Service
Service
Service

Service Manual

Horizontal Frequency

24- 83 kHz

TABLE OF CONTENTS

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Version	Date	Revision History	TPV Model Name
A00	Mar.-16-2009	Initial release	T89MM5DBRWHPNNE
			T89MM5DBRWHPNCE
			T89SM5DBRWHPNNE
			T89SM5DBRWHPNCE
		Panel List in Item 5	M185B1-L02
			LTM185AT01 Q01 / Q02

1. Monitor Specification

Display	47 cm wide screen	18.5 inches wide screen
Type	TFT LCD	
Viewable Image Size	47 cm diagonal	18.5 inch diagonal
Tilt	-5 to 25°	
Maximum Weight (Unpacked)	3.8 kg	8.3 lbs.
Dimensions (include base)		
Height	34.1 cm	13.4 inches
Depth	19.0 cm	7.5 inches
Width	44.59 cm	17.55 inches
Maximum Graphic Resolution	1366 x 768 (60Hz) analog input	
Optimum Graphic Resolution	1366 x 768 (60Hz) analog input	
Text Mode	720 × 400	
Dot Pitch	0.2835 (H) × 0.2835 (W) mm	
Horizontal Frequency	24 to 83 kHz	
Vertical Refresh Rate	48 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	0 to 35° C	32 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	20 to 80%	
Power Source	100 – 240 VAC, 50/60 Hz	

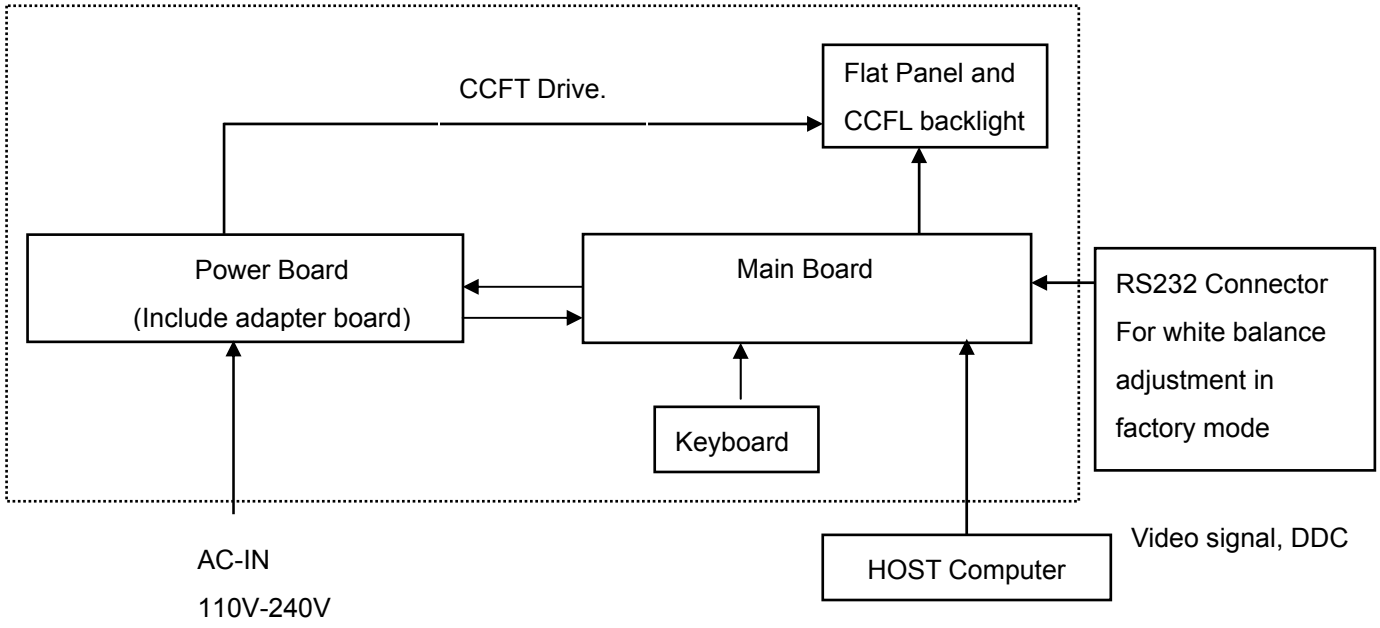
Altitude:		
Operating	0 to 3657.6 m	0 to 12,000 feet
Storage	0 to 12192 m	0 to 40,000 feet
Power Consumption (maximum)	27 watts	
Input Terminal	One VGA connector with cable included	

2. LCD Monitor Description

The LCD Monitor will contain main board, power board, a key board which house the flat panel control logic, brightness control logic and DDC.

The power board will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.

Monitor Block Diagram



3. Operation Instructions

3.1 General Instructions

The monitor settings can be adjusted from the On-Screen Display (OSD) menu. To access the OSD and adjust screen settings base on your viewing preference, do the following:

1. If the monitor is not already on, press the power button to turn on the monitor. The power indicator will light up.

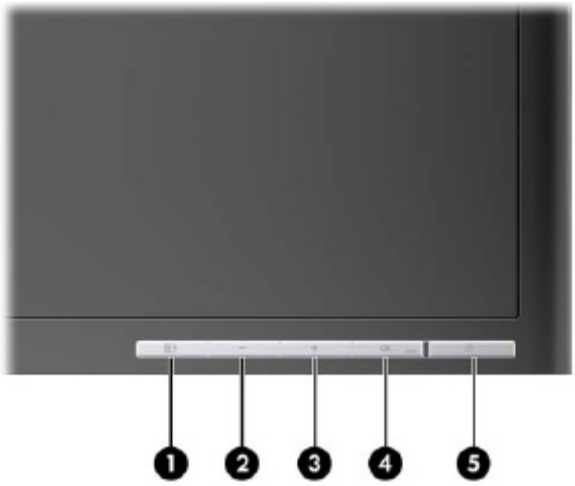
2. To access the OSD menu, press the **Menu** button.

3. To navigate through the Main Menu, press the **–** or **+** buttons. Once the desired function is highlighted, press the **Menu** button to activate the Submenu. Press the **Menu** button to select the highlighted function.

4. Press the **–** or **+** button to change the settings of the selected function. Press the **–** or **+** button to select another function in the Submenu.

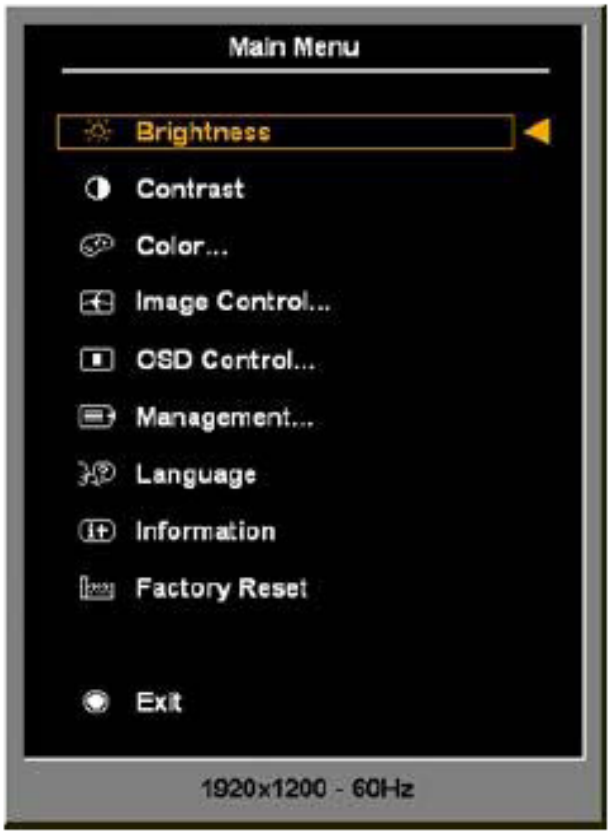
5. **Press** Auto/OK **to select the highlighted function.**

3.2 Control Button



Control			Function
1		Menu	Opens, selects or exits the OSD menu.
2	–	Minus	If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels.
3	+	Plus	If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels.
4	OK auto	OK/auto	If the OSD menu is on, press to select the highlighted menu item. If the OSD menu is inactive, press to activate the auto adjustment feature to optimize the screen image.
5		Power LED	Green = Fully powered. Amber = Sleep mode. Flashing Amber = Sleep Timer mode.
6		Power	Turns the monitor on or off.

3.3 Adjust the Picture



Icon	Main Menu	Submenu	Description
	Brightness	Adjustable scale	Adjusts the brightness level of the screen. The factory default range is 90.
	Contrast	Adjustable scale	Adjusts the contrast level of the screen. The factory default range is 80.
	Color		Selects the screen color. The factory default is 6500K or Custom Color, depending on the model.
		9300 K	Changes to slightly blueish white.
		6500 K	Changes to slightly reddish white.
		sRGB	Sets your screen colors to adapt to the color standards used in the image technology industry.
RGB		Custom Color	Selects and adjusts your own color scales: • R—sets your own red color levels • G—sets your own green color levels • B—sets your own blue color levels
	Image Control		Adjusts the screen image. (VGA input only)
		Auto Adjustment	Automatically adjusts the screen image.
		Clock	Minimizes any vertical bars or strips visible on the screen background. Adjusting the Clock will also change the horizontal screen image.
		Clock Phase	Adjusts the focus of the display. This adjustment allows you to remove any horizontal noise and clear or sharpen the image of characters.
		Horizontal Position	Adjusts the position of the screen image left and right.
		Vertical Position	Adjusts the position of the screen image up and down.
		Custom Scaling	Selects the method on how displayed information on the monitor will be formatted. Select: • Fill to Screen - image fills the entire screen and may look distorted or elongated because of non-proportional scaling of height and width • Fill to Aspect Ratio - image is sized to fit the screen and maintains proportional image

Icon	Main Menu	Submenu	Description
		Sharpness (non-native modes)	Adjusts the screen image to look sharper or soft.
	OSD Control		Provides a menu for adjusting the on-screen display (OSD) controls.
		Horizontal OSD Position	Changes the viewing position of the OSD menu to the left or right area of the screen. The factory default range is 50.
		Vertical OSD Position	Changes the viewing position of the OSD menu to the top or bottom area of the screen. The factory default range is 50.
		OSD Transparency	Adjust to view the background information through the OSD.
		OSD Timeout	Sets the time duration in seconds that the OSD is visible after the last button is pressed. The range is 5 – 60 seconds. The factory default is 30 seconds.
	Management		Selects the OSD and power management features of the monitor.
		Power Saver	Enables the power saving feature. Select: • On • Off The factory default is On.
		Power On Recall	Restores power to the monitor following an unexpected removal of power. Select: • On • Off The factory default is On.
H 59.8 Z		Mode Display	Displays the resolution, refresh rate and frequency information on the screen each time the OSD Main Menu is accessed. Select: • On • Off The factory default is On.
		Monitor Status	Displays the operating status of the monitor each time the monitor is powered on. Select the location to display the status to: • Top • Middle • Bottom • Off The factory default is Top.

Icon	Main Menu	Submenu	Description
DDC		DDC/CI Support	Allows the computer to control some OSD menu features such as brightness, contrast and color temperature. Set to: • On • Off The factory default is On.
LED		Bezel Power LED	Turns off the power LED on the front panel of the monitor. The factory default is On.
		Sleep Timer	Provides the timer adjustment menu options: • Set Current Time—sets the current time in hours and minutes • Set Sleep Time—sets the time you want to place the monitor in sleep mode • Set on Time—sets the time you want the monitor to wake up from sleep mode • Timer—sets the Sleep Timer feature On or Off. The default setting is Off. • Sleep Now—immediately sets the monitor to enter sleep mode
	Language		Selects the language in which the OSD menu is displayed. The factory default is English.
i+	Information		Selects and displays important information about the monitor.
		Current Settings	Provides the current input video mode.
		Recommended Settings	Provides the recommended resolution mode and refresh rate for the monitor.
		Serial Number	Reports the serial number of the monitor. The serial number is needed if contacting HP technical support.
		FW Version	Reports the firmware version of the monitor.
		Backlight Hours	Reports the total hours of backlight operation.
		Service Support	http://www.hp.com/support
	Factory Reset		Returns all OSD menu settings and DDC/CI controls to the factory default settings, except the Language.
	Exit		Exits the OSD menu screen.

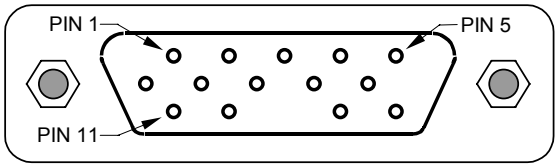
4. Input/Output Specification

4.1 Input Signal Connector

4.1.1 D-SUB connector

Pin	Signal	Pin	Signal
1	Red Video	9	+5V Supply
2	Green Video	10	Logic Ground
3	Blue Video	11	NC
4	NC	12	DDC-Serial Data
5	DDC-Return	13	H-Sync.
6	Red Ground	14	V-Sync.
7	Green Ground	15	DDC-Serial Clock
8	Blue Ground		

VGA connector layout



4.2 Factory Preset Display Modes

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	640 x 480	31.469	59.940
2	720 x 400	31.469	70.087
3	800 x 600	37.879	60.317
4	1024 x 768	48.363	60.004
5	1280 x 960	60.00	60.00
6	1280 x 1024	63.98	60.02
7	1366 x 768	47.7	60.00
8	1366 x 768	48.0	60.00

5. Panel Specification

5.1 General Feature

M185B1-L02

Item	Specification	Unit	Note
Active Area	409.8 (H) × 230.4(V) (18.5" diagonal)	mm	(1)
Bezel Opening Area	413.4(H) x 234 (V)	mm	
Driver Element	a-Si TFT active matrix	-	-
Pixel Number	1366 x R.G.B. x 768	pixel	-
Pixel Pitch	0.3 (H) x 0.3 (V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	16.7M	color	-
Transmissive Mode	Normally White	-	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-	-
Module Power Consumption	13.85	Watt	(2)

LTM185AT01 Q01/Q02

Items	Specification	Unit	Note
Pixel Pitch	0.300(H) x 0.300(W)	mm	
Active Display Area	409.8(H) x 230.4(V)	mm	
Surface Treatment	Haze 25%, Hard-coating(3H)		
Display Colors	16.7M (6bit Hi-FRC)	colors	
Number of Pixels	1366 x 768	pixel	
Pixel Arrangement	RGB vertical stripe		
Display Mode	Normally White		
Luminance of White	250(Typ.)	cd/㎡	

5.2 Optical Characteristics

M185B1-L02

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-1000T	Typ - 0.03	0.646	Typ + 0.03	-	(1), (5)
		Ry			0.334			
	Green	Gx			0.284			
		Gy			0.602			
	Blue	Bx			0.152			
		By			0.076			
	White	Wx			0.313			
		Wy			0.329			
Center Luminance of White (Center of Screen)		L_C		200	250	-	cd/m^2	(4), (5)
Contrast Ratio		CR		700	1000	-	-	(2), (5)
Response Time		T_R	θ_x=0°, θ_Y =0°	-	1.3	3.2	ms	(3)
		T_F		-	3.7	6.8		
White Variation		δW	θ_x=0°, θ_Y =0° USB2000	-	1.3	1.42	-	(5), (6)
Viewing Angle	Horizontal	θ_x+	CR ≧ 10 USB2000	75	85	-	Deg.	(1), (5)
		θ_x-		75	85	-		
	Vertical	θ_Y+		70	80	-		
		θ_Y-		70	80	-		

LTM185AT01 Q01/Q02

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio (Center of screen)		C/R		600	1000	-		(3) SR-3
Response Time	On/Off	Tr+ Tf		-	5	10	msec	(5) RD-850S
Luminance of White (Center of screen)		Y_L		200	250	-	cd/m2	(6) SR-3
Color Chromaticity (CIE 1931)	Red	Rx	Normal $\theta_{L,R}=0$ $\theta_{U,D}=0$ Viewing Angle	-0.030	0.645	+0.030		
		Ry			0.335			
	Green	Gx			0.290			
		Gy			0.605			
	Blue	Bx			0.150			
		By			0.075			
	White	Wx			0.313			
		Wy			0.329			(7),(8)
Color Chromaticity (CIE 1976)	Red	Ru'		-	0.450	-		SR-3
		Rv'		-	0.526	-		
	Green	Gu'		-	0.120	-		
		Gv'		-	0.563	-		
	Blue	Bu'		-	0.167	-		
		Bv'		-	0.188	-		
	White	Wu'		-	0.198	-		
		Wv'		-	0.468	-		
C.G.L	White	△u'v'		-	0.011	0.02		(9)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Color Gamut		-		-	72	-	%	
Color Temperature		-		-	6500	-	K	
Viewing Angle	Hor.	θ_L	CR≥10	70	80	-	Degrees	(8) EZ-Contrast
		θ_R		70	80	-		
	Ver.	θ_U		70	80	-		
		θ_D		70	80	-		
Brightness Uniformity (9 Points)		B_{uni}		-	-	25	%	(4) SR-3

5.3 Parameter guide line for CCFL Inverter

1.TFT LCD Module:

M185B1-L02

Parameter		Symbol	Value			Unit
			Min.	Typ.	Max.	
Power Supply Voltage		Vcc	4.5	5.0	5.5	V
Ripple Voltage		V_{RP}	-	-	100	mV
Rush Current		I_{RUSH}	-	2	3	A
Power Supply Current	White	Icc	-	0.44	0.6	A
	Black		-	0.58	0.9	A
	Vertical Stripe		-	0.6	0.9	A
Power Consumption			-	3.0	4.5	Watt
LVDS differential input voltage		Vid	100	-	600	mV
LVDS common input voltage		Vic	-	1.2	-	V

LTM185AT01 Q01/Q02

Item		Symbol	Min.	Typ.	Max.	Unit	Note
Voltage of Power Supply		V_{DD}	4.5	5.0	5.5	V	(1)
LVDS Input Characteristics	Differential Input Voltage for LVDS Receiver Threshold	High	-	-	+100	mV	(2)
		Low	-100	-	-	mV	
	LVDS skew	t_{SKEW}	-300		300		(3)
	Differential input voltage	$\|V_{ID}\|$	200		600	mV	(4)
	Input voltage range (single-ended)	V_{IN}	0		2.4	V	(4)
	Common mode voltage	V_{CM}	0+ $\|V_{ID}\|/2$	1.2	2.4- $\|V_{ID}\|/2$	V	(4)
Current of Power Supply	(a) Black	I_{DD}	-	550	-	mA	(5),(6)
	(b) White		-	400	-	mA	
	(c) Dot		-	700	1000	mA	
Vsync Frequency		f_V	47	60	75	Hz	
Hsync Frequency		f_H	37.13	47.40	59.25	kHz	
Main Frequency		f_{DCLK}	56.66	72.33	90.42	MHz	
Rush Current		I_{RUSH}	-	-	3	A	(7)

2. Back Light Unit:

M185B1-L02

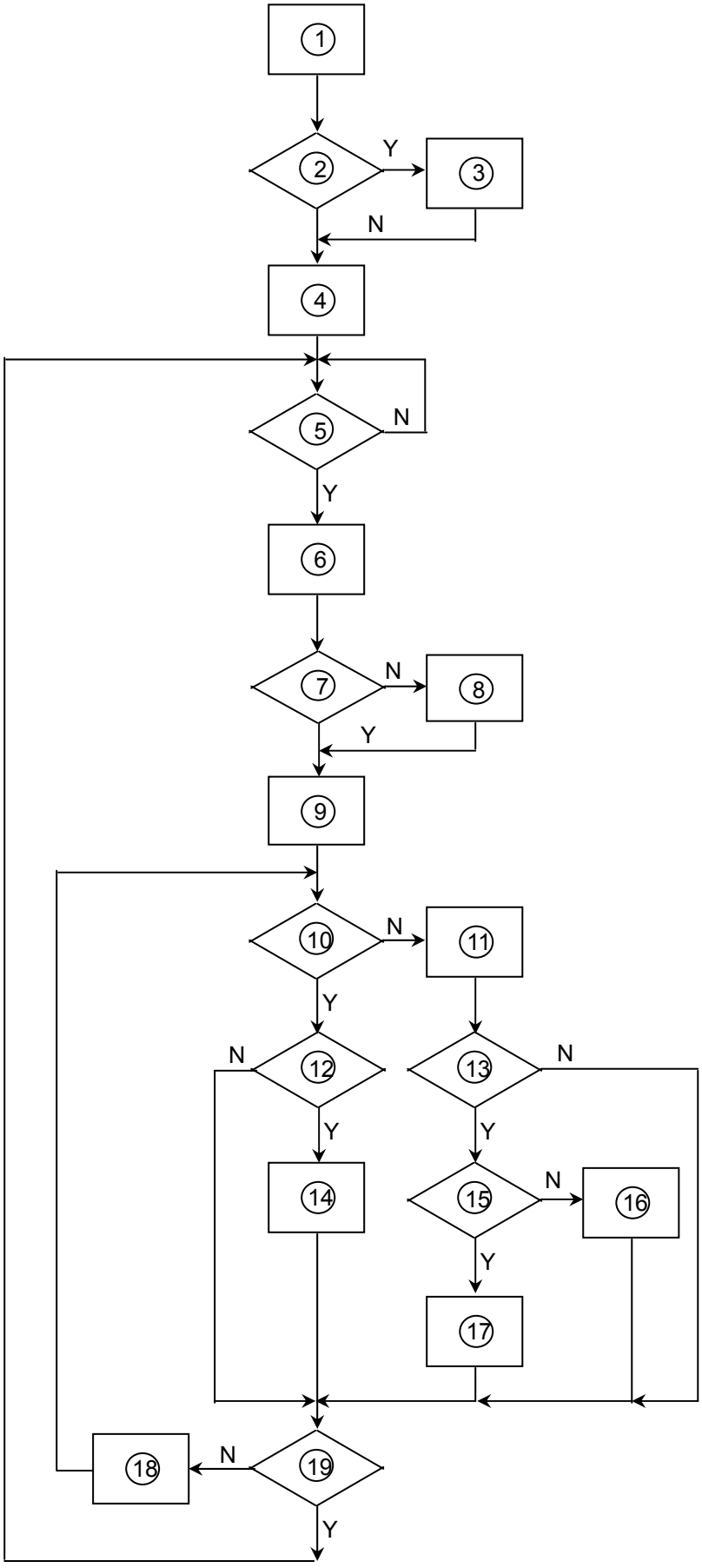
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Lamp Input Voltage	V_L	---	760	836	V_{RMS}
Lamp Current	I_L	2.0	7.5	8.0	mA_{RMS}
Lamp Turn On Voltage	V_S	---	---	1680(0℃)	V_{RMS}
		---	---	1460(25℃)	V_{RMS}
Operating Frequency	F_L	40	---	80	KHz
Lamp Life Time	L_{BL}	50000	---	---	Hrs
Power Consumption	P_L	---	10.85	---	W

LTM185AT01 Q01/Q02

Item		Symbol	Min.	Typ.	Max.	Unit	Note
Lamp Current		I_L	3.0	7.5	8.0	mArms	(1)
Lamp Voltage		V_L	-	700	-	Vrms	
Lamp Frequency		f_L	40	-	60	kHz	(2)
Operating Life Time		Hr	50,000	-	-	Hour	(3)
Inverter waveform	Asymmetry rate	Wasy	-	-	10	%	(4)
	Distortion rate	Wdis	1.2726	1.414	1.5554		
Startup Voltage		Vs	-	-	0℃ : 1,480 25℃: 1,170	Vrms	(5)

6. Block diagram

6. 1 Software Flow Chart

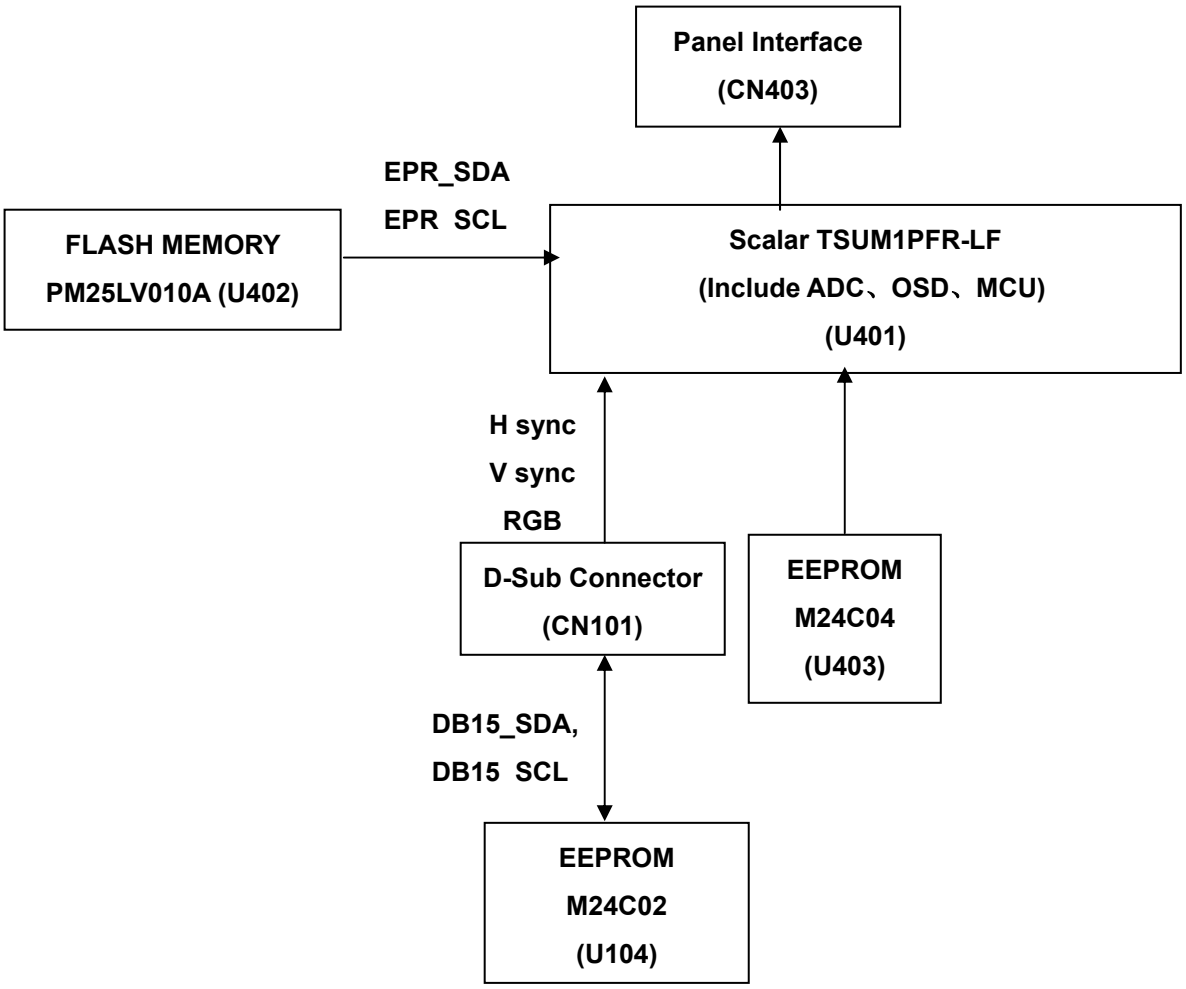


REMARK:

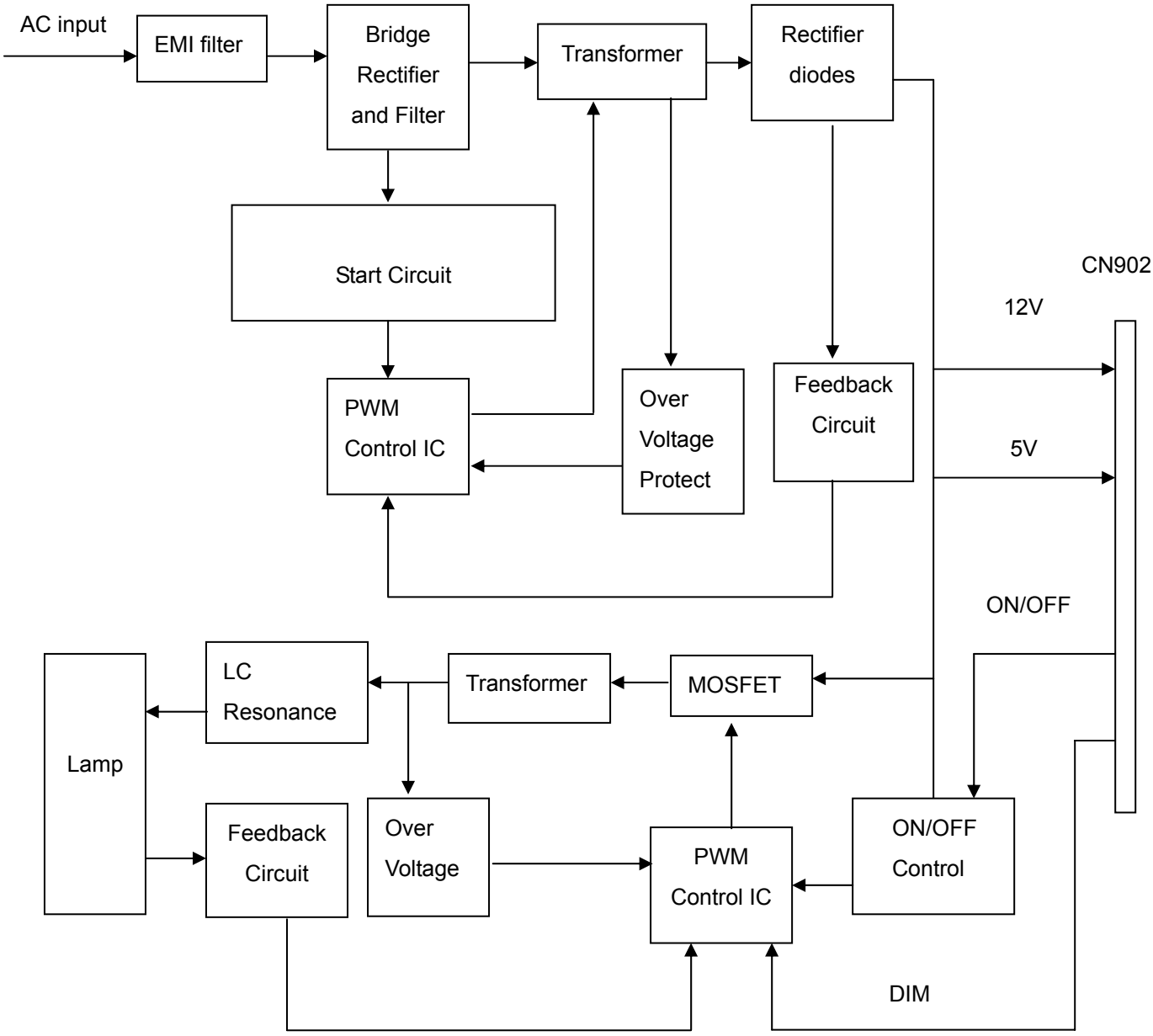
1) MCU initialize.
2) Is the EEprom blank?
3) Program the EEprom by default values.
4) Get the PWM value of brightness from EEprom.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEprom. Turn on the LED and set it to green color. Scalar initialize.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are they’re any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappear.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

6.2 Electrical Block Diagram

6.2.1 Scalar Board

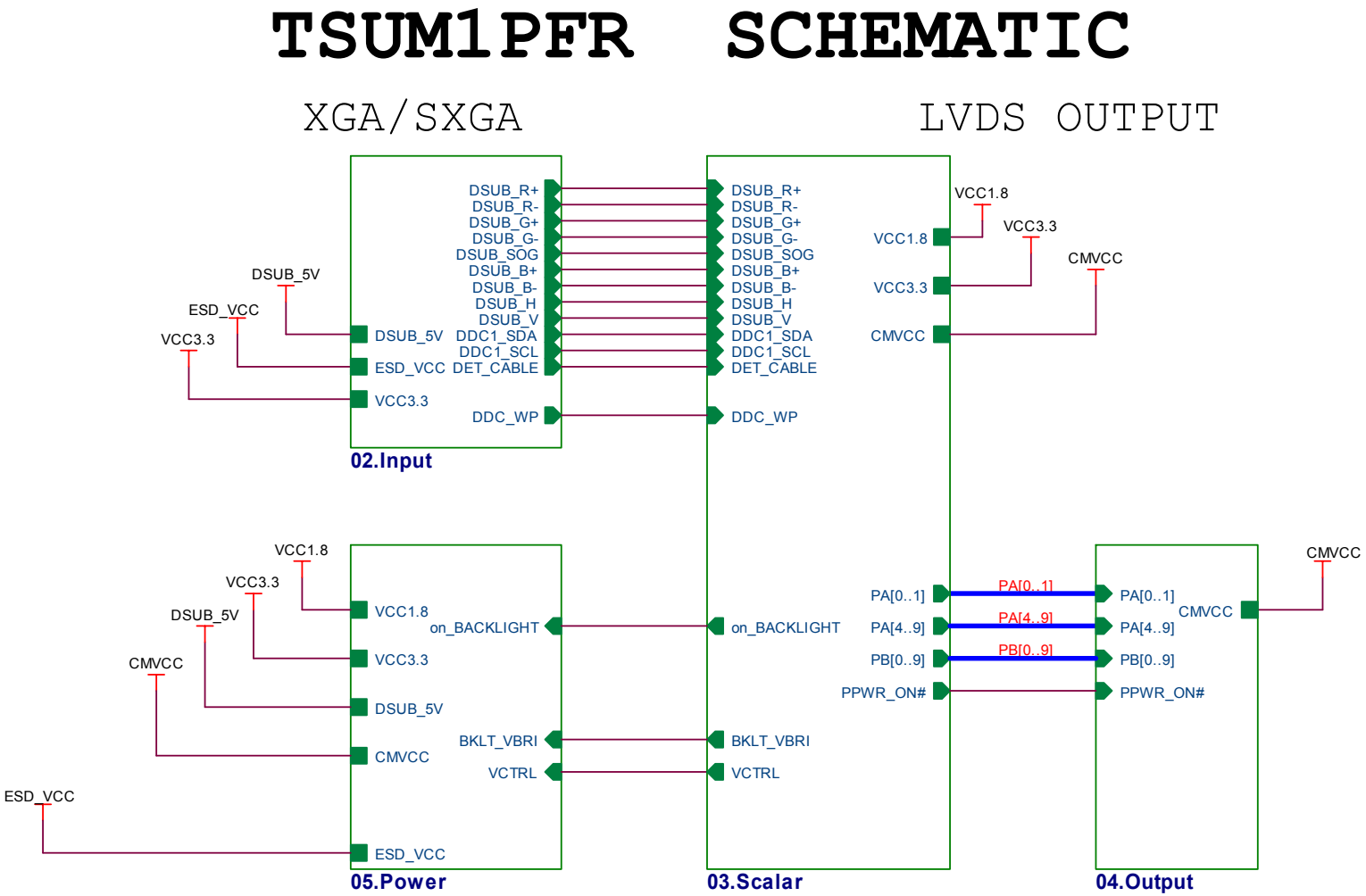


6.2.2 Inverter / Power Board

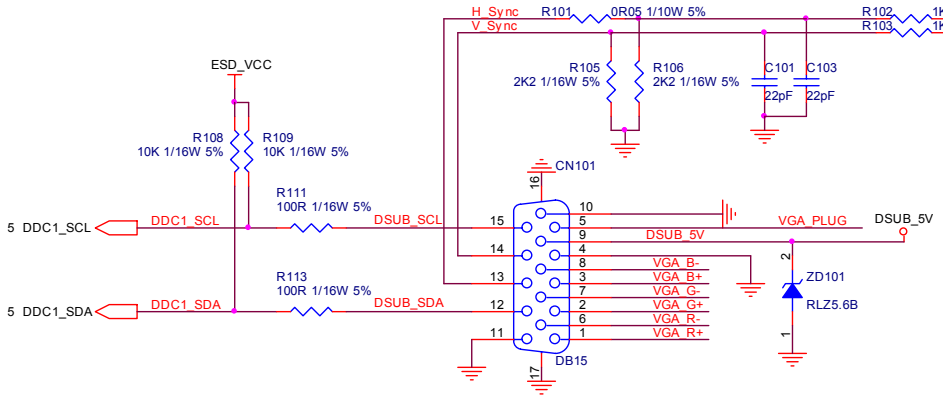


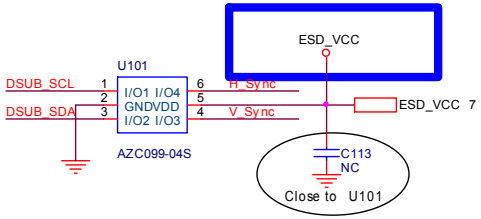
7. Schematic

7.1 Main Board

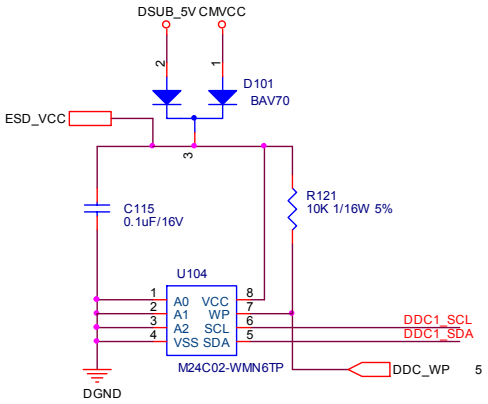


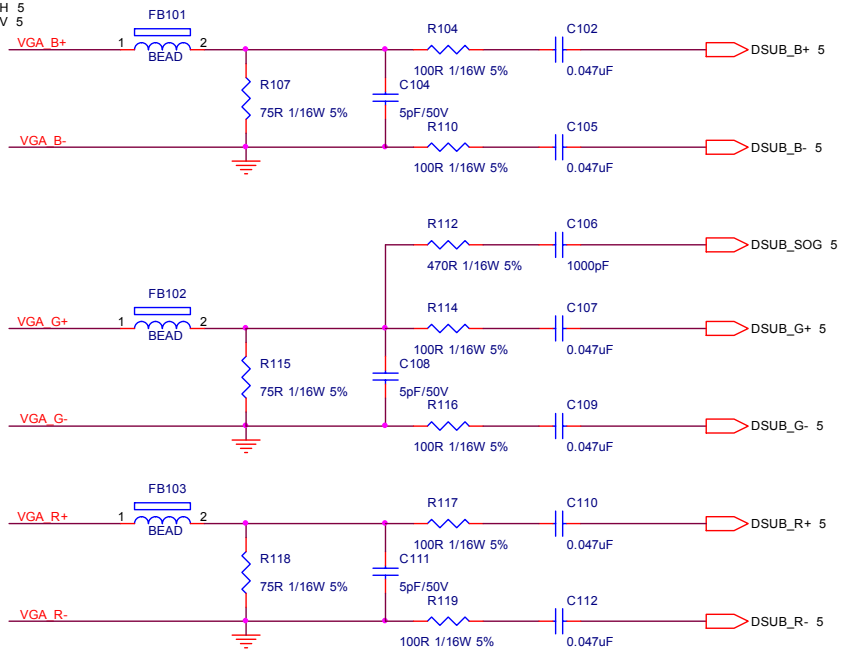
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	HP L1908w LE1851w	Size	A
結 隔 爪 網 腹	G3083-1E-X-X-2-090210	TPV MODEL		Rev	1E
Key Component	01.COVER & REVISE HISTORY & TOP	PCB NAME	715G3083-1E	称爹	<称爹>
Date	Tuesday, February 10, 2009	Sheet	3 of 7		

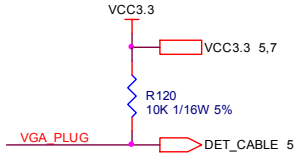




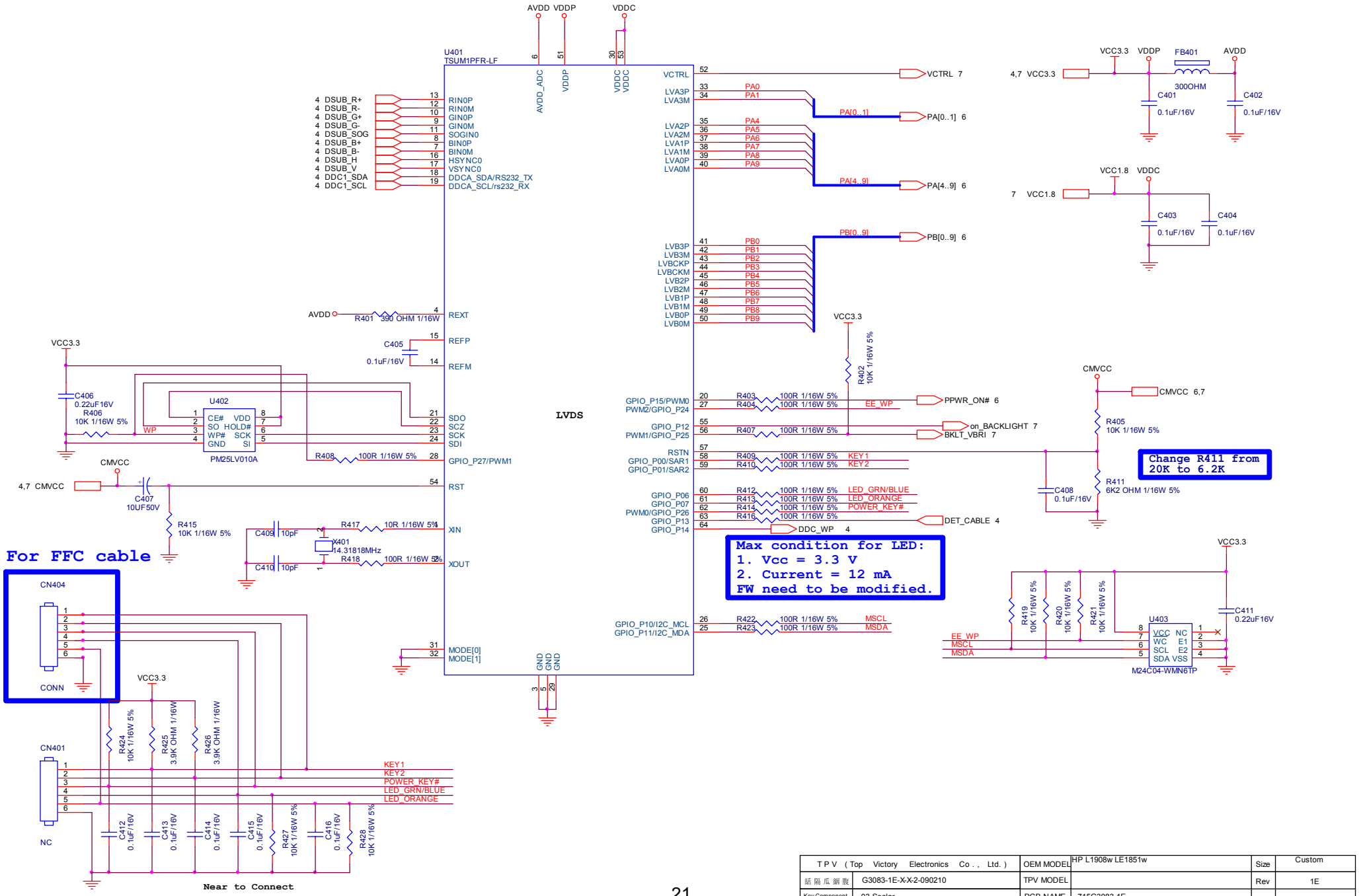
Add EDID Eeprom stucture



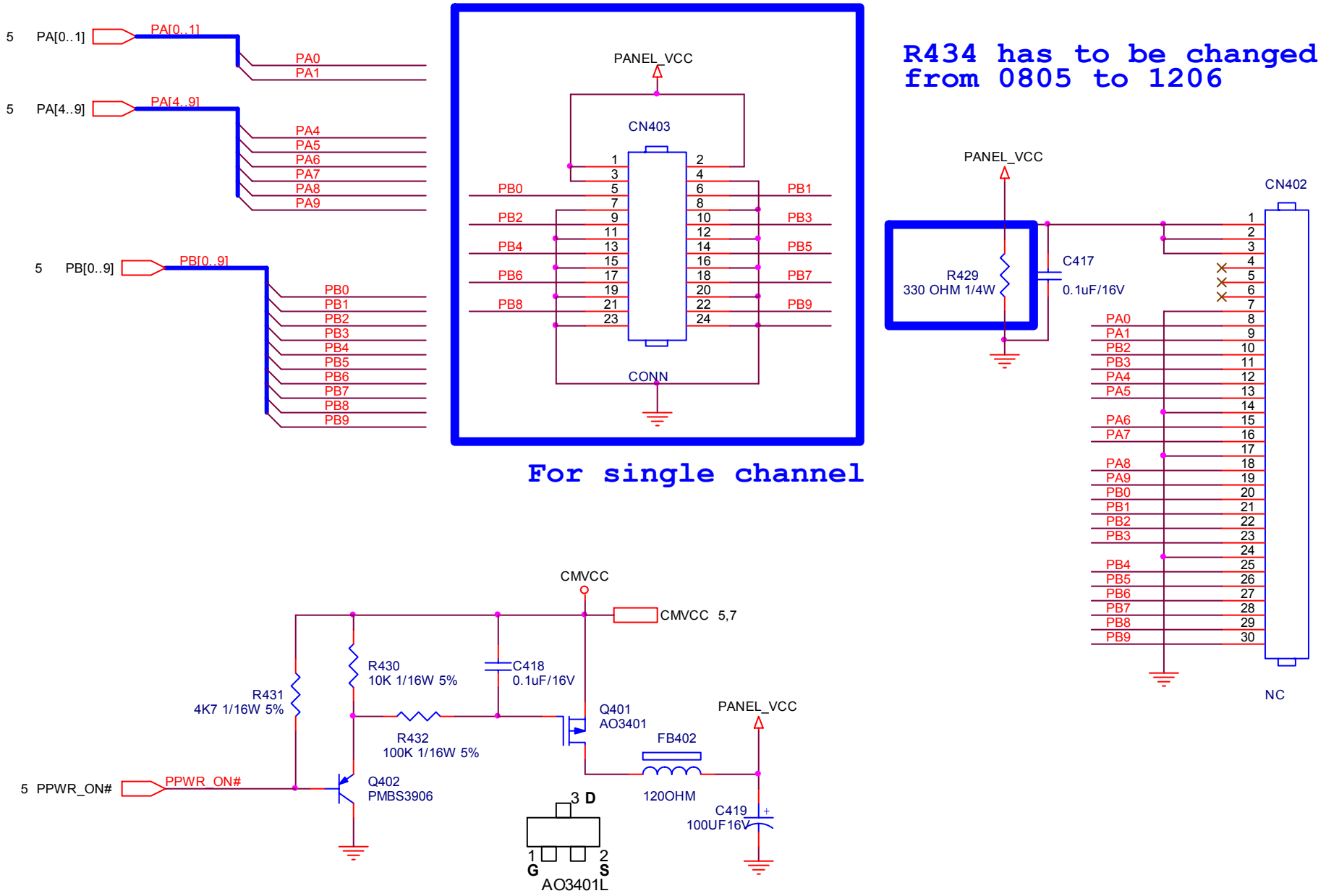




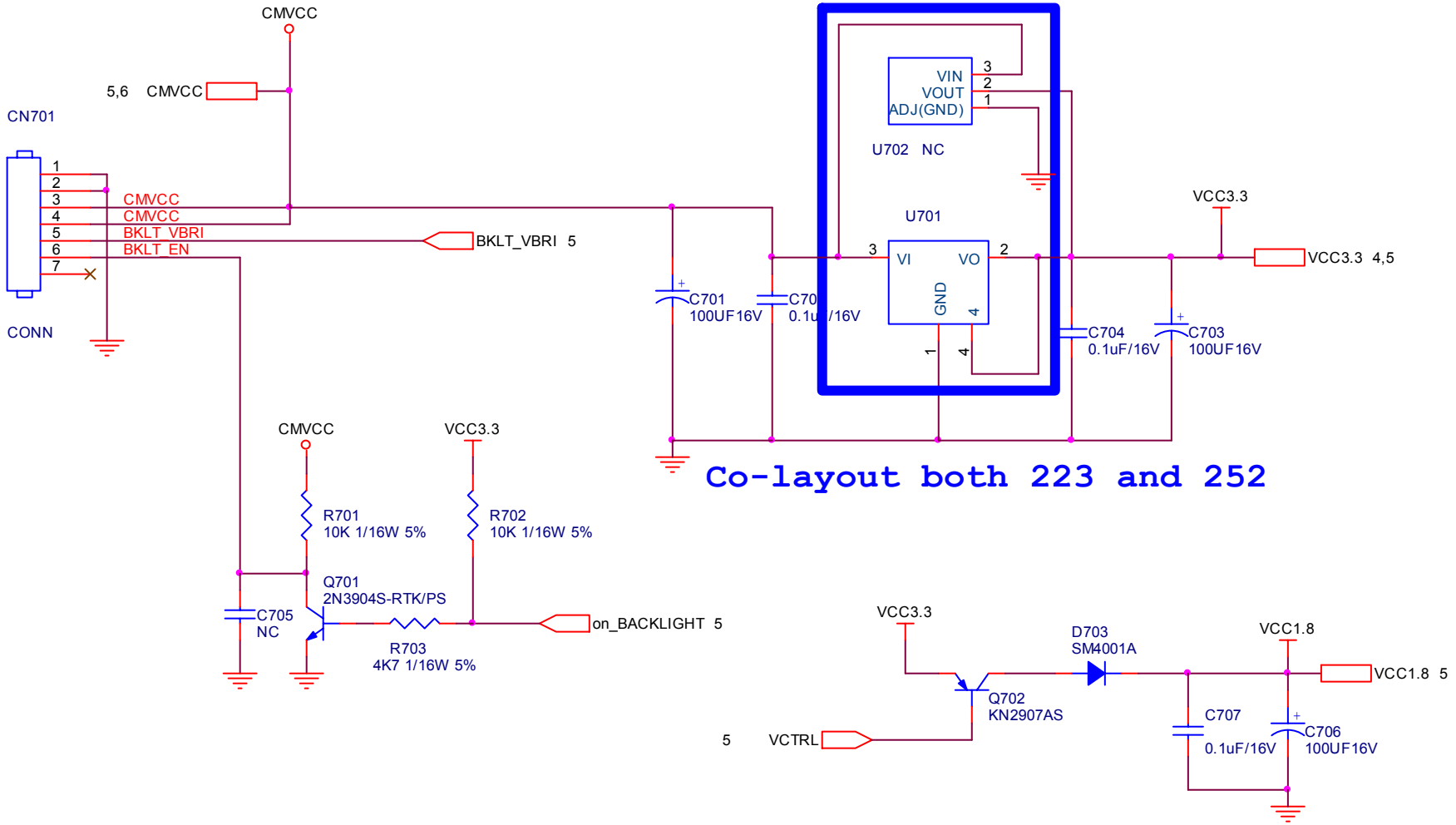
T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	HP L1908w LE1851w	Size	B
結 隔 瓜 綢 腹	G3083-1E-X-X-2-090210	TPV MODEL		Rev	1E
Key Component	02.Input	PCB NAME	715G3083-1E	称爹	<称爹>
Date	Wednesday, February 18, 2009	Sheet	4 of 7		



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	HP L1908w LE1851w	Size	Custom
結 隔 瓜 貓 腹	G3083-1E-X-X-2-090210	TPV MODEL		Rev	1E
Key Component	03.Scalar	PCB NAME	715G3083-1E	称爹	<称爹>
Date	Tuesday, February 10, 2009	Sheet	5 of 7		

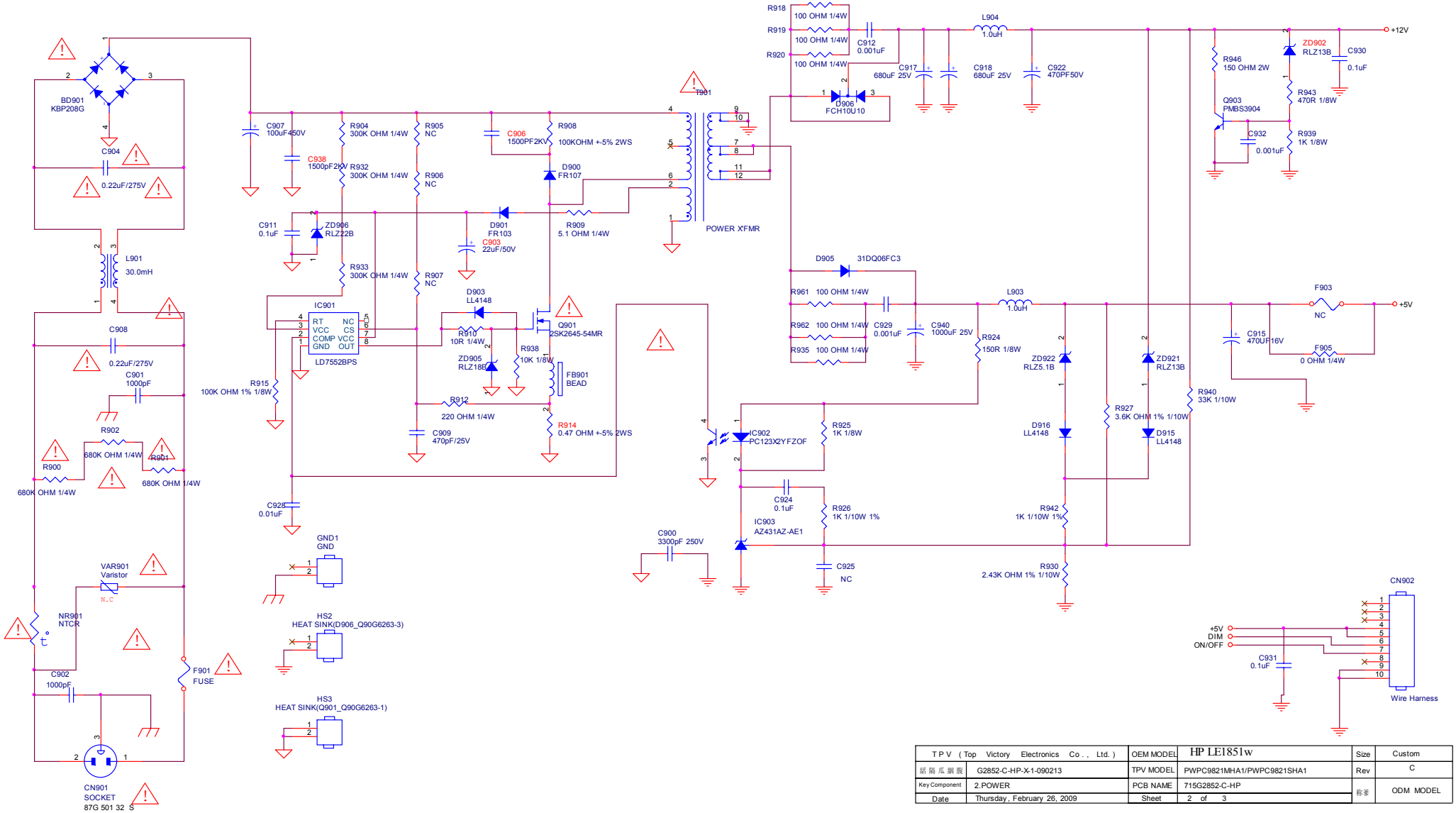


T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	HP L1908w	Size	A
結 隔 瓜 綢 腹	G3083-1E-X-X-2-090210	TPV MODEL		Rev	1E
Key Component	04.Output	PCB NAME	715G3083-1E	称爹	<称爹>
Date	Tuesday , February 10, 2009	Sheet	6 of 7		

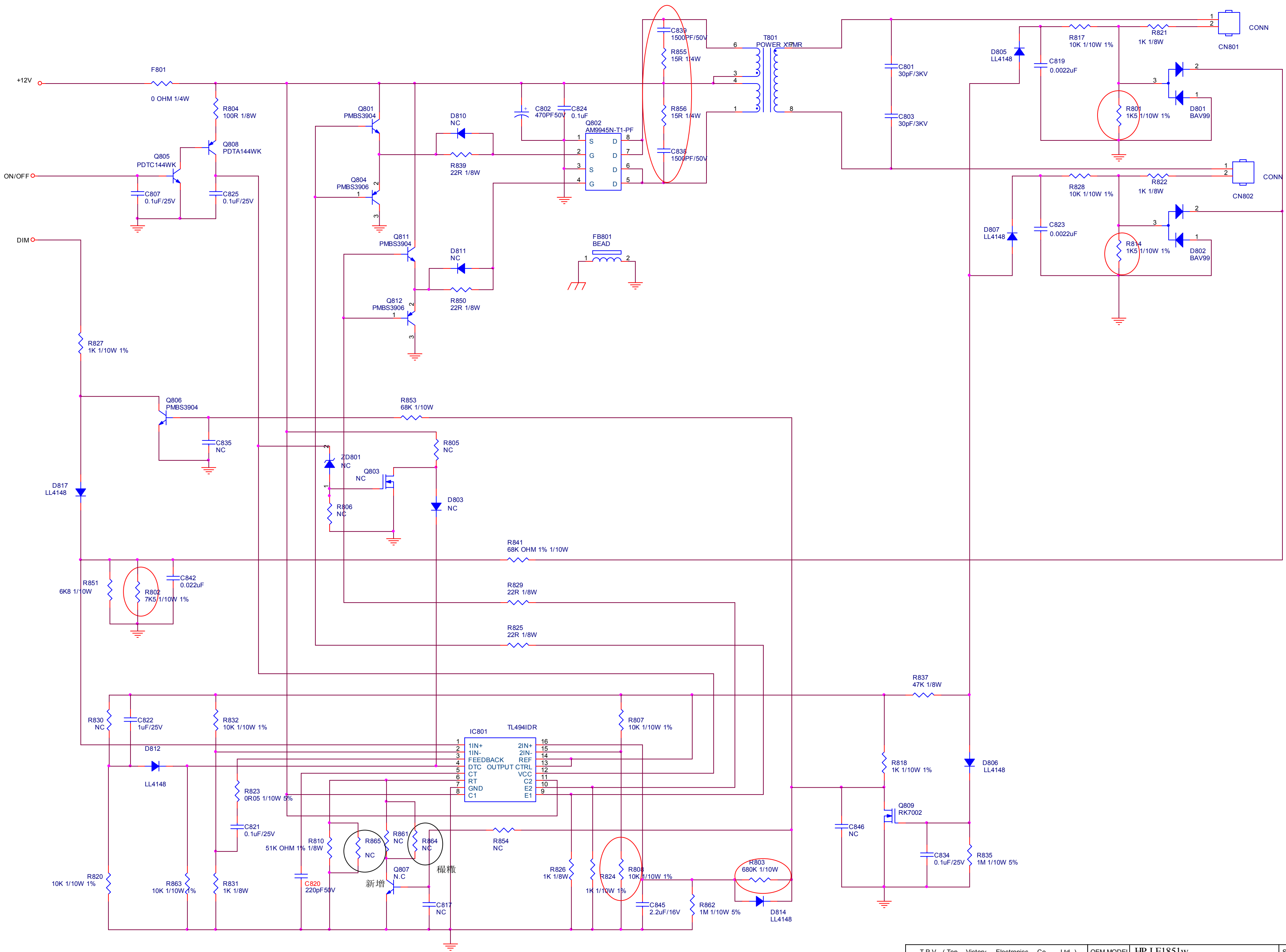


T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	HP L1908w LE1851w	Size	A
結 隔 瓜 綑 腹	G3083-1E-X-X-2-090210	TPV MODEL		Rev	1E
Key Component	05.Power	PCB NAME	715G3083-1E	称爹	<称爹>
Date	Tuesday , February 10, 2009	Sheet	7 of 7		

7.2 Power Board

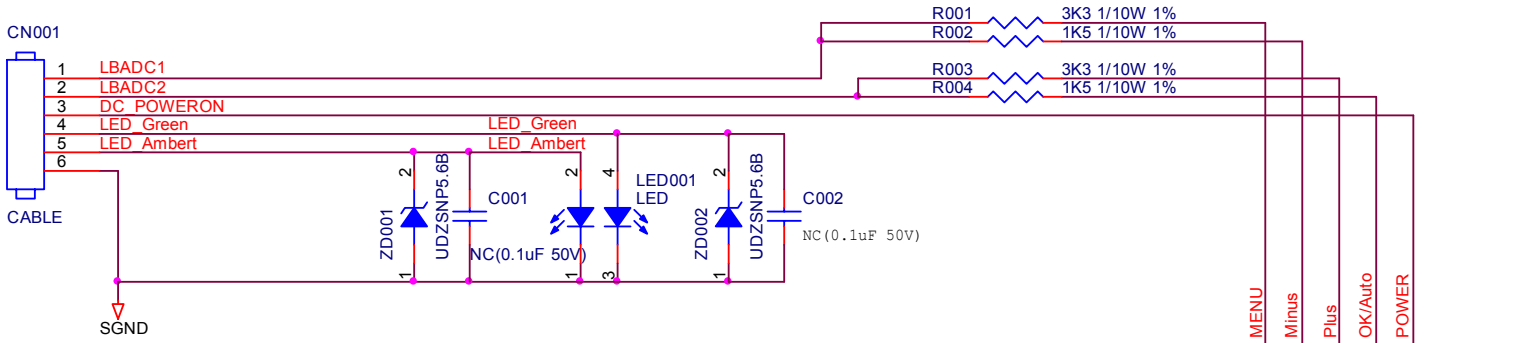


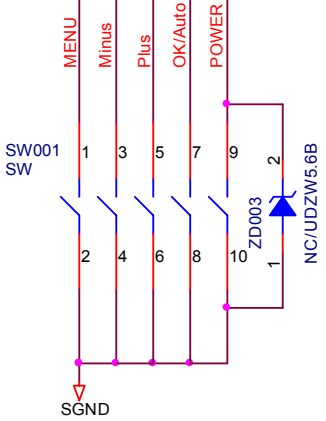
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	HP LE1851w	Size	Custom
結 陽 瓜 鎖 服	G2852-C-HP-X-1-090213	TPV MODEL	PWPC9821MHA1/PWPC9821SHA1	Rev	C
Key Component	2.POWER	PCB NAME	715G2852-C-HP	称 爹	ODM MODEL
Date	Thursday, February 26, 2009	Sheet	2 of 3		



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	HP LE1851w	Size	Custom
	G2852-C-HP-X-1-090213	TPV MODEL	PWPC9821MHA1/PWPC9821SHA1	Rev	C
Key Component	3.INVERTER	PCB NAME	715G2852-C-HP		ODM MODEL
Date	Thursday, February 26, 2009	Sheet	3 of 3		

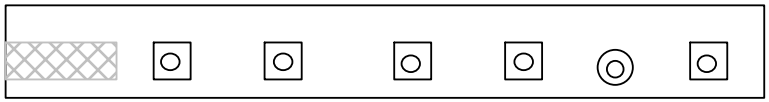
7.3 Key Board





Metal DOME switch

LBADC1	MENU(3.3K)	1.51V
	DOWN(1.5K)	0.92V
LBADC2	UP (3.3K)	1.51V
	OK (1.5K)	0.92V

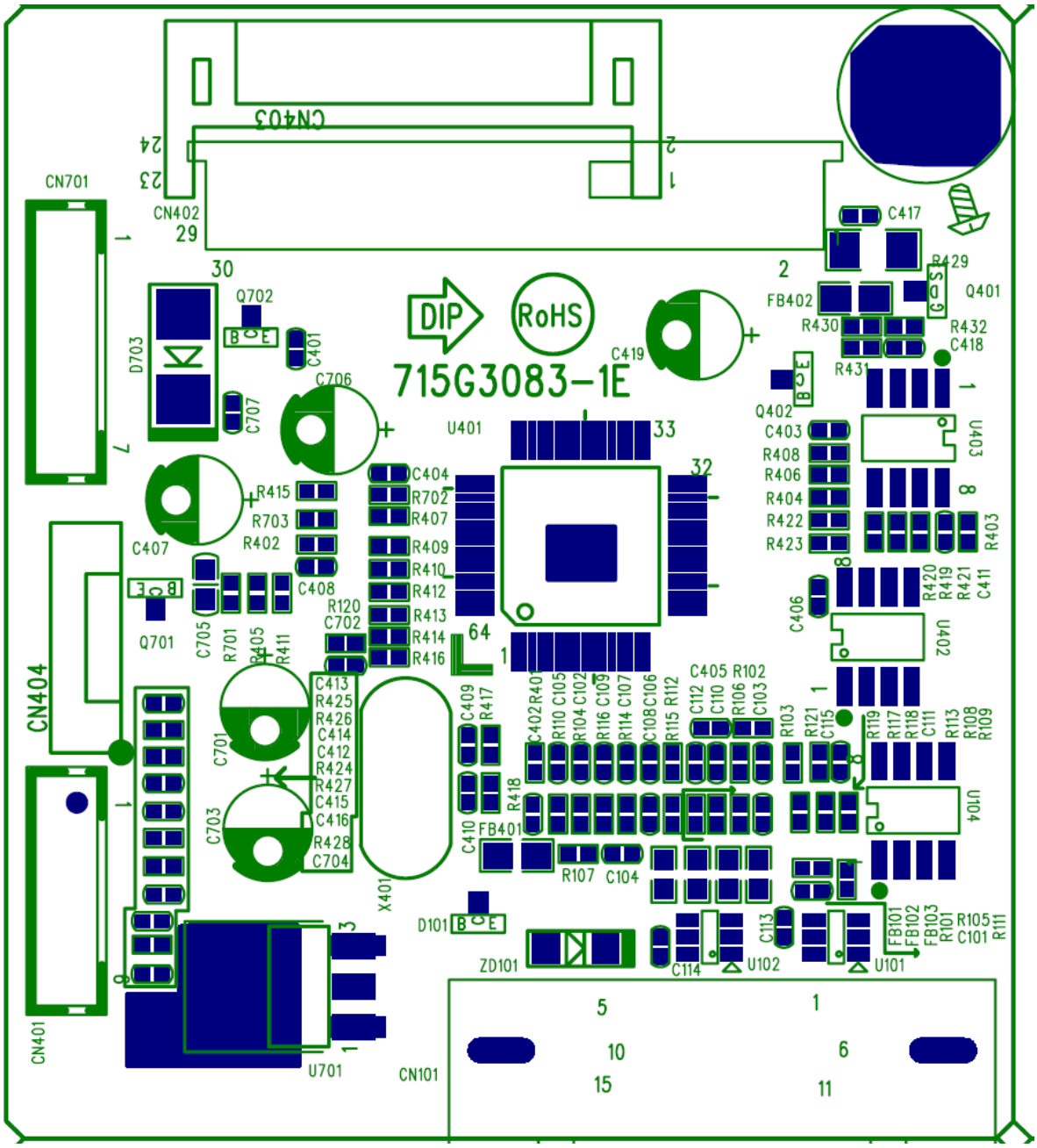


Cable (MENU) (Minus) (Plus) (OK/Auto)LED (Power)

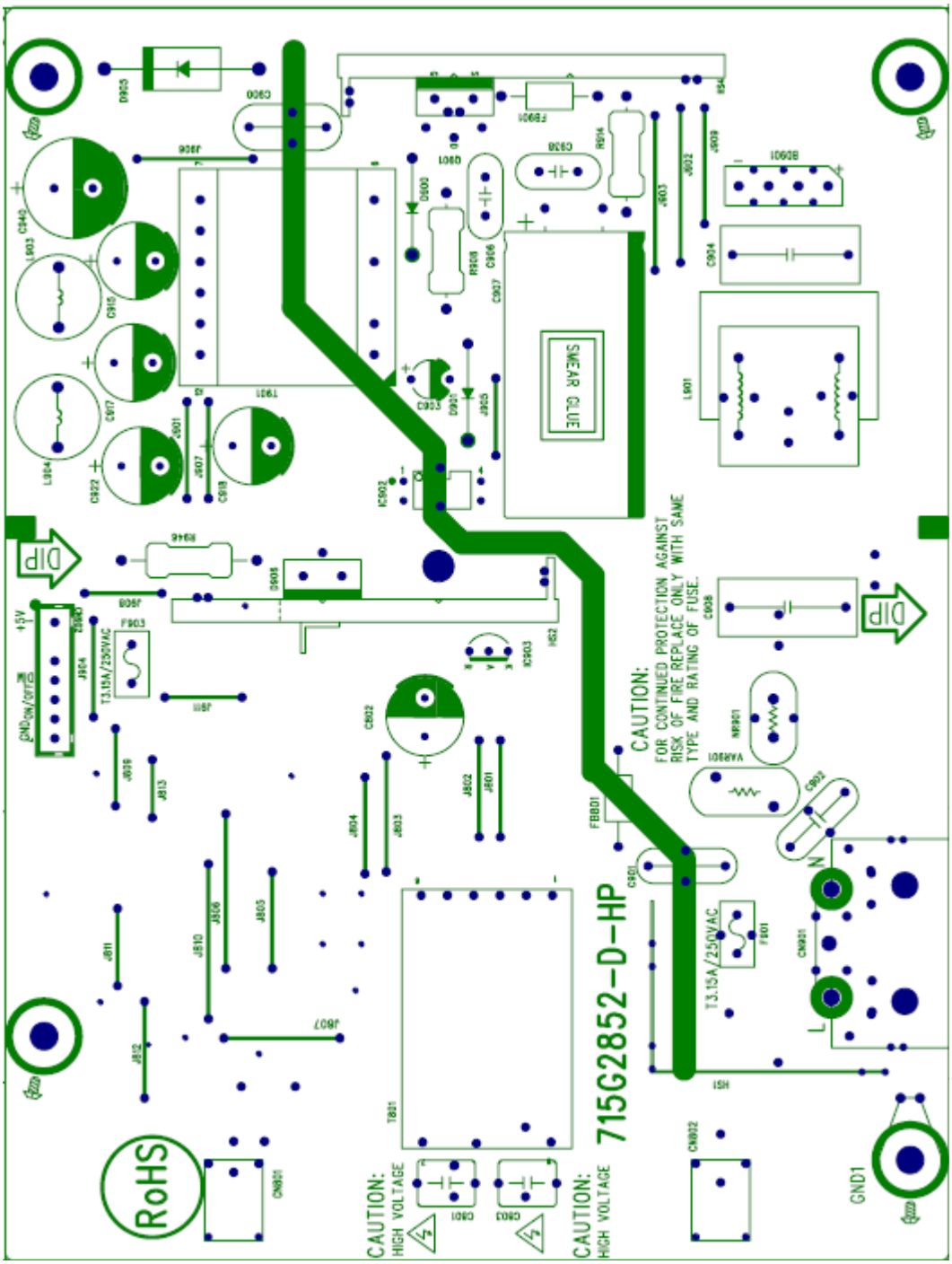
T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	HP LE1851w / LE2001w	Size	A
結 隔 瓜 綑 腹	G3457-B-X-X-1-081212	TPV MODEL	N/A	Rev	B
Key Component	2.0.key	PCB NAME	715G3457-B	称爹	<称爹>
Date	Friday, February 06, 2009	Sheet	2 of 2		

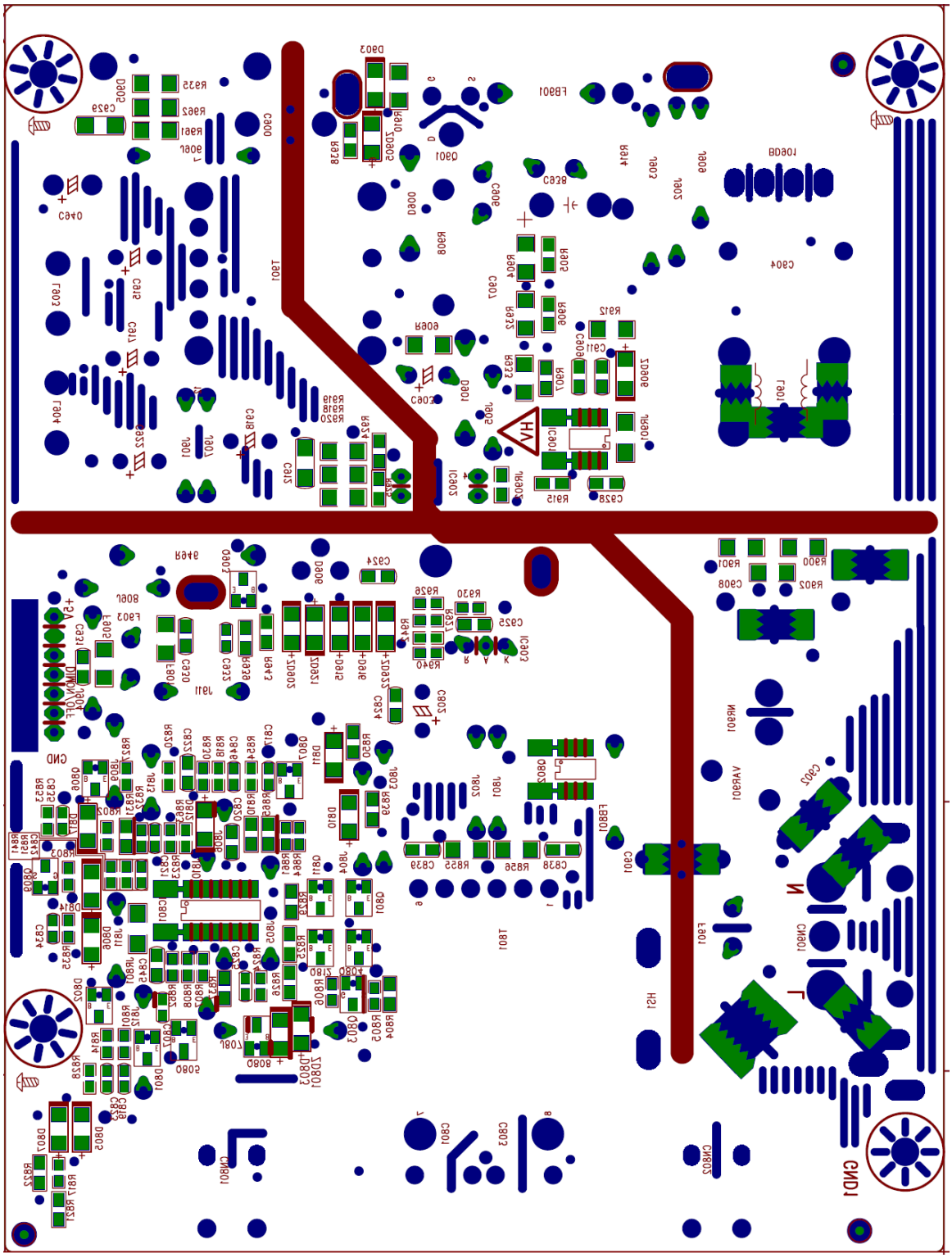
8. PCB Layout

8.1 Main Board

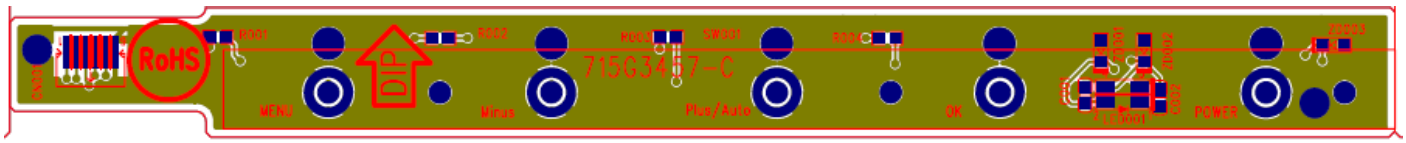


8.2 Power Board





8.3 Key Board



9. Maintainability

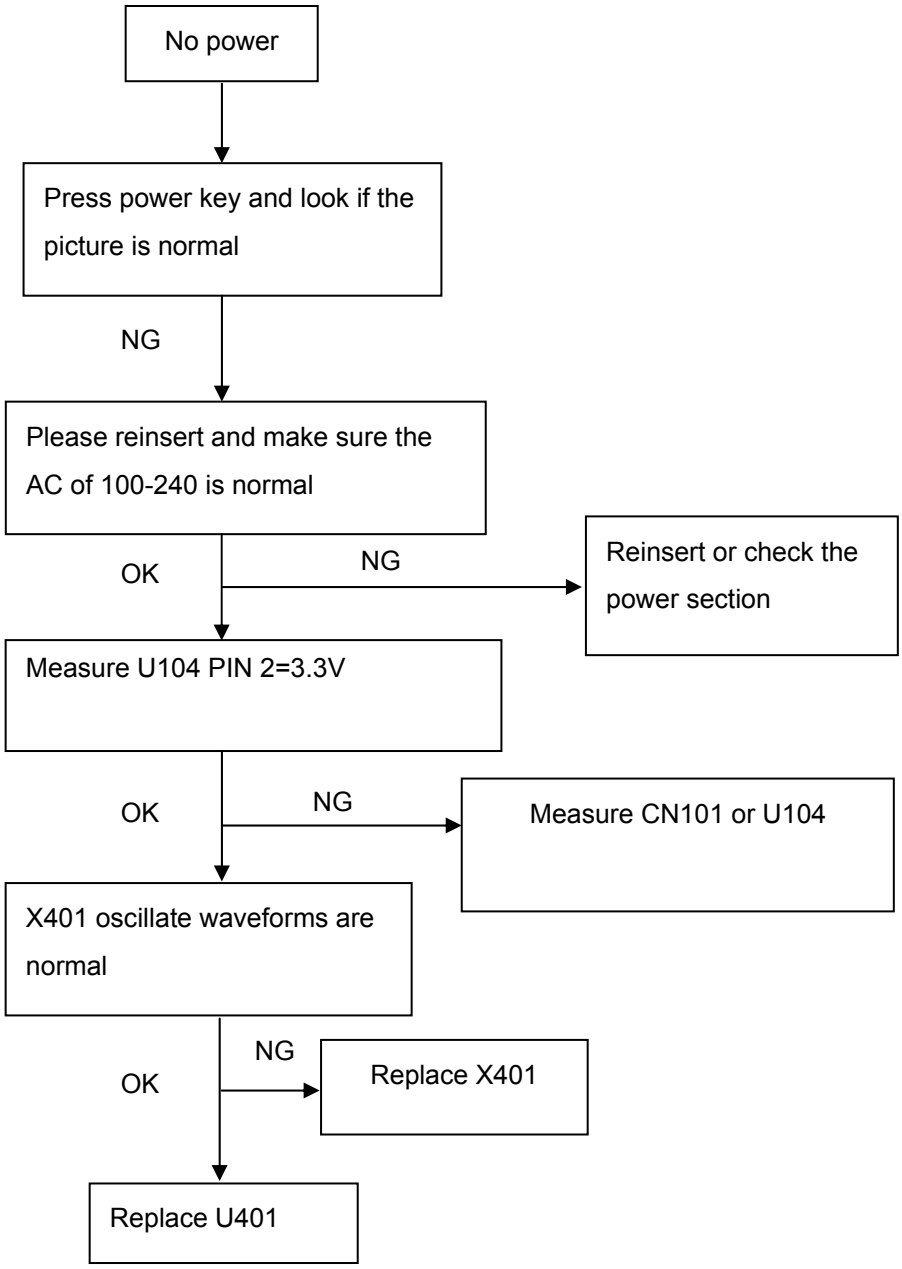
9.1Equipments and Tools Requirement

1. Multi-meter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with a Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

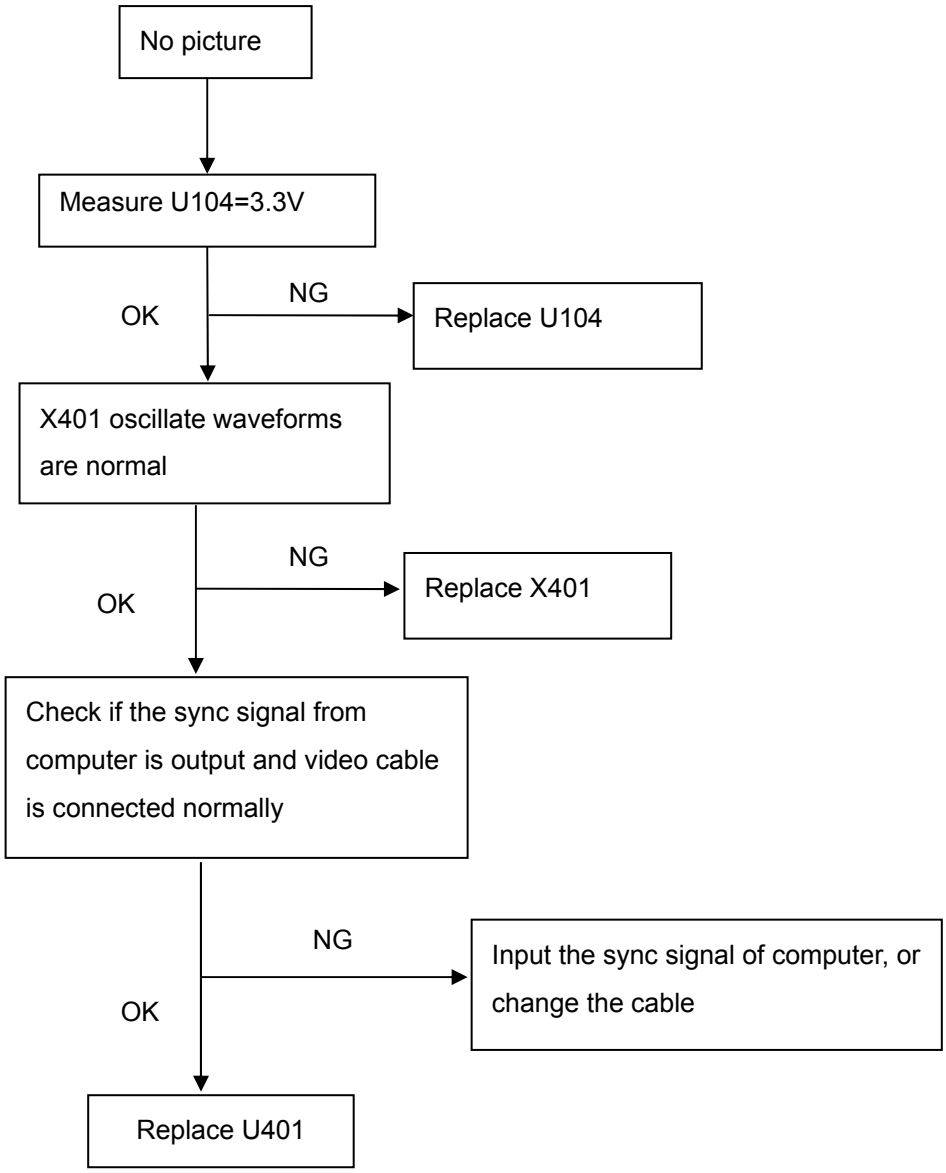
9.2 Trouble Shooting

9.2.1 Main Board

1、No power

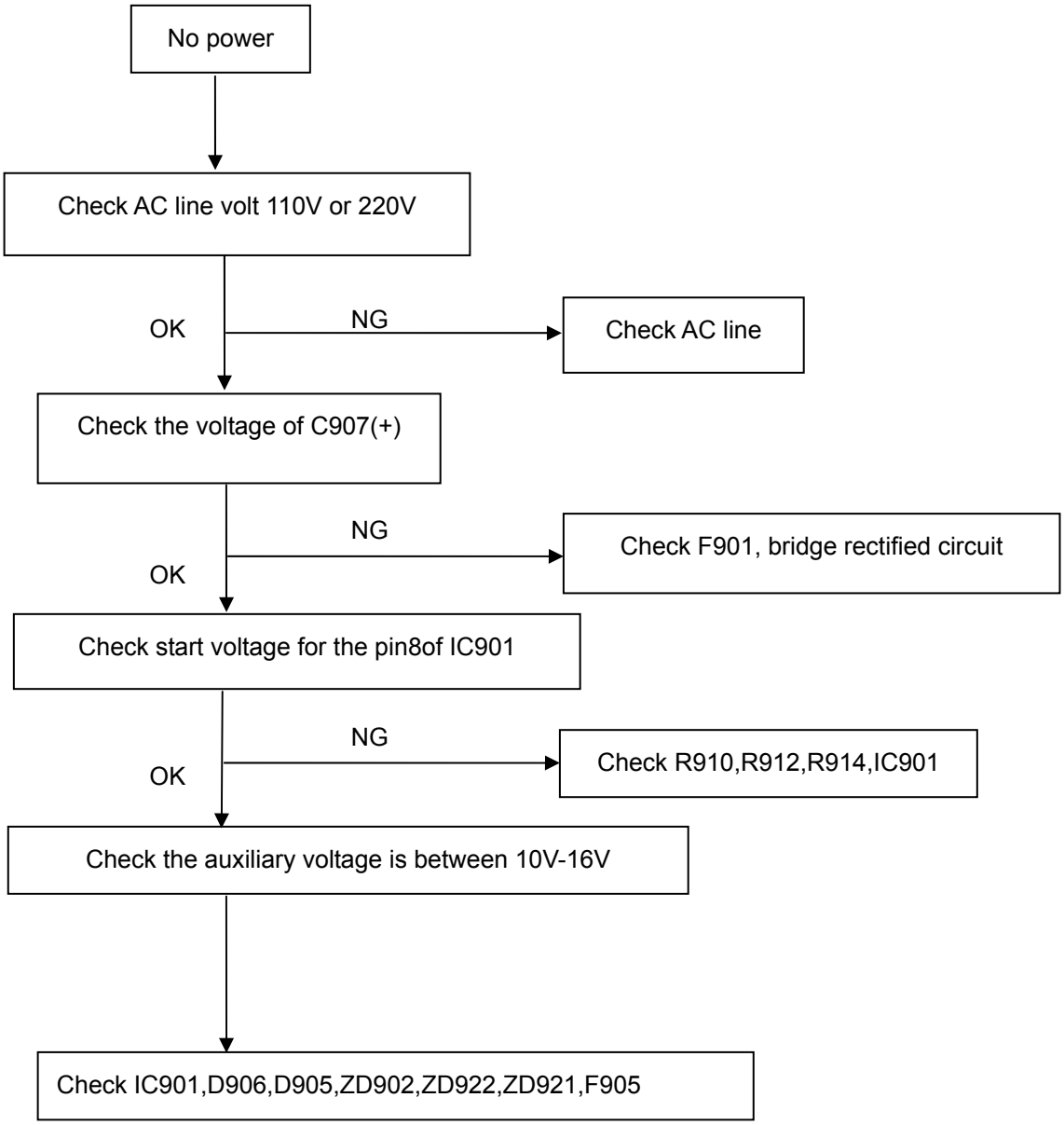


No picture (LED is orange)

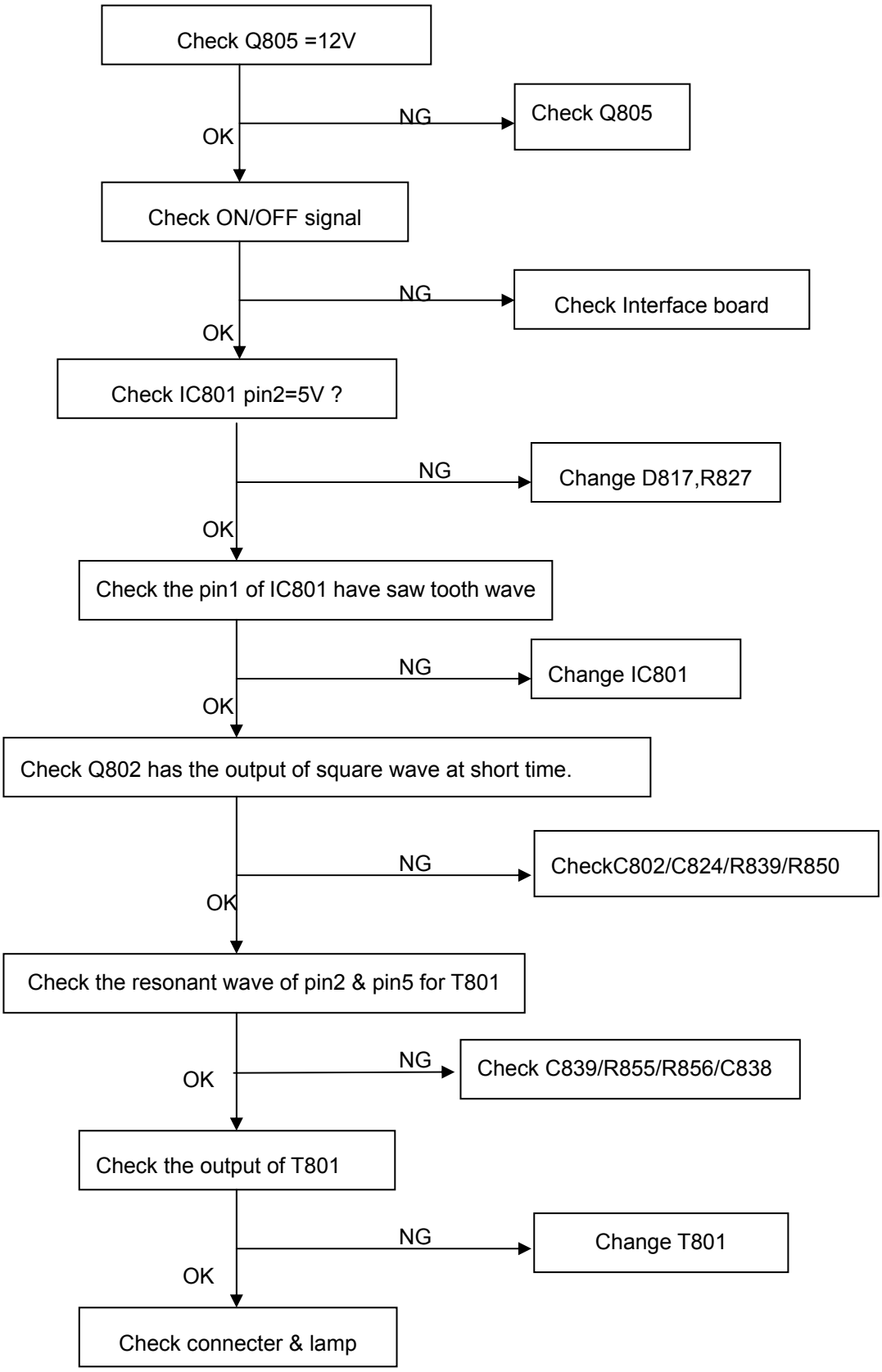


9.2.2 Power Board

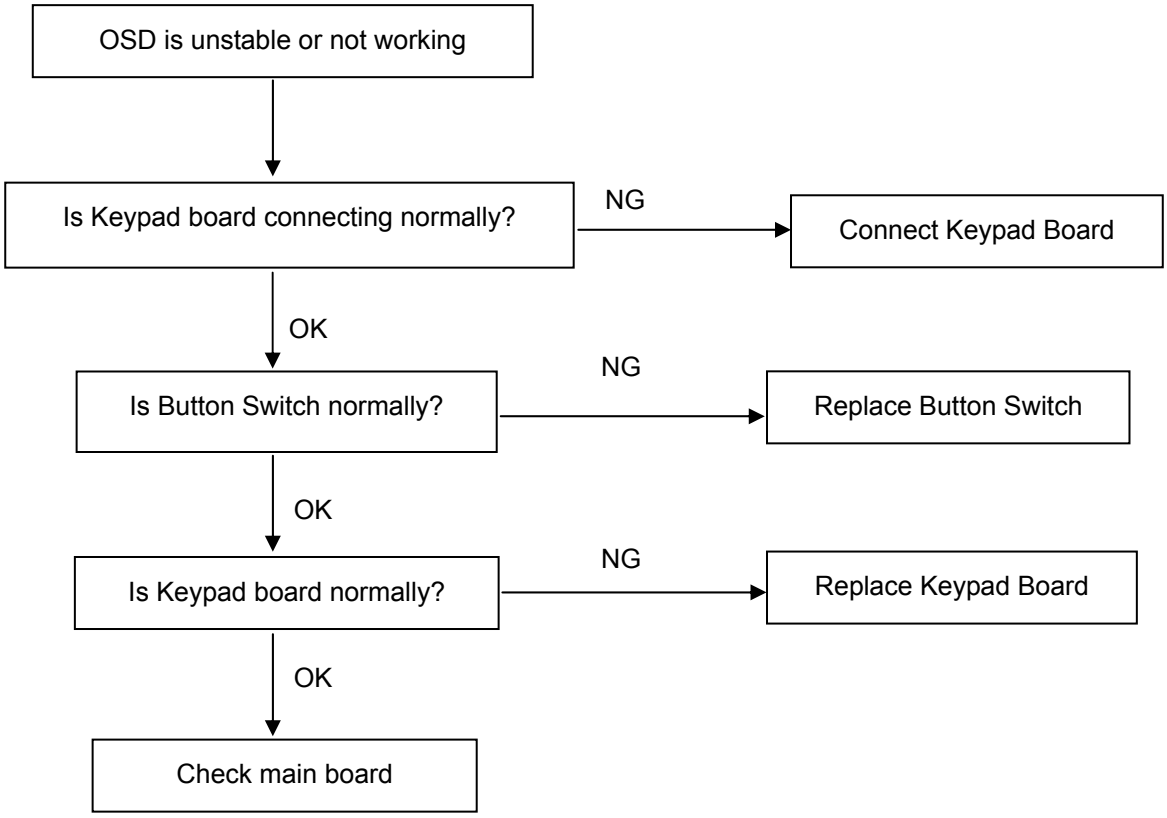
1. No Power



2. W/LED No Backlight



9.2.3 Key Board



10. White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding White-Balance adjustment.

1. How to do the Chroma-7120 MEM .Channel setting
   A. Reference to chroma 7120 user guide
   B. Use " **SC**" key and " **NEXT**" key to modify xyY value and use "**ID**" key to modify the TEXT description Following is the procedure to do white-balance adjust

2. Setting the color temp. You want
   A. 9300k color:
      9300 color temp. parameter is x = 283 ±15, y = 297 ±15, Y> 160 cd/m^2 ,
   B. sRGB color:
      sRGB color temp. parameter is x = 313±15, y = 329 ±15, Y>170 cd/m^2)
   C. 6500K color:
      6500K color temp. parameter is x = 313±15, y = 329 ±15, Y>200 cd/m^2)

3. Into factory mode of HP LE1851w
   Turn on power, press the Menu button, pull out the power cord, and then plug the power cord. Then the factory OSD will be at the left top of the panel.
4. Bias adjustment:
   Set the **Contrast** to 80
   Adjust the **Brightness** to 90.
5. Gain adjustment :
   Move cursor to "-F-" and press MENU key
   A. Adjust 9300k color-temperature
      1. Switch the Chroma-7120 to **9300k channel.**
      2. The chroma 7120 will show x = 283±15, y = 298 ±15, Y>190 cd/m^2
      3. Switch the chroma-720 to **RGB MODE** (with press "MODE" button to change)
      4. Adjust the RED of color **9300K** on factory window until chroma 7120 indicator reached the value R=100
      5. Adjust the GREEN of color **9300K** on factory window until chroma 7120 indicator reached the value G=100
      6. Adjust the BLUE of color **9300K** on factory window until chroma 7120 indicator reached the value B=100
      7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±5

B. Adjust sRGB color-temperature

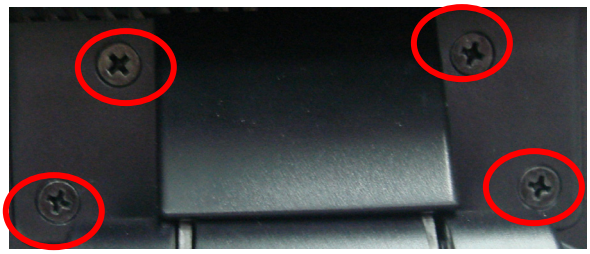
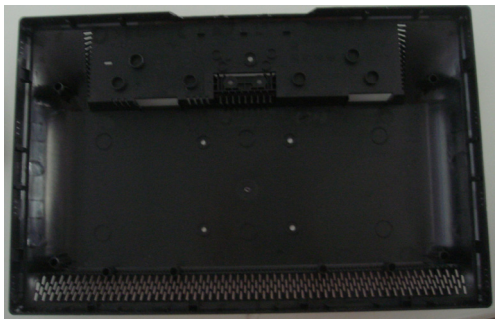
1. Switch the chroma-7120 to sRGB **channel.**
2. The chroma 7120 will show x = 313 ±15, y = 329 ±15, Y >170 cd/m^2
3. Switch the chroma 7120 l to **RGB MODE** (with press “MODE” button to change)
4. Adjust the RED of color sRGB on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color sRGB on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color sRGB on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±5

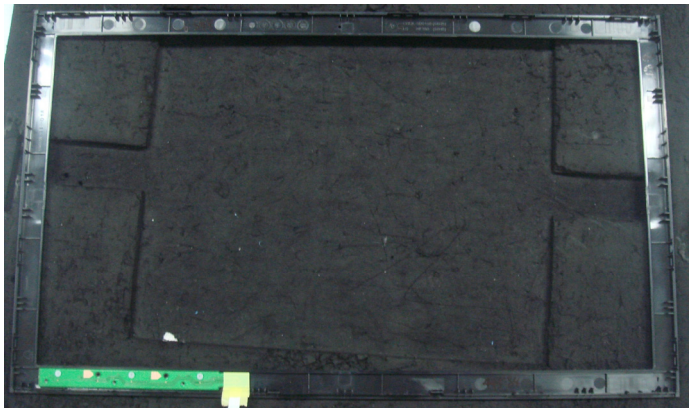
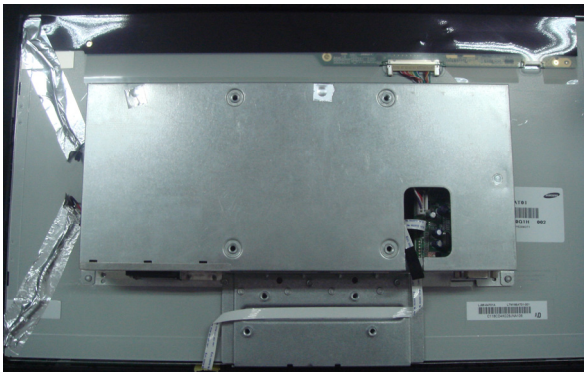
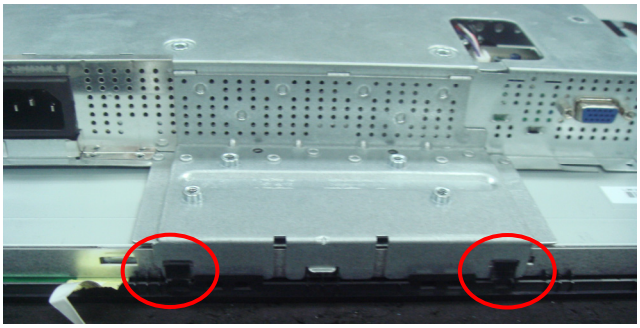
C. Adjust 6500k color-temperature

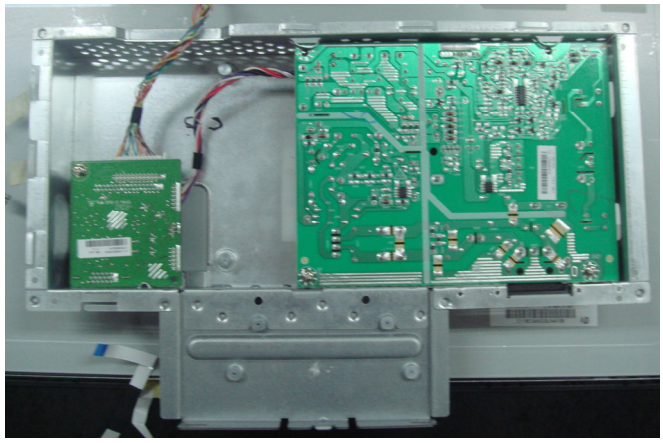
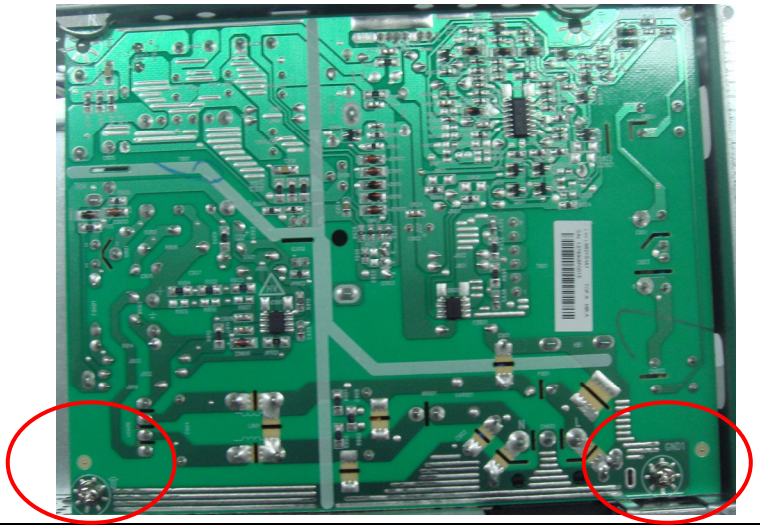
1. Switch the chroma-7120 to 6500K **channel.**
2. The chroma 7120 will show x = 313 ±15, y = 329 ±15, Y >200 cd/m^2
3. Switch the chroma 7120 l to **RGB MODE** (with press “MODE” button to change)
4. Adjust the RED of color sRGB on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color sRGB on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color sRGB on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4,5,6) until chroma 7120 RGB value meet the tolerance =100±5

D. Press reset key and Turn the Power-button “off to on” to quit from factory mode.

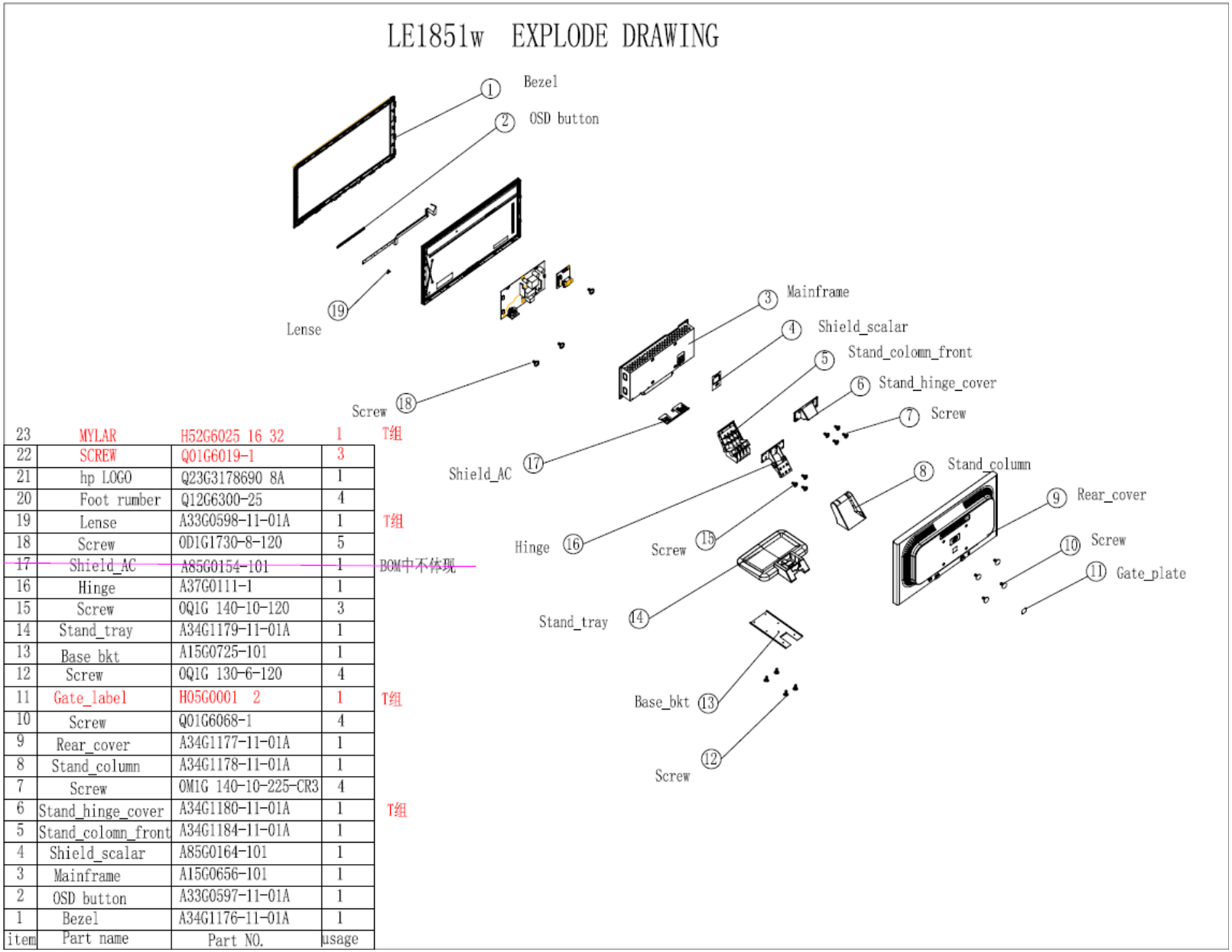
11. Mechanical Instructions

Step	Figure	Description
Preparation		Lay the monitor on a flat, soft and clean surface.
Remove the stand	 	Remove the decorate cover and the screws to remove the stand.
Remove the back cover	 	Remove the back cover

Remove the bezel		Remove the screws to remove the bezel
Remove the main frame	 	Remove the screws marked in red and to remove the main frame
Remove the panel		Remove the panel

Remove main board and power board	  	1.Remove the screws marked in red to remove the Power Boardand Main Board. 2.Disconnect the connector and remove the Power Board and Main Board.

12. Monitor Exploded View



item	Part name	Part NO.	usage	
23	MYLAR	H52G6025 16 32	1	T组
22	SCREW	Q01G6019-1	3	
21	hp LOGO	Q23G3178690 8A	1	
20	Foot rumber	Q12G6300-25	4	
19	Lense	A33G0598-11-01A	1	T组
18	Screw	0D1G1730-8-120	5	
17	Shield_AC	A85G0154-101	1	BOM中不体现
16	Hinge	A37G0111-1	1	
15	Screw	0Q1G 140-10-120	3	
14	Stand_tray	A34G1179-11-01A	1	
13	Base_bkt	A15G0725-101	1	
12	Screw	0Q1G 130-6-120	4	
11	Gate_label	H05G0001 2	1	T组
10	Screw	Q01G6068-1	4	
9	Rear_cover	A34G1177-11-01A	1	
8	Stand_column	A34G1178-11-01A	1	
7	Screw	0M1G 140-10-225-CR3	4	
6	Stand_hinge_cover	A34G1180-11-01A	1	T组
5	Stand_colomn_front	A34G1184-11-01A	1	
4	Shield_scalar	A85G0164-101	1	
3	Mainframe	A15G0656-101	1	
2	OSD button	A33G0597-11-01A	1	
1	Bezel	A34G1176-11-01A	1	

13. BOM List

T89MM5DBRWHPNNE

Location	Part No.	Description	Remark
	040G 58162435A	P/N LABEL FOR MANUAL PE BAG	
	040G 581654 3A	CARTON LABEL	
	050G 600 1 W	WHITE STRAP	
	052G 1185	MIDDLE TAPE	
	052G 1186	SMALL TAPE	
	052G 1211 A	Conductive Tape 55mm *45mm *0.08mm	
E08902	089G 728HAAE03	SINGNAL CABLE 1.8M	
E08901	089G404A19N IS	POWER CORD	
E09501	095G8018 3XE32	HARNESS 30P-24P 150MM	
	0D1G1730 8120	SCREW	
	0M1G 140 10225 CR3	SCREW	
	705GH934005	HP 18.5" STAND ASS'Y	
	705GH934006	HP 18.5" KEY PADD ASS'Y	
	750GLM185B1232Z0HP	PANEL M185B1-L02 C2 NB CMO	
	A15G0656101	mainframe	
	A34G1177AAA 3B0130	Rear cover LE1851	
	H40G 18N690 1A	ID LABEL	
	H40G 18N690 2A	ID LABEL	
	H40G 581690 8A	TCO'03 LABEL	
	H40G 58169010A	防盗标签	
	H41G160669045A	EMEA DOC KIT(531344-A21)	
	H41G780669057A	RTF CARD 488557-141	
	H41G780669059A	RTF CARD 407430-005	
	H41G780669070A	QSG 531343-B21	
	H41G780669071A	RESOLUTION 311618-008	
	H44G8022101	EPS_LE1851w	
	H44G8022201	EPS_LE1851w	
	H44G8022690 1A	carton	
	H45G 77 6	PE PACKING	
	H45G 87 4 H A	PE BAG FOR BASE	
	H45G 87 18 4H A	EPE COVER	
	H52G 1250006	Conductive Tape 100mm*50mm*0.08mm	
	PWPC9821MHA1	POWER BOARD G2852-D-HP-X-1-090309	
	Q01G6068 1	screw	
	Q23G3178690 8A	logo	
	Q45G 76 28 H A	PE BAG FOR MANUAL	
	0Q1G 130 6120	SCREW (T3X6)	

	0Q1G 140 12120	SCREW 4X12	
	A15G0725101	Base_btm_plate	
	A34G1178AAA 1B0100	Stand_column LE1851	
	A34G1179AAA 1B0130	BASE LE1851	
	A34G1184AAA 1B0100	Stand_column_front LE1851	
	A37G0111 1	Hinge	
	A33G0597DAMA1L0100	button LE1851	
	A34G1176AAAA1B0130	Bezel LE1851	
	KEPC9HA1	KEY BOARD G3457-1-X-X-1-090317	
	Q01G6019 1	SCREW	
	756GH9CB HP001	SCALER BOARD-CBPC9M5HPH1	
U402	056G1133713	IC PM25LV010A-100SCE SOIC-8	
SMTCR-U402	100GHMM8000WT1	MCU ASS'Y-056G1133713	
CN701	033G3802 7B Y W	WAFER	
CN404	033G8019 6C	CONN.6P 1.0 DIP	
CN403	033G8043 24 H6W61	WAFER	
	040G 45762412B	CBPC LABEL	
X401	093G 2253B H	XAT01431AFI1H-3OHX AT-49 14.31818MHZ	
CN101	088G 35315F XH	D-SUB 15PIN VERTICAL CONN WITH SCREW	
CN801	033G8021 2E F	WAFER	
CN802	033G8021 2E F	WAFER	
	040G 45762412B	CBPC LABEL	
IC902	056G 139 3A	IC PC123Y22FZ0F	
NR901	061G 58080 WT6872	RST NTCR 8 OHM	
C908	063G107K2246S1	X2 CAP 0.22UF K 275VAC	
C904	063G107K2246S1	X2 CAP 0.22UF K 275VAC	
C803	065G 3J3006ET	30PF 5% SL 3KV TDK	
C801	065G 3J3006ET	30PF 5% SL 3KV TDK	
C902	065G305M1022BP	Y2 1000PF M 250VAC Y5P	
C901	065G305M1022BP	Y2 1000PF M 250VAC Y5P	
C900	065G306M3322BP	3300PF 20%	
C907	067G 40Z10115K	CAP 105℃ 100UF M 450V	
C940	067G215A1024KV	EC 1000uF 25V 12.5*20mm	
C922	067G215D4714KV	E.C 105℃ CAP 470UF M 25V ED SERIES	
C802	067G215D4714KV	E.C 105℃ CAP 470UF M 25V ED SERIES	
C917	067G215D6814KV	CAP 105℃ 680uF M 25V	
C918	067G215D6814KV	CAP 105℃ 680uF M 25V	
C915	067G215S4713KV	EC 105℃ CAP 470UF M 16V	
L904	073G 253 91 V1	CHOKE COIL 1.1uH	
L903	073G 253 91 V1	CHOKE COIL 1.1uH	

L901	073L 174 40 HG	GBQM4.778.391	
T801	080GL17T 40 H	XFMR INVERTER DADON	
T901	080GL19T 26 T	X'FMR 610uH SRW24LQL-T15H016	
CN901	087G 501 32 S	AC SOCKET	
D905	093G3006 1 1	31DQ06FC3 NIHON INTER	
CN902	095G 825 7WE01	HARNESS 7P-7P 210MM	
	705GH957003	Q901 ASS'Y	
	705GQ793053	D906 ASS'Y	
HS1	H85G0002 1	SHIELD	
BD901	093G 50460 28	BRIDGE DIODE KBP208G LITEON	
SW001	077G 500 5H XL	DOME SWITCH 5PCS	
CN001	089G 76J 6504	FFC CABLE	
C407	067G 2151007RB	EC 10uF M 50V 5*11mm	
C419	067G 4051013PB	EC 100uF M 16V 5*11mm	
C701	067G 4051013PB	EC 100uF M 16V 5*11mm	
C706	067G 4051013PB	EC 100uF M 16V 5*11mm	
C703	067G 4051013PB	EC 100uF M 16V 5*11mm	
U401	056G 562557	IC TSUM1PFR-LF	
U701	056G 563114	IC G1117-33T63Uf 1A/3.3V SOT-223	
U101	056G 662 13	IC AZC099-04S SOT23-6L	
U102	056G 662 13	IC AZC099-04S SOT23-6L	
U403	056G1133 32	IC M24C04-WMN6TP SO8	
U104	056G1133 34	M24C02-WMN6TP	
U402	056G1133713	IC PM25LV010A-100SCE SOIC-8	
Q402	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q701	057G 417 12 T	KEC 2N3904S-RTK/PS	
Q702	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q401	057G 763 1	A03401 SOT23 BY AOS(A1)	
R417	061G0402100 6857	RST CHIP 10R 1/16W 5%	
R423	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R422	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R418	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R416	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R414	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R413	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R412	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R410	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R409	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R408	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R407	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	

R104	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R110	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R111	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R113	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R114	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R116	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R117	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R119	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R403	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R404	061G0402101 6805	RST CHIPR 100 OHM +-5% 1/16W	
R102	061G0402102 6805	RST CHIPR 1k OHM +-5% 1/16W	
R103	061G0402102 6805	RST CHIPR 1k OHM +-5% 1/16W	
R420	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R421	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R424	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R427	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R428	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R430	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R701	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R702	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R419	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R415	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R406	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R405	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R402	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R121	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R120	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R109	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R108	061G0402103 6805	RST CHIPR 10K OHM +-5% 1/16W	
R432	061G0402104 6857	RST CHIP 100K 1/16W 5%	
R106	061G0402222 6857	RST CHIPR 2.2KOHM +-5% 1/16W F	
R105	061G0402222 6857	RST CHIPR 2.2KOHM +-5% 1/16W F	
R401	061G0402390 0F6857	RST CHIP 390R 1/16W 1%	
R425	061G0402392 6805	RST CHIPR 3.9KOHM +-5%	
R426	061G0402392 6805	RST CHIPR 3.9KOHM +-5%	
R112	061G0402471 6857	RST CHIPR 470 OHM +-5% 1/16W	
R431	061G0402472 6857	RST CHIPR 4.7KOHM +-5% 1/16W	
R703	061G0402472 6857	RST CHIPR 4.7KOHM +-5% 1/16W	
R411	061G0402622 6857	RST CHIP 56K 5% 1/16W	
R107	061G0402750 6857	RST CHIPR 75 OHM +-5% 1/16W	

R115	061G0402750 6857	RST CHIPR 75 OHM +-5% 1/16W	
R118	061G0402750 6857	RST CHIPR 75 OHM +-5% 1/16W	
R101	061G0603000 6857	RST CHIPR 0 OHM +-5% 1/10W	
R429	061G1206331 6857	RST CHIP 330 OHM 1/8W 5%	
C409	065G0402100 316785	CAP 0402 10PF J 50V NPO	
C410	065G0402100 316785	CAP 0402 10PF J 50V NPO	
C106	065G0402102 326785	CHIP 1000pF 50V X7R	
C414	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C415	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C416	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C417	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C418	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C702	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C704	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C707	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C413	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C115	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C401	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C402	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C403	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C404	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C405	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C408	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C412	065G0402104 126785	CAP CHIP 0402 0.1UF 16V X7R	
C101	065G0402220 316785	CAP MLCC 22PF 50V NPO	
C103	065G0402220 316785	CAP MLCC 22PF 50V NPO	
C406	065G0402224 176784	CAP 0402 0.22UF 16V Y5V	
C411	065G0402224 176784	CAP 0402 0.22UF 16V Y5V	
C112	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C110	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C109	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C107	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C105	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C102	065G0402473 126785	CAP MLCC 47NF 16V X7R	
C104	065G0402509 316785	CAP MLCC 5PF 50V NPO	
C108	065G0402509 316785	CAP MLCC 5PF 50V NPO	
C111	065G0402509 316785	CAP MLCC 5PF 50V NPO	
FB402	071G 56K121 M	CHIP BEAD	
FB401	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 bullwill	
FB101	071G 59K190 B	19 OHM BEAD	

FB102	071G 59K190 B	19 OHM BEAD	
FB103	071G 59K190 B	19 OHM BEAD	
D101	093G 64 42 P	BAV70 SOT23 BY PAN JIT	
ZD101	093G 39S 24 T	RLZ 5.6B LLDS	
D703	093G 52S 7 T	DIODE SM4001A 1A/50V SMA	
	715G3083 2 6403	MAIN BOARD PCB	
Q901	057G 724 11	STP9NK65ZFP	
	0M1G 930 8120	SCREW	
HS3	H90G0009 1	HEAT SINK	
D906	093G 60267	SP10100	
	0M1G 930 8120	SCREW	
HS2	Q90G6263 3	HEAT SINK	
IC801	056G 379 22	IC TL494IDR SOIC-16	
IC901	056G 379 76	IC LD7552BPS SOP-8	
Q801	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q806	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q811	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q903	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q804	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q812	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q802	057G 600 55	P5506 HVG SO-8	
Q807	057G 759 2	RK7002FD5T116 SOT-23 BY ROHM	
Q809	057G 759 2	RK7002FD5T116 SOT-23 BY ROHM	
Q808	057G 760 4B	PDTA144WK SOT346	
Q805	057G 760 5B	PDTC144WK SOT346	
R823	061G0603000 6857	RST CHIPR 0 OHM +-5% 1/10W	
R818	061G0603100 1F6857	RST CHIP 1.0 KOHM +-1% 1/10W	
R824	061G0603100 1F6857	RST CHIP 1.0 KOHM +-1% 1/10W	
R827	061G0603100 1F6857	RST CHIP 1.0 KOHM +-1% 1/10W	
R926	061G0603100 1F6857	RST CHIP 1.0 KOHM +-1% 1/10W	
R942	061G0603100 1F6857	RST CHIP 1.0 KOHM +-1% 1/10W	
R820	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R828	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R832	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R863	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R817	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R808	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R807	061G0603100 2F6857	RST CHIP 10K 1/10W 1%	
R835	061G0603105 6857	RST CHIP 1M 1/10W 5%	
R862	061G0603105 6857	RST CHIP 1M 1/10W 5%	

R801	061G0603150 1F6857	RST CHIPR 1.5k OHM 1% 1/10W	
R814	061G0603150 1F6857	RST CHIPR 1.5k OHM 1% 1/10W	
R930	061G0603243 1F6857	RST CHIPR 2.43KOHM +-1% 1/10W	
R940	061G0603330 2F6857	RST CHIPR 33KOHM +-1% 1/10W	
R927	061G0603360 1F6857	RST CHIPR 3.6KOHM +-1% 1/10W	
R851	061G0603680 1F6857	RST CHIPR 6.8KOHM +-1% 1/10W	
R841	061G0603680 2F6857	RST CHIPR 68KOHM +-1% 1/10W	
R864	061G06036803FF	RST CHIPR 680 KOHM +-1% 1/10W	
R854	061G0603683	RST CHIPR 68K OHM +-5% 1/10W	
R853	061G0603683 6857	RST CHIPR 68KOHM +-5% 1/10W	
R803	061G0603684 6857	RST CHIPR 680KOHM +-5% 1/10W	
R802	061G0603750 1F6857	RST CHIPR 7.5KOHM +-1% 1/10W	
JR902	061G0805000 6857	RST CHIPR 0 OHM +-5% 1/8W	
R831	061G0805100 1F6857	RST CHIPR 1KOHM +-1% 1/8W	
R822	061G0805100 1F6857	RST CHIPR 1KOHM +-1% 1/8W	
R821	061G0805100 1F6857	RST CHIPR 1KOHM +-1% 1/8W	
R915	061G0805100 3F6857	RST CHIPR 100KOHM +-1% 1/8W	
R804	061G0805101 6857	RST CHIPR 100 OHM +-5% 1/8W	
R826	061G0805102 6857	RST CHIPR 1 KOHM +-5% 1/8W	
R925	061G0805102 6857	RST CHIPR 1 KOHM +-5% 1/8W	
R939	061G0805102 6857	RST CHIPR 1 KOHM +-5% 1/8W	
R938	061G0805103 6857	RST CHIPR 10 KOHM +-5% 1/8W	
R924	061G0805151 6857	RST CHIPR 150 OHM +-5% 1/8W	
R825	061G0805220 6857	RST CHIPR 22 OHM +-5% 1/8W	
R829	061G0805220 6857	RST CHIPR 22 OHM +-5% 1/8W	
R839	061G0805220 6857	RST CHIPR 22 OHM +-5% 1/8W	
R850	061G0805220 6857	RST CHIPR 22 OHM +-5% 1/8W	
R943	061G0805471 6857	RST CHIPR 470 OHM +-5% 1/8W	
R837	061G0805473 6857	RST CHIPR 47KOHM +-5% 1/8W	
R810	061G0805510 2F6857	RST CHIPR 51KOHM +-1% 1/8W	
JR801	061G1206000 6857	RST CHIP 0 OHM 1/4W 5%	
JR901	061G1206000 6857	RST CHIP 0 OHM 1/4W 5%	
F801	061G1206000 46857	RST CHIPR 0 OHM +-5% 1/4W	
F905	061G1206000 46857	RST CHIPR 0 OHM +-5% 1/4W	
R910	061G1206100 6857	RST CHIPR 10 OHM +-5% 1/4W	
R920	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	
R935	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	
R961	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	
R962	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	
R919	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	

R918	061G1206101 6857	RST CHIPR 100 OHM +-5% 1/4W	
R855	061G1206150 6857	RST CHIPR 15 OHM +-5% 1/4W	
R856	061G1206150 6857	RST CHIPR 15 OHM +-5% 1/4W	
R912	061G1206221 6857	RST CHIPR 220 OHM +-5% 1/4W	
R933	061G1206304 6857	RST CHIPR 300KOHM +-5% 1/4W	
R932	061G1206304 6857	RST CHIPR 300KOHM +-5% 1/4W	
R904	061G1206304 6857	RST CHIPR 300KOHM +-5% 1/4W	
R909	061G1206519 6857	RST CHIPR 5.1 OHM +-5% 1/4W	
R900	061G1206684 6857	RST CHIPR 680KOHM +-5% 1/4W	
R901	061G1206684 6857	RST CHIPR 680KOHM +-5% 1/4W	
R902	061G1206684 6857	RST CHIPR 680KOHM +-5% 1/4W	
C932	065G0603102 326785	1000PF +-10% 50V X7R	
C834	065G0603104 226785	CAP 0603 0.1UF +-10% 25V X7R	
C825	065G0603104 226785	CAP 0603 0.1UF +-10% 25V X7R	
C807	065G0603104 226785	CAP 0603 0.1UF +-10% 25V X7R	
C821	065G0603104 226785	CAP 0603 0.1UF +-10% 25V X7R	
C823	065G0603222 326785	CAP 0603 2.2NF 50V X7R	
C819	065G0603222 326785	CAP 0603 2.2NF 50V X7R	
C842	065G0603223 326785	CHIP 0.022UF 50V X7R 0603	
C928	065G0805103 326826	CAP 0805 10NF K 50V X7R	
C931	065G0805104 326805	CAP 0805 0.1UF +-10% 50V X7R	
C930	065G0805104 326805	CAP 0805 0.1UF +-10% 50V X7R	
C924	065G0805104 326805	CAP 0805 0.1UF +-10% 50V X7R	
C911	065G0805104 326805	CAP 0805 0.1UF +-10% 50V X7R	
C824	065G0805104 326805	CAP 0805 0.1UF +-10% 50V X7R	
C817	065G0805105 226784	CAP CHIP 0805 1uF K 25V X7R	
C822	065G080510522K T	CAP CHIP 0805 1UF K 25V X7R	
C838	065G0805152 316826	CAP 0805 1.5nF J 50V NPO	
C839	065G0805152 316826	CAP 0805 1.5nF J 50V NPO	
C820	065G080522131G6857	CAP 0805 220PF G 50V NPO	
C845	065G0805225 126805	MLCC 0805 2.2UF K 16V X7R	
C909	065G0805471 316857	CHIP 470PF 50V NPO	
C912	065G1206102 726857	CHIP 1000PF 500V X7R	
C929	065G1206102 726857	CHIP 1000PF 500V X7R	
D801	093G 6433S	DIODE BAV99 SEMTECH	
D802	093G 6433S	DIODE BAV99 SEMTECH	
ZD906	093G 39S 20 T	RLZ22B LLDS	
ZD922	093G 39S 25 T	RLZ5.1B LLDS	
ZD921	093G 39S 40 T	RLZ 13B LLDS	
ZD902	093G 39S 40 T	RLZ 13B LLDS	

ZD905	093G 39S 44 T	RLZ18B LLDS	
D916	093G 64S522SEM	LL4148	
D915	093G 64S522SEM	LL4148	
D903	093G 64S522SEM	LL4148	
D817	093G 64S522SEM	LL4148	
D814	093G 64S522SEM	LL4148	
D812	093G 64S522SEM	LL4148	
D807	093G 64S522SEM	LL4148	
D806	093G 64S522SEM	LL4148	
D805	093G 64S522SEM	LL4148	
R004	061G06031501FF	RST CHIPR 1.5KOHM +-1% 1/10W FENGHUA	
R002	061G06031501FF	RST CHIPR 1.5KOHM +-1% 1/10W FENGHUA	
R003	061G06033301FF	RST CHIPR 3.3KOHM +-1% 1/10W FENGHUA	
R001	061G06033301FF	RST CHIPR 3.3KOHM +-1% 1/10W FENGHUA	
LED001	081G 14501 GP	LED GPTD1210YGC3-HB GUANGPU	
ZD002	093G 39S 34 T	UDZSNP5.6B ROHM	
ZD001	093G 39S 34 T	UDZSNP5.6B ROHM	
	715G3457 1 6905	KEY BOARD PCB	
CN901	006G 31500	EYELET	
IC903	056G 158 10 T	IC AS431AZTR-E1 TO-92	
R908	061G152M10452T	RST MOFR 100KOHM +-5% 2WS	
R946	061G152M15152T6W56	RST MOFR 150 OHM +-5% 2WS	
R914	061G152M47852T6W56	RST MOFR 0.47 OHM +-5% 2WS"	
C938	065G 2K152 1T6921	1.5NF/2KV Y5P +-10%	
C906	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
C903	067G 2152207NT	KY50VB22M-TP5 5*11	
FB801	071G 55 9 T6100	FERRITE BEAD 3.5*6*0.8-T52	
FB901	071G 55 29 6100	PERRITE BEAD	
F901	084G 56 3 B	FUSE 3.15A 250V	
D900	093G 6026T52T	RECTIFIER DIODE FR107	
D901	093G 6038T52T	FR103	
J812	095G 90 23	JUMPER WIRE	
J813	095G 90 23	JUMPER WIRE	
J901	095G 90 23	JUMPER WIRE	
J903	095G 90 23	JUMPER WIRE	
J904	095G 90 23	JUMPER WIRE	
J906	095G 90 23	JUMPER WIRE	
J907	095G 90 23	JUMPER WIRE	
J908	095G 90 23	JUMPER WIRE	
J909	095G 90 23	JUMPER WIRE	

J911	095G 90 23	JUMPER WIRE	
J902	095G 90 23	JUMPER WIRE	
J905	095G 90 23	JUMPER WIRE	
J811	095G 90 23	JUMPER WIRE	
J801	095G 90 23	JUMPER WIRE	
J802	095G 90 23	JUMPER WIRE	
J803	095G 90 23	JUMPER WIRE	
J804	095G 90 23	JUMPER WIRE	
J805	095G 90 23	JUMPER WIRE	
J806	095G 90 23	JUMPER WIRE	
J807	095G 90 23	JUMPER WIRE	
J809	095G 90 23	JUMPER WIRE	
	715G2852 D HPL834	POWER BOARD PCB	

14. Different Parts List

Diversity of T89MM5DBRWHPNCE compared with T89MM5DBRWHPNNE			
Location	**Part No.**	**Description**	**Remark**
	750GLM185B1232D0HP	PANEL M185B1-L02 C2 NB CMO	

Diversity of T89SM5DBRWHPNNE compared with T89MM5DBRWHPNNE			
Location	**Part No.**	**Description**	**Remark**
E750	750GLS185AT112Z0HP	PANEL LTM185AT01 Q01(001) SZ SEC	
E750	750GLS185AT11CZ0HP	PANEL LTM185AT01 Q02(002) FQ SEC	2nd source
	756GH9CB HP002	SCALER BOARD(CBPC9M5HPH1)	
	A34G1177AAA 1B0130	Rear cover LE1851	
	PWPC9821SHA1	POWER BOARD G2852-D-HP-X-1-090225	

Diversity of T89SM5DBRWHPNCE compared with T89MM5DBRWHPNNE			
Location	**Part No.**	**Description**	**Remark**
E750	750GLS185AT112Z0HP	PANEL LTM185AT01 Q01(001) SZ SEC	
E750	750GLS185AT11CZ0HP	PANEL LTM185AT01 Q02(002) FQ SEC	2nd source
	756GH9CB HP002	SCALER BOARD(CBPC9M5HPH1)	
	A34G1177AAA 1B0130	Rear cover LE1851	
	PWPC9821SHA1	POWER BOARD G2852-D-HP-X-1-090225	