Service
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Service Manual

Horizontal Frequency
30 - 83kHz

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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	Release Date	Revision History	TPV Model Name
A00	Feb.-21-2012	Initial release	TIBKN22QAGE6HNE
			TIBKN22KAGE6HNE
A01	Feb.-20-2013	Add new models	TIAKN22LAGACHNE
			TIB2N22BAGA1HNE
			TIB2N22BDFA1HNE
			TIB2N22KAGE6HNE
			TIB2N22QAGE6HNE
			TIBKN22BDFA1HNE
			TIC1N22BAGA1HNE
			TIC1N22KAGE6HNE
			TIC1N22QAGE6HNE
			TICAN22KAGE6HNE
			TICAN22KAGE7HNE
			TICAN22QAGE7HNE

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.
Hereafter throughout this manual, AOC Company will be referred to as AOC.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design.
Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:
DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.
Take care during handling the LCD module with backlight unit
-Must mount the module using mounting holes arranged in four corners.
-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
-Make certain that treatment person’s body is grounded through wristband.
-Do not leave the module in high temperature and in areas of high humidity for a long time.
-Avoid contact with water as it may a short circuit within the module.
-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

1.Monitor Specifications

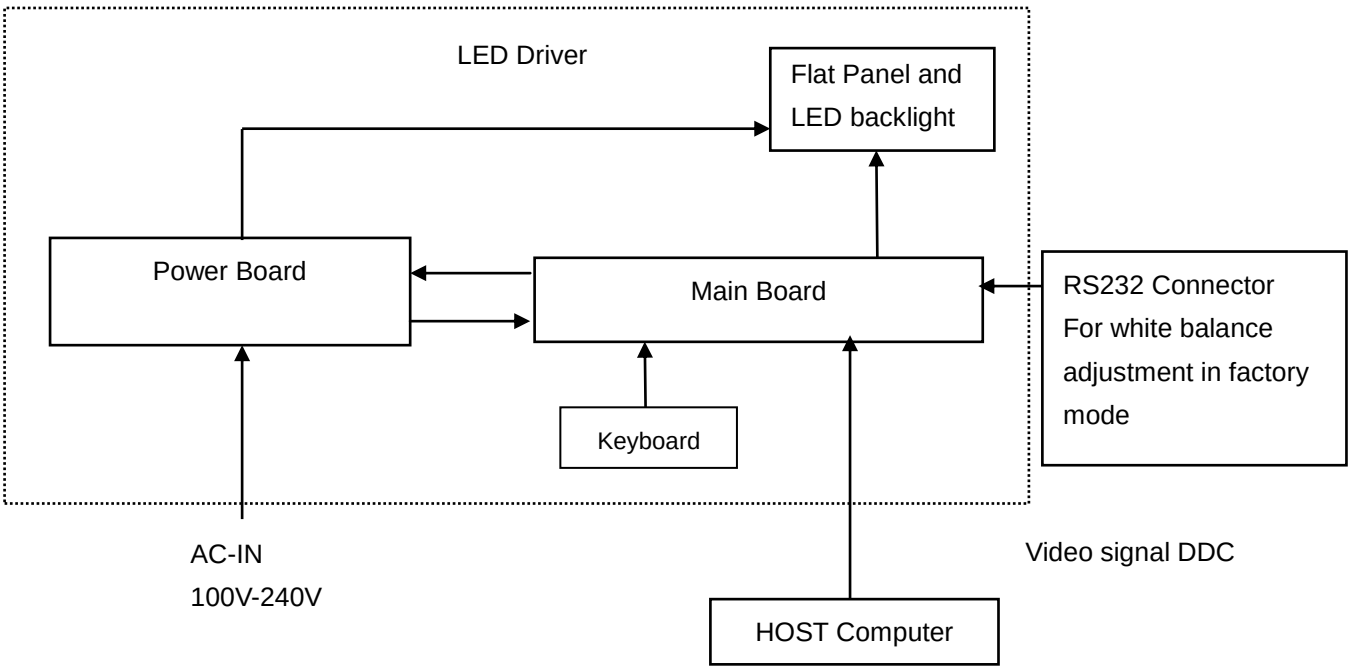
Panel	Model name	E2250SWDN
	Driving system	TFT Color LCD
	Viewable Image Size	54.7cm diagonal
	Pixel pitch	0.24825mm(H) x 0.24825mm(V)
	Video	R, G, B Analog Interface
	Separate Sync.	H/V TTL
	Display Color	16.7M Colors
	Dot Clock	165MHz
Resolution	Horizontal scan range	30 kHz - 83 kHz
	Horizontal scan Size(Maximum)	476.64mm
	Vertical scan range	50 Hz - 76 Hz
	Vertical scan Size(Maximum)	268.11mm
	Optimal preset resolution	1920 x 1080@60Hz
	Plug & Play	VESA DDC2B/CI
	Input Connector	D-Sub 15pin , DVI 24 pin
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, Positive , DVI TMDS
	Power Source	100-240V~, 50/60Hz
	Power Consumption	Active 23W
		Standby < 0.5 W
	Off timer	0-24 hrs
Physical Characteristics	Connector Type	15-pin Mini D-Sub , 24 pin DVI
	Signal Cable Type	Detachable
	Dimensions & Weight:	
	Height (with base)	379.95mm
	Width	511.18mm
	Depth	190.00mm
	Weight (monitor only)	3.28kg
Environmental	Temperature:	
	Operating	0° to 40°
	Non-Operating	-25°to 55°
	Humidity:	
	Operating	10% to 85% (non-condensing)
	Non-Operating	5% to 93% (non-condensing)

2.LCD Monitor Description

The LCD MONITOR will contain a main board, a power board, and 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. Operating Instructions

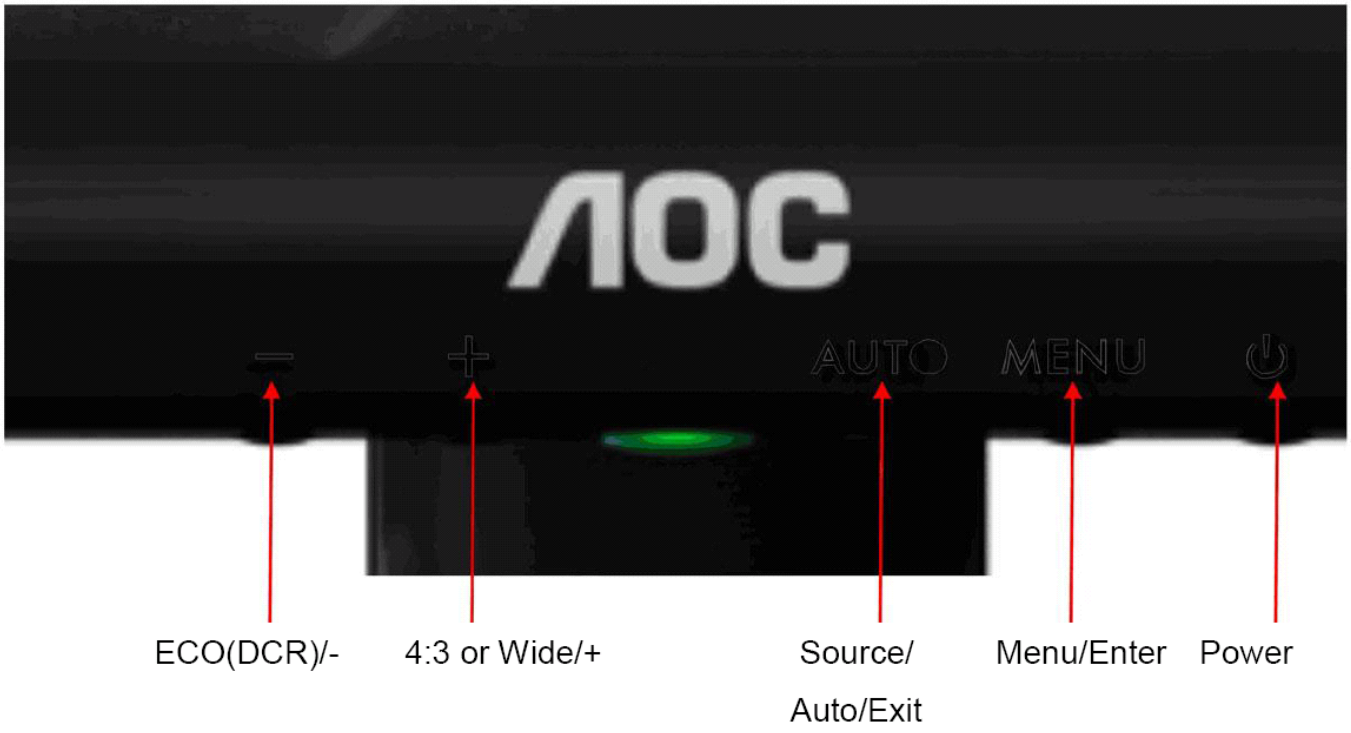
3.1 General Instructions

Press the power button to turn the monitor on or off. The other control knobs are located at front panel of the monitor (See Figure). By changing these settings, the picture can be adjusted to your personal preferences.

* The power cord should be connected.

* Press the power button to turn on the monitor. The power indicator will light up.

3.2 Control Buttons and Connections



Power

Press the Power button to turn on/off the monitor.

Eco (DCR)/ -

Press the Eco key continuously to select the Eco mode of brightness and DCR on when there is no OSD. (Eco mode hot key may not be available in all models).

4 : 3 or wide

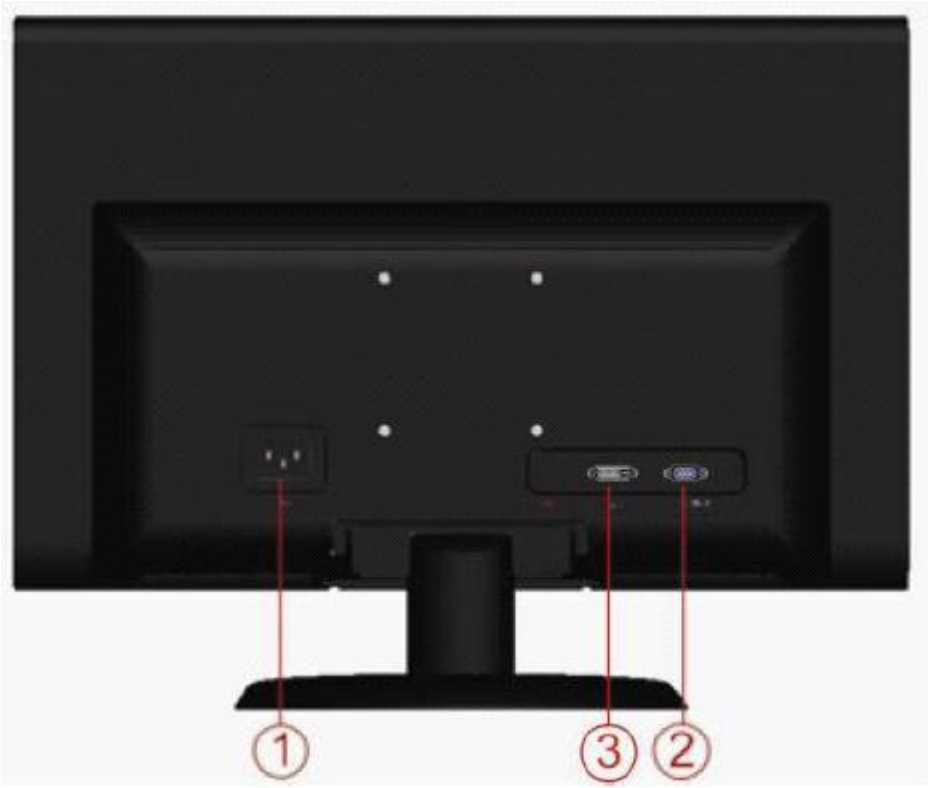
When there is no OSD, press + continuously to change 4:3 or wide image ratio. (If the product screen size is 4:3 or input signal resolution is wide format, the hot key is disable to adjust.)

Auto / Exit

When there is no OSD, press Auto/Source button continuously about 3 second to do auto configure

Source hot key

When the OSD is closed, press Source button will be Source hot key function. Press Source button continuously to select the input source showed in the message bar, press Menu/Enter button to change to the source selected.



1. Power

2. Analog (DB-15 VGA cable)

3. DVI

To protect equipment, always turn off the PC and LCD monitor before connecting.

1 Connect the power cable to the AC port on the back of the monitor.

2 Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.

3. Connect one end of the DVI cable to the back of the monitor and connect the other end to the computer‟s DVI port.

4 Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

3.3 OSD Setting

Basic and simple instruction on the control keys.

1) Press the **MENU-button** to activate the OSD window.

2) Press **- or +** to navigate through the functions. Once the desired function is highlighted, press the **MENU-button** to activate it. press **- or +** to navigate through the sub-menu functions. Once the desired function is highlighted, press **MENU-button** to activate it.

3) Press **- or +** to change the settings of the selected function. Press **AUTO** to exit. If you want to adjust any other function, repeat steps 2-3.

4) OSD Lock Function: To lock the OSD, press and hold the **MENU button** while the monitor is off and then press **power button** to turn the monitor on. To un-lock the OSD - press and hold the **MENU button** while the monitor is off and then press **power button** to turn the monitor on.

Notes:

1) If the product has only one signal input, the item of "Input Select" is disable to adjust.

2) If the product screen size is 4:3 or input signal resolution is wide format, the item of "Image Ratio" is disable to adjust.

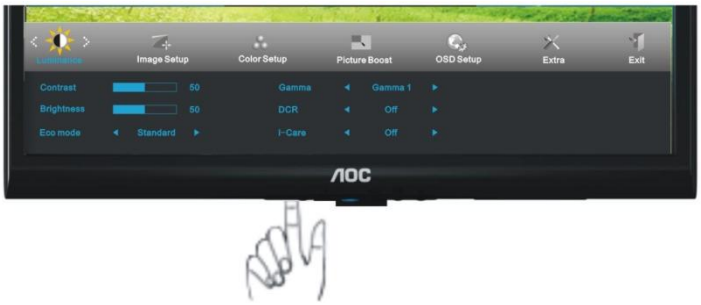
3) One of DCR, Color Boost, and Picture Boost functions is active, the other two function is turned off accordingly.

Luminance

1

Press **MENU** (Menu) to display menu.

2



Press − or + to select (Luminance), and press **MENU** to enter.

3

Press − or + to select submenu, and press **MENU** to enter.

4

Press − or + to adjust.

5

Press **AUTO** two times to exit.

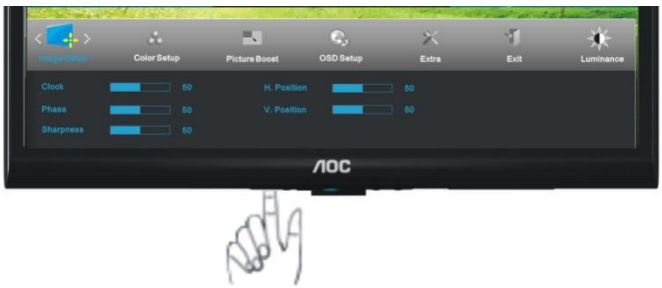
	Brightness	0-100		Backlight Adjustment
	Contrast	0-100		Contrast from Digital-register.
	Eco mode	Standard		Standard Mode
		Text		Text Mode
		Internet		Internet Mode
		Game		Game Mode
		Movie		Movie Mode
		Sports		Sports Mode
	Gamma	Gamma1		Adjust to Gamma1
		Gamma2		Adjust to Gamma 2
		Gamma3		Adjust to Gamma 3
	DCR	Off		Disable dynamic contrast ratio
		On		Enable dynamic contrast ratio

Image Setup

1

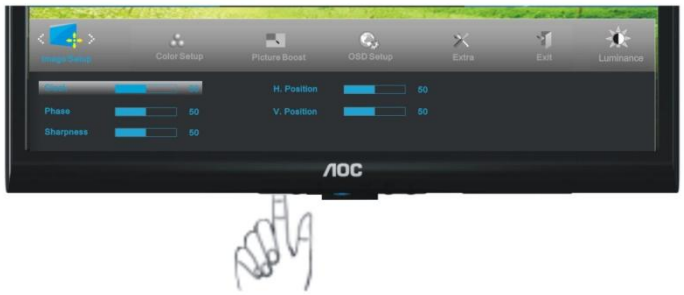
Press MENU (Menu) to display menu.

2



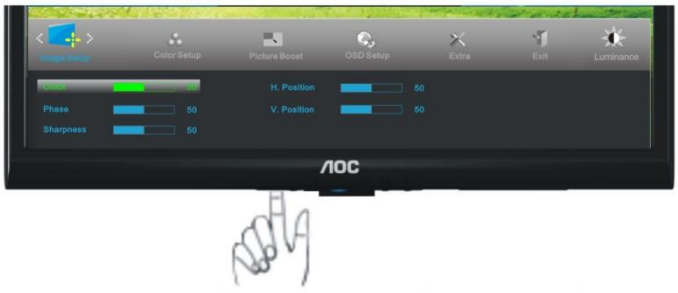
Press − or + to select  (Image Setup), and press MENU to enter.

3



Press − or + to select submenu, and press MENU to enter.

4



Press − or + to adjust.

5

Press **AUTO** two times to exit.

	Clock	0-100	Adjust picture Clock to reduce Vertical-Line noise.
	Phase	0-100	Adjust Picture Phase to reduce Horizontal-Line noise
	Sharpness	0-100	Adjust picture sharpness
	H.Position	0-100	Adjust the horizontal position of the picture.
	V.Position	0-100	Adjust the vertical position of the picture.

Color Setup

1

Press MENU (Menu) to display menu.

2

Press − or + to select (Color Setup), and press MENU to enter.

3

Press − or + to select submenu, and press MENU to enter.

4

Press − or + to adjust.

5

Press **AUTO** two times to exit.

	Color setup.	Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
		Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User	Red	Red Gain from Digital-register
			Green	Green Gain Digital-register.
			Blue	Blue Gain from Digital-register
	DCB Mode	Full Enhance	on or off	Disable or Enable Full Enhance Mode
		Nature Skin	on or off	Disable or Enable Nature Skin Mode
		Green Field	on or off	Disable or Enable Green Field Mode
		Sky-blue	on or off	Disable or Enable Sky-blue Mode
		AutoDetect	on or off	Disable or Enable AutoDetect Mode
	DCB Demo		On or off	Disable or Enable Demo

Picture Boost

1

Press MENU (Menu) to display menu.

2

Press − or + to select (Picture Boost), and press MENU to enter.

3

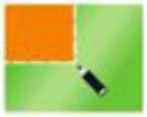
Press − or + to select submenu, and press MENU to enter.

4

Press − or + to adjust.

5

Press **AUTO** two times to exit.

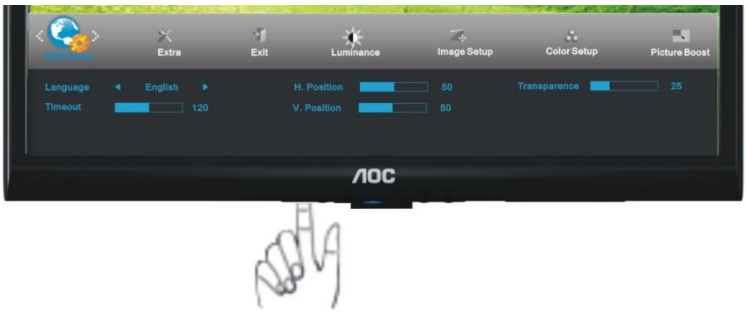
	Frame Size	14-100	Adjust Frame Size
	Brightness	0-100	Adjust Frame Brightness
	Contrast	0-100	Adjust Frame Contrast
	H. position	0-100	Adjust Frame horizontal Position
	V.position	0-100	Adjust Frame vertical Position
	Bright Frame	on or off	Disable or Enable Bright Frame

OSD Setup

1

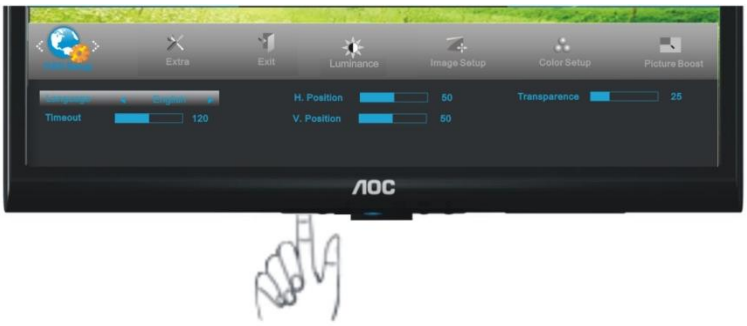
Press **MENU** (Menu) to display menu.

2



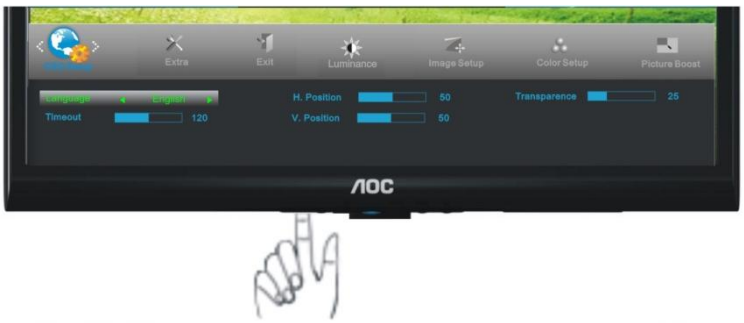
Press **−** or **+** to select (OSD Setup), and press **MENU** to enter.

3



Press **−** or **+** to select submenu, and press **MENU** to enter.

4



Press **−** or **+** to adjust.

5

Press **AUTO** two times to exit.

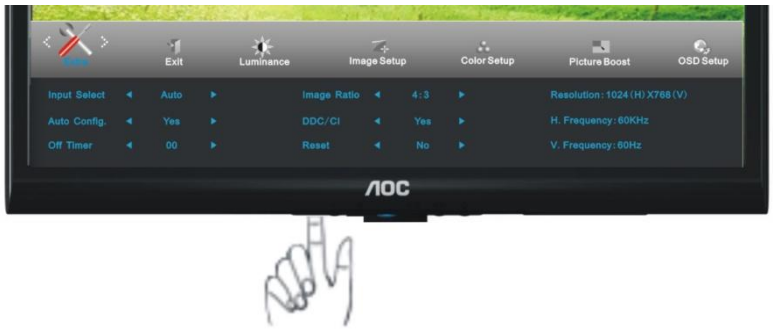
	H.Position	0-100	Adjust the horizontal position of OSD
	V.Position	0-100	Adjust the vertical position of OSD
	Timeout	5-120	Adjust the OSD Timeout
	Transparence	0-100	Adjust the transparence of OSD
	Language		Select the OSD language

Extra

1

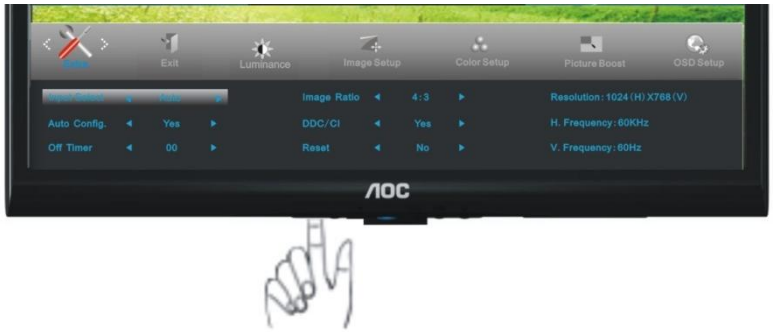
Press **MENU** (Menu) to display menu.

2



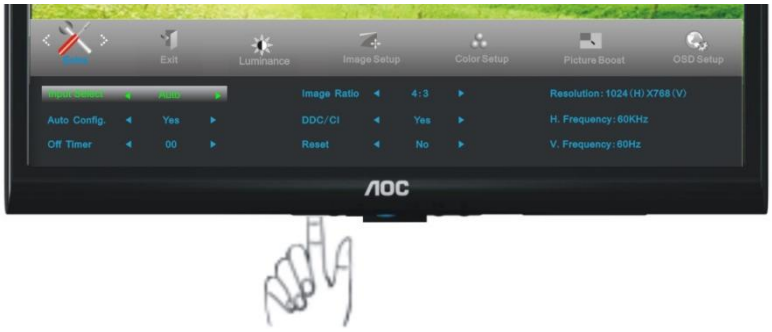
Press − or + to select (Extra), and press **MENU** to enter.

3



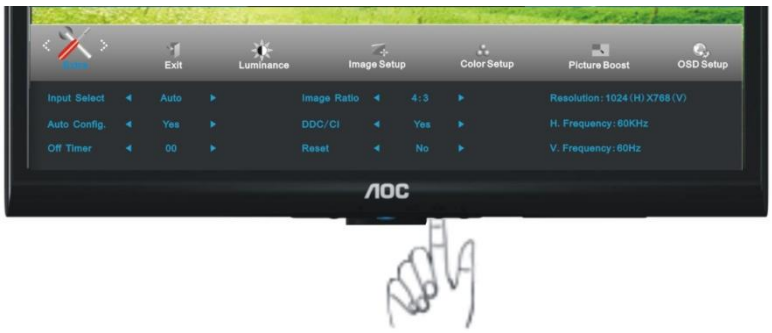
Press − or + to select submenu, and press **MENU** to enter.

4



Press − or + to adjust.

5



Press **AUTO** two times to exit.

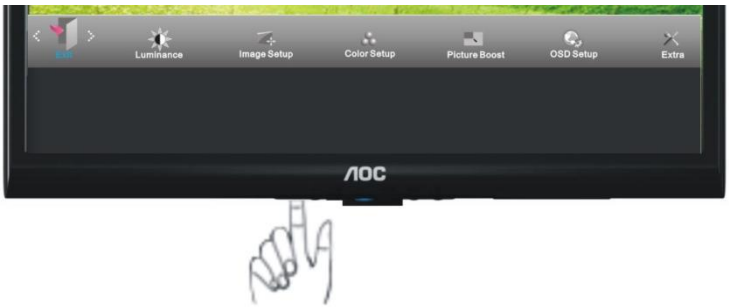
	Input Select	Analog	Select Analog Sigal Source as Input
	Auto Config	yes or no	Auto adjust the picture to default
	Off timer	0-24hrs	Select DC off time
	Image Ratio	wide or 4:3	Select wide or 4:3 format for display
	DDC-CI	yes or no	Turn ON/OFF DDC-CI Support
	Reset	Yes or no	Reset the menu to default
	Information		Show the information of the main image and sub-image source

Exit

1

Press **MENU** (Menu) to display menu.

2



Press **−** or **+** to select (Exit), and press **MENU** to enter.

3

Press **AUTO** two times to exit

	Exit		Exit the main OSD

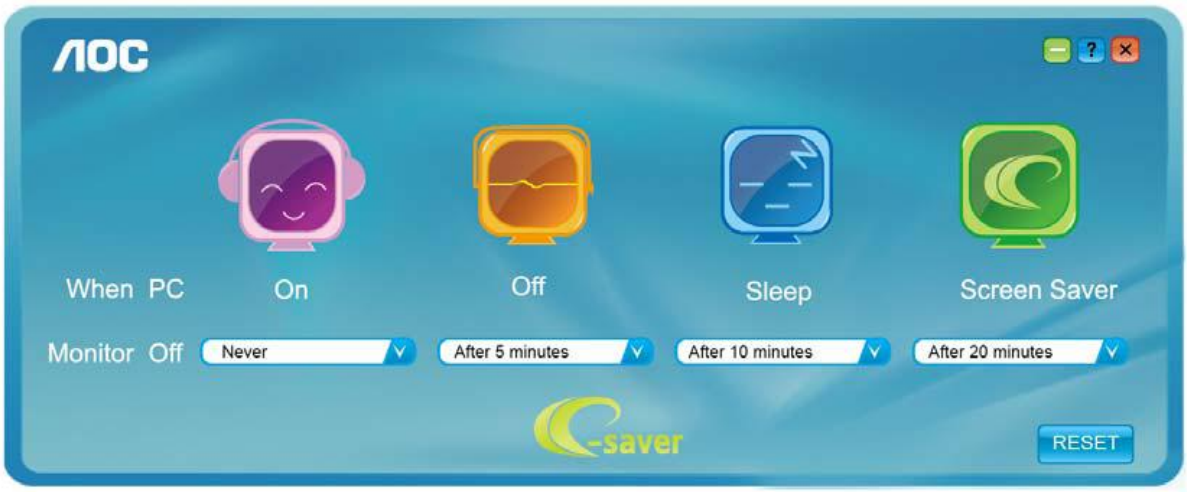
LED Indicators

Status	LED Color	
Full Power Mode	Green or Blue	
Active-off Mode	Orange or red	

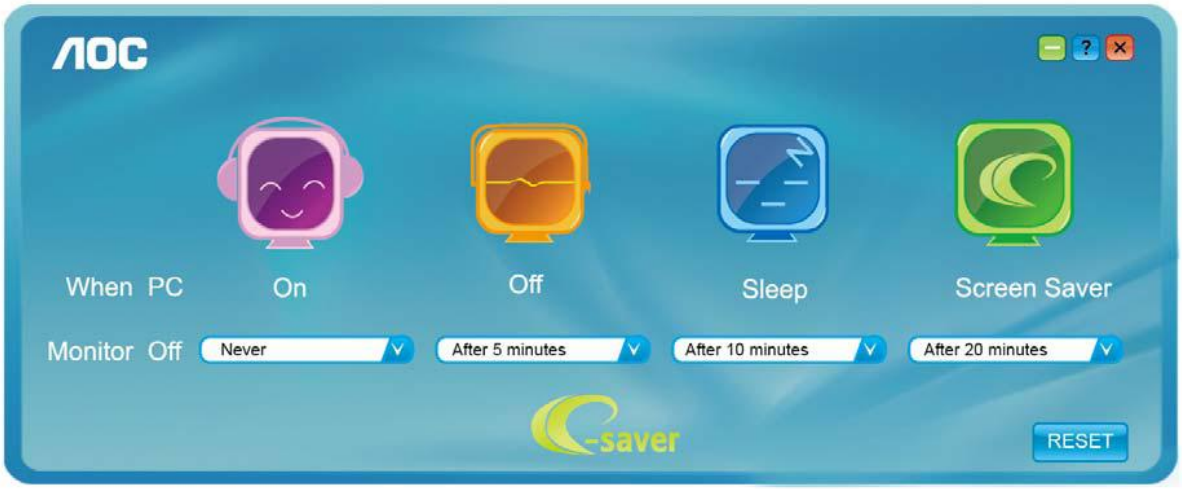
e-Saver

Welcome to use AOC e-Saver monitor power management software! The AOC e-Saver features Smart Shutdown functions for your monitors, allows your monitor to timely shutdown when PC unit is at any status (On, Off, Sleep or Screen Saver); the actual shutdown time depends on your preferences (see example below).
Please click on "driver/e-Saver/setup.exe" to start installing the e-Saver software, follow the install wizard to complete software installation.

Under each of the four PC status, you may choose from the pull-down menu the desired time (in minutes) for your monitor to automatically shutdown. The example above illustrated:
1) The monitor will never shutdown when the PC is powered on.
2) The monitor will automatically shutdown 5 minutes after the PC is powered off.
3) The monitor will automatically shutdown 10 minutes after the PC is in sleep/stand-by mode.
4) The monitor will automatically shutdown 20 minutes after the screen saver appears.



You can click “RESET” to set the e-Saver to its default settings like below.



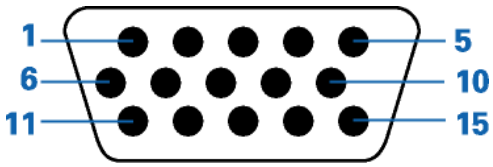
Screen+

Welcome to "Screen+" software by AOC, Screen+ software is a desktop screen splitting tool, it splits the desktop into different panes, each pane displays a different window. You only need to drag the window to a corresponding pane, when you want to access it. It supports multiple monitor display to make your task easier. Please follow the installation software to install it.

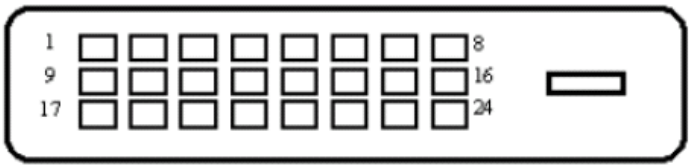
4. Input/Output Specification

4.1 Input Signal Connector

Analog connector



Pin Number	15-Pin Side of the Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	N.C.
5	Detect Cable
6	GND-R
7	GND-G
8	GND-B
9	+5V
10	Ground
11	N.C.
12	DDC-Serial data
13	H-sync
14	V-sync
15	DDC-Serial clock



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield
4	TMDS Data 4-	12	TMDS Data 3-	20	TMDS Data 5-
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+
6	DDC Clock	14	+5V Power	22	TMDS Clock Shield
7	DDC Data	15	Ground(for+5V)	23	TMDS Clock +
8	N.C.	16	Hot Plug Detect	24	TMDS Clock -

4.2 Preset Display Modes

STANDARD	RESOLUTION	HORIZONTAL FREQUENCY(kHZ)	VERTICAL FREQUENCY(Hz)
VGA	640×480@60Hz	31.469	59.940
VGA	640×480@72Hz	37.861	72.809
VGA	640×480@75Hz	37.500	75.000
SVGA	800×600@56Hz	35.156	56.250
SVGA	800×600@60Hz	37.879	60.317
SVGA	800×600@72Hz	48.077	72.188
SVGA	800×600@75Hz	46.875	75.000
XGA	1024×768@60Hz	48.363	60.004
XGA	1024×768@75Hz	60.023	75.029
SXGA	1280×1024@60Hz	63.981	60.020
SXGA	1280×1024@75Hz	79.976	75.025
WXGA	1440×900@60Hz	55.935	55.876
WSXGA	1680×1050@60Hz	65.290	59.950
WSXGA	1920×1080@60Hz	67.500	60.000
IBM-MODE DOS	720×400@70Hz	31.469	70.087
MAC MODE VGA	640×480@67Hz	35.000	66.667
MAC MODE SVGA	832×624@75Hz	49.725	74.551

4.3 Panel Specification

4.3.1 General Features

HM215WU1-500 is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 21.5 inch diagonally measured active area with FHD resolutions (1920 horizontal by 1080 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.

4.3.2 General Specifications

Parameter	Specification	Unit
Active area	476.64(H) × 268.11 (V)	mm
Number of pixels	1920(H) ×1080(V)	pixels
Pixel pitch	0.24825(H) ×0.24825(V)	mm
Pixel arrangement	RGB Vertical stripe	
Display colors	16.7M	colors
Display mode	Normally White	
Dimensional outline	495.6(H) × 292.2(V) × 10.2(D) typ.	mm
Weight	1450 (Typ.)	g
Surface Treatment	Haze 25%, 3H	
Back-light	Lower side 1-LED Light bar Type	

4.3.3 Electrical Characteristics

Electrical characteristics

[Ta =25±2 ℃]

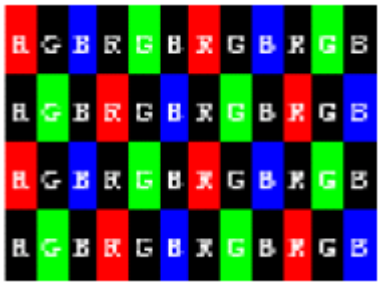
Parameter		Min.	Typ.	Max.	Unit	Remarks
Power Supply Voltage	V_{DD}	4.5	5.0	5.5	V	Note1
Power Supply Current	I_{DD}	-	700	1200	mA	
In-Rush Current	I_{RUSH}	-	-	3	A	Note 2
Permissible Input Ripple Voltage	V_{RF}	-	-	300	mV	V_{DD} = 5.0V
High Level Differential Input Threshold Voltage	V_{IH}	-	-	+100	mV	
Low Level Differential Input Threshold Voltage	V_{IL}	-100	-	-	mV	
Differential input voltage	$\|V_{ID}\|$	200	-	600	mV	
Differential input common mode voltage	Vcm	1.0	1.2	1.5		V_{IH}=100mV, V_{IL}=-100mV
LED Channel Voltage	V_L	46.4	51.2	57.6	V	
LED Channel Current	I_L	57	60	63	mA	
LED Lifetime		30,000	-	-	Hrs	I
Power Consumption	P_D	-	4.9	-	W	
	P_{BL}	-	12.29	-	W	I_L=60 mA, Note 5
	P_{total}	-	17.19	-	W	

Notes : 1. The supply voltage is measured and specified at the interface connector of LCM**.**

The current draw and power consumption specified is for VDD=5.0V, Frame rate=75Hz. Test Pattern of power supply current

a) Typ : Color Bar pattern

b) Max : Skip Sub Pixel Pattern



2. Duration of rush current is about 2 ms and rising time of VDD is 520 μs ± 20 %

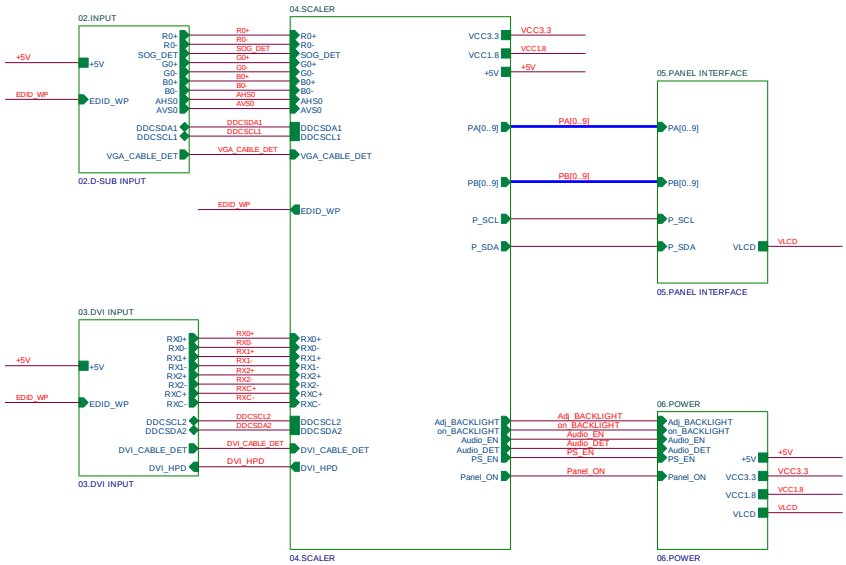
4.3.4 Optical Characteristics

[VDD = 5.0V, Frame rate = 60Hz, Clock = 78MHz, IBL = 240mA, Ta =25±2 ℃]

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle range	Horizontal	Θ_3	CR > 10	35	45	-	Deg.
		Θ_9		35	45	-	Deg.
	Vertical	Θ_{12}		20	25	-	Deg.
		Θ_6		35	40	-	Deg.
Viewing Angle range	Horizontal	Θ_3	CR > 5	50	-	-	Deg.
		Θ_9		50	-	-	Deg.
	Vertical	Θ_{12}		30	-	-	Deg.
		Θ_6		45	-	-	Deg.
Luminance Contrast ratio		CR	Θ = 0° (Center) Normal Viewing Angle	450	600		
Luminance of White		Y_w		160	200		cd/m^2
White luminance uniformity		ΔY		75	80		%
Reproduction of color	White	W_x		0.283	0.313	0.343	
		W_y		0.299	0.329	0.359	
	Red	R_x		0.609	0.639	0.669	
		R_y		0.312	0.342	0.372	
	Green	G_x		0.293	0.323	0.353	
		G_y		0.600	0.630	0.660	
	Blue	B_x		0.123	0.153	0.183	
		B_y		0.021	0.051	0.081	
Response Time	Rising	T_r			1.5	2.5	ms
	Falling	T_f			3.5	5.5	ms
Cross Talk		CT		-	-	2.0	%

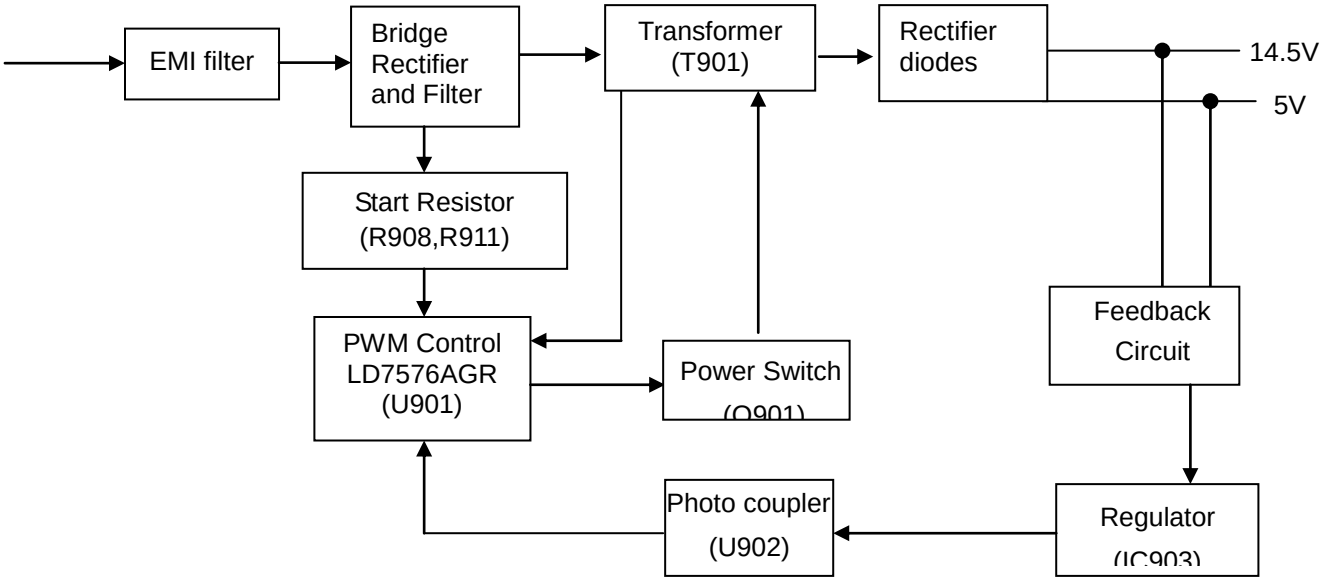
5. Block Diagram

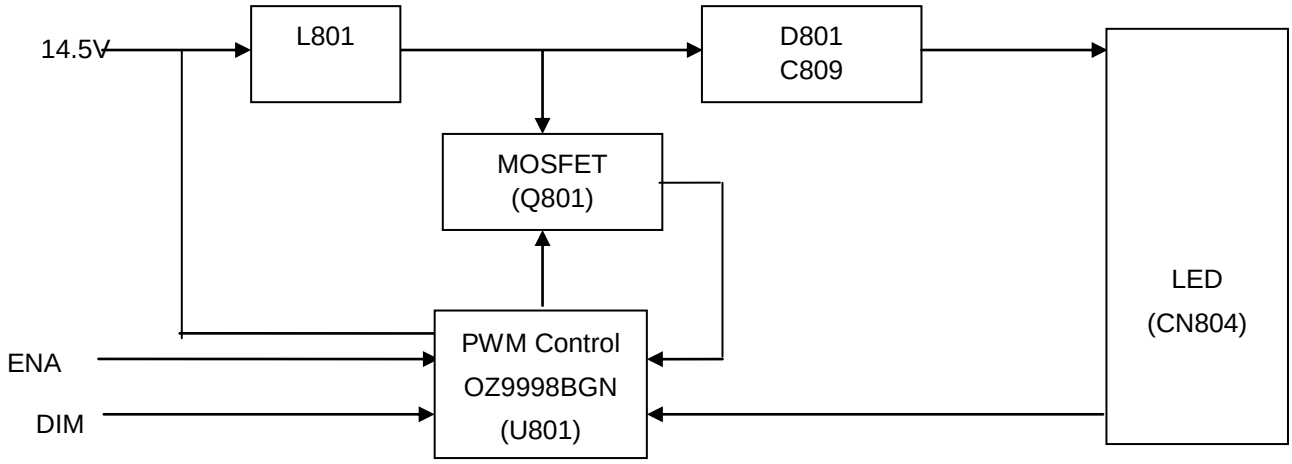
5.1 Main Board



T P V （Top Victory Electronics Co., Ltd.）		OEM MODEL	OTS	Size	B
結 構 瓦 圖 版	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	COVER & REVISE HISTORY	PCB NAME	715G4502-M0B-000-0040	称 多	<称多>
Date	Friday, October 29, 2010	Sheet	2 of 7		

5.2 Power Board

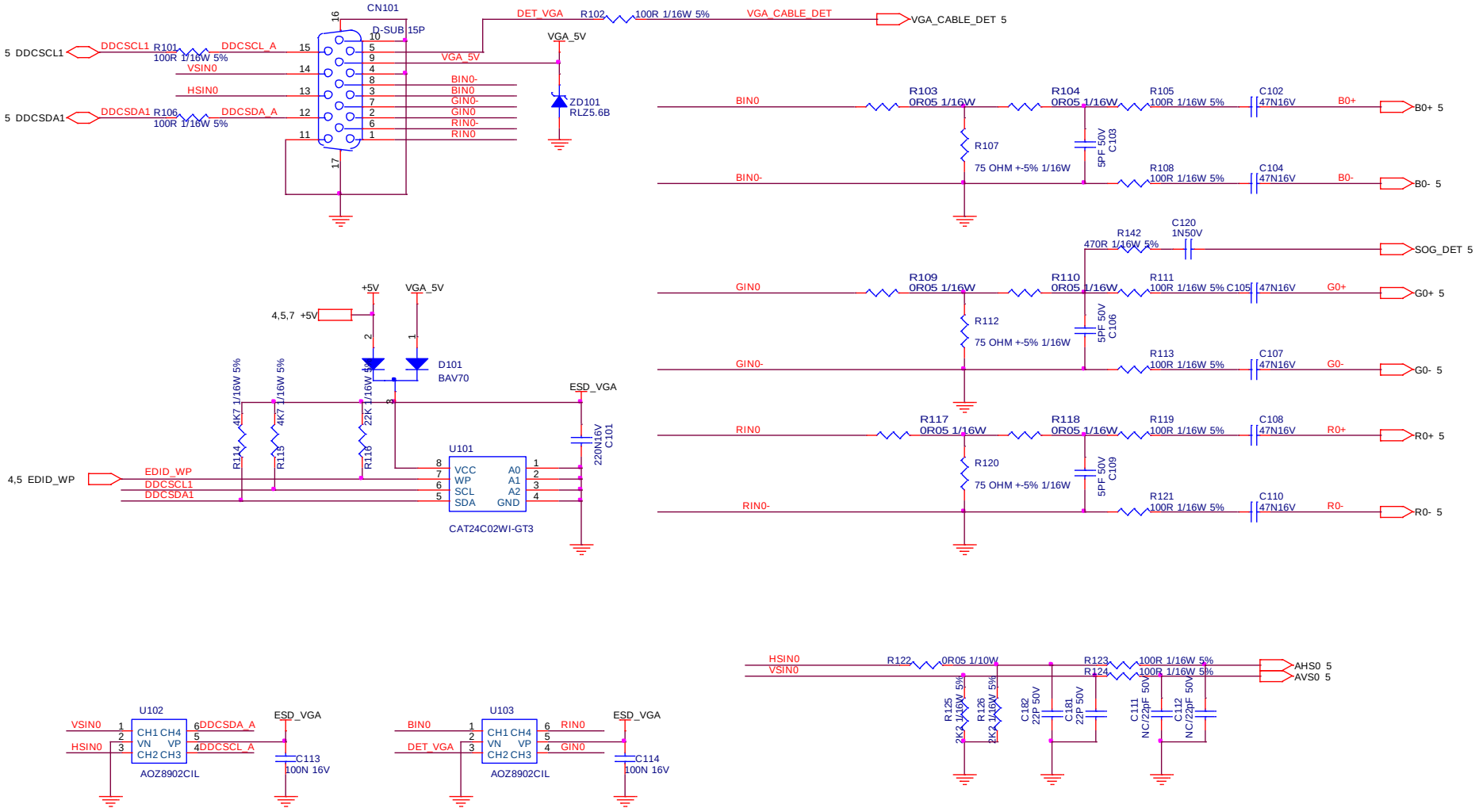




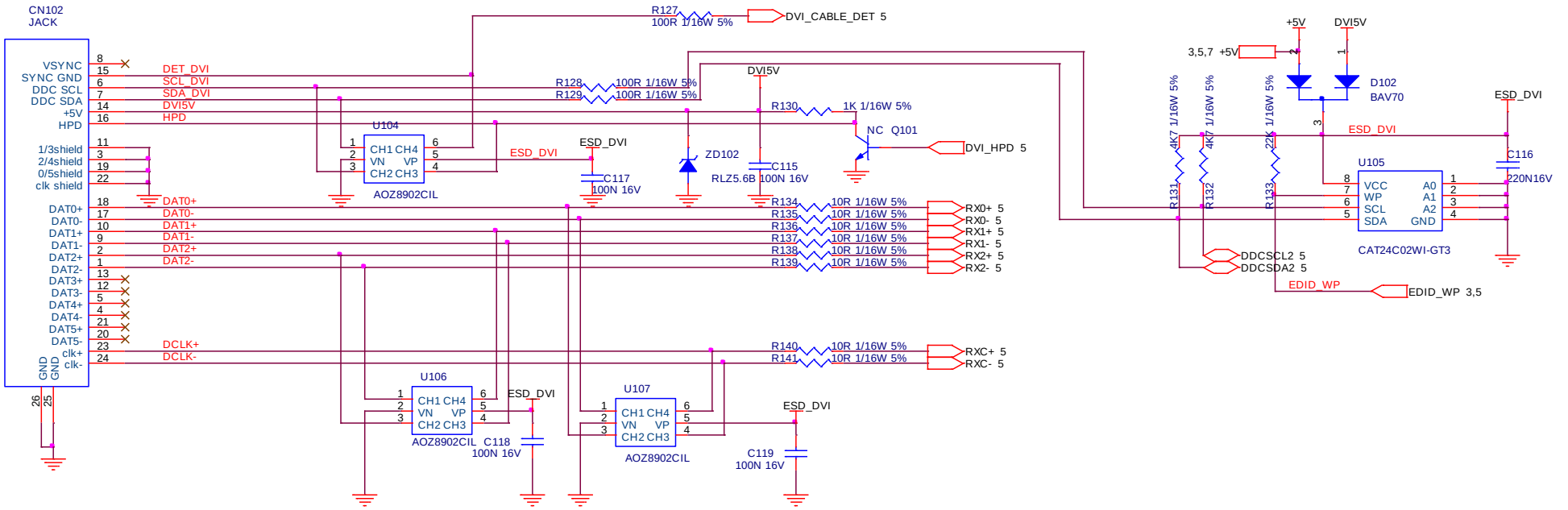
6. Schematic

6.1 Main Board

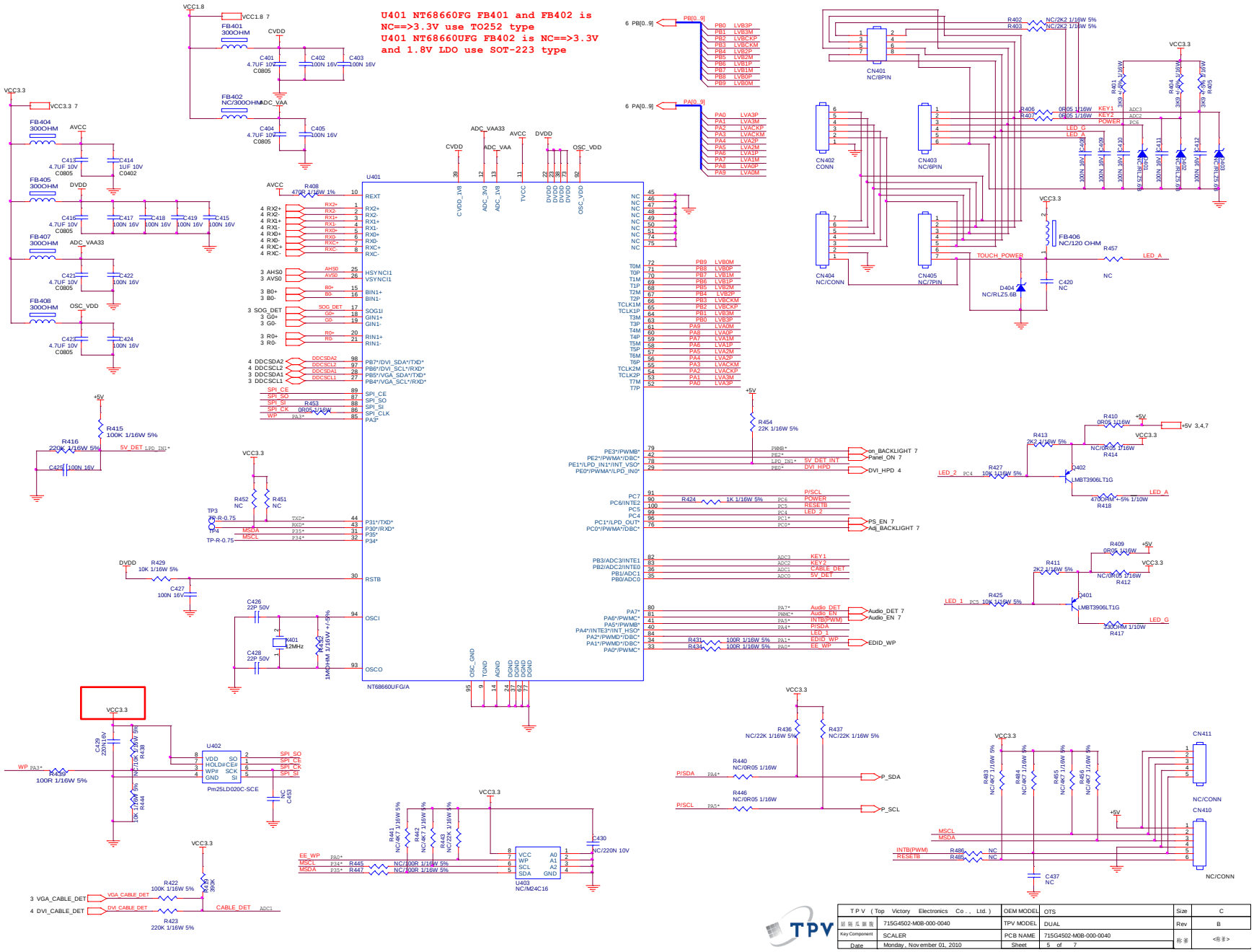
715G4502M01000004C

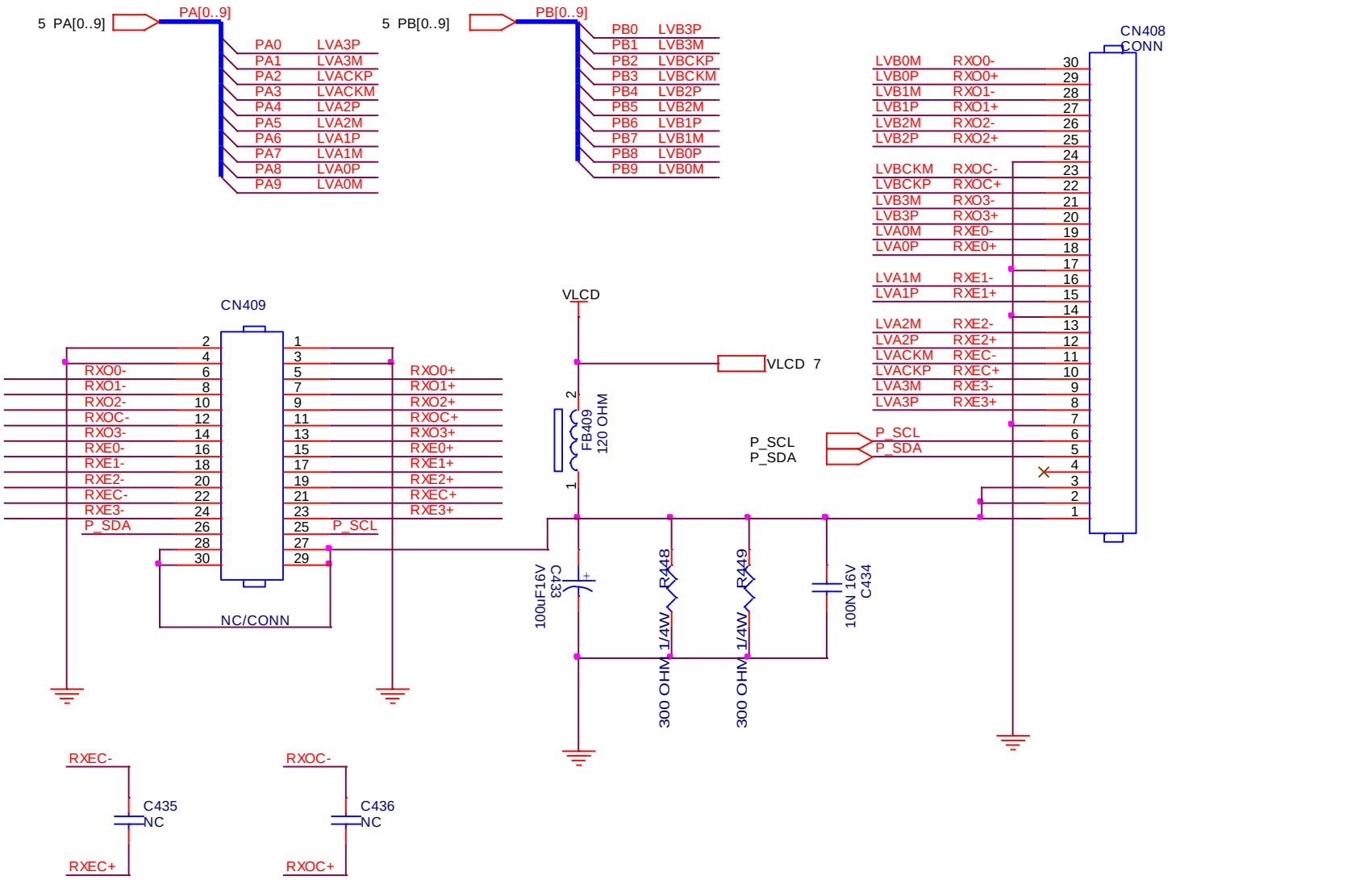


T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	OTS	Size	B
結 隔 瓜 網 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	D-SUB I/O	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Friday, October 29, 2010	Sheet	3 of 7		

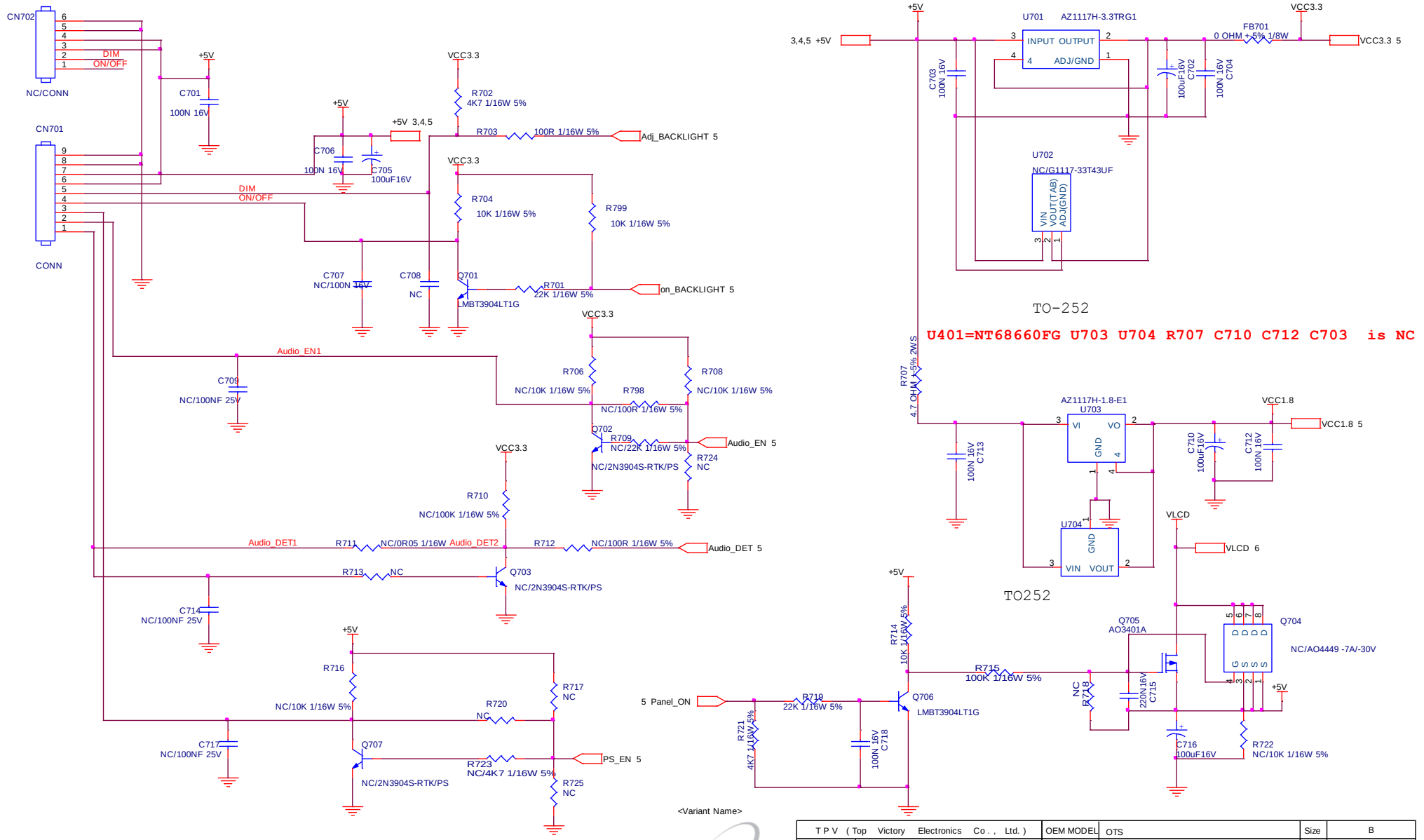


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	OTS	Size	B
結構瓜組腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	DVI	PCB NAME	715G4502-M0B-000-0040	称爹	<称爹>
Date	Monday, November 01, 2010	Sheet	4 of 7		


U401 NT68660FG FB401 and FB402 is NC==>3.3V use TO252 type
U401 NT68660UFG FB402 is NC==>3.3V and 1.8V LDO use SOT-223 type
NT68660UFG/A
Pm25LD020C-SCE
U403 NC/M24C16
CN401 NC/8PIN
CN402 CONN
CN403 NC/6PIN
CN404 NC/CONN
CN405 NC/7PIN
CN410
CN411
NC/CONN
TPV
TPV (Top Victory Electronics Co., Ltd.)
715G4502-M0B-000-0040
SCALER
Monday, November 01, 2010
OEM MODEL OTS
TPV MODEL DUAL
PCB NAME 715G4502-M0B-000-0040
Sheet 5 of 7
Size C
Rev B



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	OTS	Size	A
絞 隔 瓜 綑 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	B
Key Component	LVDS PANEL I/O	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Friday, October 29, 2010	Sheet	6 of 7		

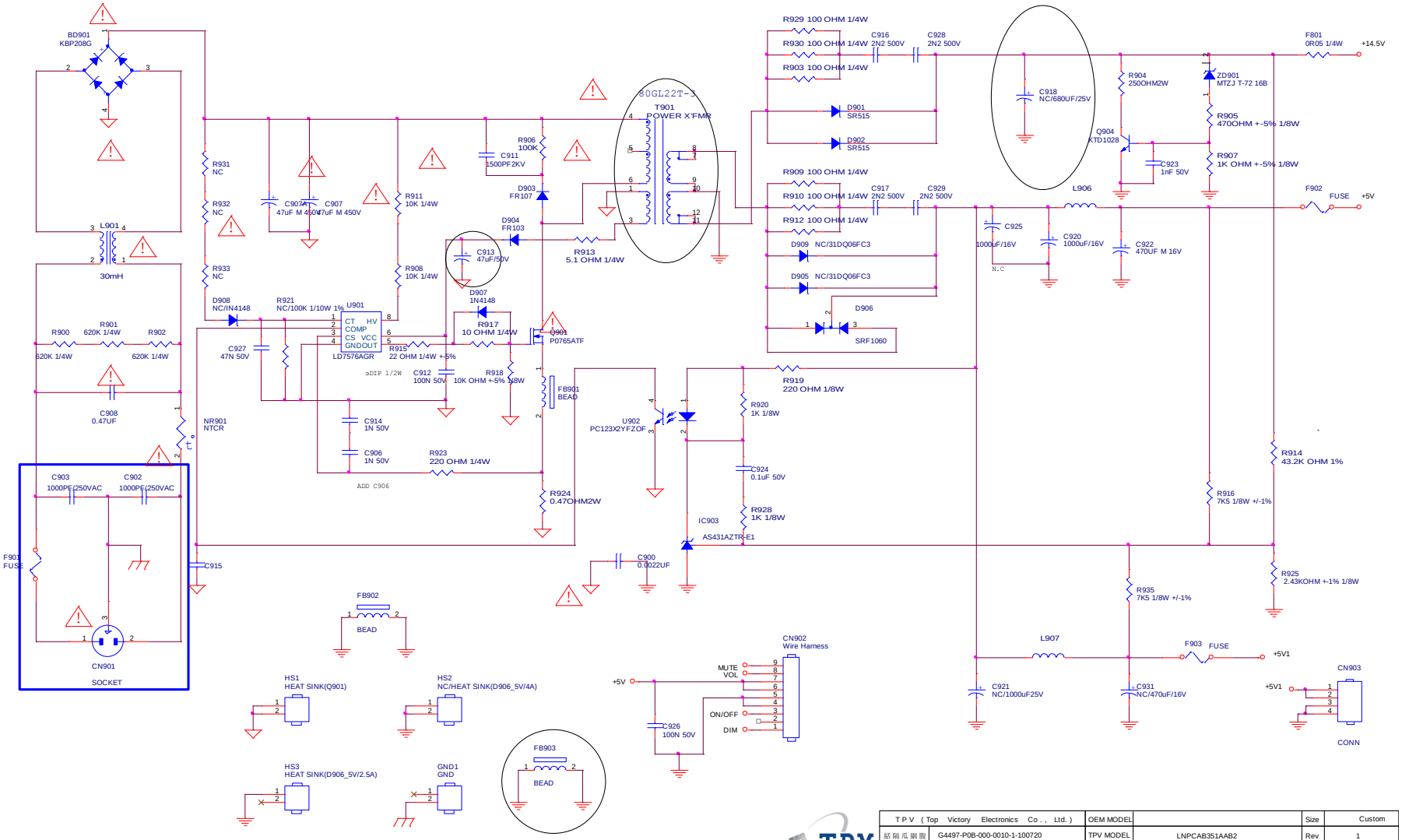


<Variant Name>

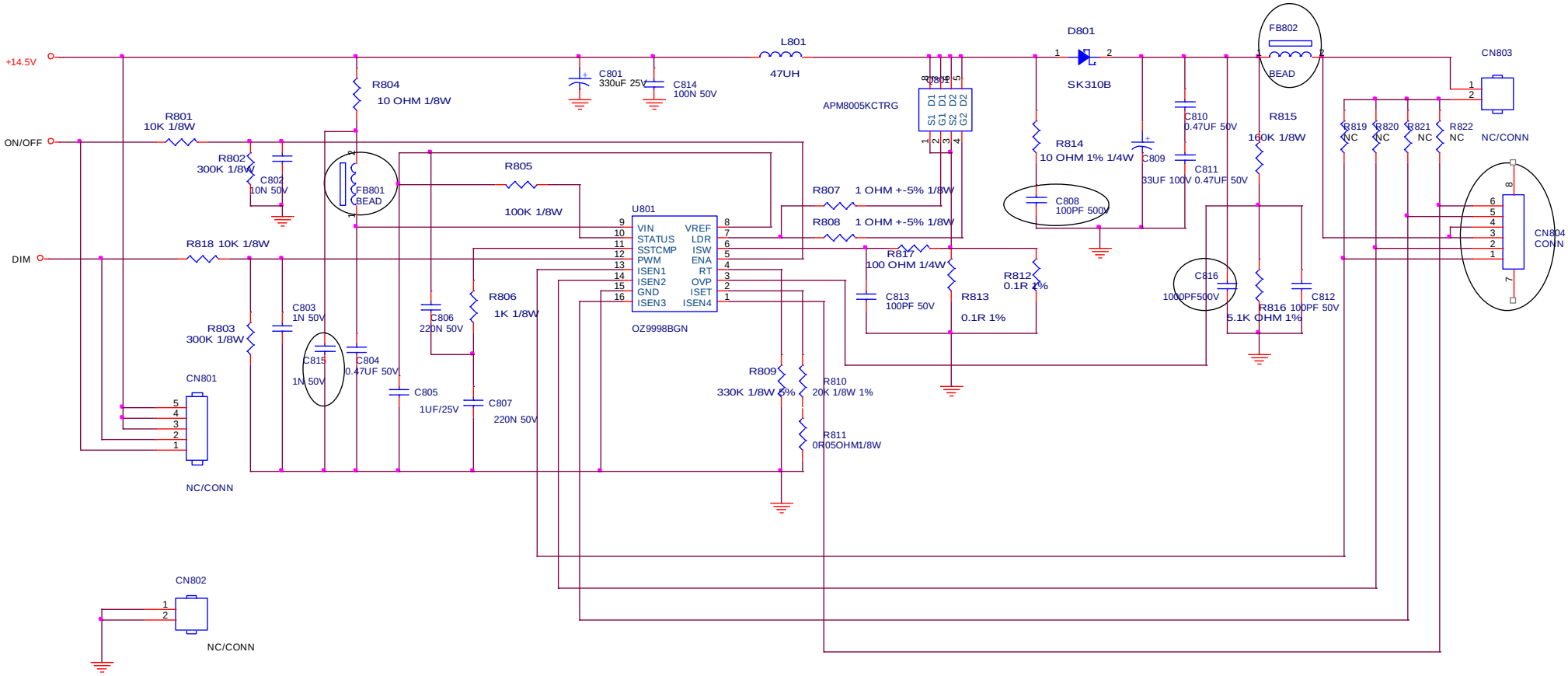
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	OTS	Size	B
結 隔 瓜 鋼 腹	715G4502-M0B-000-0040	TPV MODEL	DUAL	Rev	A
Key Component	POWER	PCB NAME	715G4502-M0B-000-0040	称 爹	<称爹>
Date	Friday , October 29, 2010	Sheet	7 of 7		

6.2 Power Board

715G4744P01000001C



T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	Custom
話 筒 瓜 綱 股	G4497-P0B-000-0010-1-100720	TPV MODEL	LNPCAB351AAB2	Rev	1
Key Component	01.POWER	PCB NAME	715G4497-P0B-000-0010	称 爹	ODM MODEL
Date	Friday, December 24, 2010	Sheet	1 of 3		

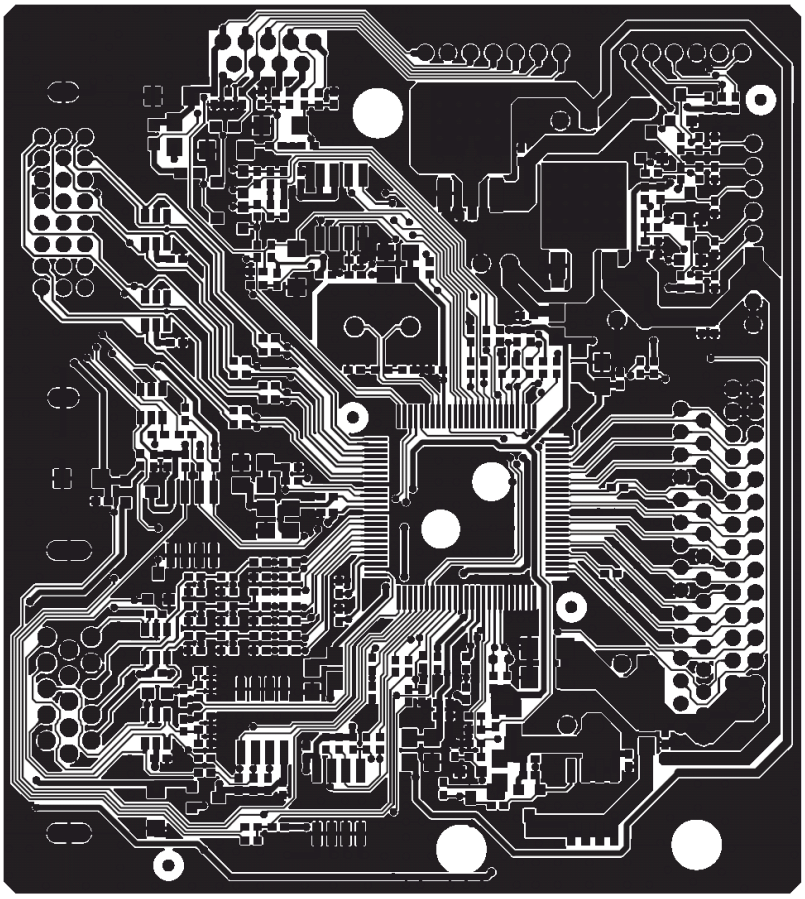


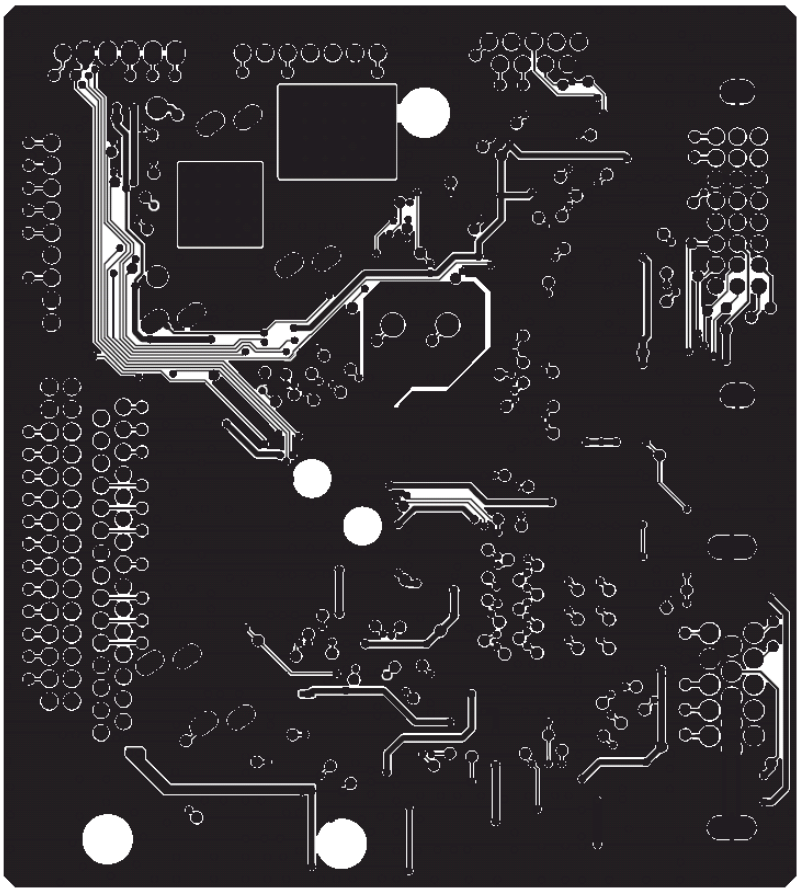
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL		Size	Custom
紙 隔 瓜 綢 腹	G4497-P0B-000-0010-1-100720	TPV MODEL	LNPCAB351AAB2	Rev	1
Key Component	02.INVERTER	PCB NAME	715G4497-P0B-000-0010	称 爹	ODM MODEL
Date	Friday , December 24, 2010	Sheet	2 of 3		

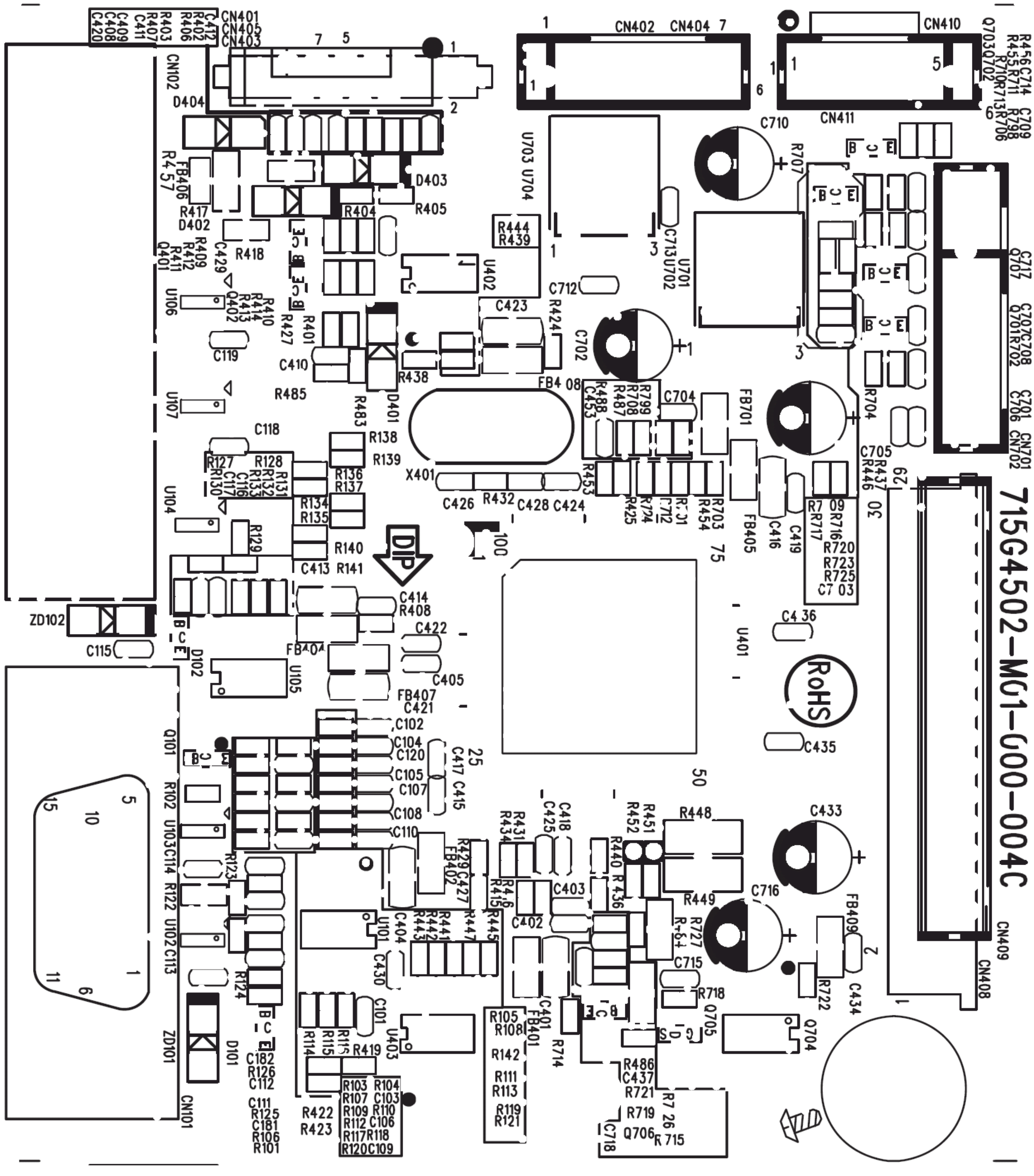
7. PCB Layout

7.1 Main Board

715G4502M01000004C

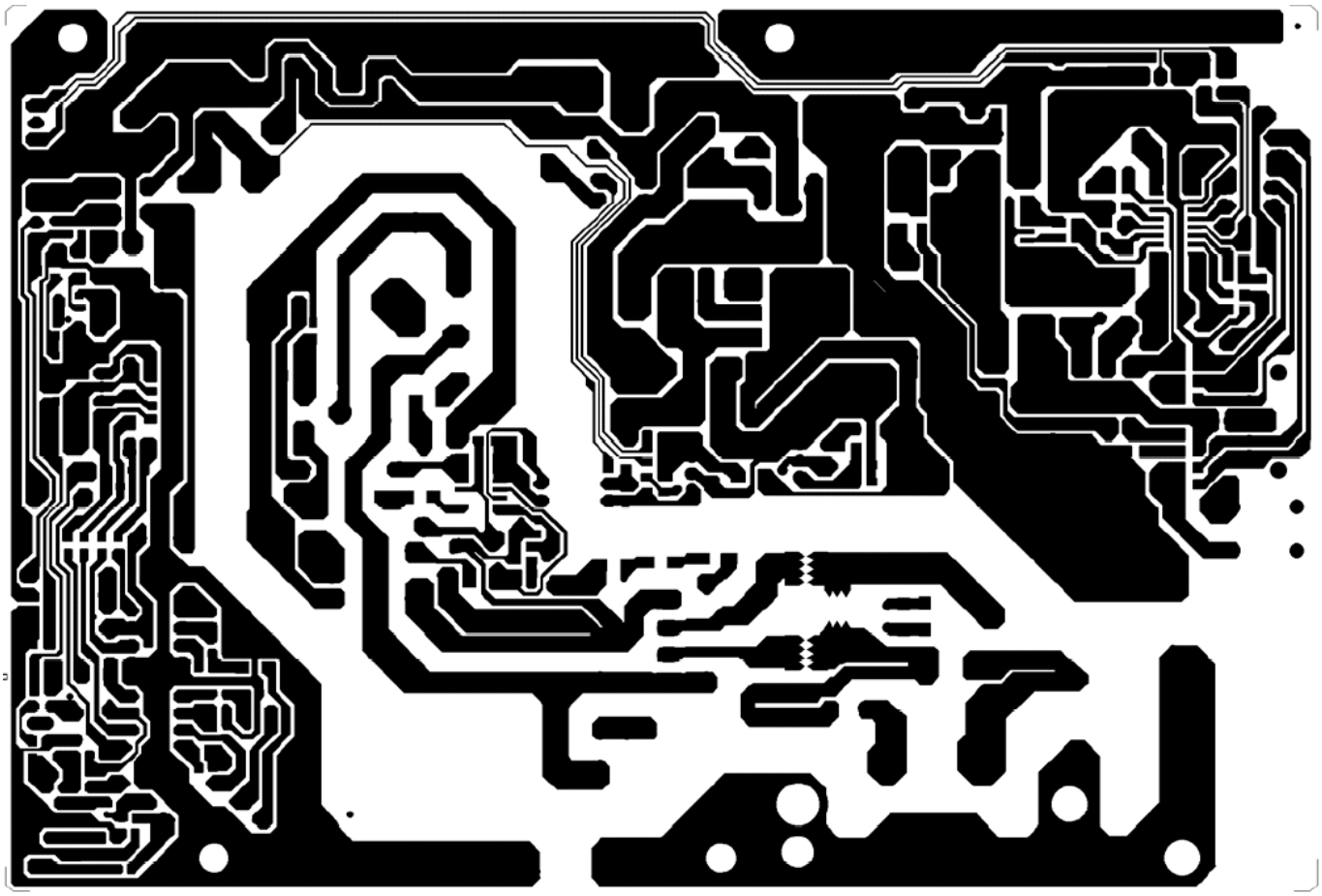


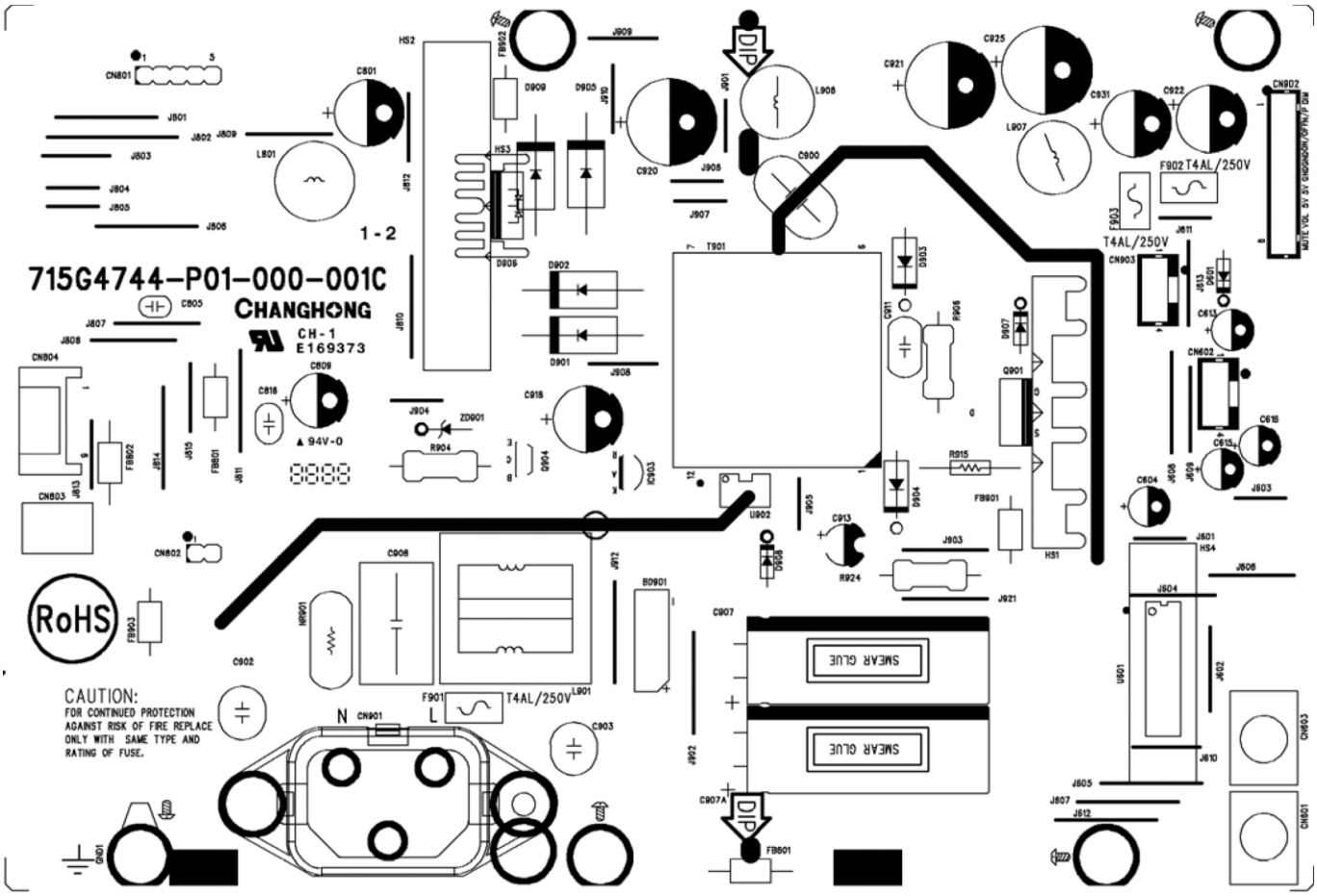



715G4502-M01-000-004C
RoHS
DIP
CN401
CN402
CN404
CN410
CN411
CN409
CN408
CN101
CN102
U401
U402
U403
X401

7.2 Power Board

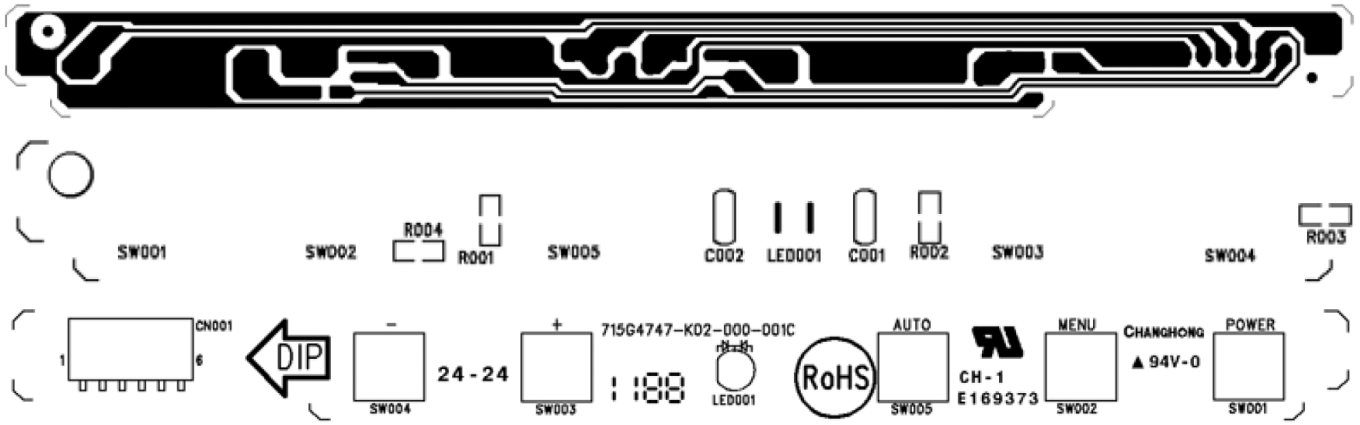
715G4744P01000001C





7.3 Key Board

715G4747K02000001C



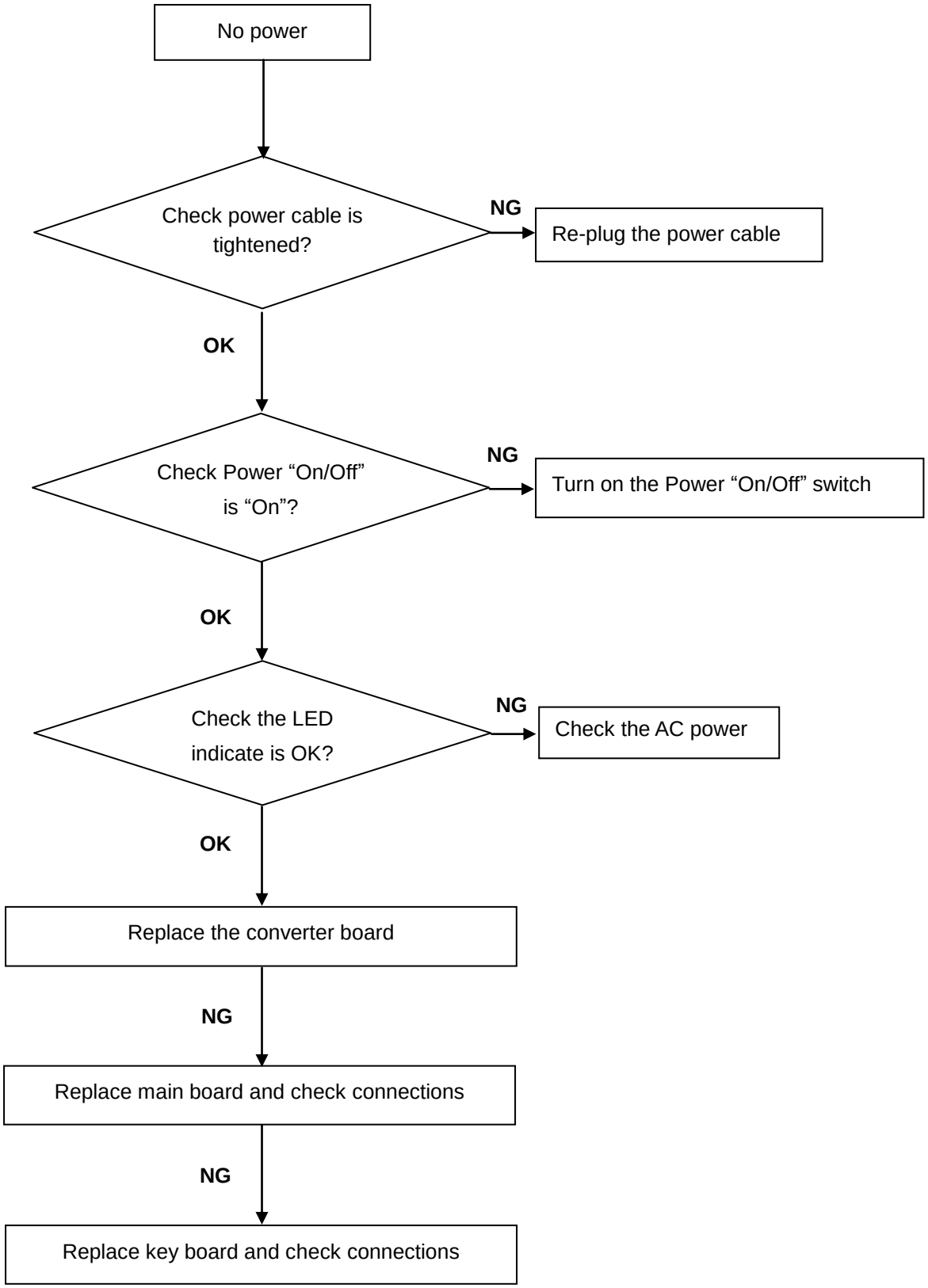
8. Maintainability

8.1 Equipments and Tools Requirement

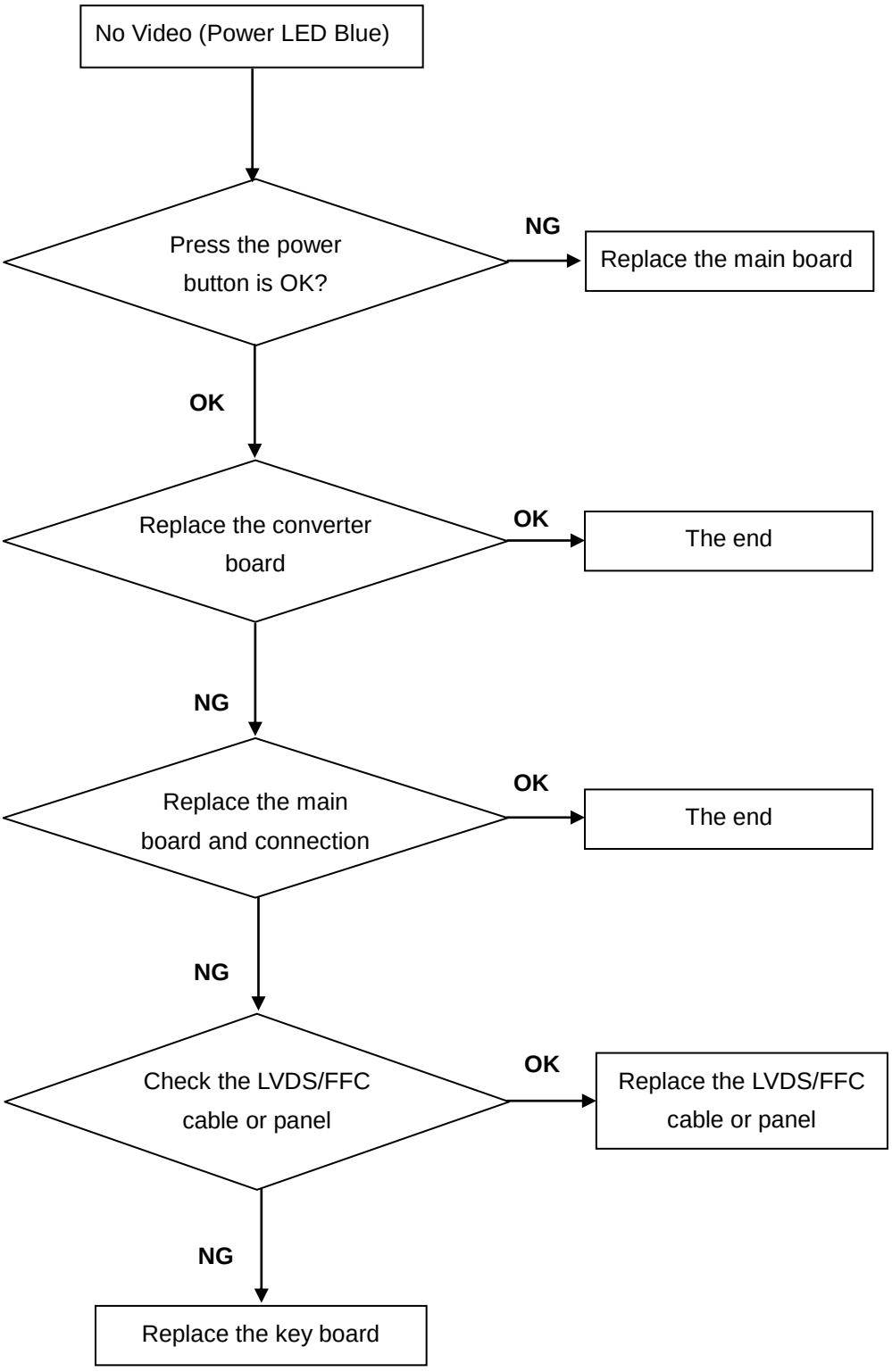
1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

8.2 Trouble Shooting

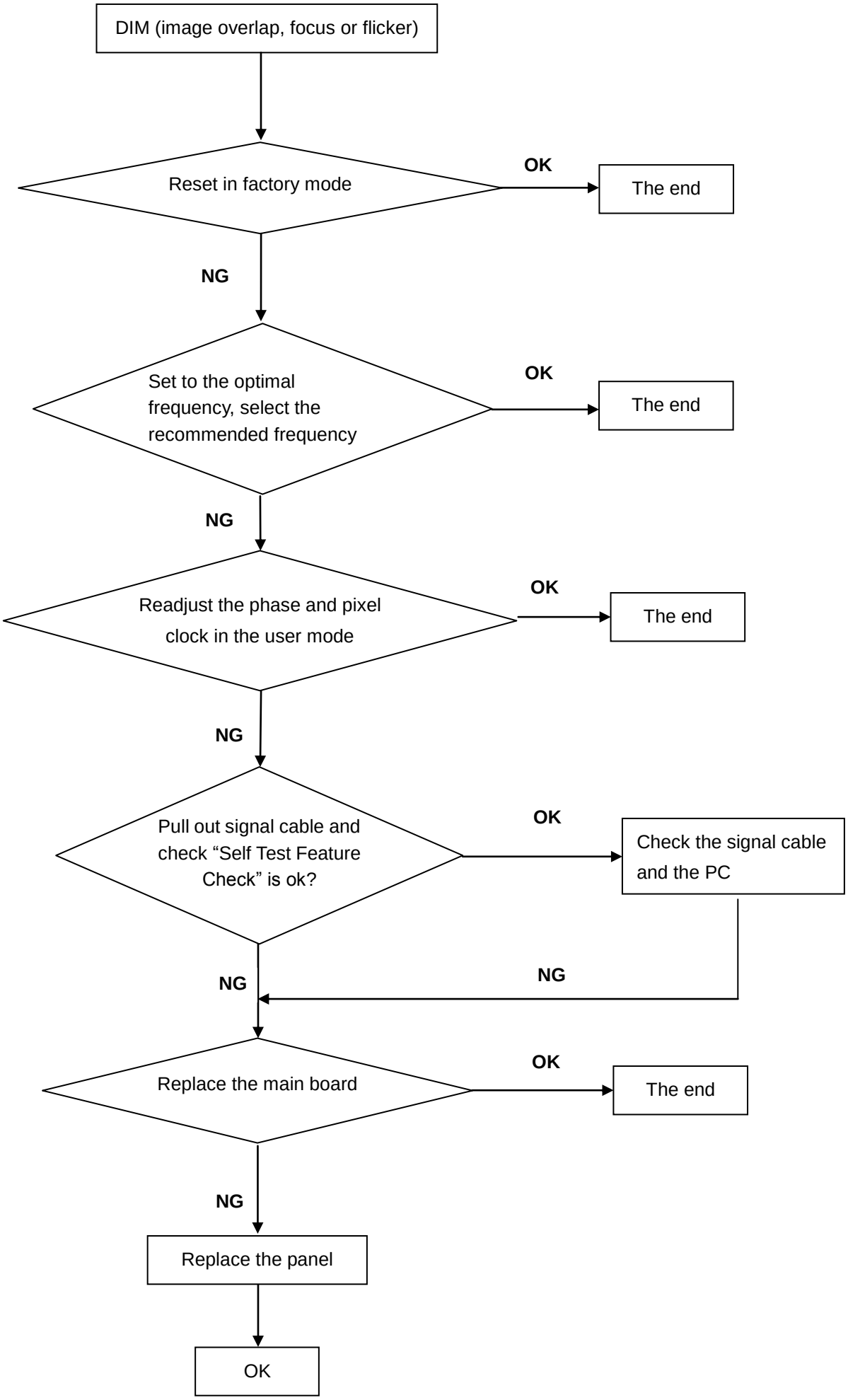
No Power



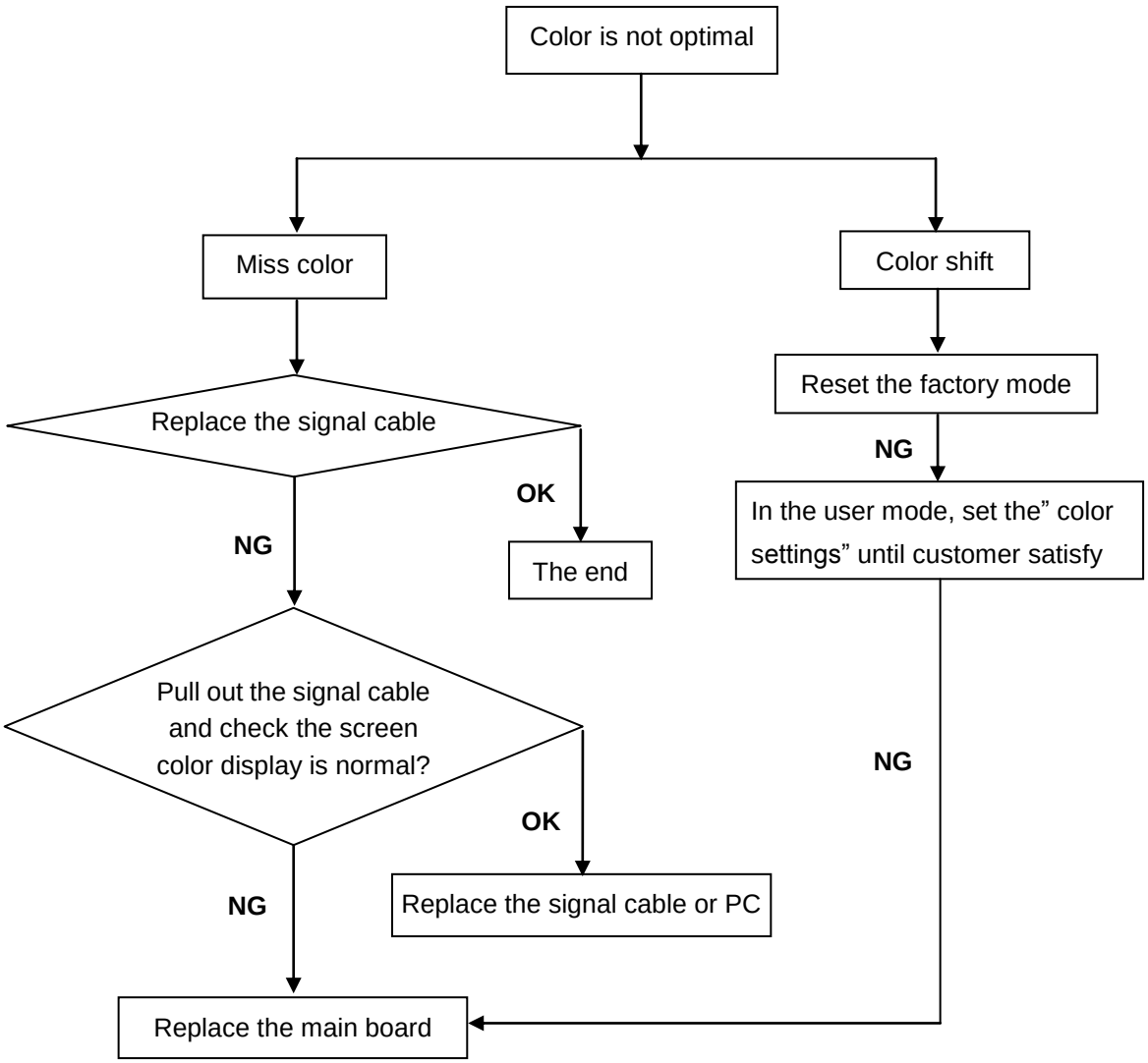
2. No Video (Power LED Blue)



3. DIM


DIM (image overlap, focus or flicker)
Reset in factory mode
OK
The end
NG
Set to the optimal frequency, select the recommended frequency
OK
The end
NG
Readjust the phase and pixel clock in the user mode
OK
The end
NG
Pull out signal cable and check “Self Test Feature Check” is ok?
OK
Check the signal cable and the PC
NG
NG
Replace the main board
OK
The end
NG
Replace the panel
OK

4. Color is not optimal



9.White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding white balance adjustment.

How to setting MEM channel you can reference to chroma 7120 user guide or simple 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 .

1. Setting the color temp.

A. 6500K:

Warm color temp. parameter is x=313±20， y=329±20

B. 7300K

Normal color temp. parameter is x=301±20， y=317±20

C. 9300K

Cool color temp. parameter is x=283±20，y=297±20

D. sRGB

sRGB color temp. parameter is x=313±20， y=329±20

2. Enter into the factory mode:

Press the MENU button,Pull out the power cord, then plug the power cord. Then the factory OSD will be at the left top of the panel.

3. Biase adjustment:

Set the Contrast  to 50; Adjust the Brightness  to 90.

4. Gain adjustment:

A. Adjust Warm (6500K) color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 3 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=313±20， y=329±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

B. Adjust Normal (7300K) color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 4(with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=301±20， y=317±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE 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±2

C. Adjust Cool (9300K) color-temperature

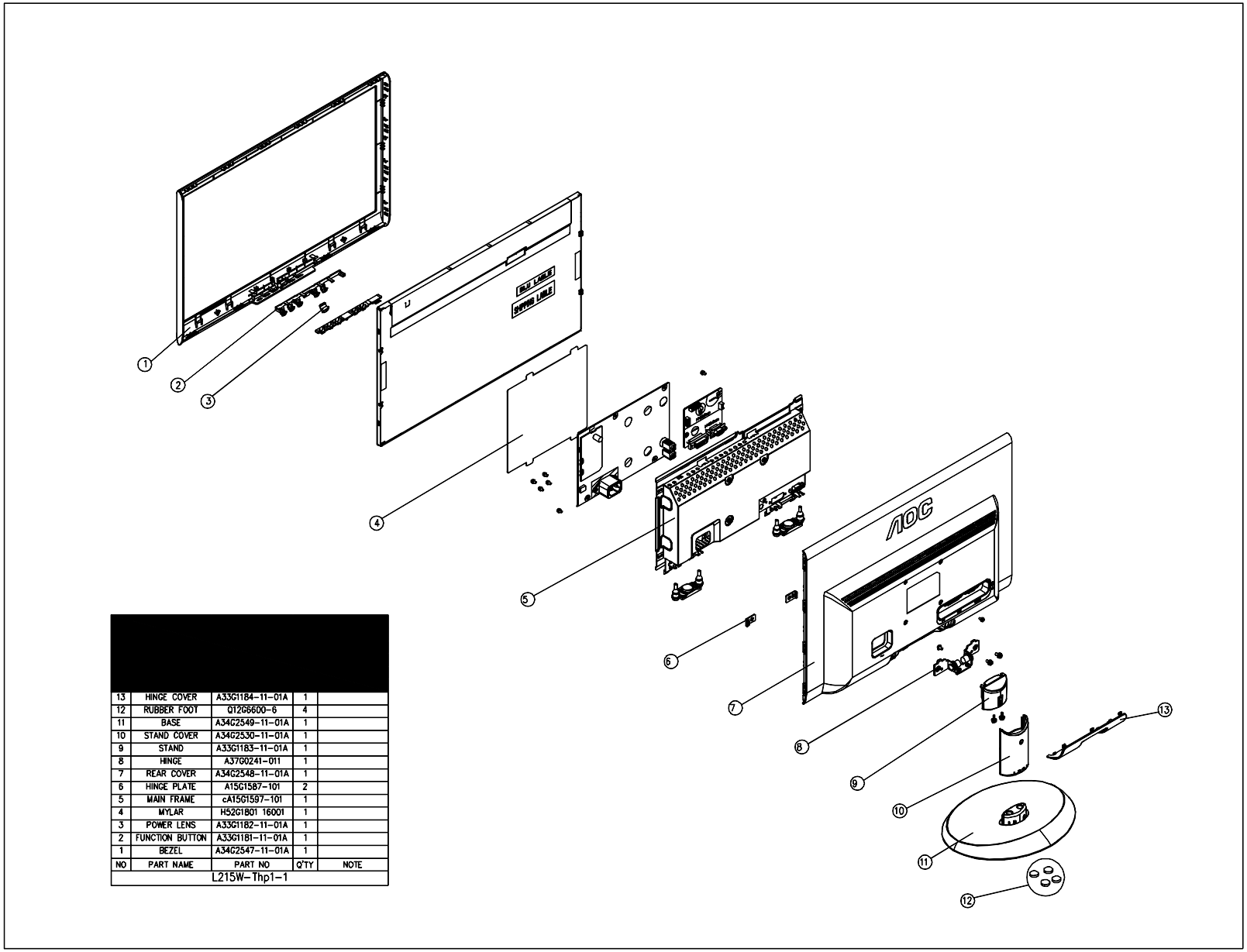
1. Switch the Chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM. Channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=283±20，y=297±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE 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±2

D. Adjust sRGB color-temperature

1. Switch the chroma-7120 to RGB-Mode (with press “MODE” button)
2. Switch the MEM.channel to Channel 10 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x=313±20， y=329±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE 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±2

E. Turn the Power-button off to quit from factory mode.

10. Monitor Exploded Views



NO	PART NAME	PART NO	Q'TY	NOTE
13	HINGE COVER	A33G1184-11-01A	1	
12	RUBBER FOOT	012G6600-6	4	
11	BASE	A34G2549-11-01A	1	
10	STAND COVER	A34G2530-11-01A	1	
9	STAND	A33G1183-11-01A	1	
8	HINGE	A37G0241-011	1	
7	REAR COVER	A34G2548-11-01A	1	
6	HINGE PLATE	A15G1587-101	2	
5	MAIN FRAME	cA15G1597-101	1	
4	MYLAR	H52G1801 16001	1	
3	POWER LENS	A33G1182-11-01A	1	
2	FUNCTION BUTTON	A33G1181-11-01A	1	
1	BEZEL	A34G2547-11-01A	1	

L215W-Thp1-1

11. BOM List

Note: The parts information listed below are for reference only, and are subject to change without notice. Please go to http://cs.tpvaoc.cn/hello1.asp for the latest information.

TIBKN22QAGE6HNE

Location	Part No.	Description	Remark
	040G 58162461A	EPA LABEL	
	052G 2191 A	PAPER TAPE	
	052G6019 1	INSULATING TAPE	
HDCP-SMT	070GHDCP500HDC	HDCP CODE	
E08902	089G 715CAAE01	SIGNAL CABLE	2nd source
E08902	089G 715GAAE01	SIGNAL CABLE	2nd source
E08902	089G 715HAAE01	SIGNAL CABLE	
E08901	089G402A15N HL	AC POWER CORD 1500mm	
E08901	089G402A15N IS	AC POWER CORD 1500MM	2nd source
E08907	095G179J30NE34	FFC CABLE 30pin 190mm 1.0mm	
E09504	095G8014 6DE45	HARNESS 6P(CI1406)-6P(2008) 140	2nd source
E09504	095G8014 6TE45	HARNESS 6P(CI1406)--6P(2008) 140	
E09504	095G8014 6WE45	HARNESS 6P(CI1406S)-6P(2008) 140	2nd source
	0D1G1030 8120	screw	
	0M1G 930 8 47 CR3	SCREW 3x8	
	0M1G1140 8120	SCREW 4x8	
	0Q1G 140 12120	SCREW 4X12	
	0Q1G 930 10120	SCREW (T3X10)	
E750	750GBK215W1512N000	LCD HM215WU1-500 3850 HF BOE	
E750	750GBK215W1522N000	LCD HM215WU1-500 3950 HF BOE	2nd source
	A15G1587101	BKT_HINGE SGCC	
	A15G1597101D03	MAIN FRAME FOR 50TH 21.5W	
	A33G1181ABJ 1L0100	FUNCTION BUTTON FOR 50TH	
	A33G1182 1 1L0100	POWER LENS FOR 50TH	
	A33G1183ABJ 1L0100	STAND TOP FOR 50TH 18.5W	
	A33G1184ABJ 1L0100	HINGE COVER FOR 50TH 18.5W	
	A34G2530ABJ 1B0100	STAND COVER	
	A34G2547AEDP1B0105	BEZEL FOR 50TH 21.5W	
	A34G2548ABJ 1B0100	REAR COVER	
	A34G2549AED 1B0130	BASE FOR E2250SW	
	AM1G1740 10125	SCREW	
	H37G0030014	HINGE 21.5	
	H40G 001624 1A	CARTON LABEL BARCODE 1	
	H40G 22N61589A	E2250SWD EPI ID LABEL	
	H40G 45762413B	P/N LABEL FOR BASE	
	H40G 58161549A	guaranty sticker	
	H44GB018103	EPS	
	H44GB018203	EPS	
	H44GB01861507A00HX	ARTWORK CARTON e2250SWDN	

	H45G 77 6	PE PACKING	
	H45G 87 1 25	EPE COVER	
	H52G1801 16006	insulating sheet	
	H70G21C161507A	CD MANUAL e2250SWDN	
	KEPCAHB5	KEY BOARD	
	PLPCBB581AHD1	POWER BOARD	
	Q40G 58162435A	LABEL	
	Q45G 76 28 H A	P.E. BAGx320x210x0.04	
	Q50G 4 10	TIE (Y1900221)	
	Q52G 1185 99	BIG CARTON TAPE FOR AOC	
M05201	Q52G100202500A00JY	AL FOIL	
M05203	Q52G100204500A00JY	AL FOIL	
M05202	Q52G100204500A00JY	AL FOIL	
	Q52G6019 14	TAPE	
E08907	S95G179T30NE34	FFC CABLE 30P 190mm P1.0MM	2nd source
	756GHACB A1171	MAIN BOARD-CBPCAN2A1H1	
SMTCB-U402	100GANBI001W11	MCU ASS'Y-056G2233 11	
CN402	033G3802 6B Y L	WAFER	
CN701	033G3802 9B Y L	CONN 2.0 9P	
CN408	033G801930F CH L	FFC CONN 1.0mm 30P R/A 34mm 6mm	
R707	061G152M47964L SY	RST MOFR 4.7 OHM +-5% 2WS FUTABA	
CN101	088G 35315FVXH	D-SUB CONN V/T 15P BLUE 1*1 V/T 30.8	
CN102	088G 35424FVXH	DVI CONN V/T 24P WHITE	
X401	093G 2251B J	CRYSTAL 12MHZ NXS12.000AC30F-KAB10	
	709G4502 HM001	COMSUPTIVE ASS'Y	
	AIGAN2A1H1	MAIN BOARD FOR AI	
	H40G 45762429A	LABEL	
LED001	081G 12 1F GH	LED GREEN/YELLOW GHZYG603D2-5B	
CN001	095G820H 6TE10	HARNESS 6P(SANW)-6P(2008) 120	
CN001	095G820H 6WE10	HARNESS 6P(SANW)-6P(2008) 120	2nd source
	709G4747 HM001	COMSUPTIVE ASS'Y	
	SMTKEPCAHB5	KEY BOARD FOR SMT	
GND1	009G6005 1	GND TERMINAL	
U902	056G 139 3A	PC123Y22FZOF SHARP	
NR901	061G 5810T	NTCR 8R 20% 3.1W SCK13084MMY501	
C908	063G107K474 6S	0.47UF +-10%	
C902	065G305M1023BW	CAP Y2 1NF 20% 250V Y5U	
C903	065G305M1023BW	CAP Y2 1NF 20% 250V Y5U	
C900	065G306M2222BP	CAP Y1 2.2NF 20% 250V Y5P	
C809	067G 415330 9K	EC 33UF 20% 100V ED 8*12	
C907	067G 42Z68015K	EC 68UF 20% 450V 12.5*50 2000 hr	
C801	067G215D3314KV	EC 330UF 20% 25V 10*12 4000 hr	
C918	067G215D6814KV	EC 680UF 20% 25V 10*20	
C922	067G215S4713KV	EC 470UF 20% 16V 10X13	
L901	073G 174 65 H2	LINE FILTER 30mH MIN	

L906	073G 253191 H	IND CHOKE 1.1uH DADON	
L801	073G 253214 DN	CHOKE COIL 47UH 10% LZ.CC013.G01 2.5A	
T901	080GL22T 3 N3	X'FMR 490UH 7% 4UH YUVA-1656	
CN901	087G 501 48 S	AC SOCKET 3PIN + 3 Hole	
D902	093G 60335	DIODE SR515 5A/150V DO-201AD	
D901	093G 60335	DIODE SR515 5A/150V DO-201AD	
CN902	095G 825 9T518	HARNESS 9P-9P 120MM	
CN902	095G 825 9W518	HARNESS 9P-9P 120MM	2nd source
	0Q1G 340 8140	SCREW Q1-SELF TAPING SCREW :Q x8.0	
CN804	311GW200A06ABX	WAFER 2.0mm 6P	
	705GHA57006	Q901 ASS"Y	
	705GHA93006	D906 ASS"Y	
	709G4744 HM001	CONSUMPTIVE ASS'Y	
	H40G 45762429A	LABEL	
	PLBB581AHD1SMT	POWER BOARD FOR SMT	
BD901	093G 50460515	BRIDGE KBP308G-C 3A 800V KBP	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
C705	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C702	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C433	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C716	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C710	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
	SMTCAN2A1H1	MAIN BOARD FOR SMT	
U703	056G 133 33AAC	LDO AZ1117H-1.8TRE1	
U401	056G 562369	SCALER NT68660UFG/B TQFP-100	
U701	056G 563514	IC AZ1117H-3.3TRG1 1A/3.3V SOT223	
U107	056G 662 48	ESD PROTECT AZC399-04S.R7G SOT23-6L	
U106	056G 662 48	ESD PROTECT AZC399-04S.R7G SOT23-6L	
U104	056G 662 48	ESD PROTECT AZC399-04S.R7G SOT23-6L	
U103	056G 662 48	ESD PROTECT AZC399-04S.R7G SOT23-6L	
U102	056G 662 48	ESD PROTECT AZC399-04S.R7G SOT23-6L	
U101	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U105	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U402	056G2233 11	IC Pm25LD020C-SCE SIOC-8(150mil) 2M	
Q401	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q402	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q706	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q701	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q705	057G 763940	MOSFET AO3401A SOT-23	
R453	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R410	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R409	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R407	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R406	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R118	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	

R117	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R110	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R109	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R104	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R103	061G0402000 JT	RST CHIPR MAX0R05 1/16W TZAI YUAN	
R141	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R140	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R139	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R138	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R137	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R136	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R135	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R134	061G0402100 JT	RST CHIP 10R 1/16W 5% TZAI YUAN	
R123	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R124	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R127	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R128	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R129	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R431	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R434	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R439	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R703	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R121	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R119	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R113	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R111	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R108	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R106	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R105	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R102	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R101	061G0402101 JT	RST CHIP 100R 1/16W 5% TZAI YUAN	
R488	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R487	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R424	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R130	061G0402102 JT	RST CHIP 1K 1/16W 5% TZAI YUAN	
R799	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R714	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R704	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R444	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R429	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R427	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R425	061G0402103 JT	RST CHIP 10K 1/16W 5% TZAI YUAN	
R415	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	
R422	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	
R715	061G0402104 JT	RST CHIP 100K 1/16W 5% TZAI YUAN	

R432	061G0402105 JT	RST CHIP R 1Mohm 1/16W +/-5% TZAI YUAN	
R413	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R411	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R126	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R125	061G0402222 JT	RST CHIP 2K2 1/16W 5% TZAI YUAN	
R116	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R133	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R454	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R701	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R719	061G0402223 JT	RST CHIP 22K 1/16W 5% TZAI YUAN	
R423	061G0402224 JT	RST CHIP 220K 1/16W 5% TZAI YUAN	
R416	061G0402224 JT	RST CHIP 220K 1/16W 5% TZAI YUAN	
R401	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R404	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R405	061G0402392 JT	RST CHIP R 3K9 +/-5% 1/16W TZAI YUAN	
R419	061G0402394 JF	RST CHIP R 390K +/-5% 1/16W FENGHUA	
R408	061G04024700FT	RST CHIP 470R 1/16W 1%	
R142	061G0402471 JT	RST CHIP 470R 1/16W 5% TZAI YUAN	
R721	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R702	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R132	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R131	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R115	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R114	061G0402472 JT	RST CHIP 4K7 1/16W 5% TZAI YUAN	
R107	061G0402750 JT	RST 0402 75R 5% 1/16W	
R112	061G0402750 JT	RST 0402 75R 5% 1/16W	
R120	061G0402750 JT	RST 0402 75R 5% 1/16W	
R122	061G0603000 JT	RST CHIP MAX 0R05 1/10W TZAI YUAN	
R417	061G0603331 JT	RST 0603 330R 5% 1/10W	
R418	061G0603471 JT	RST CHIPR 470OHM +-5% 1/10W TZAI YUAN	
FB701	061G0805000 JT	RST 0805 0.05R MAX 1/8W	
R726	061G0805000 JT	RST 0805 0.05R MAX 1/8W	
R448	061G1206301 JT	RST CHIPR 300 OHM +-5% 1/4W TZAI YUAN	
R449	061G1206301 JT	RST CHIPR 300 OHM +-5% 1/4W TZAI YUAN	
C120	065G040210232K A	CAP 0402 1NF 10% 50V X7R	
C113	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C114	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C115	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C117	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C118	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C119	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C402	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C403	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C415	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C412	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	

C411	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C410	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C409	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C408	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C405	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C417	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C418	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C419	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C422	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C424	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C425	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C427	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C434	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C718	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C713	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C712	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C706	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C704	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C703	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C701	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C414	065G0402105A5K Y	NO-SUGGEST CAP 0402 1UF 10% 10V X5R	
C428	065G040222031J A	CAP 0402 22PF J 50V NPO	
C426	065G040222031J A	CAP 0402 22PF J 50V NPO	
C182	065G040222031J A	CAP 0402 22PF J 50V NPO	
C181	065G040222031J A	CAP 0402 22PF J 50V NPO	
C715	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C429	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C116	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C101	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C110	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C108	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C107	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C105	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C104	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C102	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C103	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C106	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C109	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C423	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C421	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C416	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C413	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C404	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
C401	065G0805475A2K Y	NO-SUGGEST CAP 0805 4.7UF 10% 10V X7R	
FB407	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	

FB409	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB401	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB404	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB405	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB408	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
D101	093G 64 42 L	DIODE LBAV70LT1G SOT-23 LRC	
D102	093G 64 42 L	DIODE LBAV70LT1G SOT-23 LRC	
ZD102	093G 39GA01 T	RLZ5.6B	
ZD101	093G 39GA01 T	RLZ5.6B	
	709G4502 HS001	COMSUPTIVE ASS'Y	
E715	715G4502M01000004C	MAIN BOARD PCB	2nd source
E715	715G4502M01000004I	MAIN BOARD PCB	
	H52G1701 1	MESH PRINTTING_PAPER	
R002	061G0603000 FF	RST CHIPR MAX0R01 1/10W FENGHUA	
R004	061G06031001FF	RST CHIPR 1 KOHM +-1% 1/10W FENGHUA	
R003	061G06032001FF	RST CHIP 2KOHM 1% 1/10W FENGHUA	
R001	061G06032001FF	RST CHIP 2KOHM 1% 1/10W FENGHUA	
	AIKEPCAHB5	KEY BOARD FOR AI	
Q901	057G 667941	MOSFET P0765ATF 7 650 TO-220F	
HS1	090G6064 1	HEAT SINK	
	0M1G 930 8120	SCREW 3x8	
HS3	090G6084 1 GP	HEAT SINK	
D906	093G 60507	SCHOTTKY SRF1060 C0 10A 60V ITO-220AB	
	0M1G 930 8120	SCREW 3x8	
	055G 23524	WELDING FLUX WITHOUT PB	
	Q51G 6 4509	GLUE_RTV	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
U901	056G 379529	AC/DC CONVERTER IC LD7576AGR SOP-7	
U801	056G 700 11	LED DRIVER OZ9998BGN-A1-0-TR SOP-16	
Q801	057G 763 92	FET P8008HV 4A/80V SOP-8	
R811	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
RJ801	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
R804	061G0805100 JF	RST CHIPR 10 OHM +-5% 1/8W FENGHUA	
R916	061G08051002FT	RST CHIP 10K 1/8W 1%	
R806	061G0805102 JF	RST CHIPR 1K OHM +-5% 1/8W FENGHUA	
R907	061G0805102 JT	RST CHIPR 1K OHM +- 5% 1/8W TZAI YUAN	
R801	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R818	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R928	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R918	061G0805103 JT	RST 0805 10K 5% 1/8W	
R805	061G0805104 JT	RST CHIPR 100KOHM +- 5% 1/8W TZAI YUAN	
R808	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R807	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R815	061G0805164 JF	RST 0805 160K 5% 1/8W	
R810	061G08052002FT	RST CHIP 20K 1/8W 1%	

R920	061G0805202 JF	RST CHIPR 2KOHM +-5% 1/8W FENGHUA	
R919	061G0805221 JF	RST CHIPR 220 OHM +-5% 1/8W FENGHUA	
R803	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R802	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R809	061G08053303FT	RST CHIP 330K 1% 1/8W	
R905	061G0805471 JT	RST CHIPR 470OHM +-5% 1/8W TZAI YUAN	
R816	061G08055101FT	RST CHIP 5K1 1/8W 1%	
R925	061G08059101FF	RST CHIPR 9.1KOHM +-1% 1/8W FENGHUA	
F801	061G1206000 JT	RST CHIPR MAX0R05 1/4W TZAI YUAN	
R917	061G1206100 JT	RST CHIPR 10 OHM +-5% 1/4W TZAI YUAN	
R814	061G12061009FF	RST CHIP 10 OHM 1% 1/4W FENGHUA	
R929	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R912	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R910	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R909	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R903	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R930	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R911	061G1206103 JF	RST CHIPR 10KOHM +-5% 1/4W FENGHUA	
R908	061G1206103 JT	RST CHIPR 10KOHM +-5% 1/4W TZAI YUAN	
R913	061G1206109 JT	RST CHIPR 1 OHM +-5% 1/4W TZAI YUAN	
R812	061G12062007FT	RST 1206 0.2R 1% 1/4W SMD12060R2	
R813	061G12062007FT	RST 1206 0.2R 1% 1/4W SMD12060R2	
R923	061G1206221 JT	RST CHIPR 220 OHM +-5% 1/4W TZAI YUAN	
R900	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R901	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R902	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R817	061G1206681 JT	RST CHIPR 680 OHM +-5% 1/4W TZAI YUAN	
C812	065G080510131J F	CAP CHIP 0805 100PF J 50V NPO	
C813	065G080510131J F	CAP CHIP 0805 100PF J 50V NPO	
C923	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C906	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C815	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C914	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C803	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C802	065G080510332K Y	CAP CHIP 0805 10N 50V X7R +/-10%	
C915	065G080510332K Y	CAP CHIP 0805 10N 50V X7R +/-10%	
C924	065G080510432K F	CAP CHIP 0805 0.1UF K 50V X7R	
C814	065G080510432K F	CAP CHIP 0805 0.1UF K 50V X7R	
C912	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C926	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C807	065G080522432K Y	CAP CHIP 0805 220N 50V X7R +/-10%	
C806	065G080522432K Y	CAP CHIP 0805 220N 50V X7R +/-10%	
C927	065G080547332K F	CAP CHIP 0805 47NF K 50V X7R	
C811	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C810	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	

C804	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C808	065G120610171J Y	CAP 1206 100PF 5% 500V NP0	
C916	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C917	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C928	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
C929	065G120622272K Y	CER 1206 2N2 500V X7R 10%	
D801	093G 60S907 T	SCHOTTKY B3100B 3A 100V SMB	
	709G4744 HS001	CONSUMPTIVE ASS'Y	
	PLA9361AHD1AI	POWER BOARD FOR AI	
SW005	077G603S AI CJ	TACT SWITCH AI 2PIN SEALED	
SW004	077G603S AI CJ	TACT SWITCH AI 2PIN SEALED	
SW003	077G603S AI CJ	TACT SWITCH AI 2PIN SEALED	
SW002	077G603S AI CJ	TACT SWITCH AI 2PIN SEALED	
SW001	077G603S AI CJ	TACT SWITCH AI 2PIN SEALED	
E715	715G4747K02000001C	KEY BOARD PCB	
C805	065G250K1052HT	CAP CER 1UF 10% 25V X7R	
C816	065G517K102 2T6921	CAP CER 1000PF K 500V Y5P	
C911	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
C913	067G215Y4707KT	EC 47uF 20% 50V 6.3*11mm EG	
D903	093G 6026T52T	CTIFIER DIODE FR107	
F901	084G 56 4 B	FUSE 4A 250V	
F902	084G 56 4 B	FUSE 4A 250V	
FB801	071G 55 29	FERRITE BEAD	
FB802	071G 55 29	FERRITE BEAD	
FB901	071G 55 29	FERRITE BEAD	
FB902	071G 55 29	FERRITE BEAD	
FB903	071G 55 29	FERRITE BEAD	
R924	061G152M47852T SY	RST MOFR 0.47 OHM +-5% 2WS FUTABA	
Q904	057G 530503 T	2SD1207T	
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	
J808	095G 90 23	JUMPER WIRE	
J809	095G 90 23	JUMPER WIRE	
J810	095G 90 23	JUMPER WIRE	
J811	095G 90 23	JUMPER WIRE	
J812	095G 90 23	JUMPER WIRE	
J813	095G 90 23	JUMPER WIRE	
J814	095G 90 23	JUMPER WIRE	
J815	095G 90 23	JUMPER WIRE	
J901	095G 90 23	JUMPER WIRE	

J902	095G 90 23	JUMPER WIRE	
J903	095G 90 23	JUMPER WIRE	
J904	095G 90 23	JUMPER WIRE	
J905	095G 90 23	JUMPER WIRE	
J906	095G 90 23	JUMPER WIRE	
J907	095G 90 23	JUMPER WIRE	
J909	095G 90 23	JUMPER WIRE	
J910	095G 90 23	JUMPER WIRE	
J921	095G 90 23	JUMPER WIRE	
CN901	006G 31500	EYELET	
IC903	056G 158 10 T	DC/DC AS431AZTR-E1 150MA 40V TO-92	
R915	061G 17222052T TZ	RST CFR 22R 5% 1/4W	
R906	061G152M10452T SY	RST MOFR 100KOHM +-5% 2WS FUTABA	
R904	061G152M25152T SY	RST MOF 250R 5% 2W	
C920	067G 2046812KT	CS CAP 680uF 10V 8*11 mm	
ZD901	093G 39A6852T	ZENER DIODES MTZJ22B DO-34	
D907	093G 6452452T	SWITCHING 1N4148-B4006 0.2A 100V DO-35	
J908	095G 90 23	JUMPER WIRE	
	709G4744 HA001	CONSUMPTIVE ASS'Y	
	715G4744P01000001C	POWER BOARD PCB	
D904	093G 6026T52T	CTIFIER DIODE FR107	