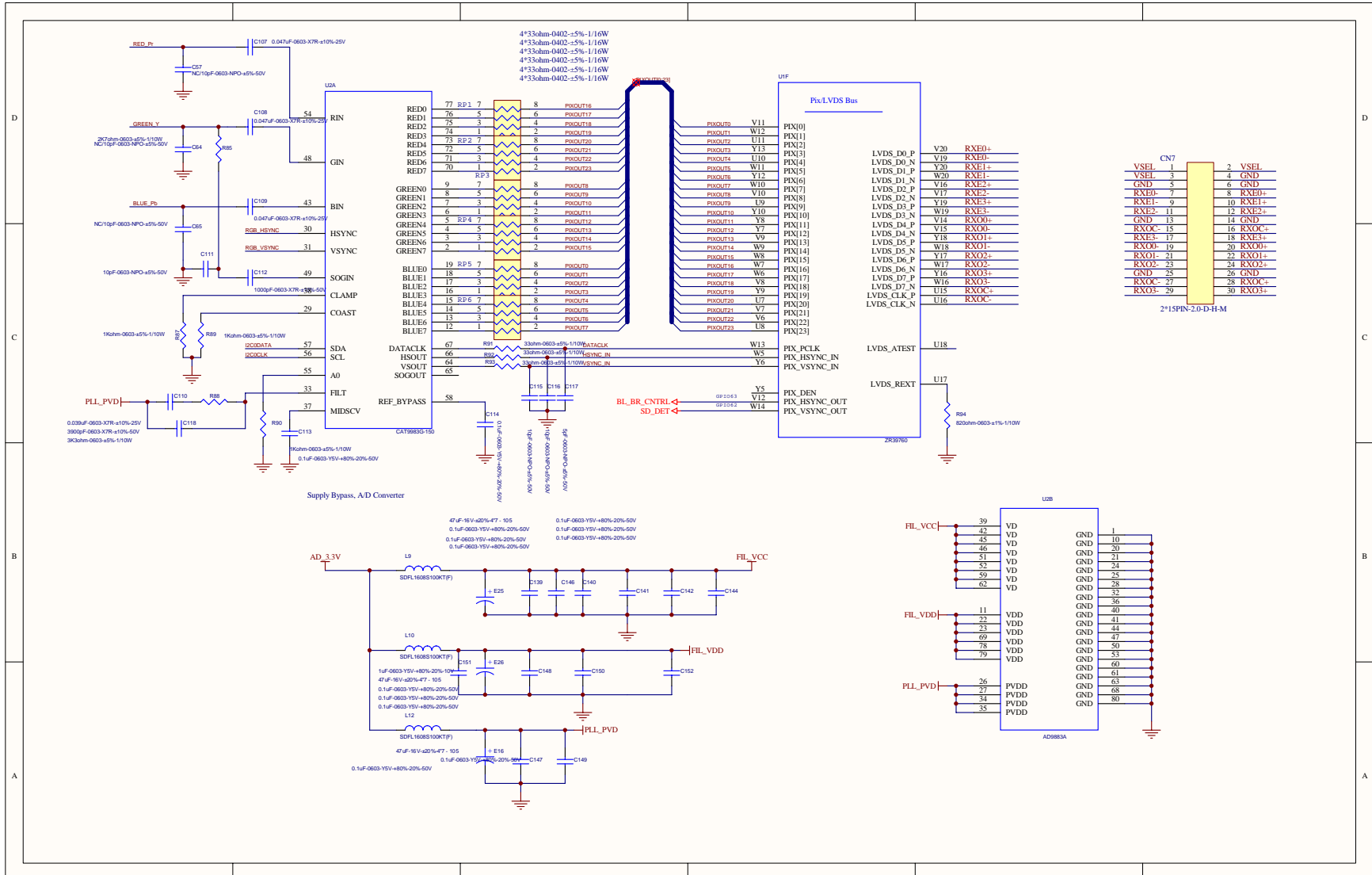


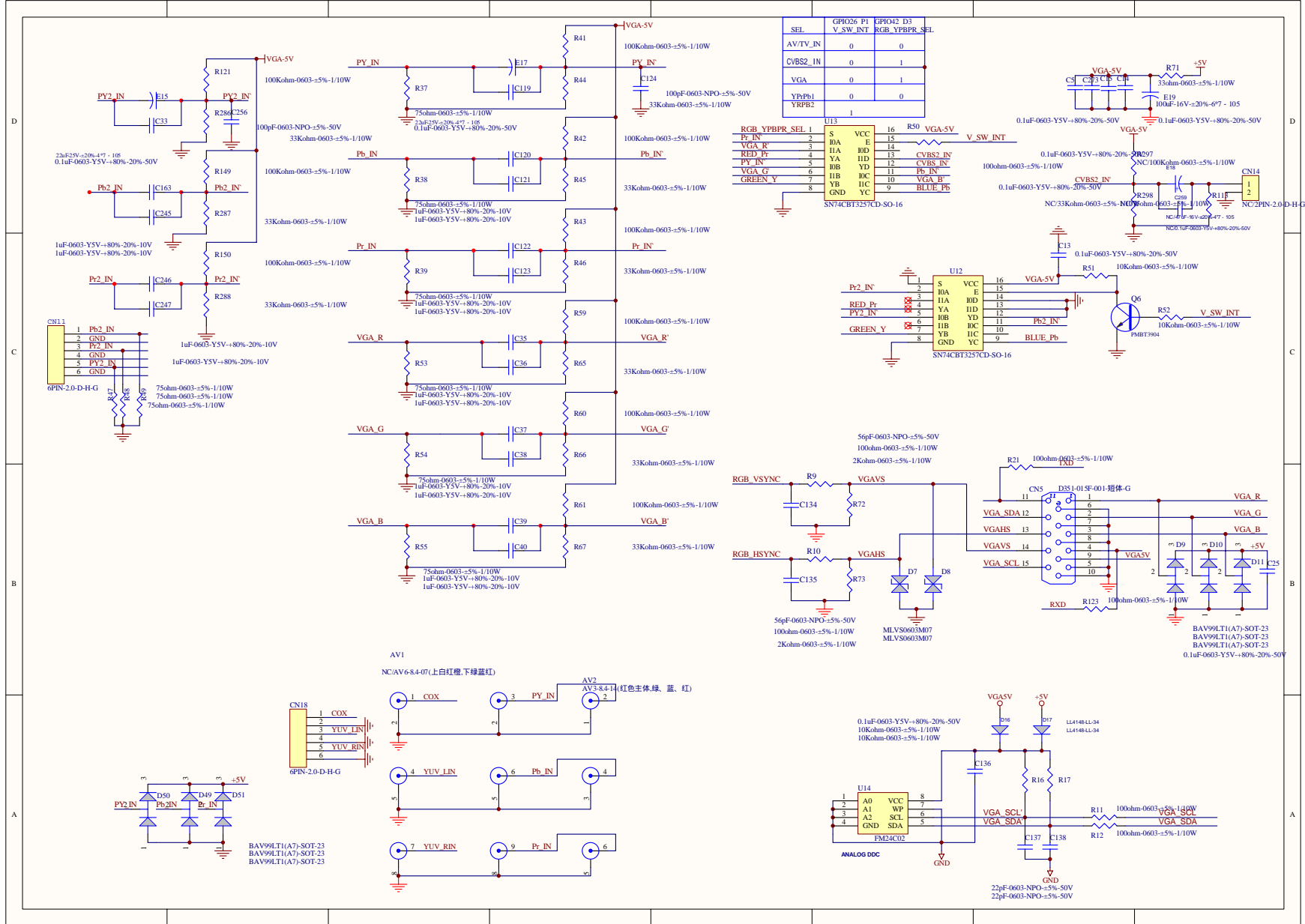


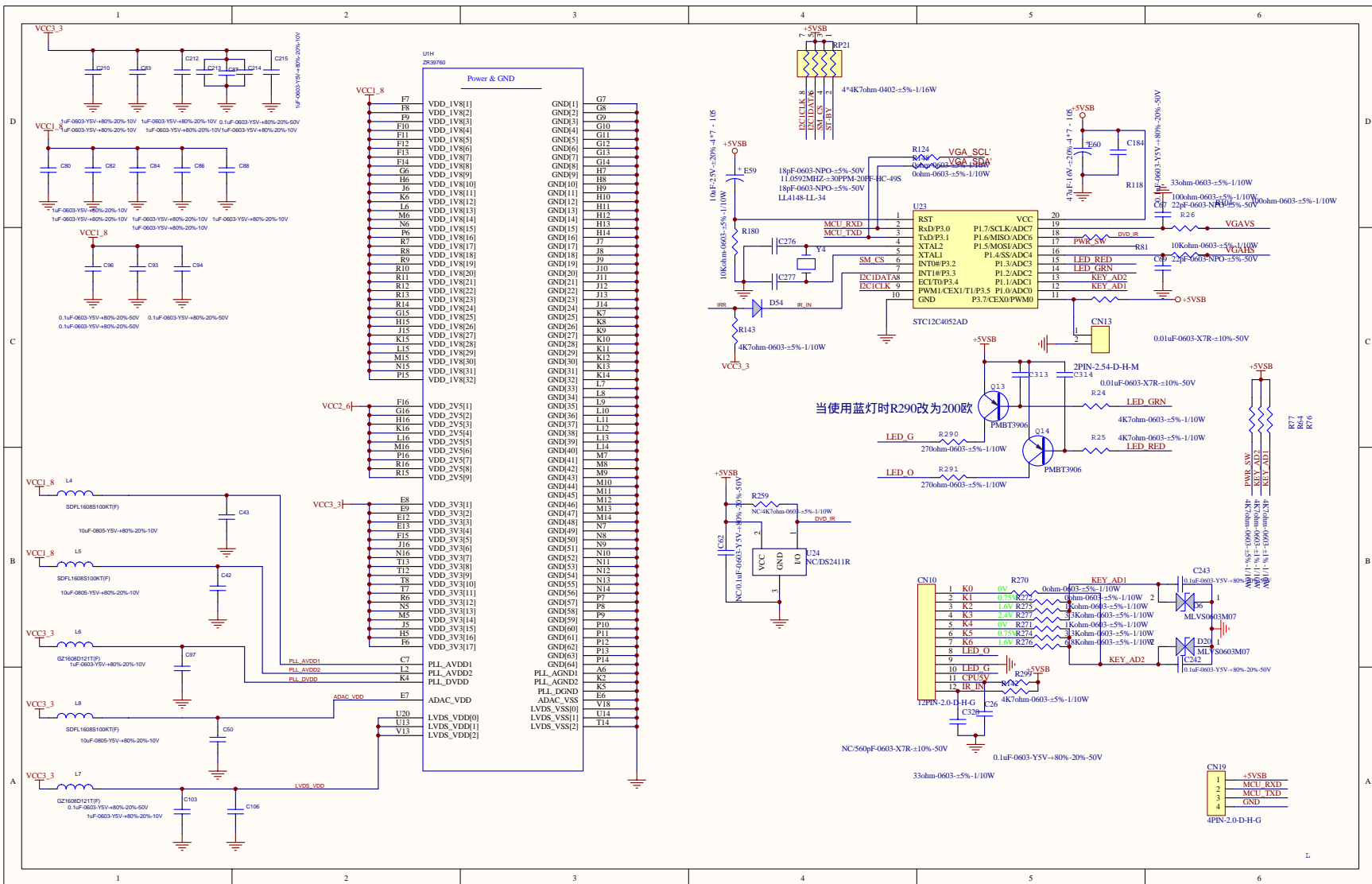


放靠U13位置

放靠C157位置

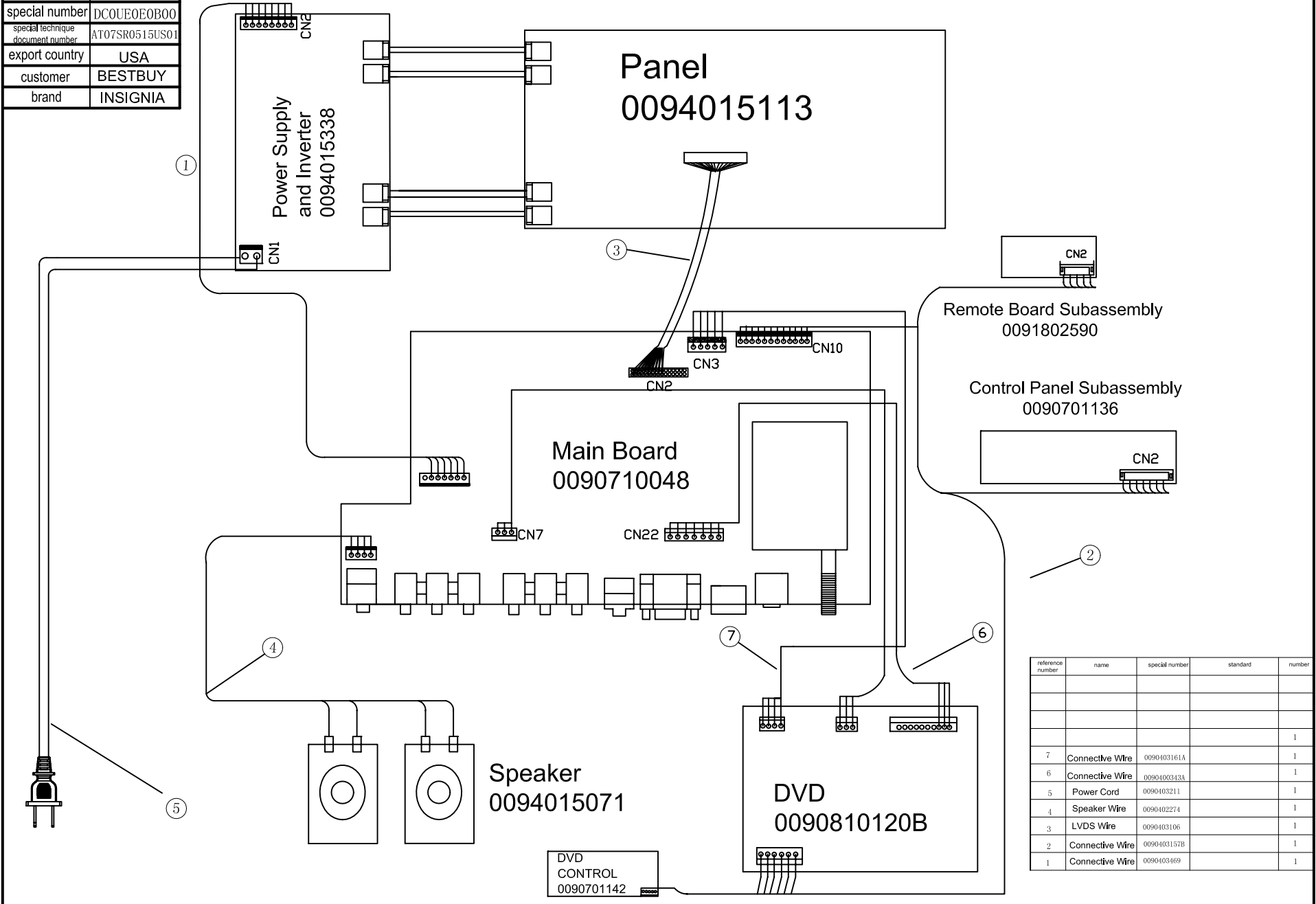








customer type	NS-LTDVD19
haier type	L1912W-C
special number	DC0UE0E0B00
special technique document number	AT07SR0515US01
export country	USA
customer	BESTBUY
brand	INSIGNIA



reference number	name	special number	standard	number
				1
7	Connective Wire	0090403161A		1
6	Connective Wire	0090400343A		1
5	Power Cord	0090403211		1
4	Speaker Wire	0090402274		1
3	LVDS Wire	0090403106		1
2	Connective Wire	0090403157B		1
1	Connective Wire	0090403469		1

Sincere forever

**Haier**