

# **Service Manual**

## **ViewSonic VA720-2**

**Model No. VLCDS23724-2W**

**17" Color TFT LCD Display**

(VA720-2\_SM\_593 Rev. 1a – Jan.. 2004)

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## Revision History

Revision	Date	Description Of Changes	Approval
1a	08/01/04	Initial Release DCN- 3608	Angela Luh

## TABLE OF CONTENTS

<b>1. Precautions and Safety Notices</b>	<b>1</b>
<b>2. Specification</b>	<b>2</b>
<b>3. Front Panel Function Control Description</b>	<b>4</b>
<b>4. Circuit Description</b>	<b>5</b>
<b>5. Adjusting Procedure</b>	<b>6</b>
<b>6. Trouble Shooting Flow Chart</b>	<b>7</b>
<b>7. Recommended Spare Parts List</b>	<b>11</b>
<b>8. Exploded Diagram And Spare Parts List</b>	<b>15</b>
<b>9. Block Diagram</b>	<b>18</b>
<b>10. Schematic Diagrams</b>	<b>19</b>
<b>11. PCB Layout Diagrams</b>	<b>21</b>

## 1. Precautions and Safety Notices

Prior to using this manual, please ensure that you have carefully followed all the procedures outlined in the user manual for this product.

Read all of these instructions.

Save these instructions for later use.

Follow all warnings and instructions marked on the product.

Do not use this product near water.

This display should be installed on a solid horizontal base.

When cleaning, use only a neutral detergent cleaner with a soft damp cloth. Do not spray with liquid or aerosol cleaners.

Do not expose this display to direct sunlight or heat. Hot air may cause damage to the cabinet and other parts.

Adequate ventilation must be maintained to ensure reliable and continued operation and to protect the display from overheating. Do not block ventilation slots and openings with objects or install the display in a place where ventilation may be hindered.

Do not install this display near a motor or transformer where strong magnetism is generated. Images on the display will become distorted and the color irregular.

Do not allow metal pieces or objects of any kind fall into the display from ventilation holes.

Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating, those openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.

## 2. Specification

### 2.1. PRODUCT SPECIFICATIONS

<b>LCD panel type</b>	17.0" TFT(AU)
<b>Power Consumption</b>	40 W
<b>Displayable Resolution</b>	SXGA 1280 x 1024 maximum
<b>Pixel dimension</b>	0.264 mm x 0.264 mm
<b>Display Color</b>	16.7 M
<b>Viewing Angle (CR≥10)</b>	Horizontal: ±70° Vertical: ±70°
<b>Response Time</b>	Tr:12ms Tf:4ms( typ).
<b>Contrast Ratio</b>	450:1 typ.
<b>Brightness</b>	200 cd/m <sup>2</sup> (min),260 cd / m <sup>2</sup> typ.
<b>Active Display Area</b>	337.9 mm horizontal x 270.3mm vertical
<b>AC/DC adapter</b>	Input:AC 100~264V,47~63 Hz Output:+12V DC.
<b>Dimensions ( WxHxD )</b>	415 mm(W) x 403(H) mm x 229(D) mm
<b>Weight (Net / Gross)</b>	5.4 / 7.6 kg (unit)
<b>Input connector</b>	15 Pin D-Sub.
<b>Power management</b>	YES
<b>Temperature</b>	Operating : 0°C ~ +40°C Storage : -20°C ~ +60°C

## 2.2. FACTORY SUPPORTING MODES

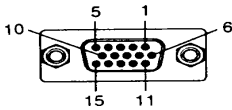
Primary Preset  
Factory Preset Modes

VESA 1280 x 1024 @ 60 Hz

1. VESA 640 x 350 @ 70Hz, 31.47kHz, -/+
2. VESA 720 x 400 @ 70Hz, 31.467kHz, +/-
3. VESA 640 x 480 @ 60Hz, 31.469kHz, -/-
4. VESA 640 x 480 @ 72Hz, 37.861kHz, -/-
5. VESA 640 x 480 @ 75Hz, 37.5kHz, -/-
6. MAC 640 x 480 @ 67Hz, 35kHz,
7. VESA 800 x 600 @ 56Hz, 35.156kHz, +/+
8. VESA 800 x 600 @ 60Hz, 37.879kHz, +/+
9. VESA 800 x 600 @ 72Hz, 48.077kHz, +/+
10. VESA 800 x 600 @ 75Hz, 46.875kHz, +/+
11. MAC 832 x 624 @ 75Hz, 49.725kHz,
12. VESA1024 x 768 @ 60Hz, 48.363kHz, -/-
13. VESA1024 x 768 @ 70Hz, 56.476kHz, -/-
14. VESA 1024 x 768 @ 72Hz, 58.036kHz, -/-
15. VESA 1024 x 768 @ 75Hz, 60.023kHz, +/+
16. MAC 1024 x 768 @ 75Hz, 60.241kHz,
17. VESA 1280 x 1024 @ 60Hz, 63.981kHz, +/+
18. VESA 1280 x 1024 @ 75Hz, 79.976kHz, +/+
19. MAC 1152 x 870 @ 75Hz, 68.6kHz,

## 2.3. D-SUB CONNECTOR

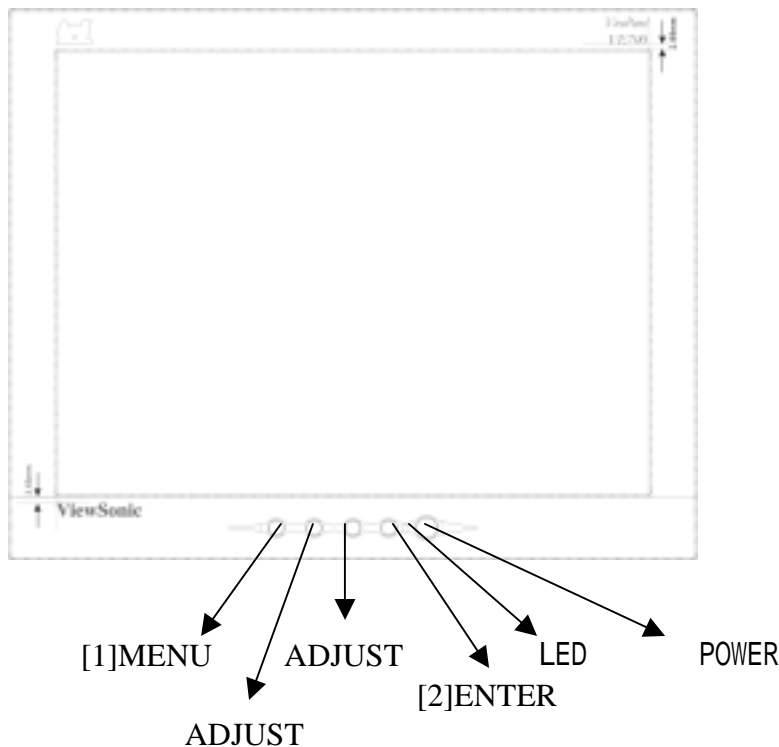
This section describes the pin assignment of the LCD's video connector. It is called 15 Pin Mini D-sub Connector.



Pin NO.	Signal Connector
1	Red Video Signal
2	Green Video Signal
3	Blue Video Signal
4	N.C.
5	Ground
6	Ground
7	Ground
8	Ground
9	+5v
10	Ground
11	N.C.
12	DDC data
13	Horizontal sync signal
14	Vertical sync signal
15	DDC clock

### 3. Front Panel Function Control Description

#### Location of Controls



- 1) POWER :  
Press the power button to turn the monitor on. Press it again to turn the monitor off.
- 2) [1]MENU :  
Enter or exit the OSD adjustment menu.it also exit from the submenu back to previous menu.
- 3) [2]ENTER :  
To confirm the current selection
- 4) ADJUST (UP)  
To scroll up in menu or to increase value of selected item.
- 5) ADJUST (DOWN)  
To scroll down in menu or to decrease value of selected item.
- 6) POWER INDICATOR :  
The LED will light with green color in normal on state,and will light with orange color in power saving mode.
- 7) Brightness/Contrast: press button UP/DOWN .
- 8) Auto Image Adjust : press button [2] .
- 9) OSD lock and unlock: press two buttons [1]&[up] simultaneously for 10 seconds.
- 10) Power lock and unlock: press two buttons [1]&[Down] simultaneously for 10 seconds.
- 11) ALL RESET: First, power off the monitor, un-plug the AC cord, then press “ ” and “Power “ key at the same time and plug the AC cord.
- 12) Factory Mode:First, power off the monitor, un-plug the AC cord and be sure the signal cable is connected(D-sub connected) , then press “2” and “Power “ key at the same time and plug the AC cord.
- 13) RUN-IN mode: First, power off the monitor, un-plug the AC cord and be sure the signal cable is not connected (D-sub not connected) , then press “2” and “Power “ key at the same time and plug the AC cord.
- 14) ISP mode:First, power off the monitor, unplug the AC cord, then press “2” and “Power “ and “down” key at the same time and plug the AC cord.
- 15) AUTO color: then press “1” and “ ” and “ ” key at the same time.

## 4 Circuit Description

### A. DC-DC CONVERTER AND LDO

This brick converts the 12V input voltage to 5V for panel use and U9 converts the voltage from 5V to 3.3V , U8 converts the voltage from 5V to 2.5V for controller use.

It consists of a PWM IC (LM2596), flywheel Diode (D4), buck choke (L1), and capacitor (C68,C69).

U7 (LM2596) is a PWM generator working at 150Khz.

Self protection features include a two stage frequency reducing current limit for the output switch and an over temperature shutdown for complete protection under fault condition.

U8 is a low dropout voltage and fast transient response three terminal regulator, the output voltage is 2.5V fixed.

U9 is a low dropout voltage and fast transient response three terminal regulator, the output voltage is 3.3V fixed.

### B. Scaling controller

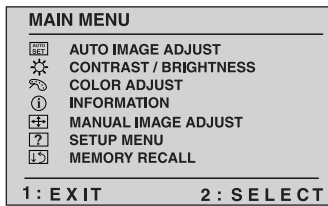
The gm2121 is a graphics processing IC for Liquid Crystal Display (LCD) monitor at SXGA resolution . It provides a high-speed triple-ADC and PLL,a high quality zoom and shrink scaling engine , an on-screen display (OSD) controller, digital color controls, an on-chip micro-controller ( OCM ) and industry standard dual four channel LVDS transmitter for direct connect to LCD panel with LVDS interface.

The triple-ADC is to convert RGB analog signal to digital signal. The gm2121 is a complete 8-bit up to 162MHz (SXGA 75Hz / UXGA 60Hz) monolithic analog interface optimized for capturing RGB graphic signal, +3.3V and +2.5V power supply is necessary.

The gm2121 scaling filter can combine it's advanced scaling with a pixel-replication type scaling function.this is useful for improving the sharpness and definition of graphics when scaling at high zoom factors. Gm2121 provides an 8 to 10 bit look-up table (LUT) for each input color channel intended for Gamma correction and to compensate for a non-linear response of the LCD panel . A 10-bit output results in an improved color depth control. The 10-bit output is then dithered down to 8 bits( or 6 bits) per channel at the display .



## 5. Adjusting Procedure



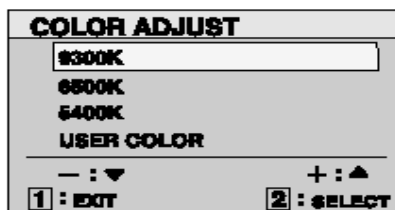
**Auto Image Adjust** automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion.

Press the [2] button to obtain a sharper image.

First, power off the monitor, un-plug the AC cord and be sure the signal cable is connected (D-sub connected) , then press “2” key at the same time and plug the AC cord to factory.



**Color Adjust** provides several color options: preset color temperatures and User which allows you to adjust red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin).



**9300K** — Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

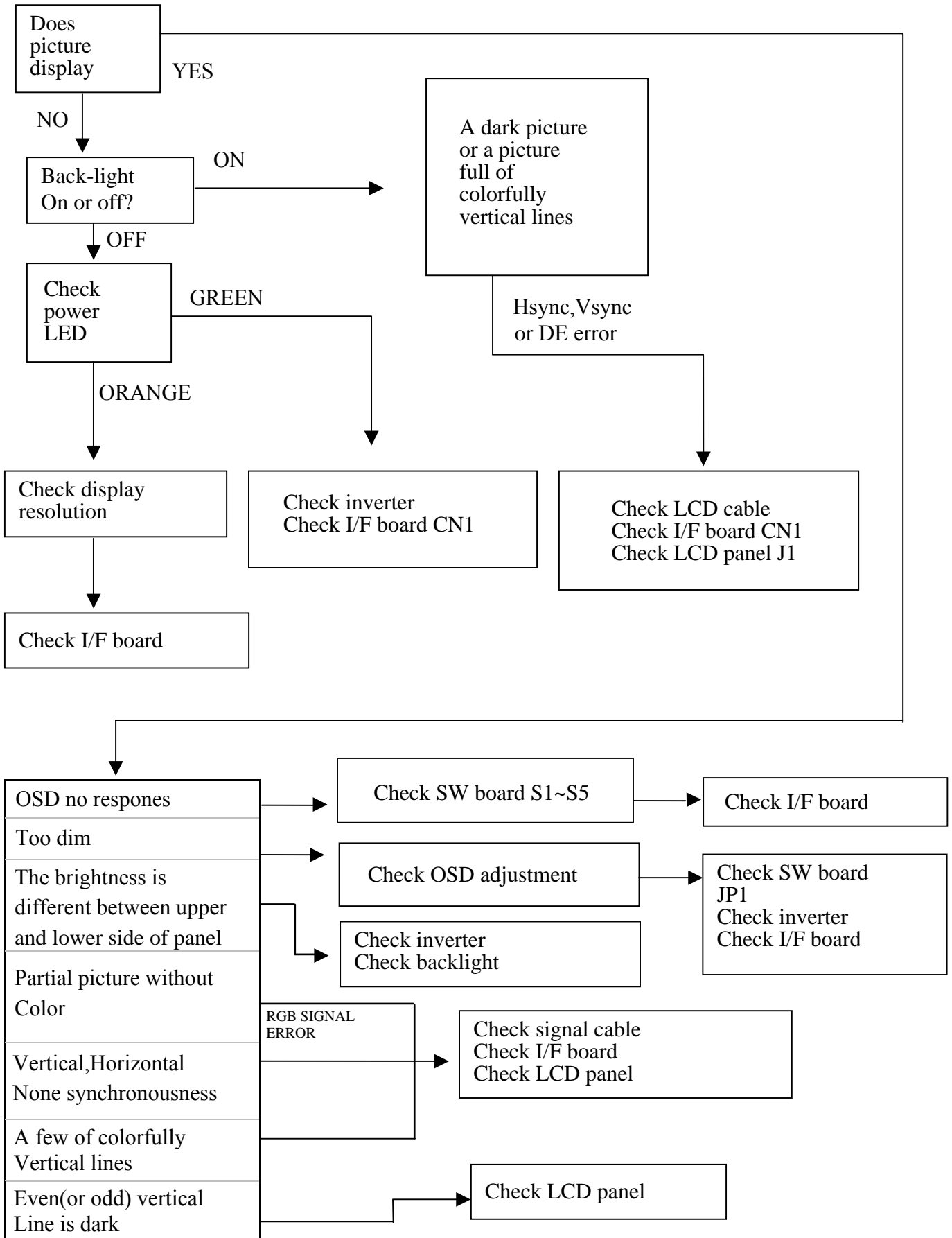
**6500K** — Adds red to the screen image for warmer white and richer red. Default setting.

**5400K** — Adds green to the screen image for a darker color.

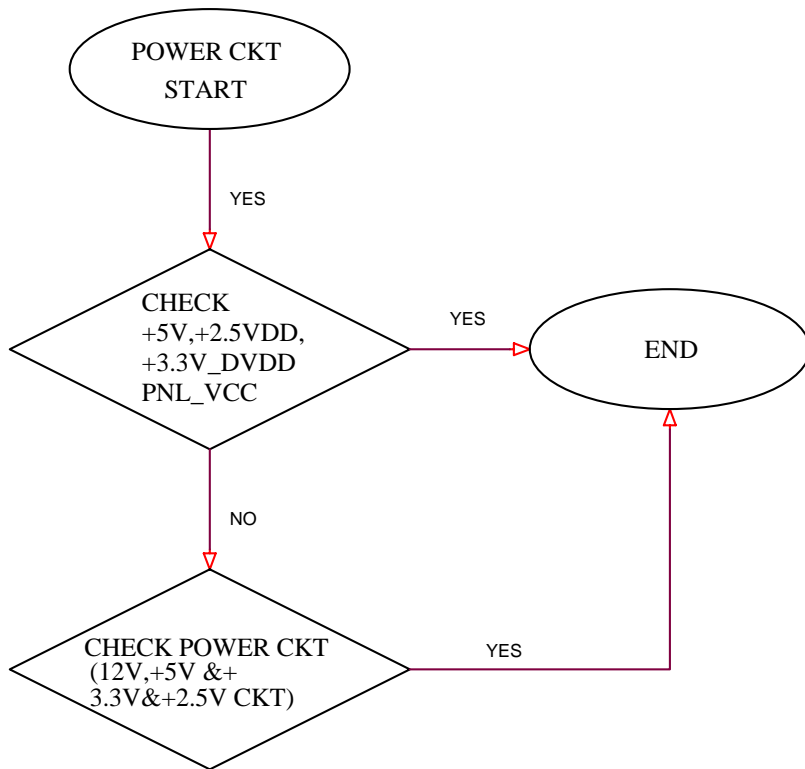
**User Color** — Individual adjustments for red, green, and blue.

- 1 To select color (R, G or B) press button [2].
- 2 To adjust selected color, press ▲ or ▼.
- 3 When you are finished making all color adjustments, press button [1] *twice*.

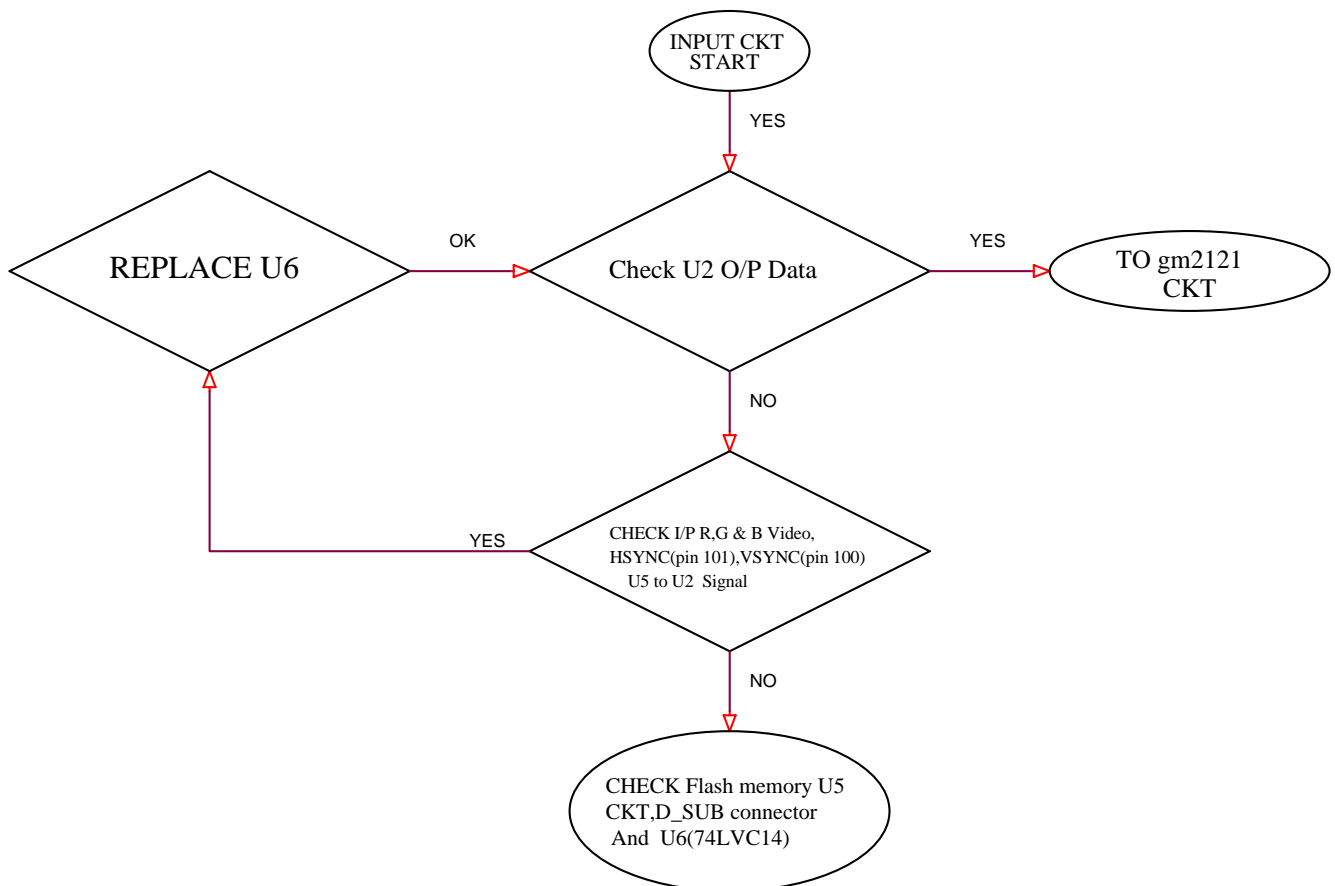
## 6. Trouble Shooting Flow Chart



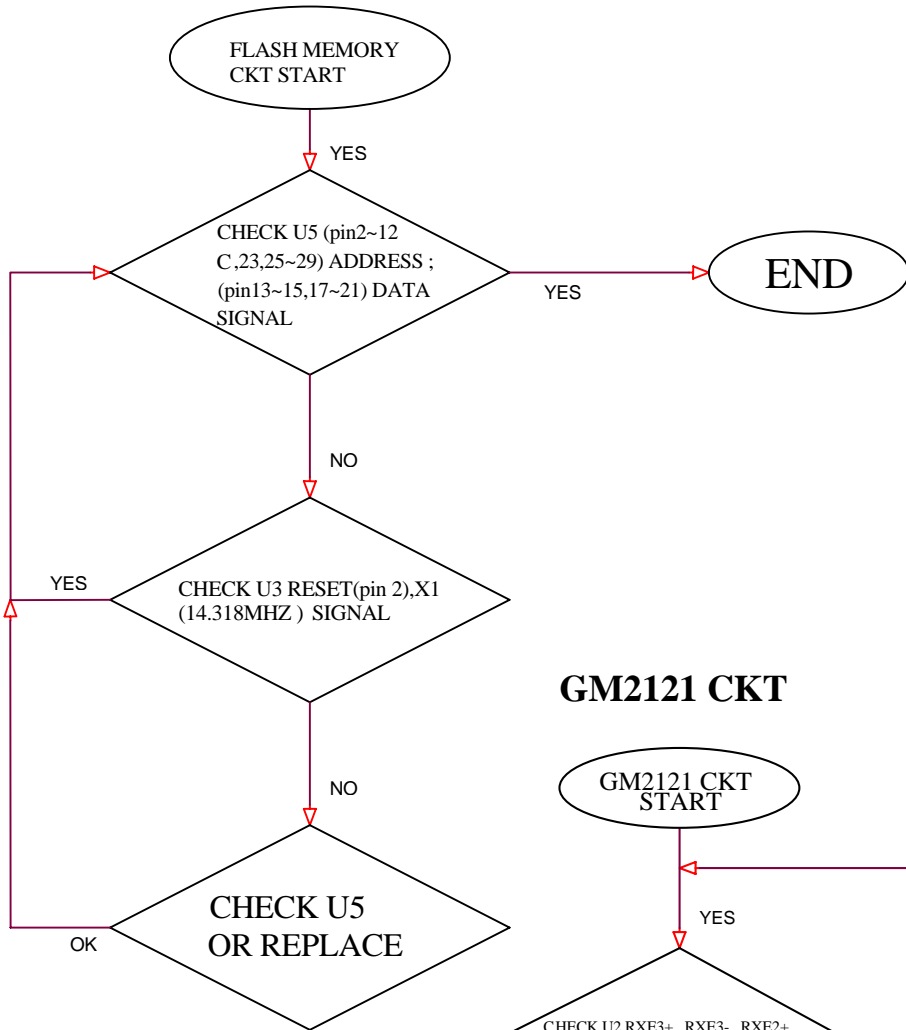
## POWER CKT



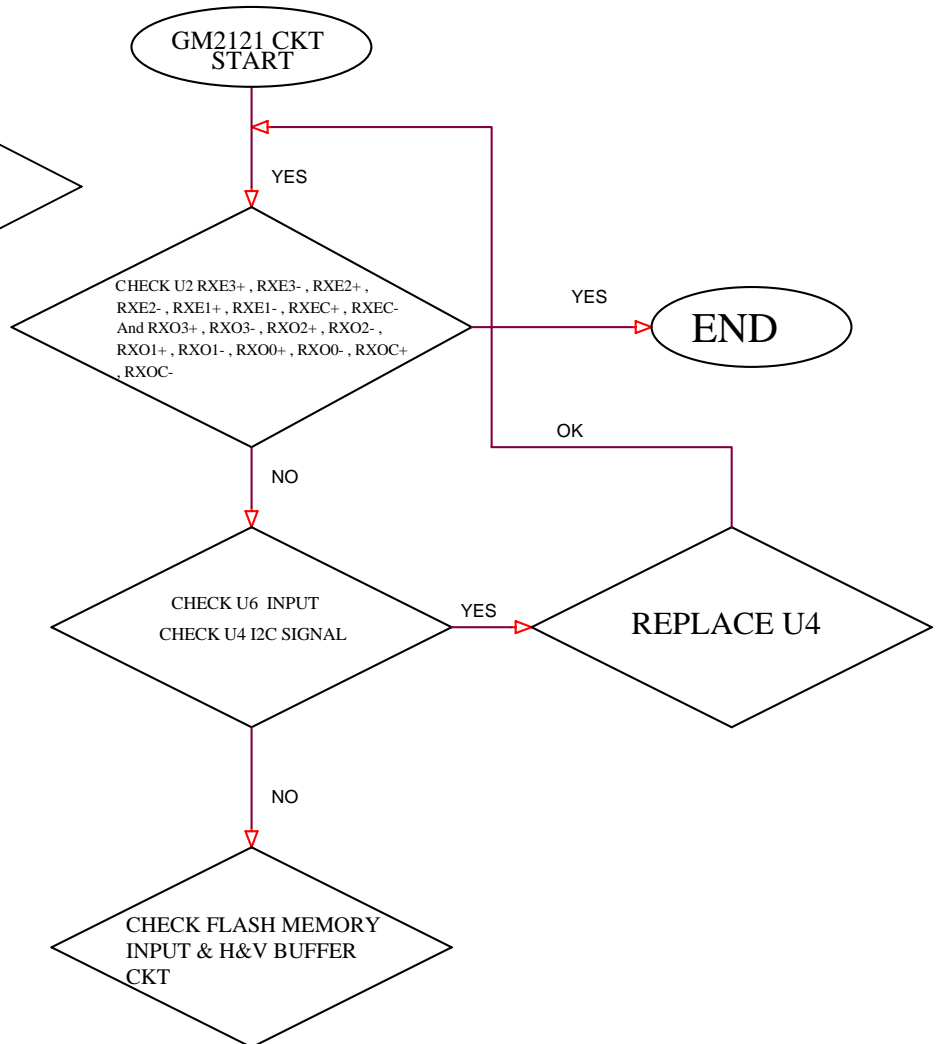
## INPUT CKT



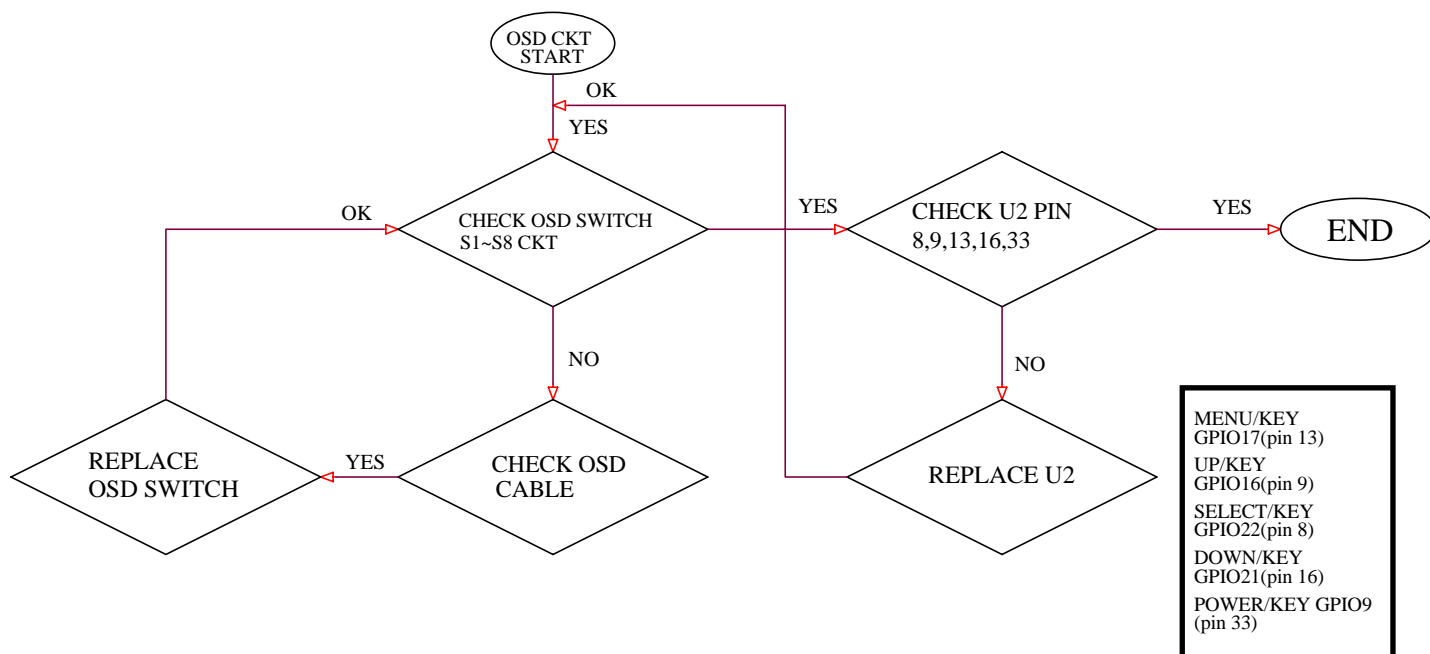
# FLASH MEMORY CKT



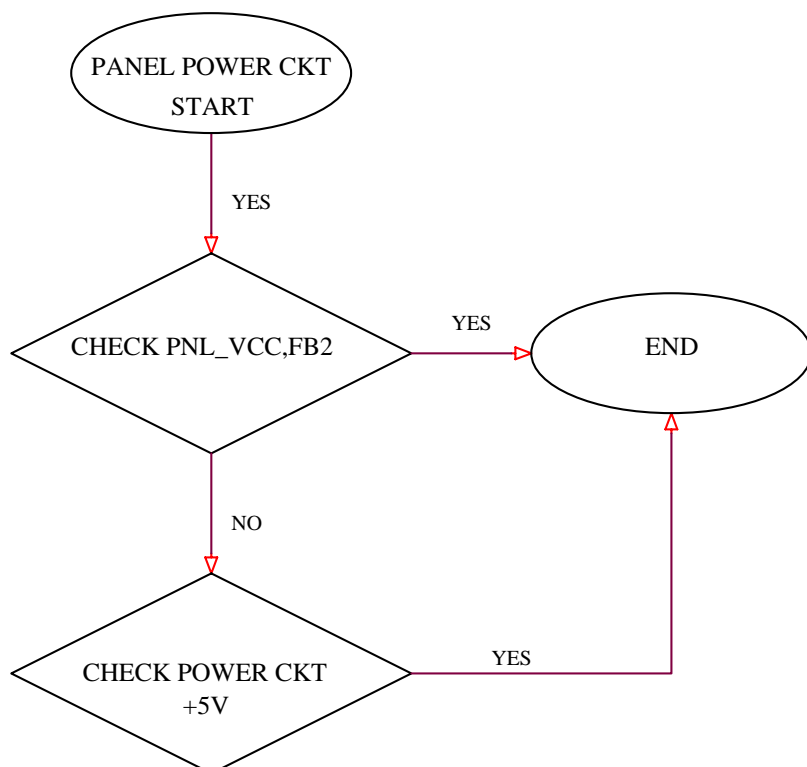
# GM2121 CKT



## OSD CKT



## PANEL POWER CKT



## 7. Recommended Spare Parts List

### Recommended Spare Parts List VA720-2

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
1	B-IF-0222-0046	DPWBN5415T8---A	I/F BOARD	I/F BOARD	1
2	A-AD-0114-0146	RUNTP5459T8----	AC/DC ADAPTER	AC/DC ADAPTER	1
3	A-VC-0101-0253	QCODS1492T8D--A	VGA CABLE 1.8M	VGA CABLE 1.8M	1
4	A-PC-0106-0180	QACC-1126D8D---	AC POWER CORD 1.8M	AC POWER CORD 1.8M	1
5	A-PC-0106-0181	QACC-1228T8D-F-	AC POWER CORD 1.8 EU	AC POWER CORD 1.8 EU	1
6	C-BS-0303-0299	GSTN-2870D8F--A	BASE	BASE	1
7	M-MS-0808-8124	MHNGM0019D8----	HINGE	HINGE	1
8	M-MS-0808-8901	LANGF2052D8---A	BASE PLATE	BASE PLATE	1
9	C-FP-0301-0912	GCABA2301D8F--B	FRONT BEZEL	FRONT BEZEL	1
10	C-BC-0302-0414	GCABB1734D8F--A	BACK BEZEL	BACK BEZEL	1
11	PL-NB-0707-0214	JKNBP2309D8F--A	SWITCH KNOB	SWITCH KNOB	1
12	M-CV-0830-2476	GCOVD2390D8F---	VIEWSONIC LOGO PLATE	VIEWSONIC LOGO PLATE	1
13	M-CV-0830-2300	GCOVD2402D8F--A	REAR COVER	REAR COVER	1
14	M-MS-0808-8122	LANGF2051D8----	D-SUB BRACKET	D-SUB BRACKET	1
15	M-MS-0808-6478	HBDGA1724D8----	VIEWSONIC LOGO	VIEWSONIC LOGO	1
16	M-MS-0808-8126	PISLV0205D8---A	DECORATION PLATE	DECORATION PLATE	1
17	M-MS-0808-8125	PGAD-1009D8----	MOVABLE BUSHING	MOVABLE BUSHING	1
18	P-FM-0602-0798	SPAKA6503D8F---	EPS PAD	EPS PAD	1
19	P-BX-0601-0747	SPAKC3406D8---A	CARTON	CARTON	1
20	M-LCD-0826-0137	VVLM170EN05--N-	PANEL(17" AU)	PANEL(17" AU)	1
21	B-SB-0221-0483	RUNTP5469T8----	INVERTER	INVERTER	1
22	A-VC-0101-0360	QCODS1676T8----	LVDS CABLE	LVDS CABLE	1
23	B-IF-0222-0047	DPWBN5493T8---A	I/F BOARD	I/F BOARD	1
24	M-BK-0805-0010	LANGF2086D8---D	MAIN BRACKET	MAIN BRACKET	1
25	E-FS-0410-0099	QFS-Z402F-81UAA	FOUSE 4A	F1	1
26	E-IC-0401-2901	VSISST39VF010-S	CPU (39VF010-90-4C-NH)	U5	1
27	E-IC-0401-2902	VSIGM2121-----A	SCALLER GENESIS GM2121	U2	1
28	M-MS-0808-8902	QSOCI1636N832--	32PIN PLCC IC SOCKET	U5	1
29	E-X-0415-0137	RCRSL1161T8----	CRYSTAL 14.318MHZ	X1	1
30	E-IC-0401-2659	VSI24C16BP3----	EEPROM	U4	1
31	M-FC-0809-0792	QCNCNP1962T8----	Connector 30 PIN,FI-SE30P-HF	CN1	1
32	A-CD-VA720-2	DDSKC0025T8---C	CD DRIVER	CD DRIVER	1

## BOM LIST FOR VA720-2

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
1	C-BS-0303-0299	GSTN-2870D8F--A	SPRAY PAINT	SPRAY PAINT	1PCS
2	M-MS-0808-8124	MHNGM0019D8----	HINGE	HINGE	1PCS
3	M-MS-0808-8901	LANGF2052D8---A	BASE PLATE	BASE PLATE	1PCS
4	M-SCW-0824-6737	XESSD30P06000--	BASE PLATE/BASE*5	BASE PLATE/BASE*5	5PCS
5	M-SCW-0824-6736	XBSSD40P12000--	BASE PLATE/HINGE*4,	BASE PLATE/HINGE*4,	4PCS
6	M-MS-0808-7678	GLEGG1460D8F---	RUBBER LEG	RUBBER LEG	4PCS
7	B-IF-0222-0046	DPWBN5415T8---A	SW BOARD	SW BOARD	1SET
8	M-WR-0828-0660	QCNWS0906T8010-	INVERTER WIRE	INVERTER WIRE	1PCS
9	M-MS-0808-8131	QCNWS0908T8006-	OSD WIRE	OSD WIRE	1PCS
10	#N/A	TLABZ4916T8----	INVERTER LABEL	INVERTER LABEL	1PCS
11	C-FP-0301-0912	GCABA2301D8F--B	CAB-A	CAB-A	1PCS
12	C-BC-0302-0414	GCABB1734D8F--A	SPRAY PAINT	SPRAY PAINT	1PCS
13	PL-NB-0707-0214	JKNBP2309D8F--A	KNOB	KNOB	1PCS
14	M-CV-0830-2476	GCOVD2390D8F---	LOGO PLATE	LOGO PLATE	1PCS
15	M-CV-0830-2300	GCOVD2402D8F--A	SPRAY PAINT	SPRAY PAINT	1PCS
16	M-MS-0808-8122	LANGF2051D8----	D SUB BRACKET	D SUB BRACKET	1PCS
17	M-MS-0808-8128	PSLDM6443D8----	SHIELD CASE(INVERTER BOARD)	SHIELD CASE(INVERTER BOARD)	1PCS
18	M-SCW-0824-6804	XEASD30P06000--	FOR MAIN BRACKET*12	FOR MAIN BRACKET*12	12PCS
19	M-SCW-0824-6738	XEPSN26P06000--	KEY BOARD/CAB-A*3	KEY BOARD/CAB-A*3	3PCS
20	M-SCW-0824-6734	XEPSB40P12000--	INSTEAD OF ABOVE SCREW	INSTEAD OF ABOVE SCREW	2PCS
21	M-SCW-0824-6733	XBMSD30P06000--	INVERTER*2,1/F*5,D-SUB*3	INVERTER*2,1/F*5,D-SUB*3	10PCS
22	M-SCW-0824-6812	XEASD30P12TV0--	HINGE*2	HINGE*2	2PCS
23	M-SCW-0824-6739	XBMSD40P08TV0--	MHNGM0019*4	MHNGM0019*4	4PCS
24	M-MS-0808-5840	LBOSM1069D8----	BOSS FOR VGA CONNECTOR	BOSS FOR VGA CONNECTOR	2PCS
25	M-MS-0808-9174	HDECP1929D8F---	LENS	LENS	1PCS
26	M-MS-0808-6478	HBDGA1724D8----	VS LOGO	VS LOGO	1PCS
27	M-MS-0808-9179	PISL-1243D8----	MYLAR FOR INVERTER	MYLAR FOR INVERTER	1PCS
28	M-MS-0808-8126	PISL V0205D8---A	DECORATION PLATE	DECORATION PLATE	1PCS
29	M-BK-0805-0012	LANGF2063D8---A	KENSINGTON BRACKET	KENSINGTON BRACKET	1PCS
30	M-SCW-0824-6740	XBMSD30P04000--	INVERTER SHIELD*4	INVERTER SHIELD*4	4PCS
31	#N/A	PISLS1182D8----	PC PLATE	PC PLATE	2PCS
32	#N/A	ZADHSDNJ-LK----	ADHESIVE	ADHESIVE	0.5G
33	#N/A	ZTAPEN018D030U-	TYPE 0.05M*3,0.1*1	TYPE 0.05M*3,0.1*1	0.25M
34	#N/A	CPWBVA720T8ACEB	6BIT A MINUS PANEL (17"AU)	6BIT A MINUS PANEL (17"AU)	1PCS
35	#N/A	CPWBGA720T8ACEB	6BIT A MINUS PANEL (17"AU)	6BIT A MINUS PANEL (17"AU)	1PCS
36	A-AD-0114-0146	RUNTP5459T8----	AC/AD ADAPTER(HJC 4A 1.65)	AC/AD ADAPTER(HJC 4A 1.65)	1PCS
37	#N/A	TLAB-5428T8---A	MODEL LABEL	MODEL LABEL	1PCS
38	A-PC-0106-0181	QACC-1228T8D-F-	AC POWER CORD EU 1.8M BLACK	AC POWER CORD EU 1.8M BLACK	1PCS
39	A-VC-0101-0253	QCODS1492T8D--A	VGA CABLE 1.8M FOR PC99	VGA CABLE 1.8M FOR PC99	1PCS
40	A-PC-0106-0180	QACC-1126D8D---	AC POWER CORD(1.8M)USA	AC POWER CORD(1.8M)USA	1PCS
41	M-LB-0813-0527	TLABZ3903D8---	UPC LABEL	UPC LABEL	1PCS
42	#N/A	TLAB-5429T8----	S/N LABEL	S/N LABEL	1PCS
43	#N/A	TINSE2901T8---A	USER'S MANUAL	USER'S MANUAL	1PCS
44	#N/A	TCAD-1303T8----	COLOR DOCVMENT	COLOR DOCVMENT	1PCS
45	#N/A	TLAB-5430T8----	STAND LABEL	STAND LABEL	1PCS
46	#N/A	TLAB-5434T8----	2 WORD LABEL	2 WORD LABEL	1PCS
47	P-FM-0602-0798	SPAKA6503D8F---	EPS PAD	EPS PAD	1PCS
48	P-BX-0601-0747	SPAKC3406D8---A	CARTON	CARTON	1PCS
49	M-MS-0808-9180	SSAKH1356D8-T--	SET BAG	SET BAG	1PCS
50	#N/A	SPAKW1155D8---C	PALLET (981X1143)	PALLET (981X1143)	0.0179PCS
51	#N/A	SPAKK6273D8----	CORNER PAPER	CORNER PAPER	0.0714PCS
52	M-MS-0808-5875	SPAKK1703T8Z---	CORNER PAPER (50X50X120)T	CORNER PAPER (50X50X120)T	0.0714PCS
53	#N/A	SPAKK6322D8----	CORNER PAPER (50X50X1000)T	CORNER PAPER (50X50X1000)T	0.0357PCS
54	#N/A	SPAKK6346D8----	CORRUGATED BOARD (980X1140)TB	CORRUGATED BOARD (980X1140)TB	0.0357M
55	#N/A	SPAKK6357D8----	CORNER PAPER (50X50X2200)V	CORNER PAPER (50X50X2200)V	0.0714MM
56	#N/A	ZSHETVR02X510--	WRAP SHEEP	WRAP SHEEP	1.35M
57	#N/A	ZSHETVR05X1220-	WRAP SHEEP	WRAP SHEEP	28M
58	#N/A	ZTIE-P155Y1800-	PACKING STAP	PACKING STAP	0.5M
59	#N/A	ZTAPEQ019T040--	TAPE 50MM*1	TAPE 50MM*1	0.1PCS
60	#N/A	ZTAPEQ072T050-B	TAPE 800MM*3,500MM*2	TAPE 800MM*3,500MM*2	3.4MM
61	M-MS-0808-8402	PISL-1246D8----	PROTECT SHEET	PROTECT SHEET	1PCS

MODEL: DPWBN5493T8---A(FOR MAIN BOARD)

1	E-C-0404-3972	VCEACU1CH477M-P	E,Capacitor,470UF/16V	C68,69 (470UF/16V)	2PCS
2	#N/A	VCEACU1CG477M-P	E,Capacitor,470UF/16V	SECOND SOURCE	2PCS
3	E-IC-0401-2659	VSI24C16BP3----	EEPROM,IC 24C16BP3	U4	1PCS
4	#N/A	VSI24C16ADP01--	EEPROM,IC 24C16ADP	SECOND SOURCE	1PCS
5	E-IC-0401-2660	VSI24WC16P-----	EEPROM,IC CAT24WC16P	SECOND SOURCE	1PCS
6	E-IC-0401-2584	VSI24C16-----	EEPROM,IC 24C16	SECOND SOURCE	1PCS
7	E-IC-0401-2137	VSI24C21-----	EEPROM,IC 24C21	U12	1PCS
8	E-IC-0401-2287	VSI24LC21A-SN-A	EEPROM,IC AT24C21-10C	SECOND SOURCE	1PCS
9	#N/A	VSI24LC21A----	EEPROM,IC 24LC21	SECOND SOURCE	1PCS
10	#N/A	VNCNP0906REJST-	Connector 6PIN	JP3 (INVERTER CON)	1PCS
11	#N/A	VNCNP0908REJST-	Connector 8PIN	CN4 (OSD CON)	1PCS
12	#N/A	QCNCND1175T8----	VGA Connector (DB-15)	CN3 (DB-15)	1PCS
13	E-X-0415-0137	RCRSL1161T8----	OSC(14.318 MHZ)	X1 (NTK 14.318MHZ)	1PCS
14	#N/A	RCRSL1154T8----	OSC(14.318 MHZ)	SECOND SOURCE	1PCS

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
15	#N/A	RCRSL1088T8----	OSC(14.318 MHZ)	SECOND SOURCE	1PCS
16	E-X-0415-0139	RCRSL1255T8----	OSC(14.318 MHZ)	SECOND SOURCE	1PCS
17	#N/A	RCHOL1098T8640-	CHOKE 64UH	L1	1PCS
18	#N/A	RCHOL1100T8640-	CHOKE 64UH	SECOND SOURCE	1PCS
19	#N/A	QJAKD1018T8D--	POWER JACK	JP2	1PCS
20	#N/A	VCEACU1CG337M-P	E,Capacitor,330UF/16V	C13, (330UF/16V)	1PCS
21	#N/A	VCEATU1CH107M5-	E,Capacitor,100UF/16V	C1,11,14,23,30,36,60,75,78,80,82,112	12PCS
22	B-SB-0221-0505	TLAB-3547T8----	PWB LABEL	PWB LABEL	1PCS
23	E-IC-0401-2901	VSSIS39VF010-S	MCU IC,39VF010-90-4C-NH	U5 (39VF010-90-4C-NH)	1PCS
24	#N/A	VSI39LV010-70-A	MCU IC,39LVF010-70	SECOND SOURCE	1PCS
25	#N/A	TLAB-5522T8----	BIOS LABEL	BIOS LABEL	1PCS
26	#N/A	QPWB-5493T8--D	BARE A/D BOARD	BARE A/D BOARD	1PCS
27	M-MS-0808-8902	QSOCI1636N832--	IC SOCKET 32 PIN,PLCC-32,FRANCON ELEC	U5	1PCS
28	#N/A	QSOCI1644T832--	IC SOCKET 32 PIN,PLCC-32,FRANCON ELEC	SECOND SOURCE (FCN)	1PCS
29	#N/A	VSDAN202UT106-A	DUAL DIODE ,DAN202	D21	1PCS
30	#N/A	VSDBAV99-----A	DIODE,BAV99(75V/4NS/250mW)	D1,2,3,8,9,10,11	7PCS
31	#N/A	VSDBAV99A-----A	DIODE,BAV99A(75V/4NS/250mW)	SECOND SOURCE	7PCS
32	#N/A	VSDLYBAV99-----A	DIODE,LYBAV99(75V/4NS/250mW)	SECOND SOURCE	7PCS
33	#N/A	VSDBAV99-----A	DIODE,BAV99(75V/4NS/250mW)	D12,13,14,	3PCS
34	#N/A	VSDBAV99A-----A	DIODE,BAV99A(75V/4NS/250mW)	SECOND SOURCE	3PCS
35	#N/A	VSDLYBAV99-----A	DIODE,LYBAV99(75V/4NS/250mW)	SECOND SOURCE	3PCS
36	#N/A	VSDLYSS32-----A	Barrier rectifier,LYSS32	D4	1PCS
37	#N/A	VSDLYSS24-----A	Barrier rectifier,LYSS24	SECOND SOURCE	1PCS
38	#N/A	VSDSS2-----A	Barrier rectifier,DSS22	SECOND SOURCE	1PCS
39	#N/A	VSDSS24-----A	Barrier rectifier,DSS24	SECOND SOURCE	1PCS
40	#N/A	VSDSK2-----A	Barrier rectifier,DSK22	SECOND SOURCE	1PCS
41	#N/A	VSDSK24-----A	Barrier rectifier,DSK24	SECOND SOURCE	1PCS
42	#N/A	VSDSS34-----A	Barrier rectifier,DSS34	SECOND SOURCE	1PCS
43	#N/A	VSDSS34----GI-A	Barrier rectifier,DSS34GI	SECOND SOURCE	1PCS
44	#N/A	VSDSM340A-----A	Barrier rectifier,DSM340A	SECOND SOURCE	1PCS
45	#N/A	VSDB340A-----A	Barrier rectifier,DB340A	SECOND SOURCE	1PCS
46	#N/A	VSZRLZ5.6B----A	ZENER DIODE,5.6V	ZD1,2,3,4,5,6,	6PCS
47	#N/A	VSZMMDZ5232B--A	ZENER DIODE,5.6V	SECOND SOURCE	6PCS
48	E-IC-0401-2118	VSIACI1084-33-A	Power Regulator 3.3V IC AIC1084-33	U8	1PCS
49	#N/A	VSIAPL1084-33-A	Power Regulator 3.3V IC APL1084-33	SECOND SOURCE	1PCS
50	#N/A	VSIRT9171-33--A	Power Regulator 3.3V IC RT9171-33	SECOND SOURCE	1PCS
51	#N/A	VSIPI1084CM-33A	Power Regulator 3.3V IC PJ1084CM-33	SECOND SOURCE	1PCS
52	#N/A	VSILM2596S-5---	Power Regulator IC LM2596S-5	U7 (PWM IC)	1PCS
53	E-IC-0401-2898	VSIAP1501-5K5-A	Power Regulator IC AP1501-5K5	SECOND SOURCE	1PCS
54	#N/A	VSISI9433DY----A	MOSFET,SI9433DY	U1,	1PCS
55	#N/A	VSIFDS4435----A	MOSFET,FDS4435	SECOND SOURCE	1PCS
56	#N/A	VSICEM4435----A	MOSFET,CEM4435	SECOND SOURCE	1PCS
57	#N/A	VSICEM9433----A	MOSFET,CEM9433	SECOND SOURCE	1PCS
58	#N/A	VSISI4435DY----A	MOSFET,SI4435DY	SECOND SOURCE	1PCS
59	#N/A	VSIAP4435M----A	MOSFET,AP4435M	SECOND SOURCE	1PCS
60	#N/A	VSAIO4411----A	MOSFET,A04411	SECOND SOURCE	1PCS
61	#N/A	VSISI9435DY---A	Power PMOSFET IC SI9435DY	SECOND SOURCE	1PCS
62	#N/A	VSICEM9435----A	Power PMOSFET IC CEM9435	SECOND SOURCE	1PCS
63	#N/A	VSIDM9435A---A	Power PMOSFET IC SDM9435A	SECOND SOURCE	1PCS
64	#N/A	VSISI4435DYTR-A	Power PMOSFET IC SI4435DYTR	SECOND SOURCE	1PCS
65	#N/A	VSISN74LV14A--A	INVERTER Gate IC SN74LV14A	U6	1PCS
66	#N/A	VST2N3904----A	Transistor,2N3904,(NPN T.R VCEO=40VAC)	Q1,2,3,	3PCS
67	#N/A	VSTMMBT3904T-MA	Transistor,MMBT3904T,(NPN T.R VCEO=40VAC)	SECOND SOURCE	3PCS
68	#N/A	VSTMMBT3904LT-A	Transistor,MMBT3904LT,(NPN T.R VCEO=40VAC)	SECOND SOURCE	3PCS
69	#N/A	VST2N3906----A	Transistor,2N3906,(PNP T.R VCEO=40VAC)	Q4,5,	2PCS
70	M-FC-0809-0792	QCNCPI962T8----	Connector 30 PIN,FI-SE30P-HF	CN1 (FI-SE30P-HF)	1PCS
71	#N/A	QCNCPI979T8----	Connector 30 PIN,FI-S30P-HF	SECOND SOURCE	1PCS
72	E-FS-0410-0099	QFS-Z402F-8IUAA	FUSE, 4A/125V	F1	1PCS
73	#N/A	VSIMIC811MU---A	RESET IC,MIC811MU	U3 (RESET IC)	1PCS
74	#N/A	VSIMAX811-----A	RESET IC,MAX811	SECOND SOURCE	1PCS
75	#N/A	VSIADM811-----A	RESET IC,ADM811	SECOND SOURCE	1PCS
76	#N/A	VSIIMP811LEUS-A	RESET IC,IMP811LEUS	SECOND SOURCE	1PCS
77	#N/A	VSIAME8815BEG-A	LDO Regulator IC 5V/2.5V,AME8815BEG	U9	1PCS
78	#N/A	VSIRC1117S25--A	LDO Regulator IC 5V/2.5V,RC1117S25	SECOND SOURCE	1PCS
79	#N/A	VSIRT9164-25--A	LDO Regulator IC 5V/2.5V,RT9164-25	SECOND SOURCE	1PCS
80	#N/A	VSIAPL1117-25-A	LDO Regulator IC 5V/2.5V,APL1117-25	SECOND SOURCE	1PCS
81	E-IC-0401-2902	VSIGM2121-----A	GENESIS SCALER ,GM2121	U2 (SCALER)	1PCS
82	#N/A	VSDDL4001-----A	DIODE,DL4001	D17	1PCS
83	#N/A	VSDM1-----A	DIODE,M1	SECOND SOURCE	1PCS
84	#N/A	VSDSM4001A---A	DIODE,SM4001A	SECOND SOURCE	1PCS
85	#N/A	VRMDNVG--000J-A	Resistor,SMT,0603,0Ω,±5%,1/16W	R34,35,40,45,84,94	6PCS
86	#N/A	VRMDNVG--101J-A	Resistor,SMT,0603,100Ω,±5%,1/16W	R21,24,26,28,81,82,93,95	8PCS
87	#N/A	VRMDNVG--102J-A	Resistor,SMT,0603,1KΩ,±5%,1/16W	R38,39,41,44,	4PCS
88	#N/A	VRMDNVG--103J-A	Resistor,SMT,0603,10KΩ,±5%,1/16W	R12,13,20,22,29,30,78,79,90,91,92	11PCS
89	#N/A	VRMDNVG--181J-A	Resistor,SMT,0603,180Ω,±5%,1/16W	R9,10,11	3PCS
90	#N/A	VRMDNVG--201J-A	Resistor,SMT,0603,200KΩ,±5%,1/16W	R3	1PCS
91	#N/A	VRMDNVG--202J-A	Resistor,SMT,0603,2KΩ,±5%,1/16W	R4,15,17,46,	4PCS
92	#N/A	VRMDNVG--222J-A	Resistor,SMT,0603,2.2KΩ,±5%,1/16W	R36,37,	2PCS
93	#N/A	VRMDNVG--330J-A	Resistor,SMT,0603,33Ω,±5%,1/16W	R5,6,7,8,16	5PCS
94	#N/A	VRMDNVG--331J-A	Resistor,SMT,0603,330Ω,±5%,1/16W	R43	1PCS



Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty
95	#N/A	VRMDNVG--472J-A	Resistor,SMT,0603,4.7K $\Omega$ , $\pm$ 5%,1/16W	R1,	1PCS
96	#N/A	VRMDNVG--471J-A	Resistor,SMT,0603,470 $\Omega$ , $\pm$ 5%,1/16W	R49,50	2PCS
97	#N/A	VRMDNVG--750J-A	Resistor,SMT,0603,75 $\Omega$ , $\pm$ 5%,1/16W	R31,32,33	3PCS
98	#N/A	VCLFHN1HG104Z-A	Capacitor,SMT,0603,50V,0.1U	C2,3,4,5,6,7,8,9,12,15,	10PCS
99	#N/A	VCLFHN1HG104Z-A	Capacitor,SMT,0603,50V,0.1U	C16,17,18,19,20,24,25,26,27,28,	10PCS
100	#N/A	VCLFHN1HG104Z-A	Capacitor,SMT,0603,50V,0.1U	C29,31,32,33,34,35,37,38,42,46,	10PCS
101	#N/A	VCLFHN1HG104Z-A	Capacitor,SMT,0603,50V,0.1U	C47,49,51,61,62,67,74,76,77,81,	10PCS
102	#N/A	VCLFHN1HG104Z-A	Capacitor,SMT,0603,50V,0.1U	C83,110	2PCS
103	#N/A	VCICHN1HH101J-A	Capacitor,SMT,0603,50V,100P	C48	1PCS
104	#N/A	VCIRHN1HG103K-A	Capacitor,SMT,0603,50V,0.01U	C43,44,45,50,53,54,66,73,79	9PCS
105	#N/A	VCIRHN1HG103K-A	Capacitor,SMT,0603,50V,0.01U	C88,89,90,91,92,93,94,	7PCS
106	#N/A	VCICHN1HH220J-A	Capacitor,SMT,0603,50V,22P	C40,41	2PCS
107	#N/A	VCICHN1HH221J-A	Capacitor,SMT,0603,50V,220P	C10,21,39,	3PCS
108	#N/A	VCLFHN1HG473Z-A	Capacitor,SMT,0805,50V,0.047U	C63,	1PCS
109	#N/A	VCLFCNICG105Z-A	Capacitor,SMT,0805,50V,1U	C72,84,85	3PCS
110	#N/A	VCEABN1CX106M-A	E,Capacitor,10UF/16V	C22,71	2PCS
111	#N/A	VCEABN1CX106MNA	E,Capacitor,10UF/16V	SECOND SOURCE	2PCS
112	#N/A	VCEABN1CX107M-A	E,Capacitor,100UF/16V	C64,65	2PCS
113	#N/A	VCEABN1CX107MNA	E,Capacitor,100UF/16V	SECOND SOURCE	2PCS
114	#N/A	VCEABN1CX226M-A	E,Capacitor,22UF/16V	C52	1PCS
115	#N/A	VCLFCN1EY225K-A	Capacitor,SMT,0805,50V,2.2U/16V	C70	1PCS
116	E-L-0407-1559	RFIL-5232T8300A	BEAD,100MHZ/30 $\Omega$ , $\pm$ 25%,NBQ16080	FB8,11,13,16,18,19,20(0603)	7PCS
117	E-L-0407-1559	RFIL-5232T8300A	BEAD,100MHZ/30 $\Omega$ , $\pm$ 25%,NBQ16080	FB21,22,23,27,29,(0603)	5PCS
118	#N/A	RFIL-5231T8600A	BEAD,100MHZ/60 $\Omega$ , $\pm$ 25% SBK201209	FB1,3,4,6,30(0805)	5PCS
119	#N/A	RFIL-5233T8700A	BEAD,100MHZ/70 $\Omega$ , $\pm$ 25% PBY453215	FB2,5,9,10,12,28(1812)	6PCS
120	#N/A	RFIL-5235T8121A	BEAD,100MHZ/120 $\Omega$ , $\pm$ 25%,NBQ16080	FB31,32,33	3PCS
121	#N/A	RNWRB1618T8103A	Resistor array,SMT,8P4R,25V,10K $\Omega$	RN1,2,3,4,6,7,	7PCS

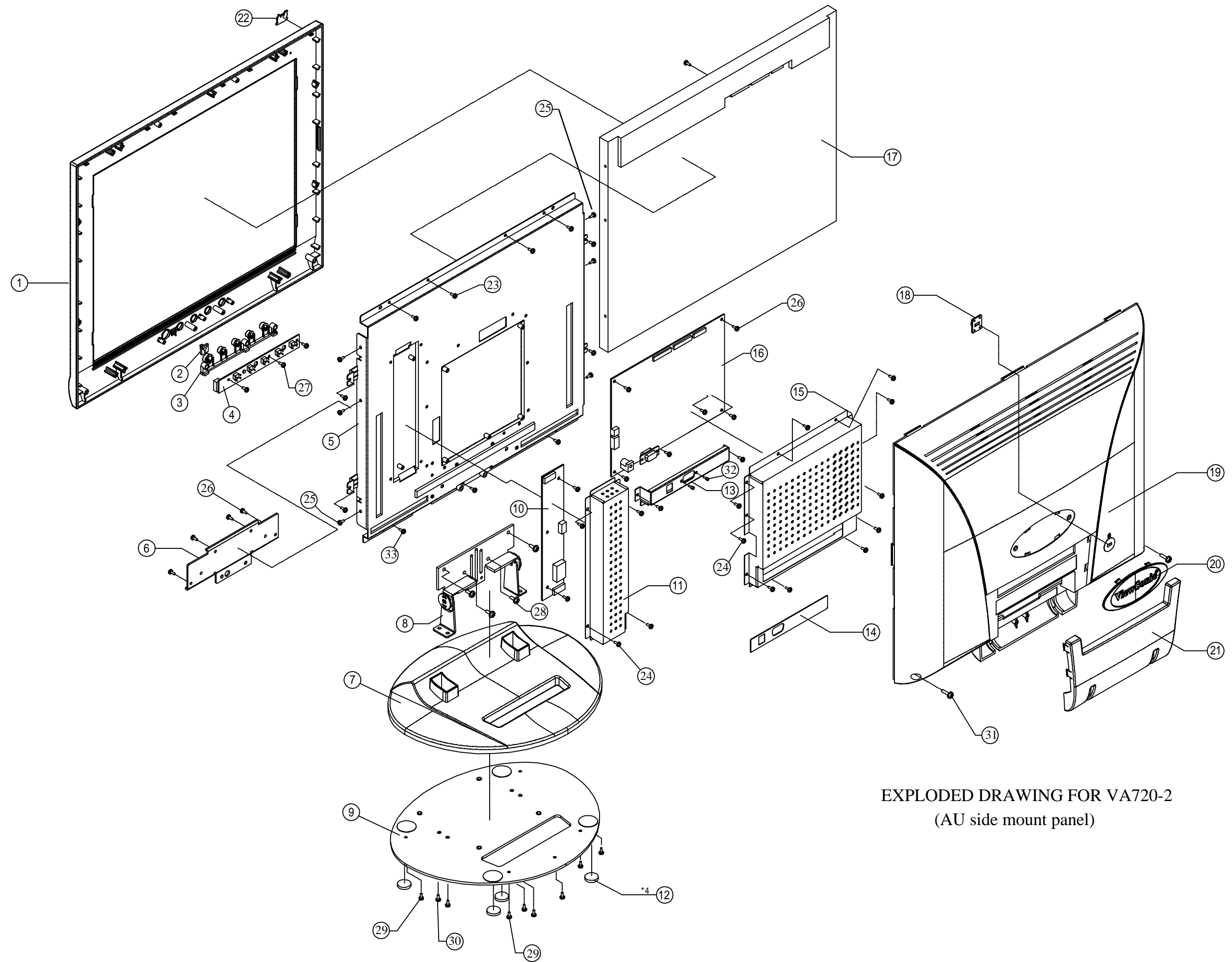
MODEL: DPWBN5415T8---A(SW BOARD)

1	#N/A	QPWB-5415T8---C	S/W BARE BOARD	S/W BARE BOARD	1PCS
2	M-SW-0815-0212	QSW-A1129D8----	SW1,2,3,4,5	SW1,2,3,4,5	5PCS
3	#N/A	VSPSPR-39MVWF--	LED1	LED1	1PCS
4	#N/A	VCNCP0908REJST-	J1	J1	1PCS
5	M-WR-0828-0471	QJUM-1045D8050-	J2,3,4	J2,3,4	3PCS
6	M-WR-0828-0473	QJUM-1045D8100-	J5	J5	1PCS
7	B-SB-0221-0505	TLAB-3547T8----	PWB LABEL	PWB LABEL	1PCS

MODEL: CPWBGA720T8ACEB

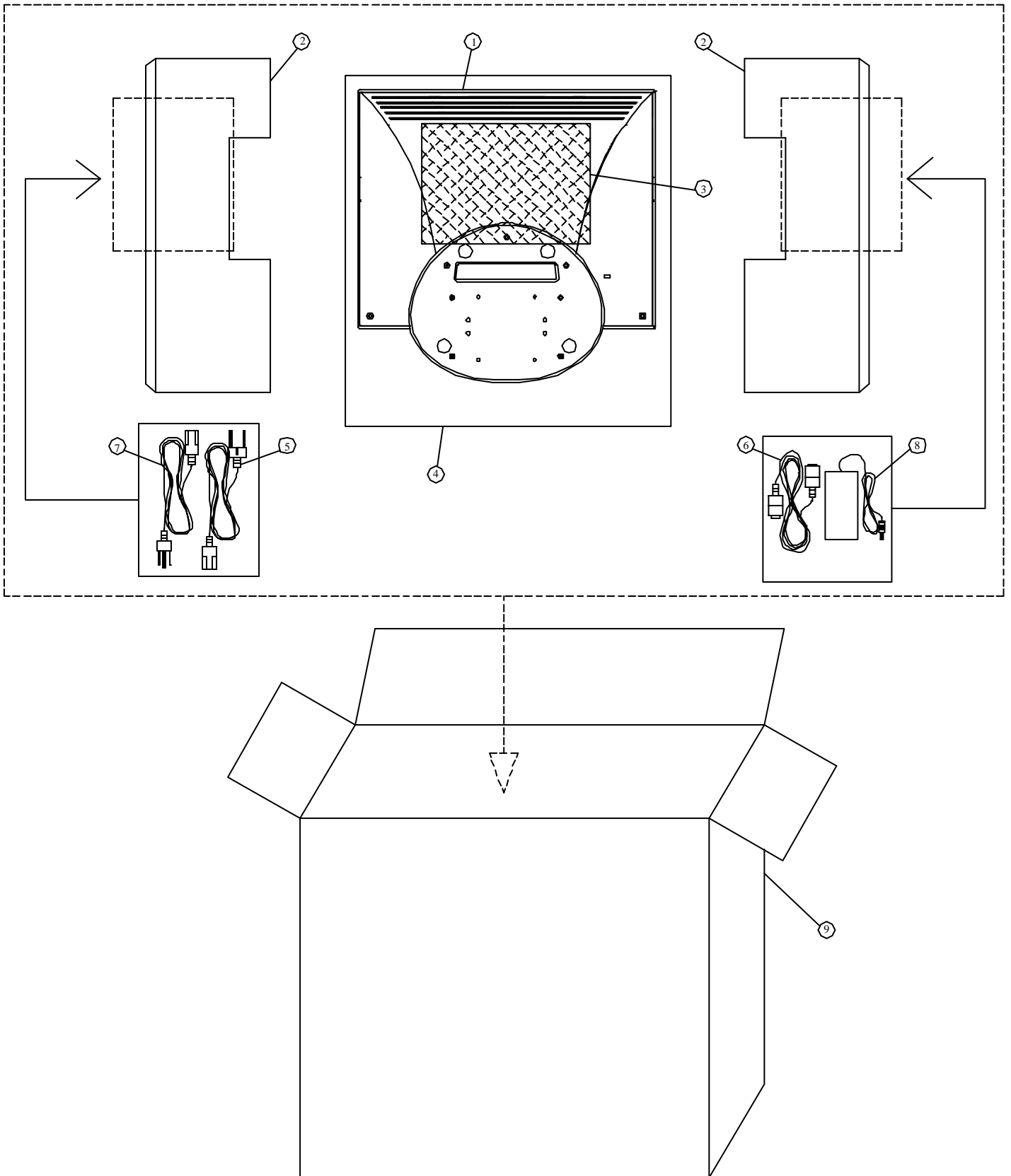
1	M-LCD-0826-0137	VVLM170EN05--N-	6BIT A MINUS PANEL(17"AU)	6BIT A MINUS PANEL(17"AU)	1SET
2	B-SB-0221-0483	RUNTP5469T8----	FOR AU 17" SIDE MOUNT INVERTER	FOR AU 17" SIDE MOUNT INVERTER	1PCS
3	B-IF-0222-0047	DPWBN5493T8---A	I/F BOARD (FOR GENESS)	I/F BOARD (FOR GENESS)	1SET
4	A-VC-0101-0360	QCODS1676T8----	LVDS CABLE	LVDS CABLE	1PCS
5	#N/A	DDSKC0025T8---C	CD DRIVER	CD DRIVER	1PCS
6	M-BK-0805-0010	LANGF2086D8---D	MAIN BRACKET	MAIN BRACKET	1PCS
7	M-SCW-0824-0809	LX-BZ1559N8----	PANEL FIX*6,	PANEL FIX*6,	6PCS
8	M-MS-0808-8944	PSLDM6500D8----	SHIELD CASE FOR I/F BOARD	SHIELD CASE FOR I/F BOARD	1PCS
9	M-BK-0805-0053	LANGF2066D8----	BRACKET(MAIN-SUB)	BRACKET(MAIN-SUB)	1PCS
10	M-SCW-0824-6733	XBMSD30P06000--	FOR LANGF2066/2086C*4,GROUND*1	FOR LANGF2066/2086C*4,GROUND*1	5PCS
11	M-SCW-0824-6740	XBMSD30P04000--	I/F SHIELD CASE	I/F SHIELD CASE	9PCS
12	#N/A	ZTAPEL025S030--	TAPE 50MM*1,60MM*1,70MM*1,200MM*2	TAPE 50MM*1,60MM*1,70MM*1,200MM*2	580MM
13	#N/A	ZTAPEY020W066U-	TAPE FOR CORE FIXING	TAPE FOR CORE FIXING	70MM
14	#N/A	PRDAA6380D8----	HEATSINK	HEATSINK	1PCS

# 8. Exploded Diagram And Spare Parts List



EXPLODED DRAWING FOR VA720-2  
(AU side mount panel)

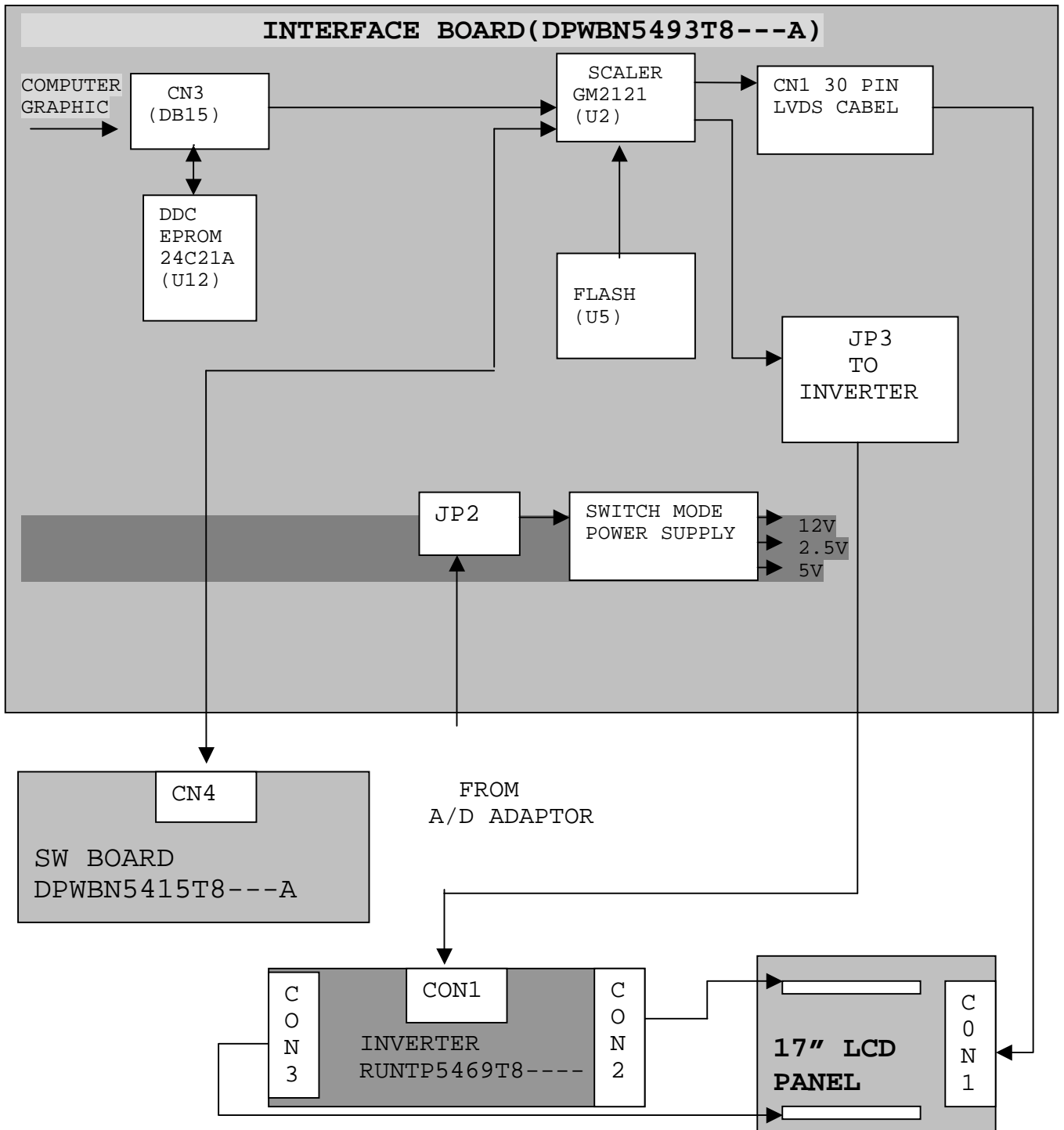
# PACKING METHOD



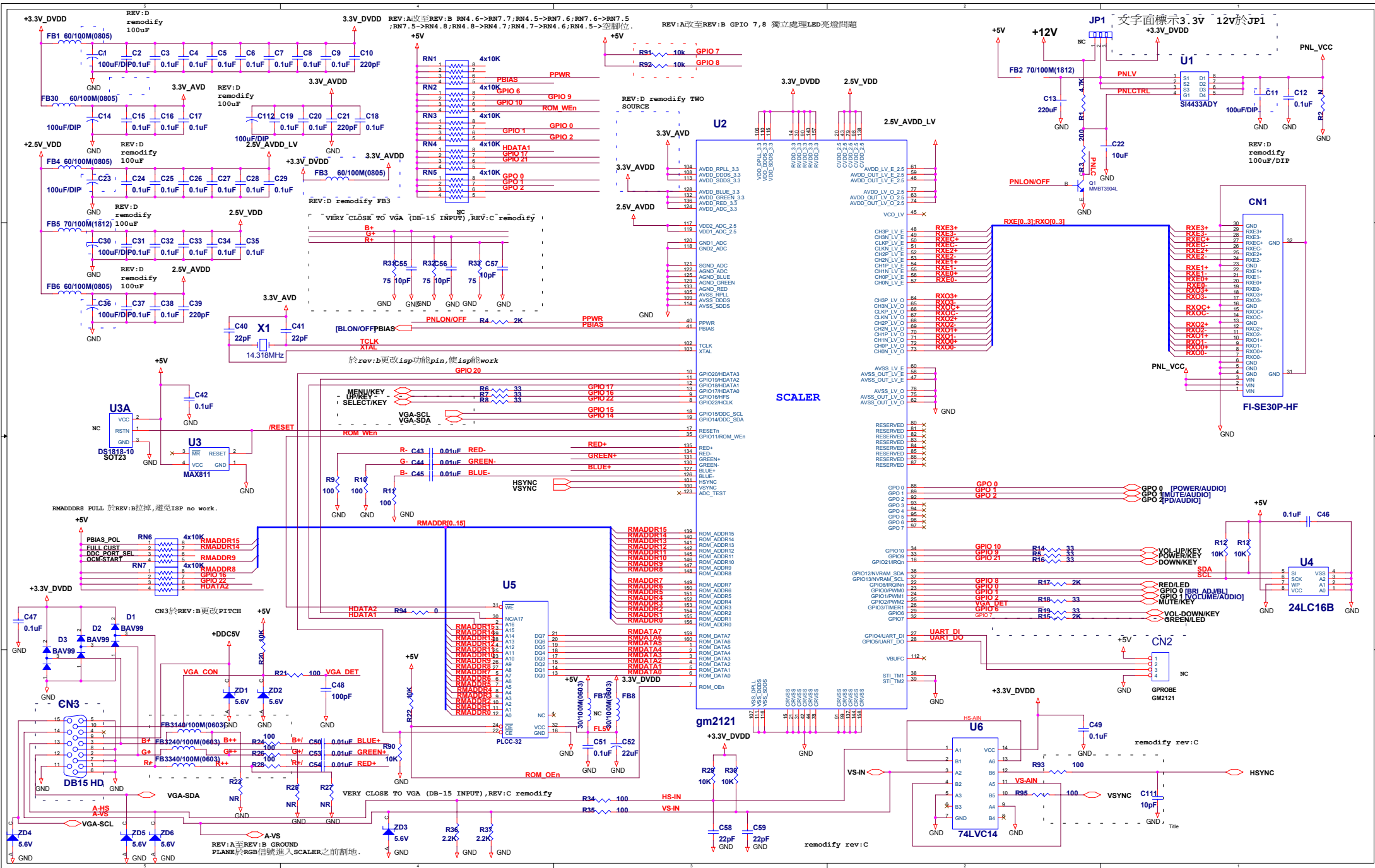
## VA720-2 Exploded Parts List

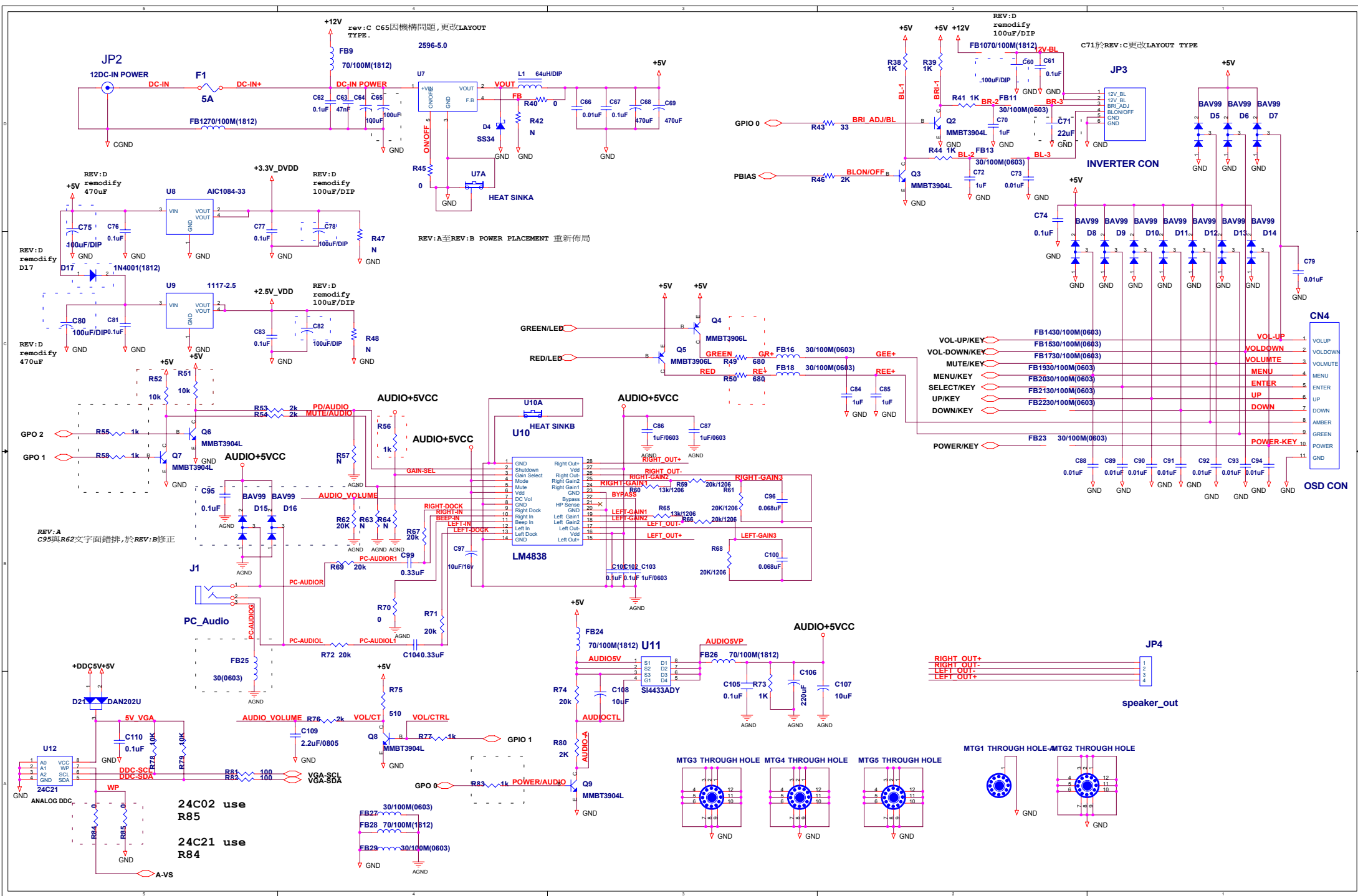
Item	ViewSonic P/N	Ref. P/N	Description	Q'TY
1	C-FP-0301-0912	GCABA2301D8F--B	FRONT COVER	1
2	M-MS-0808-9174	HDECP1929D8F---	LENS	1
3	PL-NB-0707-0170	JKNBP2309D8F---	FUNCTION KNOB	1
4	B-IF-0222-0046	DPWBN5415T8---A	FUNCTION PCB	1
5	M-BK-0805-0062	LANGF2086D8---E	MAIN BRACKET	1
6	M-BK-0805-0053	LANGF2066D8----	BRACKET(MAIN-SUB)	1
7	C-BS-0303-0299	GSTN-2870D8F--A	BASE	1
8	M-MS-0808-8124	MHNGM0019D8----	HINGE	1
9	M-MS-0808-8901	LANGF2052D8---A	BASE PLATE	1
10	B-SB-0221-0483	RUNTP5469T8----	INVERTER PCB	1
11	M-MS-0808-8128	PSLDM6443D8---	SHIELD CASE(INVERTER BOARD)	1
12	M-MS-0808-7678	GLEGG1460D8F---	RUBBER LEG	4
13	M-MS-0808-8122	LANGF2051D8----	D-SUB BRACKET	1
14	M-MS-0808-9205	PISLV0205D8---B	DECORATION PLATE	1
15	M-MS-0808-8944	PSLDM6500D8----	SHIELD CASE(I/F BOARD)	1
16	B-IF-0222-0047	DPWBN5493T8---A	I/F BOARD	1
17	M-LCD-0826-0137	VVLM170EN05--N-	AU PANEL	1
18	M-BK-0805-0012	LANGF2063D8---A	KENSINGTON BRACKET	1
19	C-BC-0302-0414	GCABB1734D8F--A	REAR COVER	1
20	M-CV-0830-2476	GCOVD2390D8F---	LOGO COVER	1
21	M-CV-0830-2300	GCOVD2402D8F--A	HINGE COVER	1
22	M-MS-0808-6478	HBDGA1724D8----	BIRD PLATE	1
23	M-SCW-0824-6804	XEASD30P06000--	SCREW(BRAZIER HEAD-3*6-Bronze)	11
24	M-SCW-0824-6740	XBMSD30P04000--	SCREW(ROUND HEAD-M3*4-Bronze)	14
25	M-SCW-0824-0809	LX-BZ1559N8----	SPECIAL SCREW M3*4 Nickle	6
26	M-SCW-0824-6733	XBMSD30P06000--	SCREW(ROUND HEAD-M3*6-Bronze)	14
27	M-SCW-0824-6738	XEPSN26P06000--	SCREW(PAN HEAD-2.6*6-Nickle)	3
28	M-SCW-0824-6739	XBMSD40P08TV0--	SCREW(ROUND HEAD-Washer-M4*8-Bronze)	4
29	M-SCW-0824-6737	XESSD30P06000--	SCREW(FLAT HEAD-3*6-Bronze)	5
30	M-SCW-0824-6736	XBSSD40P12000--	SCREW(FLAT HEAD-4*12-Bronze)	4
31	M-SCW-0824-6734	XEPSB40P12000--	SCREW(PAN HEAD-4*12-Black)	2
32	M-MS-0808-5840	LBOSM1069D8----	HEX-ROD FOR VGA CONNECTOR	2
33	M-SCW-0824-0810	XEPSD30P08TV0--	SCREW(PAN HEAD-Washer-3*8-Bronze)	1

## 9.BLOCK DIAGRAM



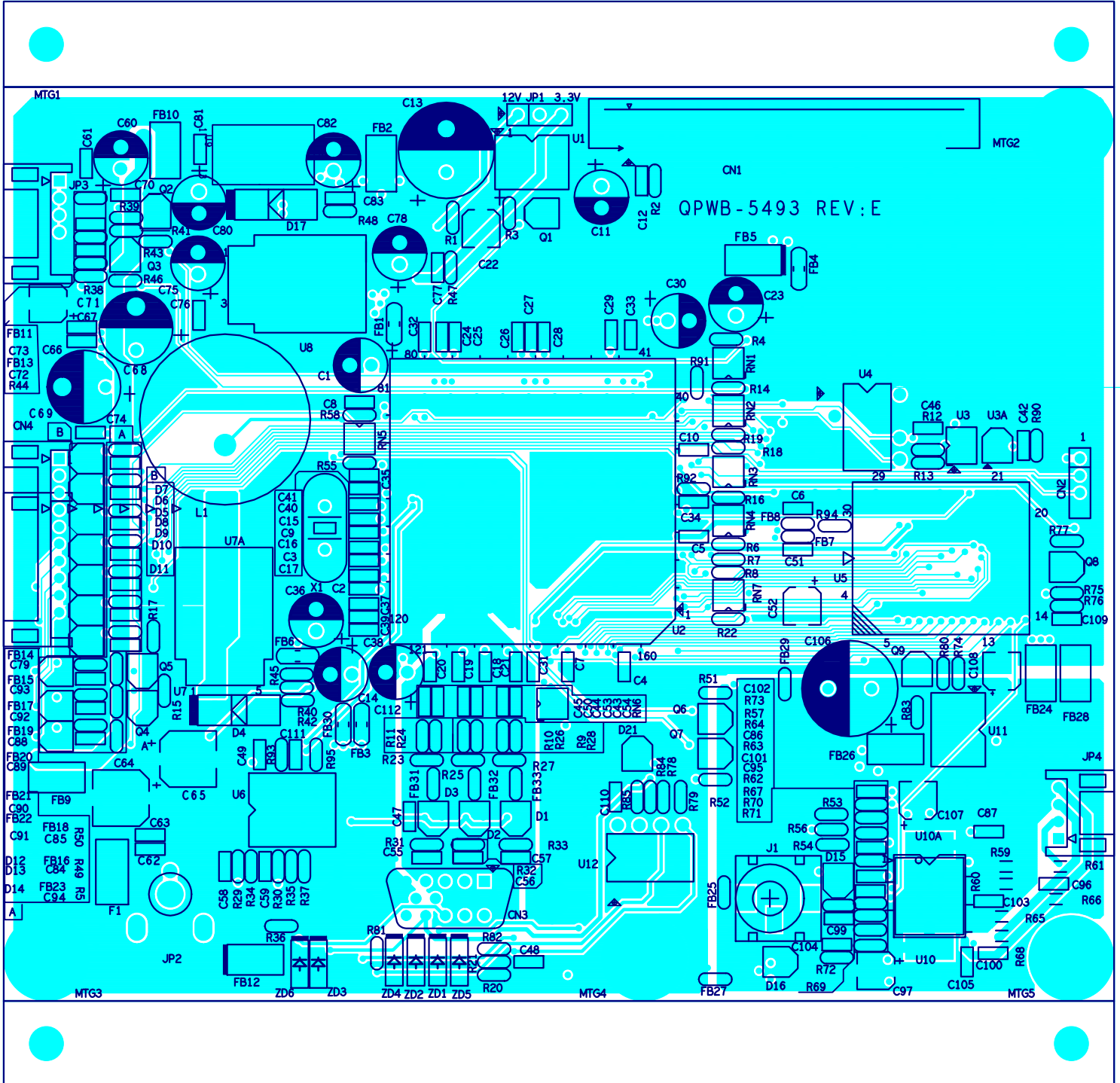
# 10.SCHEMATIC DIAGRAMS



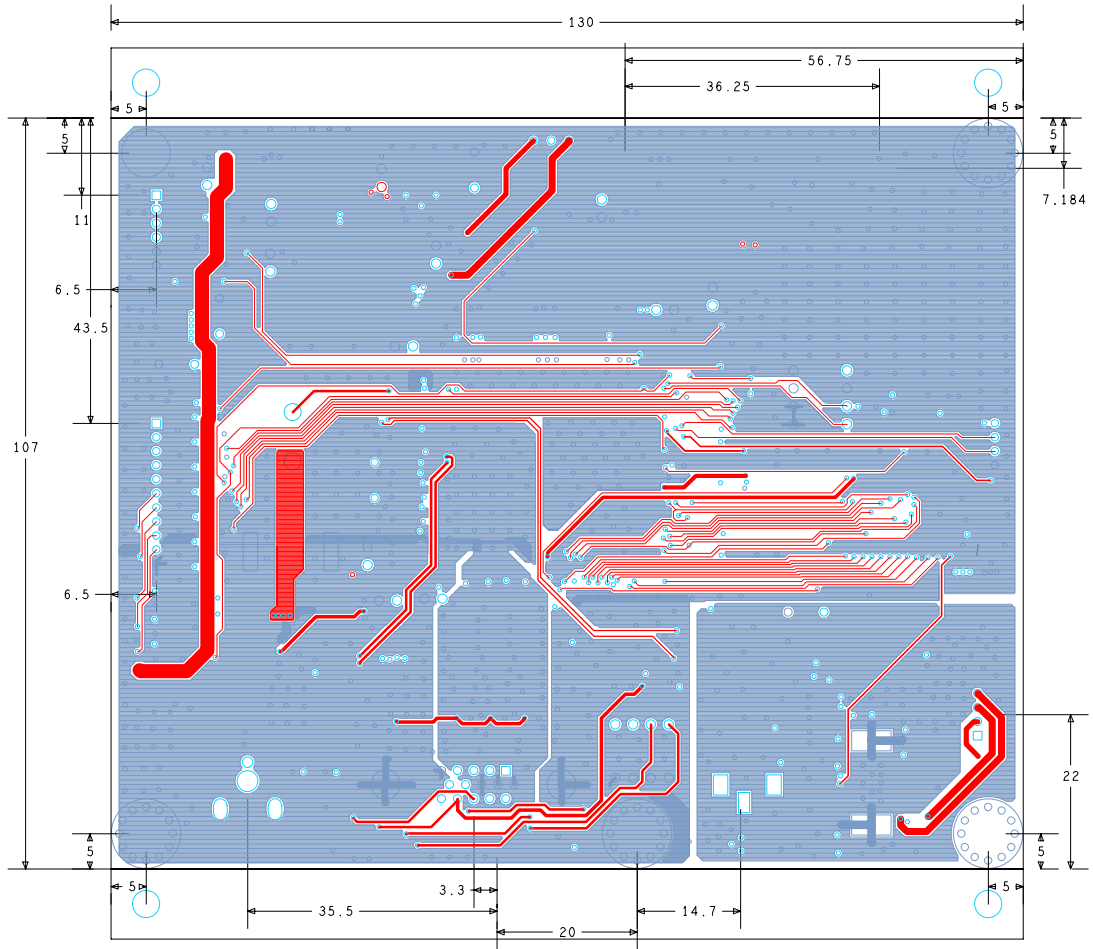


# 11.PCB LAYOUT

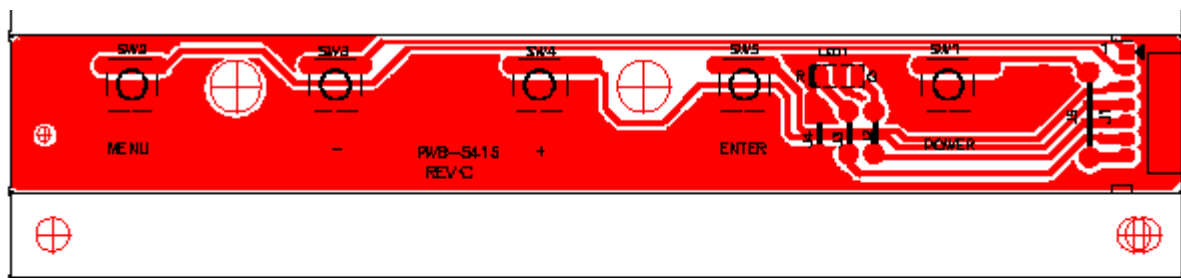
## MIN BOARD







**SW BOARD**



## *\*Reader's Response\**

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

### Assessment

A. What do you think about the content after reading **VA720-2** Service Manual?

<i>Unit</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
<b>1. Precautions And Safety Notices</b>				
<b>2. Specification</b>				
<b>3. Front Panel Function Control Description</b>				
<b>4. Circuit Description</b>				
<b>5. Adjusting Procedure</b>				
<b>6. Trouble Shooting Flow Chart</b>				
<b>7. Recommended Spare Parts List</b>				
<b>8. Exploded Diagram and Spare Parts List</b>				
<b>9. Block Diagram</b>				
<b>10. Schematic Diagrams</b>				
<b>11. PCB Layout Diagrams</b>				

B. Are you satisfied with the **VA720-2** service manual?

<i>Item</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinion or suggestion about this service manual?

### Reader's basic data:

Name:		Title:	
Company:			
Add:			
Tel:		Fax:	
E-mail:			

After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943. You may also e-mail any suggestions to the Director, Quality Systems & Processes (marc.maupin@viewsonic.com)