Service
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Service Manual

Horizontal Frequency

30-80 kHz

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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

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 might 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 radiations 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.)

Revision List

Version	Date	Revision History	Remark
A00	Jun.-12-2009	Initial release	T89MM5NQ6WA16NE
			T89AM5NB6WA2UNE
			T89SM5NB6WA1UNE
		Add Panel list in Item 5	M185XW01
			LTM185AT02
		Add Power Board in Item 7.1/8.1/9.2	715G3244 1

1. Monitor Specification

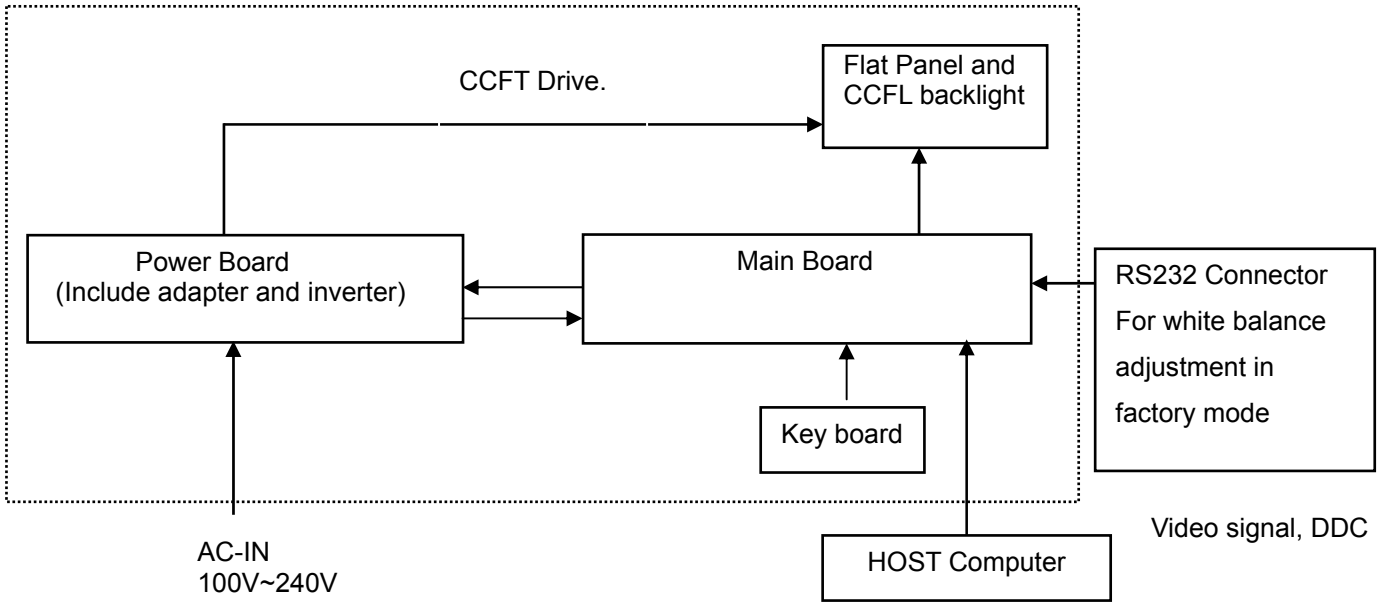
LCD Panel	Model number	936Swa	
	Driving system	TFT Color LCD	
	Viewable Image Size	470mm diagonal	
	Pixel pitch	0.3mm(H) x 0.3mm(V)	
	Video	R, G, B Analog Interface & Digital Interface	
	Separate Sync.	H/V TTL	
	Display Color	16.7M Colors	
	Dot Clock	85.5MHz	
Resolution	Horizontal scan range	30 kHz - 80 kHz	
	Horizontal scan Size(Maximum)	409.8mm	
	Vertical scan range	55 Hz - 75 Hz	
	Vertical scan Size(Maximum)	230.4mm	
	Optimal preset resolution	1366x768 (60 Hz)	
	Highest preset resolution	1366x768 (60 Hz))	
	Plug & Play	VESA DDC2B/CI	
	Input Connector	D-Sub 15pin	
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM	
	Power Source	100-240VAC, 50/60Hz	
	Power Consumption	Typical < 25W	
		Standby < 1 W	
	USB Downstream port (A type)	To USB device, loading < 100mA	
	off timer	0~24hours	Select timing to turn off the monitor.
	Speakers	1.5W x 2	
Physical Characteristics	Connector Type	15-pin Mini D-Sub	
	Signal Cable Type	Detachable	
	Dimensions & Weight:	Height (with base)	358.66mm
		Width	463.14mm
		Depth	186mm
		Weight (monitor only)	3.63 kg
		Weight (with packaging)	5.02kg
Environmental	Temperature:	Operating	0° to 40°
		Non-Operating	-20°to 60°
	Humidity:	Operating	10% to 85% (non-condensing)
		Non-Operating	5% to 80% (non-condensing)
	Altitude:	Operating	0~ 3000m (0~ 10000 ft)
		Non-Operating	0~ 5000m (0~ 15000 ft)

2. LCD Monitor Description

The LCD Monitor will contain main board, power board, 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



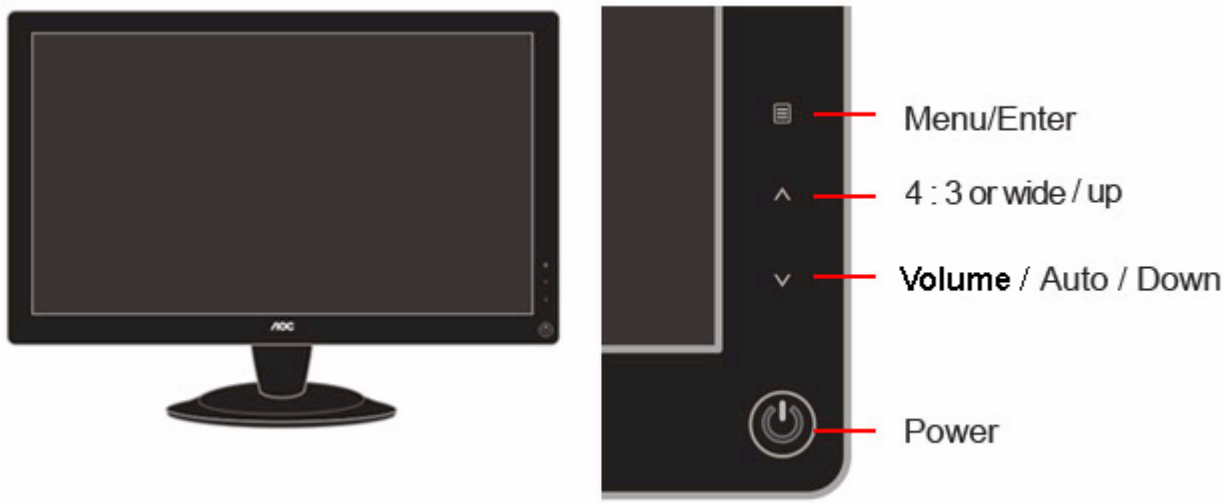
3. Operation Instructions

3.1 General Instructions

Press the power button to turn the monitor on or off. The other control knobs are located at front panel of the monitor. 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



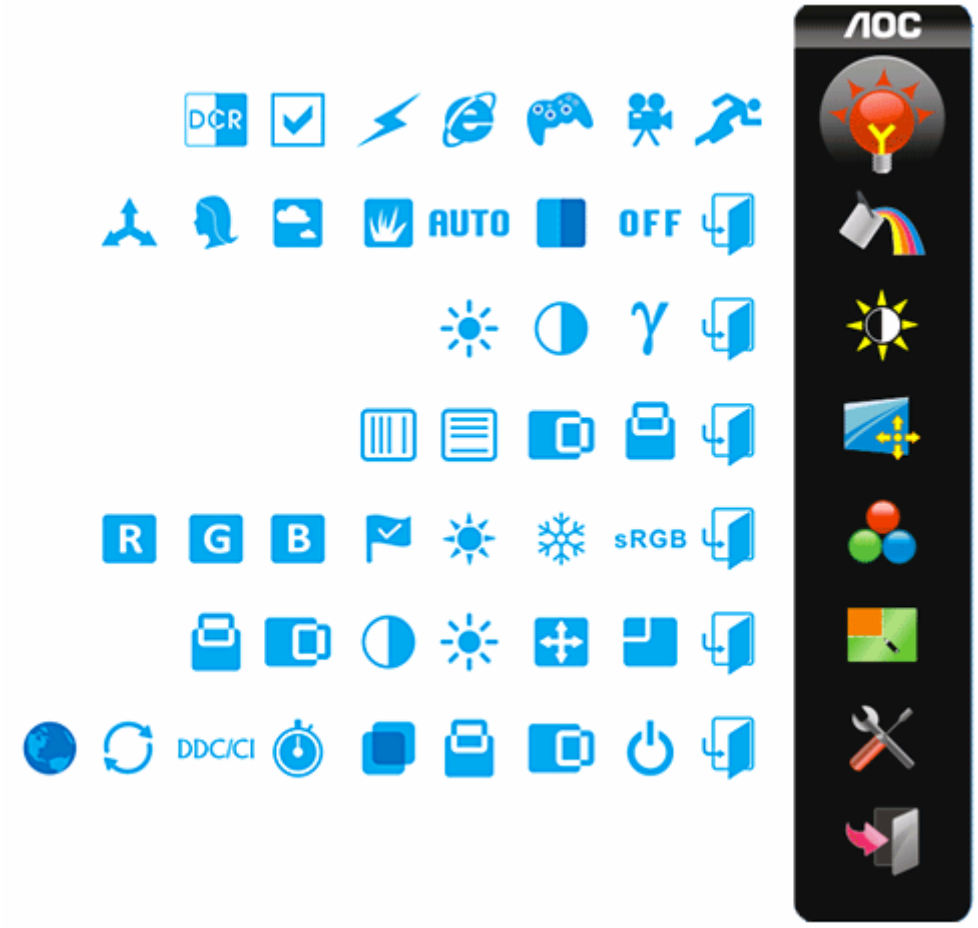
Power Press to turn on or turn off the monitor.

4:3 or wide / Up Press ^key to change the screen aspect ratio between standard 4：3format or Wide format.

Auto / Down Auto configure hot key: When the OSD is closed, press Auto button to do auto configure.

3.3 Adjusting the Picture

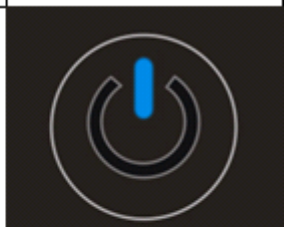
OSD Settings




Eco mode ---DCR, Standard, Text, Internet, Game, Movie, Sports

Notes : When Eco mode is not set as “Standard”, Contrast and Brightness can not be adjusted; When DCR is set as “On”, Contrast, Brightness, Eco mode and Gamma can not be adjusted.

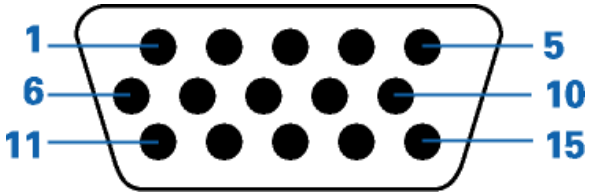
LED Indicator

Status	LED Color	
Full Power Mode	Blue	
Active-off Mode	Orange	

4. Input/Output Specification

4.1 Input Signal Connector

D-Sub mini 15pin Connector



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

4.2 Factory Preset Display Modes

STAND	RESOLUTION	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
VGA	640×480 @60Hz DMT	31.469	59.94
VGA	640×480 @67Hz MAC	35	66.667
VGA	640×480 @72Hz DMT	37.861	72.809
VGA	640×480 @75Hz DMT	37.5	75
Dos-mode	720×400 @70Hz DOS	31.469	70.087
SVGA	800×600 @56Hz DMT	35.156	56.25
SVGA	800×600 @60Hz DMT	37.879	60.317
SVGA	800×600 @72Hz DMT	48.077	72.188
SVGA	800×600 @75Hz DMT	46.875	75
SVGA	832×624 @75Hz	49.725	74.55
XGA	1024×768 @60Hz DMT	48.363	60.004
XGA	1024×768 @70Hz DMT	56.476	70.069
XGA	1024×768 @75Hz DMT	60.023	75.029
WXGA	1366x768 @60Hz DMT	47.765	59.85

5. Panel Specification

5.1 Display Characteristics

M185B1-L02

Item	Specification	Unit
Active Area	409.8 (H) × 230.4(V) (18.5" diagonal)	mm
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

M185XW01

ITEMS	Unit	SPECIFICATIONS
Screen Diagonal	[mm]	470.1(18.51")
Active Area	[mm]	409.8 (H) x 230.4 (V)
Pixels H x V		1366(x3) x 768
Pixel Pitch	[um]	300 (per one triad) × 300
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		TN Mode, Normally White
White Luminance (Center)	[cd/m^2]	250 cd/m^2 (@ 7.5mA (Typ.)
Contrast Ratio		1000 (Typ.)
Optical Response Time	[msec]	5ms (Typ., on/off)
Nominal Input Voltage VDD	[Volt]	+5.0 V (Typ)
Power Consumption (VDD line + CCFL line)	[Watt]	14.8 W (Typ) (without inverter, all black pattern)
Weight	[Grams]	2000 (Max)
Physical Size	[mm]	430.37 (W) x 254.6 (H) Typ. x 16.5 (D) Max
Electrical Interface		One channel LVDS
Support Color		16.7M colors (RGB 6-bit + Hi_FRC)
Surface Treatment		Anti-Glare, 3H
Temperature Range		
Operating	[°C]	0 to +50
Storage (Shipping)	[°C]	-20 to +60
RoHS Compliance		RoHS Compliance
TCO'03 Compliance		TCO'03 Compliance

LTM185AT02

Items	Specification	Unit
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	300(Typ.)	cd/• •

5.2 Optical Characteristics

M185B1-L02

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-1000T	Typ - 0.03	0.646	Typ + 0.03	-
		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		185	250	-	cd/m^2
Contrast Ratio		CR		700	1000	-	-
Response Time		T_R	θ_x=0°, θ_Y =0°	-	1.3	3.2	ms
		T_F		-	3.7	6.8	
White Variation		δW	θ_x=0°, θ_Y =0° USB2000	-	1.3	1.42	-
Viewing Angle	Horizontal	θ_x+	CR ≧ 10 USB2000	75	85	-	Deg.
		θ_x-		75	85	-	
	Vertical	θ_Y+		70	80	-	
		θ_Y-		70	80	-	

M185XW01

Item	Unit	Conditions	Min.	Typ.	Max.
Viewing Angle	[degree]	Horizontal (Right) CR = 10 (Left)	150	170	- -
		Vertical (Up) CR = 10 (Down)	140	160	- -
Contrast ratio		Normal Direction	600	1000	-
Response Time	[msec]	Raising Time (T_{rR})	-	3.6	5.7
		Falling Time (T_{rF})	-	1.4	2.3
		Raising + Falling	-	5	8
Color / Chromaticity Coordinates (CIE)		Red x	0.618	0.648	0.678
		Red y	0.309	0.339	0.369
		Green x	0.262	0.292	0.322
		Green y	0.573	0.603	0.633
		Blue x	0.113	0.143	0.173
		Blue y	0.040	0.070	0.100
Color Coordinates (CIE) White		White x	0.283	0.313	0.343
		White y	0.299	0.329	0.359
Central Luminance	[cd/m^2]		200	250	-
Luminance Uniformity	[%]		75	80	-
Crosstalk (in 60Hz)	[%]				1.5
Flicker	dB				-20

LTM185AT02

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Contrast Ratio (Center of screen)		C/R		600	1000	-	
Response Time	On/Off	Tr+ Tf		-	5	10	msec
Luminance of White (Center of screen)		Y_L		250	300	-	cd/m2
Color Chromaticity (CIE 1931)	Red	Rx	Normal • $\theta_{L,R}=0$ • $\theta_{U,D}=0$ Viewing Angle	-0.030	0.650	+0.030	
		Ry			0.335		
	Green	Gx			0.295		
		Gy			0.605		
	Blue	Bx			0.145		
		By			0.075		
	White	Wx			0.313		
		Wy			0.329		
Color Chromaticity (CIE 1976)	Red	Ru'		-	0.455	-	
		Rv'		-	0.527	-	
	Green	Gu'		-	0.122	-	
		Gv'		-	0.563	-	
	Blue	Bu'		-	0.161	-	
		Bv'		-	0.187	-	
	White	Wu'		-	0.198	-	
		Wv'		-	0.468	-	
C.G.L	White	• u'v'		-	0.011	0.02	
Color Gamut		-		-	72	-	%
Color Temperature		-		-	6500	-	K
Viewing Angle	Hor.	• θ_L	CR• 10	70	80	-	Degrees
		• θ_R		70	80	-	
	Ver.	• θ_U		70	80	-	
		• θ_D		70	80	-	
Brightness Uniformity (9 Points)		B_{uni}		-	-	25	%

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

M185XW01

Symbol	Parameter	Min	Typ	Max	Unit	Conditions
VDD	Logic/LCD Drive Voltage	4.5	5.0	5.5	[Volt]	+/-10%
IDD	Input Current	-	0.76	0.85	[A]	VDD= 5.0V, All Black Pattern At 60Hz,
PDD		-	3.8	4.25	[Watt]	VDD= 5.0V, All Black Pattern At 60Hz
IRush	Inrush Current	-	-	3	[A]	Note 1
VDDrp	Allowable Logic/LCD Drive Ripple Voltage	-	-	350	[mV] p-p	VDD= 5.0V, All Black Pattern At 60Hz

LTM185AT02

Item		Symbol	Min.	Typ.	Max.	Unit
Voltage of Power Supply		V_{DD}	4.5	5.0	5.5	V
LVDS Input Characteristics	Differential Input Voltage for LVDS Receiver Threshold	High	-	-	+100	mV
		Low	-100	-	-	mV
	LVDS skew	t_{SKEW}	-300		300	
	Differential input voltage	$\|V_{ID}\|$	200		600	mV
	Input voltage range (single-ended)	V_{IN}	0		2.4	V
	Common mode voltage	V_{CM}	0+ $\|V_{ID}\|/2$	1.2	2.4- $\|V_{ID}\|/2$	V
Current of Power Supply	(a) Black	I_{DD}	-	550	-	mA
	(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

2. Backlight 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}	40000	---	---	Hrs
Power Consumption	P_L	---	10.85	---	W

M185XW01

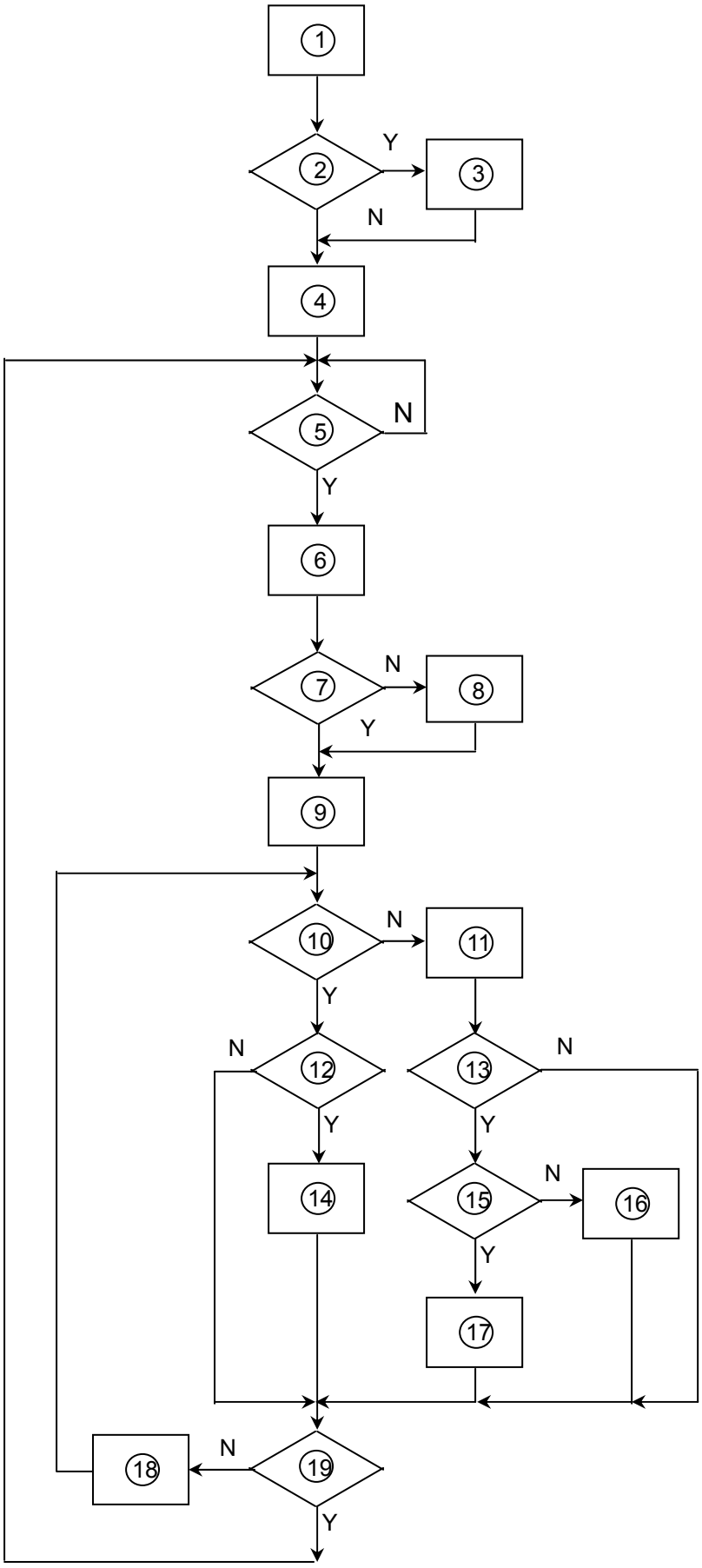
Parameter	Min.	Typ.	Max.	Unit
CCFL Standard Current (ISCFL)	7.0	7.5	8.0	[mA] rms
CCFL Operation Current (IRCFL)	3.0	7.5	8.0	[mA] rms
CCFL Frequency (FCFL)	40	50	80	[KHz]
CCFL Ignition Voltage (ViCFL, Ta= 0℃)	1650	-	-	[Volt] rms
CCFL Ignition Voltage (ViCF, Ta= 25℃)	1250	-	-	[Volt] rms
CCFL Operation Voltage (VCFL)	-	700 (@7.5mA)	880	[Volt] rms
CCFL Power Consumption (PCFL)	-	11	12.1	[Watt]
CCFL Life Time (LTCFL)	50,000	-	-	[Hour]

LTM185AT02

Item		Symbol	Min.	Typ.	Max.	Unit
Lamp Current		I_L	3.0	7.5	8.0	mArms
Lamp Voltage		V_L	-	700	-	Vrms
Lamp Frequency		f_L	40	-	60	kHz
Operating Life Time		Hr	50,000	-	-	Hour
Inverter waveform	Asymmetry rate	Wasy	-	-	10	%
	Distortion rate	Wdis	1.2726	1.414	1.5554	
Startup Voltage		Vs	-	-	0• •: 1,700	Vrms
					25• •: 1,400	

6. Block Diagram

6.1 Software Flow Chart

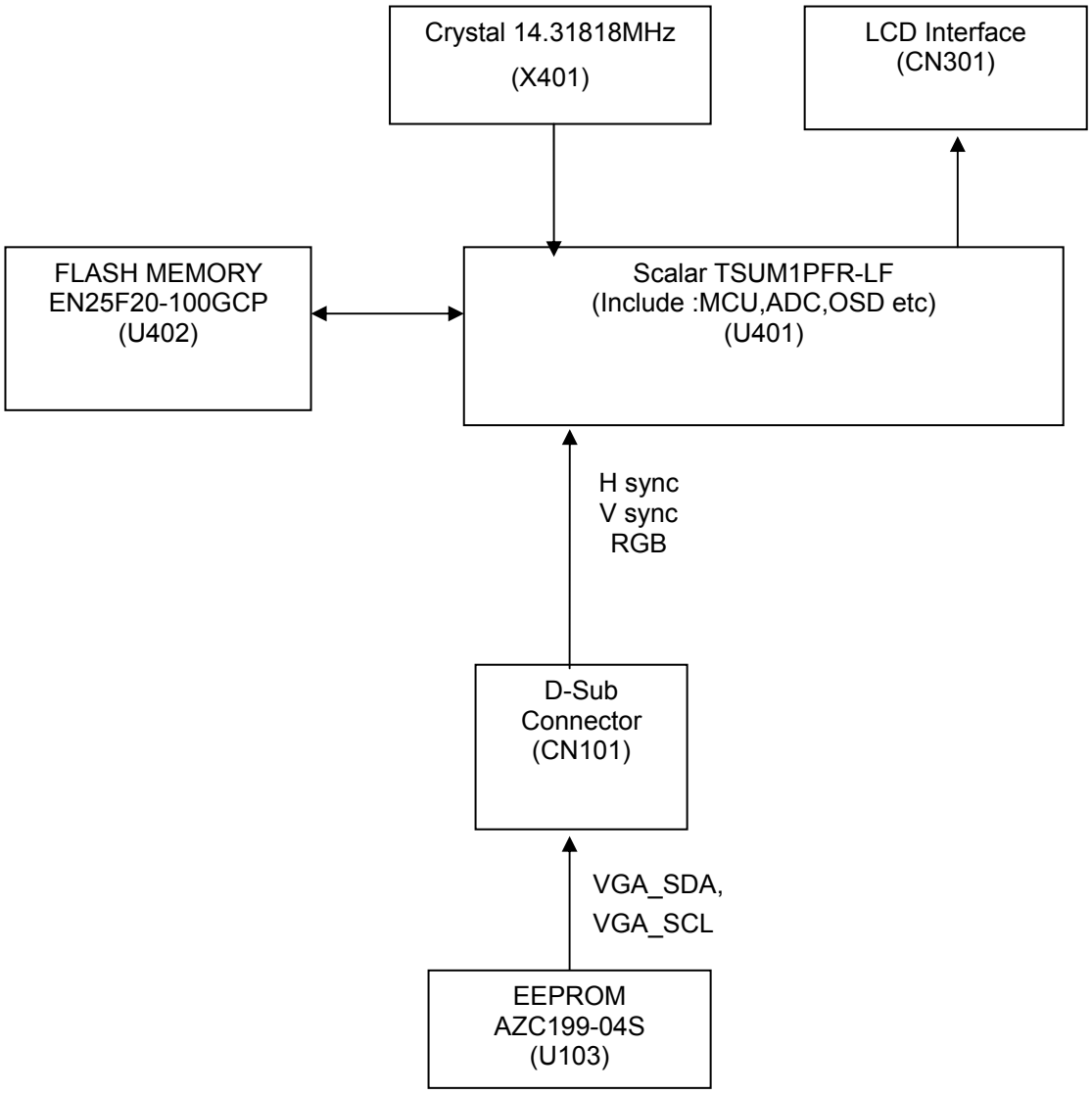


REMARK:

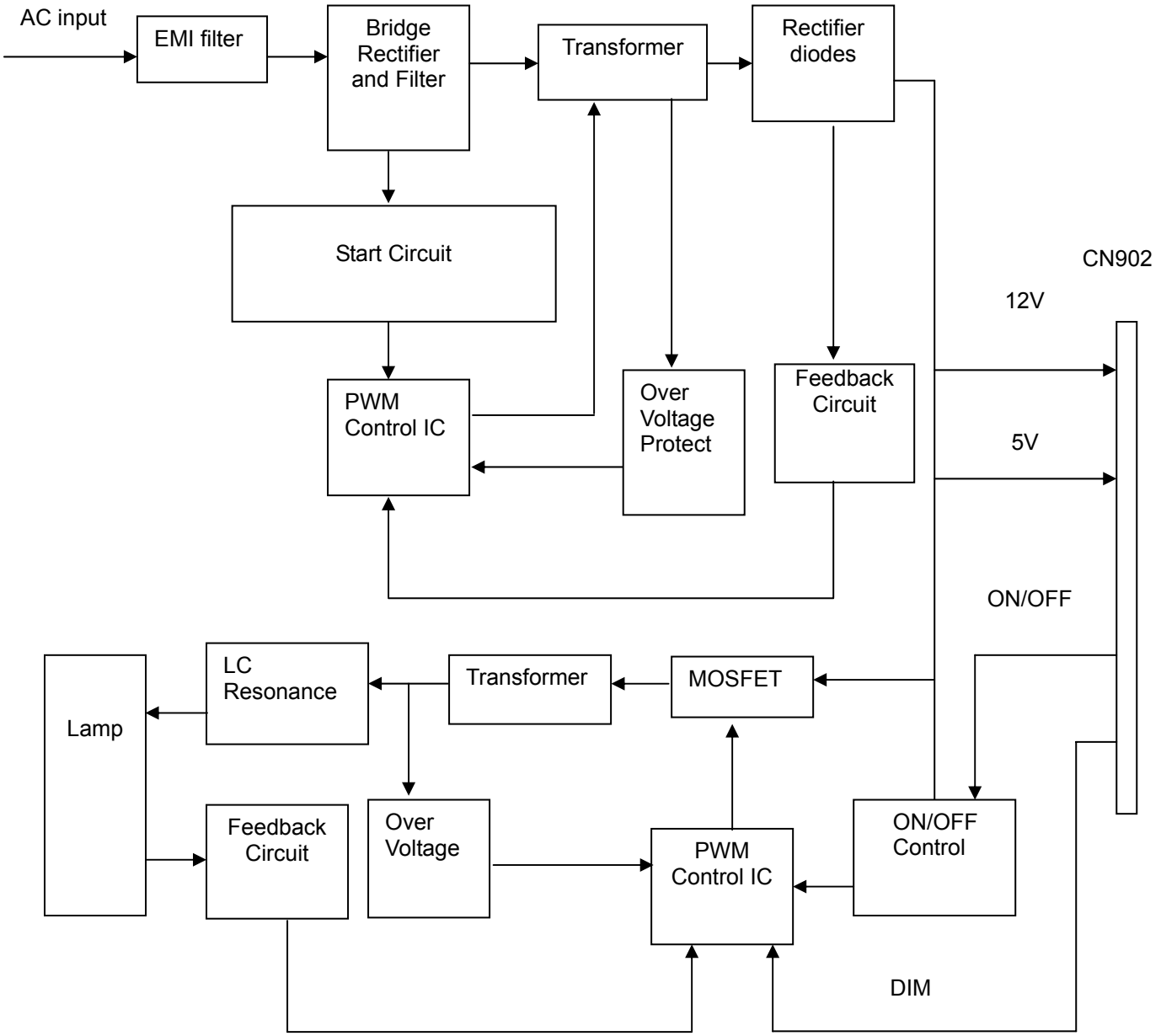
1) MCU initialize.
2) Is the EEprom blank?
3) Program the EEprom by default values.
4) Get the PWM value of brightness from EEprom.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEprom. Turn on 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



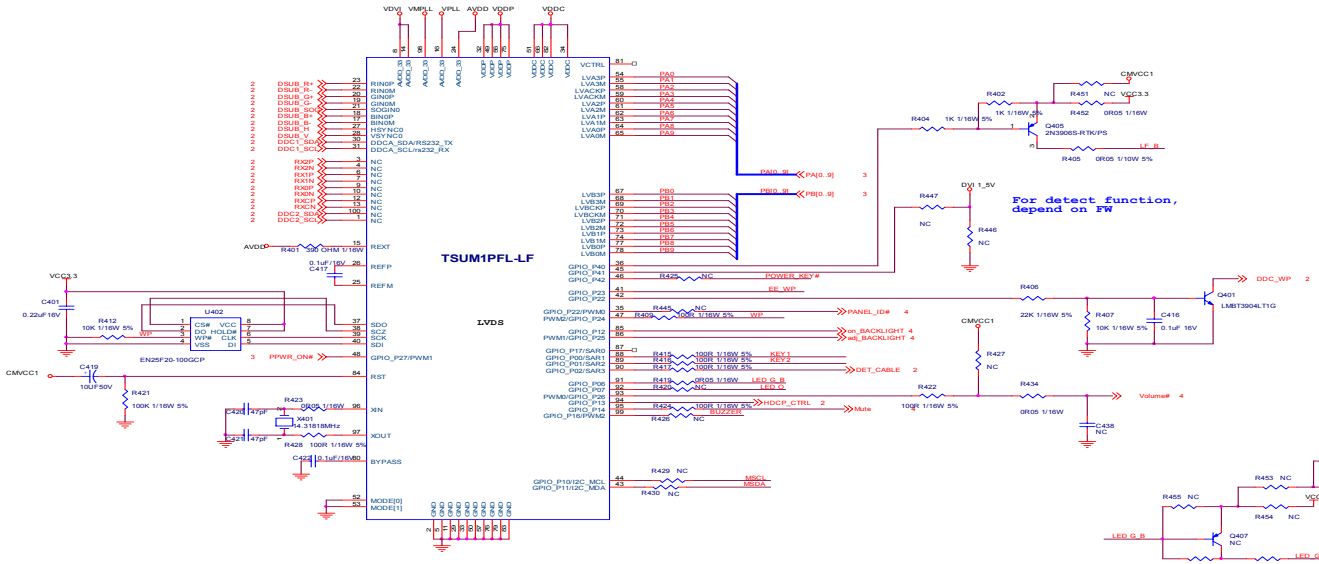
6.2.2 Inverter / Power Board



7. Schematic

7.1 Main Board

715G3329 1 2



X'TAL
Normal Function : CL = Cs + ((Cg*Cd)/(Cg+Cd))
P.S : Assume Cs = 4 pF

X401	CL of SPEC	Cs and Cd (C420, C421)
綠 (93G 22-53B-H)	18 pF	27 pF
紅 (93G 22-53-J)	32 pF	56 pF

Max condition for LED:
1. Vcc = 3.3 V
2. Current = 12 mA
FW need to be modified.

	U402
SST Eon	For user data, WB, EDID, HDCP are saved in Flash.

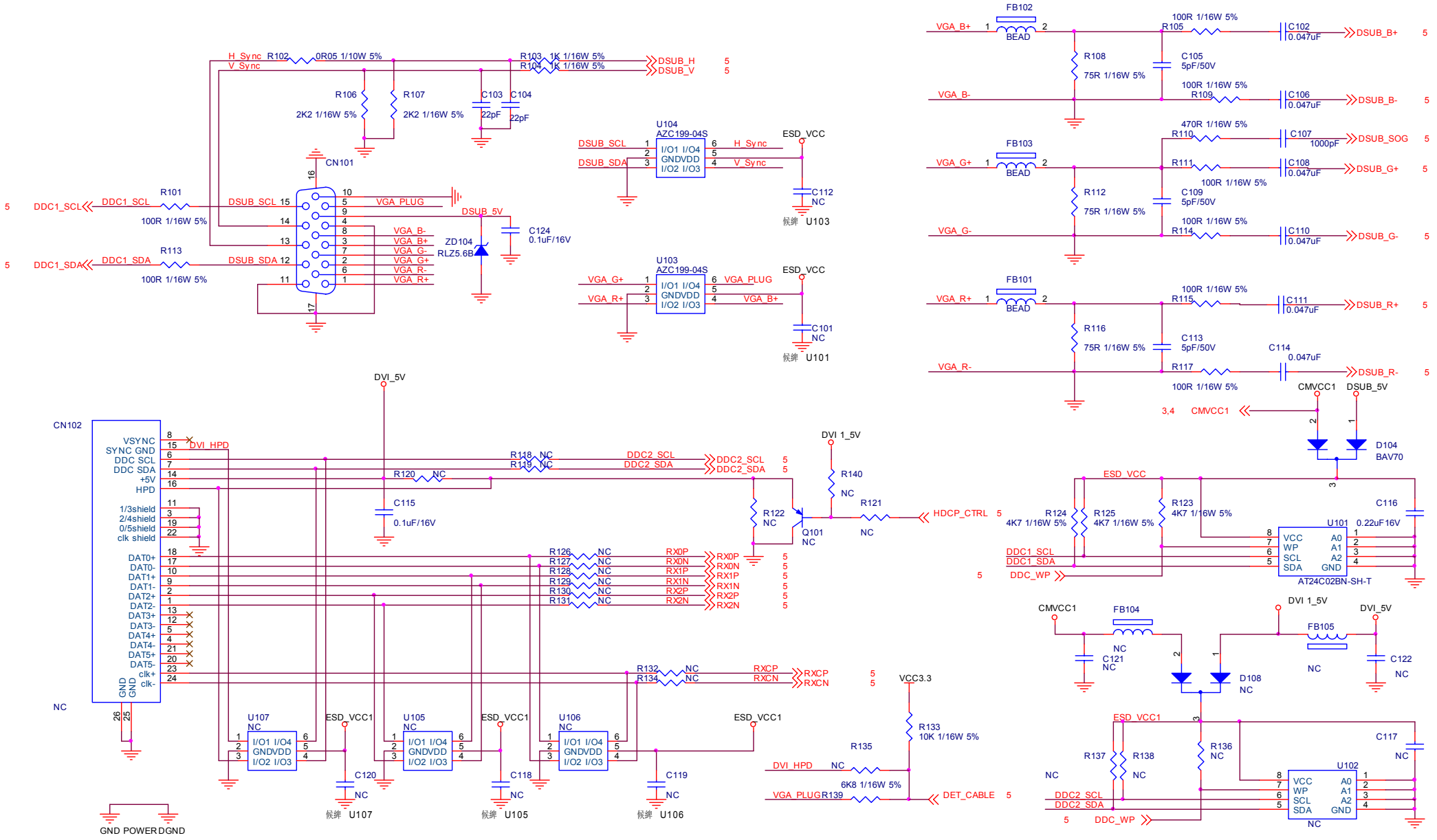
SST	U402
010A	Befor AOC ID2007 OSD
020A	For ID2008 ID2009

Eon	U402
020	For All model

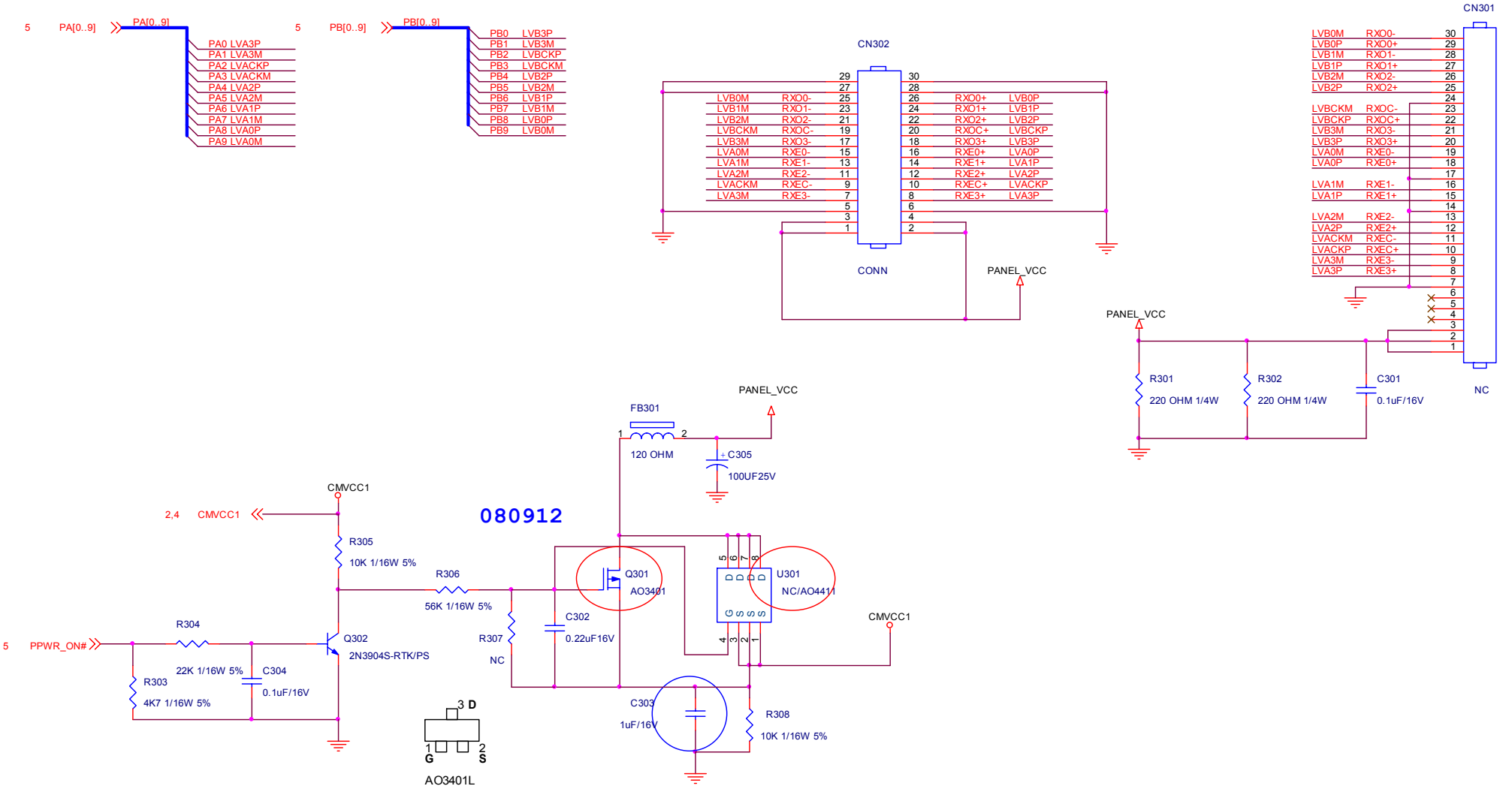
	For NVRAM	Without NVRAM
U403	M24C04-WMN6TP	NC
C423	0.22uF16V	NC
R429	100R 1/16W 5%	NC
R430	100R 1/16W 5%	NC
R440	10K 1/16W 5%	NC
R441	10K 1/16W 5%	NC
R442	10K 1/16W 5%	NC

	Indirect LED	Direct LED
R419	10K 1/16W 5%	100R 1/16W 5%
R420	10K 1/16W 5%	100R 1/16W 5%
R453	0R 1/16W 5%	NC
R455	2.2K 1/16W 5%	NC
R461	NC	0R 1/16W 5%
R457	0R 1/16W 5%	NC
R459	2.2K 1/16W 5%	NC
R462	NC	0R 1/16W 5%
Q407	2N3906S	NC
Q408	2N3906S	NC

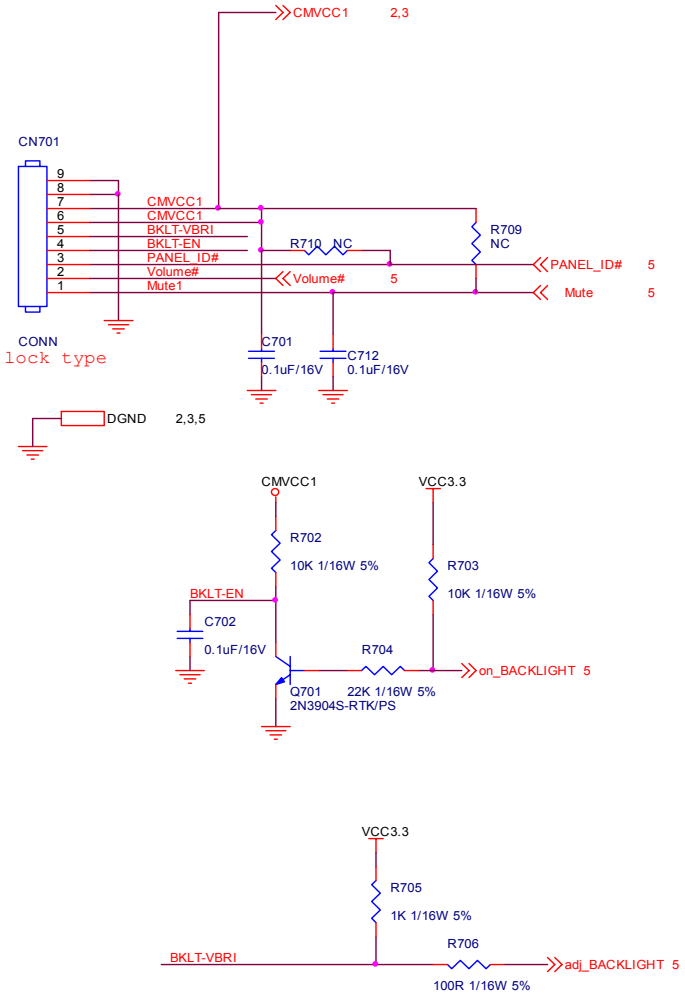
T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL	NEW R SERIES	Size	Custom
版 版 化 圖 號	G3329-1-2-X-1-090512	TPV MODEL	AOC 936SWA	Rev	B
Key Component	S.0.SCALER	PCB NAME		版 次	«版次»
Date	Tuesday, May 12, 2009	Sheet	5 of 5		

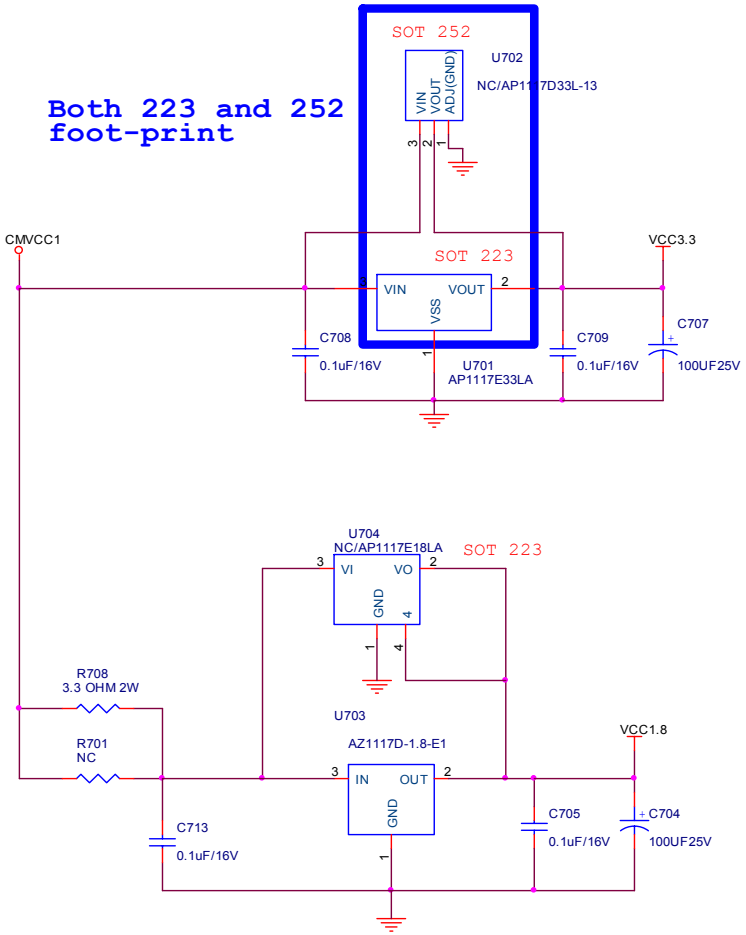


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	NEW R SERIES	Size	B
結構代號	G3329-1-2-X-1-090512	TPV MODEL	AOC 936SWA	Rev	B
Key Component	2.0.INPUT	PCB NAME		称爹	<称爹>
Date	Tuesday, May 12, 2009	Sheet	2 of 5		



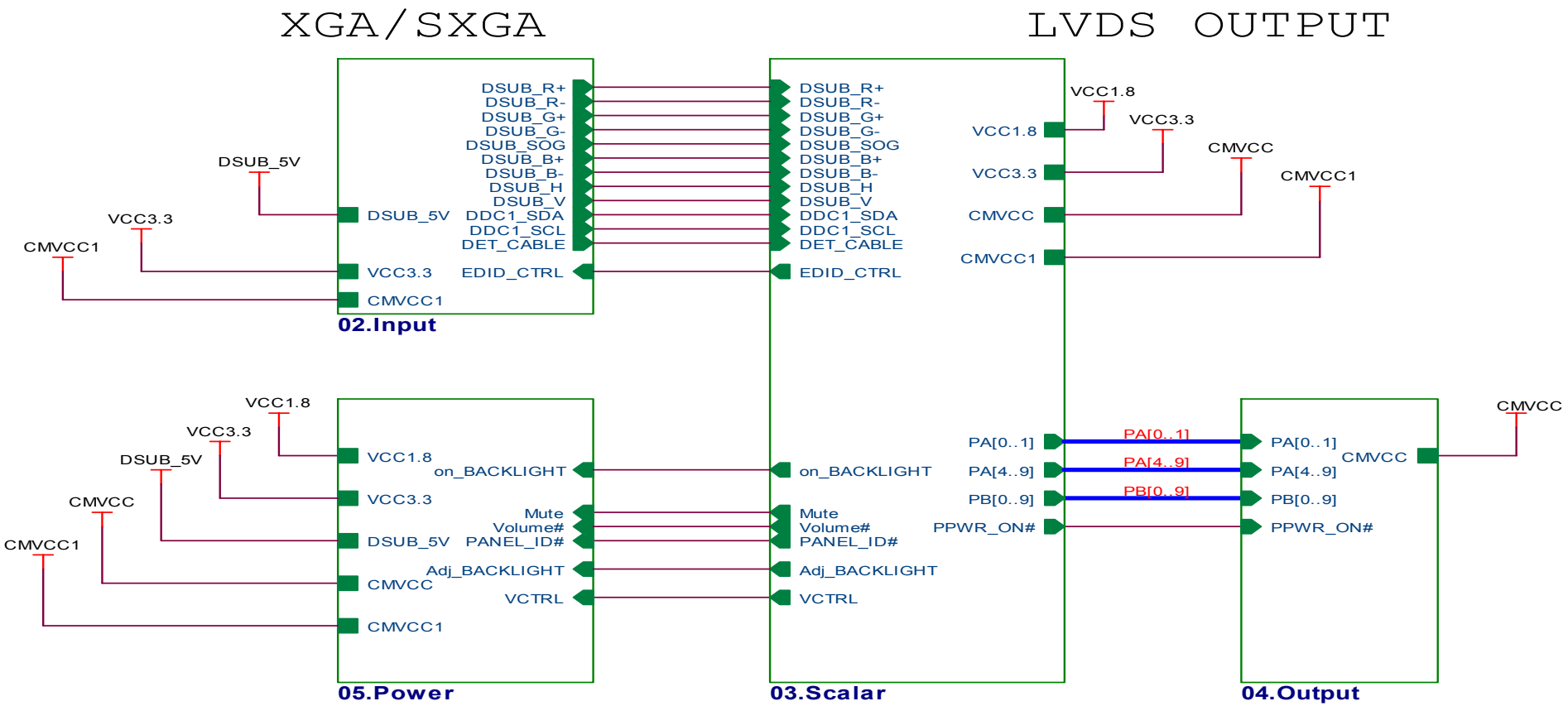
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	NEW R SERIES	Size	B
結 隔 瓜 鋼 腹	G3329-1-2-X-1-090512	TPV MODEL	AOC 936SWA	Rev	B
Key Component	3.0.OUTPUT	PCB NAME		称爹	<称爹>
Date	Tuesday , May 12, 2009	Sheet	3 of 5		



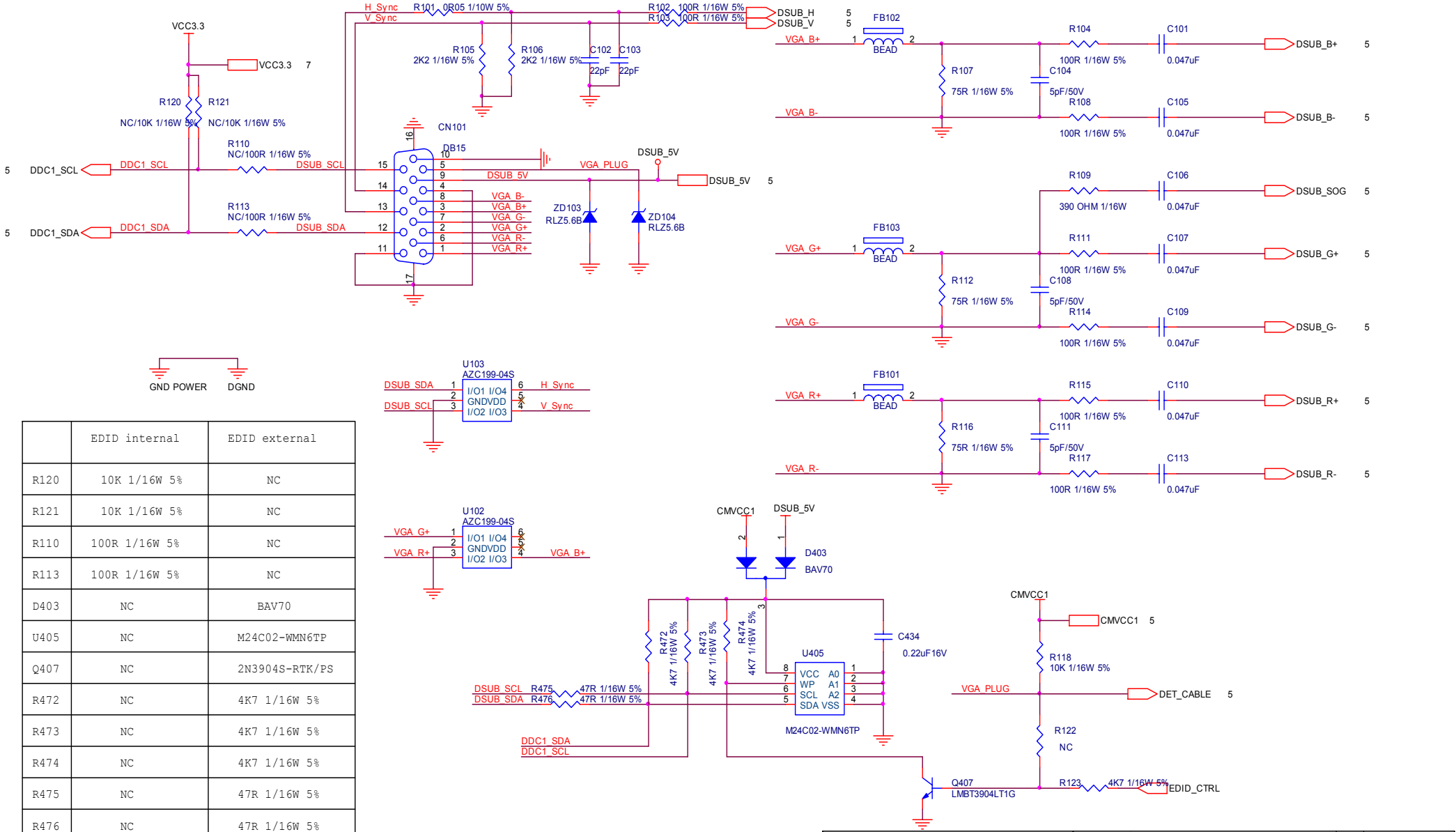


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	NEW R SERIES	Size	B
結 隔 瓜 銀 腹	G3329-1-2-X-1-090512	TPV MODEL	AOC 936SWA	Rev	B
Key Component	4.0.POWER	PCB NAME		称爹	<称爹>
Date	Tuesday, May 12, 2009	Sheet	4 of 5		

TSUM1PFR SCHEMATIC



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	OTS R-series	Size	A
結 隔 瓜 綑 腹	G3324-I-X-X-6-090105	TPV MODEL		Rev	F
Key Component	01.Top	PCB NAME	715G3244-I	称爹	<称爹>
Date	Tuesday, January 06, 2009	Sheet	3 of 7		



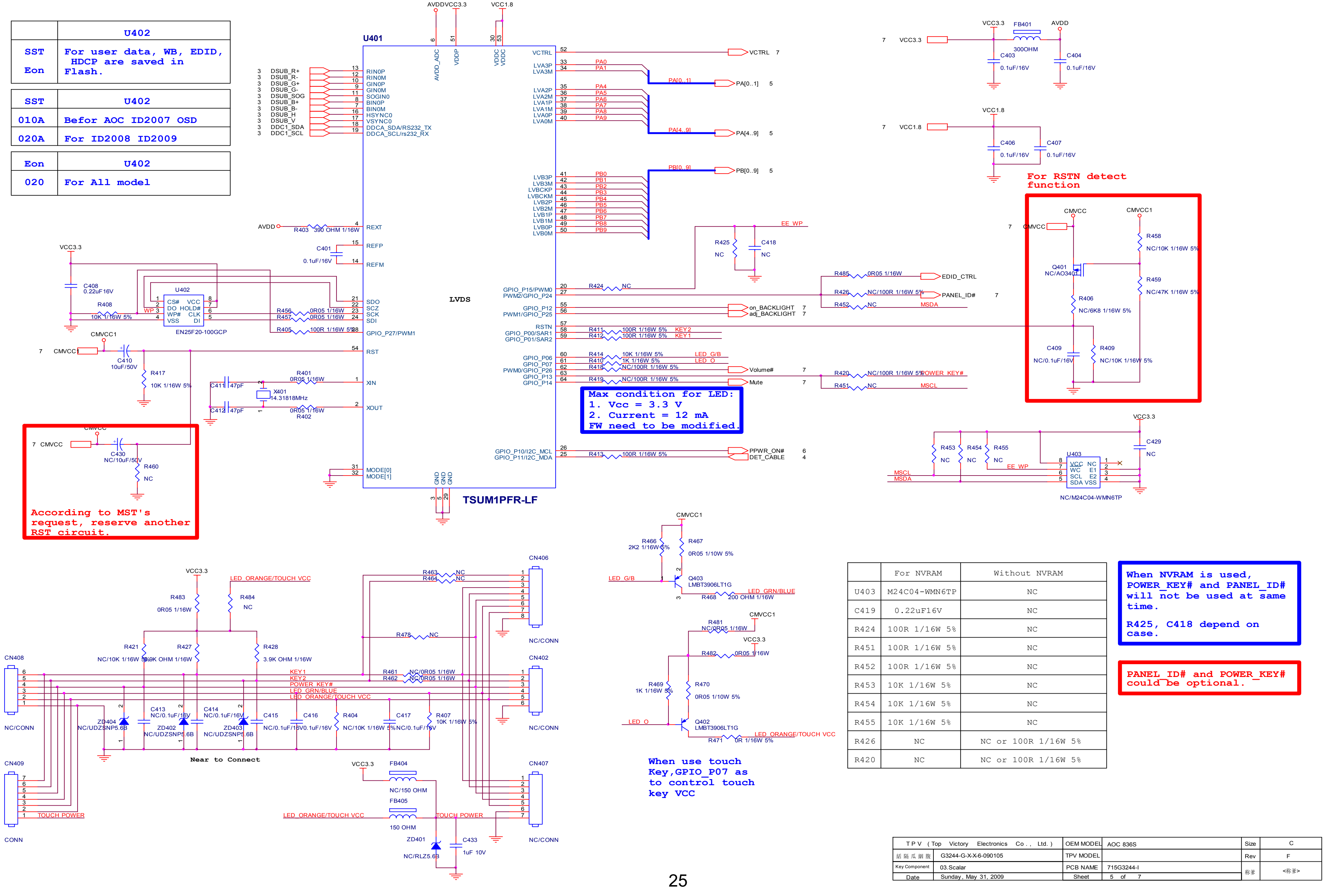
	EDID internal	EDID external
R120	10K 1/16W 5%	NC
R121	10K 1/16W 5%	NC
R110	100R 1/16W 5%	NC
R113	100R 1/16W 5%	NC
D403	NC	BAV70
U405	NC	M24C02-WMN6TP
Q407	NC	2N3904S-RTK/PS
R472	NC	4K7 1/16W 5%
R473	NC	4K7 1/16W 5%
R474	NC	4K7 1/16W 5%
R475	NC	47R 1/16W 5%
R476	NC	47R 1/16W 5%
C434	NC	0.22uF

T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC 836S	Size	B
結 隔 瓜 錮 腹	G3244-G-X-X-6-090105	TPV MODEL		Rev	F
Key Component	02.Input	PCB NAME	715G3244-I	称 爹	<称爹>
Date	Tuesday, January 06, 2009	Sheet	4 of 7		

	U402
SST Eon	For user data, WB, EDID, HDCP are saved in Flash.

SST	U402
010A	Befor AOC ID2007 OSD
020A	For ID2008 ID2009

Eon	U402
020	For All model



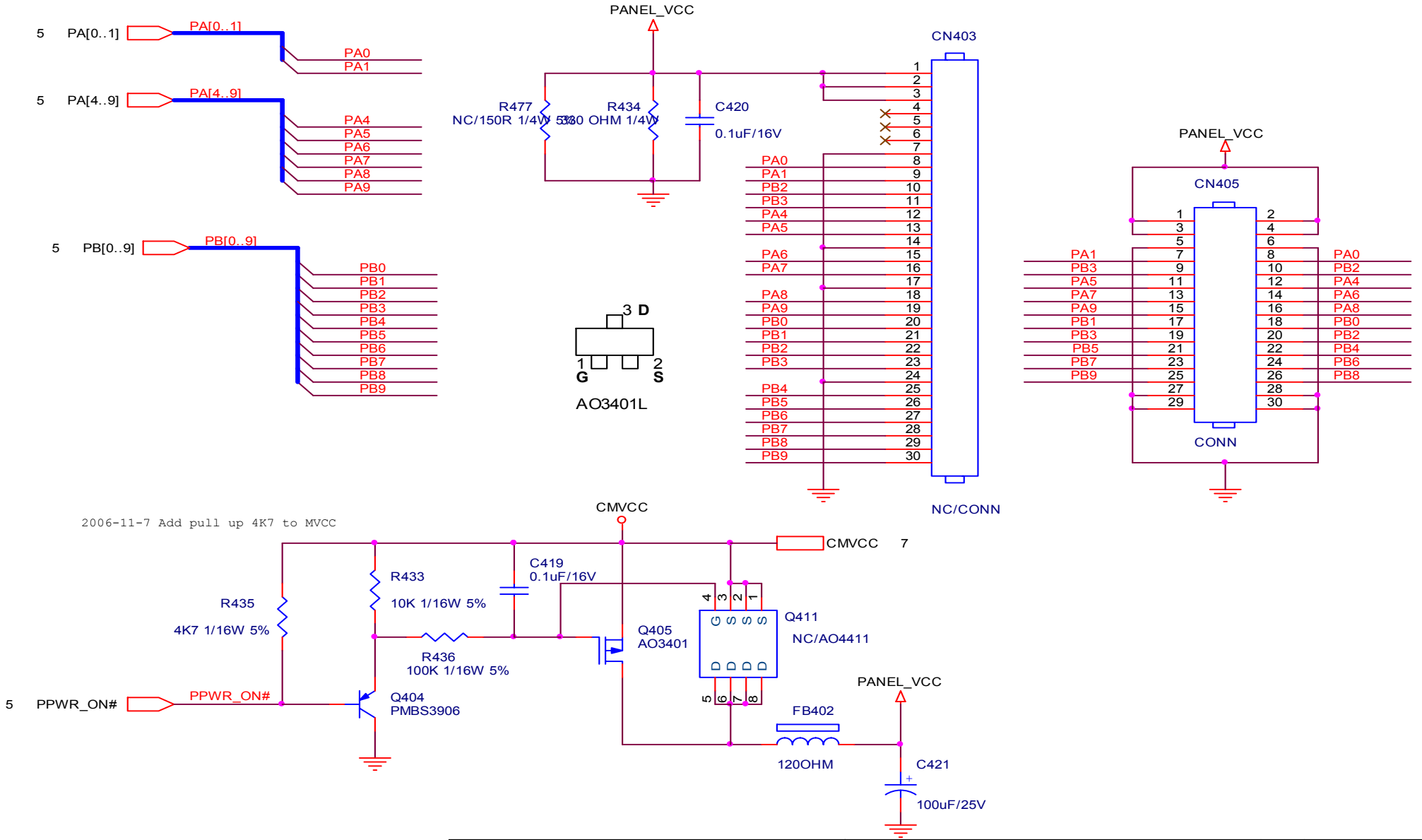
	For NVRAM	Without NVRAM
U403	M24C04-WMN6TP	NC
C419	0.22uF16V	NC
R424	100R 1/16W 5%	NC
R451	100R 1/16W 5%	NC
R452	100R 1/16W 5%	NC
R453	10K 1/16W 5%	NC
R454	10K 1/16W 5%	NC
R455	10K 1/16W 5%	NC
R426	NC	NC or 100R 1/16W 5%
R420	NC	NC or 100R 1/16W 5%

When NVRAM is used, POWER_KEY# and PANEL_ID# will not be used at same time.

R425, C418 depend on case.

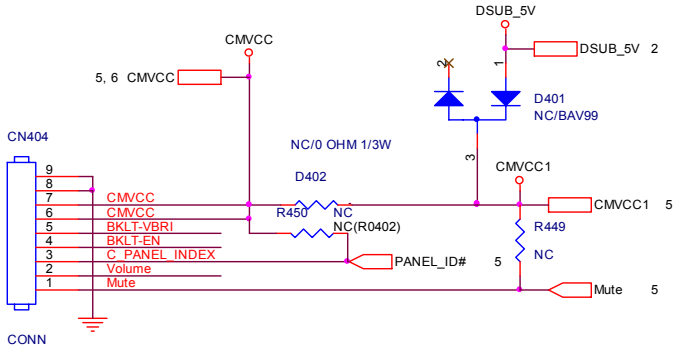
PANEL_ID# and POWER_KEY# could be optional.

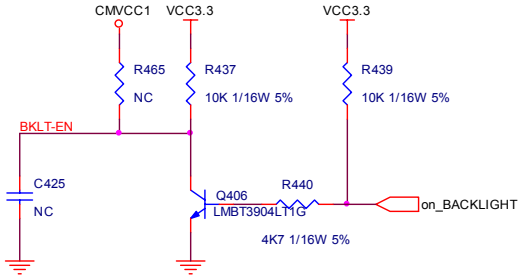
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC 836S	Size	C
	G3244-G-X-X-6-090105	TPV MODEL		Rev	F
Key Component	03.Scalar	PCB NAME	715G3244-I		
Date	Sunday, May 31, 2009	Sheet	5 of 7		

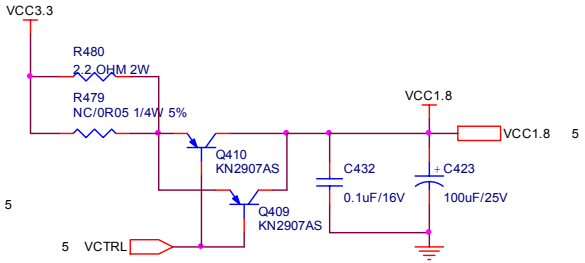


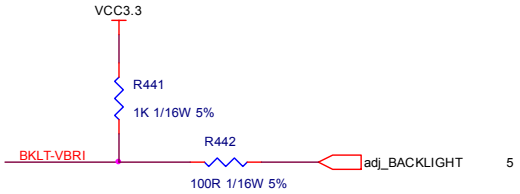
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	AOC 836S	Size	A
結 隔 瓜 綢 腹	G3244-G-X-X-6-090105	TPV MODEL		Rev	F
Key Component	04.Output	PCB NAME	715G3244-I	称爹	<称爹>
Date	Sunday, May 31, 2009	Sheet	6 of 7		

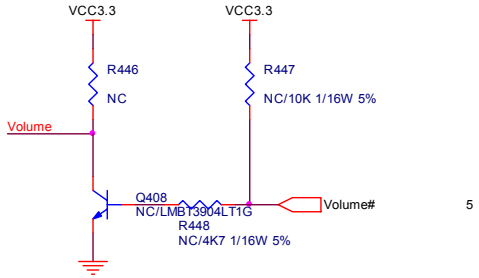
2008/01/14
BAT99 : If 0.05A,VF=1.0V
BAV70 : If 0.05A,VF=1.0V
It's need to use Low Dropout Regulator.

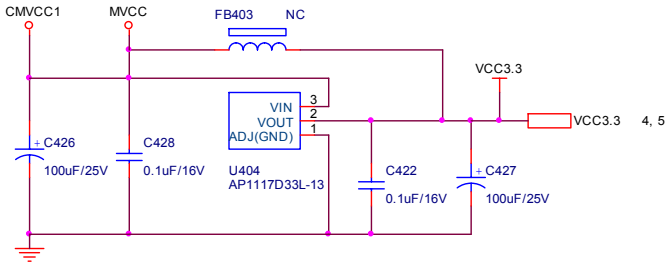








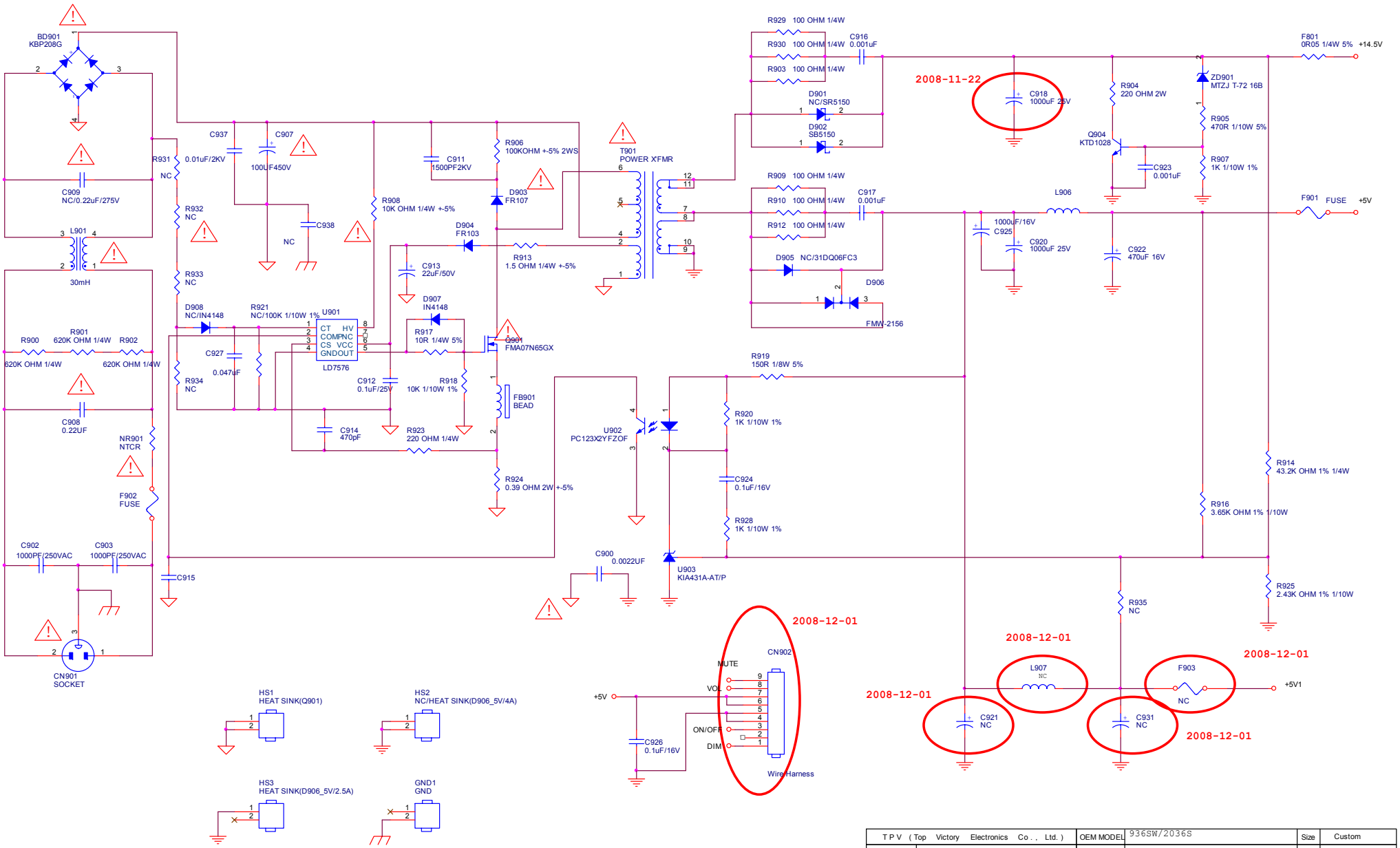




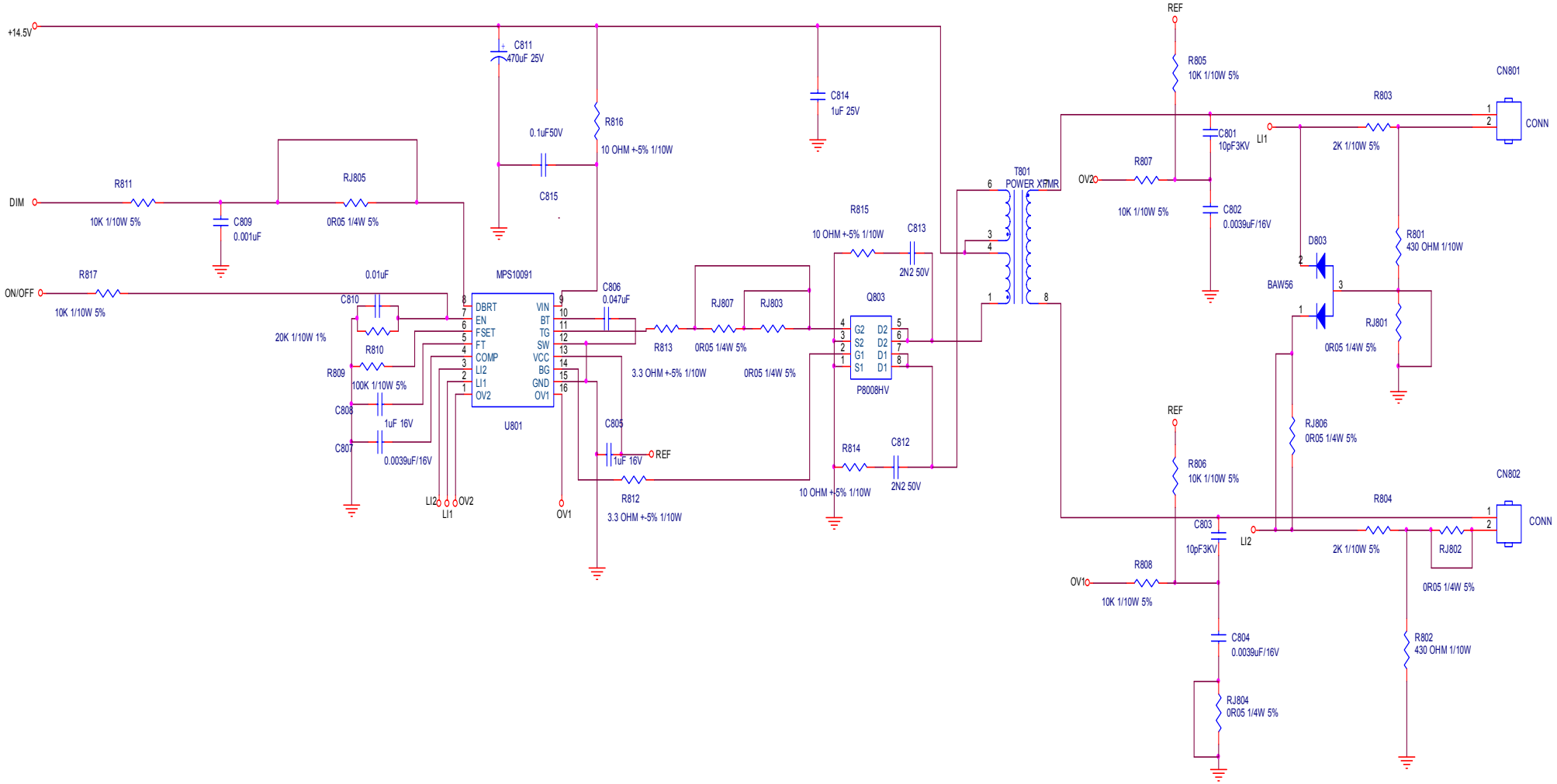
U404 can use package 223 or 252.

T P V （Top Victory Electronics Co., Ltd.）		OEM MODEL	AOC 836S	Size	B
紙隔瓜網腹	G3244-G-X-X-6-090105	TPV MODEL		Rev	F
Key Component	05.Power	PCB NAME	715G3244-I	称爹	<称爹>
Date	Sunday, May 31, 2009	Sheet	7 of 7		

7.2 Power Board



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	936SW/2036S	Size	Custom
話 隔 瓜 鎖 腹	G2892-1-3-X-1-090317	TPV MODEL	PWPC9921MHD1/PWPC9821AHD1/PWPC9921MHG2	REV	1
Key Component	01.POWER	PCB NAME	715G2892-1-3	称 峯	ODM MODEL
Date	Tuesday, March 17, 2009	Sheet	2 of 3		

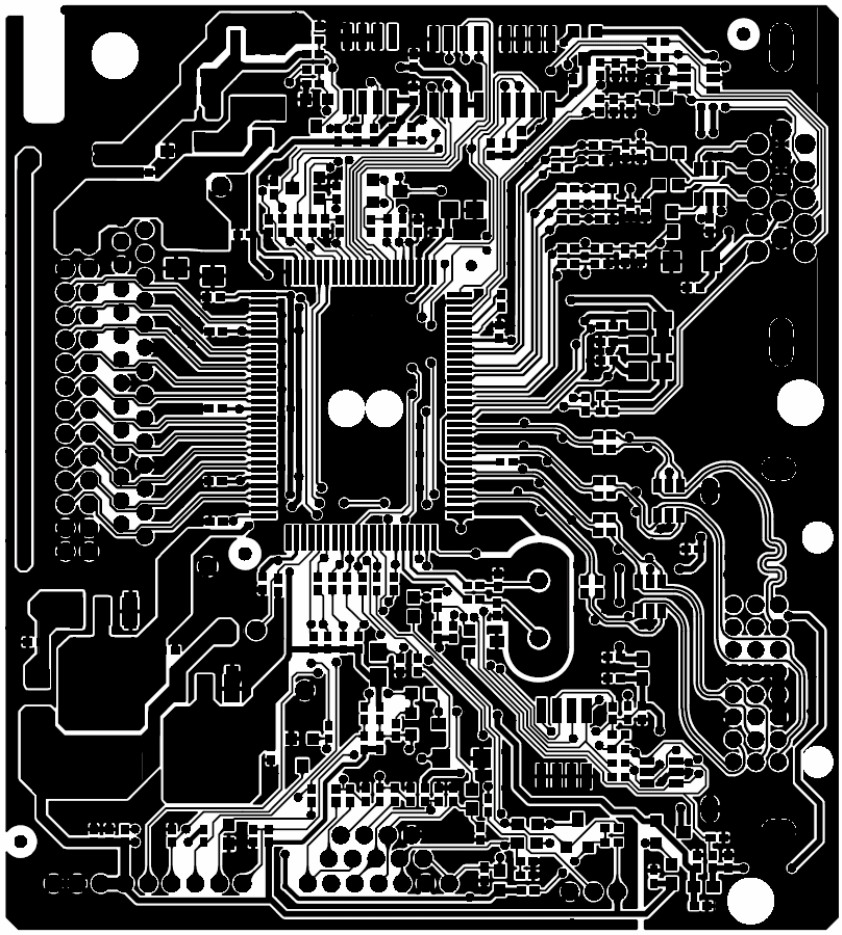


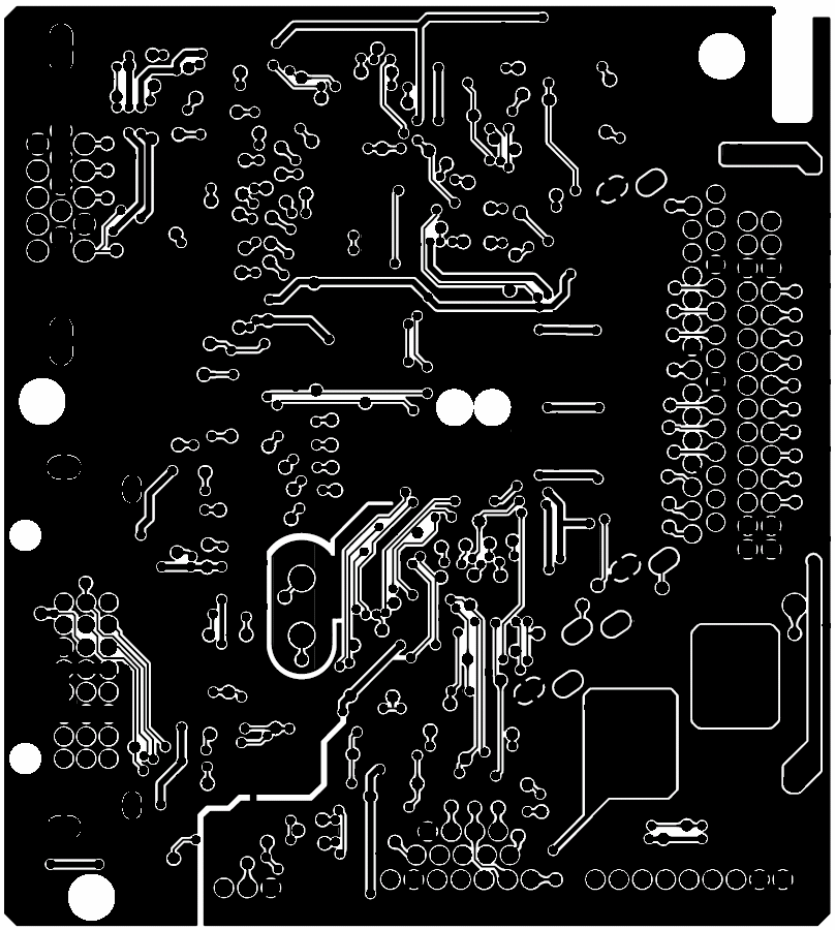
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	936SW/2036S	Size	Custom
結構瓜編腹	G2892-1-3-X-1-090317	TPV MODEL	PWPC9921MHD1/PWPC9821AHD1/PWPC9921MHB2	Rev	1
Key Component	02.INVERTER	PCB NAME	715G2892-1-3	称爹	ODM MODEL
Date	Tuesday, March 17, 2009	Sheet	3 of 3		

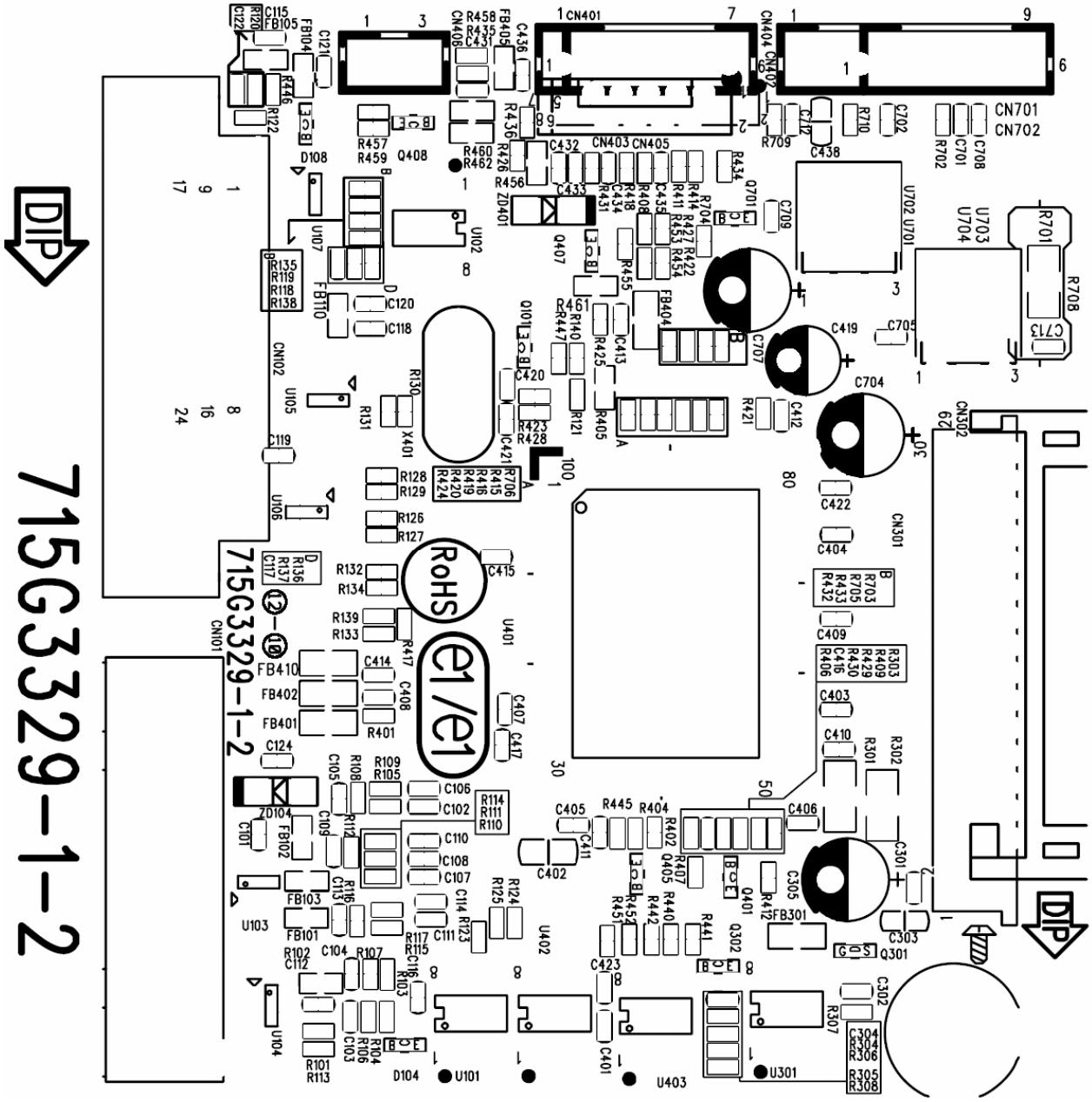
8. PCB Layout

8.1 Main Board

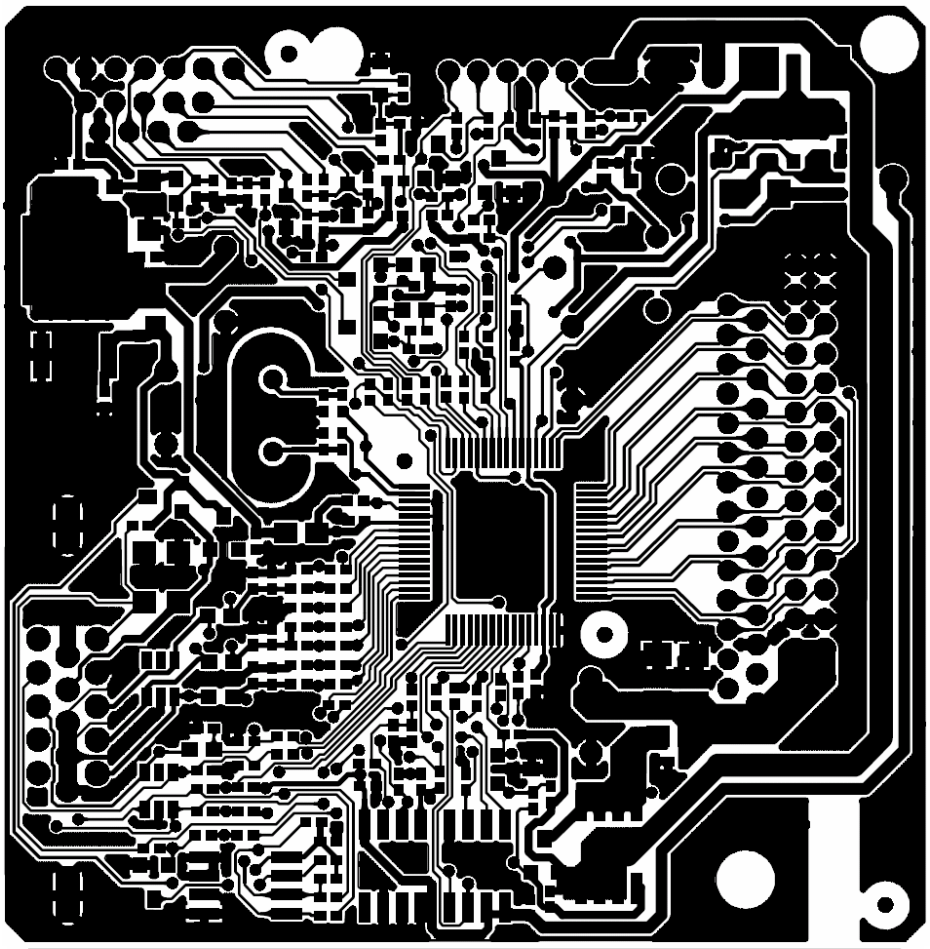
715G3329 1 2

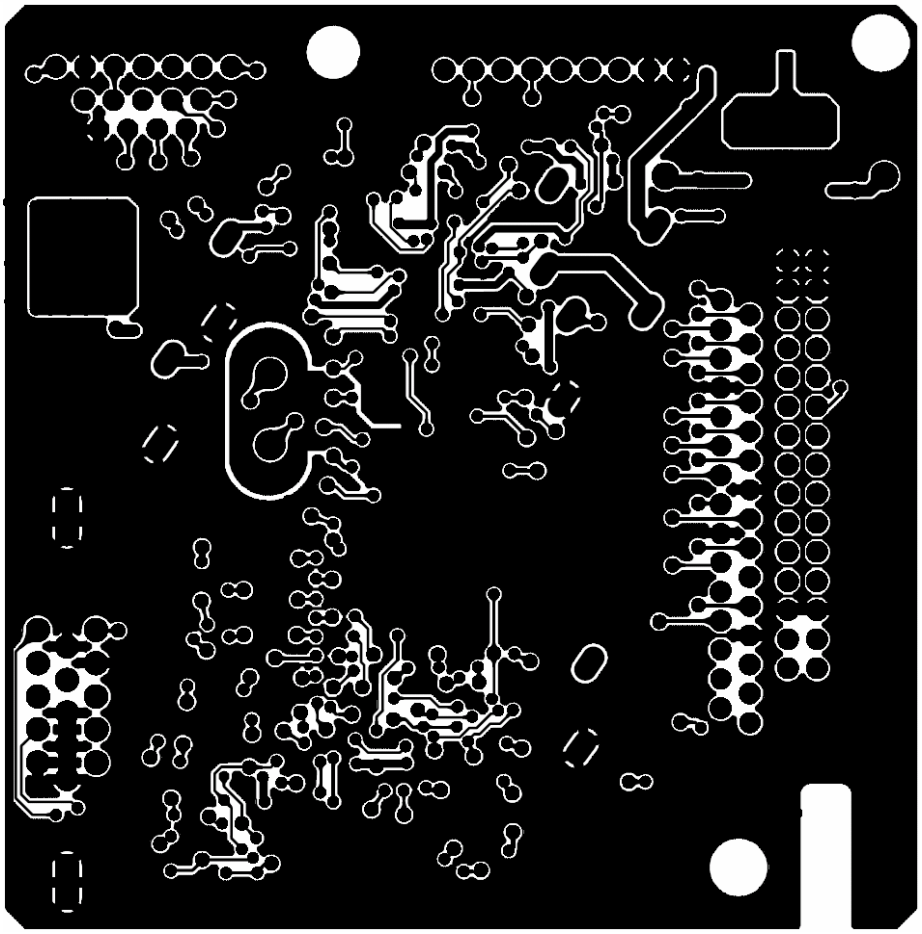


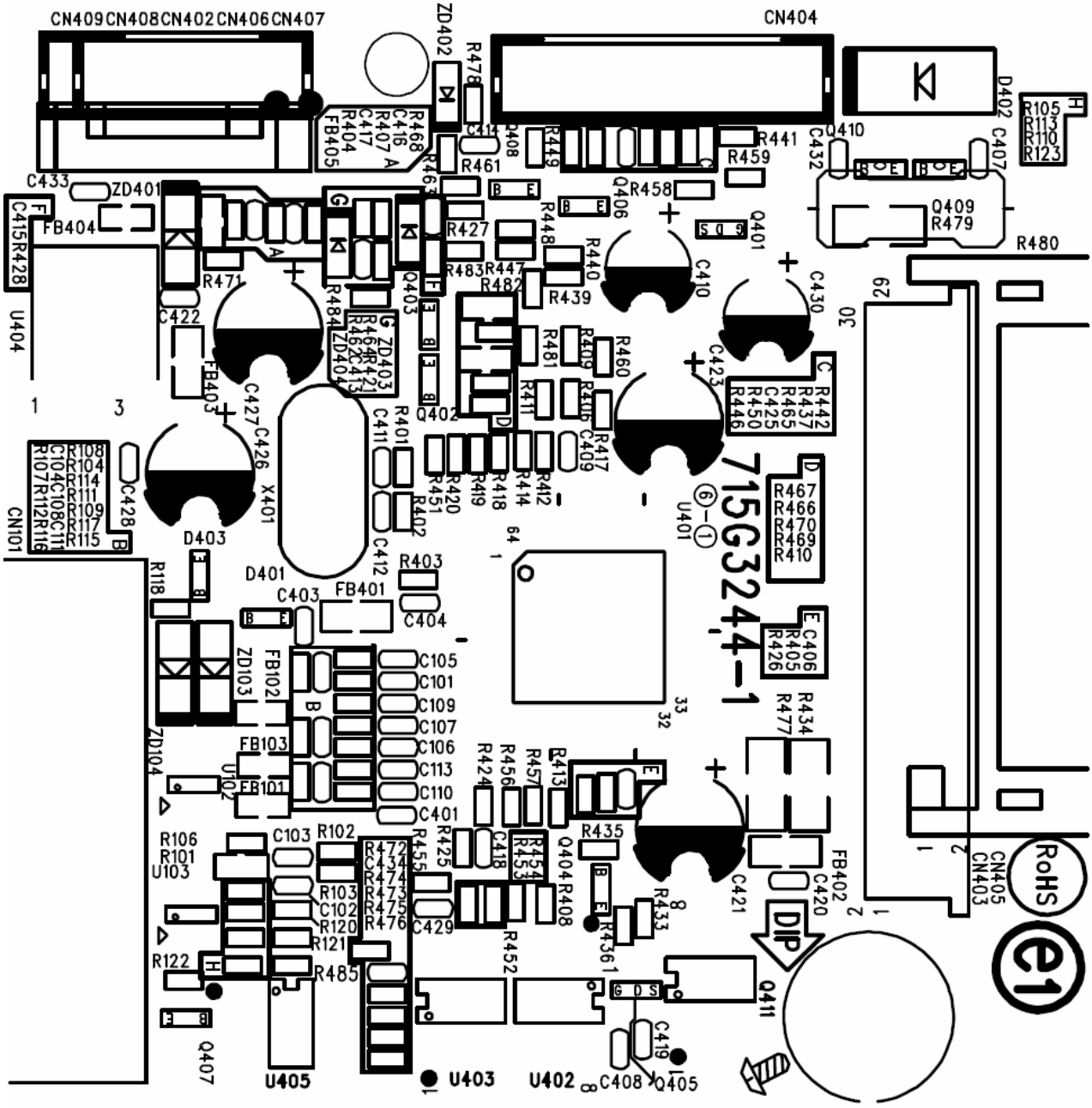



715G3329-1-2
715G3329-1-2
RoHS
e1/e1
DIP
DIP
CN401
CN403
CN405
CN701
CN702
CN301
CN302
CN101
CN102
U101
U102
U103
U104
U105
U106
U107
U301
U401
U402
U403
U701
U702
U703
U704
Q101
Q301
Q302
Q401
Q407
Q408
Q701
D104
D108
ZD104
ZD401
X401

715G3244 1

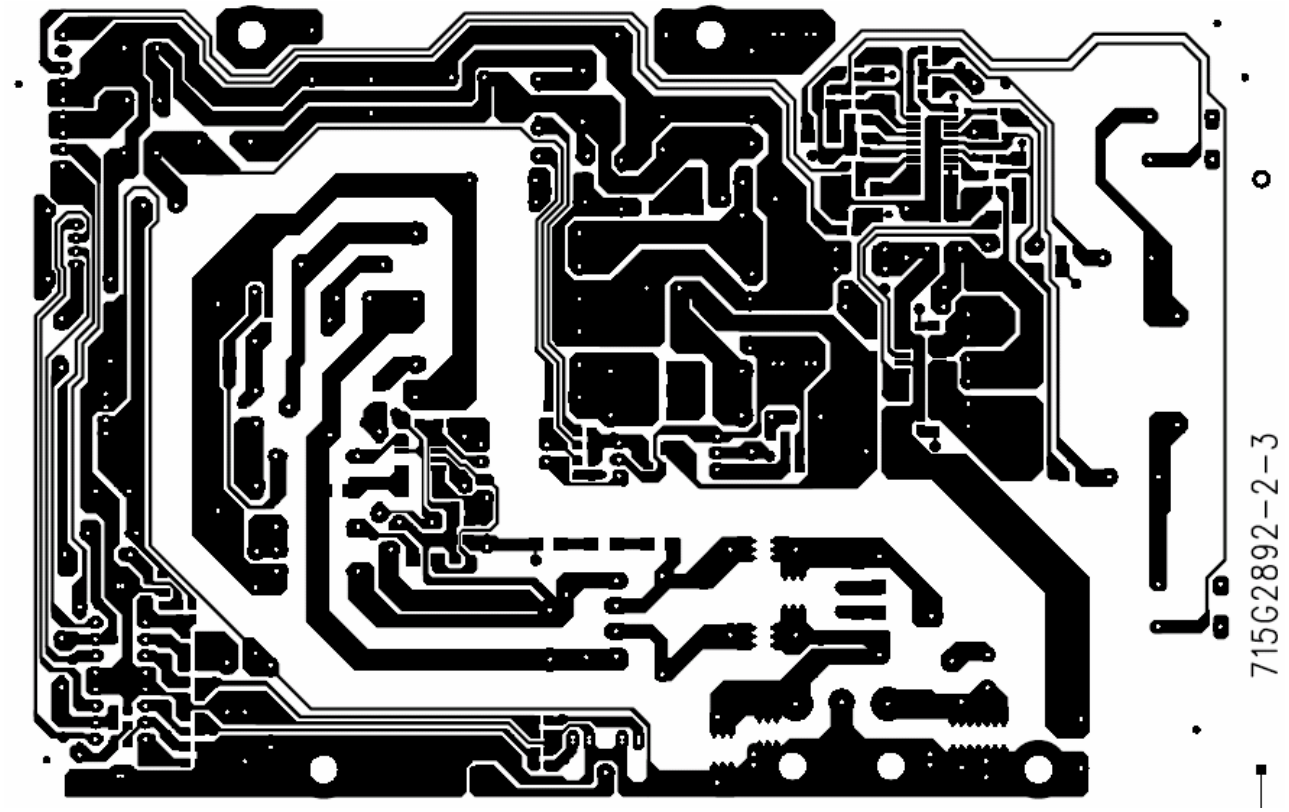


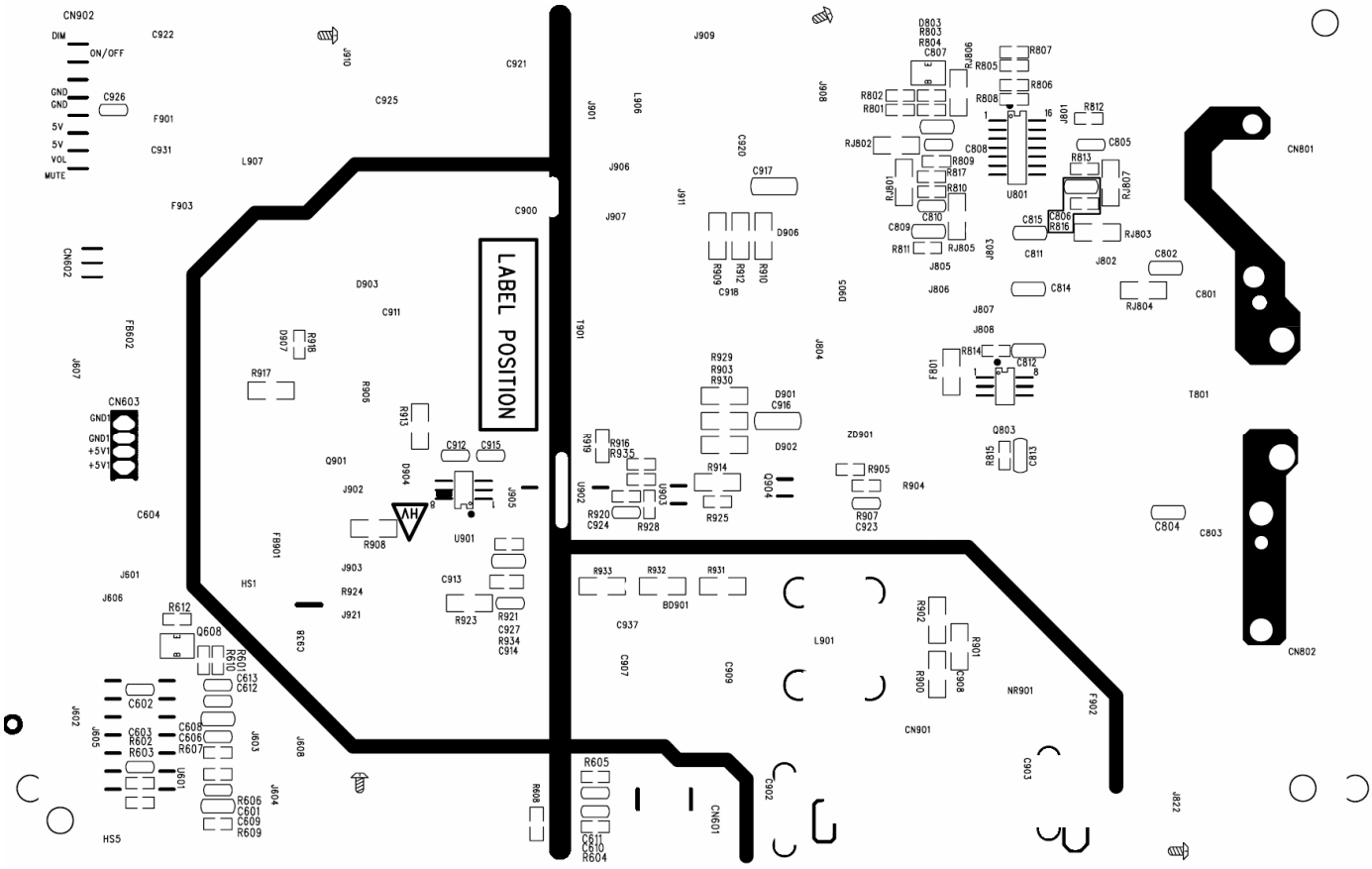


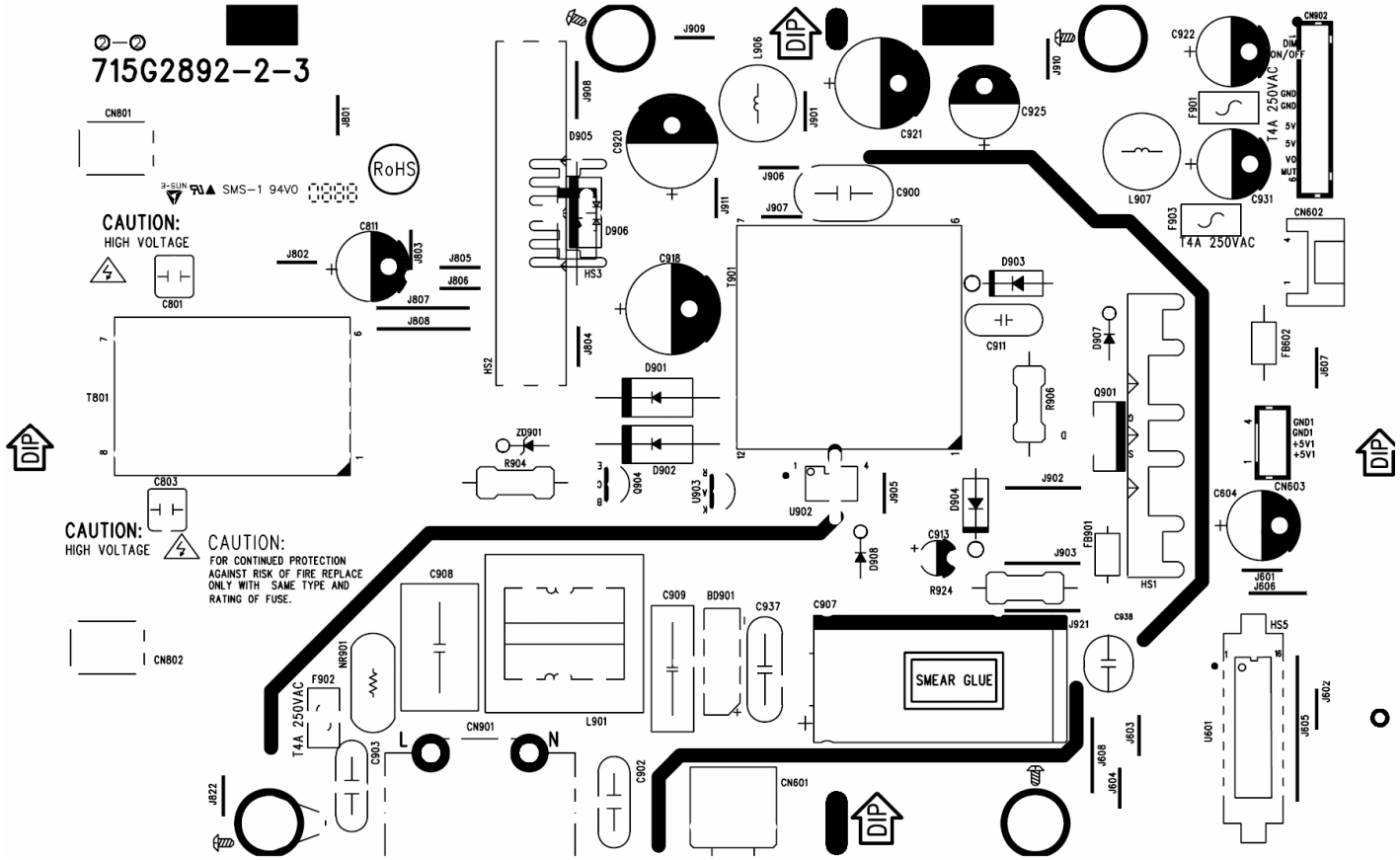

CN409 CN408 CN402 CN406 CN407
CN404
715G3244-1
U401
U405
U403
U402
Q411
Q405
DIP
RoHS

8.2 Power Board

715G2892 2 3

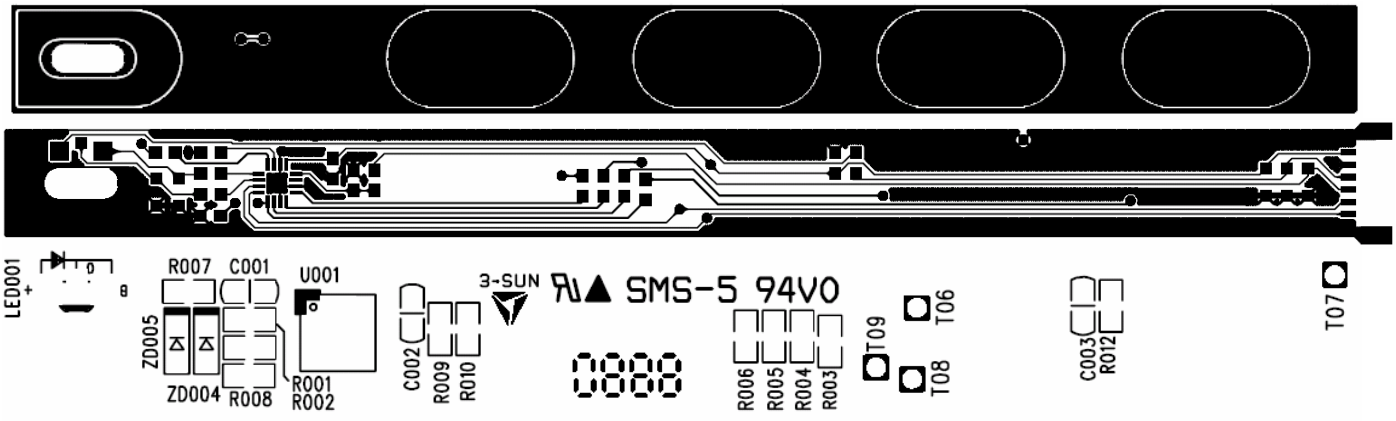





715G2892-2-3
CAUTION:
HIGH VOLTAGE
CAUTION:
HIGH VOLTAGE
CAUTION:
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.
SMEAR GLUE
T4A 250VAC
T4A 250VAC
T4A 250VAC
L
N
DIP
DIP
DIP
DIP

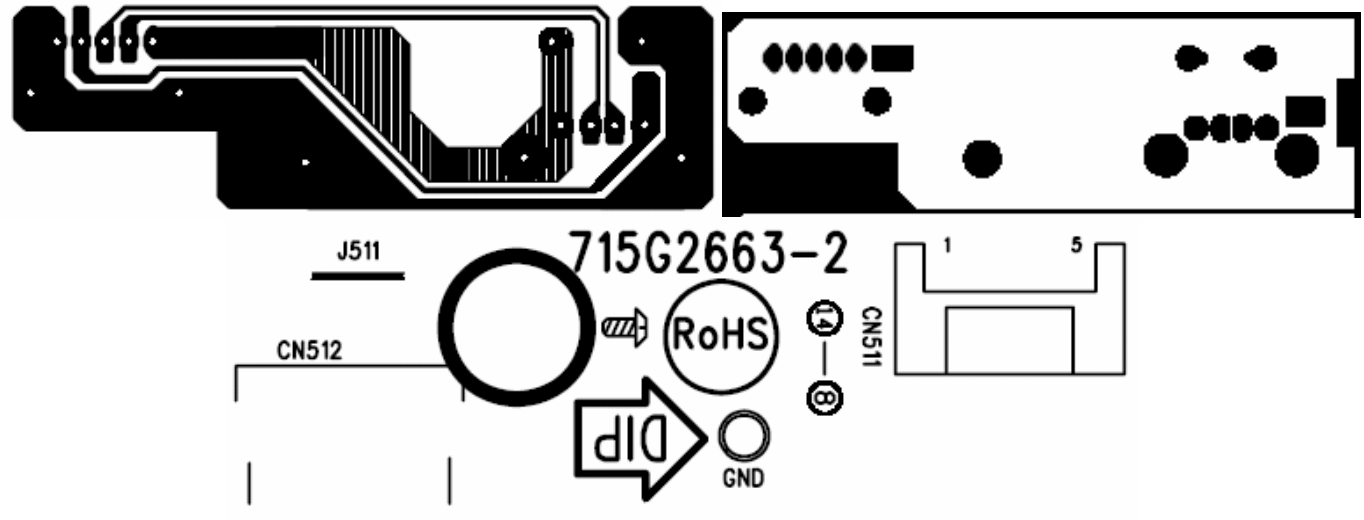
8.3 Key Board

715G3371 1

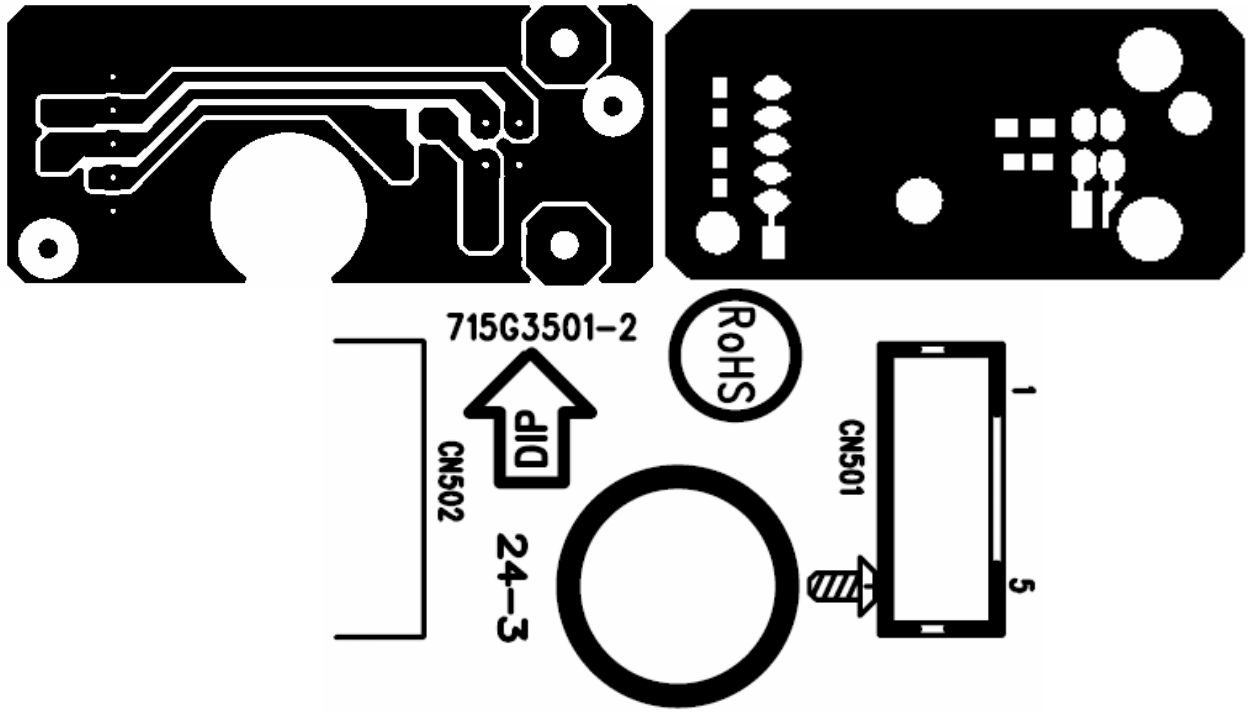


8.4 USB Board

715G2663 2



715G3501 2



9. Maintainability

9.1 Equipments and Tools Requirement

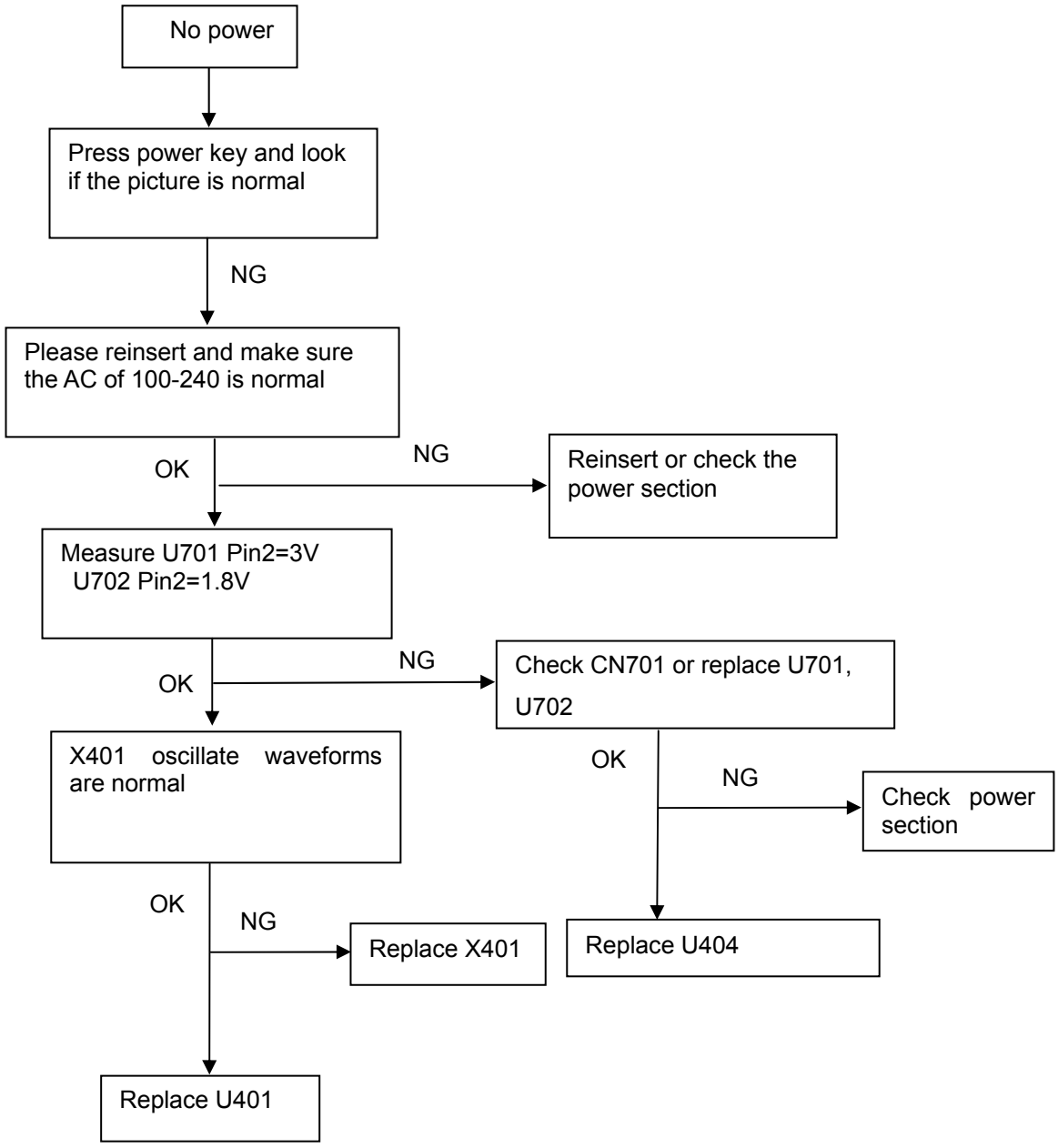
1. Multi-meter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

9.2 Trouble Shooting

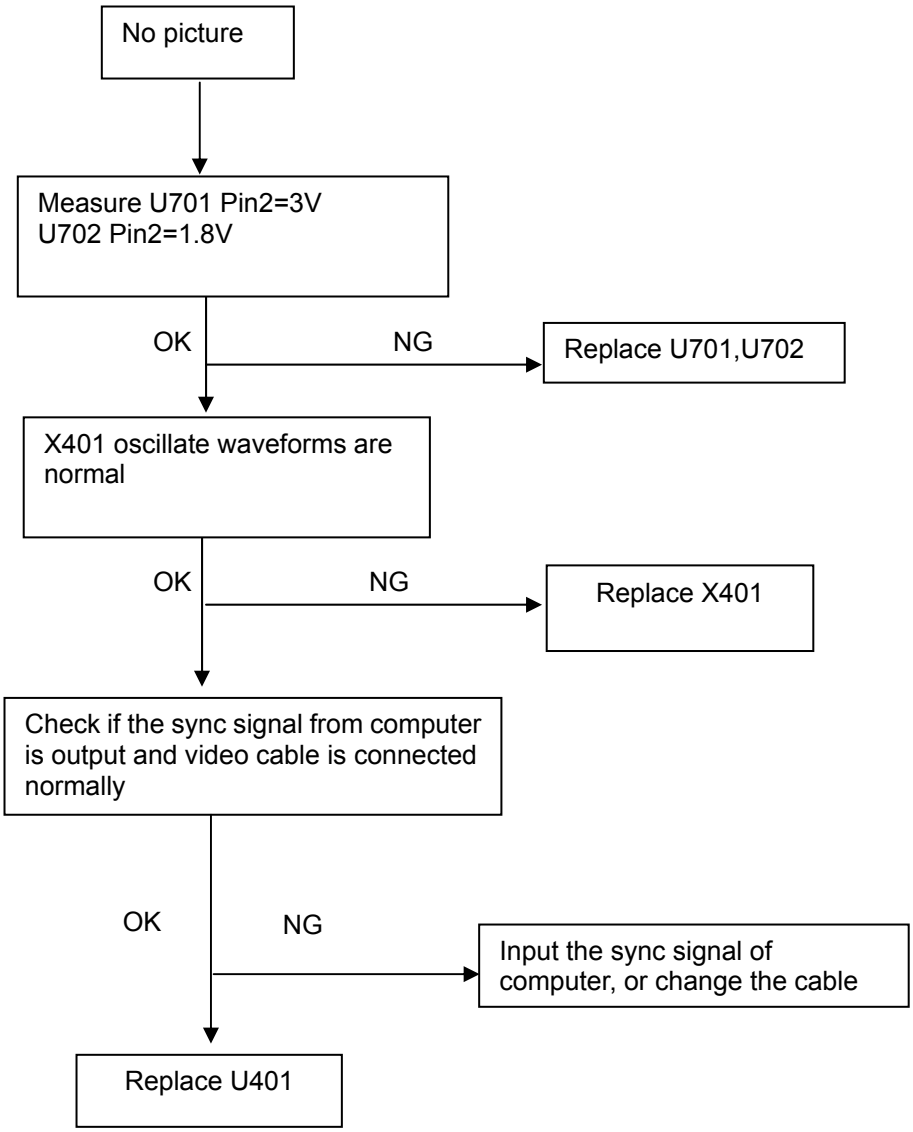
9.2.1 Main Board

715G3329 1 2

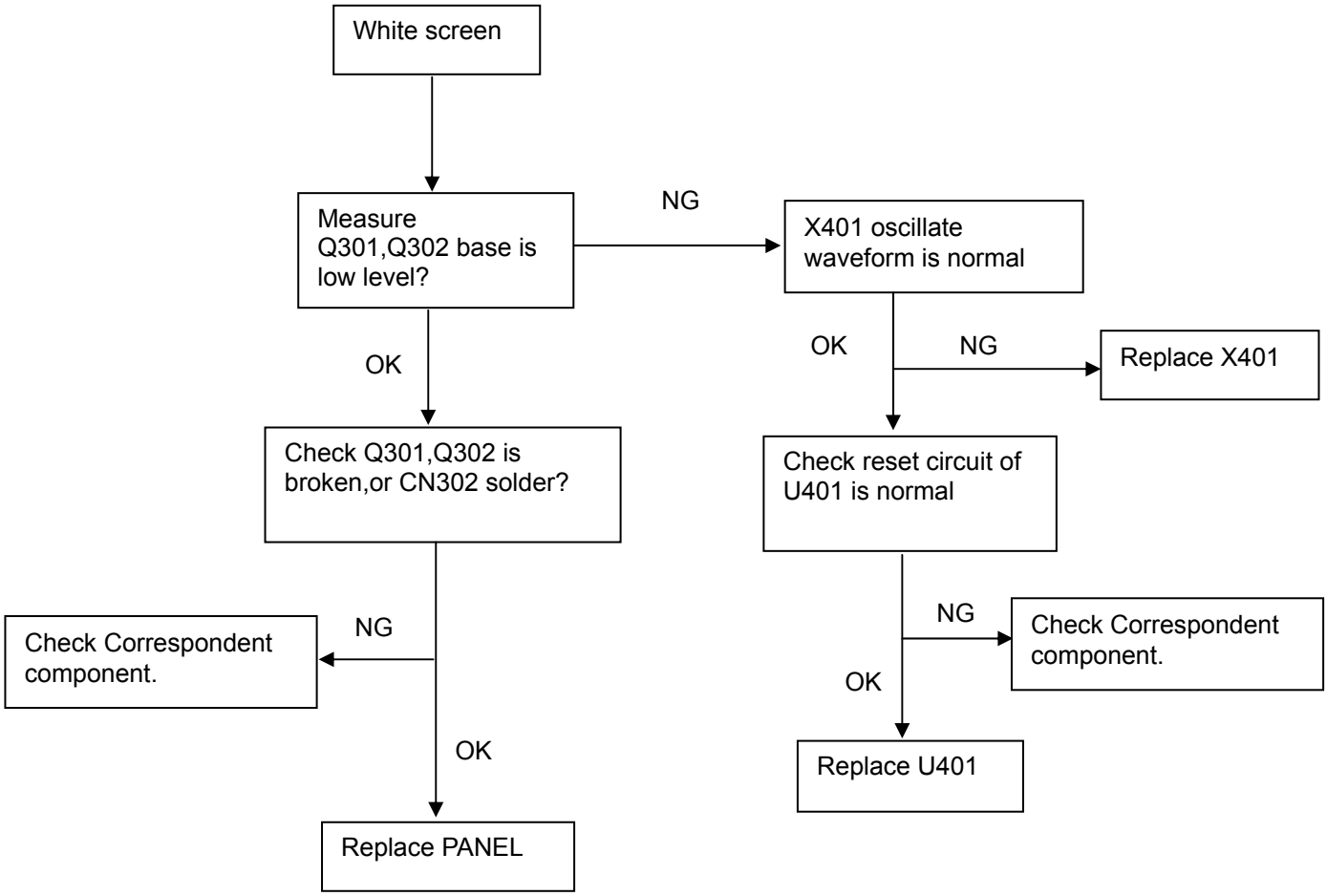
No Power



No Picture

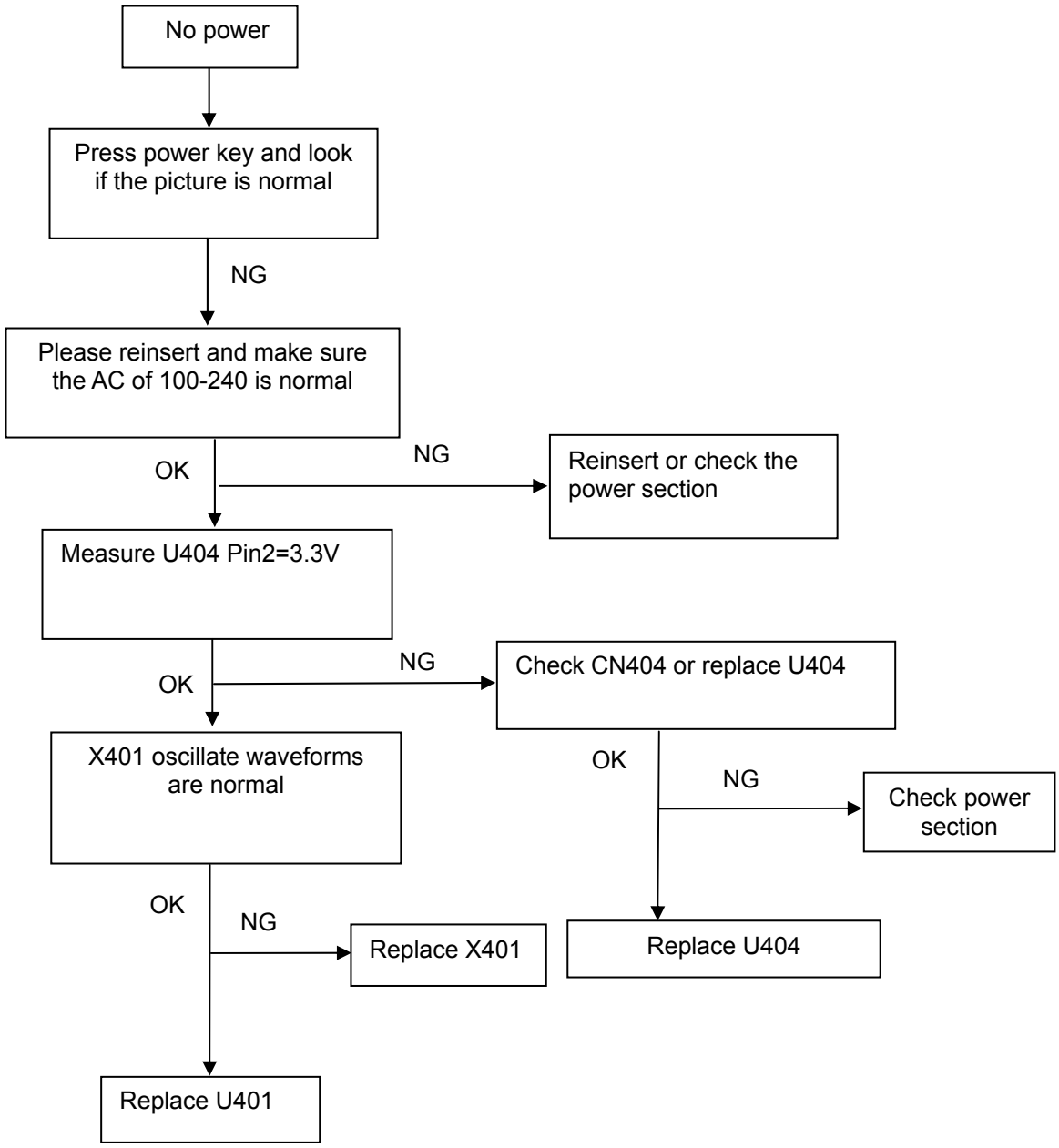

No picture
Measure U701 Pin2=3V
U702 Pin2=1.8V
OK
NG
Replace U701,U702
X401 oscillate waveforms are normal
OK
NG
Replace X401
Check if the sync signal from computer is output and video cable is connected normally
OK
NG
Input the sync signal of computer, or change the cable
Replace U401

White Screen

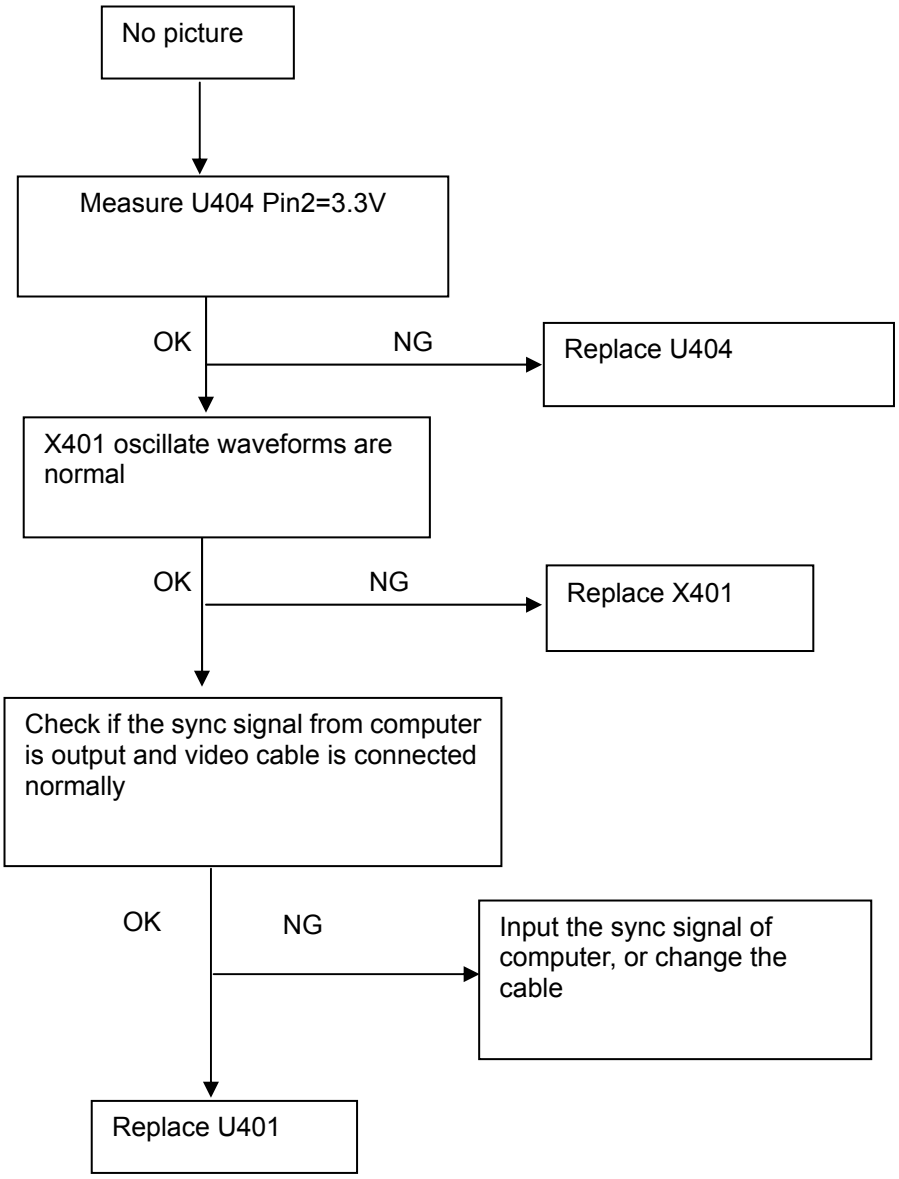


715G3244 1

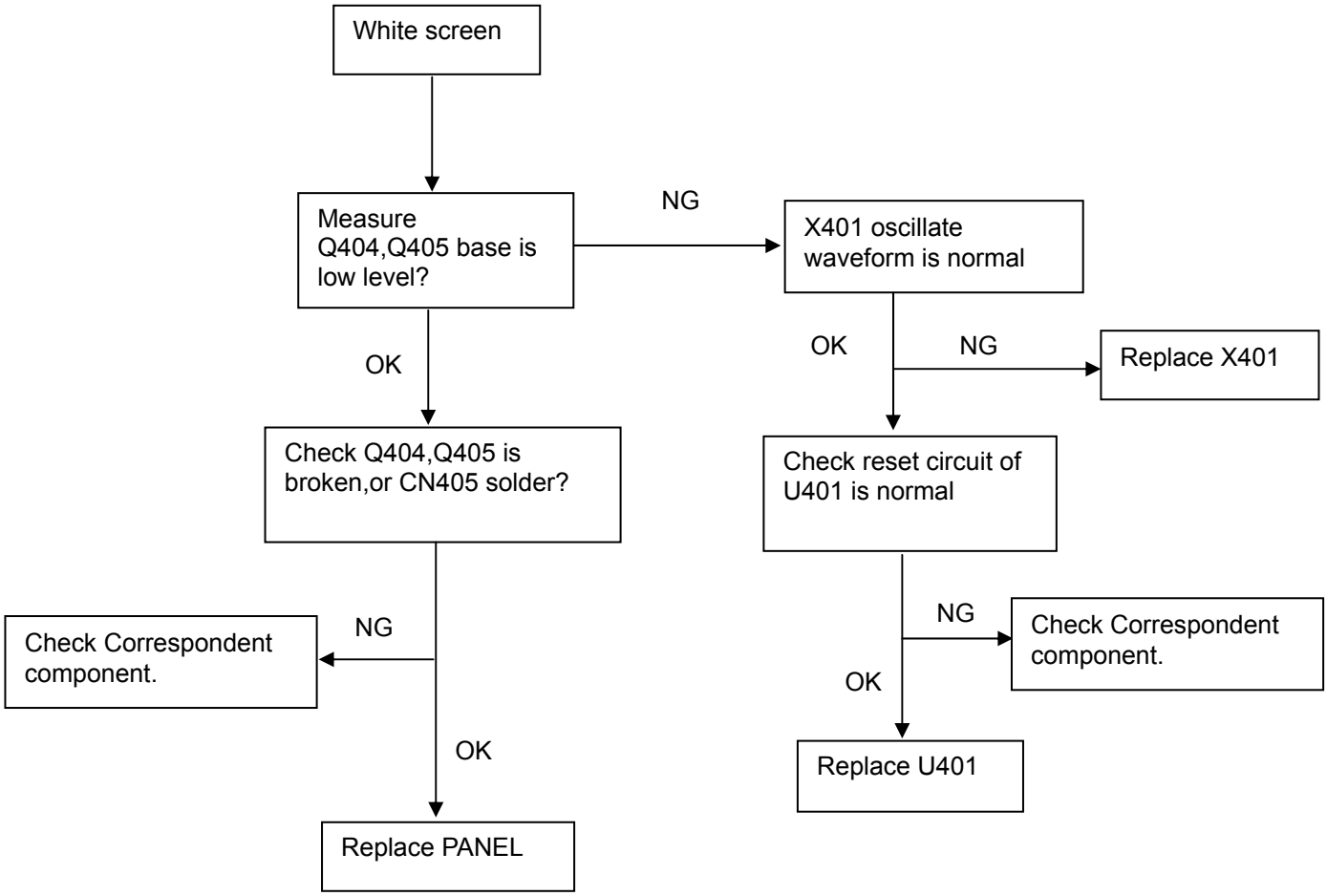
No Power



No Picture

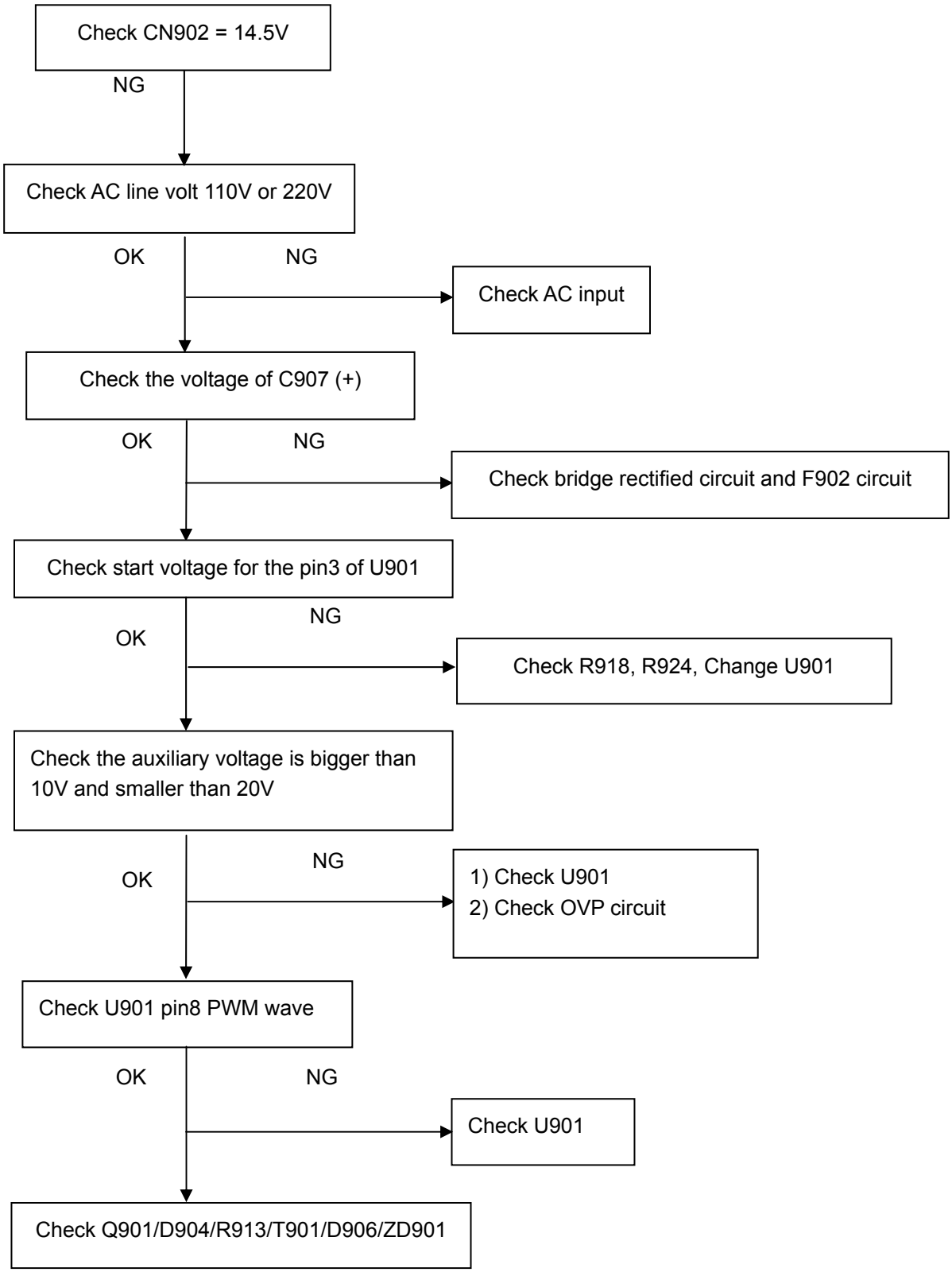

No picture
Measure U404 Pin2=3.3V
OK
NG
Replace U404
X401 oscillate waveforms are normal
OK
NG
Replace X401
Check if the sync signal from computer is output and video cable is connected normally
OK
NG
Input the sync signal of computer, or change the cable
Replace U401

White Screen

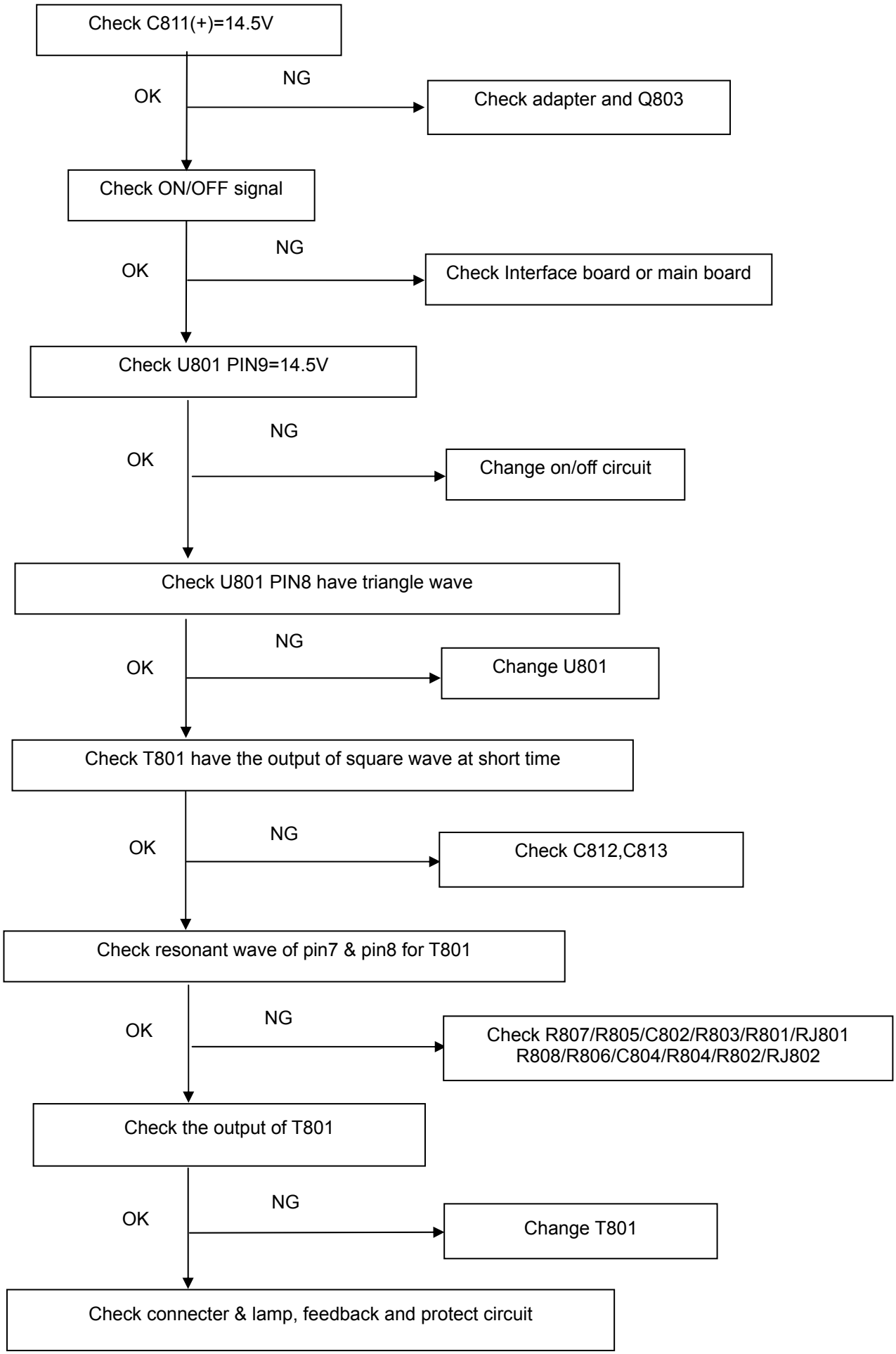


9.2.2 Power Board

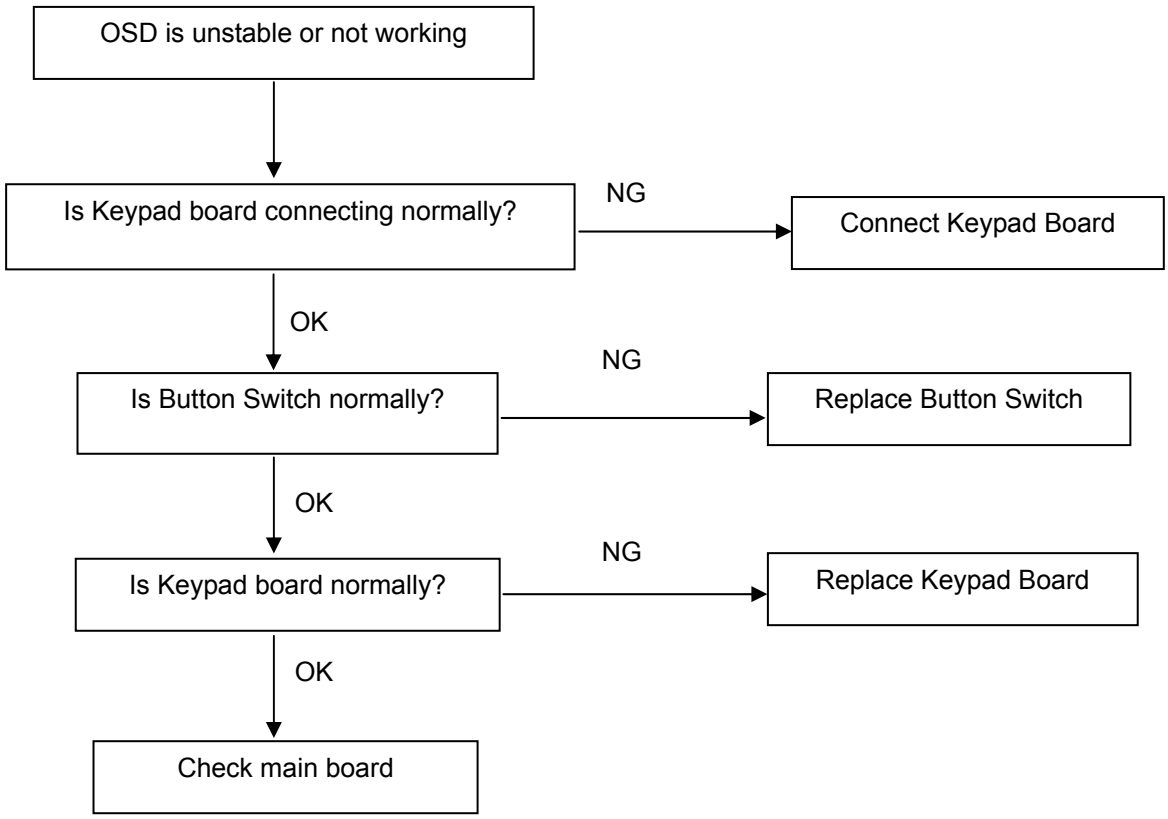
1) No power



2.) 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 x, y, Y 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. MEM.CHANNEL 3 (7800 color):

7800 color temp. parameter is x = 302 ±30, y = 318 ±30, Y = 180 cd/m^2 ,

B. MEM.CHANNEL 4 (6500 color):

6500 color temp. parameter is x = 313±30, y = 329 ±30, Y =200 cd/m^2

C. MEM.CHANNEL 9 (9300 color):

9300 color temp. parameter is x = 283±30, y = 297 ±30, Y =170 cd/m^2

D. MEM.CHANNEL 10 (SRGB color):

SRGB color temp. parameter is x = 313±30, y = 329 ±30, Y =180 cd/m^2

4. Bias adjustment:

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

5. Gain adjustment:

Move cursor to "-F-" and press MENU key

A. Adjust C2 (7800) 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 = 302 ±30, y = 318 ±30, Y =180 cd/m^2
4. Adjust the RED of color1 on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color1 on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color1 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 C1 (6500) 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 = 313 ±30, y = 329 ±30, Y = 200 cd/m^2
4. Adjust the RED of color3 on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color3 on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color3 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 C1 (9300) 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 = 283±30, y = 297 ±30, Y =170 cd/m^2
4. Adjust the RED of color3 on factory window until chroma 7120 indicator reached the value R=100

5. Adjust the GREEN of color3 on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color3 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

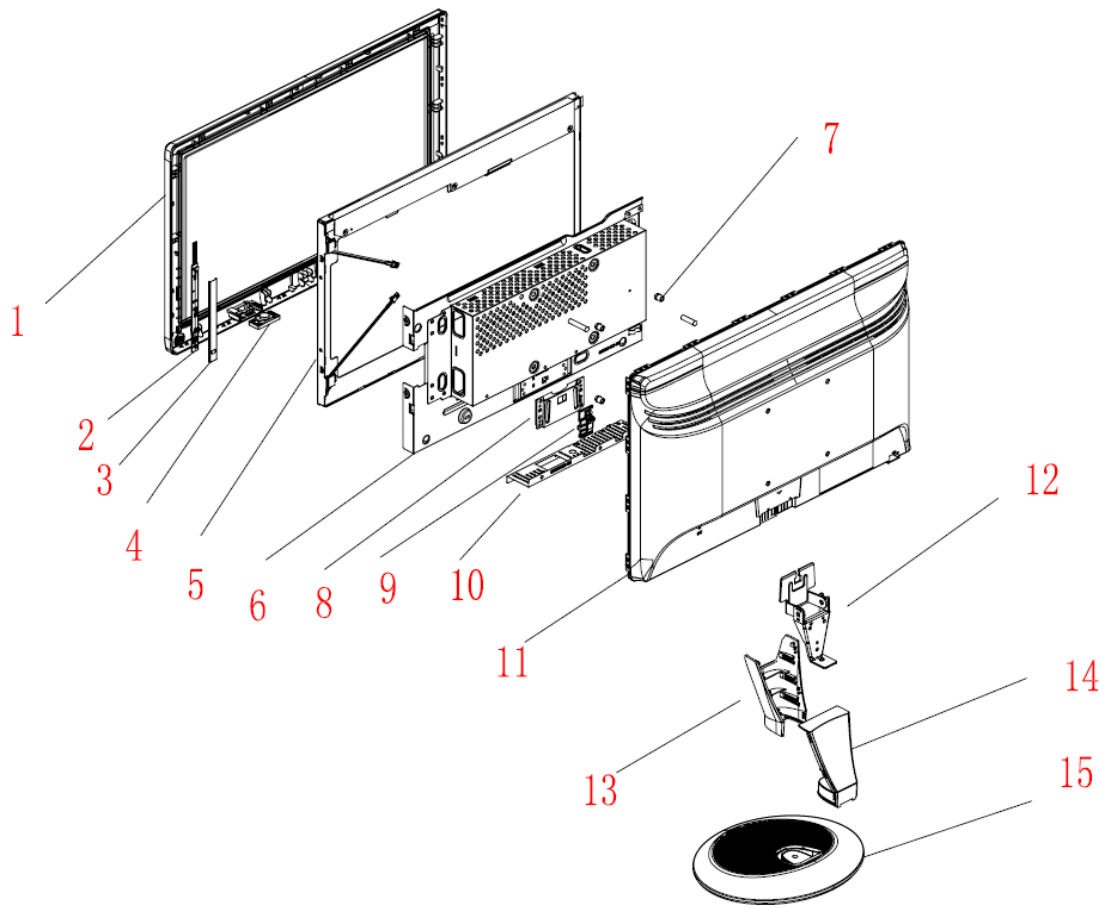
D. Adjust C1 (SRGB) color-temperature

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 = 313±30, y = 329 ±30, Y =180 cd/m^2
4. Adjust the RED of color3 on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN of color3 on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE of color3 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

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

11. Monitor Exploded View

AOC 936** Explosion Flowchart



项目	名称
15	Base
14	Back cover
13	Front cover
12	Hinge
11	Rear cover
10	AC shield
9	Release button
8	Accessories
7	rivet
6	Mainframe
5	Panel
4	Bugle
3	Key guide
2	Key
1	Bezel

12. BOM List

T89MM5NQ6WA16NE

Location	Part No.	Description	Remark
	040G 45762420A	LABEL 25x6mm	
	040G 58162435A	P/N LABEL FOR MANUAL PE BAG	
	045G 77500	BARCODE RIBBON	
	045G 77501	BARCODE RIBBON	
	052G 1185	MIDDLE TAPE	
	052G 1186	SMALL TAPE	
	052G 1208 A	ALUMINIUM TAPE	
	052G6026 2	MESH PRINTTING PAPER	
	055G 100611500	TIN STICK W/O PB	
E07801	078G 314505 K	SPK 8OHM 1.5W 37X17 400 180MM KUAIDA	
	089G 173 56 4B	AUDIO CABLE	
E08905	089G 175 8 C	USB CABLE A+B 1.8M	
E08902	089G 725HAA DB	D-SUB CABLE	
E08901	089G424A15N IS	POWER CORD	
E09508	095G8014 5XH09	HARNESS 5P(PLUG)-5P(2501) 200MM	
E09503	095G8014 7T588	HARNESS 7P(PLUG)-6P(C2003) 260MM	
E09501	095G8018 3TH55	HARNESS 30P-30P 140MM	
	0D1G1730 8120	SCREW	
	0M1G 130 5120	SCREW	
	705GH934050	18.5 STAND ASS'Y SKD	
E750	750GLM185B1212N000	PANEL M185B1-L02 C1 NB CMO	2nd source
	756GH9CB A1027	MCU ASS'Y	2nd source
	H26G800P504 1A	barcode	
	H40G 58161569A	USB LABEL	
	H40G 58161596A	BASIC GOLD EPA LABEL	
	H40G18NP615 7A	ID LABEL 936Swa St.Paul	
	H41G780061534A	913Fw CKD	
	H41G780061587A	QSG 936Swa black audio	
	H45G 77 6	PE PACKING	
	H45G 87 4 7	PE BAG FOR BASE	
	H45G 87 4 8	PE BAG FOR BASE	
	H45G 87 18 16	EPE COVER	
	H45G 87 28 V2	PE BAG FOR MANUAL	
	H70G2009615 6A	936Swa CD MANUAL	
	KEPC9HAK	KEY BOARD	
	PWPC9921SHD1	POWER BOARD	
	Q01G6064 1	screw	
	Q15G0413A02SKD	MAIN FRAME	
	Q34G0558AEDA1B0100	bezel L185WA-936	
	Q34G0559AEDA3S0100	rearcover L185WA-936	
	Q34G0562AED 1S0130	AOC-936 base	
	Q45G 76 28V13 A	PE BAG	
	Q52G 1185 99	BIG CARTON TAPE FOR AOC	
	Q52G6019 14	TAPE	
	Q85G0118201CKD	AOC 936S AC SHIELD	
	USB9HA1K	USB BOARD	
	USB9HA2K	USB BOARD	
	0Q1G1040 8120	SCREW	

	Q34G0560AED 1S0100	AOC-836 stand_front	
	Q34G0561AED 1S0100	AOC-936 stand_rear	
	Q37G0133011	AOC 936S HINGE	
	756GH9CB A1027	MAIN BOARD-CBPC9M5A1HK	
U402	056G1133129	IC EN25F20-100GCP 2Mb SOP-8	
SMTCR-U402	100GAMM8001W11	MCU ASS'Y-056G1133129	
CN402	033G3802 7B Y L	conn 2.0 7p	
CN701	033G3802 9B Y L	CONN 2.0 9P	
CN302	033G8027 30 H	WAFER 30P 2.0MM RIGHT ANGLE	
	040G 45762412B	CBPC LABEL	
R708	061G152M33964L	RST MOFR 3.3 OHM +-5% 2WS	
CN101	088G 35315F XH	D-SUB 15PIN VERTICAL CONN WITH SCREW	
X401	093G 22 53 J	14.31818MHZ/32PF/49US	
E09513	095G8022 6X504	HARNESS 6P-6P 200MM	
	A33G0564 2 1L0100	Key-Guide	
	Q52G 3 75	3M DOUBLE FACE TAPE	
GND1	009G6005 1	GROUND TERMINAL	
CN602	033G3802 4 BH F	CONNECTOR	
CN801	033G8021 2E U	INVERT CONNECTOR	
CN802	033G8021 2E U	INVERT CONNECTOR	
	040G 45762412B	CBPC LABEL	
U902	056G 139 7 1	IC EL817MA M-TYPE	
U601	056G 616 51	IC APA2071JI-TUG 3.1W DIP-16	
NR901	061G 5810T	RST NTCR 8 OHM +-20% 4A 13mm THINKING	
C908	063G107K2246S1	X2 CAP 0.22UF K 275VAC	
C937	065G 2M103 3B	0.01uF 2KV 20% Z5U	
C801	065G 3J1006ET	10PF,J,3KV,SL	
C803	065G 3J1006ET	10PF,J,3KV,SL	
C902	065G305M1022BP	Y2 1000PF M 250VAC Y5P	
C903	065G305M1022BP	Y2 1000PF M 250VAC Y5P	
C900	065G306M2222BP	2200PF +-20% 250VAC	
C925	067G215P1023AV	CAP 105℃ 1000UF M 16V	
C918	067G215P1024AV	CAP 105℃ 1000UF M 25V	
C920	067G215P1024AV	CAP 105℃ 1000UF M 25V	
C811	067G215P4714AV	CAP 105℃ 470UF M 25V	
C604	067G215S4713KV	EC 105℃ CAP 470UF M 16V	
C922	067G215S4713KV	EC 105℃ CAP 470UF M 16V	
C931	067G215S4713KV	EC 105℃ CAP 470UF M 16V	
C921	067G215V1023KS	EC 1000uF M 16V 12.5*16mm	
C907	067G215Z10115A	CAP 105℃ 100UF M 450V	
L901	073G 174 65 H2	LINE FILTER 30mH MIN	
L907	073G 253191 L	CHOKE COIL 1.1uH CC-007802	
L906	073G 253191 L	CHOKE COIL 1.1uH CC-007802	
T901	080GL17T 47 S	X'FMR 600uH	
T801	080GL22T 1 H1	X'FMR INVERTER 72uH	
CN901	087G 501 32 DL	AC SOCKET DIP 3PIN+2PIN GROUND	
CN601	088G 30214K DC	PHONE JACK 5PIN	
BD901	093G 50460 28	BRIDGE DIODE KBP208G LITEON	
D902	093G 60325	DIODE SB5150 5A/150V DO-201AD	
CN902	095G 825 9T518	HARNESS 9P-9P 120MM	
	705GQ857021	Q901 ASS'Y	

	705GQ893027	D906 ASS'Y	
	PW9921SHD1SMT	POWER BOARD FOR SMT	
HS5	Q90G6258 2	HEAT SINK	
CN511	033G3802 5 BH L	CONNECTOR 5PIN	
CN512	088G 352 2 XH	USB CONN	
	715G2663 2	USB BOARD PCB	
CN501	033G3802 5B Y L	CONN 2.0 5P	
CN502	088G 351 2B XH	USB CONN	
C419	067G 3151007KB	EC 10uF M 50V 5*11	
C704	067G 3151014KB	EC 100uF M 25V 6.3*11	
C305	067G 3151014KB	EC 100uF M 25V 6.3*11	
C707	067G 3151014KB	EC 100uF M 25V 6.3*11	
CN001	033G8034 6H H X	WAFER 1.0mm SMT 6P	
U001	056G 665 43	IC CY8C20180-LDX2I QFN-16(COL)	
R001	061G0603000	RST CHIP MAX 0R05 1/10W	
R008	061G0603000	RST CHIP MAX 0R05 1/10W	
R009	061G0603000	RST CHIP MAX 0R05 1/10W	
R012	061G0603000	RST CHIP MAX 0R05 1/10W	
R002	061G0603101	RST CHIPR 100 OHM +-5% 1/10W	
R004	061G0603561	RST CHIPR 560 OHM +-5% 1/10W	
R005	061G0603561	RST CHIPR 560 OHM +-5% 1/10W	
R006	061G0603561	RST CHIPR 560 OHM +-5% 1/10W	
R007	061G0603561	RST CHIPR 560 OHM +-5% 1/10W	
C001	065G0603102 31	CHIP 1000PF 50V NPO	
C002	065G0603225 A5	CHIP 2.2uF 10V X5R	
LED001	081G15BY 2 EL	LED 12-22BHS2C-A01-2C	
ZD004	093G 39S 34 T	UDZSNP5.6B ROHM	
ZD005	093G 39S 34 T	UDZSNP5.6B ROHM	
	715G3371 1	KEY BOARD PCB	
Q901	057G 667 56	MOSFET 7A/650V FMA07N65GX TO-220F	
HS1	090G6064 1	HEAT SINK	
	0M1G 930 8120	SCREW	
HS3	090G6084 1 GP	HEAT SINK	
D906	093G1506 2	FMW-2156	
	0M1G 930 8120	SCREW	
U901	056G 379128	IC LD7576 GS SOP-8	
U801	056G 379154	IC AM9000ES SOIC-16	
Q803	057G 763 92	FET P8008HV 4A/80V SOP-8	
R610	061G0603000	RST CHIP MAX 0R05 1/10W	
R814	061G0603100	RST CHIPR 10 OHM +-5% 1/10W	
R815	061G0603100	RST CHIPR 10 OHM +-5% 1/10W	
R816	061G0603100	RST CHIPR 10 OHM +-5% 1/10W	
R907	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R920	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R928	061G0603100 1F	RST CHIPR 1 KOHM +-1% 1/10W	
R918	061G0603100 2F	RST CHIPR 10K OHM +-1% 1/10W	
R809	061G0603100 3F	RST CHIPR 100 KOHM +-1% 1/10W	
R601	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R602	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R603	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R604	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	

R605	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R609	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R805	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R806	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R807	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R808	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R811	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R817	061G0603103	RST CHIPR 10 KOHM +-5% 1/10W	
R804	061G0603202	RST CHIPR 2 KOHM +-5% 1/10W	
R803	061G0603202	RST CHIPR 2 KOHM +-5% 1/10W	
R810	061G0603203	RST CHIPR 20 KOHM +-5% 1/10W	
R925	061G0603243 1F	RST CHIPR 2.43K OHM +-1% 1/10W	
R606	061G0603270 2F	RST CHIPR 27 KOHM +-1% 1/10W	
R607	061G0603270 2F	RST CHIPR 27 KOHM +-1% 1/10W	
R812	061G0603339	RST CHIPR 3.3 OHM +-5% 1/10W	
R813	061G0603339	RST CHIPR 3.3 OHM +-5% 1/10W	
R916	061G0603365 1F	RST CHIPR 3.65 KOHM +-1% 1/10W	
R801	061G0603430 0F	RST CHIPR 430 OHM +-1% 1/10W	
R802	061G0603430 0F	RST CHIPR 430 OHM +-1% 1/10W	
R905	061G0603471	RST CHIPR 470 OHM +-5% 1/10W	
R608	061G0805000	RST CHIP MAX 0R05 1/8W	
R919	061G0805151	RST CHIPR 150 OHM +-5% 1/8W	
F801	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ801	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ802	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ803	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ804	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ805	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ806	061G1206000	RST CHIP MAX 0R05 1/4W	
RJ807	061G1206000	RST CHIP MAX 0R05 1/4W	
R917	061G1206100	RST CHIPR 10 OHM +-5% 1/4W	
R903	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R909	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R910	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R912	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R929	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R930	061G1206101	RST CHIPR 100 OHM +-5% 1/4W	
R908	061G1206103	RST CHIPR 10K OHM +-5% 1/4W	
R913	061G1206159	RST CHIPR 1.5 OHM +-5% 1/4W	
R923	061G1206221	RST CHIPR 220 OHM +-5% 1/4W	
R914	061G1206432 2F	RST CHIPR 43.2 KOHM +-1% 1/4W	
R900	061G1206624	RST CHIPR 620 KOHM +-5% 1/4W	
R901	061G1206624	RST CHIPR 620 KOHM +-5% 1/4W	
R902	061G1206624	RST CHIPR 620 KOHM +-5% 1/4W	
C610	065G0603101 31	CER1 0603 NP0 50V 100P PM5 R	
C611	065G0603101 31	CER1 0603 NP0 50V 100P PM5 R	
C923	065G0603102 32	1000PF +-10% 50V X7R	
C810	065G0603103 32	CAP CHIP 0603 0.01UF K 50V X7R	
C915	065G0603103 32	CAP CHIP 0603 0.01UF K 50V X7R	
C912	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	
C924	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	

C926	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	
C612	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	
C613	065G0603104 22	CAP CHIP 0603 0.1UF K 25V X7R	
C805	065G0603105 17	1UF 16V Y5V	
C808	065G0603105 17	1UF 16V Y5V	
C914	065G0603471 32	CHIP 470PF 50V X7R	
C606	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C603	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C602	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C601	065G0603474 12	MLCC 0603 0.47UF K 16V X7R	
C809	065G0805102 32	CHIP 1000P 50VX7R 0805	
C815	065G0805104 32	CAP CHIP 0805 0.1uF K 50V X7R	
C814	065G0805105 22	CAP CHIP 0805 1uF K 25V X7R	
C608	065G0805105 22	CAP CHIP 0805 1uF K 25V X7R	
C609	065G0805105 22	CAP CHIP 0805 1uF K 25V X7R	
C812	065G0805222 32	CHIP 2200PF 50V X7R 0805	
C813	065G0805222 32	CHIP 2200PF 50V X7R 0805	
C807	065G0805392 31	CHIP 3900PF 50V X7R 0805	
C802	065G0805392 31	CHIP 3900PF 50V X7R 0805	
C804	065G0805392 31	CHIP 3900PF 50V X7R 0805	
C806	065G0805473 32	CHIP 0.047UF 50V X7R	
C927	065G0805473 32	CHIP 0.047UF 50V X7R	
C916	065G1206102 72	CAP CHIP 1206 1000PF K 500V X7R	
C917	065G1206102 72	CAP CHIP 1206 1000PF K 500V X7R	
D803	093G 64 38 P	BAW56	
	PW9A21SHD1AI	POWER BOARD FOR AI	
C503	065G0603104 12	CER2 0603 X7R 16V 100N P	
C501	065G0603509 31	CHIP 5PF +-0.5PF 50V NPO	
C502	065G0603509 31	CHIP 5PF +-0.5PF 50V NPO	
FB501	071G 56K121 M	CHIP BEAD	
	715G3501 2	USB BOARD PCB	
U401	056G 562208	IC TSUM1PFL-LF PQFP-100	
U703	056G 563 31	IC AZ1117D-1.8-E1	
U701	056G 585 4A	IC AP1117E33L-13	
U103	056G 662502	IC ESD AZC199-04S SOT23-6L	
U104	056G 662502	IC ESD AZC199-04S SOT23-6L	
U402	056G1133129	IC EN25F20-100GCP 2Mb SOP-8	
U101	056G1133918	IC AT24C02BN-SH-T 8-SOIC	
Q302	057G 417 12 T	KEC 2N3904S-RTK/PS	
Q701	057G 417 12 T	KEC 2N3904S-RTK/PS	
Q405	057G 417 13 T	KEC 2N3906S-RTK/PS	
Q401	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q301	057G 763 1	A03401 SOT23 BY AOS(A1)	
R452	061G0402000	RST CHIP MAX 0R05 1/16W	
R434	061G0402000	RST CHIP MAX 0R05 1/16W	
R423	061G0402000	RST CHIP MAX 0R05 1/16W	
R419	061G0402000	RST CHIP MAX 0R05 1/16W	
R418	061G0402000	RST CHIP MAX 0R05 1/16W	
R414	061G0402000	RST CHIP MAX 0R05 1/16W	
R101	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R105	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	

R109	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R111	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R113	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R114	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R115	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R117	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R409	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R415	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R416	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R417	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R422	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R424	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R428	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R706	061G0402101	RST CHIPR 100 OHM +-5% 1/16W	
R705	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R404	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R402	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R104	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R103	061G0402102	RST CHIPR 1 KOHM +-5% 1/16W	
R703	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R702	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R436	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R412	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R407	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R308	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R305	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R133	061G0402103	RST CHIPR 10 KOHM +-5% 1/16W	
R421	061G0402104	RST CHIPR 100 KOHM +-5% 1/16W	
R107	061G0402222	RST CHIPR 2.2 KOHM +-5% 1/16W	
R106	061G0402222	RST CHIPR 2.2 KOHM +-5% 1/16W	
R304	061G0402223	RST CHIPR 22 KOHM +-5% 1/16W	
R406	061G0402223	RST CHIPR 22 KOHM +-5% 1/16W	
R704	061G0402223	RST CHIPR 22 KOHM +-5% 1/16W	
R401	061G0402390 0F	RST CHIP 390R 1/16W 1%	
R432	061G0402390 1F	RST CHIPR 3.9KOHM +-1% 1/16W	
R433	061G0402390 1F	RST CHIPR 3.9KOHM +-1% 1/16W	
R110	061G0402471	RST CHIPR 470 OHM +-5% 1/16W	
R123	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R124	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R125	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R303	061G0402472	RST CHIPR 4.7 KOHM +-5% 1/16W	
R306	061G0402563	RST CHIP 56K 1/16W 5%	
R139	061G0402682	RST CHIP 6K8 1/16W 5%	
R108	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R112	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R116	061G0402750	RST CHIPR 75 OHM +-5% 1/16W	
R461	061G0603000	RST CHIP MAX 0R05 1/10W	
R405	061G0603000	RST CHIP MAX 0R05 1/10W	
R102	061G0603000	RST CHIP MAX 0R05 1/10W	
R456	061G0603220	RST CHIPR 22 OHM +-5% 1/10W	
R301	061G1206221	RST CHIPR 220 OHM +-5% 1/4W	

R302	061G1206221	RST CHIPR 220 OHM +-5% 1/4W	
C107	065G0402102 32	1000PF +-10% 50V X7R	
C115	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C301	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C304	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C403	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C416	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C417	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C422	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C432	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C701	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C702	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C705	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C708	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C709	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C712	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C713	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C124	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C404	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C405	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C406	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C407	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C408	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C409	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C410	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C411	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C412	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C413	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C414	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C415	065G0402104 12	CAP CHIP 0402 0.1UF 16V X7R	
C436	065G0402105 A5	CAP 0402 1UF K 10V X5R	
C103	065G0402220 31	CHIP 22PF 50V NPO	
C104	065G0402220 31	CHIP 22PF 50V NPO	
C116	065G0402224 17	CAP CER 0.22UF -20%-80%	
C302	065G0402224 17	CAP CER 0.22UF -20%-80%	
C401	065G0402224 17	CAP CER 0.22UF -20%-80%	
C420	065G0402470 31	MLCC 0402 CAP 47PF J 50V NPO	
C421	065G0402470 31	MLCC 0402 CAP 47PF J 50V NPO	
C114	065G0402473 12	CHIP 0.047uF 16V X7R	
C111	065G0402473 12	CHIP 0.047uF 16V X7R	
C110	065G0402473 12	CHIP 0.047uF 16V X7R	
C108	065G0402473 12	CHIP 0.047uF 16V X7R	
C106	065G0402473 12	CHIP 0.047uF 16V X7R	
C102	065G0402473 12	CHIP 0.047uF 16V X7R	
C105	065G0402509 31	CHIP 5pF 50V NPO	
C109	065G0402509 31	CHIP 5pF 50V NPO	
C113	065G0402509 31	CHIP 5pF 50V NPO	
C303	065G0603105 22	CHIP 1UF 25V X7R 0603	
C402	065G0805475 A5	0805 4.7UF +-10% 10V X5R	
FB301	071G 56K121 M	CHIP BEAD	
FB410	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 bullwill	

FB404	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 bullwill	
FB402	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 bullwill	
FB401	071G 56V301 B	CHIP BEAD FCM2012VF-301T07 bullwill	
FB110	071G 59G301	CHIP BEAD 300OHM	
FB101	071G 59K190 B	19 OHM BEAD	
FB102	071G 59K190 B	19 OHM BEAD	
FB103	071G 59K190 B	19 OHM BEAD	
D104	093G 64 42 PP	BAV70 SOT-23	
ZD104	093G 39GA01 T	RLZ5.6B	
	715G3329 1 2	MAIN BOARD PCB	
CN901	006G 31500	EYELET	
U903	056G 158 10 T	IC AS431AZTR-E1 TO-92	
Q904	057G 761 16	TRA KTD1028 KEC	
R906	061G152M10452T6W56	RST MOFR 100KOHM 5% 2WS	
R904	061G152M22152T	RST MOF 220OHM 5% 2W	
R924	061G152M39852T	RST MOFR 0.39 OHM +-5% 2WS	
C911	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
C913	067G215Y2207KT	CAP 105℃ 22UF M 50V KINGNICHI	
FB602	071G 55 9 T	FERRITE BEAD	
FB901	071G 55 29	FERRITE BEAD	
F901	084G 56 4 B	FUSE 4A 250V	
F902	084G 56 4 B	FUSE 4A 250V	
F903	084G 56 4 B	FUSE 4A 250V	
ZD901	093G 3916752T	MTZJ T-72 16B	
D903	093G 6026T52T	RECTIFIER DIODE FR107	
D904	093G 6038T52T	FR103	
D907	093G 64 1152T	1N4148	
J808	095G 90 23	JUMPER WIRE	
J807	095G 90 23	JUMPER WIRE	
J806	095G 90 23	JUMPER WIRE	
J805	095G 90 23	JUMPER WIRE	
J822	095G 90 23	JUMPER WIRE	
J901	095G 90 23	JUMPER WIRE	
J902	095G 90 23	JUMPER WIRE	
J903	095G 90 23	JUMPER WIRE	
J601	095G 90 23	JUMPER WIRE	
J602	095G 90 23	JUMPER WIRE	
J603	095G 90 23	JUMPER WIRE	
J604	095G 90 23	JUMPER WIRE	
J605	095G 90 23	JUMPER WIRE	
J606	095G 90 23	JUMPER WIRE	
J607	095G 90 23	JUMPER WIRE	
J921	095G 90 23	JUMPER WIRE	
J911	095G 90 23	JUMPER WIRE	
J909	095G 90 23	JUMPER WIRE	
J908	095G 90 23	JUMPER WIRE	
J907	095G 90 23	JUMPER WIRE	
J906	095G 90 23	JUMPER WIRE	
J905	095G 90 23	JUMPER WIRE	
J804	095G 90 23	JUMPER WIRE	
J803	095G 90 23	JUMPER WIRE	

J802	095G 90 23	JUMPER WIRE	
J801	095G 90 23	JUMPER WIRE	
J608	095G 90 23	JUMPER WIRE	
	715G2892 2 3	POWER BOARD PCB	

13. Different Parts List

Diversity of T89AM5NB6WA2UNE compared with T89MM5NQ6WA16NE			
Location	**Part No.**	**Description**	**Remark**
	050G 600 1 W	WHITE STRAP	
	052G 1211 B	Conductive Tape 85mm *40mm *0.09mm	
	052G 1211550	ALUMINUM FOIL TAPE	
E08902	089G 715HAA D2	SIGNAL CABLE	
E08901	089G404A15N IS	POWER CORD	
E09508	095G8014 5WH09	HARNESS 5P(PLUG)-5P(2501) 200MM	
	705GH934024	18.5"LCD STAND-BASE ASS'Y	
E750	750GLU185X1232N000	PANEL M185XW01 V20B SZ AUO	2nd source
E750	750GLU185X1234N000	PANEL M185XW01 V20B SH AUO	
E750	750GLU185X1242N000	PANEL M185XW01 V20C SZ AUO	2nd source
E750	750GLU185X1243N000	PANEL M185XW01 V20C XM AUO	2nd source
E750	750GLU185X1244N000	PANEL M185XW01 V20C SH AUO	2nd source
	H26G 800504 2A	barcode	
	H40G 18N615 4A	936Swa EU ID LABEL	
	H40G 58161581A	936Swa WW CARTON LABEL	
	H44G8018101	EPS 936S	
	H44G8018201	EPS 936S	
	H44G8018615 2A	936Swa CARTON	
	H45G 87 4 H A	PE BAG FOR BASE	
	H45G 87 18 4H A	EPE COVER	
	KEPC9HAB	KEY BOARD	
	Q15G0413202	MAIN FRAME	
	Q45G 76 28 H A	PE BAG FOR MANUAL	
	Q85G0118201	AOC 936S AC SHIELD	
	USB9HA3	USB G2663-2-X-X-1-090313	
	USB9HA4	USB G3501-2-X-X-1-090313	
	756GH9CB A1034	MAIN BOARD-CBPC9M5A1H2	
SMTCR-U402	100GAMA8006W11	MCU ASS'Y-056G1133129	
CN409	033G3802 7B Y W	WAFER	
CN404	033G3802 9B Y W	WAFER	
R480	061G152M22964L	RST MOFR 2.2ohm +-5% 2WS	
C410	067G 2151007RT	LOW E.S.R 10UF +/-20% 50V	
C423	067G 305101 4T	100UF +-20% 25V	
C421	067G 305101 4T	100UF +-20% 25V	
C427	067G 305101 4T	100UF +-20% 25V	
C426	067G 305101 4T	100UF +-20% 25V	
U401	056G 562557	IC TSUM1PFR-LF	
U404	056G 563 52	IC AP1117D33L-13 TO252-3L DIODES	
U405	056G1133 34	M24C02-WMN6TP	
Q404	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q409	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q410	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q402	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q403	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	

Diversity of T89SM5NB6WA1UNE compared with T89MM5NQ6WA16NE			
Location	**Part No.**	**Description**	**Remark**
	050G 600 1 W	WHITE STRAP	

	052G 1211 B	Conductive Tape 85mm *40mm *0.09mm	
	052G 1211550	ALUMINUM FOIL TAPE	
E08902	089G 715HAA D2	SIGNAL CABLE	
E08901	089G404A15N IS	POWER CORD	
E09508	095G8014 5WH09	HARNESS 5P(PLUG)-5P(2501) 200MM	
	705GH934024	18.5"LCD STAND-BASE ASS'Y	
	750GLS185AT21CN000	PANEL LTM185AT02 802(002) FQ SEC	
	H26G 800504 2A	barcode	
	H40G 18N615 4A	936Swa EU ID LABEL	
	H40G 58161581A	936Swa WW CARTON LABEL	
	H44G8018101	EPS 936S	
	H44G8018201	EPS 936S	
	H44G8018615 2A	936Swa CARTON	
	H45G 87 4 H A	PE BAG FOR BASE	
	H45G 87 18 4H A	EPE COVER	
	KEPC9HAB	KEY BOARD	
	Q15G0413202	MAIN FRAME	
	Q45G 76 28 H A	PE BAG FOR MANUAL	
	Q85G0118201	AOC 936S AC SHIELD	
	USB9HA3	USB BOARD	
	USB9HA4	USB BOARD	
	756GH9CB A1031	MAIN BOARD-CBPC9M5A1H2	
SMTCR-U402	100GAMS8004W11	MCU ASS'Y-056G1133129	
CN409	033G3802 7B Y W	WAFER	
CN404	033G3802 9B Y W	WAFER	
R480	061G152M22964L	RST MOFR 2.2ohm +-5% 2WS	
C410	067G 2151007RT	LOW E.S.R 10UF +/-20% 50V	
C423	067G 305101 4T	100UF +-20% 25V	
C421	067G 305101 4T	100UF +-20% 25V	
C427	067G 305101 4T	100UF +-20% 25V	
C426	067G 305101 4T	100UF +-20% 25V	
U401	056G 562557	IC TSUM1PFR-LF	
U404	056G 563 52	IC AP1117D33L-13 TO252-3L DIODES	
U405	056G1133 34	M24C02-WMN6TP	
Q404	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q409	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q410	057G 417 22 T	TRA KN2907AS -60V/-0.6A SOT-23	
Q402	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q403	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
R468	061G0402201	RST CHIP 200R 1/16W 5%	
R427	061G0402392	RST CHIP 3.9K 1/16W 5%	
R428	061G0402392	RST CHIP 3.9K 1/16W 5%	
R476	061G0402470	RST CHIPR 47 OHM +-5% 1/16W	
R475	061G0402470	RST CHIPR 47 OHM +-5% 1/16W	
R434	061G1206331	RST CHIPR 330 OHM +-5% 1/4W	
D402	061G2010000	RST CHIP MAX 0 OHM 3/4W	
FB405	071G 56G151 A	TB160808G151	
D403	093G 64 42 P	BAV70 SOT23 BY PAN JIT	
	715G3244 1	MAIN BOARD PCB	