

JT240DP6DM Service Manual

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1. PRECAUTION AND NOTICES

1.1. SAFETY PRECAUTIONS

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS:

- ◆ This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or power company.
- ◆ Use only the special power adapter that comes with this monitor for power input.
- ◆ Do not try to repair the monitor your self as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- ◆ Do not remove the monitor cabinet. There is high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.
- ◆ Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- ◆ Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.
- ◆ Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- ◆ Keep the monitor away from magnetic objects, motors, TV sets, and transformer.
- ◆ Do not place heavy objects on the monitor or power cord.

1.2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltages, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

1.3. SERVICE NOTES

1. When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.
2. When replacing a high wattage resistor (more than 1W of metal oxide film resistor) in circuit board, keep the resistor about 5mm away from circuit board.
3. Keep wires away from high voltage, high temperature components and sharp edges.
4. Keep wires in their original position so as to reduce interference.
5. Usage of this product please refer to also user's manual.

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2. SERVICE TOOL & EQUIPMENT REQUIRED

1. SIGNAL GEN.
2. MULTIMETER
3. OSCILLOSCOPE
4. SCREW DRIVER
5. IRON
6. ABSORBER
7. SOLDER
8. DUMMY LOAD (5ohm/200W)

3. SPECIFICATIONS

3.1. PRODUCT SPECIFICATIONS

LCD Panel	23.6" TFT
Power Management	Energy Star compliant VESA DPMS compatible < 1W
Displayable Resolution	Full HD 1920x1080 (max.)
Pixel Dimension	0.2715(H)× 0.2715(V)mm
LCD Display Color	16.7M Color Max.
Viewing Angle	CR ≥ 10 Horizontal: 170° Vertical: 160°
Tilt	0 degree to 22 degree
Contrast Ratio	1000 : 1 (typ.)
Brightness	220 cd/ m2 (min.) 300 cd/m ² (typ.)
Response Time	Tr:+Tf: 5ms(typ.) Tr: +Tf: 8ms(max.)
Active Display Area	521.28mm(H)× 293.22mm(V)
Temperature	Operating: 0°C ~ +40°C Storage: -20°C ~ +60°C
Compliance	VESA DDC1/2B Revision 1.3
Power	Input Voltage: 100~240 Vac Consumption: 70 Watts (Max.)

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3.2. FACTORY SUPPORTING MODES

There are totally 35 timings mode that can be saved in memory by FIFO architecture.

This monitor can support VGA up to Full HD resolution.

There are some resolution example listed in lookup timing table.

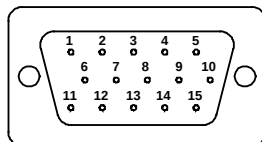
VGA mode max resolution: 1920x1080 59.96Hz 173MHz; DVI mode max resolution : 1920x1080 60Hz 148.5MHz

Lookup timing table	VGA	720 × 400 (70Hz) mode
	VGA	640 × 480 (60Hz) mode
	VESA	640 × 480 (72Hz) mode
		640 × 480 (75Hz) mode
		800 × 600 (56Hz) mode
		800 × 600 (60Hz) mode
		800 × 600 (72Hz) mode
		800 × 600 (75Hz) mode
		1024 × 768 (60Hz) mode
		1024 × 768 (70Hz) mode
		1024 × 768 (75Hz) mode
		1280 × 1024 (60Hz) mode
		1280 × 1024 (75Hz) mode
		1280 × 960 (60Hz) mode
		1440 × 900 (60Hz) mode
		1440 × 1050 (60Hz) mode
		1680 × 1050(60Hz) mode
		1600 × 1200 (60Hz) mode
		1920 × 1080 (60Hz) mode
		1152 × 864(75Hz)mode
	MAC	640 × 480 (67Hz) mode
		832 × 624 (74.5Hz) mode

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3.3. INPUT TERMINALS

D-SUB 15 PIN CONNECTOR



1.R	6.GND	11.NC
2.G	7.GND	12.SDA
3.B	8.GND	13.H.SYNC
4.NC	9. +5V	14.V.SYNC
5.GND	10.GND	15.SCL

CONNECTOR	SIGNAL	DESCRIPTION
R	RED	0.7vp-p(VIDEO)
G	GREEN	0.7vp-p(VIDEO)
B	BLUE	0.7vp-p(VIDEO)
H	H/SYNC	TTL positive or negative
V	V/SYNC	TTL positive or negative
SDA	DDC1/2B	TTL
SCL	DDC1/2B	TTL
SCL	DDC1/2B	TTL

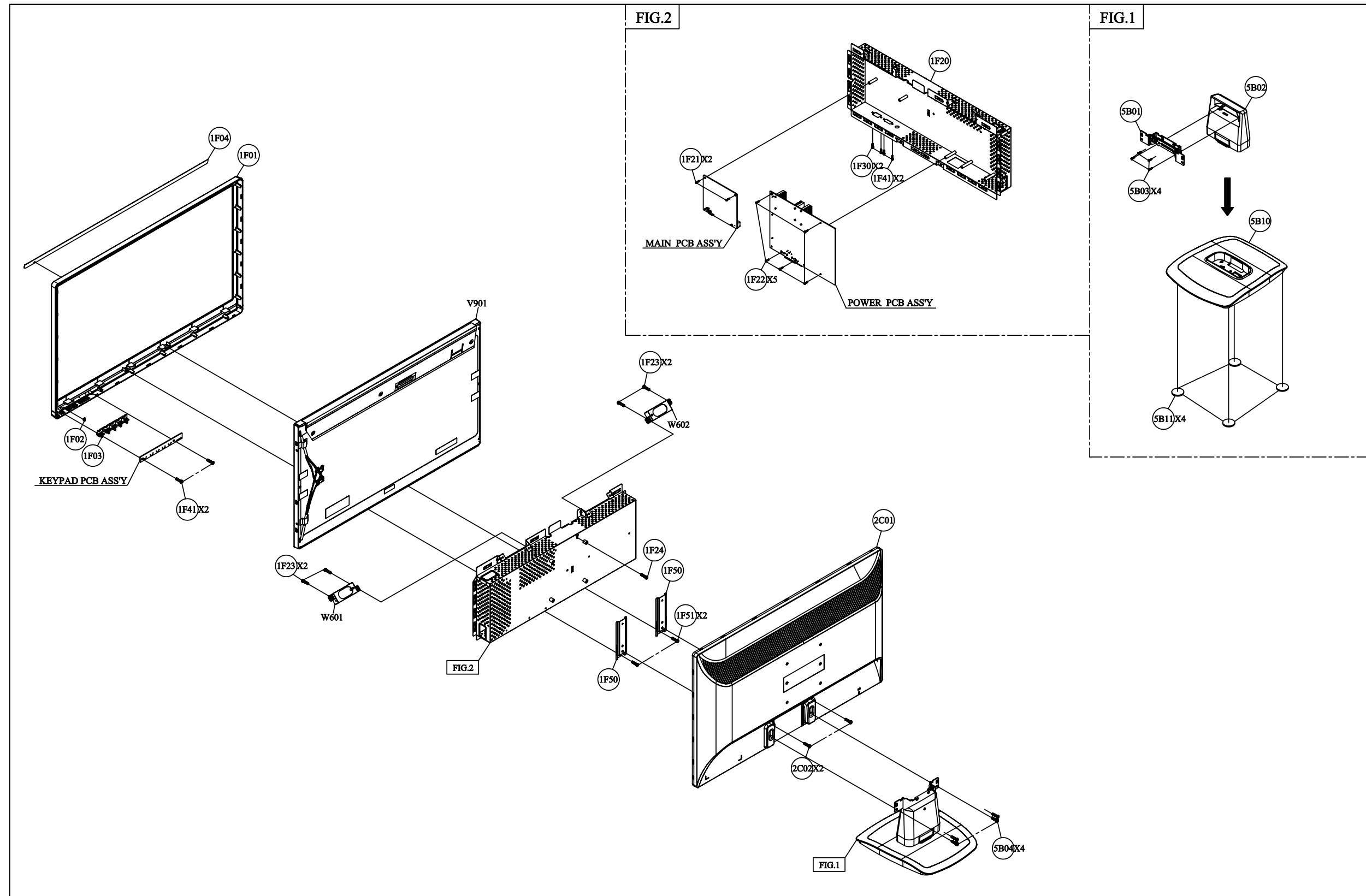
DVI Connector pin assignments

The signal cable connector shall be a molded-over, shield twisted pair cable. The cable shall be 1.5 meters long at least. The pin assignments shall be listed as below:

DVI-D connector

1	RX2-	2	RX2+	3	SHLD2	4	NC	5	NC	6	SCL	7	SDA	8	V-sync
9	RX1-	10	RX1+	11	SHLD1	12	NC	13	NC	14	5V	15	GND	16	SENSE
17	RX0-	18	RX0+	19	SHLD0	20	NC	21	NC	22	SHLDC	23	RXC+	24	RXC-

4.1. EXPLODED VIEW

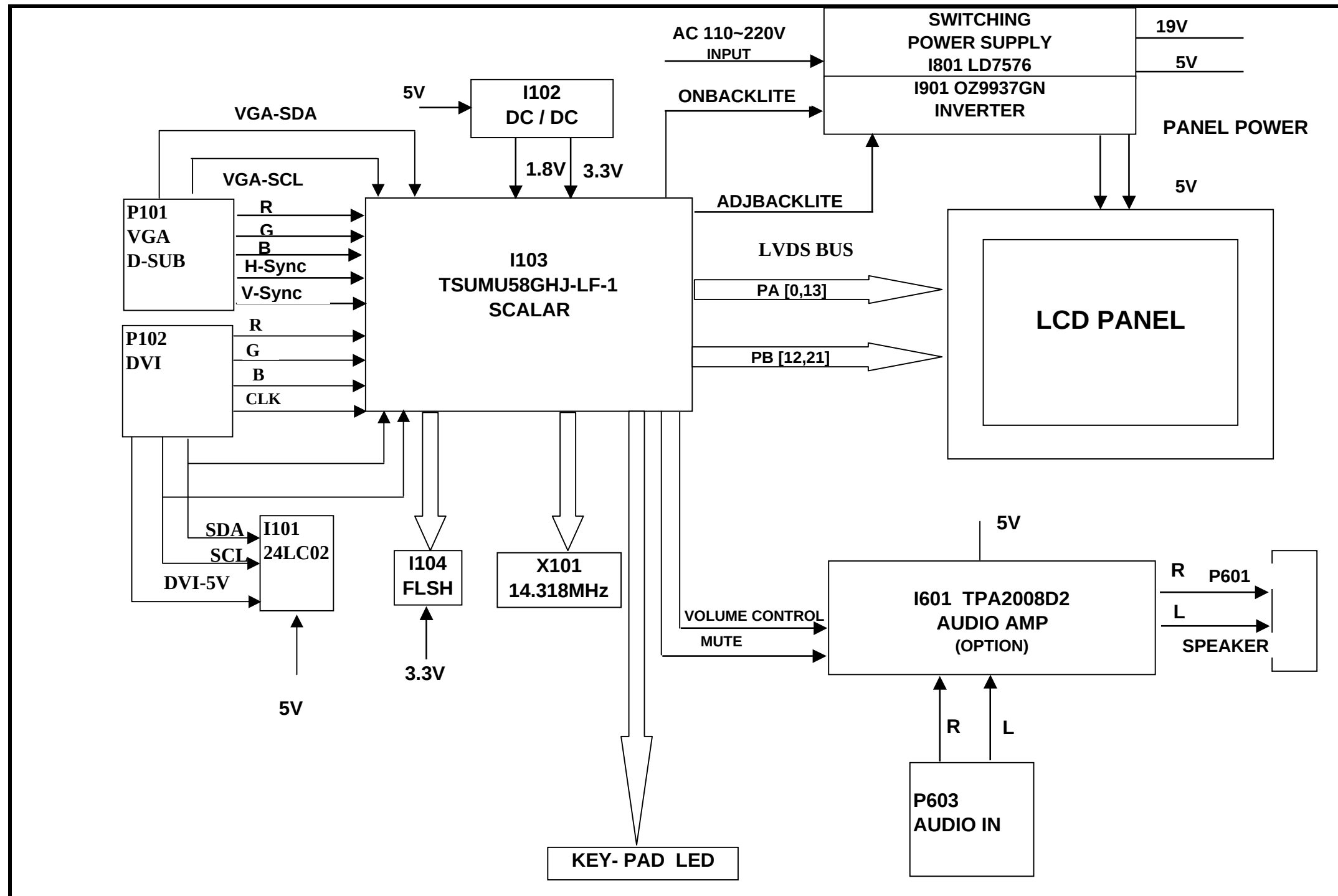


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4.2. EXPLODED VIEW PARTS LIST

Ref. No.	Source	Part No.	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
1F01		2024286511P	FRONT BEZEL	JT240DP IYAMA PLE2407HDS ABS HB G.L BLK	1	
1F02		2053758601P	LED INDIC.-PWR	JT229DP-1 PMMA	1	
1F03		2044273801P	FUNCTION KEY	JT229DP-1 ABS HB BLACK	1	
1F04		2054155101P	ORNAMENT	JT236D FRONT PLATE PC (METAL BLACK HAIR-LINE/MCM-A02)	1	
1F20		2071996908P	METAL FITTG	JT236HP SECC T=0.6mm (V Chassis)	1	
1F21		2080003700P	SCREW SPE	ISZZTER001A M3*6L MSWR17/FZMYI	2	
1F22		2080003700P	SCREW SPE	ISZZTER001A M3*6L MSWR17/FZMYI	5	
1F23		2080011100P	SCREW SPE	M3*8 MSWR17/FZMY1 BLACK	4	
1F24		2080003700P	SCREW SPE	ISZZTER001A M3*6L MSWR17/FZMYI	1	
1F30		2080004000P	SCREW SPE	STAND-OFF HEX #4-40UNC H5*5*7L	2	
1F41		2084730062P	SCREW BND T+	M3X6(BND T+)	2	
1F50		2071896300P	BRACKET FIX	JT236H HINGE BRACKET FIX SECC T=0.6MM	2	
1F51		2084730082P	SCREW BND T+	M3X8(BND T+)	2	
2C01		2022286601P	CABI BACK	JT236HP ABS HB BLKC (V Chassis)	1	
2C02		2082630064P	SCREW	M3*6 P=0.5 BLACK	2	
5B01	RA	2106663810P	HINGE	JT240HP HINGE Ang:0°~25° (TL) single hinge torque:	1	
5B01	RB	2106663811P	HINGE	JT240HP HINGE Ang:0° ~ 25° (HY) single hinge torque:	1	
5B01	RC	2106663812P	HINGE	JT240HP Ang:0°~25°(KN) Single Hinge torque:	1	
5B01	RD	2106663813P	HINGE	JT240HP Hinge Ang:0°~25° (GK) single hinge torque:	1	
5B02		2028560801P	NECK	JT236H J-ARM ABS HB BLACK MT11020	1	
5B03		2084740082P	SCREW BND T+	M4X8(BND T+)	4	
5B10		2028267001P	STAND	JT229QP M-STAND ABS HB G.L/BLACK MT11010	1	
5B11		2039820800P	FOOT PAD	φ 20*3.0T SQUARE GRAIN BLK	4	

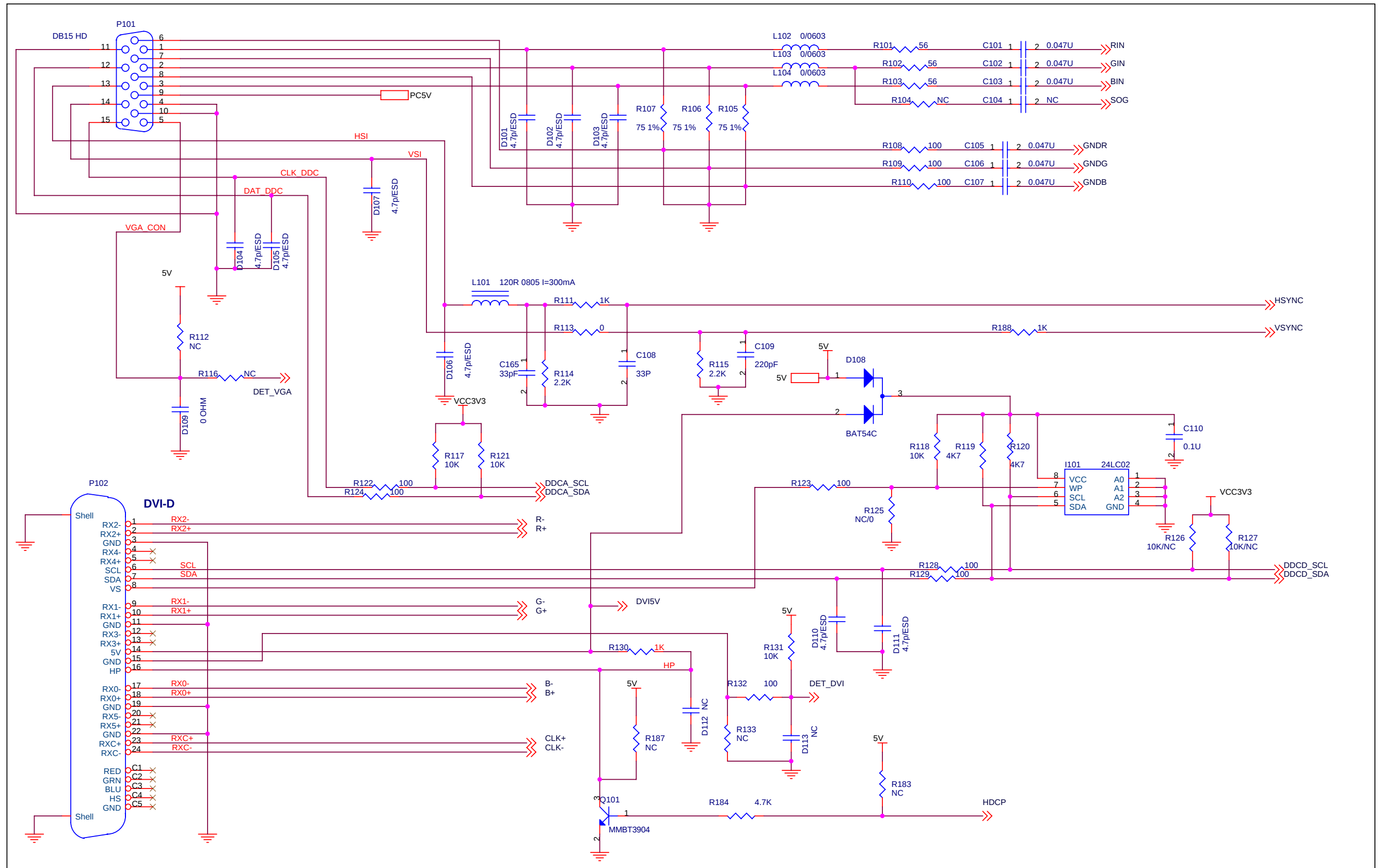
5. BLOCK DIAGRAM



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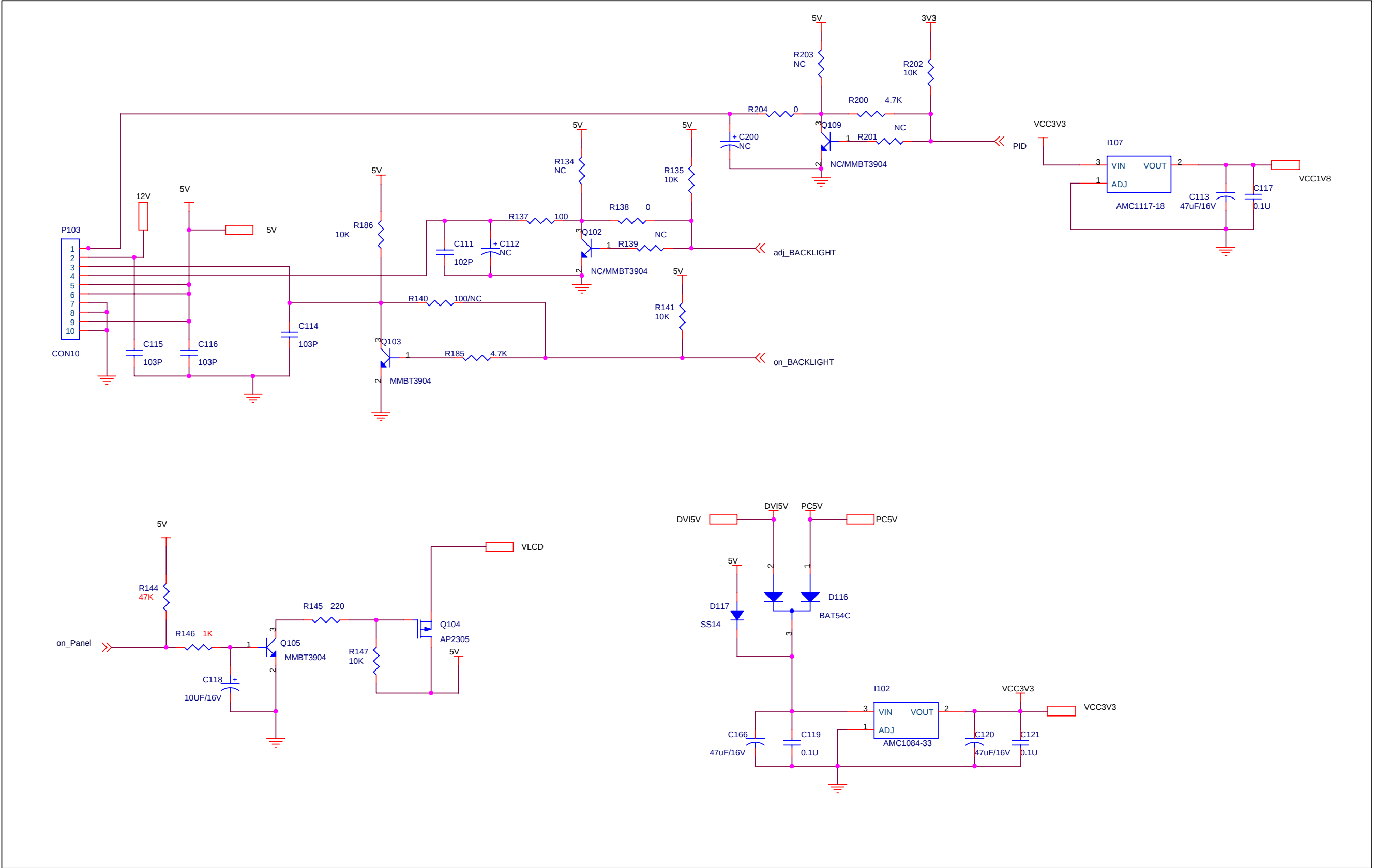
6. SCHEMATIC DIAGRAM

6.1. INPUT



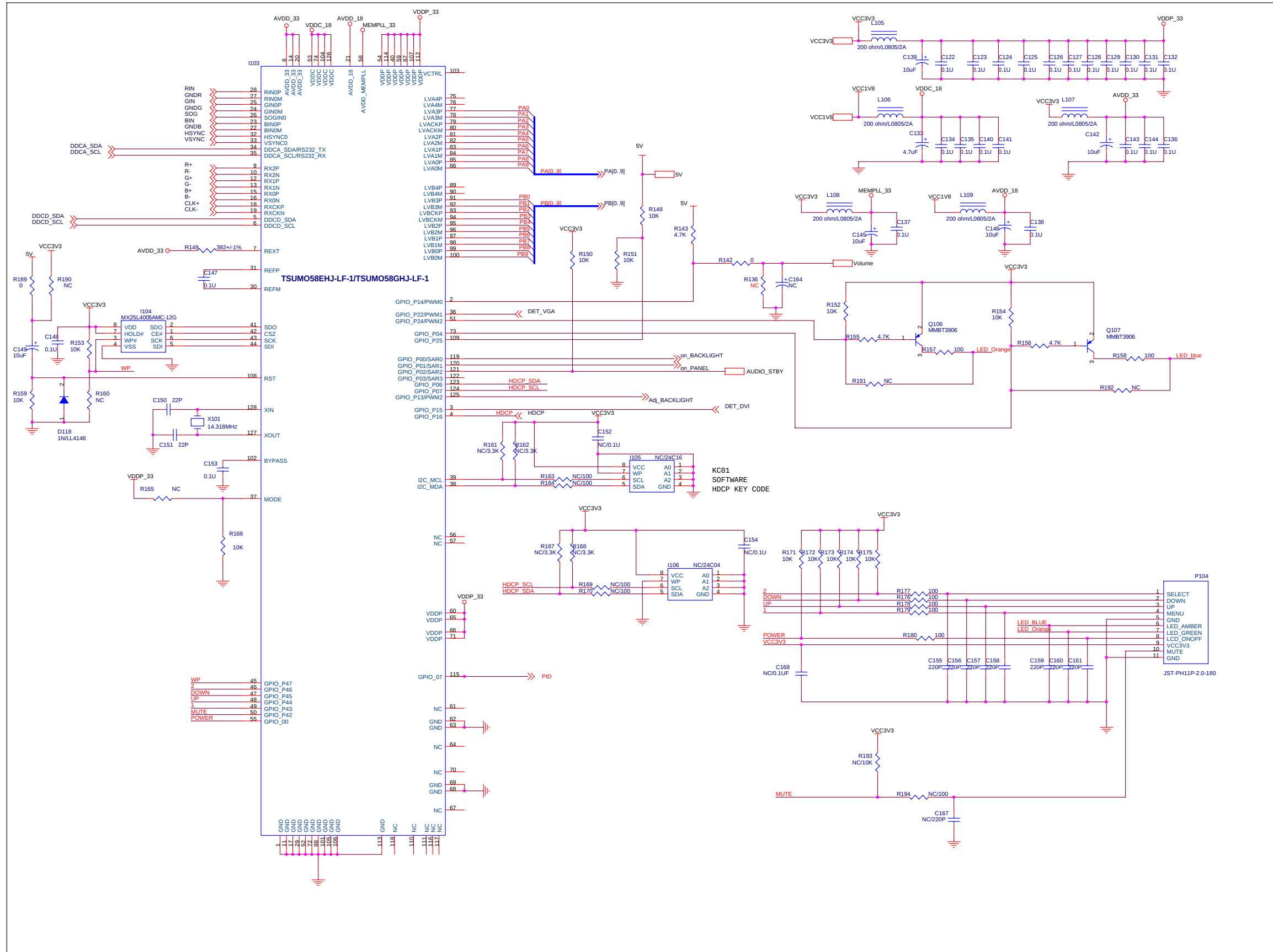
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6.2. DC TO DC

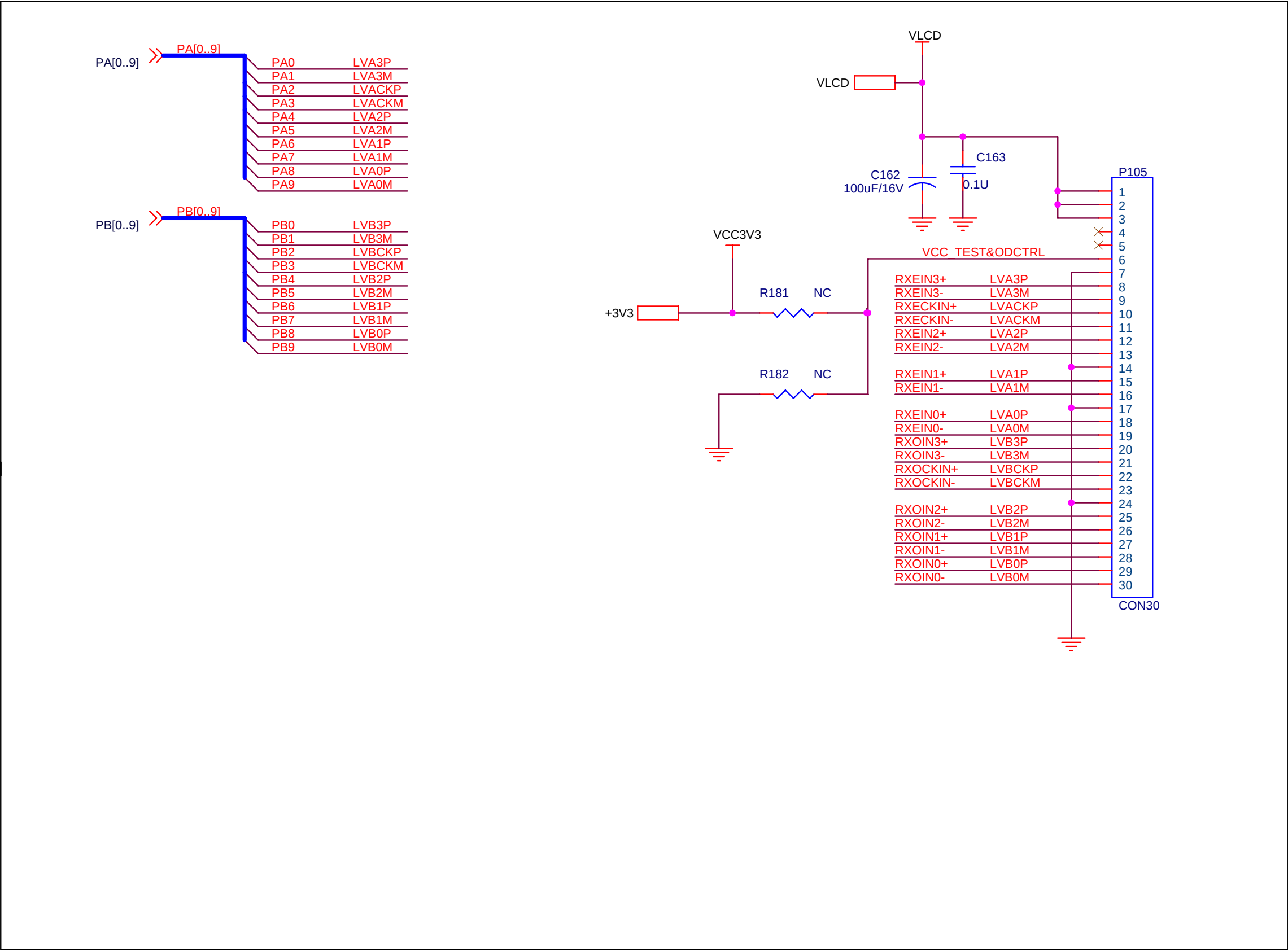


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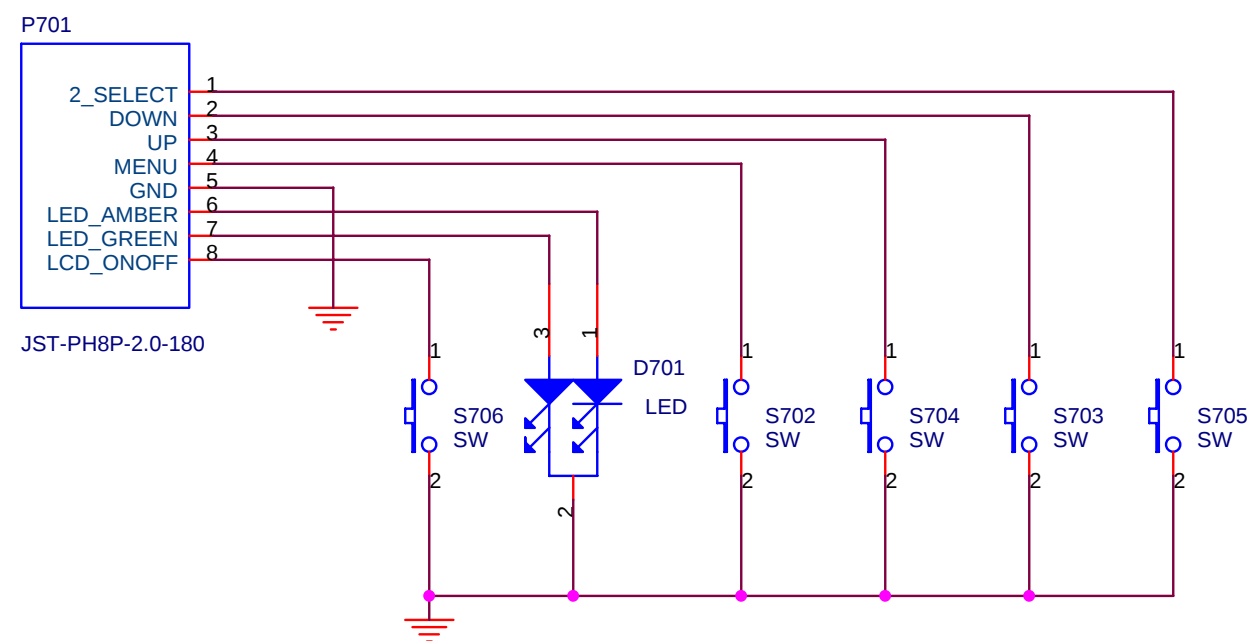
6.3. Scaler



6.4. PANEL INTERFACE

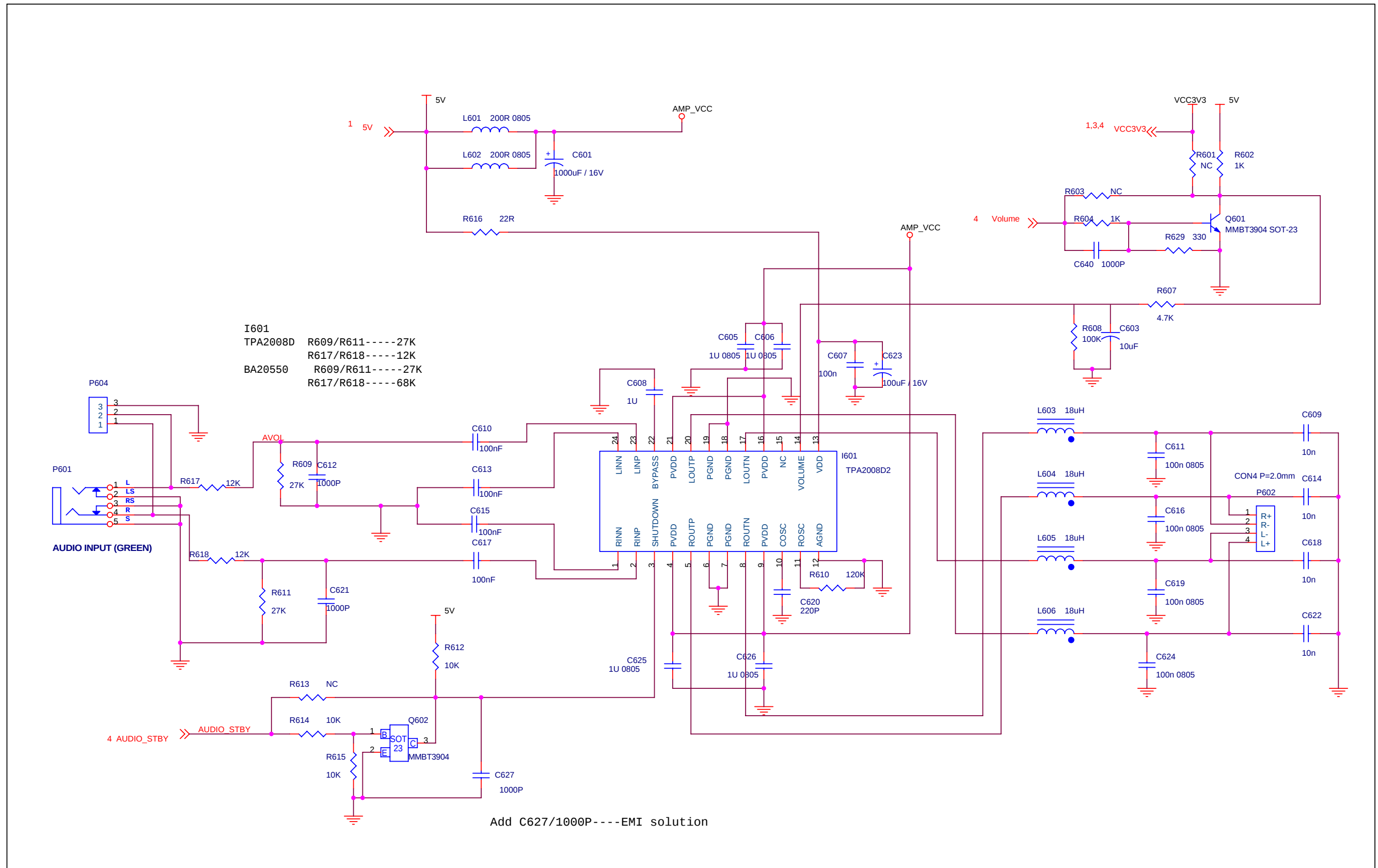


6.5. Key pad



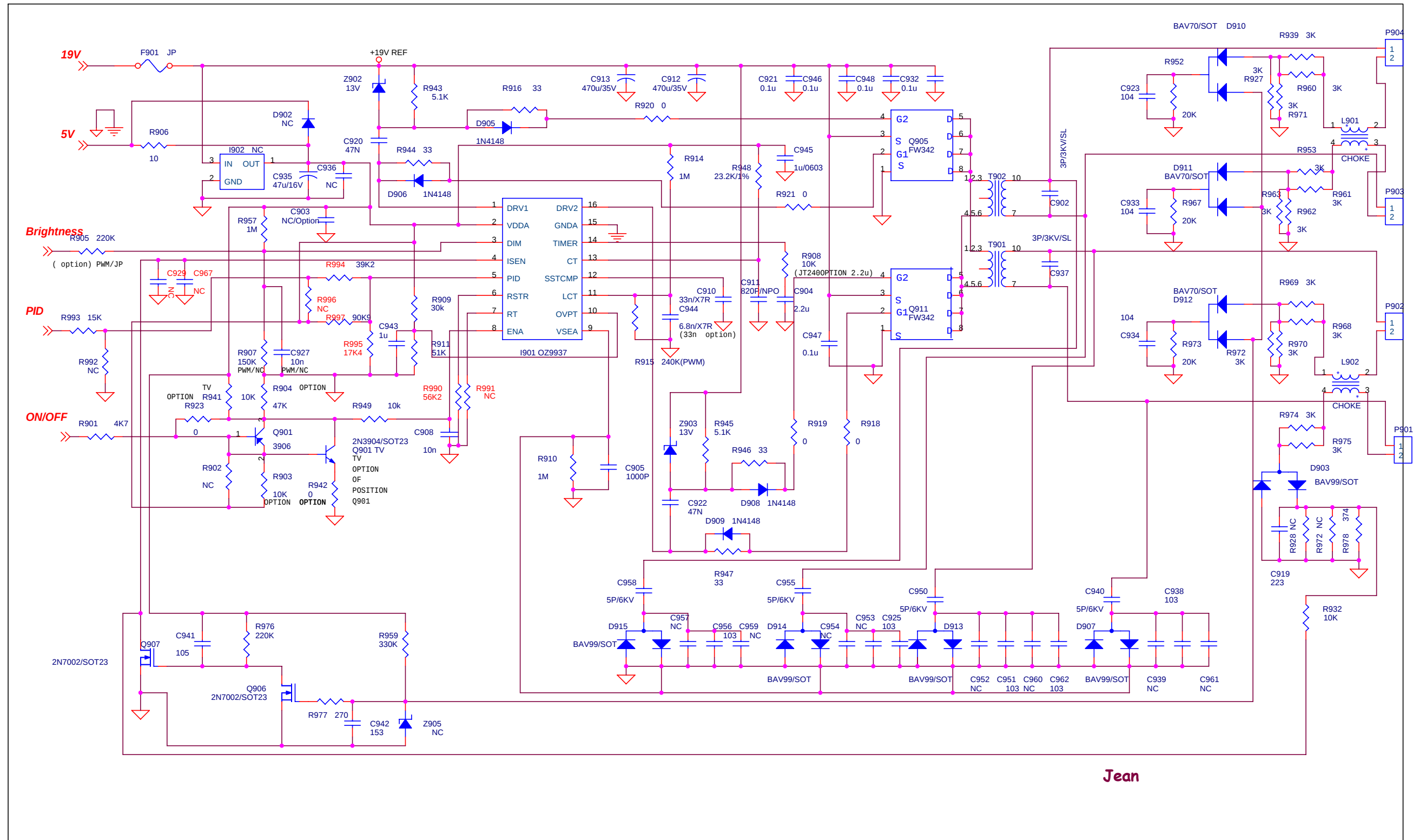
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6.6. Audio Amplifier



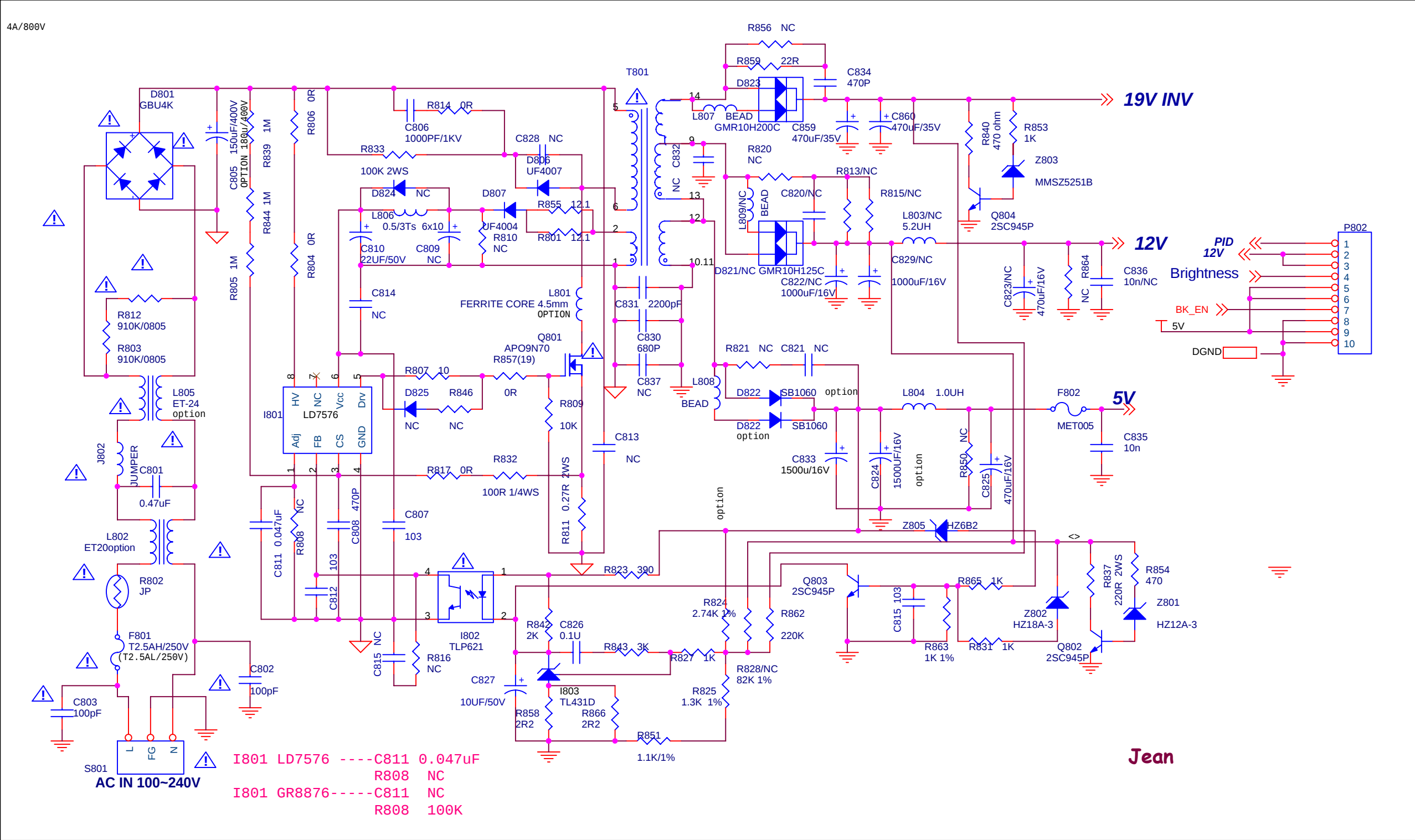
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6.7. INVERT



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6.8. POWER



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7. WORKING THEOREM

A. DC-DC CONVERTER

This AC-DC convert is the 100-240AC input voltage to 19V AND 5V output for invert use and panel use and system controller use .

B. Scaling controller

The scaling IC is to converts the input signal ranging from VGA to SXGA into Full HD resolution that panel can acknowledge.

GENERAL DESCRIPTION

The TSUMU58EHJ-1 is total solution graphics processing IC for LCD monitors with panel resolutions up to WUXGA.It is configured with a high-speed integrated triple-ADC/PLL, an integrated DVI receiver, a high quality display processing engine, an RTE engine for response-time enhancement, an integrated micro-controller and output display interface that can support LVDS panel interface format.To further reduce system costs, the TSUMU58GHJ also integrates intelligent power management control capability for green-mode requirements and spread-spectrum support for EMI management.

The TSUMU58EHJ-1 incorporates the world's first coherent oversampled RGB graphics ADC in a monitor controller 1 system.The oversampling ADC samples the input RGB signals at a frequency that is much higher than the signal source pixel rate.This can preserve details in the video signal that ordinarily would be lost due to input signal jitter or bandwidth limitations in non-oversampled systems. 2 The TSUMU58GHJ-1 also incorporates a new Dynamic Frame Rate (DFR) generator for the digital output video to the display panel that preserves the advantages of a fixed output clock rate, while eliminating the output end of frame short-line.

PIN DESCRIPTION

Analog Interface

Pin Name	Pin Type	Function	Pin
HSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog HSYNC input	32
VSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog VSYNC input	33
REFP		Internal ADC top de-coupling pin	31
REFM		Internal ADC bottom de-coupling pin	30
RIN0P	Analog Input	Analog red input	28
RIN0M	Analog Input	Reference ground for analog red input	27
SOGIN0	Analog Input	Sync-on-green input	26
GIN0P	Analog Input	Analog green input	25
GIN0M	Analog Input	Reference ground for analog green input	24
BIN0P	Analog Input	Analog blue input	23
BIN0M	Analog Input	Reference ground for analog blue input	22
REXT		External resistor 390 ohm to AVDD_33	7

DVI Interface

Pin Name	Pin Type	Function	Pin
RX0N	DVI Input	DVI Data Channel 0 Negative Input	16
RX0P	DVI Input	DVI Data Channel 0 Positive Input	15
RX1N	DVI Input	DVI Data Channel 1 Negative Input	13
RX1P	DVI Input	DVI Data Channel 1 Positive Input	12
RX2N	DVI Input	DVI Data Channel 2 Negative Input	10
RX2P	DVI Input	DVI Data Channel 2 Positive Input	9

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RXCKN	DVI Input	DVI Clock Channel Negative Input	19
RXCKP	DVI Input	DVI Clock Channel Positive Input	18

Serial Flash Interface

Pin Name	Pin Type	Function	Pin
SDO	Input w/ 5V-Tolerant	SPI Flash Serial Data Output	41
CSZ	Output	SPI Flash Chip Select	42
SCK	Output	SPI Flash Serial Clock	43
SDI	Output	SPI Flash Serial Data Input	44

LVDS Interface

Pin Name	Pin Type	Function	Pin
LVA0M	Output	LVDS A-Link Channel 0 Negative Data Output	86
LVA0P	Output	LVDS A-Link Channel 0 Positive Data Output	85
LVA1M	Output	LVDS A-Link Channel 1 Negative Data Output	84
LVA1P	Output	LVDS A-Link Channel 1 Positive Data Output	83
LVA2M	Output	LVDS A-Link Channel 2 Negative Data Output	82
LVA2P	Output	LVDS A-Link Channel 2 Positive Data Output	81
LVA3M	Output	LVDS A-Link Channel 3 Negative Data Output	78
LVA3P	Output	LVDS A-Link Channel 3 Positive Data Output	77
LVACKM	Output	LVDS A-Link Negative Clock Output	80
LVACKP	Output	LVDS A-Link Positive Clock Output	79
LVB0M	Output	LVDS B-Link Channel 0 Negative Data Output	100
LVB0P	Output	LVDS B-Link Channel 0 Positive Data Output	99
LVB1M	Output	LVDS B-Link Channel 1 Negative Data Output	98
LVB1P	Output	LVDS B-Link Channel 1 Positive Data Output	97
LVB2M	Output	LVDS B-Link Channel 2 Negative Data Output	96
LVB2P	Output	LVDS B-Link Channel 2 Positive Data Output	95
LVB3M	Output	LVDS B-Link Channel 3 Negative Data Output	92
LVB3P	Output	LVDS B-Link Channel 3 Positive Data Output	91
LVBCKM	Output	LVDS B-Link Negative Clock Output	94
LVBCKP	Output	LVDS B-Link Positive Clock Output	93

GPIO Interface

Pin Name	Pin Type	Function	Pin
GPIO_P14/ PWM0	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ Pulse Width Modulation Output; 4mA driving strength	2
GPIO_P15	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	3
GPIO_P16	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	4
GPIO_P22/ PWM1	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ Pulse Width Modulation Output; 4mA driving strength	36
GPIO_P47- GPIO_P43	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	45-49
GPIO_P42	Input/Output	General Purpose Input/Output; 4mA driving	50

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GPIO_P24/ PWM2	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/Pulse Width Modulation Output; 4mA driving strength	51
GPIO_00- GPIO_02	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	55-57
GPIO_11	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	60
GPIO_12	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	61
GPIO_13- GPIO_16	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	64-67
GPIO_06	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	70
GPIO_P04/ PWM3	I/O w/ 5V-tolerant	General Purpose Input/Output/Pulse Width Modulation Output; 4mA driving strength	73
GPIO_P42	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	75
GPIO_P43	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	76
GPIO_P25/ PWM3	I/O w/ 5V-tolerant	General Purpose Input/Output/ Pulse Width Modulation Output; 4mA driving strength	109
GPIO_P26/ PWM0	I/O w/ 5V-tolerant	General Purpose Input/Output/ Pulse Width Modulation Output; 4mA driving strength	110
GPIO_P27/ PWM1	I/O w/ 5V-tolerant	General Purpose Input/Output/ Pulse Width Modulation Output; 4mA driving strength	111
GPIO_07- GPIO_10	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving	115- 118
GPIO_P00/ SAR0	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	119
GPIO_P01/ SAR1	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	120
GPIO_P02/ SAR2	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	121
GPIO_P03/ SAR3	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	122
GPIO_P06	I/O w/ 5V-tolerant	General Purpose Input/Output; 6/12mA programmable driving strength	123
GPIO_P07	I/O w/ 5V-tolerant	General Purpose Input/Output; 6/12mA programmable driving strength	124
GPIO_P13/ WM2	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ Pulse Width Modulation Output; 4mA driving strength	125

Misc. Interface

Pin Name	Pin Type	Function	Pin
BYPASS		For External Bypass Capacitor	102
RST	Input w/ 5V-Tolerant	Chip Reset; High Reset	108
VCTRL	Output	Regulator Control	103
MODE	input	Chip Configuration Input; 10K ohm pull-low for normal operation	37
DDCD_SDA	I/O w/ 5V-tolerant	DDC Data and HDCP Slave Port Data for DVI interface; 4mA driving strength	5
DDCD_SCL	Input w/ 5V-Tolerant	DDC Clock and HDCP Slave Port Clock for DVI Interface	6

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DDCA_SDA/ RS232_TX	I/O w/ 5V-tolerant	DDC Data for Analog Interface; 4mA driving strength/UART Transmitter/GPIO	34
DDCA_SCL/ RS232_RX	Input w/ 5V-Tolerant	DDC Clock for Analog Interface/ UART Receiver/GPIO; 4mA driving strength	35
I2C_MDA/ GPIO_P11	I/O w/ 5V-tolerant	I2C Master Data/General Purpose Input/Output; 4mA driving strength	38
I2C_MCL/ GPIO_P10	I/O w/ 5V-tolerant	I2C Master Clock/General Purpose Input/Output; 4mA driving strength	39
XIN	Crystal Oscillator Input	Xin	128
XOUT	Crystal Oscillator Output	Xout	127

Power Pins

Pin Name	Pin Type	Function	Pin
AVDD_33	3.3V Power	Analog Power	8, 14, 20
AVDD_18	1.8V Power	Analog Power	21
VDDP	3.3V Power	Digital Output Power	40,58,59,71,87,107 ,114,112
VDDC	1.8V Power	Digital Core Power	53, 74, 104, 126
GND	Ground	Ground	1, 11, 17, 29, 52, 62, 63, 68, 69,72, 88,101,105,106, 113

No Connects

Pin Name	Pin Type	Function	Pin
NC		No Connect Leave These Pins Floating	54,89,90,

INVERTER

In order to drive the CCFLs embedded in the panel module, there is a half bridge inverter to convert by the controller.

The input 19V up to hundreds of AC voltage output.

The inverter is formed by symmetric in order to drive the separate lamp modules.

The input stage consists of a PWM controller, half bridge inverter, and switching MOSFET to convert DC input into AC output.

The output stage consists of a tuning capacitor, coupling capacitor, transformer, push-pull MOSFET pair to boost AC output up to hundreds of voltage.

And one resistor is serial to lamp for output voltage feedback.

There are two signal to control the inverter which come from system.

Logic "high" level which send to I901 is turn on the inverter.

BRI signal control brightness by DC level which was integral from PWM signal.

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AUDIO

General description

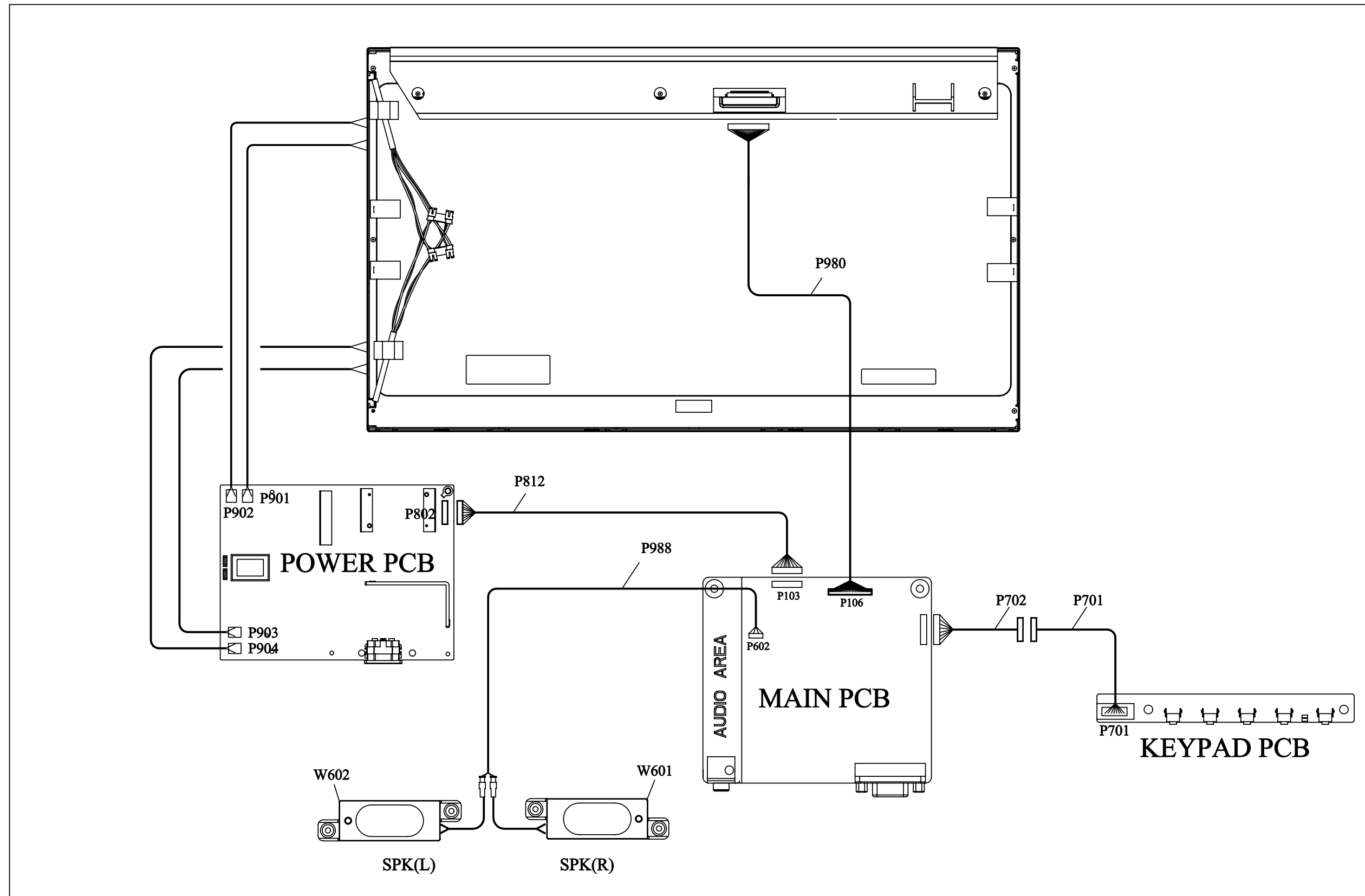
The TPA2008D2/BA20550 is a third generation 5-V class-D amplifier from Texas Instruments. Improvements to previous generation devices include: dc volume control, lower supply current, lower noise floor, higher efficiency, smaller packaging, and fewer external components. Most notably, a new filter-free class-D modulation technique allows the TPA2008D2/BA20550 to directly drive the speakers, without needing a low-pass output filter consisting of two inductors and three capacitors per channel. Eliminating this output filter saves approximately 30% in system cost and 75% in PCB area.

The improvements and functionality make this device ideal for LCD projectors, LCD monitors, powered speakers, and other applications that demand more battery life, reduced board space, and functionality that surpasses currently available class-D devices.

A chip-level shutdown control limits total supply current to 1 μ A, making the device ideal for battery-powered applications. Protection circuitry increases device reliability: thermal and short circuit.

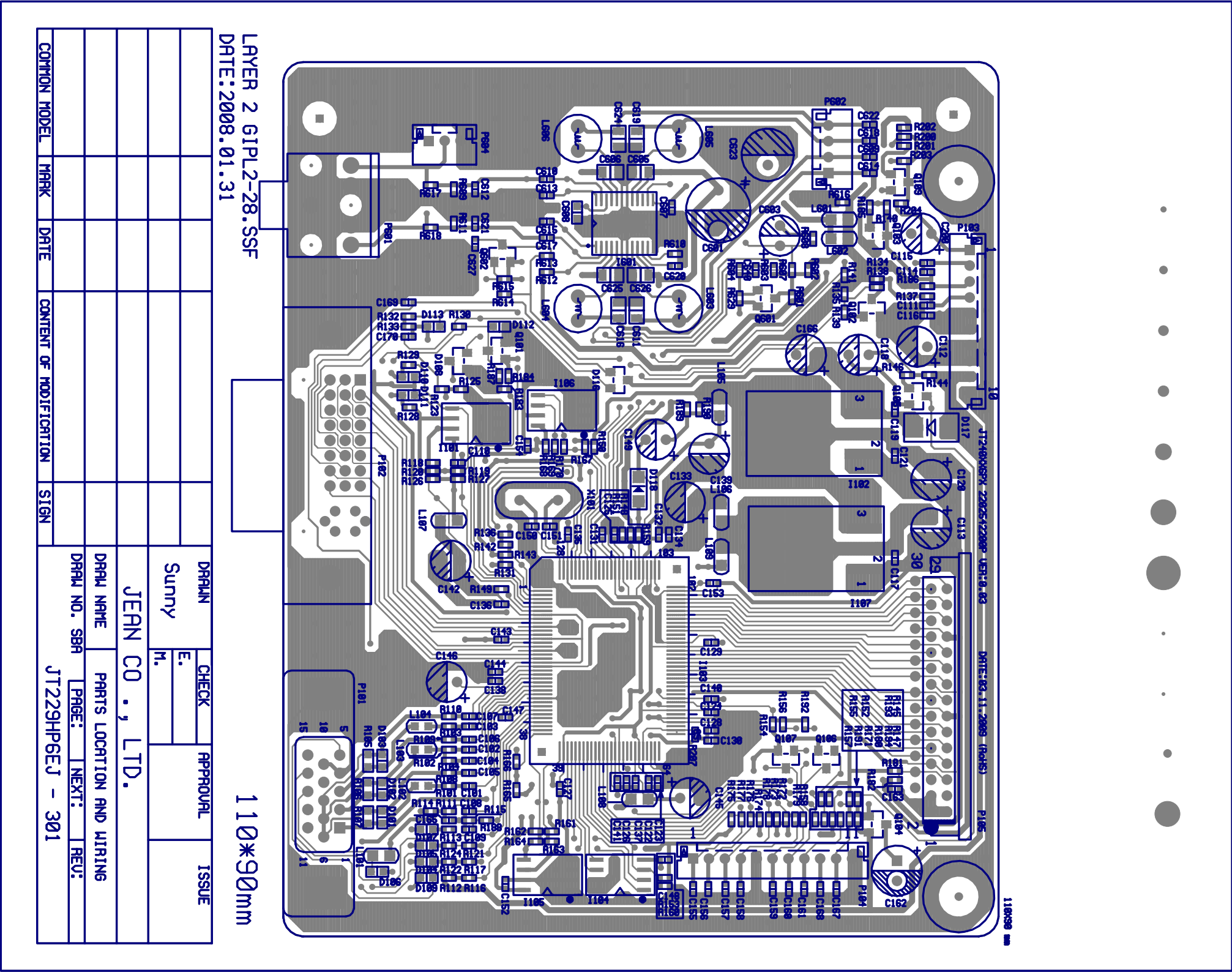
Undervoltage shutdown saves battery power for more essential devices when battery voltage drops to low levels. The TPA2008D2 is available in a 24-pin TSSOP PowerPAD(TM) package.

8. WIRING DIAGRAM



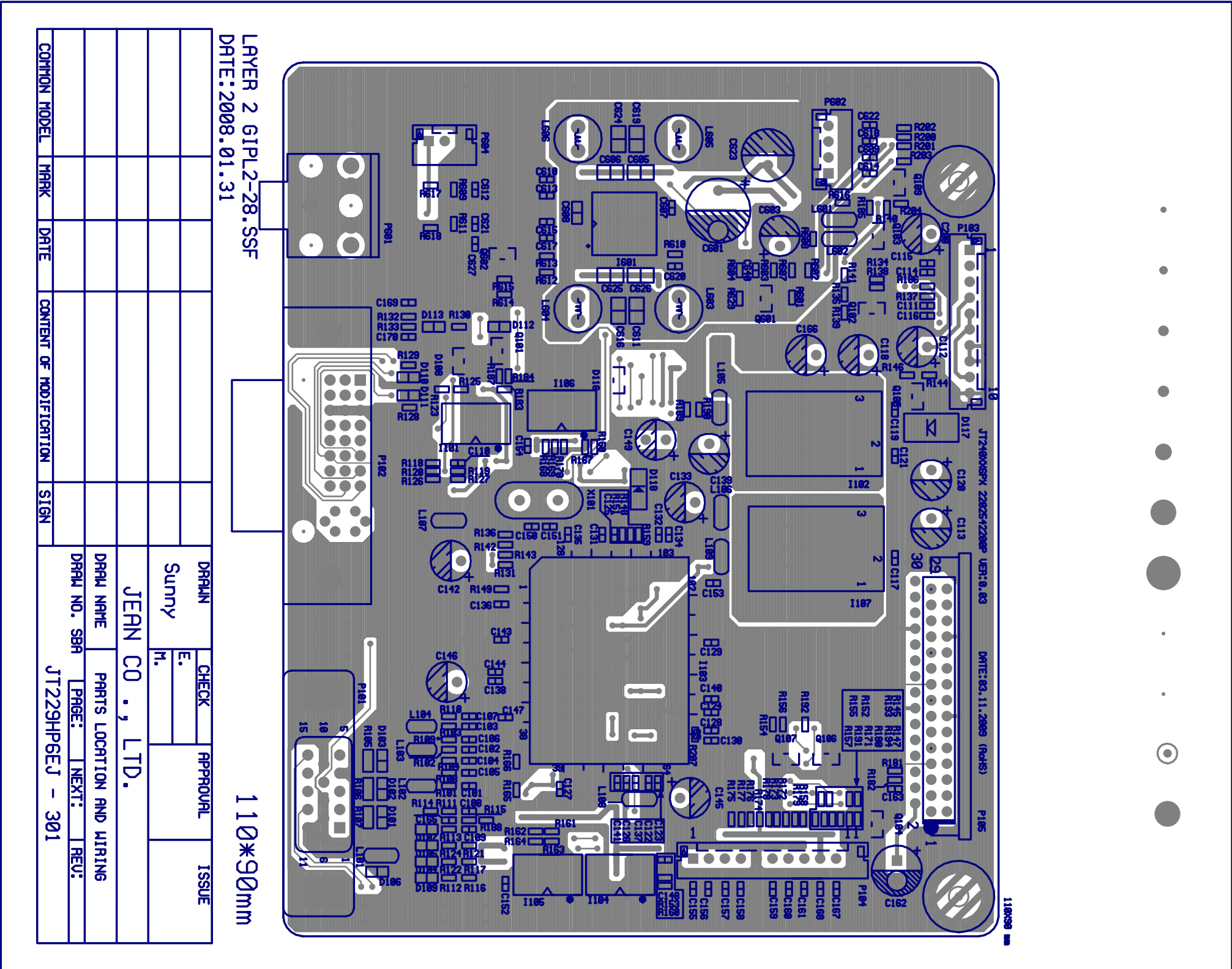
9. PCB LAYOUT

9.1. MAIN PCB TOP VIEW

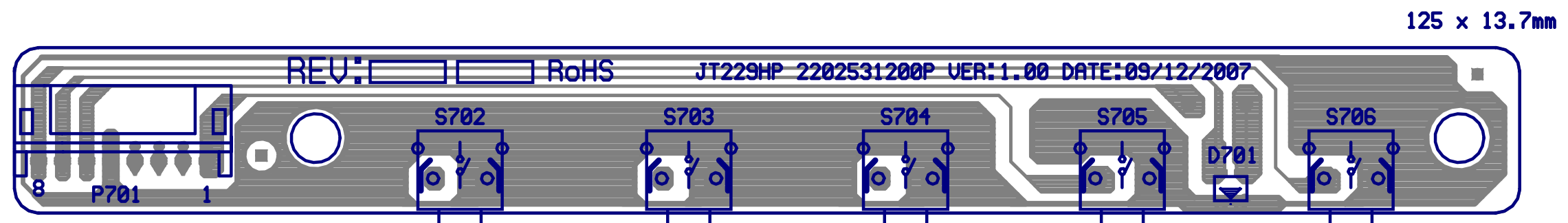


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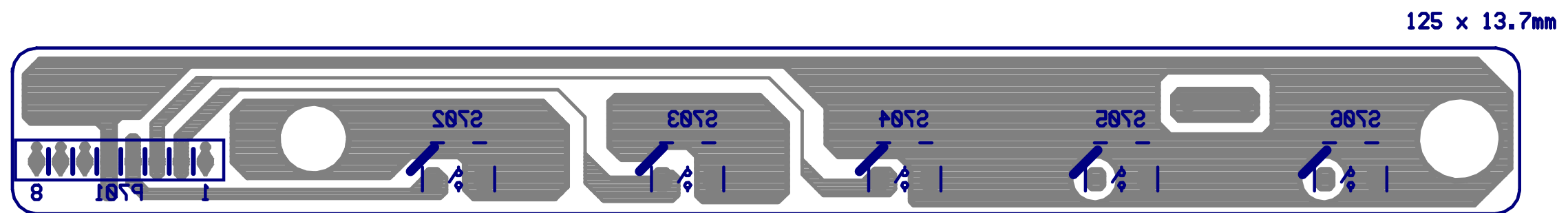
9.2. MAIN PCB BOTTOM VIEW



9.3. KEYPAD PCB TOP VIEW

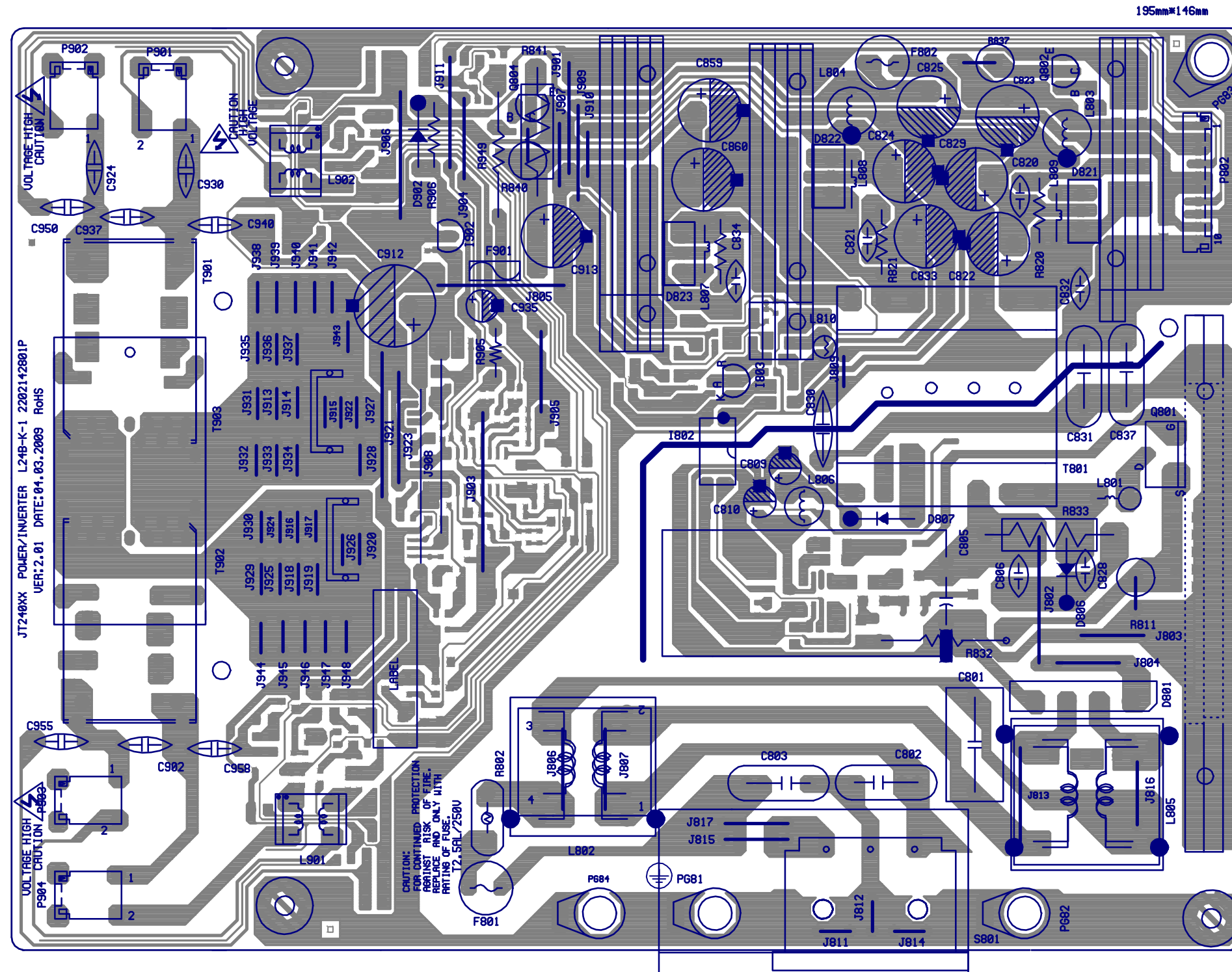


9.4. KEYPAD PCB BOTTOM VIEW



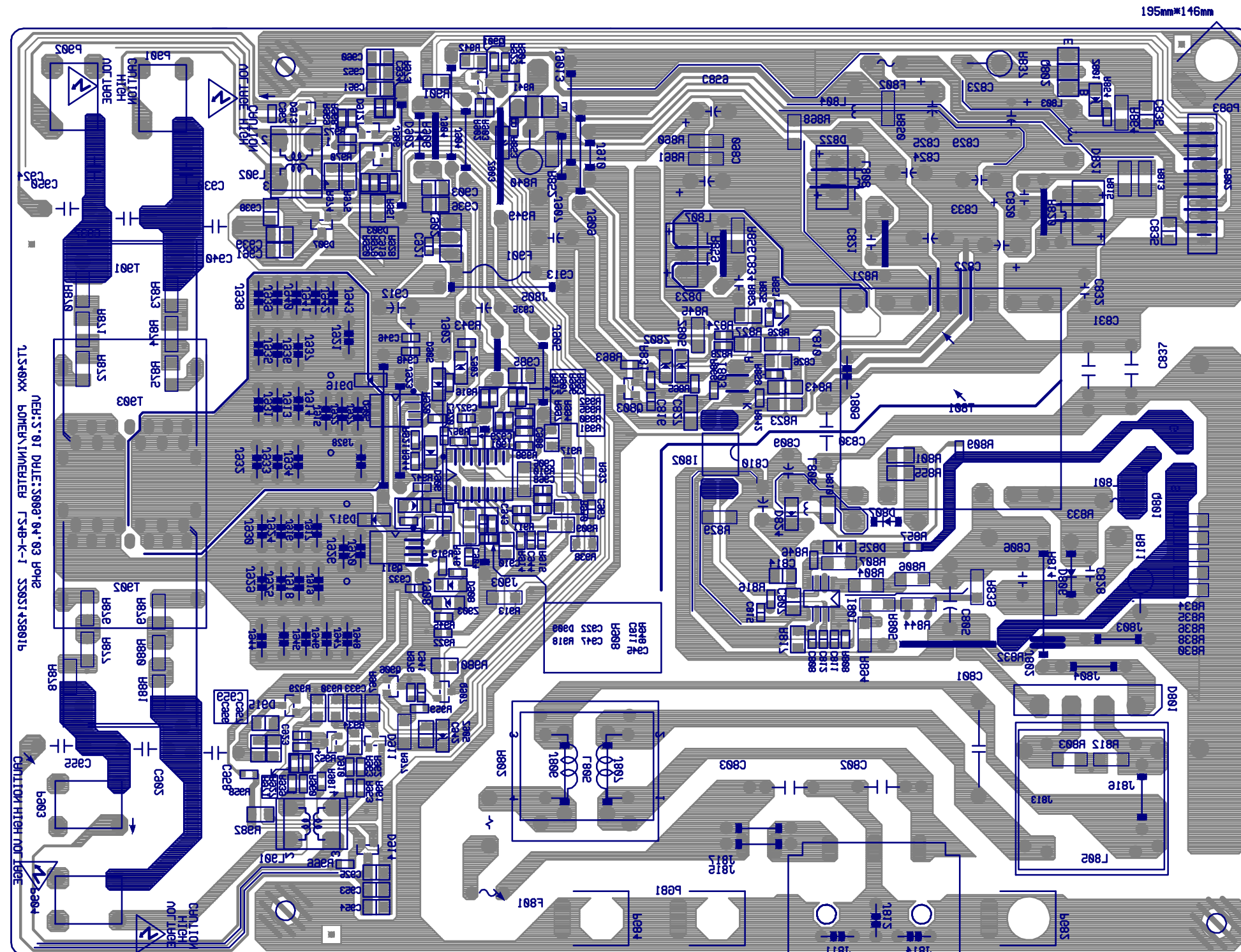
JT240DP6DM Service Manual

9.5. POWER PCB TOP VIEW



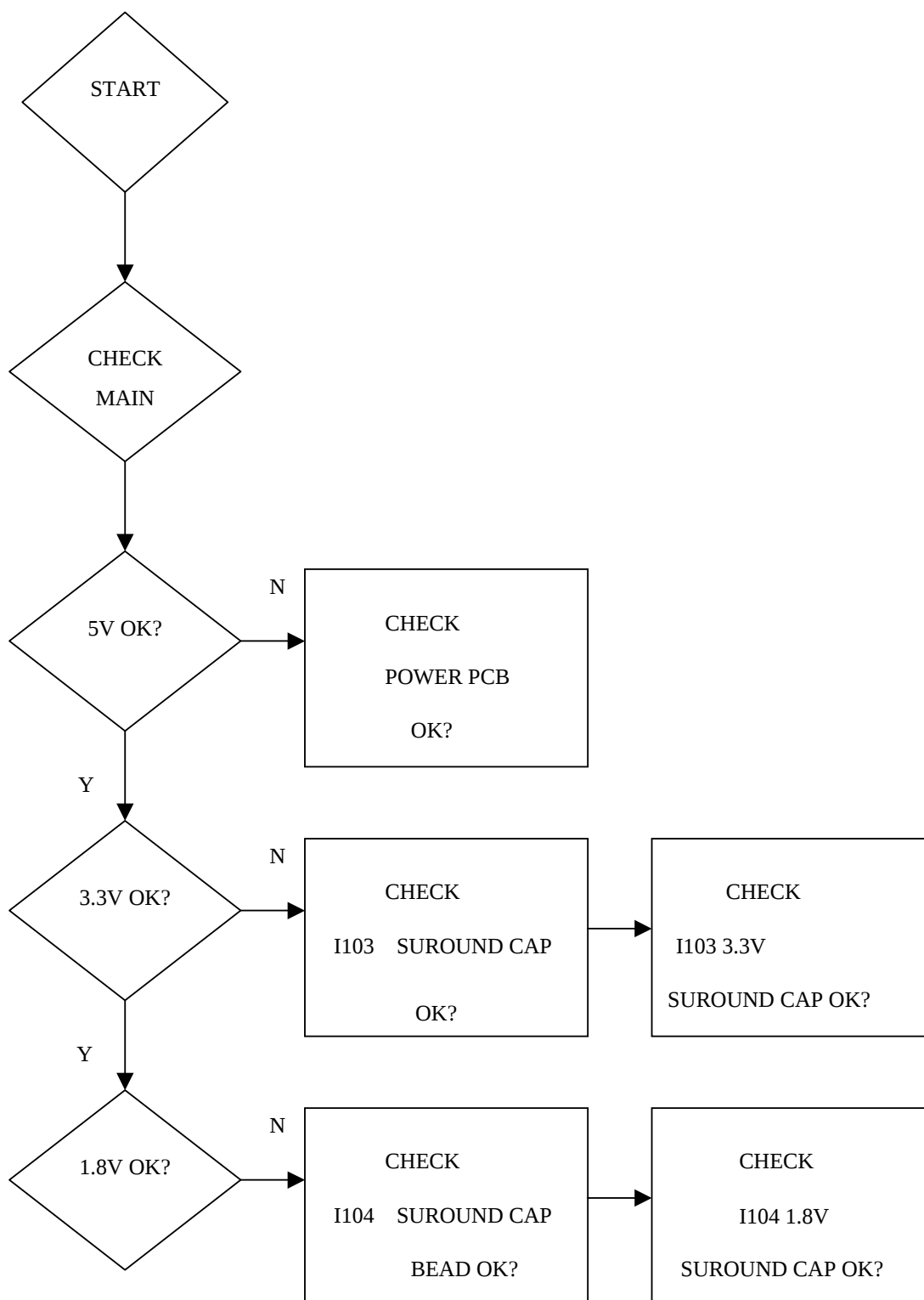
JT240DP6DM Service Manual

9.6. POWER PCB BOTTOM VIEW



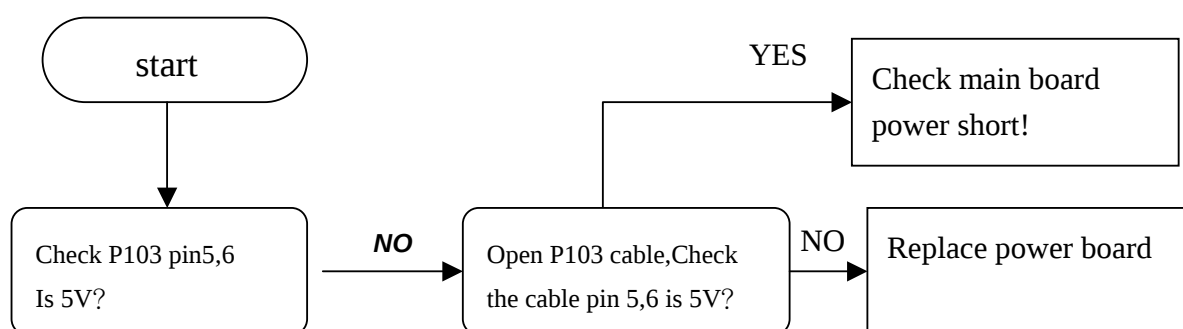
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10. TROUBLE SHOOTING FLOW CHART



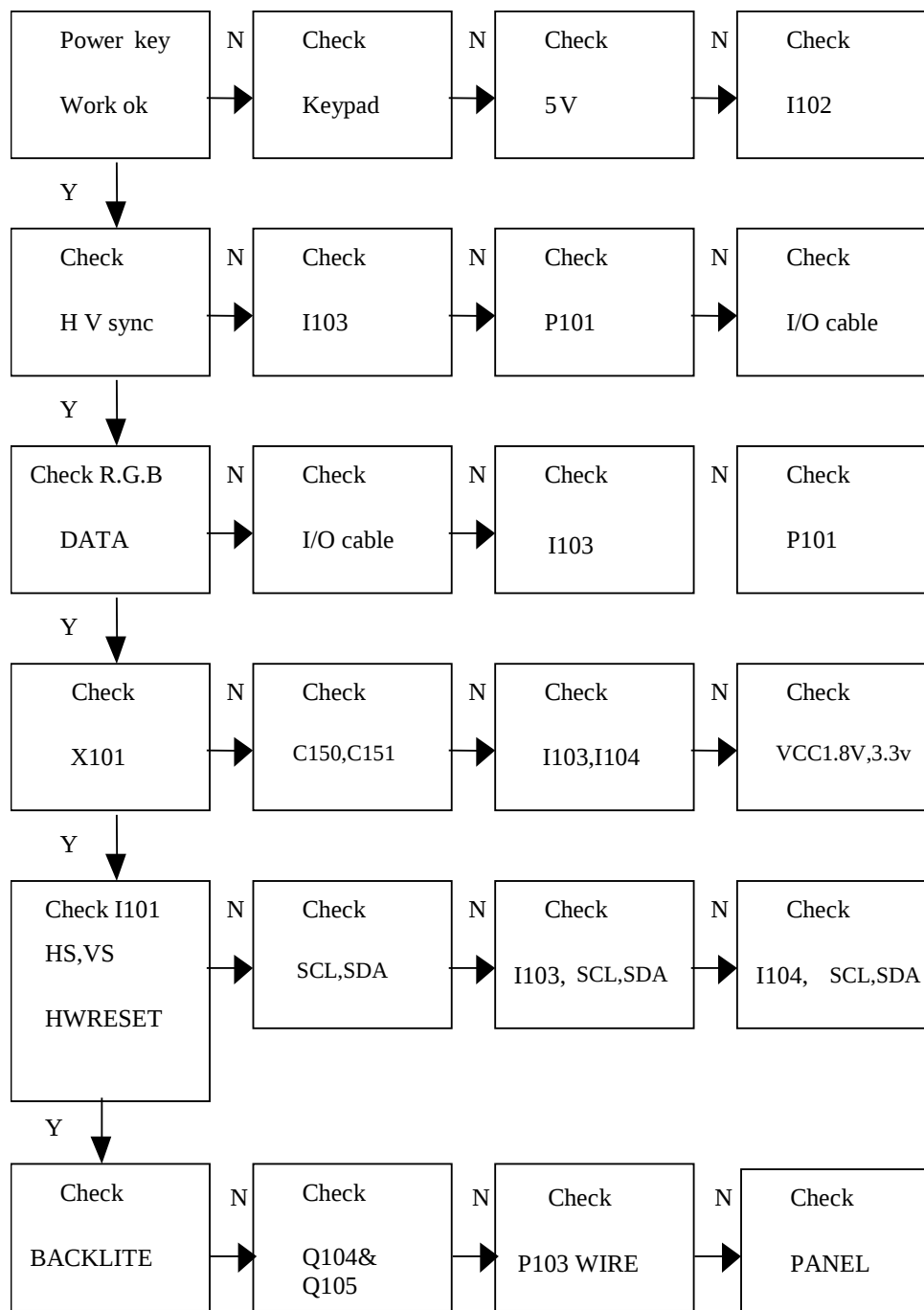
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10.1. NO POWER



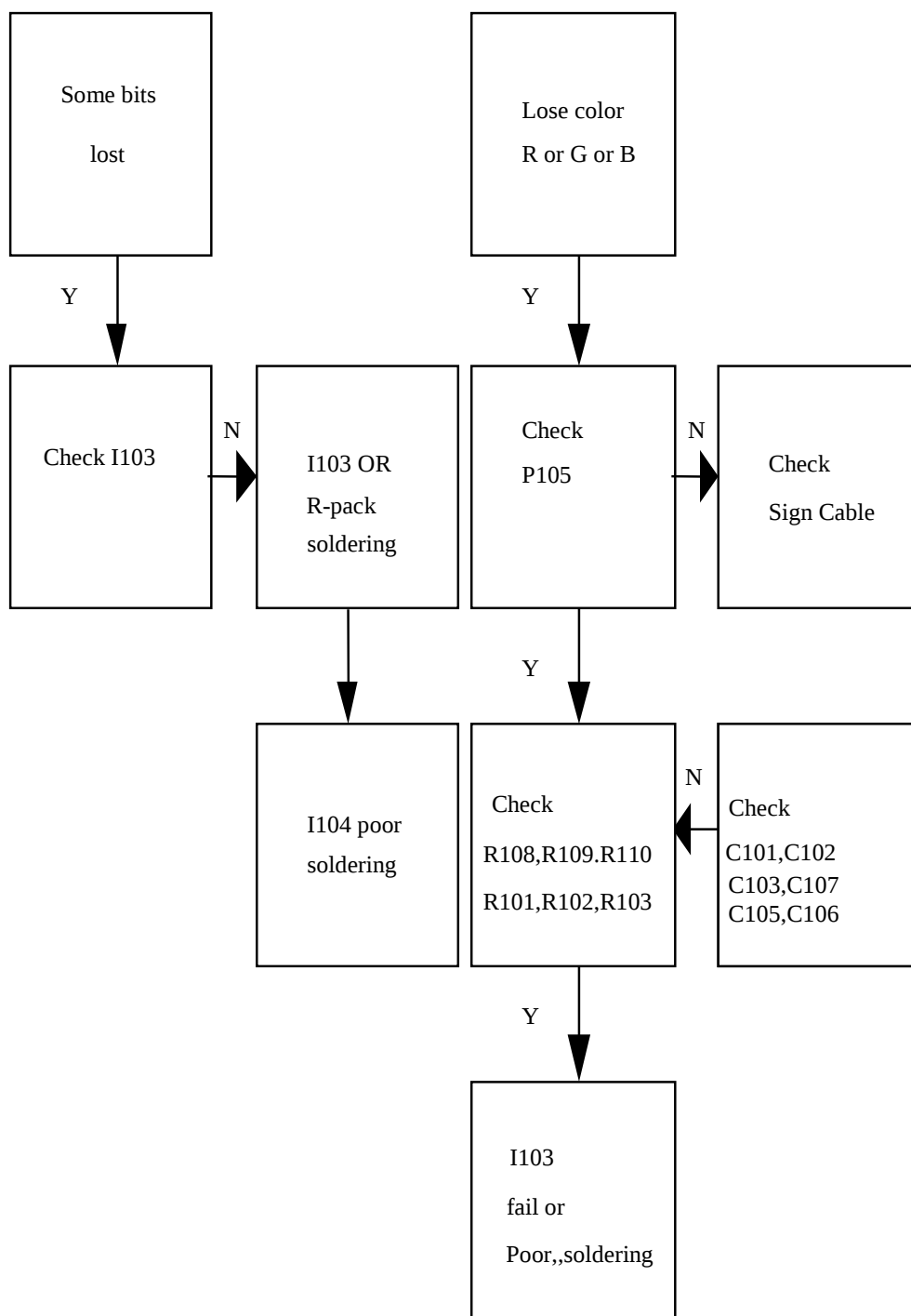
JT240DP6DM Service Manual

10.2. NO DISPLAY



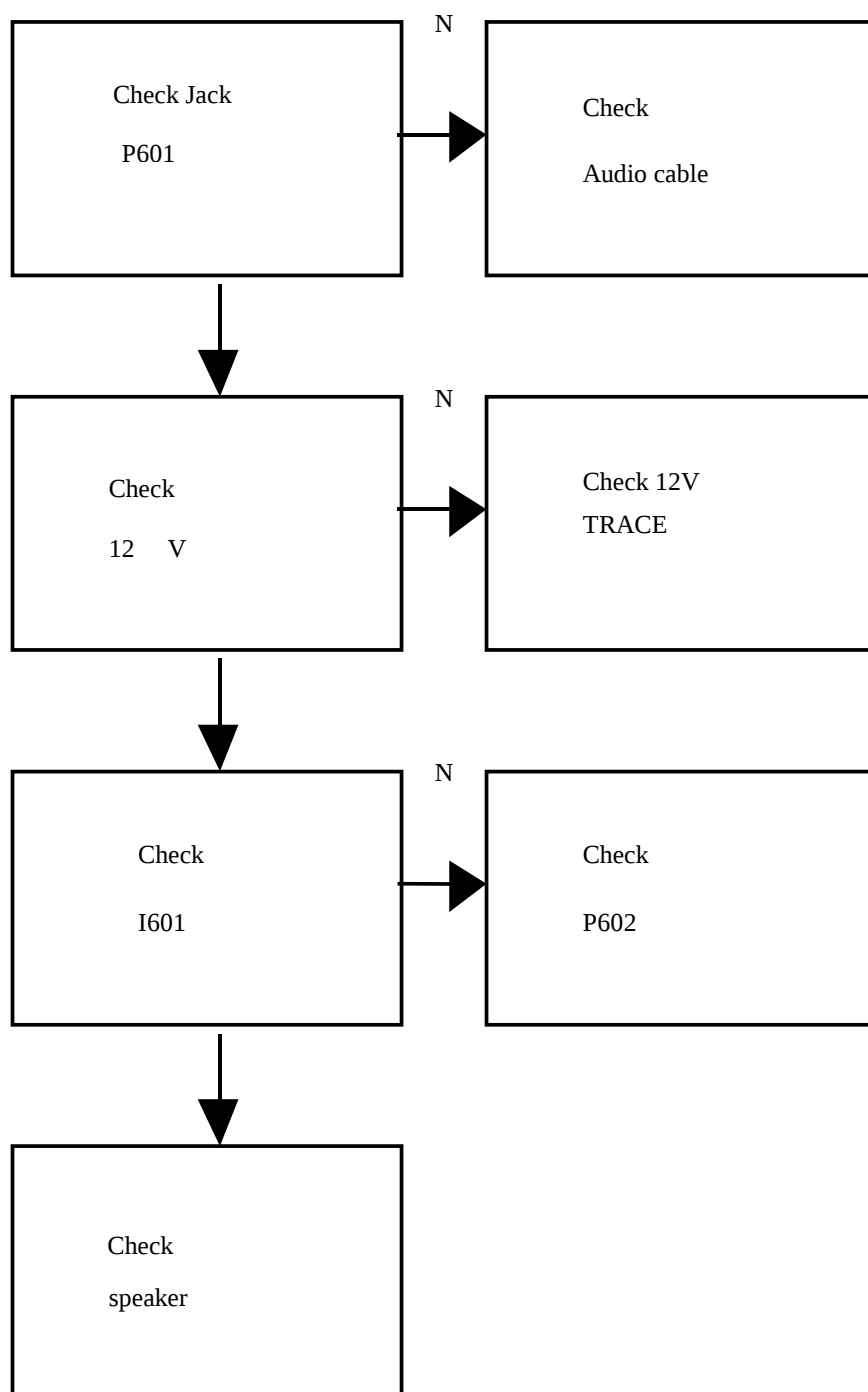
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10.3 LOSE COLOR



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10.4 NO AUDIO



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11. ADJUSTMENT

11.1. ADJUSTMENT CONDITIONS AND PRECAUTIONS

1. Approximately 30 minutes should be allowed for warm up before proceeding.
2. Adjustments should be undertaken only on those necessary elements since most of them have been carefully preset at the factory.
3. ESD protection is needed before adjustment.

11.2. MAIN ADJUSTMENTS

NO.	FUNCTION	DESIGNATION
1.	WHITE BALANCE	FUNCTION KEY
2.	GEOMETRY	FUNCTION KEY

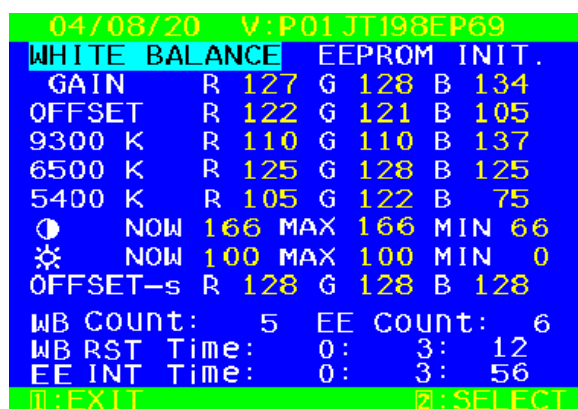
11.3 ALIGNMENT PROCEDURES

Adjustment Conditions and Precautions:

- (A). Power supply voltage:
AC 110/120V $\pm$ 10% 60 Hz $\pm$ 5%, AC 220/240V $\pm$ 10% 50 Hz $\pm$ 5%.
- (B). Warm up time:
The display must be power ON for at least 30 minutes at full white pattern before starting alignments.
This is especially critical in color temperature and white balance adjustments.
- (C). Signals: reference the front detail specifications and timing table.
Video : reference the front detail specifications.

1. Adjustment of White Balance:

- A. TIMING: 1920X1080 60Hz
- B. PATTERN: 5 BLOCKS.
- C. LCD MONITOR set to 1680x 1050 65.4K/60Hz BURN IN and warm up over 30 minutes.
- D. CA210 color analyzer at the center of screen and along a perpendicular to the screen at 20cm from the display.
- E. Power turn off, Press “**2**” and turn on power at the same time after power LED is on, release “**▲**” and “**2**” key, Then press “**1**” key go to factory mode. (Fig.1)



The screenshot shows a service menu with a blue background and yellow text. At the top, it displays '04/08/20 V:P01JT198EP69'. Below this, the 'WHITE BALANCE' menu is active, showing 'EEPROM INIT.' and various settings for GAIN, OFFSET, and temperature (9300K, 6500K, 5400K). It also shows current (NOW) and maximum (MAX) values for color temperature, minimum (MIN) values, and offset settings for R, G, and B channels. At the bottom, it shows 'WB COUNT: 5', 'EE COUNT: 6', 'WB RST Time: 0: 3: 12', and 'EE INT Time: 0: 3: 56'. Navigation keys are indicated at the bottom: '1:EXIT' and '2:SELECT'.

04/08/20 V:P01JT198EP69									
WHITE BALANCE EEPROM INIT.									
GAIN	R	127	G	128	B	134			
OFFSET	R	122	G	121	B	105			
9300 K	R	110	G	110	B	137			
6500 K	R	125	G	128	B	125			
5400 K	R	105	G	122	B	75			
●	NOW	166	MAX	166	MIN	66			
✱	NOW	100	MAX	100	MIN	0			
OFFSET-s	R	128	G	128	B	128			
WB COUNT:	5	EE COUNT:	6						
WB RST Time:	0:	3:	12						
EE INT Time:	0:	3:	56						
1:EXIT 2:SELECT									

(Fig.1)

(The data on this picture is a example only,the real one,please refer to your monitor.)

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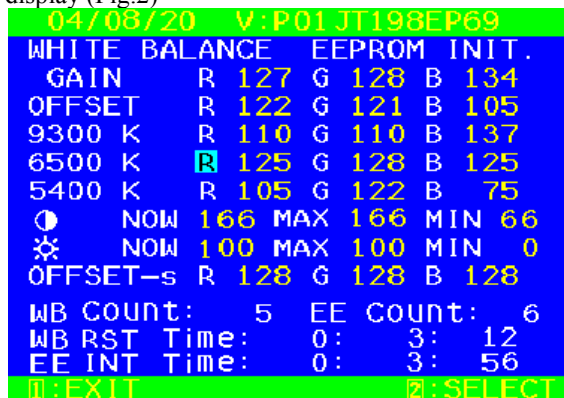
F. Adjust Color Temperature:

(1) EEPROM INIT(5BLOCKS):

Press “▼” key move cursor to EEPROM INIT, Press 2 key then monitor will INIT ADC value

(2) Press “▲” key move cursor to “White Balance”, Press 2 key do white balance adjustment.

(3) Press “▼” key move cursor to “Color Temperature Adjust”, Press 2 key, Then OSD will display (Fig.2)



(Fig.2)

(The data on this picture is a example only,the real one,please refer to your monitor.)

(4) 9300K/Cool verify: move cursor to Cool R or G or B Press 2 key,

Press “▼”, “▲” key adjust R.G.B value

$x=0.283 \pm 0.03$

$y=0.298 \pm 0.03$

Press 1 key return to Fig.2

(5) 6500K/Normal verify:

Repeat (4) press “▼”, “▲” move cursor to Normal R or G or B press 2 key

$x=0.313 \pm 0.03$

$y=0.329 \pm 0.03$

$Y \geq 220 \text{ cd/m}^2$

(6) 5400K/Warm verify:

Repeat (4) press “▼”, “▲” move cursor to Warm R or G or B press 2 key

$x=0.332 \pm 0.03$

$y=0.348 \pm 0.03$

(7) Press 1 key go back to Fig.2, Then press 1 key return to Fig.1, Power key OFF/ON quit factory mode.

G. Color Temperature & Luminance Verify:

(1) BRIGHTNESS default, CONTRAST default

9300K/Cool: $x=0.283 \pm 0.03$ $y=0.298 \pm 0.03$

6500K/Normal: $x=0.313 \pm 0.03$ $y=0.329 \pm 0.03$

5400K/Warm: $x=0.332 \pm 0.03$ $y=0.348 \pm 0.03$

(2) BRIGHTNESS MAX, CONTRAST MAX, Color Temperature 6500K/Normal $Y \geq 220 \text{ cd/m}^2$

2. Geometry:

(a). Set cross-hatch pattern and preset timing as timing table listed.

(b). Change to each mode in turn and wait for the monitor finish auto-alignment and save process before change to next mode.

(c). Until all of modes are agjusted, exit OSD menu and press PWR OFF to exit factory mode.