Haier

CAUTION:

READ THIS MANUAL CAREFULLY
TO DIAGNOSE TROUBLE CORRECTLY
BEFORE OFFERING SERVICE

SERVICE MANUAL

COLOR TV

MODEL: L19A11W

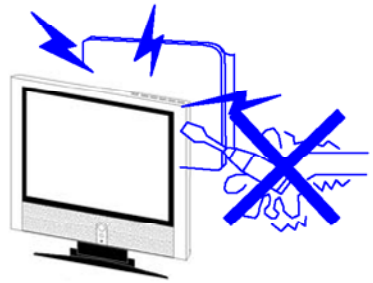
THIS MANUAL IS USED BY QUALIFIED APPLIANCE TECHNICIANS ONLY.
HAIER DOES NOT ASSUME ANY RESPONSIBILITY FOR
PROPERTY DAMAGE OR
PERSONAL INJURY FOR IMPROPER SERVICE PROCEDURES DONE
BY ONE UNQUALIFIED PERSON.

CONTENT

No.	Functions	Model
		L19A11W
1	Screen size	19inch
2	Aspect ratio	16:10
3	Brightness	300cd/m2
4	Contrast Ratio(Darkroom)	700:1
5	Resolution	1440*900
6	Response Time（ms)	8
7	Angel of view	H：150/V：135
8	Color display	16.7M
9	NO.of preset channels	100
10	OSD language	English,Italian,Deutsch,French,Espanol
11	3D decoder	NO
12	2D comb filter	Yes
13	DNR	YES
14	3A ENGINE	NO
15	Same picture split demo(SPD)	NO
16	double picture demo (DPD)	NO
17	Color system	PAL/SECAM
18	Audio system	DK,BG,I,L,L'
19	AV stereo	YES
20	Surrounding sound	NO
21	NICAM	YES
22	MUSIC/STANDARD/THEATRE/USE	MUSIC/THEATRE/PERSONAL/VOICE
23	Bass,Treble	YES
24	Balance	YES
25	BBE	NO
26	LIP SYNC	NO
27	Equalizer	NO
28	Ear phone	YES
29	Mute	YES
30	AV input	NO
31	DVD terminal	NO
32	S-video jack	YES
33	Y P_B P_R	YES
34	Monitor out	NO
35	D-SUB jack	YES
36	DVI socket	NO
37	HDMI	YES
38	SCART jack	YES
39	Windows Menu	NO
40	pc automatic adjust	YES
41	moive mode	NO

No.	Functions	Model
		L19A11W
42	Semitransparent menu	YES
43	ZOOM	NO
44	16:9 mode	YES
45	ADVANCED 4:3	YES
46	PIP	NO
47	POP	NO
48	PBP	NO
49	3A WINDOWS	NO
50	ATS	NO
51	Nation Select	YES
52	Channel List	NO
53	Input Frequecy by Manual and Channel Number Input	NO
54	Lock	YES
55	TELTEXT	10
56	NO. of built-in speakers	2
57	NO. of outer speakers	No
58	Audio output power(Built-in)(W	1.5W×2
59	Audio output power(outer)(W)	No
60	Total power input（W）	<60W
61	Voltage range（V）	AC150V~AC240V
62	Power frequency（Hz）	50~60Hz
63	Time of sleep timer(MINS)	240
64	Net weight(KG)	5.04
65	Gross weight(KG)	6.50
66	Net dimension(MM)	522*195*422
67	Packaged dimension(MM)	595*265*500
68	Loading Q'ty(40H'C)	700
69	Compatible	NO
70	Approval	CE
71	Suitable market	EUROPE

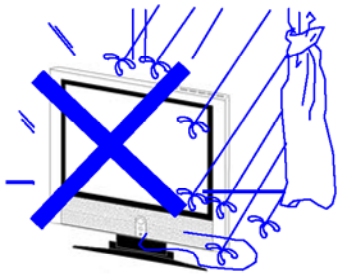
Safety Precautions



Warning

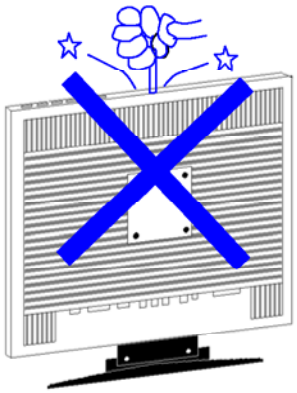
High voltages are used in the operation of this product.

Do not romove the cabinet back from your set. Refer servicing to qualified service personnel.



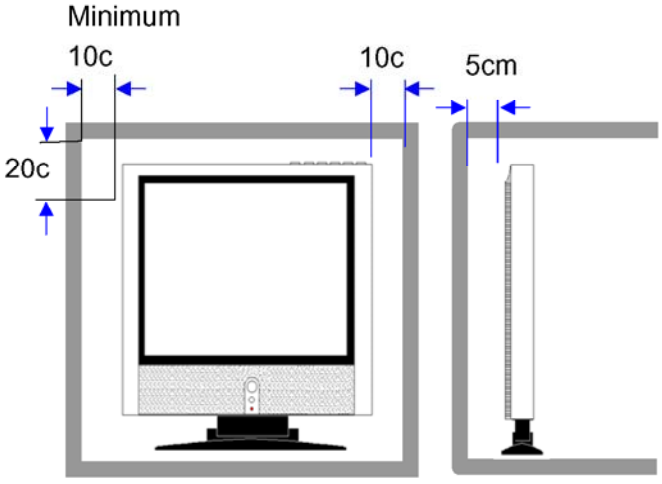
Warning

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



Warning

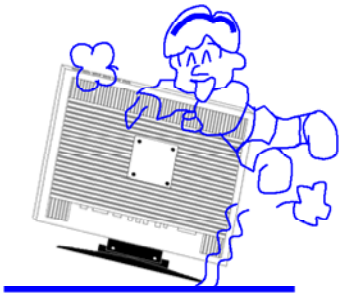
Do not drop or push objects into the television cabinet slots or openings. Never spill any kind of liquid on the television receiver.



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.

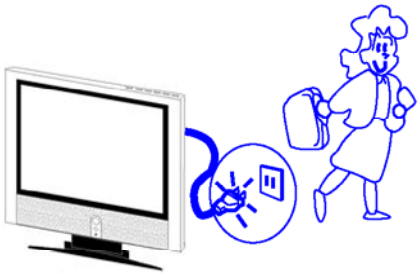


Caution

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.

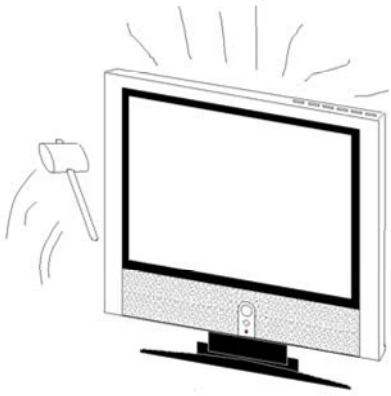


Caution

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.

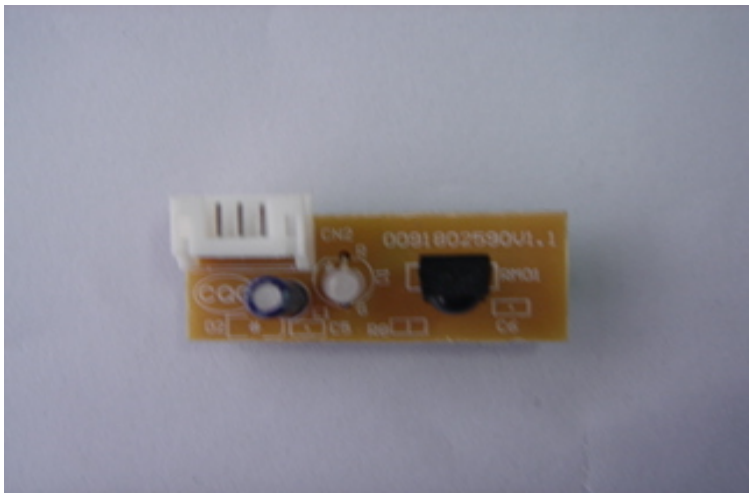


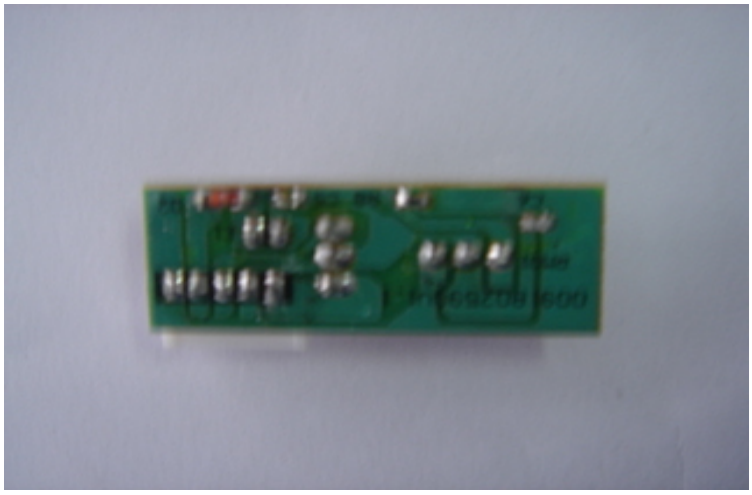
Caution

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.

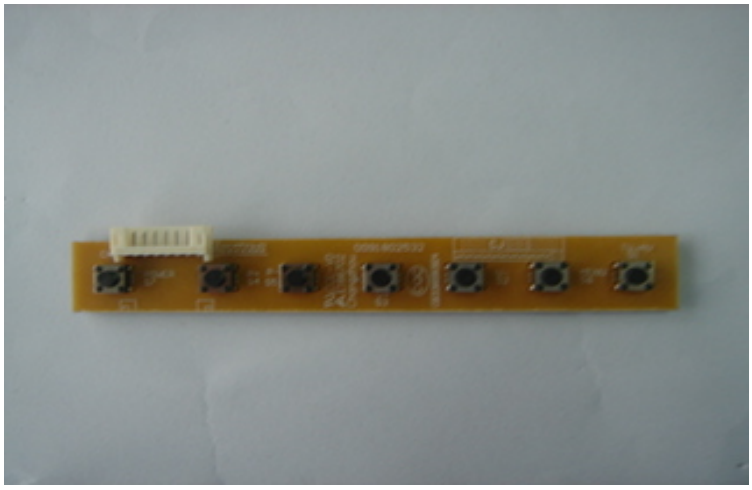
Images of Module and Circuit Boards

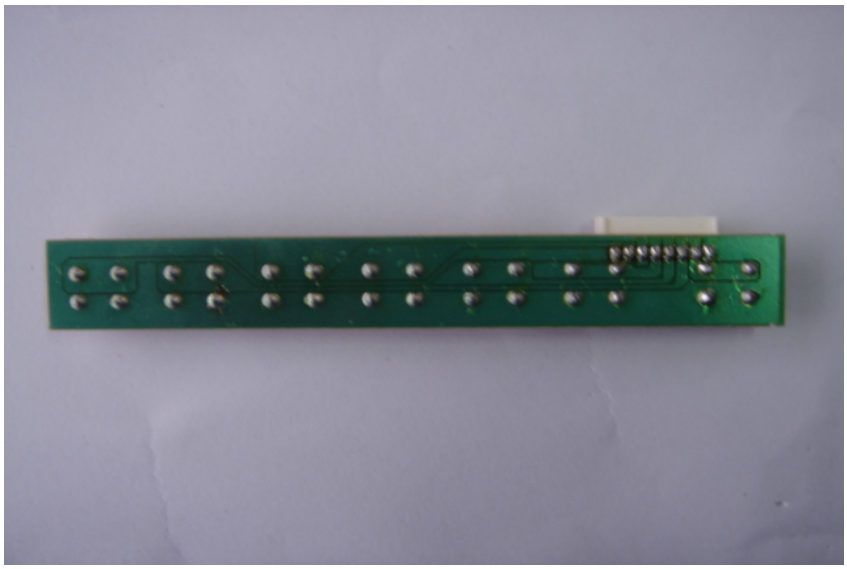
1.Images of Remote Board Subassembly



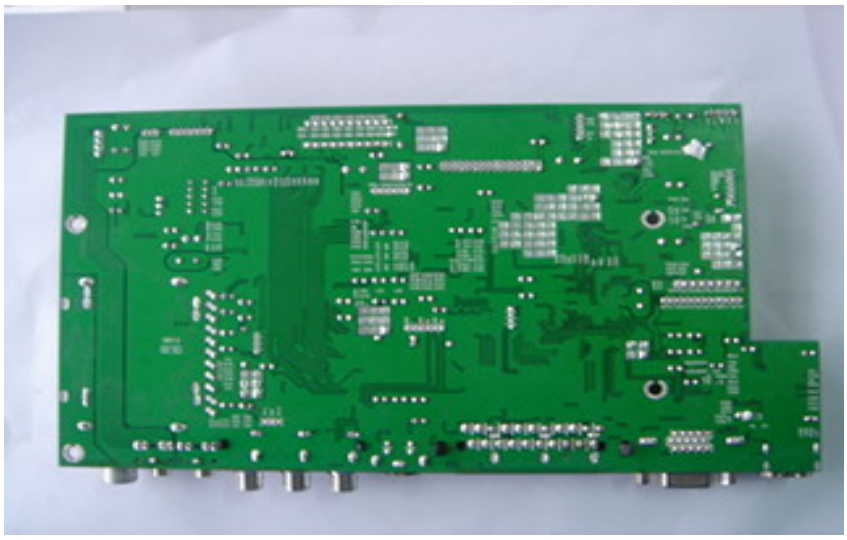


2.Images of Key Board Subassembly

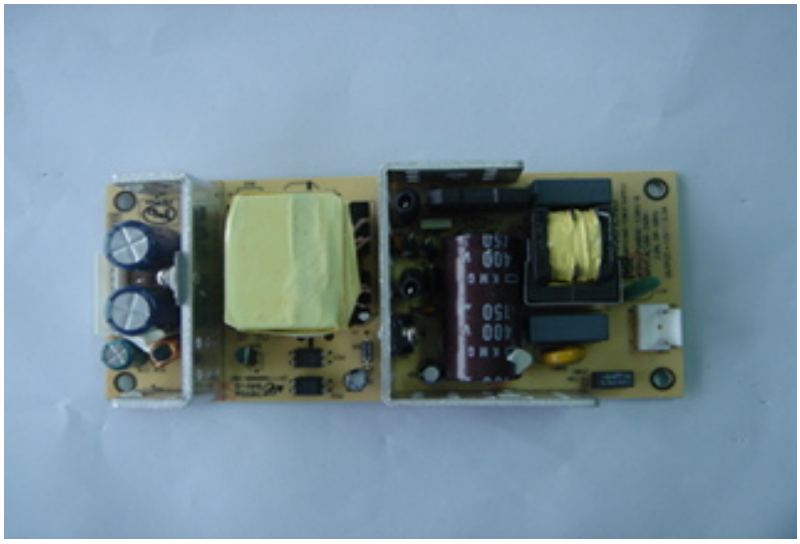


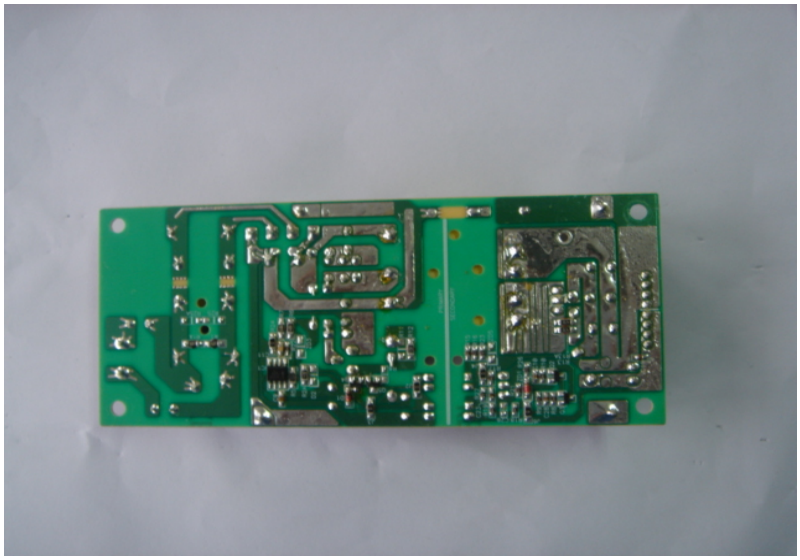


3.Images of Main Board Subassembly

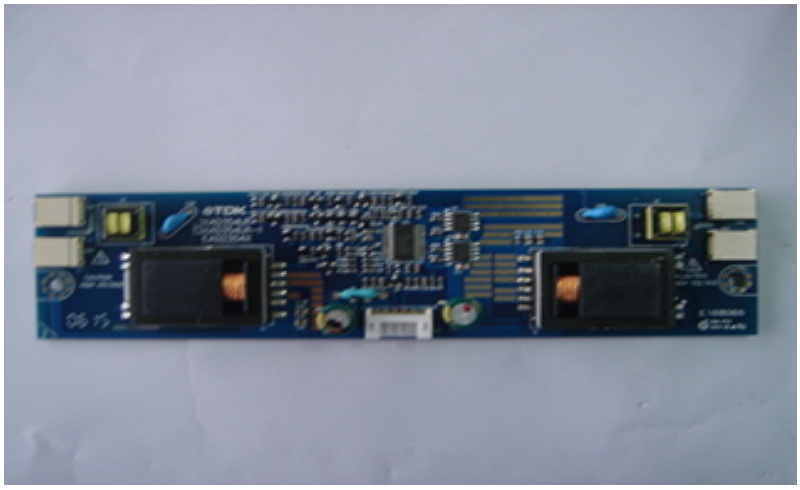


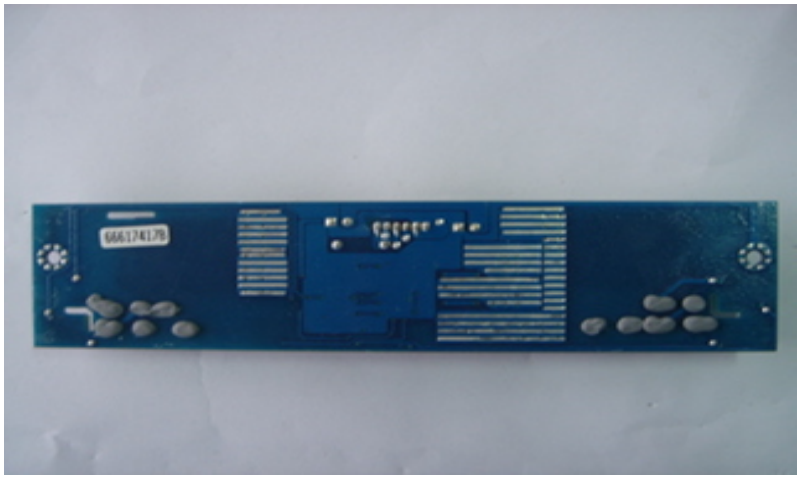
4.Images of Power supply





5.Images of Inverter




6661741J0

Key IC Description

1.UOC3

Function：TV signal processor with Teletext and Nicam

PIN	SYMBOL	DESCRIPTION
1	VSSP2	ground
2	VSSC4	ground
3	VDDC4	Digital supply to SDACs(1.8V)
4	VDDA3(3.3V)	Supply(3.3V)
5	VREF_POS_LSL	Positive reference voltage SDAC(3.3V)
6	VREF_NEG_LSL+HPL	Negative reference voltage SDAC(0V)
7	VREF_POS_LSR+HPR	Positive reference voltage SDAC(3.3V)
8	VREF_NEG_HPL+HRP	Negative reference voltage SDAC(0V)
9	VREF_POS_HPR	Positive reference voltage SDAC(3.3V)
10	XTALIN	Crystal oscillator input
11	XTALOUT	Crystal oscillator output
12	VSSA1	ground
13	VGUARD/SWIO	V-guard input/I/O switch (e.g.4mA current sinking capability for direct drive of LEDs)
14	DECDIG	Decoupling digital supply
15	VP1	1st supply voltage TV-processor(+5V)
16	PH2LF	Phase-2 filter
17	PH1LF	Phase-1 filter
18	GND1	Ground 1 for TV-processor
19	SECPLL	SECAM OLL decoupling
20	DECBG	Bandgap decoupling
21	EWD/AVL	East-West drive output or AVL capacitor
22	VDRB	Vertical drive B output
23	VDRA	Vertical drive A output
24	VIFIN1	IF input 1
25	VIFIN2	IF input 2
26	VSC	Vertical sawtooth capacitor
27	IREF	Reference current input
28	GNDIF	Ground connection for IF amplifier
29	SIFN1/DVBIN1	SIF input 1/ DVB input 1
30	SIFN2/DVBIN2	SIF input 2/ DVB input2
31	AGCOUT	Tuner AGC output
32	EHTO	EHT/over voltage protection input
33	AVL/SWO/SSIF/REFO/ REFIN	Automatic volume leveling/switch output/sound IF input sub-carrier reference output/external reference signal mixer for DVB operation

34	AUDIOIN5L	Audio-5 input(left signal)
35	AUDIOIN5R	Audio-5 input(right signal)
36	AUDOUTSL	Audio output for SCART/CINCH(left signal)
37	ADUOUTSR	Audio output for SCART/CINCH(right signal)
38	DECSDEM	Decoupling sound demodulator
39	QSS0/AMOUT/AUDEEM	QSS inter-carrier output/AM output/deemphasis(front-end audio out)
40	GND2	Ground 2 for TV processor
41	PLLIF	IF-PLL loop filter
42	SIFAGC/DVBAGC	AGC sound IF/internal-external AGC for DVB applications
43	DVBO/IFVO/FMRO	Digital Video Broadcast output/IF video output/FM radio output
44	DVBO/FMRO	Digital Video Broadcast output/IF video output
45	VCC8V	8 Volt supply for audio switches
46	AGC2SIF	AGC capacitor second sound IF
47	VP2	2th supply voltage TV processor(+5V)
48	IFVO/SVO/CVBSI	IF video output/selected CVBS out/CVBS input
49	AUDIOIN4L	Audio-4 input(left signal)
50	AUDIOIN4R	Audio-4 input(right signal)
51	CVBS4/Y4	CVBS4/Y4 input
52	C4	Chroma-4 input
53	AUDIOIN2L/SSIF	Audio 2 input (left signal)/sound IF input
54	AUDIOIN2R	Audio 2 input (right signal)
55	CVBS2/Y2	CVBS2/Y2 input
56	AUDIOIN3L	Audio 3 input(left signal)
57	AUDIOIN3R	Audio 3 input(right signal)
58	CVBS3/Y3	CVBS 3/Y2 input
59	C2/C3	Chroma-2/3 input
60	AUDOUTLSL	Audio output for audio power amplifier (left signal)
61	AUDOUTLSR	Audio output for audio power amplifier (right signal)
62	AUDOUTHPL	Audio output for headphone channel (left signal)
63	AUDOUTHPR	Audio output for headphone channel (right signal)
64	CVBSO/PIP	CVBS/PIP output
65	SVM	Scan velocity modulation output
66	FBISO/CSY	Flyback input/sandcastle output or composite H/V timing output
67	HOUT	Horizontal output
68	VSScomb	Ground connection for comb filter
69	VDDcomb	Supply voltage for comb filter(5V)
70	VIN(R/Prin2/Cx)	V-input for YUV interface(2th 日 input/Pr input or Cx input)
71	UIN(B/PBIN2)	U-input for YUV interface(2th B input/PB input)

72	YIN(G/YIN2/CVBS-Yx)	Y-input for YUV interface(2th G input/Y input or CVBS/Yx input)
73	YSYNC	Y-input for sync separator
74	YOUT	Y-output (for YUV interface)
75	UOUT(INSSW2)	U-output for YUV interface(2nd RGB/YPbPr insertion input)
76	VOUT(SWO1)	V-output for YUV interface(general purpose switch output)
77	INSSW3	3rd RGB/YPbPr insertion input
78	R/PRIN3	3rd R input/Pr input
79	G/YIN3	3rd G input/Y input
80	B/PbIN3	3rd B input/P5 input
81	GND3	Ground 3 for TV-processor
82	VP3	3rd supply for TV processor
83	BCLIN	Beam current limiter input
84	BLKIN	Black current input
85	RO	Red output
86	GO	Green output
87	BO	Blue output
88	VDDA1	Analog supply for TCG u-Controller and digital supply for TV-processor(+3.3V)
89	VREFAD_NEG	Negative reference voltage (0V)
90	VREFAD_POS	Positive reference voltage (3.3V)
91	VREFAD	Reference voltage for audio ADCs(3.3/2V)
92	GNDA	Ground
93	VDDA(1.8V)	Analogue supply for audio ADCs(1.8v)
94	VDDA2(3.3V)	Supply voltage SDAC(3.3V)
95	VSSadc	Ground for video ADC and PLL
96	VDDadc(1.8V)	Supply voltage video ADC and PLL
97	INTO/P0.5	External interrupt 0 or port 0.5(4mA current sinking capability for direct drive of LEDs)
98	P1.0/INT1	Port 1.0 or external interrruput1
99	P1.1/T0	Port 1.1 or Counter/Timer 0 input
100	VDDC2	Digital supply to core(1.8V)
101	VSSC2	ground
102	P0.4/I2SWS	Port 0.4 or I2S word select
103	P0.3/I2SCLK	Port 0.3 or I2S clock
104	P0.2/I2SDO2	Port 0.2 or I2S digital output 2
105	P0.1/I2SDO1	Port 0.1 or I2S digital output 1
106	P0.0/I2SD1I/O	Port 0.0 or I2S digital input 1 or I2S digital output
107	P1.3/T1	Port 1.3 or Counter/Timer 1 input
108	P1.6/SCL	Poet 1.6 or I2C-bus clock line
109	P1.7/SDA	Port 1.7 or I2C-bus data line

110	VDDP(3.3V)	Supply to periphery and on-chip voltage regulator(3.3V)
111	P2.0/TPWM	Poet 2.0 or tuning PWM output
112	P2.1/PWM0	Port 2.1 or PWM0 output
113	P2.2/PWM1	Port 2.2 or PWM1 output
114	P2.3/PEM2	Port 2.3 or PWM2 output
115	P3.0/ADC0	Port 3.0 or ADC0 input
116	P3.1/ADC1	Port 3.1 or ADC1 input
117	VDDC1	Digital supply to core(+1.8)
118	DECV1V8	Decoupling 1.8V supply
119	P3.2/ADC2	Port 3.2 or ADC2 input
120	P3.3/ADC3	Port 3.3 or ADC3 input
121	VSSC/P	Digital ground for u-Controller core and periphery
122	P2.4/PWM3	Port 2.4 or PWM3 output
123	P2.5/PWM4	Port 2.5 or PWM4 output
124	VDDC3	Digital supply to core(1.8v)
125	VSSC3	ground
126	P1.2/INT2	Port 1.2 or external interrupt 2
127	P1.4/RX	Port 1.4 or UART bus
128	P1.5TX	Port 1.5 or UART bus

2. NT68565

Function:Flat Panel Monitor Controller

1	AGND	TMDS Analog GND
2	RX2+	TMDS input channel 2+
3	RX2-	TMDS input channel 2-
4	AVCC	TMDS Analog VCC must be set to 3.3V
5	RX1+	TMDS input channel 1+
6	RX1-	TMDS input channel 1-
7	AGND	TMDS Analog GND
8	RX0+	TMDS input channel 0+
9	RX0-	TMDS input channel 0-
10	AGND	TMDS Analog GND
11	RXC+	TMDS input clock pair
12	RXC-	TMDS input clock pair
13	AVCC	TMDS Analog VCC must be set to 3.3V
14	REXT	External termination resistor
15	PVCC	TMDS PLL Analog VCC must be set to 3.3V
16	PGND	TMDS PLL Analog GND
17	NC	\
18	NC	\
19	BVMID	B channel Midscale clamp voltage bypass
20	BIN1+/ Pb1+	Analog Port 1 B/Pb channel positive analog video input
21	BIN1-/ Pb1-	Analog Port 1 B/Pb channel negative analog video input
22	SOGI1/ SOY1	Analog Port 1 Sync On Green Input with Schmitt trigger
23	GIN1+/ Y1+	Analog Port 1 G/Y channel positive analog video input
24	GIN1-/ Y1-	Analog Port 1 G/Y channel negative analog video input
25	RIN1+/ Pr1+	Analog Port 1 R/Pr channel positive analog video input
26	RIN1-/ Pr1-	Analog Port 1 R/Pr channel negative analog video input
27	RVMID	R channel Midscale clamp voltage bypass
28	ADC_VAA	Power ADC Analog power supply
29	ADC_GNDA	Power ADC Analog ground
30	BIN0+/ Pb0+	Analog Port 0 B/Pb channel positive analog video input
31	BIN0-/ Pb0-	Analog Port 0 B/Pb channel negative analog video input
32	SOGI0 / SOY0	Analog Port 0 Sync On Green Input with Schmitt trigger
33	GIN0+/ Y0+	Analog Port 0 G/Y channel positive analog video input
34	GIN0-/ Y0-	Analog Port 0 G/Y channel negative analog video input
35	RIN0+/ Pr0+	Analog Port 0 R/Pr channel positive analog video input
36	RIN0-/ Pr0-	Analog Port 0 R/Pr channel negative analog video input
37	NC	\
38	NC	\
39	HSYNCI1	Analog Port 1 Channel 1 Horizontal Sync Input
40	VSYNCI1/TOUTP	Analog Port 1 Channel 1 Vertical Sync Input
41	HSYNCI0	Analog Port 0 Channel 0 Horizontal Sync Input
42	VSYNCI0	Analog Port 0 Channel 0 Vertical Sync Input
43	PLL_ GND	Core Logic Ground pin for PLL

44	TCLK Reference clock Input	Reference clock Input
45	PLL_ VDD	Core logic power supply (1.8V) pin for PLL
46	HDCP_SDA	For DVI HDCP communication interface Serial Data In/Out
47	HDCP_SCL	For DVI HDCP communication interface Serial Clock
48	RSTn	System Reset
49	SDA	Host Interface Serial Data In/Out
50	SCL	Host Interface Serial Clock
51	IRQn	Interrupt Request
52	CVDD	Core logic power supply (1.8V) pin
53	IO_SEL	\
54	DVDD	Display Digital Power Supply
55	V0	Video data input
56	V1	Video data input
57	V2	Video data input
58	V3	Video data input
59	V4	Video data input
60	V5	Video data input
61	V6	Video data input
62	V7	Video data input
63	VCLK	Video Port Clock
64	NC	\
65	DGND/CGND	Digital Ground/ Core Logic Ground
66	T7P/B0	Display Blue data 0 output
67	T7M/B1	Display Blue data 1 output
68	TCLK2P/B2	Display Blue data 2 output
69	TCLK2M/B3	Display Blue data 3 output
70	T6P/B4	Display Blue data 4 output
71	T6M/B5	Display Blue data 5 output
72	T5P/B6	Display Blue data 6 output
73	T5M/B7	Display Blue data 7 output
74	T4P/G0	Display Green data 0 output
75	T4M/G1	Display Green data 1 output
76	DGND/CGND	Digital Ground/ Core Logic Ground
77	NC	\
78	NC	\
79	T3P/G2	Display Green data 2 output
80	T3M/G3	Display Green data 3 output
81	TCLK1P/G4	Display Green data 4 output
82	TCLK1M/G5	Display Green data 5 output
83	T2P/G6	Display Green data 6 output
84	T2M/G7	Display Green data 7 output
85	T1P/R0	Display Red data 0 output
86	T1M/R1	Display Red data 1 output
87	T0P/R2	Display Red data 2 output
88	T0M/R3	Display Red data 3 output
89	NC	\

90	DVDD	Display Digital Power Supply
91	R4	Display Red data 4 output
92	R5	Display Red data 5 output
93	R6	Display Red data 6 output
94	R7	Display Red data 7 output
95	NC	\
96	NC	\
97	DCLK	Display clock for TTL interface
98	DDE	Display Enable for TTL interface
99	DVS	Display vertical sycn for TTL interface
100	DHS	Display horizontal sync for TTL interface
101	DGND/CGND	Digital Ground/ Core Logic Ground
102	NC	\
103	NC	\
104	NC	\
105	NC	\
106	NC	\
107	NC	\
108	NC	\
109	NC	\
110	NC	\
111	NC	\
112	NC	\
113	NC	\
114	NC	\
115	NC	\
116	NC	\
117	GPO1	General purpose output for panel driver
118	GPO2	General purpose output
119	GPO3	General purpose output
120	INT_VSO/GPO4	Internal Vertical Sync output
121	INT_HSO/GPO5	Internal Horizontal Sync output
122	CVDD	Core logic power supply (1.8V) pin
123	HDCP_SCL_OP	Optional HDCP_SCL pin
124	GPO6/HDCP_SDA_OP	General purpose output/ Optional HDCP_SDA pin
125	PWMA/GPO7/SCL_OP	PWMA/ General purpose output/ Optional SCL pin
126	PWMB/GPO8/SDA_OP	PWMB/ General purpose output/ Optional SDA pin
127	RSTn_OP	Optional System Reset
128	IRQn_OP	Optional Interrupt Request

3. NT68F631C

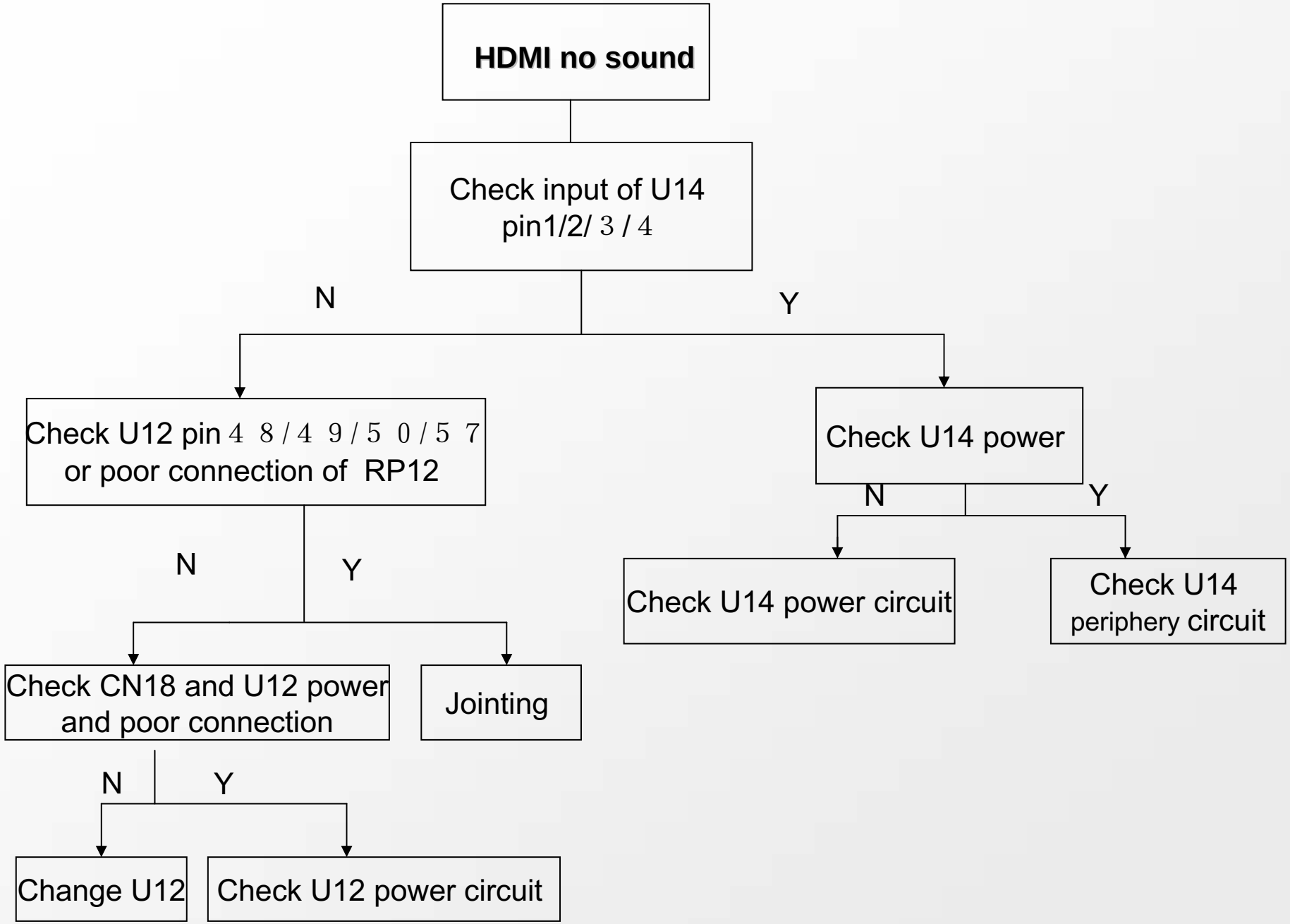
1	PD0	Push-Pull Structure with Schmitt Trigger Input
2	PA0/PWM2	Schmitt Trigger Input
3	PA1/PWM3	Schmitt Trigger Input
4	PA2/PWM4	Schmitt Trigger Input
5	PA3/PWM5	Schmitt Trigger Input
6	PA4*/PWM6*	Open-Drain Structure with Schmitt Trigger Input
7	PA5*/PWM7*	Open-Drain Structure with Schmitt Trigger Input
8	PA6*/PWM8*	Open-Drain Structure with Schmitt Trigger Input
9	PA7*/PWM9*	Open-Drain Structure with Schmitt Trigger Input
10	RSTB	Active-Low Reset Input; with Schmitt Triger Input
11	P30/RXD	GPIO Port-30 of Micro-Processor F8031
12	PD6	Push-Pull Structure with Schmitt Trigger Input
13	P31/TXD	GPIO Port-31 of Micro-Processor F8031
14	PB2/ADC2/INTE0	Push-Pull Structure with Schmitt Trigger Input
15	PB3/ADC3/INTE1	Push-Pull Structure with Schmitt Trigger Input
16	P34/T0	GPIO Port-34 of Micro-Processor F8031
17	P35/T1	GPIO Port-35 of Micro-Processor F8031
18	PE0	Push-Pull Structure with Schmitt Trigger Input
19	PE1	Push-Pull Structure with Schmitt Trigger Input
20	OSCO	12MHz External Crystal OSC Output
21	OSCI	12MHz External Crystal OSC Input
22	GND	Power Ground
23	PB0/ADC0	Push-Pull Structure with Schmitt Trigger Input
24	PB1/ADC1	Push-Pull Structure with Schmitt Trigger Input
25	PB4*/SCL0*	Open-Drain with Schmitt Trigger Input
26	PB5*/SDA0*	Open-Drain with Schmitt Trigger Input
27	PB6*/SCL1*	Open-Drain with Schmitt Trigger Input
28	PB7*/SDA1*	Open-Drain with Schmitt Trigger Input
29	PD5/CLMPO	Push-Pull Structure with Schmitt Trigger Input
30	PD4/HALFI	Push-Pull Structure with Schmitt Trigger Input
31	PD3/HALFO	Push-Pull Structure with Schmitt Trigger Input
32	HSYNCI	Horizontal and Composite sync Input
33	VSYNCI	VSYNC/Interrupt Input; Schmitt Trigger Input
34	PD2/VSYNCO	Push-Pull Structure with Schmitt Trigger Input
35	PD1/HSYNCO	Push-Pull Structure with Schmitt Trigger Input
36	PC7	Push-Pull Structure with Schmitt Trigger Input
37	PC6	Push-Pull Structure with Schmitt Trigger Input
38	PC5/PATTO	Push-Pull Structure with Schmitt Trigger Input
39	PC4/PWM1	Push-Pull Structure with Schmitt Trigger Input
40	PC3/PWM0	Push-Pull Structure with Schmitt Trigger Input
41	PC2/SOGI	Push-Pull Structure with Schmitt Trigger Input
42	PC1*	5V Open-Drain Structure with Schmitt Trigger Input
43	PC0*	5V Open-Drain Structure with Schmitt Trigger Input
44	VCC	+3.3V Power Supply Input

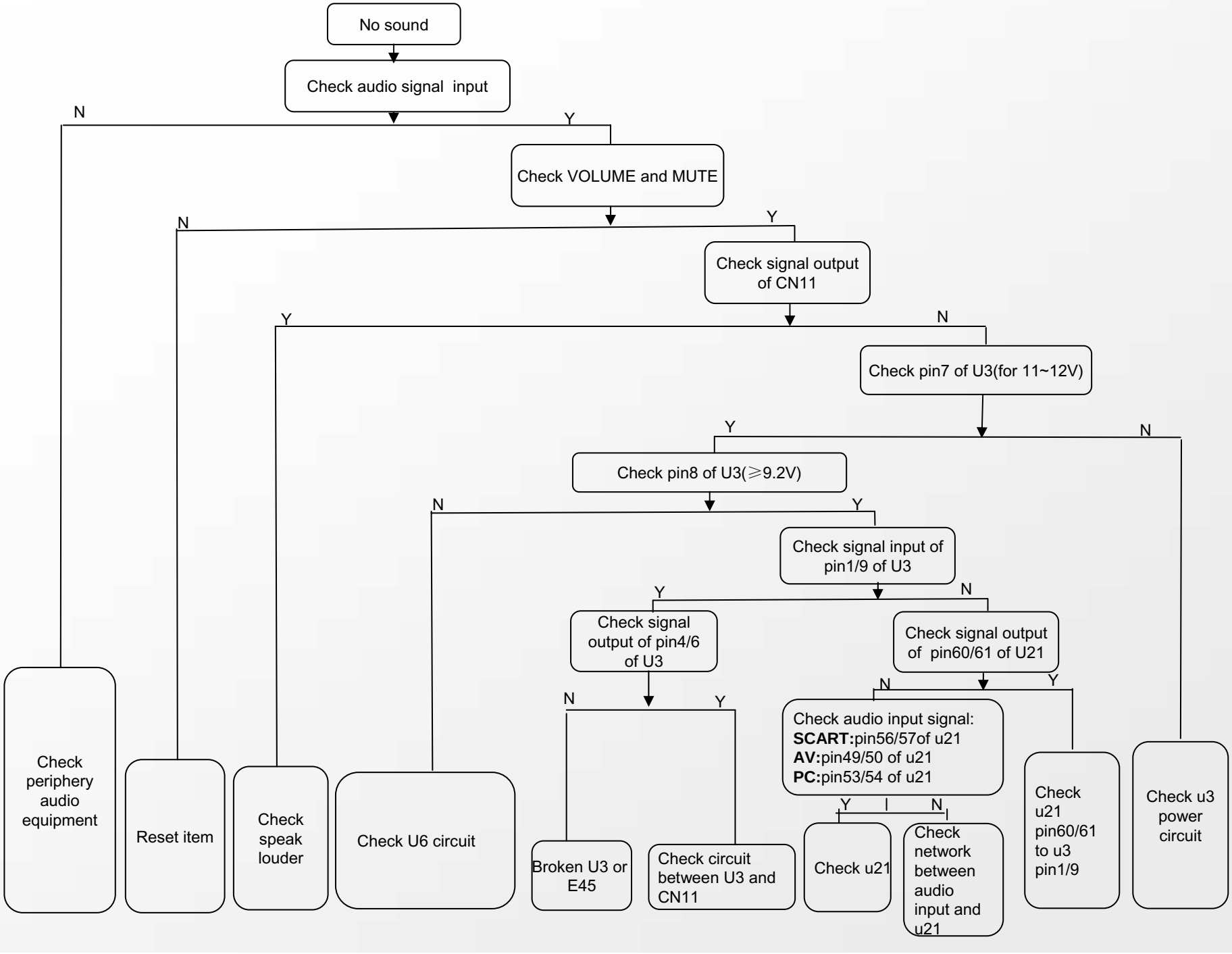
4.TPA1517NE

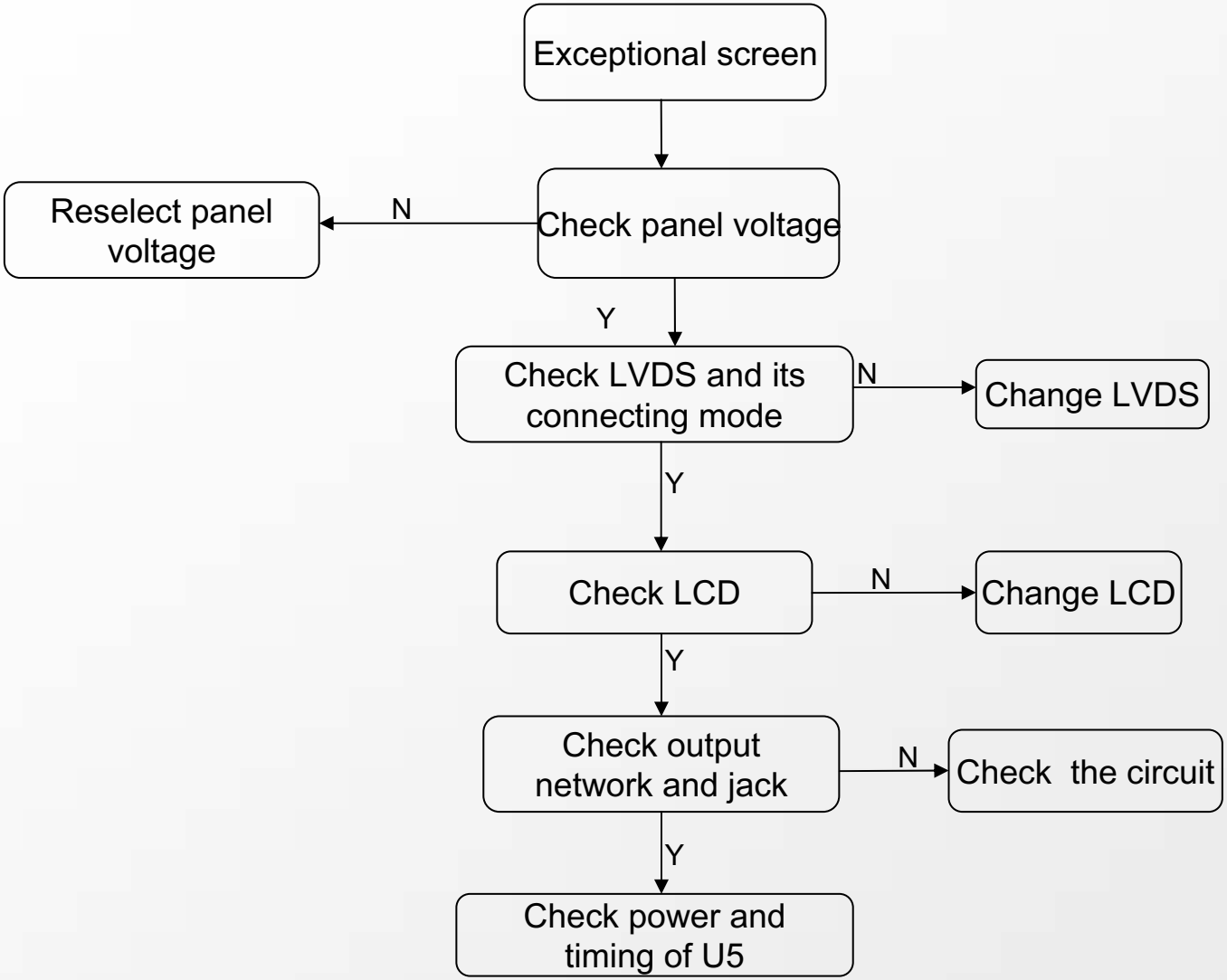
Function: Audio power amplifier

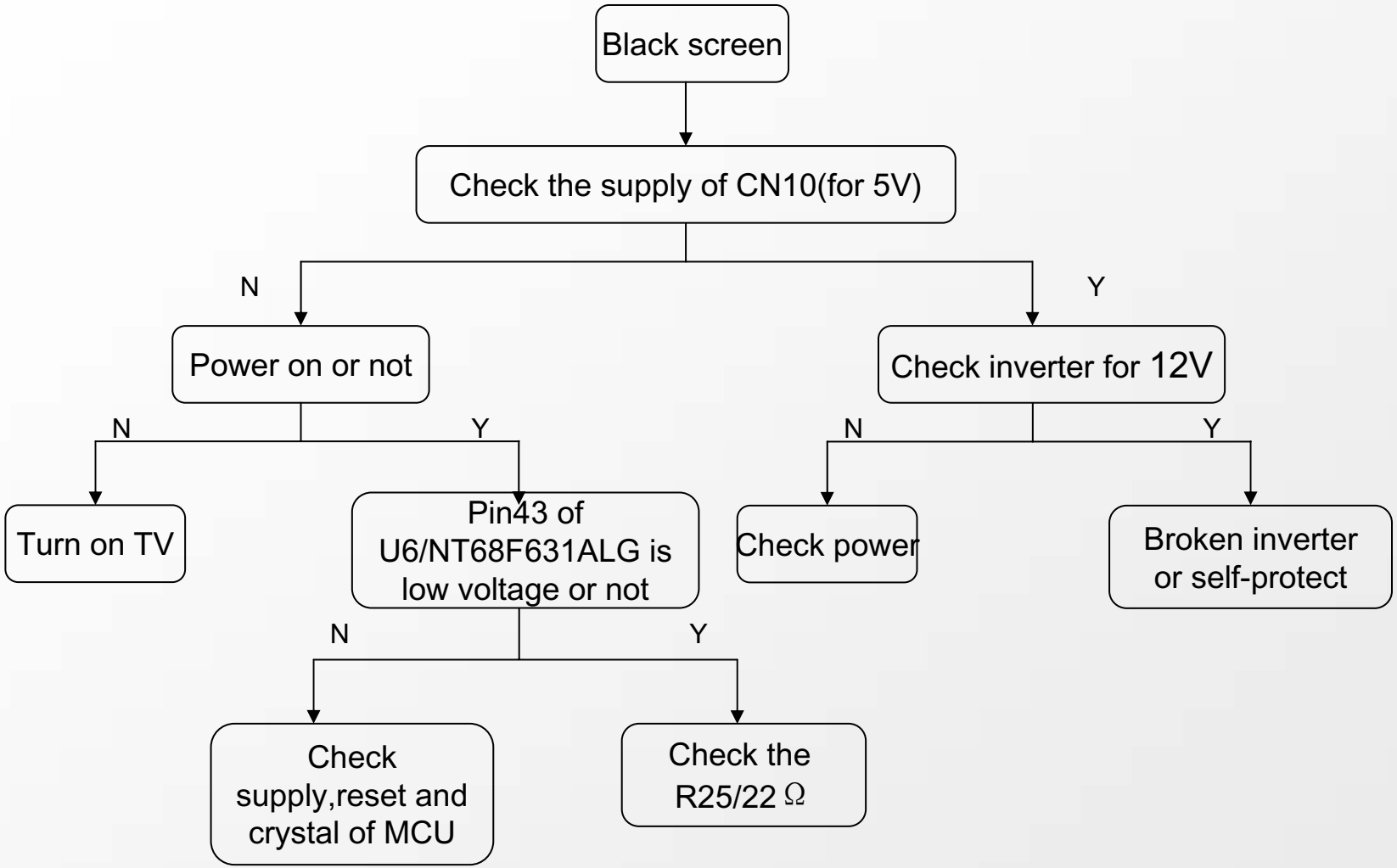
1	IN1	IN1 is the audio input for channel 1
2	SGND	SGND is the input signal ground reference
3	SVRR	SVRR is the midrail bypass mode enable
4	OUT1	OUT1 is the audio output for channel 1
5	PGND	PGND is the power ground refernce
6	OUT2	OUT2 is the audio output for channel 2
7	VCC	VCC is the supply voltage input.
8	M/SB	M/SB is the mute/standby mode enable. When held at less than 2V, this signal enables the TPA1517 for standby operation. When held between 3.4V and 8.8V, this signal enables the TPA1517 for mute operation. When held above 9.2V, the TPA1517 operates normally.
9	IN2	IN2 in the audio input for channel 2
10-20	GND/HS	GND/HS are the ground and heat-sink connections. ALL GND/HS terminals are the connected directly to the mount pad for thermal-enhanced operation.

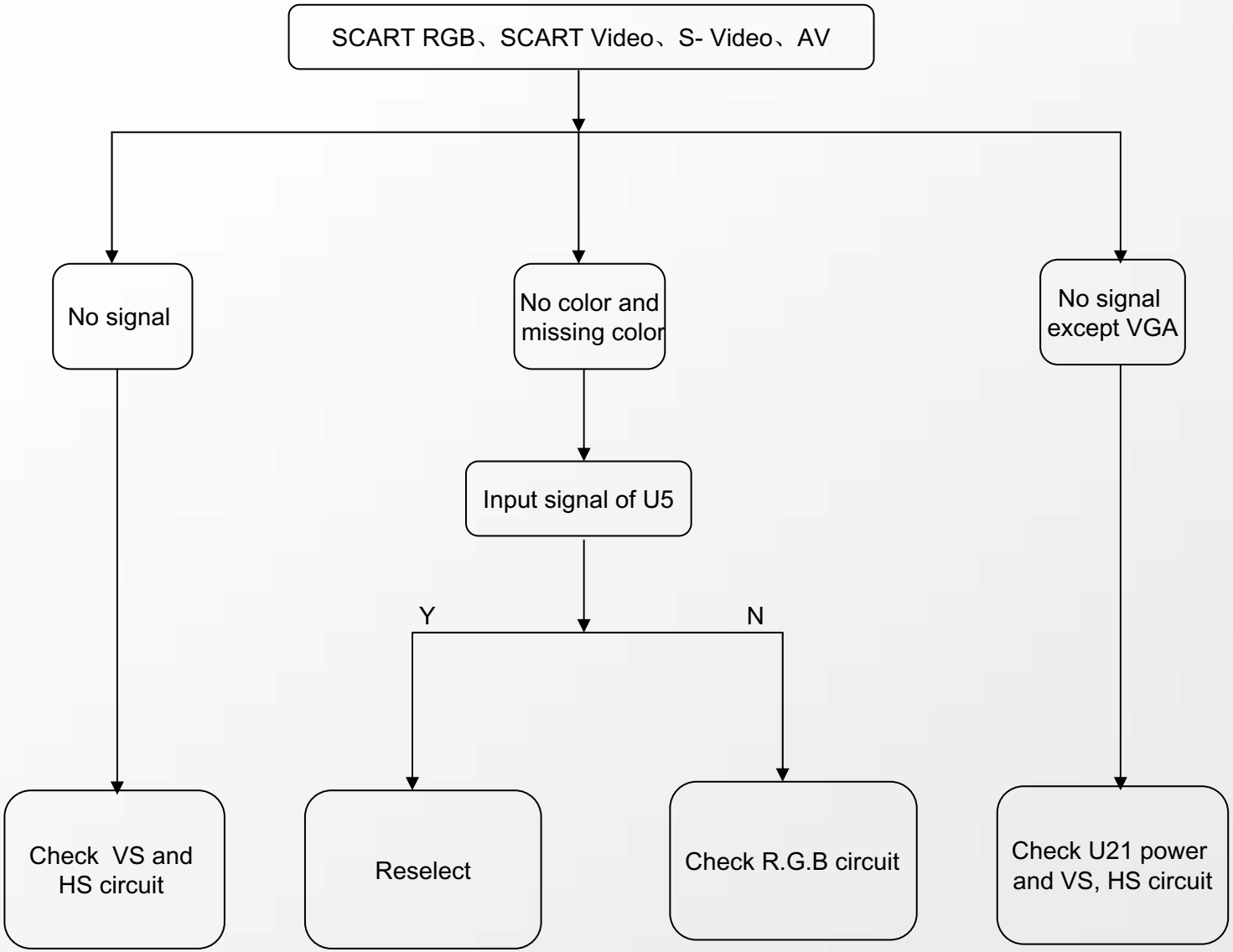
Trouble Shooting Guide

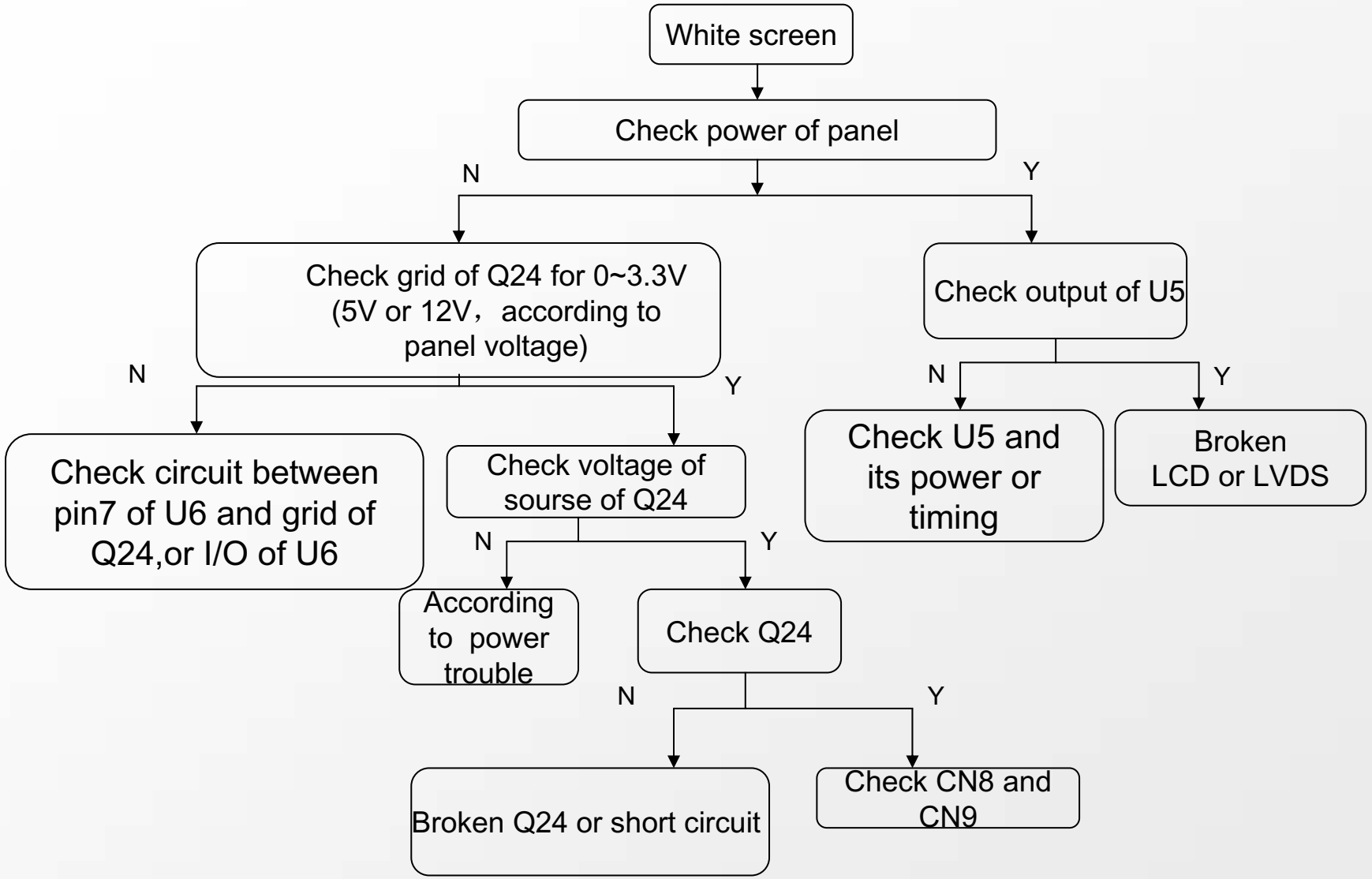

HDMI no sound
Check input of U14 pin1/2/3/4
N
Y
Check U12 pin 48/49/50/57 or poor connection of RP12
Check U14 power
N
Y
N
Y
Check U14 power circuit
Check U14 periphery circuit
Check CN18 and U12 power and poor connection
Jointing
N
Y
Change U12
Check U12 power circuit

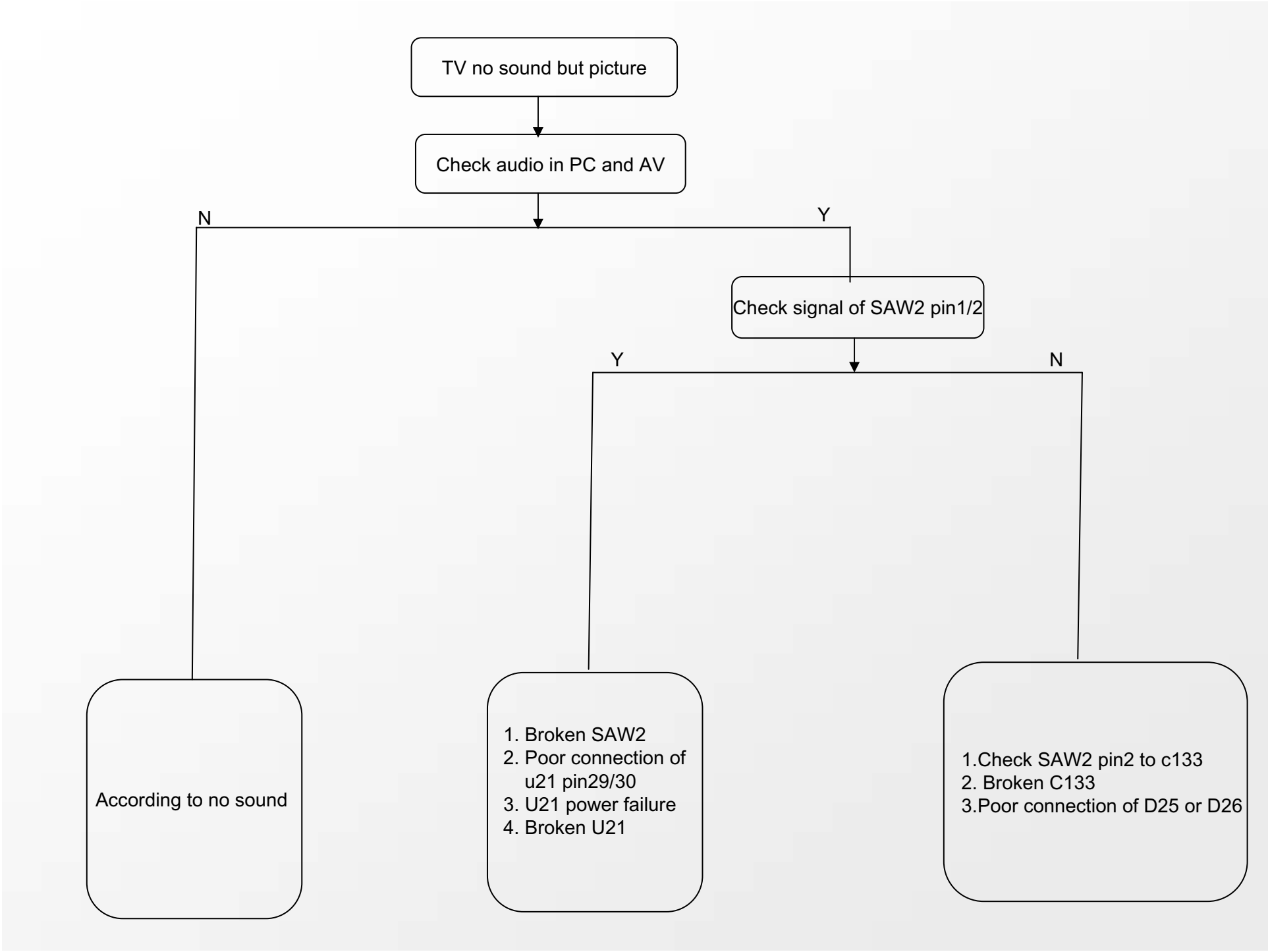

No sound
Check audio signal input
N
Y
Check periphery audio equipment
Check VOLUME and MUTE
N
Y
Reset item
Check signal output of CN11
Y
N
Check speak louder
Check pin7 of U3(for 11~12V)
Y
N
Check U6 circuit
Check pin8 of U3(≥9.2V)
N
Y
Check signal input of pin1/9 of U3
Y
N
Check signal output of pin4/6 of U3
Check signal output of pin60/61 of U21
N
Y
N
Y
Broken U3 or E45
Check circuit between U3 and CN11
Check audio input signal:
SCART:pin56/57of u21
AV:pin49/50 of u21
PC:pin53/54 of u21
Y
N
Check u21
Check network between audio input and u21
Check u21 pin60/61 to u3 pin1/9
Check u3 power circuit

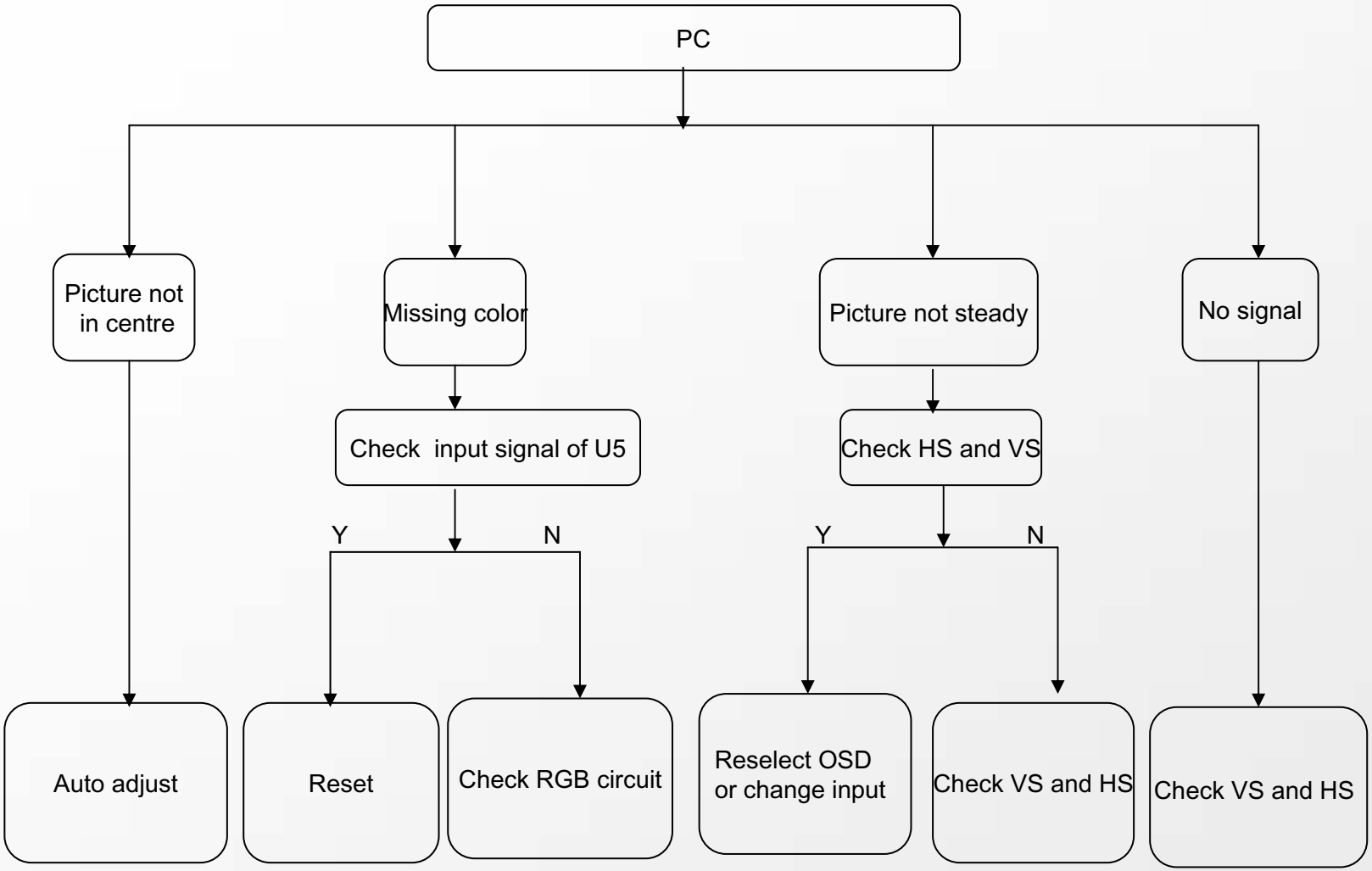

Exceptional screen
Check panel voltage
N
Reselect panel voltage
Y
Check LVDS and its connecting mode
N
Change LVDS
Y
Check LCD
N
Change LCD
Y
Check output network and jack
N
Check the circuit
Y
Check power and timing of U5

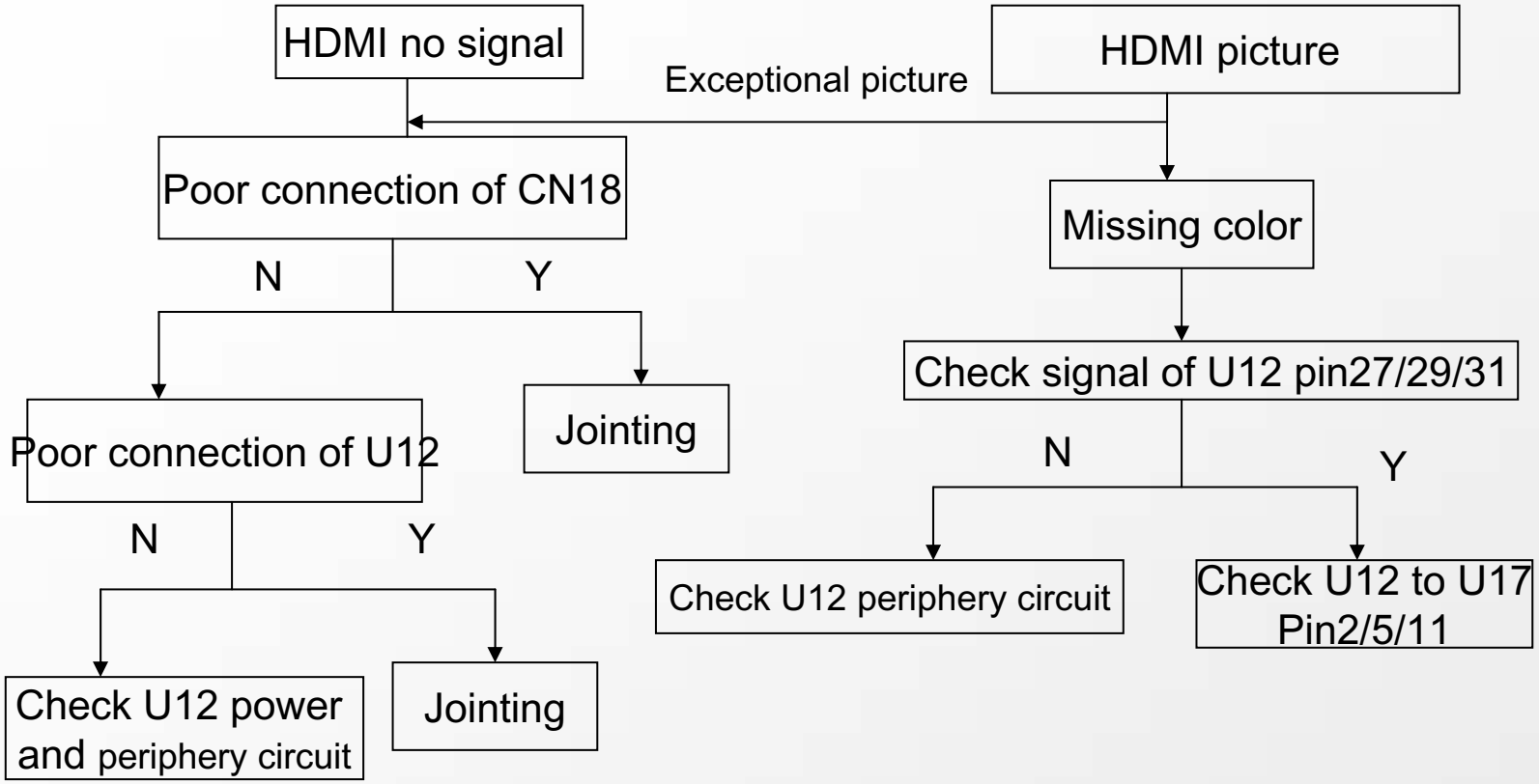

Black screen
Check the supply of CN10(for 5V)
N
Y
Power on or not
Check inverter for 12V
N
Y
N
Y
Turn on TV
Pin43 of U6/NT68F631ALG is low voltage or not
Check power
Broken inverter or self-protect
N
Y
Check supply,reset and crystal of MCU
Check the R25/22 Ω

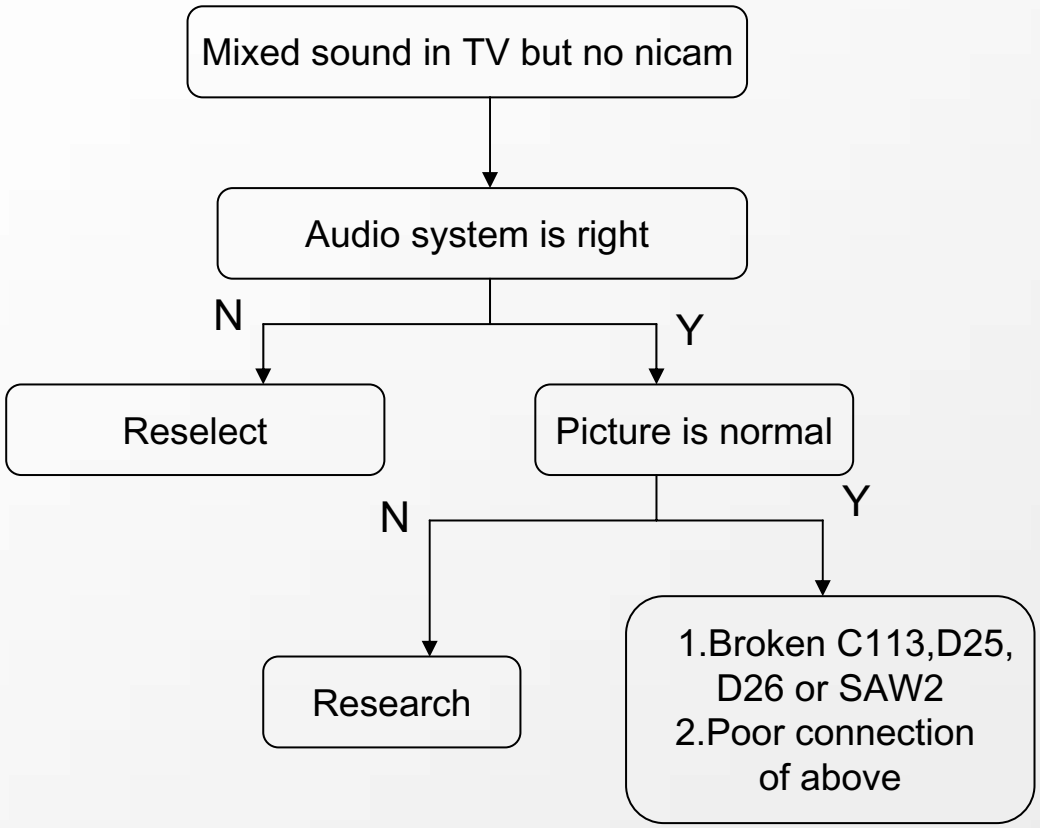

SCART RGB、SCART Video、S- Video、AV
No signal
No color and missing color
No signal except VGA
Input signal of U5
Y
N
Check VS and HS circuit
Reselect
Check R.G.B circuit
Check U21 power and VS, HS circuit

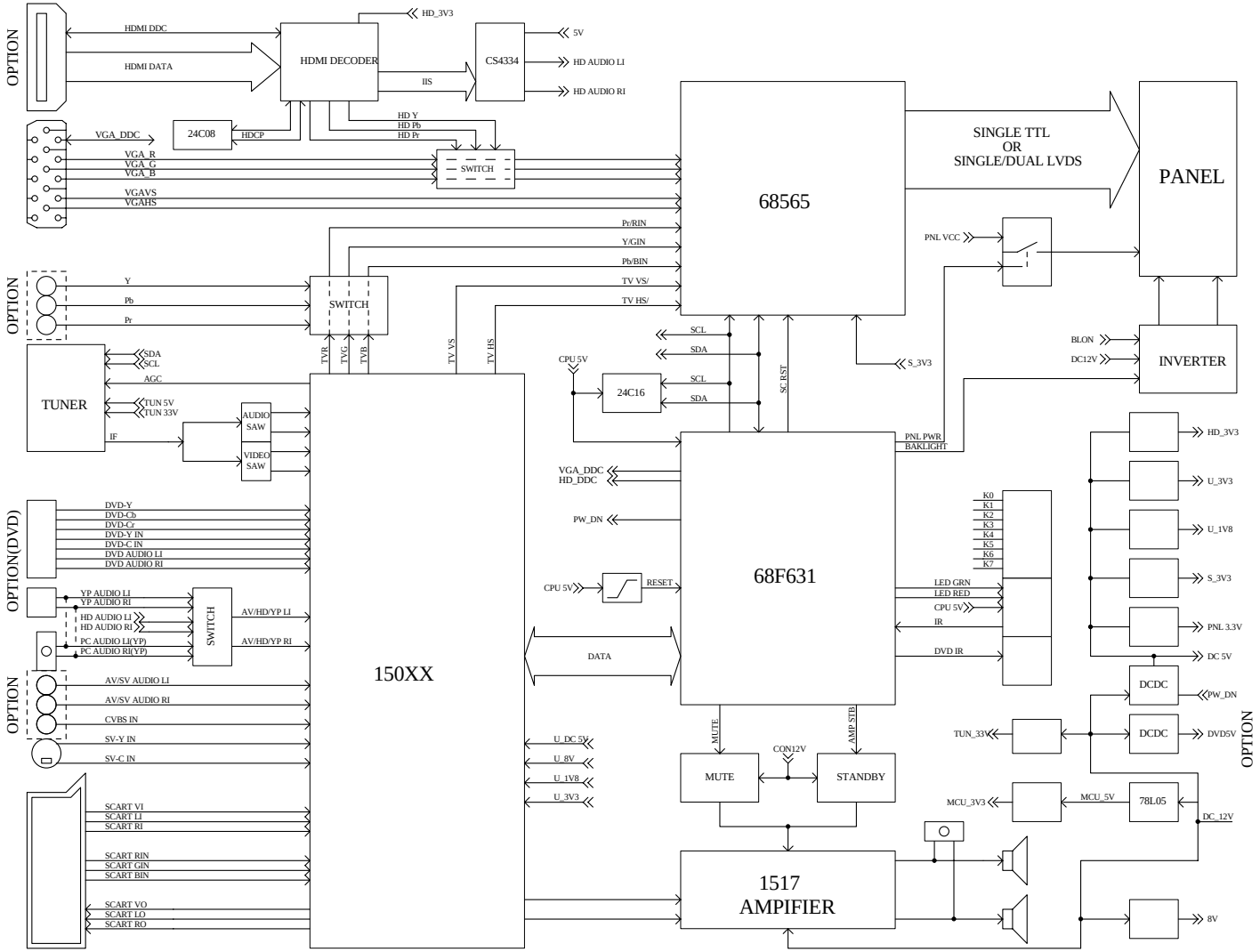

White screen
Check power of panel
N
Y
Check grid of Q24 for 0~3.3V (5V or 12V，according to panel voltage)
Check output of U5
N
Y
N
Y
Check circuit between pin7 of U6 and grid of Q24,or I/O of U6
Check voltage of sourse of Q24
Check U5 and its power or timing
Broken LCD or LVDS
N
Y
According to power trouble
Check Q24
N
Y
Broken Q24 or short circuit
Check CN8 and CN9


TV no sound but picture
Check audio in PC and AV
N
Y
Check signal of SAW2 pin1/2
Y
N
According to no sound
1. Broken SAW2
2. Poor connection of u21 pin29/30
3. U21 power failure
4. Broken U21
1.Check SAW2 pin2 to c133
2. Broken C133
3.Poor connection of D25 or D26


PC
Picture not in centre
Missing color
Picture not steady
No signal
Check input signal of U5
Check HS and VS
Y
N
Y
N
Auto adjust
Reset
Check RGB circuit
Reselect OSD or change input
Check VS and HS
Check VS and HS


HDMI no signal
Exceptional picture
HDMI picture
Poor connection of CN18
Missing color
N
Y
Jointing
Poor connection of U12
Check signal of U12 pin27/29/31
N
Y
N
Y
Check U12 periphery circuit
Check U12 to U17 Pin2/5/11
Check U12 power and periphery circuit
Jointing


Mixed sound in TV but no nicam
Audio system is right
N
Y
Reselect
Picture is normal
N
Y
Research
1.Broken C113,D25,
D26 or SAW2
2.Poor connection
of above


OPTION
HDMI DDC
HDMI DATA
HDMI DECODER
HD_3V3
5V
CS4334
HD AUDIO LI
HD AUDIO RI
IIS
HD Y
HD Pb
HD Pr
VGA_DDC
24C08
HDCP
VGA_R
VGA_G
VGA_B
SWITCH
VGAVS
VGAHS
68565
SINGLE TTL
OR
SINGLE/DUAL LVDS
PANEL
Pr/RIN
Y/GIN
Pb/BIN
TV VS/
TV HS/
PNL VCC
OPTION
Y
Pb
Pr
SWITCH
TVR
TVG
TVB
TV VS
TV HS
SCL
SDA
S_3V3
BLON
DC12V
INVERTER
TUNER
SDA
SCL
AGC
TUN 5V
TUN 33V
IF
AUDIO SAW
VIDEO SAW
CPU 5V
24C16
SCL
SDA
SC RST
PNL PWR
BAKLIGHT
HD_3V3
U_3V3
U_1V8
S_3V3
PNL 3.3V
DC 5V
DCDC
PW_DN
DCDC
DVD5V
OPTION
OPTION(DVD)
DVD-Y
DVD-Cb
DVD-Cr
DVD-Y IN
DVD-C IN
DVD AUDIO LI
DVD AUDIO RI
YP AUDIO LI
YP AUDIO RI
HD AUDIO LI
HD AUDIO RI
PC AUDIO LI(YP)
PC AUDIO RI(YP)
SWITCH
AV/HD/YP LI
AV/HD/YP RI
VGA_DDC
HD_DDC
PW_DN
CPU 5V
RESET
68F631
K0
K1
K2
K3
K4
K5
K6
K7
LED GRN
LED RED
CPU 5V
IR
DVD IR
DATA
150XX
OPTION
AV/SV AUDIO LI
AV/SV AUDIO RI
CVBS IN
SV-Y IN
SV-C IN
SCART VI
SCART LI
SCART RI
SCART RIN
SCART GIN
SCART BIN
SCART VO
SCART LO
SCART RO
U_DC 5V
U_8V
U_1V8
U_3V3
MUTE
CON12V
STANDBY
AMP STB
TUN_33V
MCU_3V3
MCU_5V
78L05
DC_12V
8V
1517
AMPIFIER

FACTORY MENU ADJUSTMENT

FACTORY 1

GAIN （White balance value ;0-255）
R 128
G 128
B 128
OFFESET （Black balance value ;0-255）
R 128
G 128
B 128
CONTRAST (0-63)
R 0
G 0
B 0
DECODER
BRIGHTNESS (0-63)
CONTAST (0-63)
YC DELAY
PAL 0-15
NTSC 0-15
SECAM 0-15
AUTO （Adjust white blance auto）
SAVE

FACTORY 2

VIDEO（PC colour temperature ;0-255）
R 128
G 128
B 128

AGC 30

DCXO -120
DISC 0
AUTO （Ajust Nicam ,DISC set up to from 125 to 129）

AUTO POWER OFF/ON (When push AC SWITCH ,TV turn on automatically or not)
AUTO BURNING OFF/ON(When push AC SWITCH ,TV enter burning mode or not)

INIT EEPROM >（Initiate EEPROM and TV standby）

SAVE >

FACTORY 3

STANDARD/MILD/FRESH（Ajust picture mode）

BRIGHTNESS	50
CONTRAST	50
SATURATION	50
VOLUME	0-63（Max volume）
DVD MODE	OFF/ON
SECAM L/L’	OFF/ON
NICAM	OFF/ON
TELETEXT	OFF/ON
LOCK SET	OFF/ON(Hotel Lock function)
FIRST SEARCH	OFF/ON（Auto search or not when first poweron）
HDMI	OFF/ON
AV	OFF/ON
SCART	OFF/ON
COMPONENT	OFF/ON
LANGUAGE	EC/EU8/ER（Language selection）
CHANNEL TAB	QD/JN（Factory signal tab）
NO SYNC TIME	5M/10M（Standby time when no signal for five minutes or ten）
SAVE	>

NOTICE:1. If you want to adjust some factory setting value，you must enter the factory menu。The method of entering the factory menu is that pressing “DISPLAY、red key、green key、yellow key、DISPLAY” successively on the remote control. Usually, the factory value of every TV is set OK before leaving factory，so we suggest that you`d better not adjust it.

2. You can press“V+、V-” to change parameter, and “P+、P-” to select each item.

3.Use the MENU key to switch FACTORY 1,FACTORY 2 and FACTORY 3 and use the EXIT key to exit factory menu.

01-POWER&AMP
01-POWER&AMP.Sch

06-AUDIO
06-AUDIO.Sch

02-INPUT
02-INPUT.Sch

07-MCU
07-MCU.Sch

03-NT68565
03-NT68565.Sch

08-0UTPUT
08-0UTPUT.Sch

04-TUNER
04-TUNER.Sch

09-HDMI
09-HDMI.SCH

05-UOC3
05-UOC3.Sch

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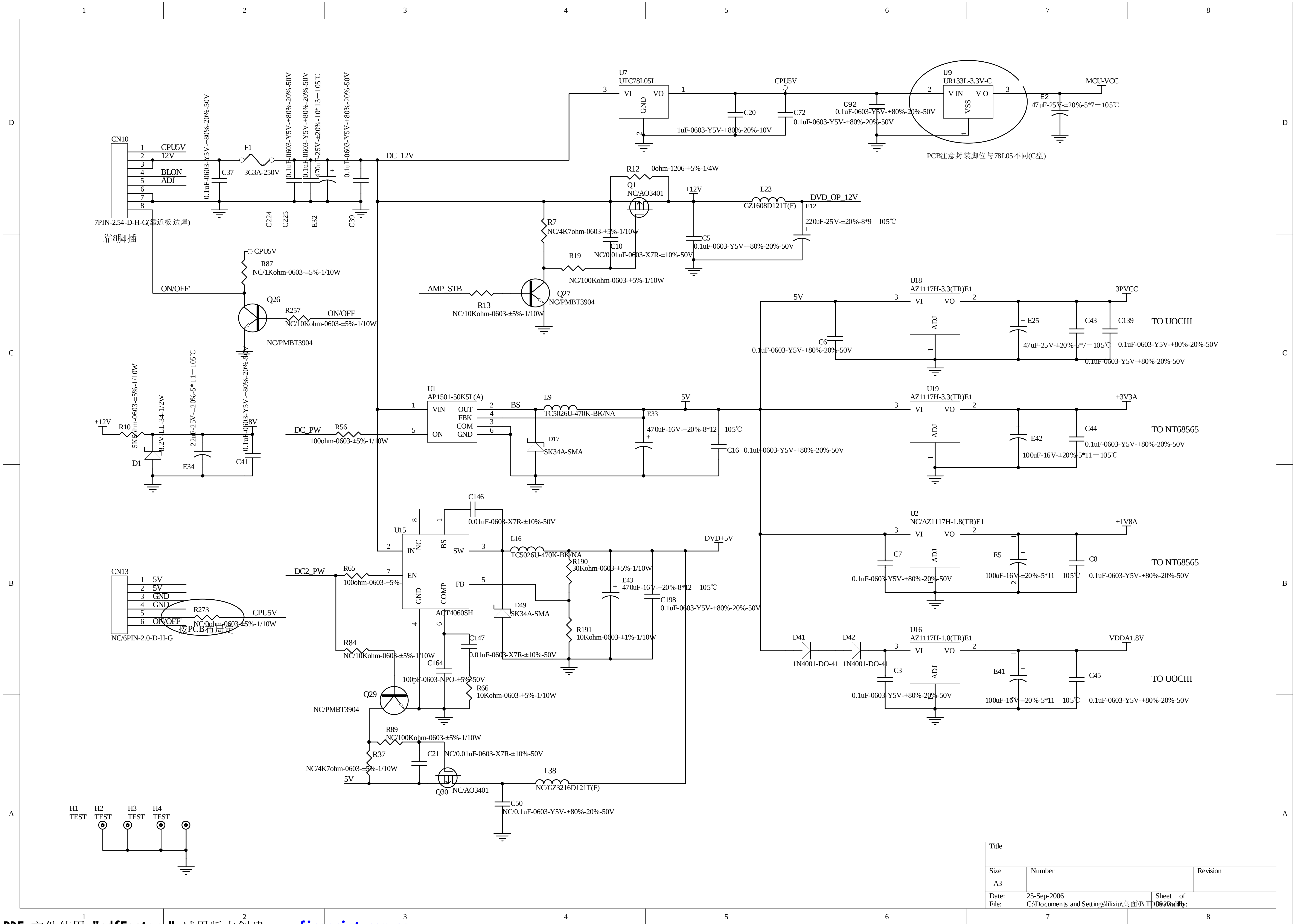

U7
UTC78L05L
VI VO GND
CPU5V
C20
1uF-0603-Y5V-+80%-20%-10V
C72
0.1uF-0603-Y5V-+80%-20%-50V
C92
0.1uF-0603-Y5V-+80%-20%-50V
U9
UR133L-3.3V-C
V IN V O VSS
MCU-VCC
E2
47uF-25V-±20%-5*7－105℃
PCB注意封装脚位与78L05不同(C型)
CN10
CPU5V
12V
BLON
ADJ
7PIN-2.54-D-H-G(靠近板边焊)
靠8脚插
F1
3G3A-250V
C37
0.1uF-0603-Y5V-+80%-20%-50V
C224
C225
E32
C39
470uF-25V-±20%-10*13－105℃
DC_12V
R12
0ohm-1206-±5%-1/4W
Q1
NC/AO3401
+12V
L23
GZ1608D121T(F)
DVD_OP_12V
E12
220uF-25V-±20%-8*9－105℃
R7
NC/4K7ohm-0603-±5%-1/10W
C10
NC/0.01uF-0603-X7R-±10%-50V
C5
0.1uF-0603-Y5V-+80%-20%-50V
R19
NC/100Kohm-0603-±5%-1/10W
AMP_STB
R13
NC/10Kohm-0603-±5%-1/10W
Q27
NC/PMBT3904
CPU5V
R87
NC/1Kohm-0603-±5%-1/10W
ON/OFF'
Q26
R257
NC/10Kohm-0603-±5%-1/10W
ON/OFF
NC/PMBT3904
U18
AZ1117H-3.3(TR)E1
5V
3PVCC
E25
47uF-25V-±20%-5*7－105℃
C43
C139
TO UOCIII
C6
0.1uF-0603-Y5V-+80%-20%-50V
+12V
R10
5Kohm-0603-±5%-1/10W
8.2V-LL-34-1/2W
D1
22uF-25V-±20%-5*11－105℃
E34
0.1uF-0603-Y5V-+80%-20%-50V
8V
C41
U1
AP1501-50K5L(A)
VIN OUT FBK COM ON GND
BS
L9
TC5026U-470K-BK/NA
5V
E33
470uF-16V-±20%-8*12－105℃
C16
D17
SK34A-SMA
DC_PW
R56
100ohm-0603-±5%-1/10W
U19
AZ1117H-3.3(TR)E1
+3V3A
E42
100uF-16V-±20%-5*11－105℃
C44
TO NT68565
C146
0.01uF-0603-X7R-±10%-50V
U15
NC BS IN SW EN FB GND COMP
ACT4060SH
L16
TC5026U-470K-BK/NA
DVD+5V
R190
30Kohm-0603-±5%-1/10W
E43
470uF-16V-±20%-8*12－105℃
C198
D49
SK34A-SMA
R191
10Kohm-0603-±1%-1/10W
DC2_PW
R65
100ohm-0603-±5%-
CN13
5V
GND
ON/OFF'
R273
NC/0ohm-0603-±5%-1/10W
CPU5V
按PCB布局定
NC/6PIN-2.0-D-H-G
R84
NC/10Kohm-0603-±5%-1/10W
C164
100pF-0603-NPO-±5%-50V
C147
0.01uF-0603-X7R-±10%-50V
R66
10Kohm-0603-±5%-1/10W
Q29
NC/PMBT3904
R89
NC/100Kohm-0603-±5%-1/10W
R37
NC/4K7ohm-0603-±5%-1/10W
C21
NC/0.01uF-0603-X7R-±10%-50V
5V
Q30
NC/AO3401
L38
NC/GZ3216D121T(F)
C50
NC/0.1uF-0603-Y5V-+80%-20%-50V
U2
NC/AZ1117H-1.8(TR)E1
+1V8A
C7
E5
100uF-16V-±20%-5*11－105℃
C8
TO NT68565
D41
D42
1N4001-DO-41
U16
AZ1117H-1.8(TR)E1
VDDA1.8V
C3
E41
C45
TO UOCIII
H1 TEST
H2 TEST
H3 TEST
H4 TEST
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Size A3
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Revision
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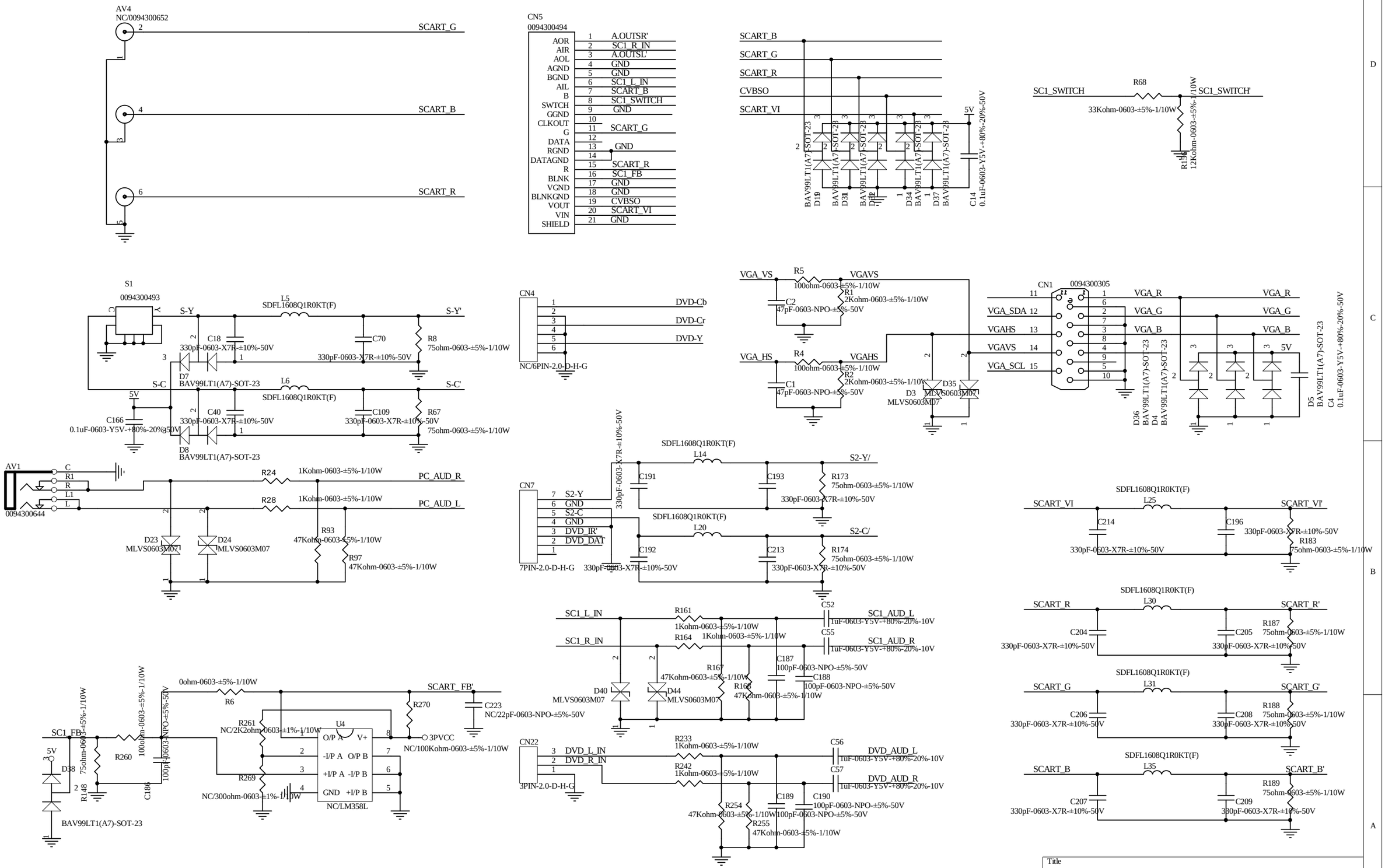
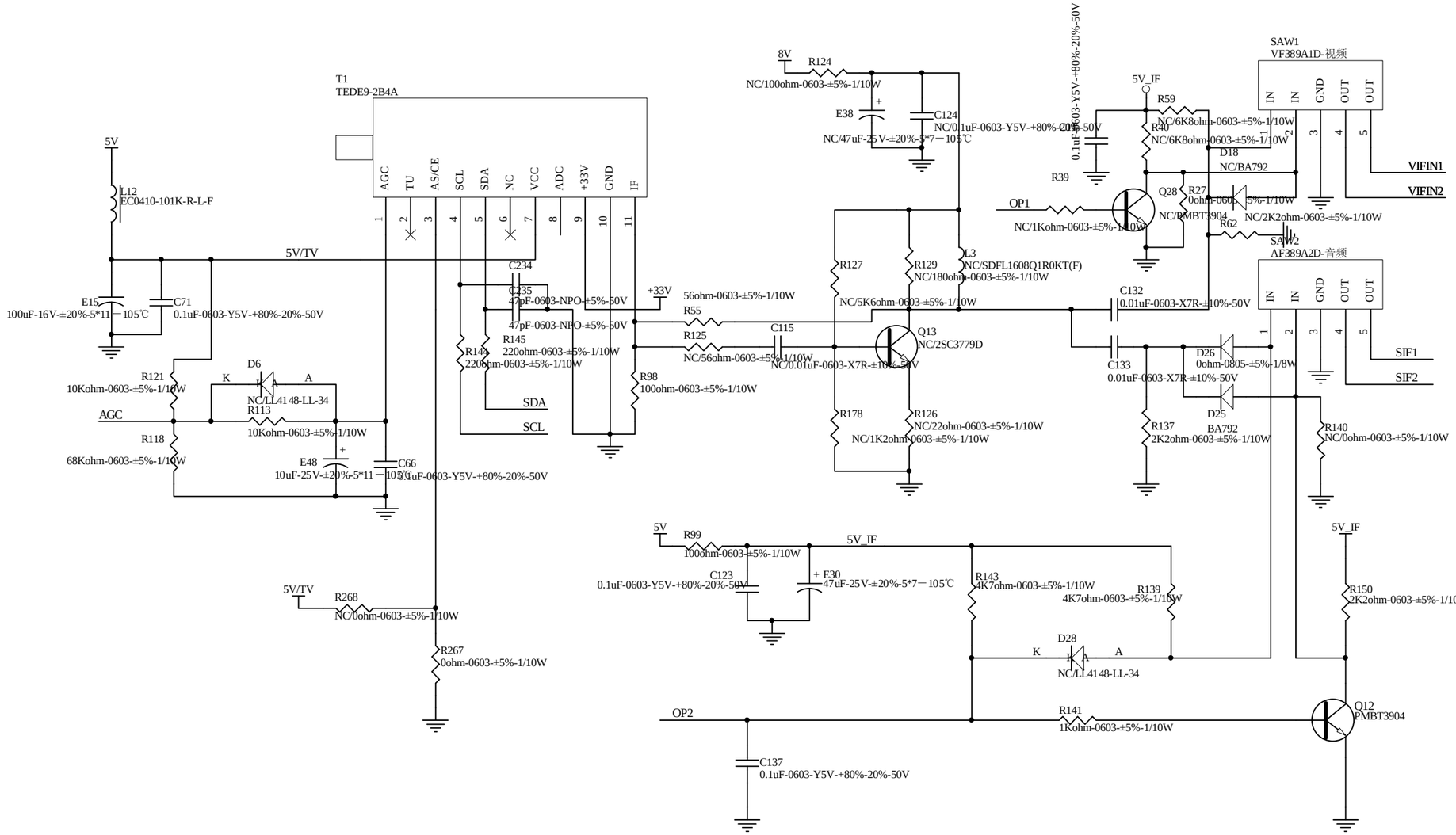


SEL	VT_SEL0	VT_SEL1
YP	0	0
TV	0	1
HD	1	0
VGA	1	1

For Single TTL Panel



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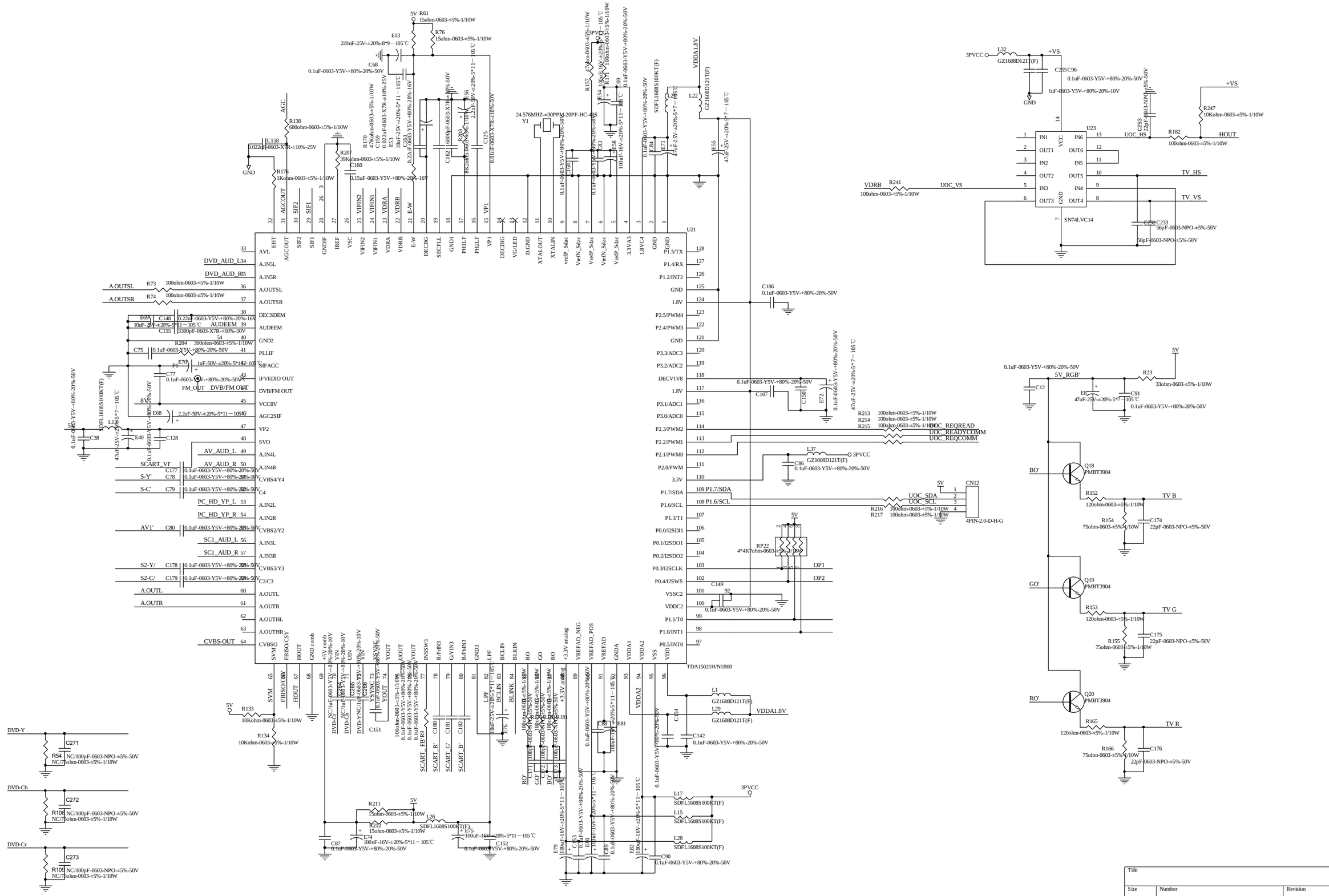

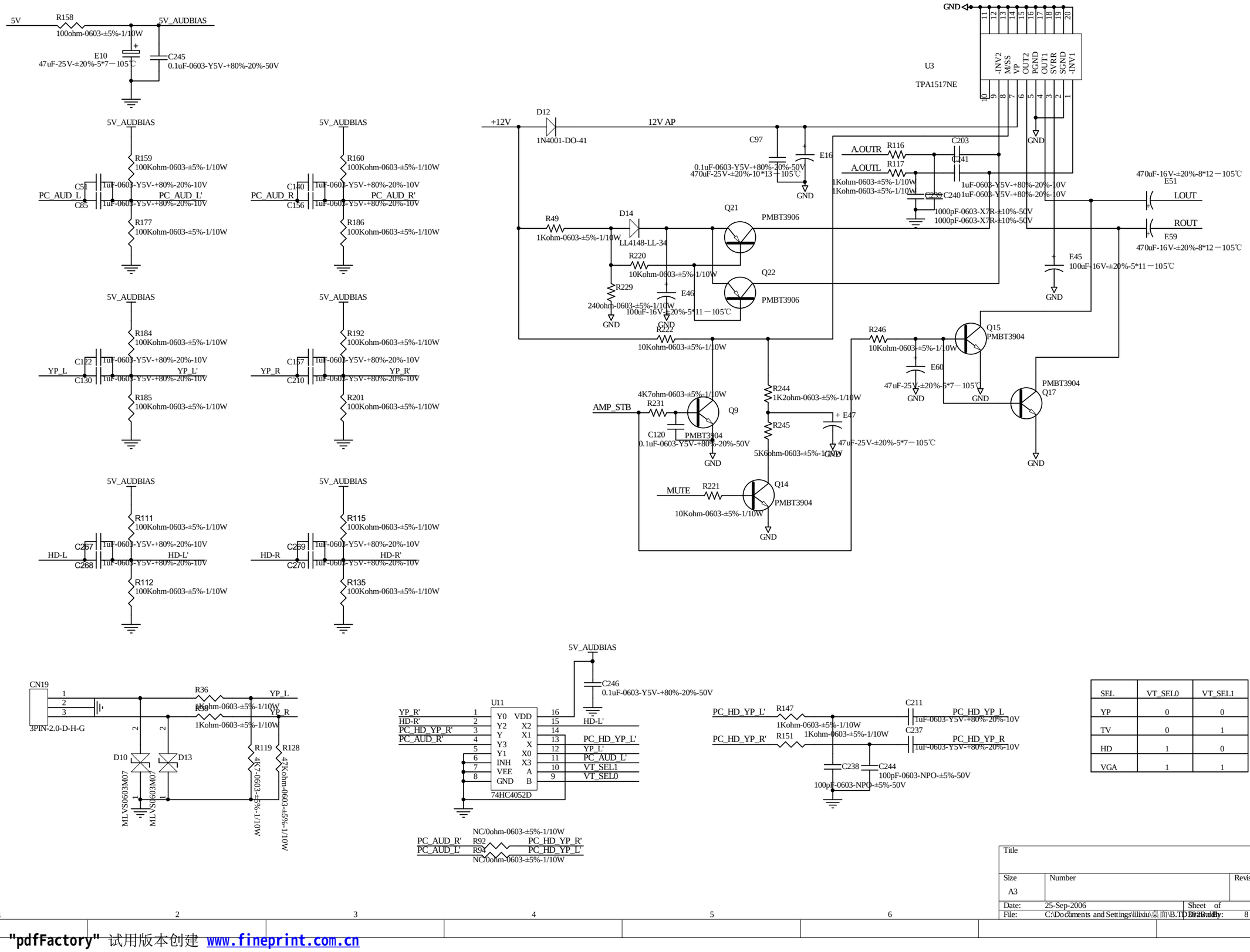

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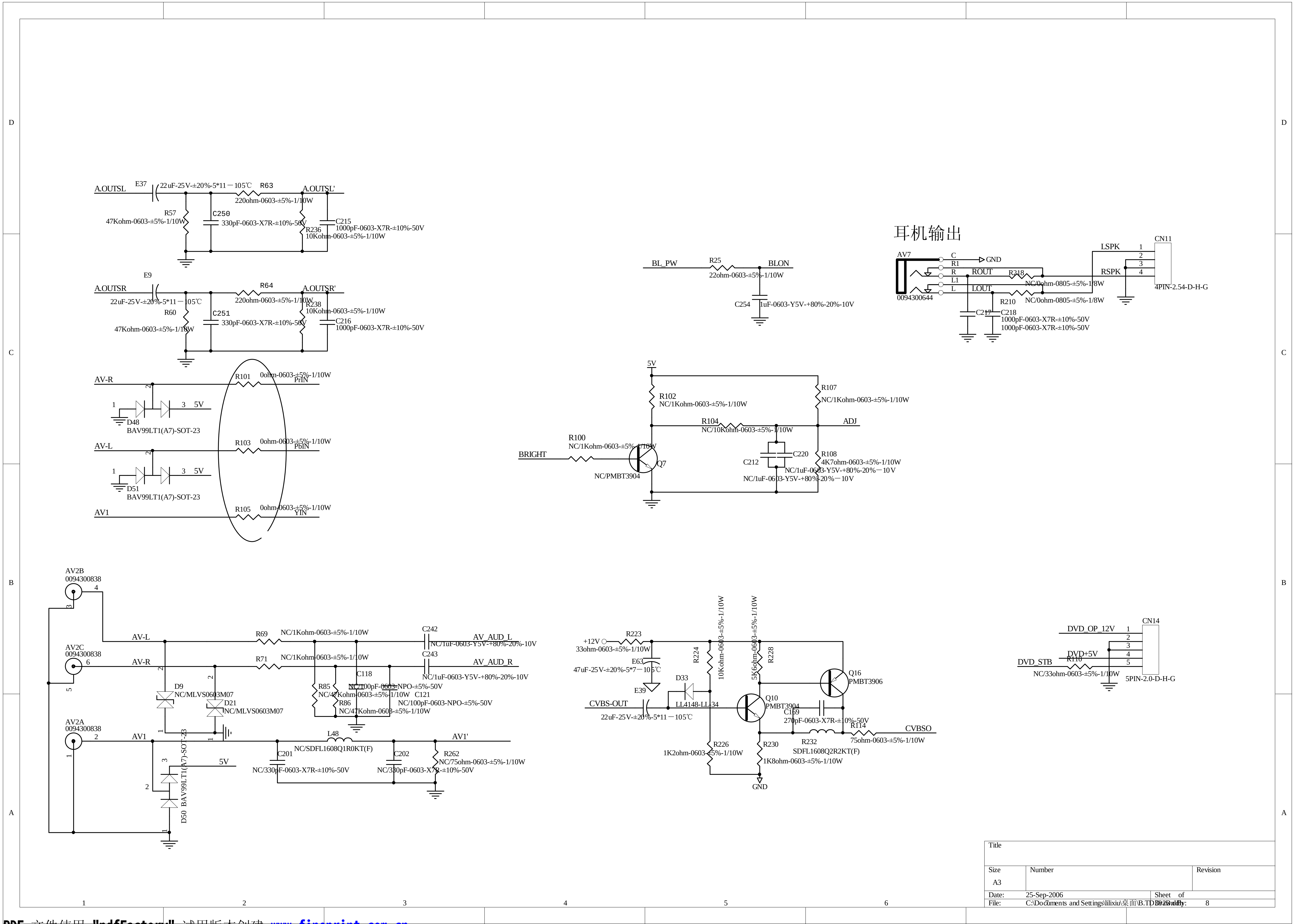

耳机输出
A.OUTSL
E37
22uF-25V-±20%-5*11－105℃
R63
220ohm-0603-±5%-1/10W
A.OUTSL'
R57
47Kohm-0603-±5%-1/10W
C250
330pF-0603-X7R-±10%-50V
R236
10Kohm-0603-±5%-1/10W
C215
1000pF-0603-X7R-±10%-50V
A.OUTSR
E9
22uF-25V-±20%-5*11－105℃
R64
220ohm-0603-±5%-1/10W
A.OUTSR'
R60
47Kohm-0603-±5%-1/10W
C251
330pF-0603-X7R-±10%-50V
R238
10Kohm-0603-±5%-1/10W
C216
1000pF-0603-X7R-±10%-50V
AV-R
R101
0ohm-0603-±5%-1/10W
PrIN
D48
BAV99LT1(A7)-SOT-23
5V
AV-L
R103
0ohm-0603-±5%-1/10W
PbIN
D51
BAV99LT1(A7)-SOT-23
AV1
R105
0ohm-0603-±5%-1/10W
YIN
BL_PW
R25
22ohm-0603-±5%-1/10W
BLON
C254
1uF-0603-Y5V-+80%-20%-10V
AV7
0094300644
C
R1
R
L1
L
GND
ROUT
LOUT
R218
NC/0ohm-0805-±5%-1/8W
R210
NC/0ohm-0805-±5%-1/8W
C217
C218
1000pF-0603-X7R-±10%-50V
1000pF-0603-X7R-±10%-50V
LSPK
RSPK
CN11
4PIN-2.54-D-H-G
R102
NC/1Kohm-0603-±5%-1/10W
R107
NC/1Kohm-0603-±5%-1/10W
R104
NC/10Kohm-0603-±5%-1/10W
ADJ
R100
NC/1Kohm-0603-±5%-1/10W
BRIGHT
Q7
NC/PMBT3904
C212
C220
R108
4K7ohm-0603-±5%-1/10W
NC/1uF-0603-Y5V-+80%-20%－10V
NC/1uF-0603-Y5V-+80%-20%－10V
AV2B
0094300838
AV2C
0094300838
AV2A
0094300838
R69
NC/1Kohm-0603-±5%-1/10W
C242
AV_AUD_L
NC/1uF-0603-Y5V-+80%-20%-10V
R71
NC/1Kohm-0603-±5%-1/10W
C243
AV_AUD_R
NC/1uF-0603-Y5V-+80%-20%-10V
C118
NC/100pF-0603-NPO-±5%-50V
R85
NC/47Kohm-0603-±5%-1/10W
C121
NC/100pF-0603-NPO-±5%-50V
R86
NC/47Kohm-0603-±5%-1/10W
D9
NC/MLVS0603M07
D21
NC/MLVS0603M07
L48
NC/SDFL1608Q1R0KT(F)
AV1'
C201
NC/330pF-0603-X7R-±10%-50V
C202
NC/330pF-0603-X7R-±10%-50V
R262
NC/75ohm-0603-±5%-1/10W
D50 BAV99LT1(A7)-SOT-23
+12V
R223
33ohm-0603-±5%-1/10W
E63
47uF-25V-±20%-5*7－105℃
E39
D33
LL4148-LL-34
R224
10Kohm-0603-±5%-1/10W
5K6ohm-0603-±5%-1/10W
R228
Q16
PMBT3906
Q10
PMBT3904
CVBS-OUT
22uF-25V-±20%-5*11－105℃
C159
270pF-0603-X7R-±10%-50V
R114
75ohm-0603-±5%-1/10W
CVBSO
R226
1K2ohm-0603-±5%-1/10W
R230
1K8ohm-0603-±5%-1/10W
R232
SDFL1608Q2R2KT(F)
DVD_OP_12V
DVD+5V
DVD_STB
R110
NC/33ohm-0603-±5%-1/10W
CN14
5PIN-2.0-D-H-G
Title
Size
A3
Number
Revision
Date:
25-Sep-2006
Sheet of
File:
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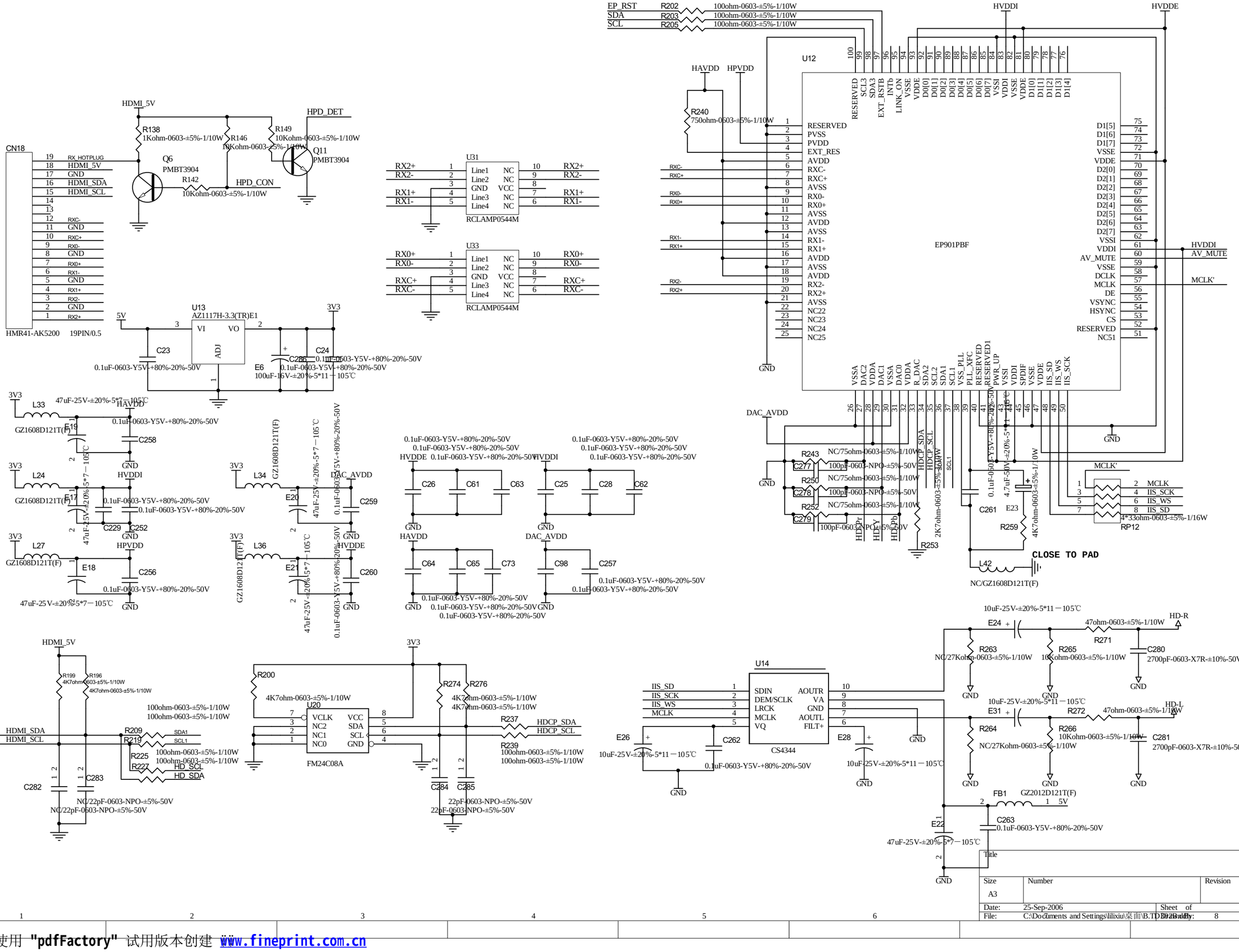
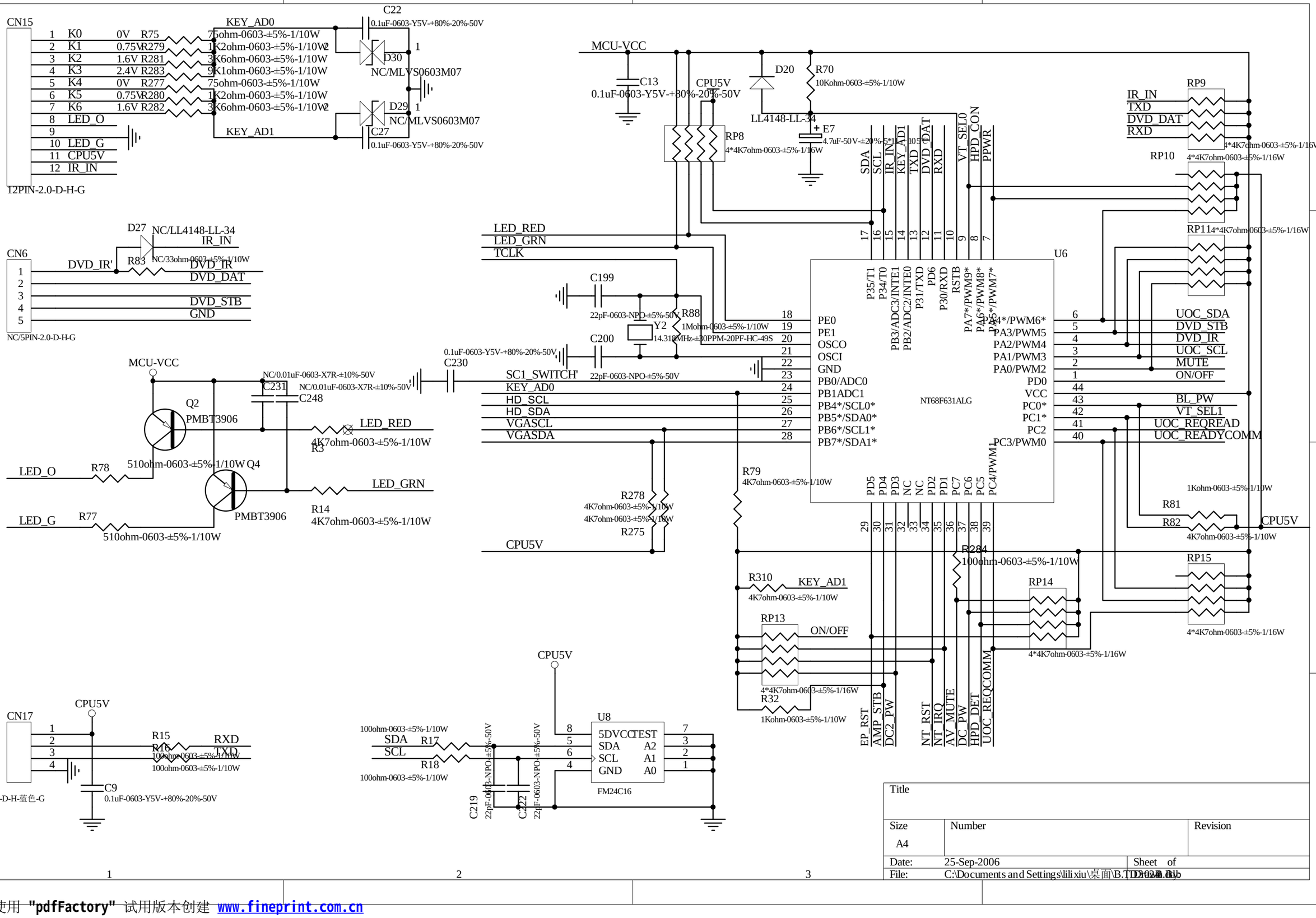
8





Sincere forever

Haier

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