Service Manual

ViewSonic VA703b-1

VA703m-1

Model No. VS11280

17” Color TFT LCD Display

(VA703b-1_VA703m-1_SM Rev. 1b Oct. 2006)

ViewSonic 381 Brea Canyon Road, Walnut, California 91789 USA - (800) 888-8583

Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	7/28/2006		Initial Release	Jamie C.
1b	10/24/2006	VS-E060297	Add 2nd panel source (CPT)	Jamie C.

TABLE OF CONTENTS

1. Precautions and Safety Notices

1.1 SAFETY PRECAUTIONS

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

WARNINGS

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

1.2 PRODUCT SAFETY NOTICE

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

1.3 SERVICE NOTES

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

1.4 HANDING AND PLACING METHODS

Correct Methods:	Incorrect Methods:
Only touch the metal frame of the LCD panel or the front cover of the monitor. Do not touch the surface of the polarizer.	Surface of the LCD panel is pressed by fingers and that may cause “Mura.”
	
	
Take out the monitor with cushions	Taking out the monitor by grasping the LCD panel. That may cause “Mura.”
	

Place the monitor on a clean and soft foam pad.	Placing the monitor on foreign objects. That could scratch the surface of the panel or cause “Mura.”
	
Place the monitor on the lap, the panel surface must be upwards.	The panel is placed facedown on the lap. That may cause “Mura.”
	

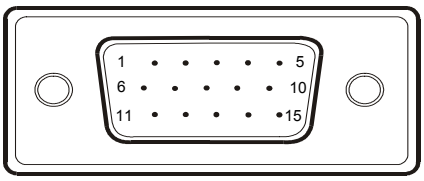
2. Specification

2.1 PRODUCT SPECIFICATIONS

LCD Panel	17.0” TFT
Recommend Resolution	1280 x 1024@60Hz
Pixel Dimension	0.264(H) x 0.264(V)mm
LCD Display Color	16.2M Colors (6+2bit panel)
Viewing Angle	Horizontal: 150 ° Vertical: 135 °
Contrast Ratio	700：1 (Typ.)
Brightness	300 cd/㎡(Typ.)
Response Time	8ms(Typ.)
Active Display Area	337.92mm(H) x 270.336mm(V)
Maximum Pixel Clock	135 MHz
Horizontal Frequency	30 – 82 kHz
Vertical Refresh Rate	50 – 85 Hz.
Temperature	Operating: 0°C to +40°C Storage: -20°C to +60°C
Power Management	Energy Star compliant VESA DPMS compatible <1 W
Power	Input Voltage : 100V~240V Consumption: ON Mode < 35 W (max) POWER SAVING < 2W OFF < 1W

2.2 INTERFACE DESCRIPTION

D-SUB 15 PIN CONNECTOR

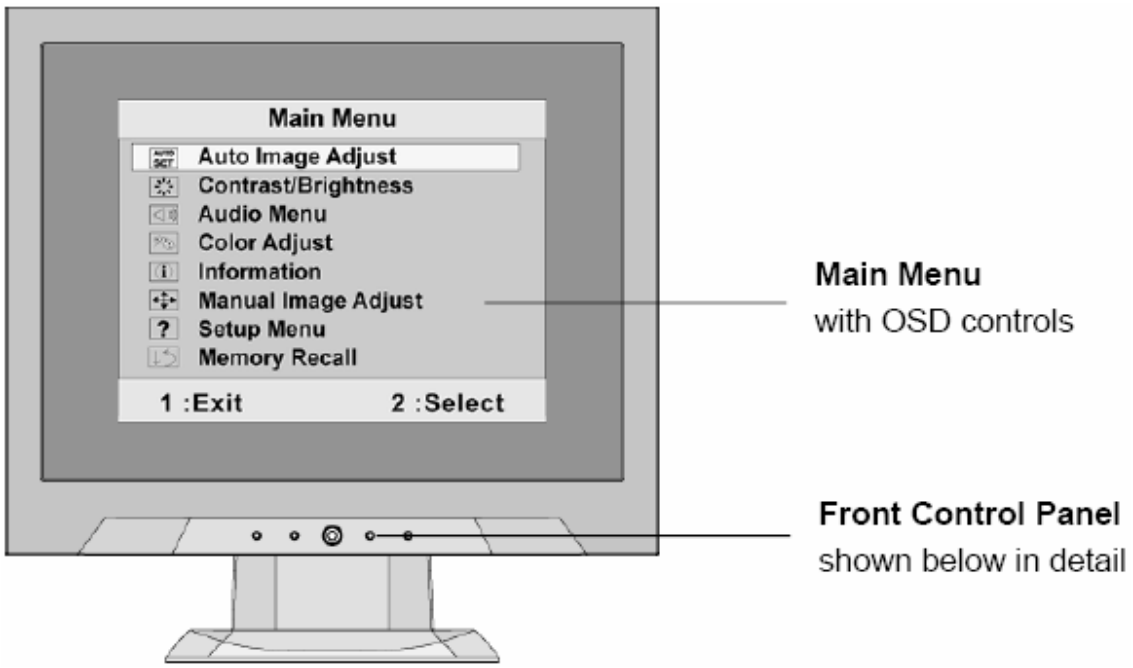


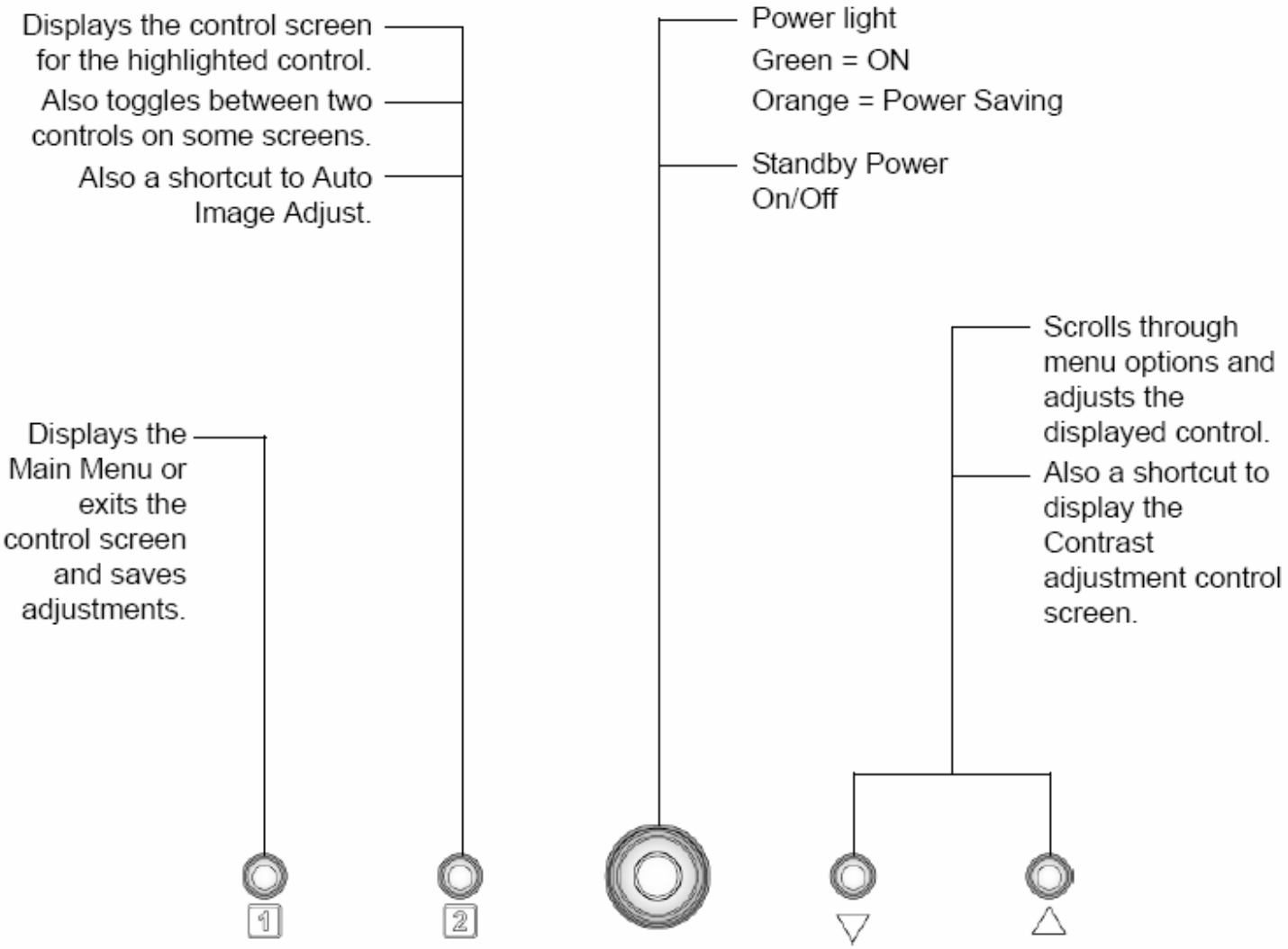
Pin Number	Pin Function
1	Red video input
2	Green video input
3	Blue video input
4	No Connection
5	Ground
6	Red video ground
7	Green video ground
8	Blue video ground
9	+5V
10	H/V sync ground
11	No connection
12	(SDA)
13	Horizontal sync (Composite sync)
14	Vertical sync
15	(SCL)

SIGNAL LEVEL

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

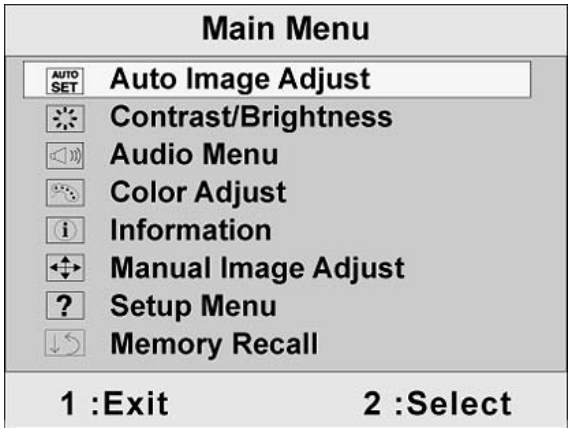
3. Front Panel Function Control Description





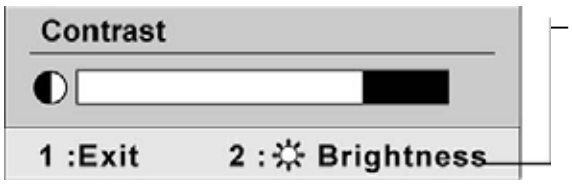
Do the following to adjust the display setting:

1. To display the Main Menu, press button [1].



NOTE: All OSD menus and adjustment screens disappear automatically after about 15 seconds. This is adjustable through the OSD timeout setting in the setup menu.

2. To select a control to adjust, press ▲or ▼ to scroll up or down in the Main Menu.
3. After the desired control is selected, press button [2]. A control screen like the one shown below appears.



The line at the bottom of the screen shows the current functions of buttons 1 and 2: Exit or select the Brightness control.

4. To adjust the control, press the up ▲ or▼ down T buttons.
5. To save the adjustments and exit the menu, press button [1] *twice*.

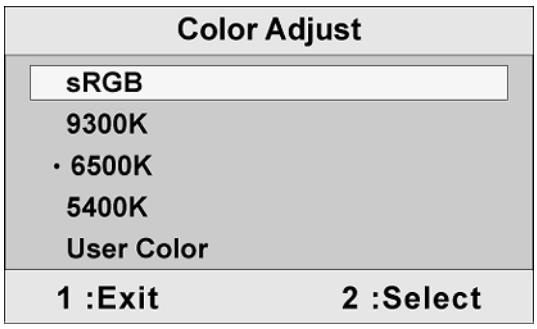
The following tips may help you optimize your display:

- Adjust the computer's graphics card so that it outputs a 1024 x 768 @ 60Hz video signal to the LCD display. (Look for instructions on “changing the refresh rate” in the graphics card's user guide.)
- If necessary, make small adjustments using H. POSITION and V. POSITION until the screen image is completely visible. (The black border around the edge of the screen should barely touch the illuminated “active area” of the LCD display.)

Main Menu Controls

Adjust the menu items shown below by using the up ▲ and down ▼ buttons.

Control	Explanation
AUTO SET	**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. **NOTE:** Auto Image Adjust works with most common video cards. If this function does not work on your LCD display, then lower the video refresh rate to 60 Hz and set the resolution to its pre-set value.
	Contrast adjusts the difference between the image background (black level) and the foreground (white level).
	Brightness adjusts background black level of the screen image.
	Color Adjust provides several color adjustment modes, including preset color temperatures and a User Color mode which allows independent adjustment of red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin).



sRGB-This is quickly becoming the industry standard for color management, with support being included in many of the latest applications. Enabling this setting allows the LCD display to more accurately display colors the way they were originally intended. Enabling the sRGB setting will cause the Contrast and Brightness adjustments to be disabled.

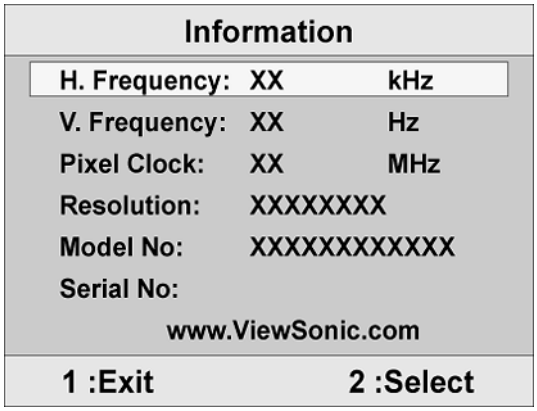
9300K-Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

6500K-Adds red to the screen image for warmer white and richer red.

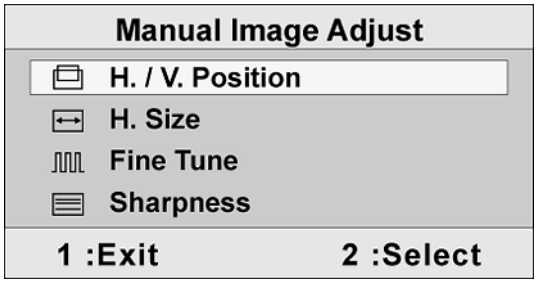
5400K-Adds green to the screen image for a darker color.

User Color Individual adjustments for red (R), green (G), and blue (B).
1. To select color (R, G or B) press button [2].
2. To adjust selected color, press▲and▼.
Important: If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.

Information displays the timing mode (video signal input) coming from the graphics card in the computer, the LCD model number, the serial number, and the ViewSonic® website URL. See your graphics card's user guide for instructions on changing the resolution and refresh rate (vertical frequency).
NOTE: VESA 1280 x 1024 @ 60Hz (recommended) means that the resolution is 1280 x 1024 and the refresh rate is 60 Hertz.

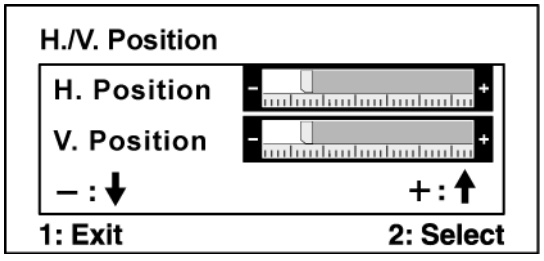


Manual Image Adjust displays the Manual Image Adjust menu.



H. Size (Horizontal Size) adjusts the width of the screen image.

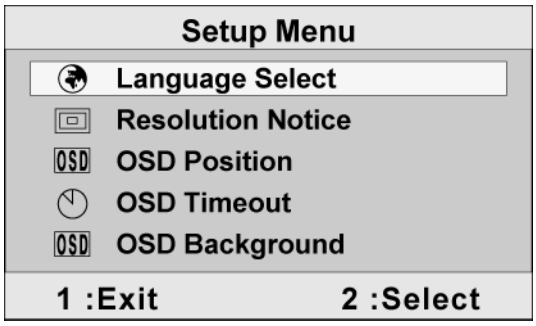
H./V. Position (Horizontal/Vertical Position) moves the screen image left or right and up or down.



Fine Tune sharpens the focus by aligning text and/or graphics with pixel boundaries.
NOTE: Try Auto Image Adjust first.

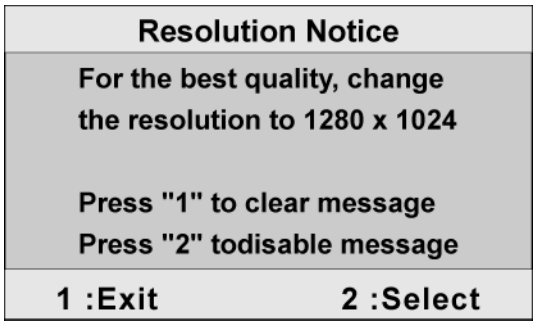
Sharpness adjusts the clarity and focus of the screen image.

Setup Menu displays the menu shown below:



Language Select allows the user to choose the language used in the menus and control screens.

Resolution Notice displays the Resolution Notice menu shown below.



Resolution Notice advises the optimal resolution to use.

OSD Position allows the user to move the OSD menus and control screens.

OSD Timeout sets the length of time the OSD screen is displayed. For example, with a “15 second” setting, if a control is not pushed within 15 seconds, the display screen disappears.

OSD Background allows the user to turn the OSD background On or Off.

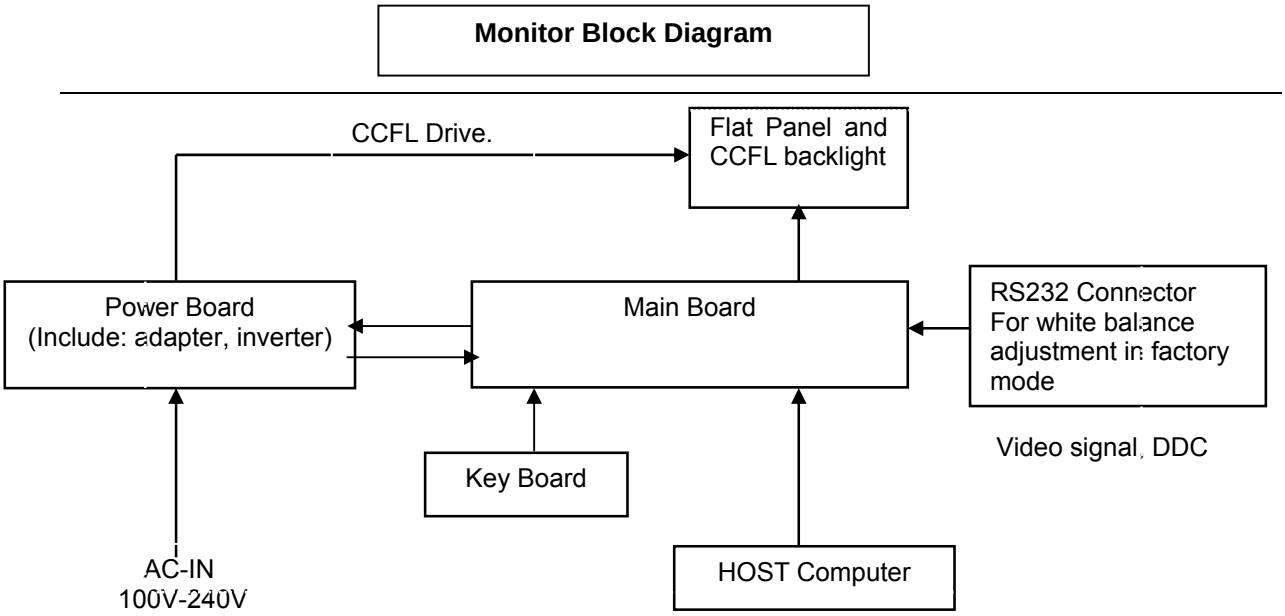
Memory Recall returns the adjustments back to factory settings if the display is operating in a factory Preset Timing Mode listed in the Specifications of this manual.
Exception: This control does not affect changes made with the User Color control, Language Select or Power Lock setting.

SHORT CUTS FUNCTION FROM THE BUTTONS

[1]	Main Menu
[2]	Auto Image Adjust
[▼] or [▲]	To immediately activate Contrast menu. It should be change to Brightness OSD by push button [2]
[▼] + [▲]	recall both of Contrast and Brightness to default
[1] + [2]	toggle 720x400 and 640x400 mode when input 720x400 or 640x400 mode
[1] + [▼] + [▲] (keep pushing 5 sec)	White Balance (Not shown on user's guide)
[1] + [▼]	Power Lock
[1] + [▲]	OSD Lock
Remark : All the short cuts function are only available while OSD off	

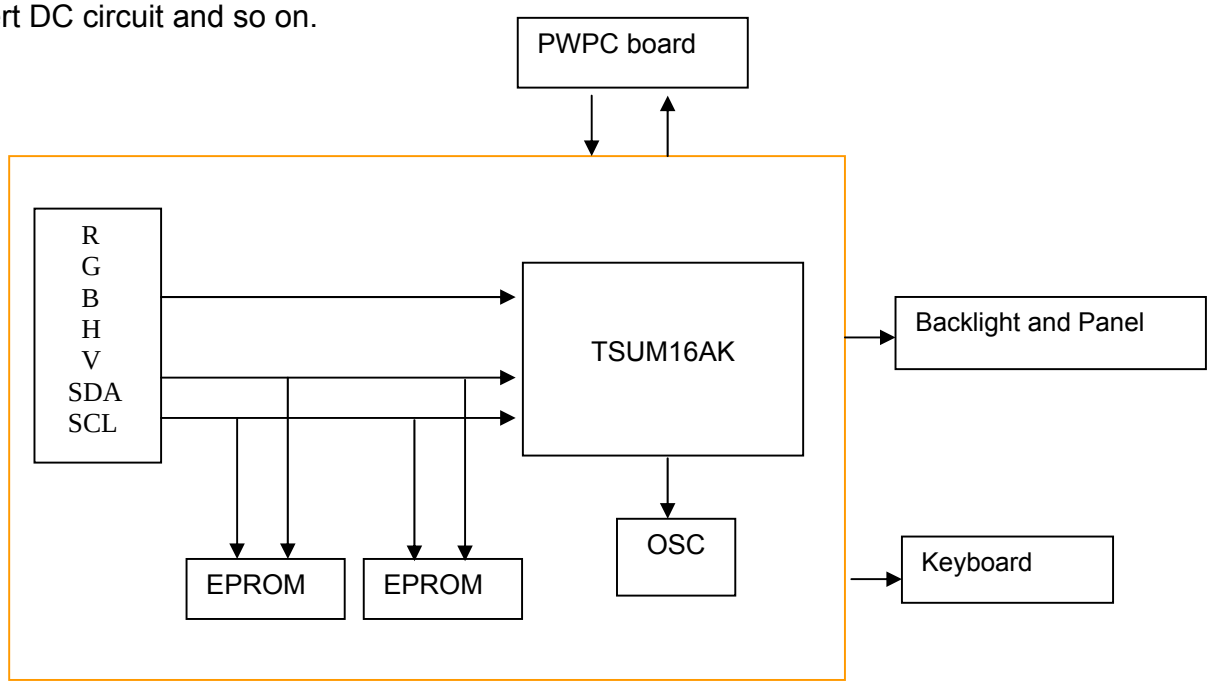
4.1 LCD MONITOR DESCRIPTION

The LCD MONITOR will contain a Main Board, an Power Board, Key Board which house the flat panel control logic, brightness control logic and DDC.



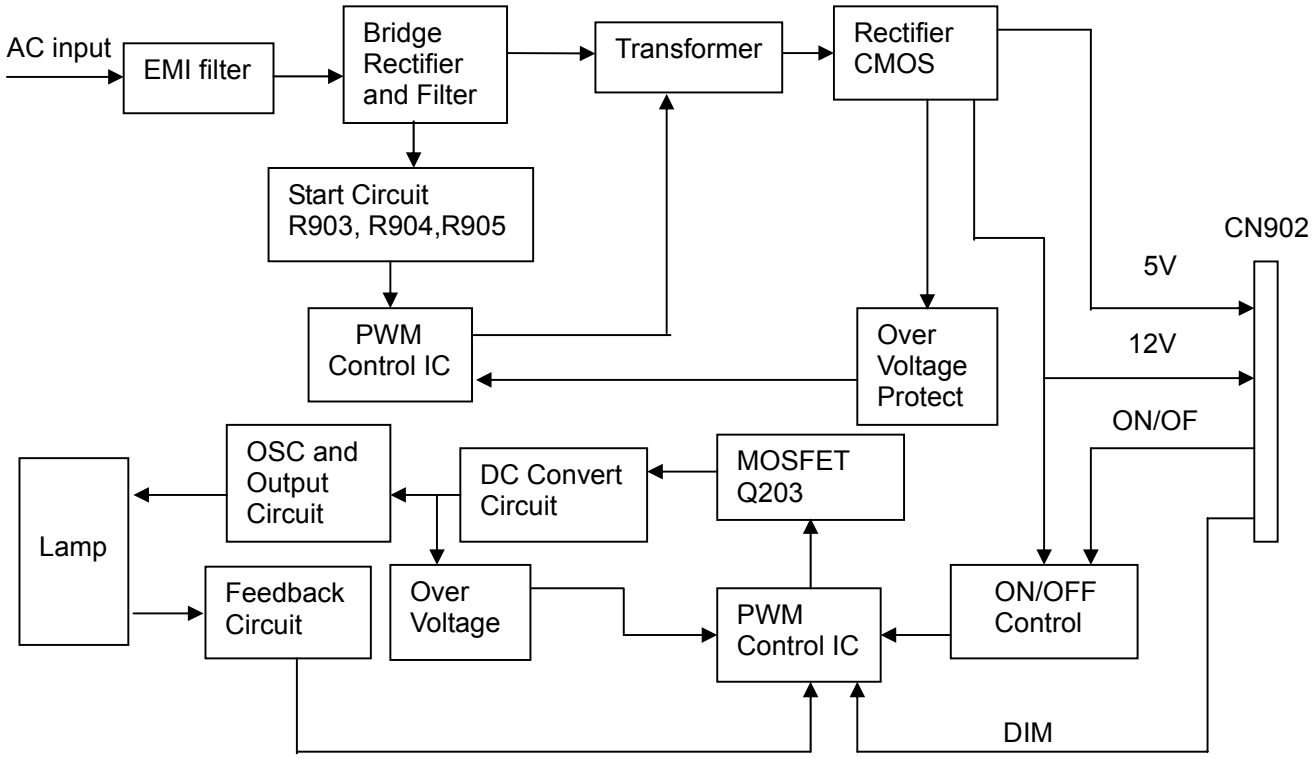
4.2 MAIN BOARD BLOCK FUNCTION DESCRIPTION

The main board contains panel control logic, brightness control logic, DDC and DC convert DC circuit and so on.



4.3 PWPC BOARD BLOCK FUNCTION DESCRIPTION

PWPC board combines to adapter and inverter, Adapter which commonly consists of bridge rectifier and filter, start circuit, PWM control circuit, protection circuits and convert to 12V, 5V DC voltage by input 90V-240V AC voltage that provide power supply for each chips in the main board and inverter. Inverter is DC TO AC circuit. It changes the 12v DC of power supply to about 600-800v AC that drives the backlight. It mostly consists of starting circuit, PWM controller, DC changing circuit, LC surging circuit, output circuit and protection circuit etc.



4.4 INTRODUCTION OF IC

TSUM16AK(U401): integrate ADC, OSD, SCALER, MCU, LVDS, convert analog RGB into digital and room and shrink scaling output to LCD panel.

PIN Function:

Pin	Symbol	Description
70	SDO	SPI flash serial data output; Input w/5V-tolerant
71	CSZ	SPI flash chip select; output
72	SCK	SPI flash serial select; output
73	SDI	SPI flash serial data input; output
65	DDCA_SDA/RS232_TX	DDC data for analog interface; 4mA driving strength/UART transmitter/GPIO; I/O w/5V-tolrant
66	DDCA_SDA/RS232_RX	DDC data for analog interface/UART transmitter/GPIO; Input w/5V-tolrant
19	RST	Chip reset; High reset; Input w/5V-tolerant
22	RSTN	Chip reset; Low reset; Input w/5W-toerant
11	VCTRL	Regulator control; Output
63	HSYNCO	Analog HSYNC input
64	VSYNCO	Analog VSYNC input
62	REFP	Internal ADC top de-coupling pin
61	REFM	Internal ADC bottom de-coupling pin
51	REXT	External resistor 390 ohm to AVDD__ADC
21	PWM1	PWM1; 4mA driving strength; Output
29	PWM0	PWM0; 4mA driving strength; Output
4	BYPASS	For External Bypass Capacitor
32	XIN	Xin; Crystal Oscillator Input
33	XOUT	Xout; Crystal Oscillator Output
44、50、60	AVDD__ADC	ADC Power 3.3V
52	AVDD__PLL	PLL Power 3.3V
34	AVDD__MPLL	MPLL Power 3.3V
14、67、95、103、115	VDDP	Digital Output Power 3.3V
12、68、97、117	VDDC	Digital Core Power 1.8V

AIC1084-33PM (U702): DC power convert, used to 5v convert 3.3v.

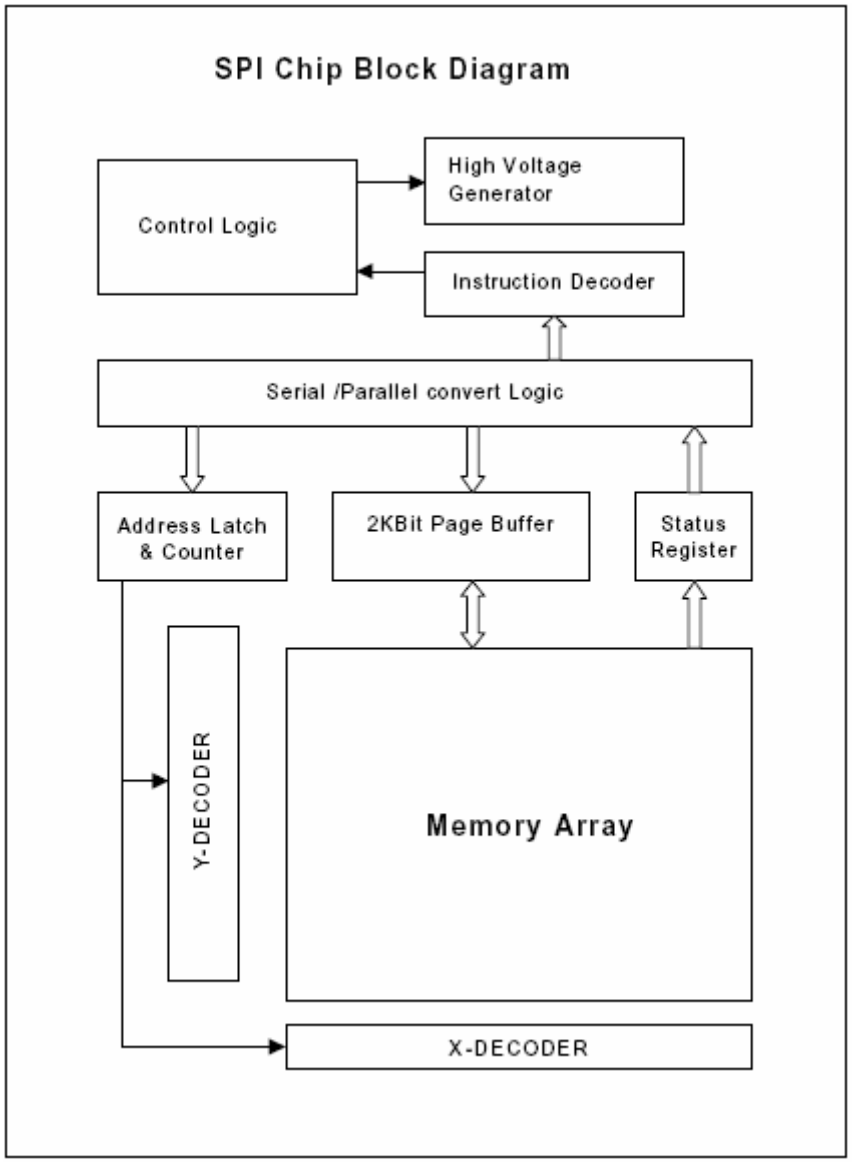
LT1117-18(U701): DC power convert, used to 5v convert 3.3v.

PM25LV010-25SCE (U402): The PM25LV010 are 512 Kbit/1 Mbits 3.0 Volt-only serial Flash memories. These devices are designed to use a single low voltage, ranging from 2.7 Volt to 3.6 Volt for 25MHz or from 3.0 Volt to 3.6 Volt for 33MHz to perform read, erase and program operations. The devices can be programmed in standard EPROM programmers as well.

PIN Descriptions:

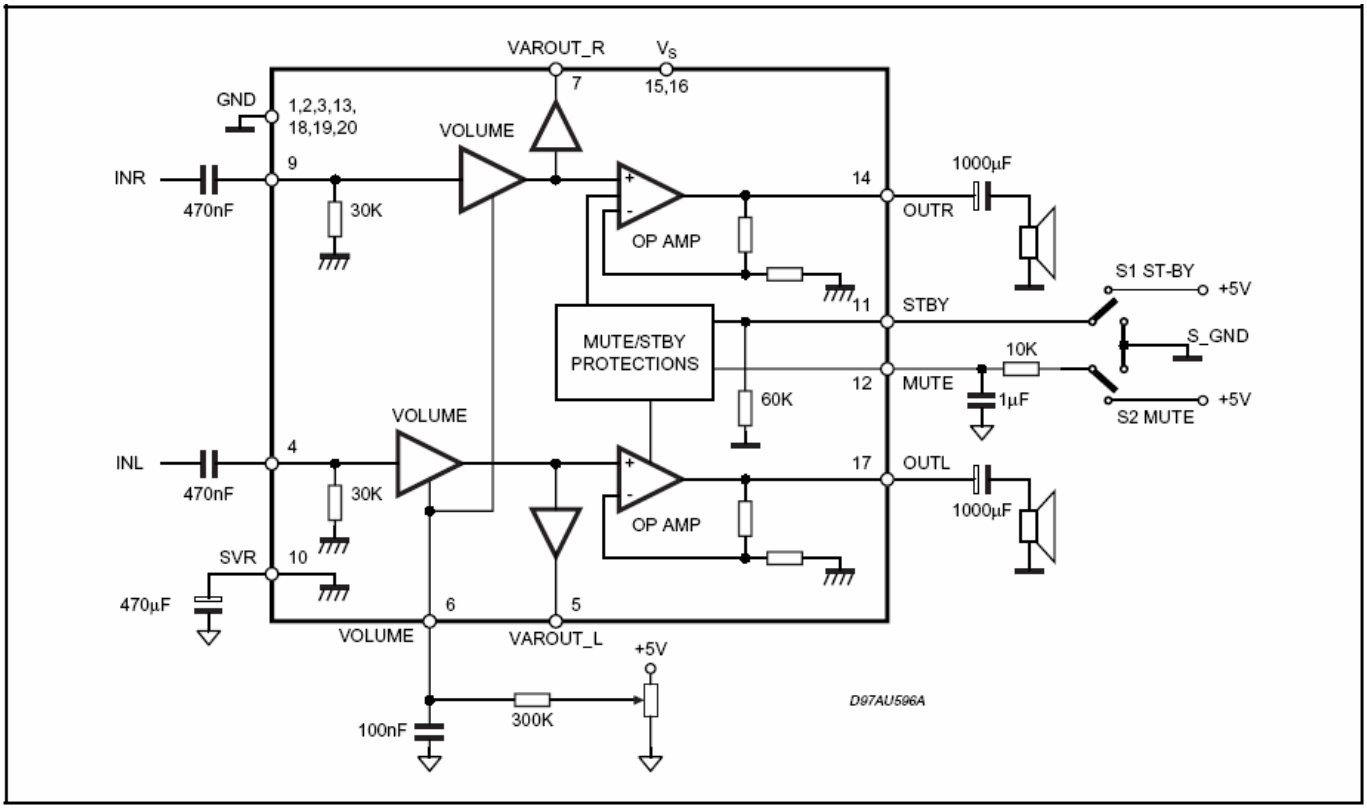
Symbol	Type	Description
CE#	INPUT	Chip Enable: CE# goes low activates the device's internal circuitries for device operation. CE# goes high deselects the device and switches into standby mode to reduce the power consumption. When the device is not selected, data will not be accepted via the serial input pin (SI), and the serial output pin (SO) will remain in a high impedance state.
SCK	INPUT	Serial Data Clock
SI	INPUT	Serial Data Input
SO	OUTPUT	Serial Data Output
GND		Ground
Vcc		Device Power Supply
WP#	INPUT	Write Protect: When the WP# pin brought to low and WPEN bit is "1", all write operations to the status register are inhibited.
HOLD#	INPUT	Hold: Pause serial communication with the master device without resetting the serial sequence.

Circuit Diagram

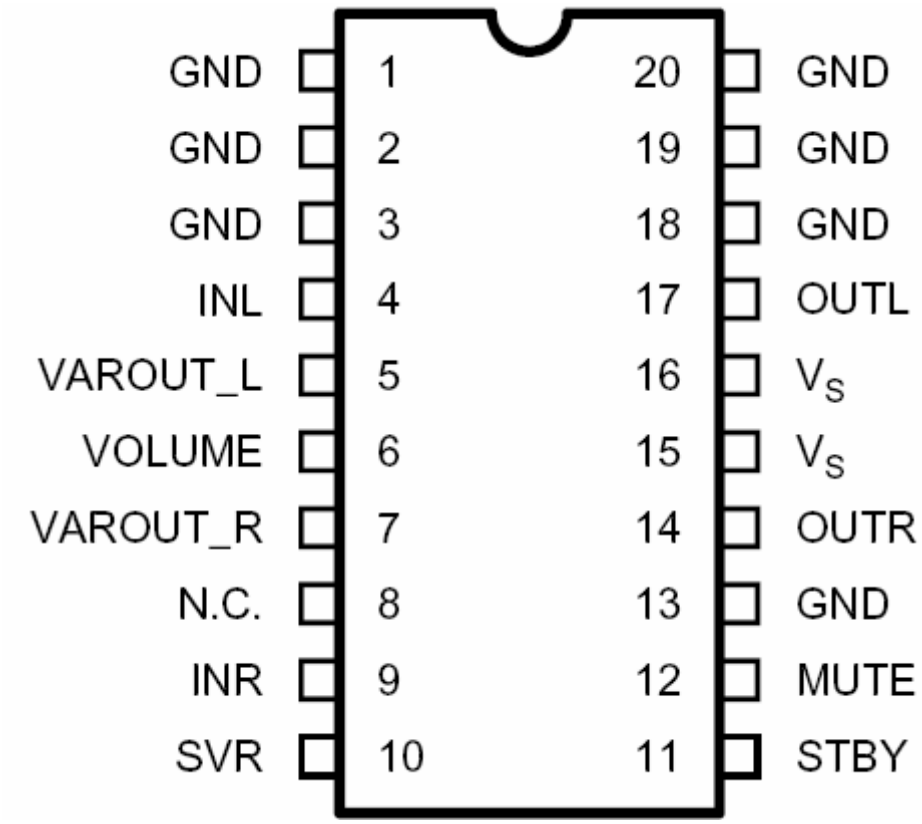


TDA7496L(U201): The TDA7496L is a stereo 2W+2W class AB power amplifier, specially designed for high quality sound, TV and Monitor applications. Features of the UTC TDA7496L include linear volume control, Stand-by and mute functions. The function of each pin and the inside circuit diagram are as follows**:**

Block Diagram



PIN Function

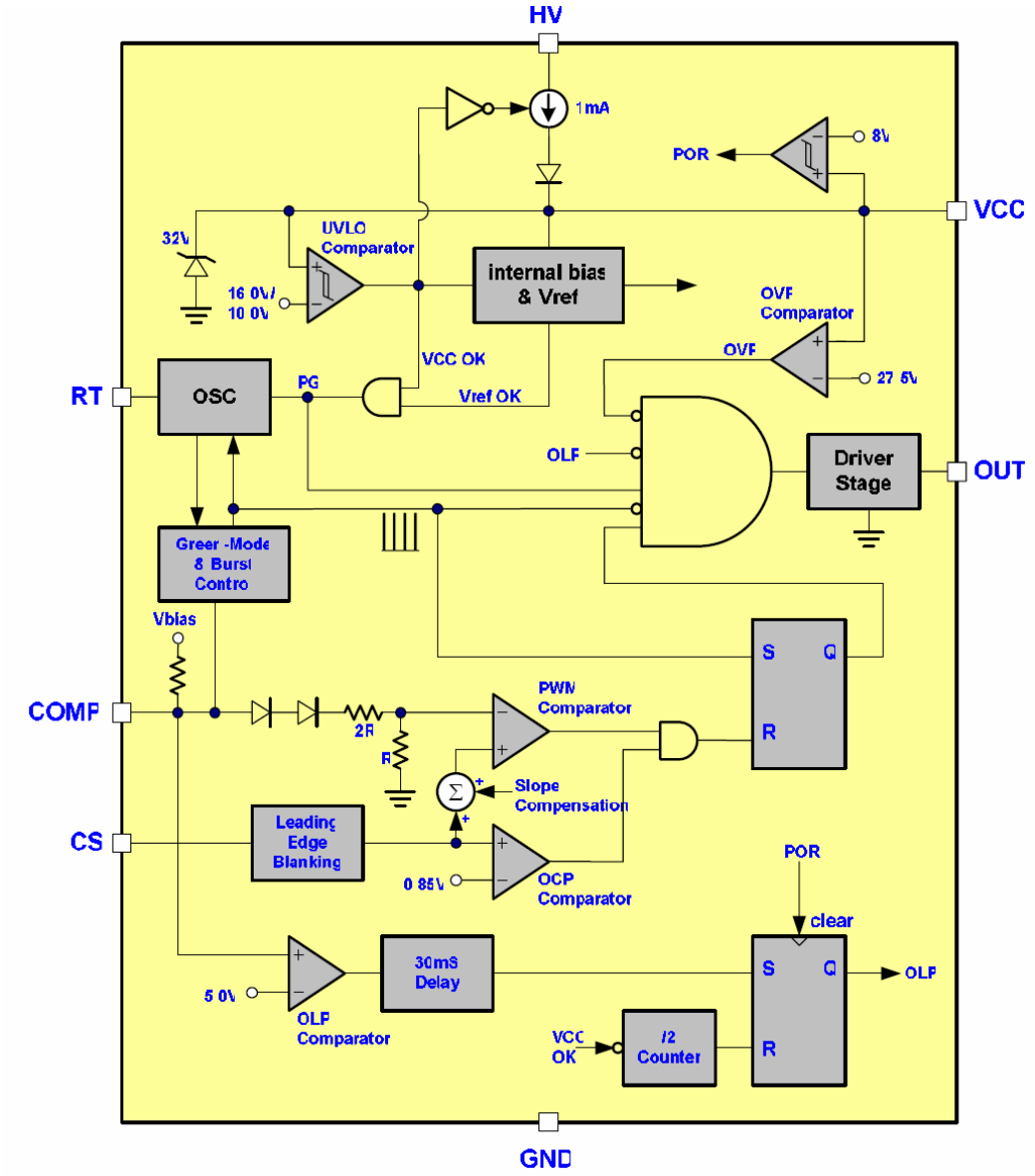


LD7575 PS (IC901): The LD7575 is a current-mode PWM controller with excellent power-saving operation. The embedded over voltage protection, over load protection and the special green-mode control provide the solution for users to design a high performance power circuit easily and etc. The function of each pin and the inside circuit diagram are as follows**:**

PIN Descriptions:

Pin	Name	Function
1	RT	This pin is to program the switching frequency. By connection a resistor to ground to set the switching frequency.
2	COMP	Voltage feedback pin(same as the COMP pin in UC384X), By connecting a photo-coupler to close the control loop and achieve the regulation.
3	CS	Current sense pin, connect to sense the MOSFET current
4	GND	Ground
5	OUT	Gate drive output to drive the external MOSFET
6	VCC	Supply voltage pin
7	NC	Unconnected Pin
8	HV	Connect this pin to positive of bulk capacitor to provide the startup current for the controller, when Vcc voltage trips the UVLO(on), this HV loop will be off to save the power loss on the startup circuit.

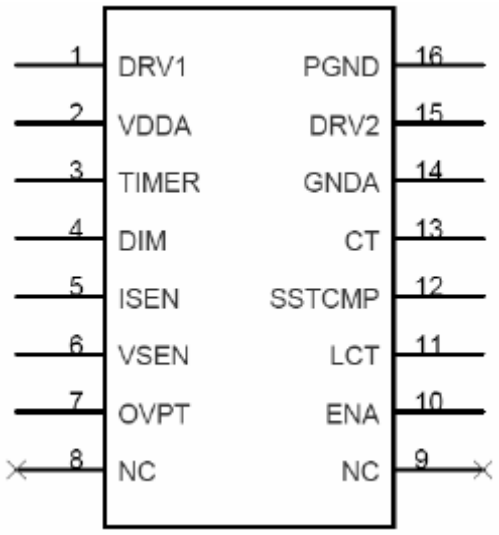
Block Diagram



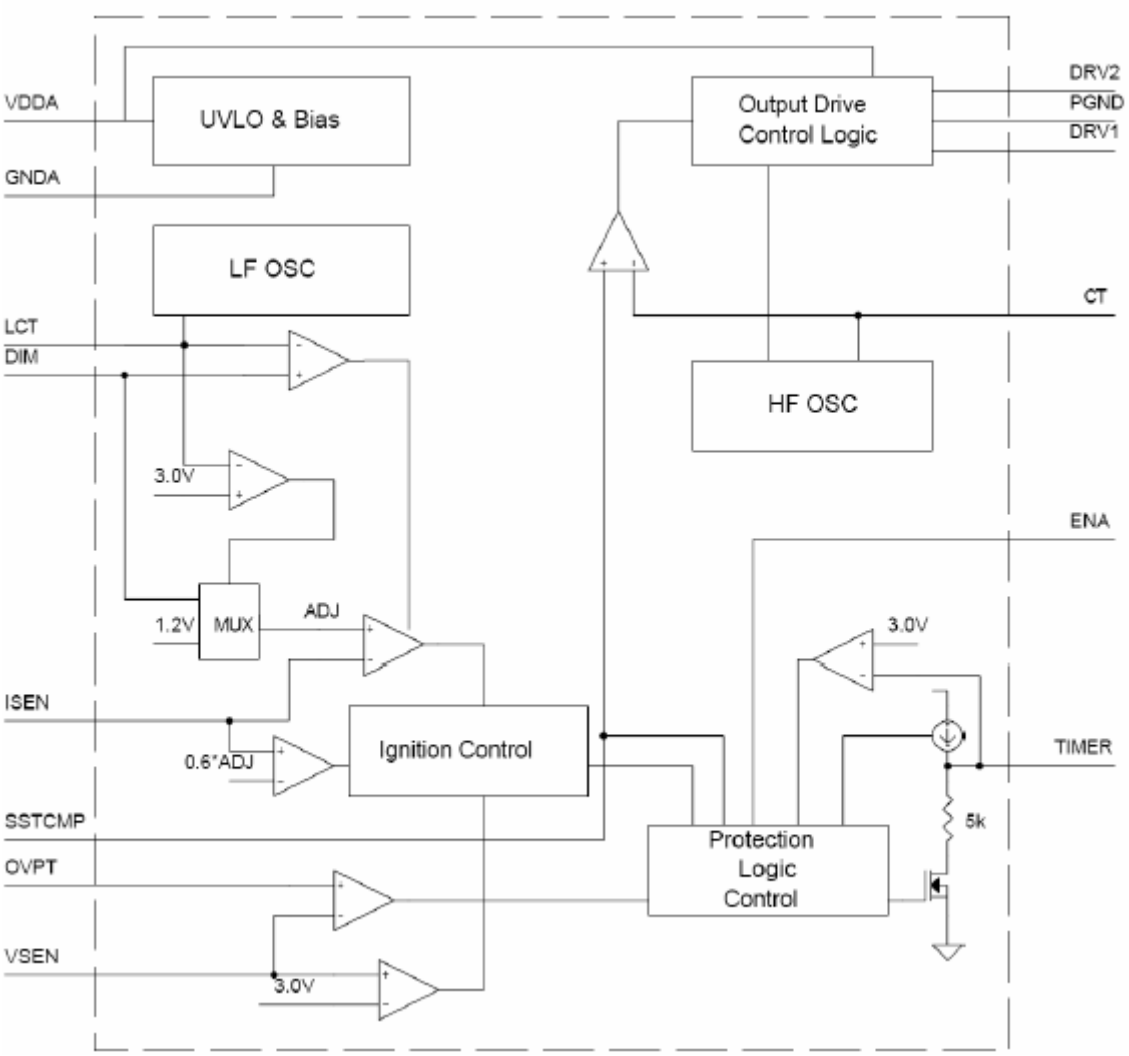
OZ9938GN(IC801): The OZ9938 is high performance, cost-effective CCFL controller designed for driving large-size LCD applications requiring 2 to 6 CCFLs.PWM control, Has such functions as short-voltage protection, Over-voltage protection, over-current protection and etc. The function of each pin and the circuit diagram inside are as follows**:**

PIN Descriptions:

Pin	Names	Description
1	DRV1	Drive output
2	VDDA	Supply voltage input
3	TIMER	Timing capacitor to set striking time and shutdown delay time
4	DIM	Analog dimming or Internal LPWM dimming or external PWM pulse input for dimming function
5	ISEN	Current sense feedback
6	VSEN	Voltage sense feedback
7	OVPT	Over-voltage/ over-current protection threshold setting pin
8	NC	No connection
9	NC	No connection
10	ENA	ON/OFF control of IC
11	LCT	Timing capacitor to set internal PWM dimming frequency and also a pin for analog dimming selection
12	SSECMP	Capacitor for soft start time and loop compensation
13	CT	Timing resistor and capacitor for operation and striking frequency
14	GNDA	Ground for analog signals
15	DRV2	Drive output
16	PGND	Ground for power paths



Block Diagram



5. Adjustment Procedure

5.1 ADJUSTMENT CONDITIONS AND PRECAUTIONS

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

5.2 MAIN ADJUSTMENTS

NO.	FUNCTIONS	DESIGNATION
1.	White Balance	Function Key
2.	Geometry	Function Key

5.3 ALIGNMENT PROCEDURES

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

1. Adjust of White Balance

1.)How to do the Chroma-7120 MEM .Channel setting

A、Reference to chroma 7120 user guide

B、Use " **SC**" key and " **NEXT**" key to modify xyY value and use "**ID**" key to modify the TEXT description Following is the procedure to do white-balance adjust

2.)Setting the color temp. You want

A、MEM.CHANNEL9 (9300 color):
9300 color temp. parameter is Wx = 0.283 ±0.03;Wy = 0.298 ±0.03;
Y = 250 ±20 cd/m^2 ,

B、MEM.CHANNEL10 (6500 color):
6500 color temp. parameter is Wx = 0.313±0.03;Wy = 0.329 ±0.03;
Y = 260 ±20 cd/m^2,

C、MEM.CHANNEL 11 (5400 color):
5400 color temp. parameter is Wx = 0.335±0.03;Wy = 0.350 ±0.03;
Y = 250 ±20 cd/m^2,

D、MEM.CHANNEL10 (SRGB color):
6500 color temp. parameter is Wx = 0.313±0.03;Wy = 0.329 ±0.03;
Y = 220 ±20 cd/m^2,

3.)Into factory mode of VA503b/VA503m

A、First Power off, then press Switch 2 button along with press Power button will activate the factory mode, then MCU will do AUTO LEVEL automatically. Meanwhile press MENU the OSD screen will located at **LEFT TOP OF PANEL**.

4.)Bias adjustment :

Set the **Contrast** to 70

Adjust the **Brightness** to 100.

5.)Gain adjustment :

Move cursor to “-F-” and press MENU key

A、Adjust 9300 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 = 0.283 ±0.03, y =0.298 ±0.03, Y = 250 ±20 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 6500 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 = 0.313 ±0.03, y = 0.329 ±0.03, Y = 260 ±20 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 5400 color-temperature

(1) Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
(2)、Switch the MEM .channel to Channel 11(with up or down arrow on chroma 7120)
(3)、The LCD-indicator on chroma 7120 will show x = 0.335 ±0.03, y = 0.350 ±0.03, Y = 250 ±20 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 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 = 0.313 ±0.03, y = 0.329 ±0.03, Y = 220 ±20 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、Press reset key and Turn the Power-button “off to on” to quit from factory mode.

2. Geometry

1).Set cross-hatch pattern and preset timing as timing table listed.
2).Change to each mode in turn and wait for the monitor finish auto-alignment and save press before change to next mode.
3).Until all of modes are adjusted,exit OSD menu and press POWER OFF to exit factory mode.

5.4 Factory Defaults

Item	Defaults	Item	Defaults
Contrast	70%	Volume	50% (For VA703m only)
Brightness	100%	Balance	N/A
Color Temperature	6500K	Treble	N/A
Sharpness	0%	Bass	N/A
OSD H. Position	50%	720x400/640x400	720x400
OSD V. Position	50%	640x480@60Hz 720x480@60Hz	640x480@60Hz
OSD Time Out	15 Sec	In SOG and Composite, 720x480@60Hz 640x480@60Hz	N/A
OSD Background	Enabled	In SOG and Composite, 1152x864@75Hz 1152x870@75Hz	N/A
Resolution Notice	Enabled	In SOG and Composite, 1280x768@60/75/85Hz 1024x768@60/75/85Hz	N/A

5.5 Function Test

1 Product: 17” LCD Monitor

2 Test Equipment: Color Video Signal & Pattern (or PC with SXGA resolution and a sound card)

3 Test Condition: Before function test and alignment, each LCD Monitor should be warmed up for at least 30 minutes with the following conditions:
(a)In room temperature,
(b) With full-white screen, RGB, and Black
(c) With cycled display modes,
640*480 (H=43.27kHz, V=85Hz)
800*600 (H=53.7kHz, V=85Hz)
1024*768 (H=68.67kHz, V=85Hz)
1280*1024 (H=79.97kHz, V=75Hz)

4 Test Display Modes & Pattern

Compatible Modes

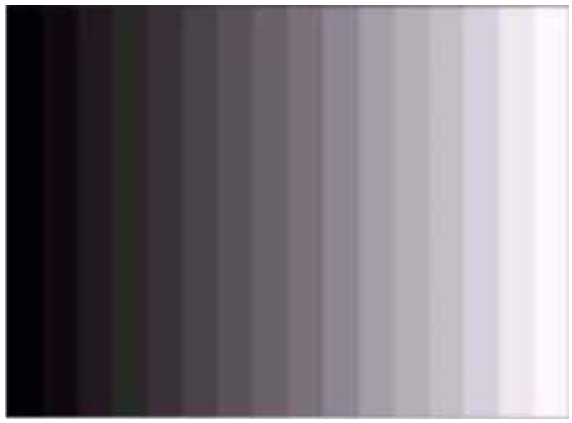
Item	Timing	Analog
1	640 x 350 @ 70Hz, 31.5kHz	**Yes**
2	640 x 480 @ 50Hz	**Yes**
3	640 x 480 @ 60Hz, 31.5kHz	**Yes**
4	640 x 480 @ 67Hz, 35.0kHz	**Yes**
5	640 x 480 @ 72Hz, 37.9kHz	**Yes**
6	640 x 480 @ 75Hz, 37.5kHz	**Yes**
7	640 x 480 @ 85Hz, 43.27kHz	**Yes**
8	720 x 400 @ 70Hz, 31.5kHz	**Yes**
9	800 x 600 @ 56Hz, 35.1kHz	**Yes**

10	800 x 600 @ 60Hz, 37.9kHz	Yes
11	800 x 600 @ 72Hz, 48.1kHz	Yes
12	800 x 600 @ 75Hz, 46.9kHz	Yes
13	800 x 600 @ 85Hz, 53.7kHz	Yes
14	832 x 624 @ 75Hz, 49.7kHz	Yes
15	1024 x 768 @ 60Hz, 48.4kHz	Yes
16	1024 x 768 @ 70Hz, 56.5kHz	Yes
17	1024 x 768 @ 72Hz, 58.1kHz	Yes
18	1024 x 768 @ 75Hz, 60.0kHz	Yes
19	1024 x 768 @ 85Hz	Yes
20	1152 x 864 @ 75Hz	Yes
21	1152 x 870 @ 75Hz	Yes
22	1280 x 720 @ 60Hz	Yes
23	1280 x 960 @ 60Hz	Yes
24	1280 x 960 @75Hz	Yes
25	1280 x 1024 @ 60Hz	Yes
26	1280 x 1024 @ 75Hz	Yes

Function Test Display Pattern

Item	Test Content	Pattern	Specification	Remark
1	Frequency & Tracking	Fine Line Moire	Eliminate visual wavy noise.	Figure 1
2	Contrast/Brightness	16 Gray Scale	16 gray levels sh should be distinguishable.	Figure 2
3	Boundary	Horizontal&Vertical Thickness	Horizontal and Vertical position of video should be adjustable to be within the screen frame.	Figure 3
4	RGB Color Performance	RGB Color Intensities	Contrast of each R, G, B, color should be normal.	Figure 4,5,6
5	Screen Uniformity & Flicker	Full White	Should be compliant with the spec.	Figure 7
6	Dead Pixel/Line	White Screen & Dark Screen	The numbers of dead pixels should be compliant with the spec.	Figure 7,8
7	White Balance	White & Black Pattern	The screen must have the pure white and black pattern, no other color.	Figure 9

Fine Line Morie Pattern (Figure1)



Gray Scale Pattern (Figure2)

Horizontal & Vertical Thickness Pattern (Figure 3)

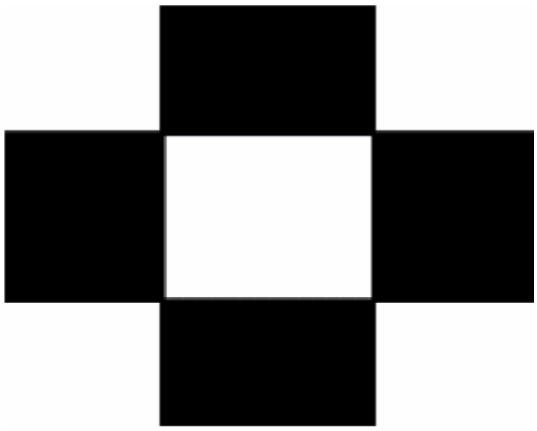
R. Color Pattern (Figure 4)

G. Color Pattern (Figure 5)

B. Color Pattern (Figure 6)

Full White Pattern (Figure 7)

Dark Screen Pattern (Figure 8)



Black-White Pattern (Figure 9)

4.3 Function Test and Alignment Procedure

All Modes Reset

You should do “All Mode Reset” (Refer to Chapter III-3. Hot Keys for Function Controls) first. This action will allow you to erase all end-user’s settings and restore the factory defaults.

Auto Image Adjust

Please select and enter “Auto Image Adjust” function on Main Menu to see if it is workable. The “Auto Image Adjust” function is aimed to offer a better screen quality by built-in ASIC. For optimum screen quality, the user has to adjust each function manually.

Firmware

Test Pattern: Burn In Mode (Refer to Chapter III-3. Hot Keys for Function Controls)

- Make sure the F/W is the latest version.

DDC

Test Pattern: EDID program

Make sure it can pass test program.

Fine Tune and Sharpness

Test Signal: 1280*1024@60Hz

Test Pattern: Line Moire Pattern

Check and see if the image has noise and focus performs well. Eliminate visual

line bar.
If not, readjust by the following steps:
(a)Select and enter “Fine Tune” function on “Manual Image Adjust” to adjust the image to eliminate visual wavy noise.
(b)Then, select and enter “Sharpness” function to adjust the clarity and focus of the screen image.

Boundary

Test Signal: 1280*1024@60Hz
Test Pattern: Horizontal & Vertical Line Thickness Pattern
Check and see if the image boundary is within the screen frame.
If not, readjust by the following steps:
(a)Select and enter “Manual Image Adjust” function on OSD Main Menu.
(b)Then, select and enter “Horizontal Size” or “Horizontal/Vertical Position” function to adjust the video boundary to be full scanned and within screen frame.

White Balance

Test Signal: 640*480@60Hz
Test Pattern: White and Black Pattern
1.5.8 R, G, B, Colors Contrast
Test Signal: 1280*1024@60Hz
Test Pattern: R, G, B, Color Intensities Pattern and 16 Gray Scale Pattern
- Check and see if each color is normal and distinguishable.
- If not, please return the unit to repair area.

Screen Uniformity and Flicker

Test Signal: 1280*1024@60Hz
Test Pattern: Full White Pattern
- Check and see if it is in normal condition.

1.5.10 Dead Pixel and Line
Test Signal: 1280*1024@60Hz
Test Pattern: Dark and White Screen Pattern
- Check and see if there are dead pixels on LCD panel with shadow gauge and filter film.
- The total numbers and distance of dead pixels should be compliant with the spec.

Mura

Test Pattern: White, RGB, Black, & Grey
Test Tool: 10% ND Filter
- Check if the Mura can pass 10% ND Filter.

Audio

Test Signal: Voice signal (optional, depend on model)
Test Pattern: liberty
- Make sure there is audio output.
- Make sure that audio function (volume 80%) is working without noise and resonance.
- Make sure that the sound of right and left speakers are in balance.

Check for Secondary Display Modes

Test Signal:
Analog: 640*350@70Hz; 640*480@60/67/72/75/85Hz;

720*400@70Hz; 800*600@56/60/72/75/85Hz;
832*624@75Hz, 1024*768@60/70/72/75/85Hz;
1280*1024@60/75Hz

- Normally when the primary mode 1280*1024@60Hz is well adjusted and compliant with the specification, the secondary display modes will also be compliant with the spec. But we still have to check with the general test pattern to make sure every secondary is compliant with the specification.

All Modes Reset

After final QC step, we have to erase all saved changes again and restore the factory defaults. You should do “All Mode Reset” again.

Power Off Monitor

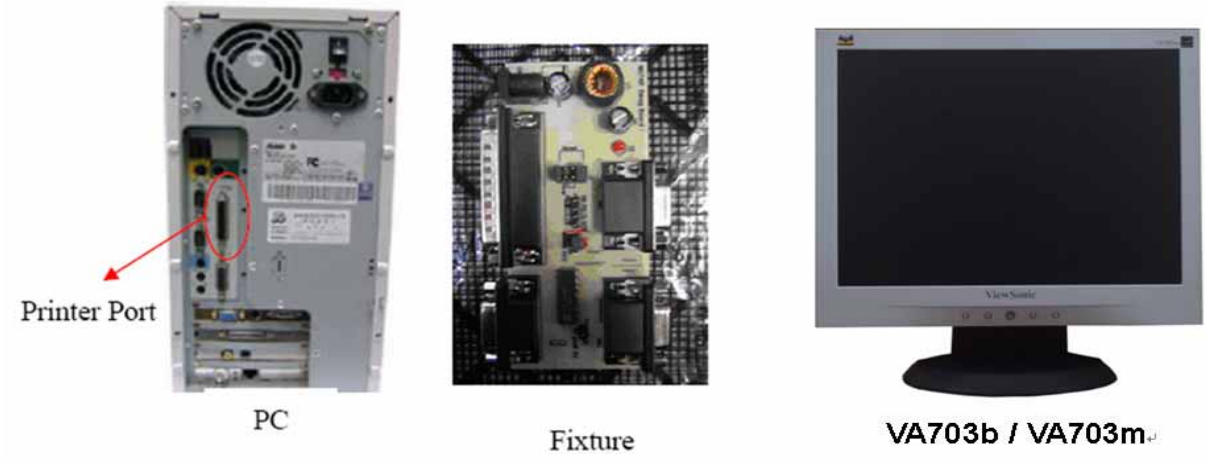
Turn off the monitor by pressing “Power” button.

5.6 Firmware Upgrade Procedure

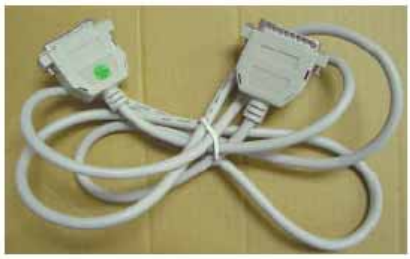
When you receive the returned monitor, please check whether the firmware version is the latest. If not, please do the following procedures to upgrade it to the latest version.

1 Equipment Needed

- VA503/VA703/VA903 Monitor
- Fixture for Firmware Upgrade
- Power Adapter (P/N: 47.58201.001) *1 for Fixture
- VGA Cable (P/N: 42.59901.003) *1(Pin 4, 11 should be connected to GND)
- PC (Personal Computer)
- LPT Cable (P/N: 42.59906.001) *1
- Firmware Upgrade Program
- One additional monitor for checking the program execution



Power Adapter for Fixture
(P/N: 47.58201.001)

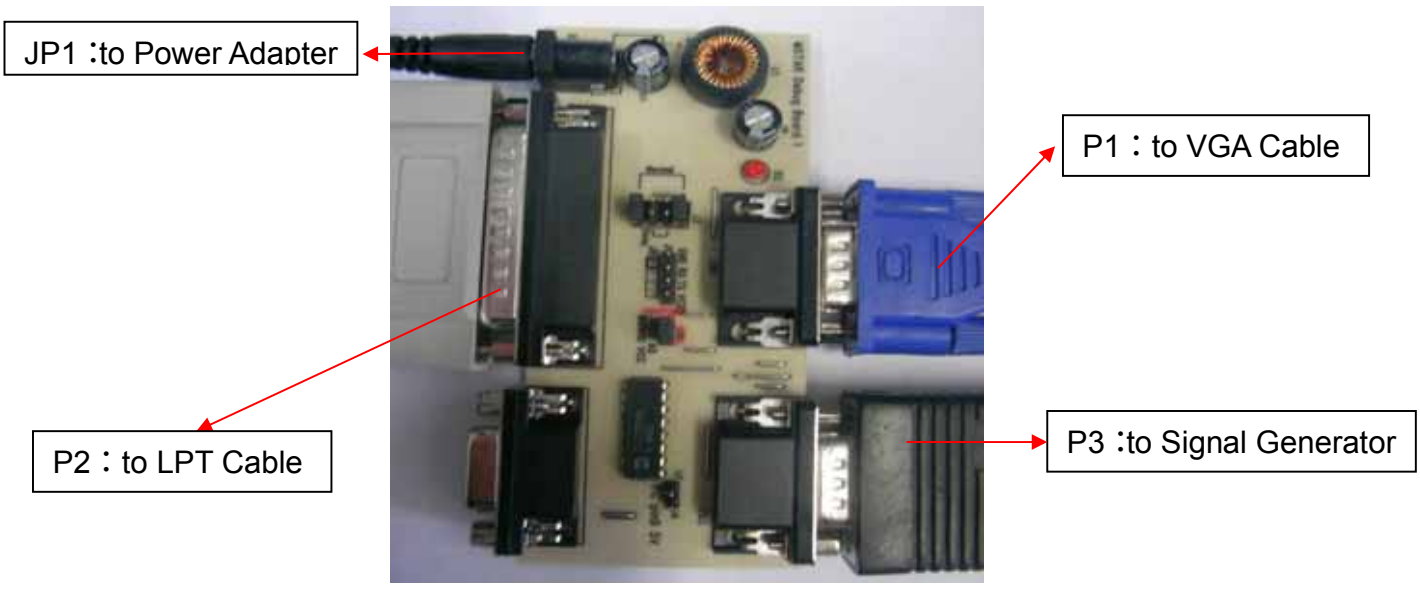


LPT Cable
(P/N: 42.59906.001)

VGA Cable
(P/N: 42.59901.003)

2 Setup Procedure

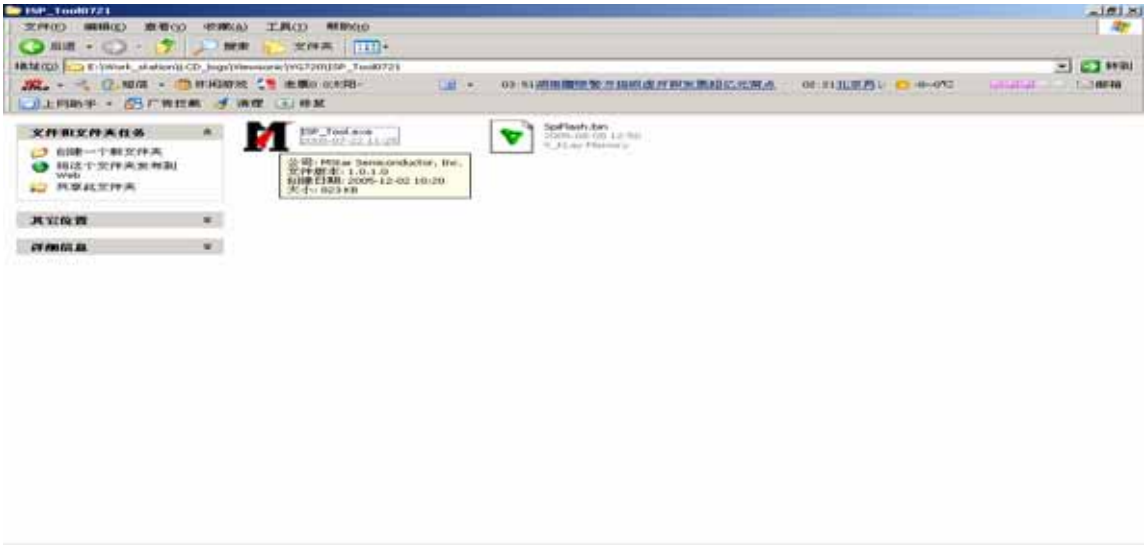
2.1 Connect P2 of Fixture with printer port of PC by LPT Cable.
2.2 Connect P1 of Fixture with VA503/VA703/VA903 Monitor by VGA Cable.
2.3 Plug Power Adapter to Fixture.
2.4 Connect Power Cord to VA503/VA703/VA903 Monitor.
2.5 Connect P3 to the Signal Generator (eg.Chroma2326) for verifying it after the operation being completed.
2.6 Connect PC to the additional monitor.



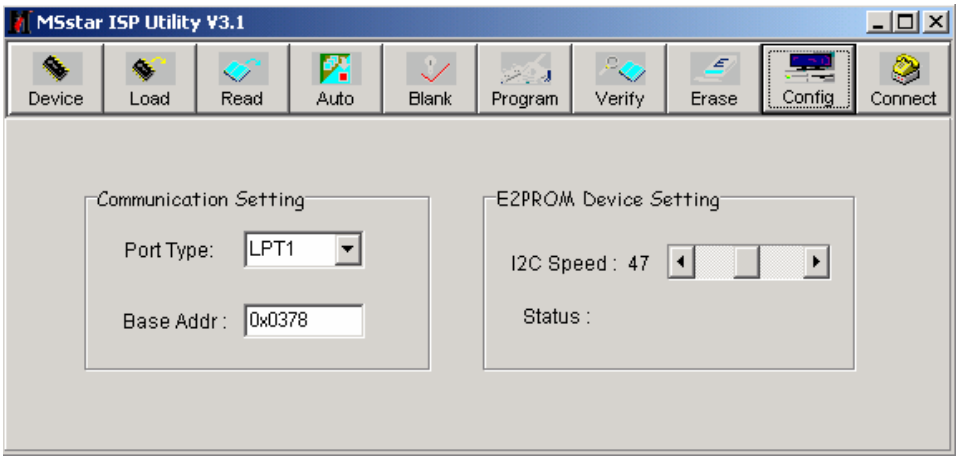
3 Firmware Upgrade Procedure

Step 1. Let VA503/VA703/VA903 set to be connected with AC cable and VGA cable.

Step 2.Execute the MSstar ISP tool.

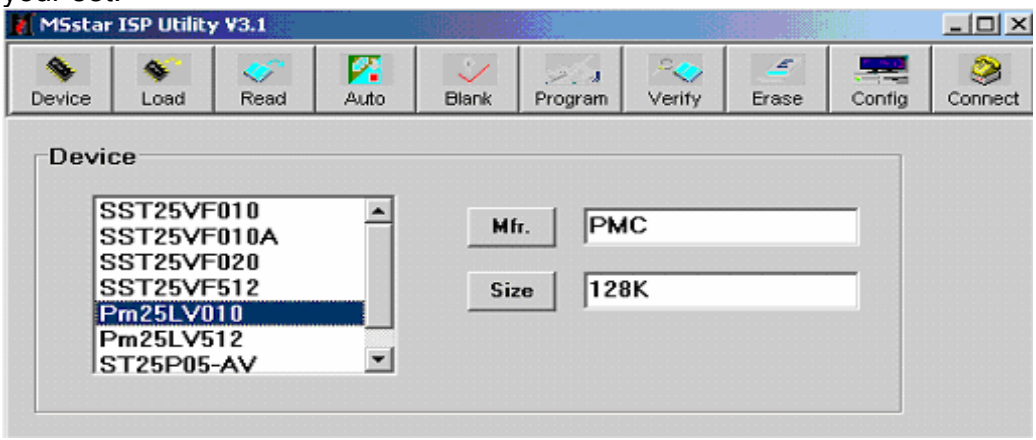


Step 3. Click “Config” button . Select the Port Type: LPT1 and the Base Addr : 0x378 on “Communication Setting” flame, and then the Speed: 47 on “E2PROM Device Setting” flame

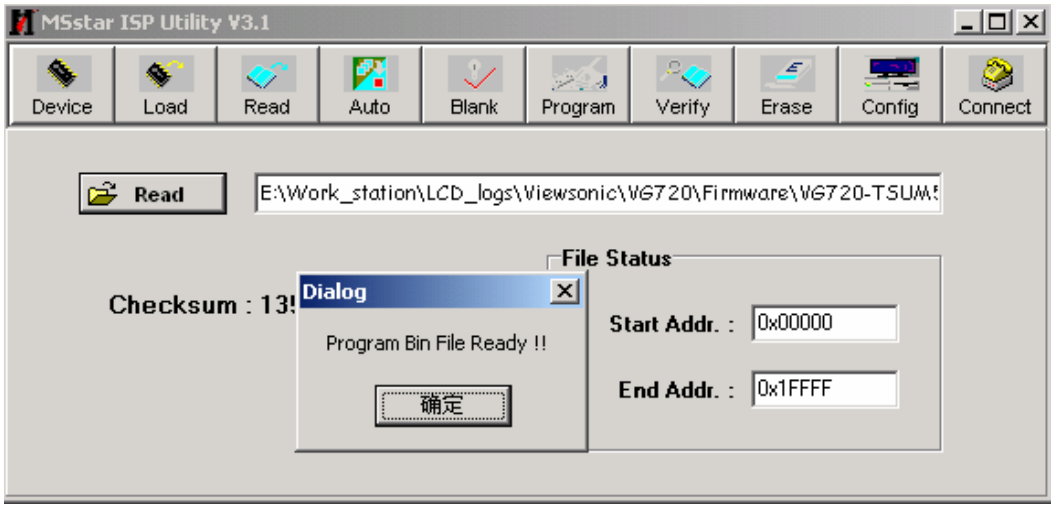


Step 4. Click “Connect” button. (On this step, if the connection is successful, the “Entry ISP Mode” Dialog will be showed. If not, the error dialog will be done.)

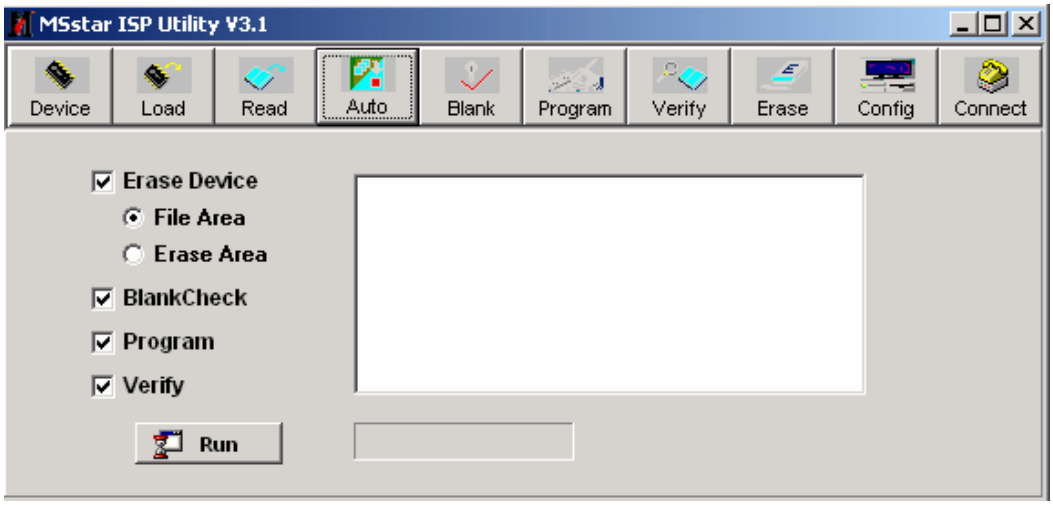
Step 5. Click “Device” button. Select the “PMC25LV010” or “SST25VF010” viewed on your set.



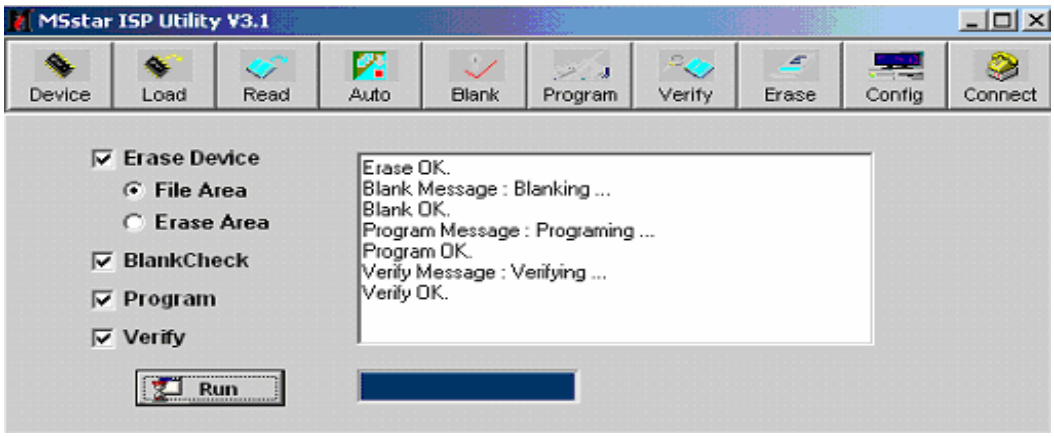
Step 6. Click “Read” button. Select the object bincode on your corresponding directory.



Step 7. Click “Auto” button. Execute the flashing action by clicking the “Run” button.

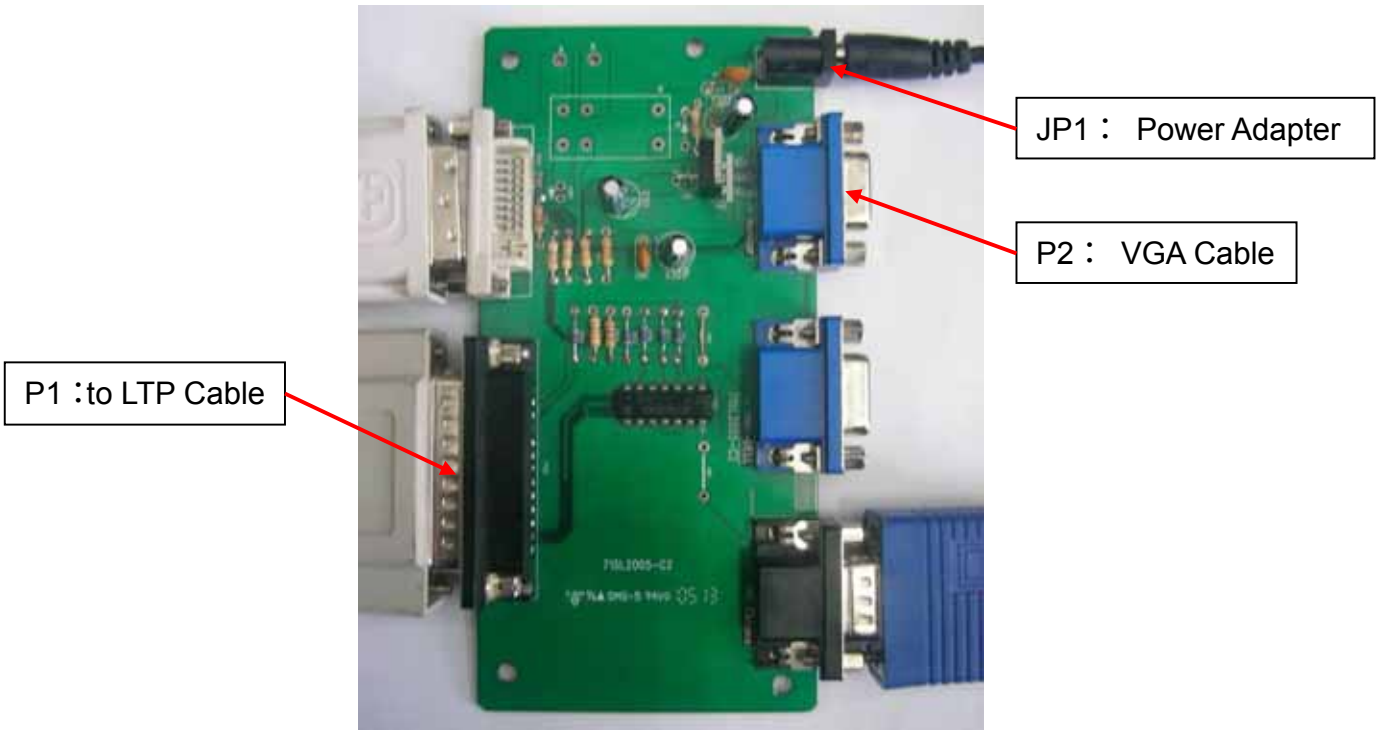


Step 8. If the flashing F/W has been completed, “Ok” message will be showed on the right TextBox.



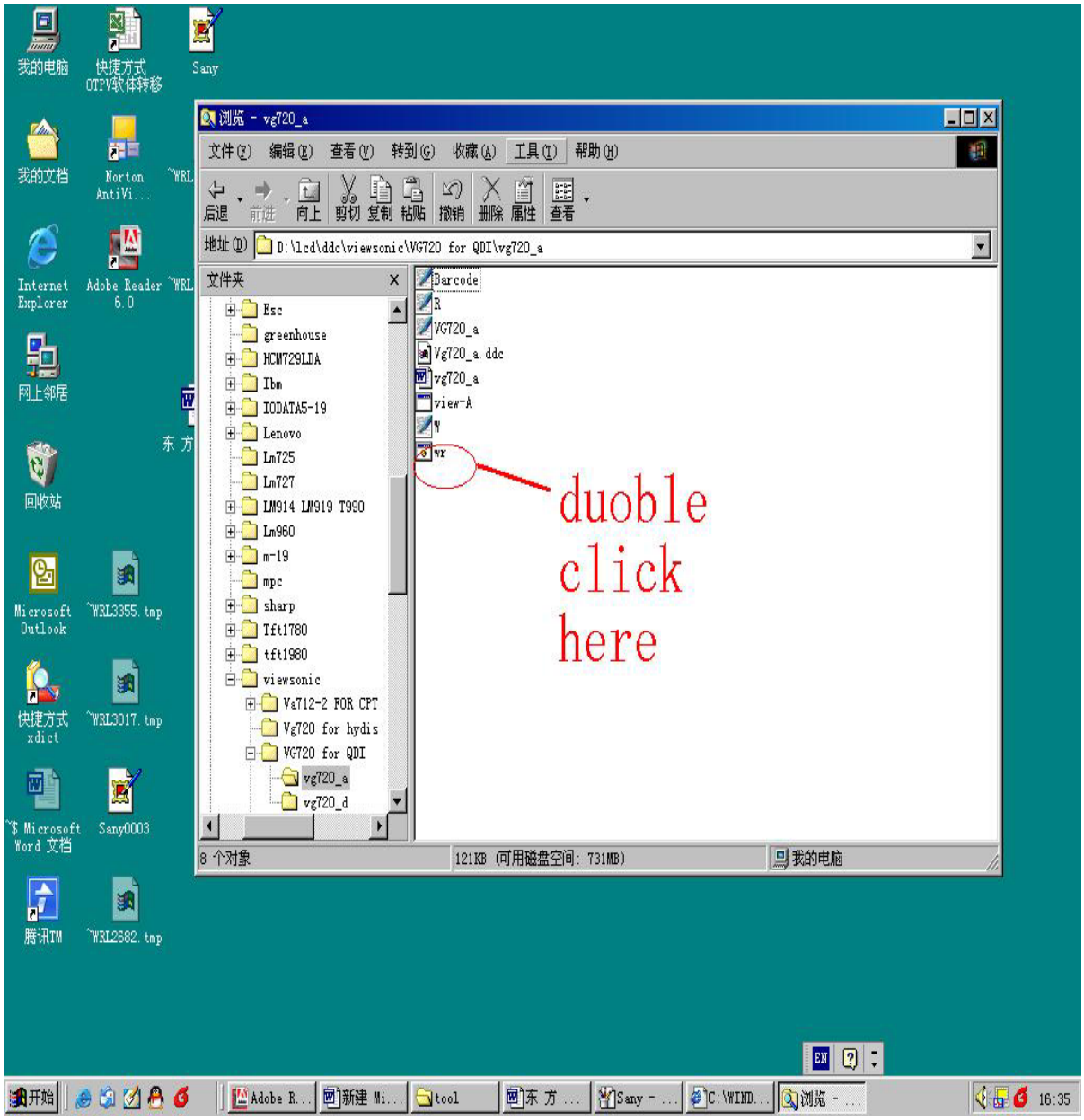
Step 9. Unplug and replug power cord of VA503/VA703/VA903 set and then check the OSD operation and image on srceen.
Step 10. At last, do “Memory Recall.”

3.2 Setup Procedure
3.2.1 Connect P2 and monitor of Fixture with VGA ports of VA503/VA703/VA903 by VGA Cable.
3.2.2 Connect P1 of Fixture with Printer port of PC by LPT Cable.
3.2.3 Plug Power Adapter to Fixture.
3.2.4 Connect Power Cord to VA503/VA703/VA903 Monitor.
3.2.5 Connect PC to the additional monitor.

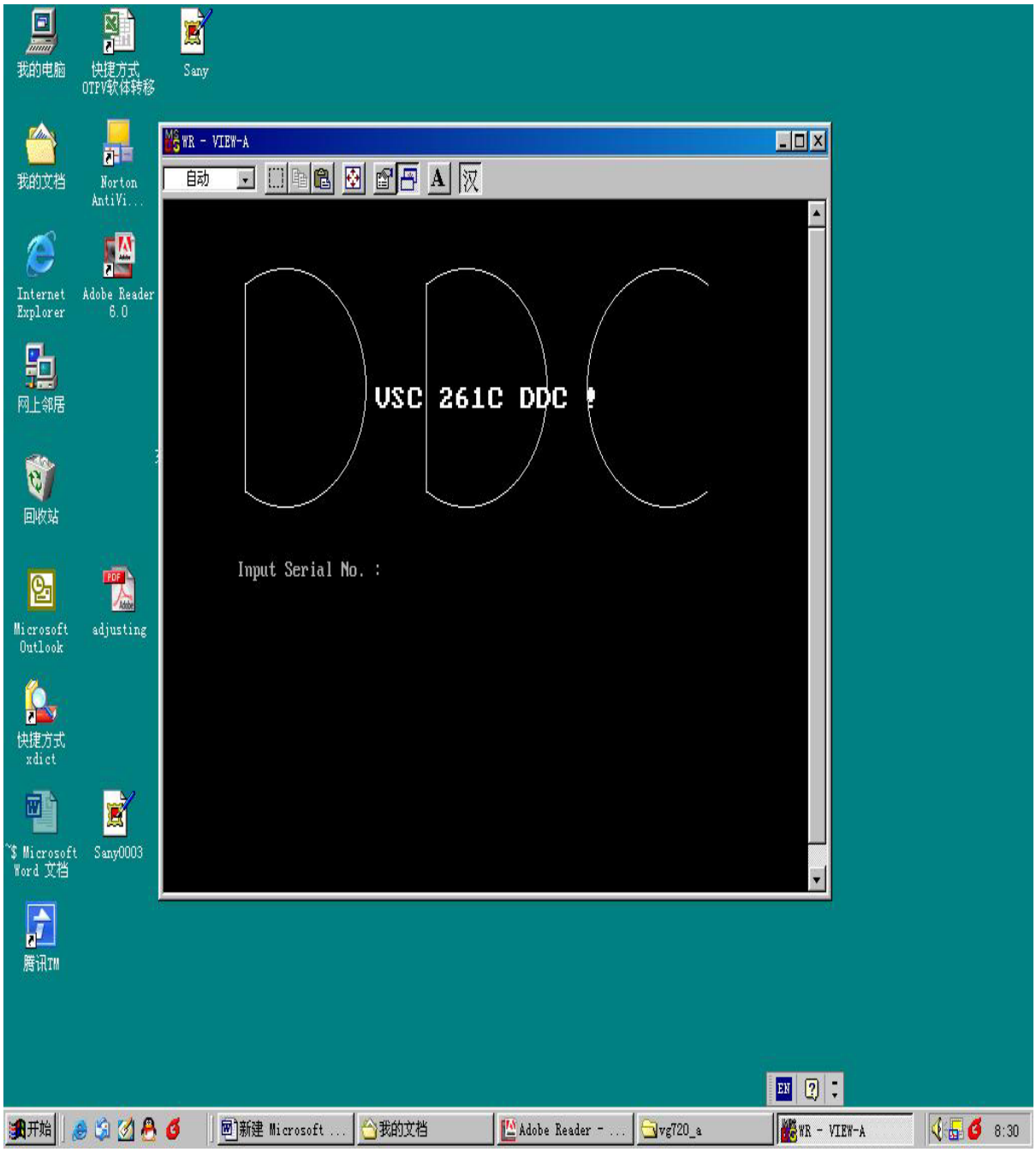


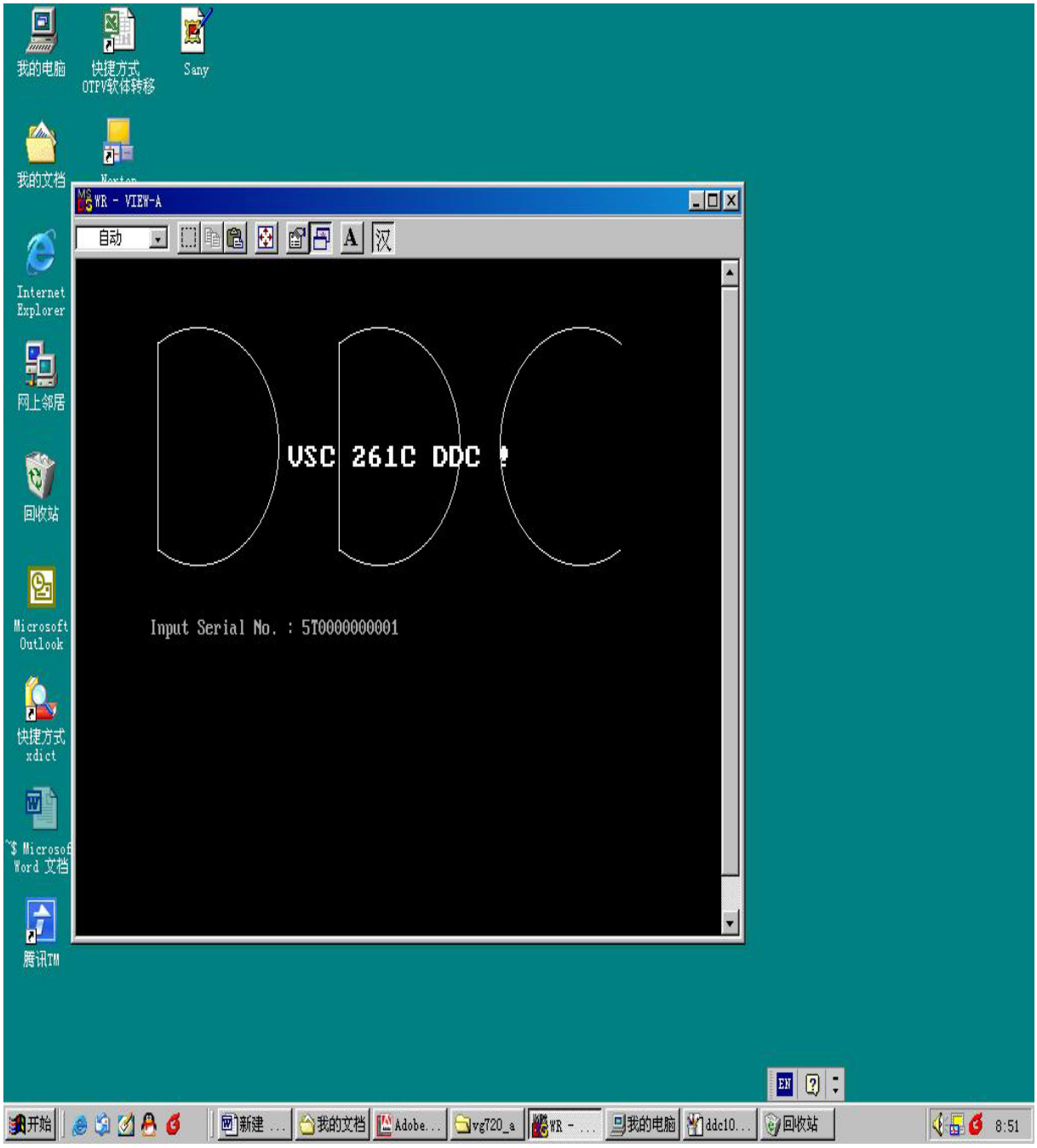
3.3 DDC Key In Procedure

Sep1.Select and execute DDc Key In program

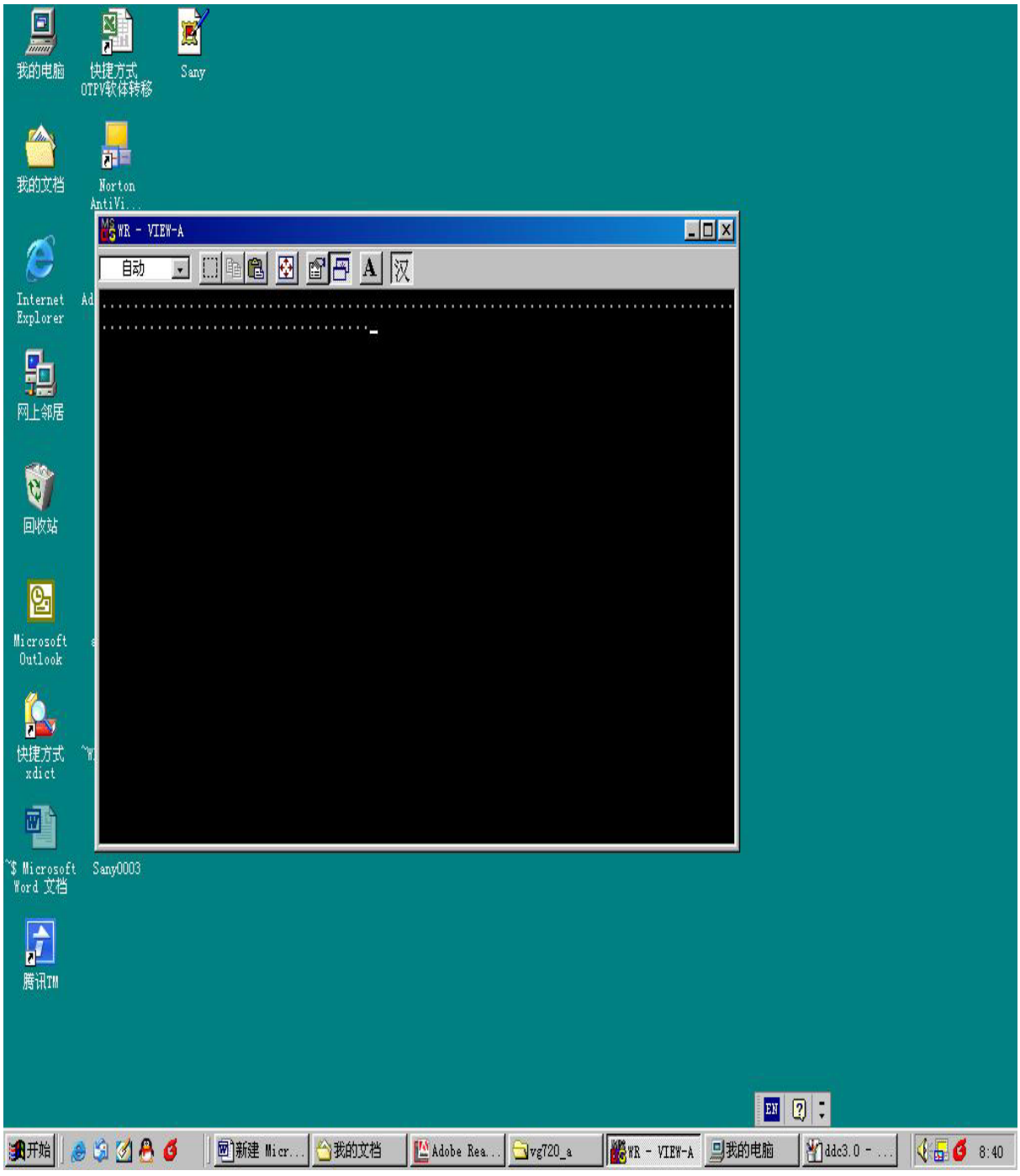


Sep2:Inpute the S/N and execute “Enter”

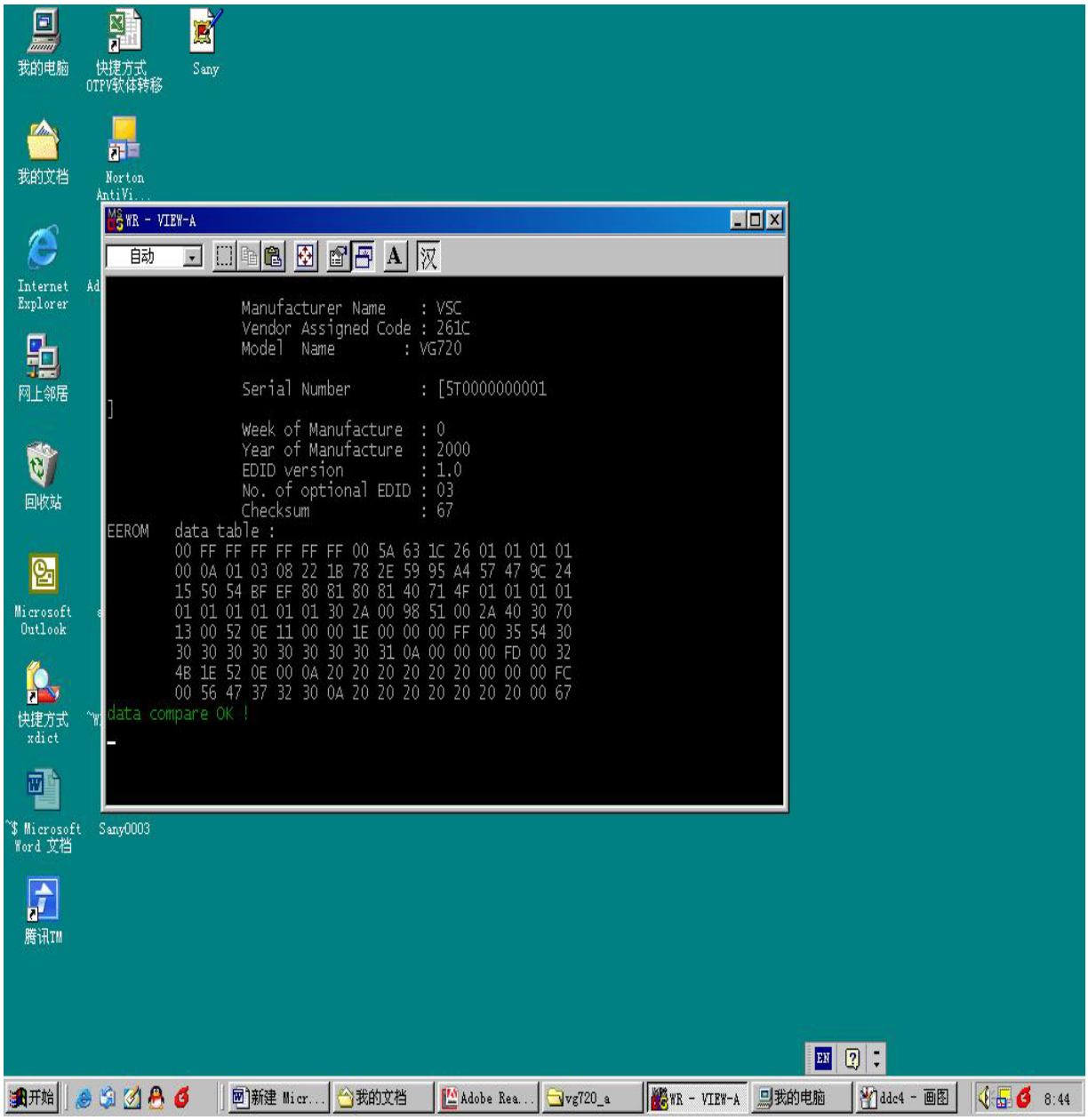



我的电脑
快捷方式 OTPV软体转移
Sany
我的文档
Internet Explorer
网上邻居
回收站
Microsoft Outlook
快捷方式 xdict
Microsoft Word 文档
腾讯TM
WR - VIEW-A
自动
汉
VSC 261C DDC
Input Serial No. : 5T0000000001
开始
新建 ...
我的文档
Adobe...
vg720_a
WR - ...
我的电脑
ddc10...
回收站
8:51

Sep3:Key the “Enter” and write the data



Sep4:If ddc program OK and show “data compare ok”



Disassemble Process

1 Units Disassemble Process

1.1 *Tools*

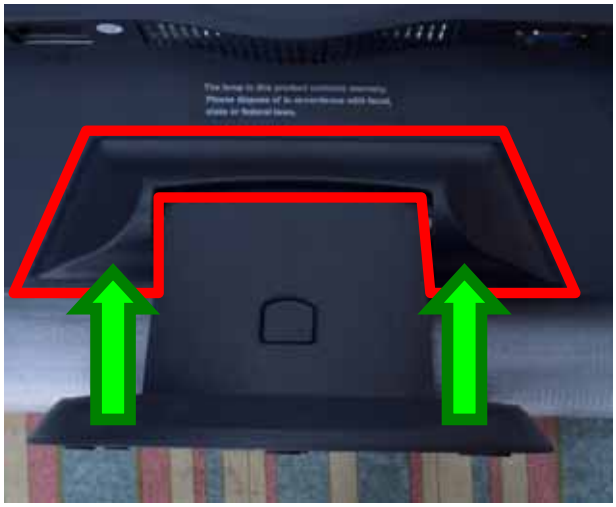
- ✧ Glove
- ✧ Big cross screwdriver
- ✧ Small cross screwdriver
- ✧ Prize equipment or abandoned IC card
- ✧ Screw box
- ✧ Cushion
- ✧ Six angle sleeve spanner

1.2 Disassemble process

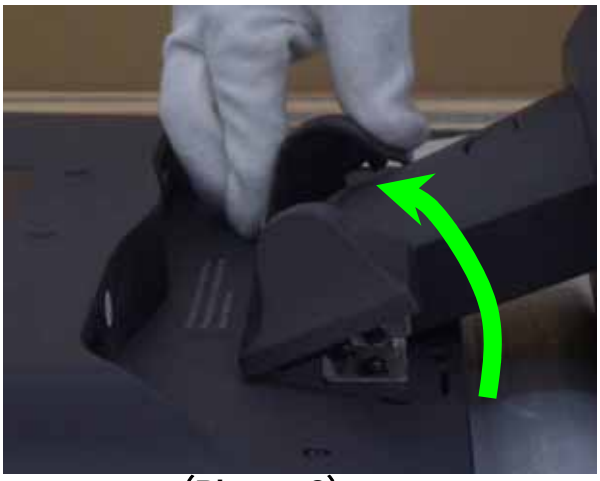
1、 Tide up the worktable, spread straight cushion, put the monitor on it, the front side adown.(**Picture 1**)
2、 Remove the decorate slice of the back cover.(**Picture 2, 3**)
3、 Disassemble the 4 screws that fix the stand, remove the stand..(**Picture, 4**)
4、 Disassemble the 4 screws of the back cover. （**Picture 5**）
5、 Use equipment or abandoned IC card to prize up the bezel through the bottom flute, and rip up the bezel downwards.(as showed in the following the **picture 6,7,8**)
6、 Disassemble the 3 screws and 3 pins of the Key board, remove the Key board. (as showed in the following the **picture 9,10**)
7、 Remove the back cover, refer to the following **picture 11**.
8、 Disassemble the 6 fixed screw in the shield, remove the shield as the direction arrowhead showed, refer to the following **picture 12**.
9、 Disassemble the 5 screws and 5 pins of the PWPC board, remove the PWPC board.(symbolized the following **picture 13** with red color)
10、 Disassemble the 2 screws and 1 pins of the audio board, remove the audio board. (symbolized the following **picture 13** with yellow color)
11、 Disassemble the 3 screws and 2 pins of the main board, remove the main board. (symbolized the following **picture 13,14** with blue color)
12、 Disassemble the 4 fixed screws of the panel, remove the main frame, as showed in the following the **picture 15,16,17**. Do not damage the cable of the panel.
13、 That's all. The disassemble process of the unit is over.

1.3 Show pictures：

（Picture 1）



（Picture 2）



（Picture 3）

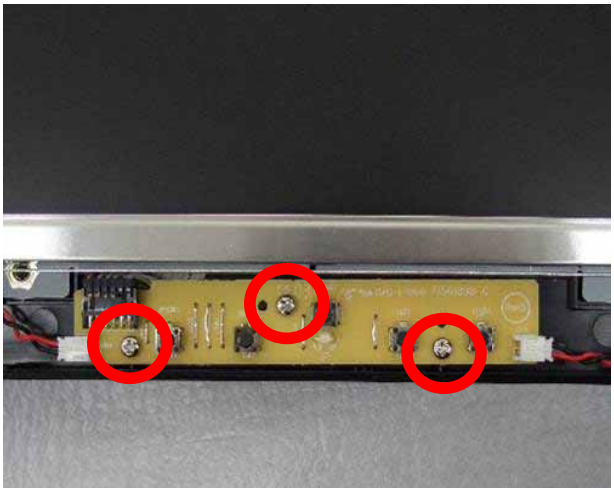
（Picture 4）

（Picture 5）

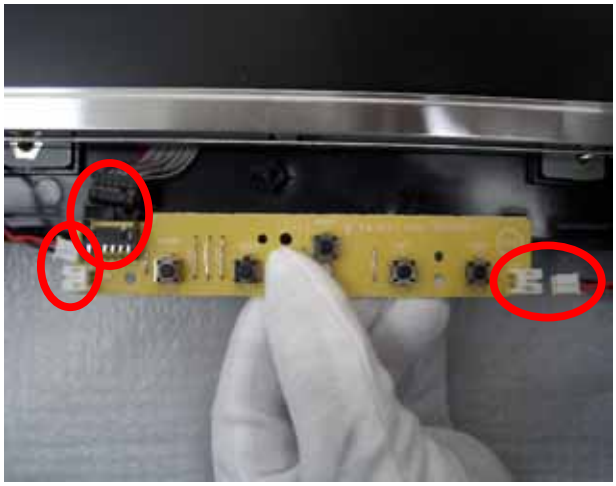
（Picture 6）

（Picture 7）

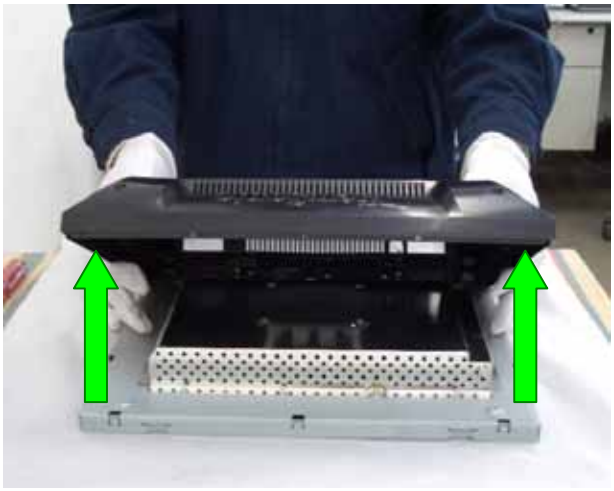
（Picture 8）



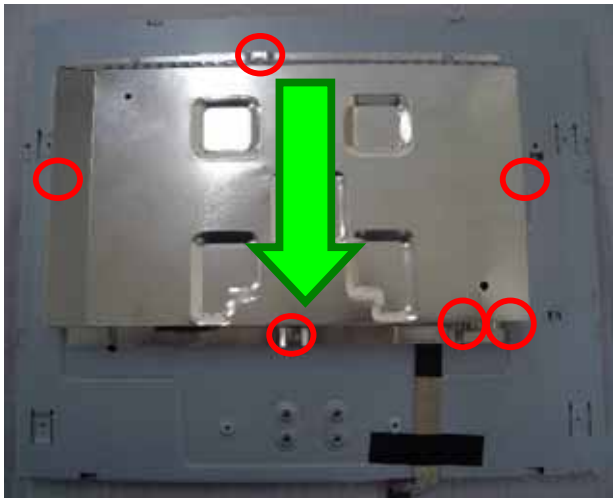
（Picture 9）



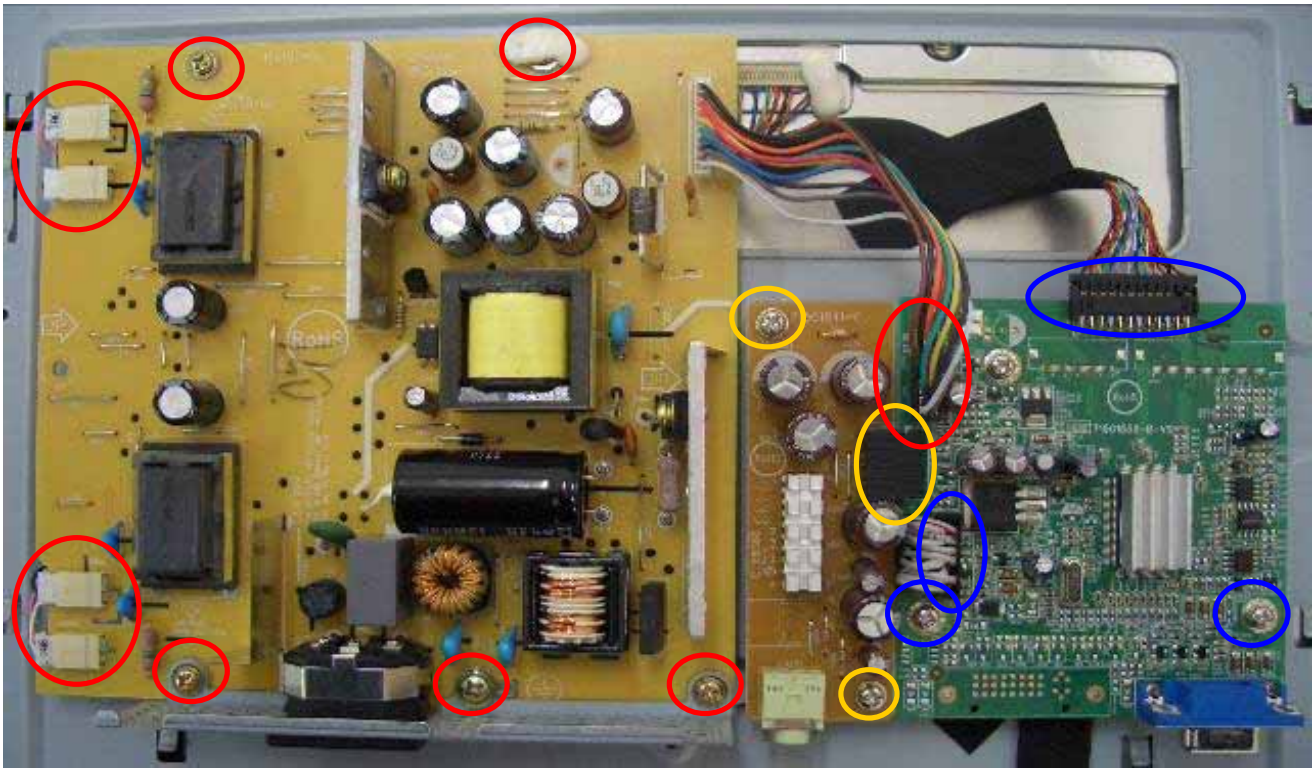
（Picture 10）



（Picture 11）



（Picture 12）



(Picture 13)

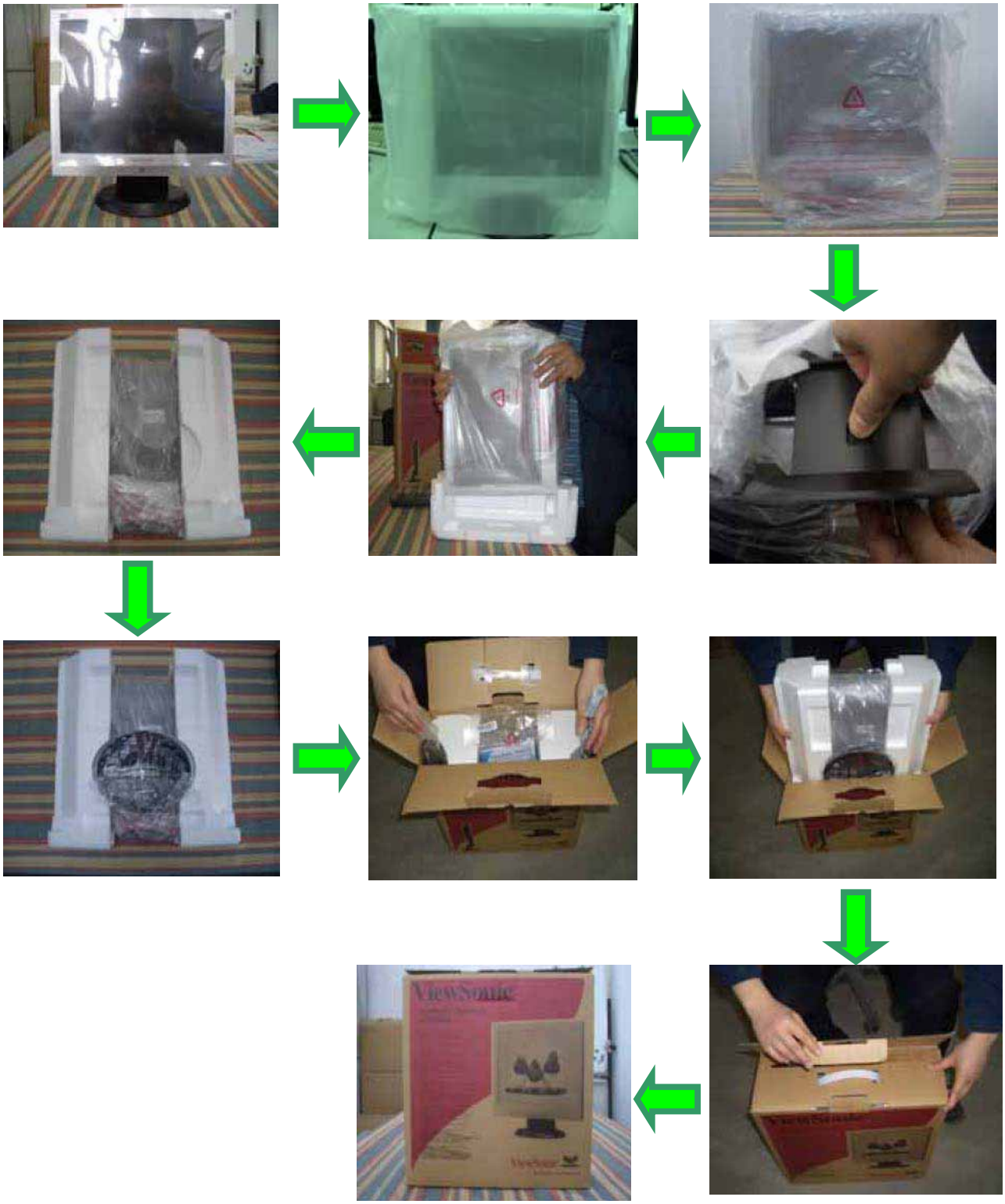
(Picture 14)

(Picture 15)

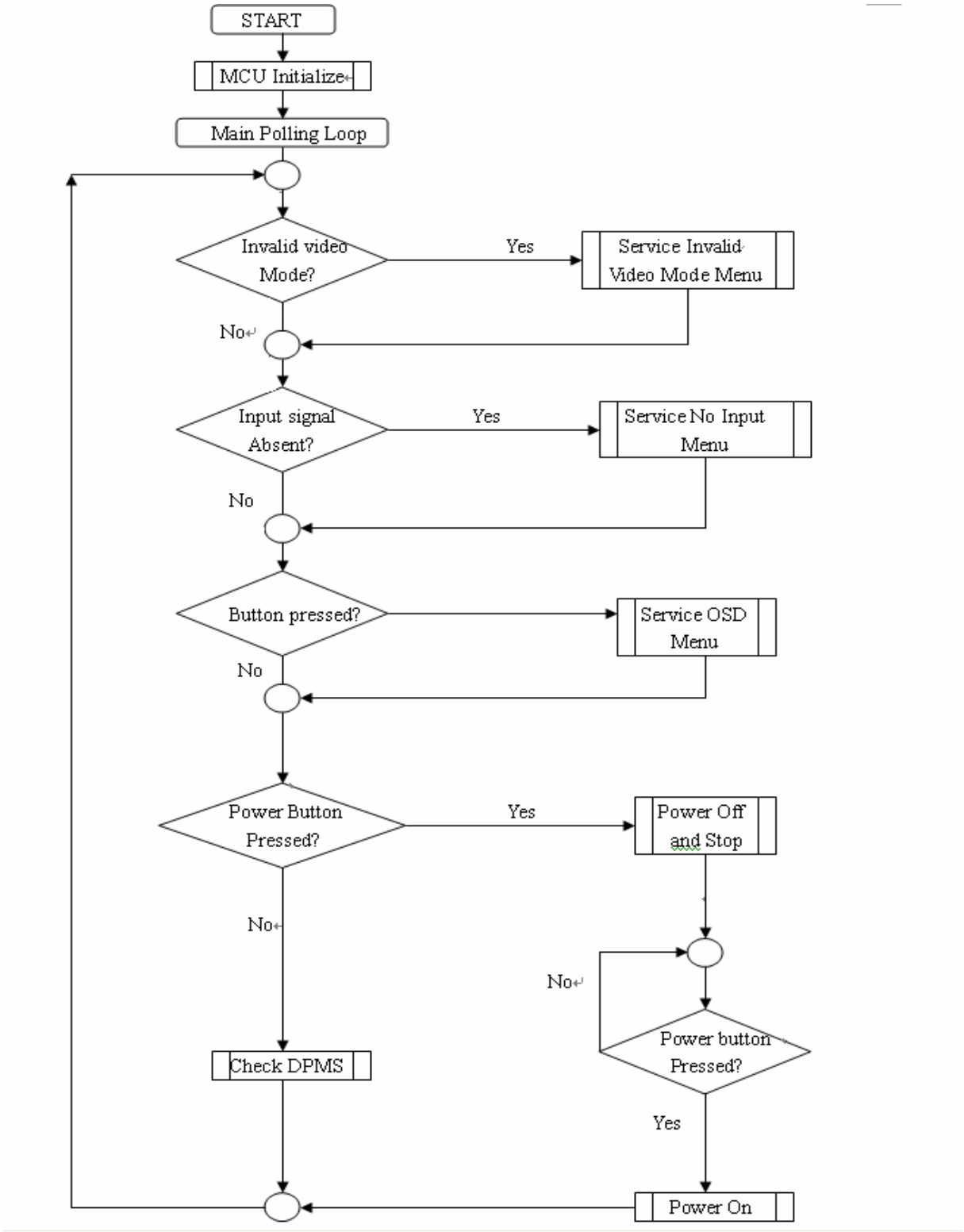
(Picture 16)

（Picture 17）

Packing Procedure



6. Troubleshooting Flow Chart



7. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (VA703b-1)

ViewSonic Model Number: VS11280

Serial No. Prefix: Q85 **Rev: 1b**

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#
1	**Accessories:**	Power Cord		A-00003716	89G402A18N LS		
2	**PC Board Assembly:**	Key Board		B-00005797	KEPC560KE1P		
3		Sub Board - Conversion Board		B-00006634	CBPC780KK5VWP		
4		Sub Board - Conversion Board For CPT panel	Added on 10/20/06	B-00008144	CBPC780KC5VWP		
5		Power Supply Board		B-00006635	PWPC1742HDV3P		
6		Power Supply Board for CPT panel	Added on 10/20/06	B-00008145	PWPC742CV2P		
7	**Cabinets:**	Front Panel		C-00006636	A34G0026B4Z L		
8		Back Cover		C-00006637	A34G0025 4Z 2L		
9		Base Assembly		C-00006487	A34G0028 4Z L		
10		Cover - Hinge		C-00006488	A34G0029 4Z L		
11	**Cables:**		Replace and Update	~~CB-00005795~~	~~89G 725HAA903~~		
12		Signal Cable For CPT Panel	Part # 10/20/06	CB-00006702	89G 725HAA704		
13		Key Harness		CB-00006638	95G8014 16702 X		
14		Cable LVDS		CB-00006639	95G8018 30695		
15	**Documentation:**	Label - Carton		DC-00003727	40G 459709 1B		
16		H/V WARNING LABEL		DC-00003729	40G 459709 4A		
17		Label - Hg		DC-00003730	40G457B709 1A		
18		HI-POT LABEL FOR 17-LCD		DC-00003731	40G 459709 5A		
19		Label - S/N		DC-00005635	40G581B709 4A		
20		Label - Manual		DC-00005636	40G 58162435A		
21		8ms Sticker		DC-00005639	40G581B709 3A		
22			Replace and Update	~~DC-00005803~~	~~41G7801709 7A~~		
23		Quick Start Guide	Part # 10/20/06	DC-00006645	J41G7801709 7B		
24		Label - Model		DC-00005812	40G 45760819A		
25			Updated Vendor		~~J70G170170913A~~		
26		User's Guide	Part # 10/20/06	DC-00006640	J70G170170917A		
27		EPA LABEL		DC-00006481	J40GSTAR709 1A		
28		ID VA703B-C	Added on 10/20/06	DC-00008141	J40G170T70911A		
29	**Electronic**	IC M24C02-WMN6TP		E-00003738	56G1133 34	U404	
30	**Components:**	IC M24C16-WMN6TP		E-00004982	56G1133 56	U403	
31		AIC1084-33PM TO-263		E-00005651	56G 563 7	U702	
32		RESET_4.38V_G690H438T73U	Added on 10/20/06	E-00006315	56G 643 20	U406	
33		TSUM16AK PQFP-128 IC		E-00005806	56G 562100	U401	
34		LCD Panel		E-00006641	750GLK70E1131N		
35		LCD Panel - CPT Panel	Added on 10/20/06	E-00008093	750GLC70A7P 12N		
36			Replace and Update	~~E-00006642~~	~~56G1133 63KV3~~	U402	
37		IC PM25LV010-25SCE	Part # 10/20/06	E-00006711	56G1133 63	U402	
38		IC AP1084K33LA	Added on 10/20/06	E-00004979	56G 563 21	U702	
39	**Hardware:**	Hinge		HW-00006644	37G 561 1		
40		EVA Washer		HW-00006476	44G3231 12 A		
41	**Miscellaneous:**		Updated Vendor		~~J15G8312 1~~		
42		Main Frame	Part # 10/20/06	M-00006643	J15G8312 2 SG		
43	**Packing Material:**	PE Bag		P-00005642	45G 76 28 V3		
44		PE Bag For Base		P-00005643	45G 88606		
45		PE Bag		P-00005644	45G 88607		
46		Foam EPS (Left)		P-00006647	J44G7003 1		
47		Foam EPS (Right)		P-00006648	J44G7003 2		
48		Generic Foam Set		P-00001347	30833		
49		Generic Box		P-00002515	20653		
50			Updated Vendor		~~J44G7003709 2A~~		
51		Craft Box	Part # 10/20/06	P-00006649	J44G7003709 2B		
52	**Plastics:**	Button Function		PL-00006485	33G5019 KD C		
53		PEDESTAL (STAND)		PL-00006486	A34G0027 4Z L		

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.

Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation. This is to eliminate repeated cross checks of each item between this version and prior versions.

RECOMMENDED SPARE PARTS LIST (VA703m-1)

ViewSonic Model Number: VS11280

Serial No. Prefix: Q86 **Rev: 1b**

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#
1	**Accessories:**	Power Cord		A-00003716	89G402A18N LS		
2	**PC Board Assembly:**	KEY BOARD		B-00005824	KEPC560KD9P		
3		Audio Control Board		B-00006489	AUPC780B4P		
4		Power Supply Board		B-00006635	PWPC1742HDV3P		
5		Power Supply Board for CPT Panel	Added on 10/23/06	B-00008145	PWPC742CV2P		
6		Conversion Board		B-00006654	CBPC780KK5VWAP		
7	**Cabinets:**	Base Assembly		C-00006513	A34G0028 KR L		
8		Hinge Cover		C-00006514	A34G0029 KR L		
9		Front Panel (Bezel)		C-00006655	A34G0026AKD L		
10		Back Cover		C-00006656	A34G0025 KR 1L		
11	**Cables:**	Audio Cable		CB-00004972	89G 173 56 31		
12		AUDIO CABLE - (Signal Cable)	Replace and Update Part # 10/20/06	~~CB-00005795~~ CB-00006702	~~89G 725HAA903~~ 89G 725HAA704		
13		Wire (Key Harness)		CB-00006638	95G8014 16702 X		
14		Cable LVDS		CB-00006639	95G8018 30695		
15	**Documentation:**	Label (for Carton)		DC-00003727	40G 459709 1B		
16		Label (H/V Warning Label)		DC-00003729	40G 459709 4A		
17		Label (HG Label)		DC-00003730	40G457B709 1A		
18		Label (Hi-Pot Label for 17" LCD)		DC-00003731	40G 459709 5A		
19		S/N LABEL		DC-00005635	40G581B709 4A		
20		MANUAL P/N LABEL		DC-00005636	40G 58162435A		
21		8ms STICKER		DC-00005639	40G581B709 3A		
22		LABEL Model		DC-00005812	40G 45760819A		
23		Label EPA		DC-00006481	J40GSTAR709 1A		
24		Label - ID Label VA703m	Added on 10/23/06	DC-00008142	J40G170T70912A		
25		Quick Start Guide	Replace and Update Part # 10/20/06	~~DC-00006496~~ DC-00006660	~~J41G7801709 8A~~ J41G7801709 8B		
26		User's Guide	Updated Vendor Part # 10/20/06	DC-00006657	~~J70G170170912A~~ J70G170170918A		
27	**Electronic**	IC M24C02-WMN6TP		E-00003738	56G1133 34	U404	
28	**Components:**	IC M24C16-WMN6TP		E-00004982	56G1133 56	U403	
29		AIC1084-33PM TO-263		E-00005651	56G 563 7	U702	
30		IC AP1084K33LA	Added on 10/23/06	E-00004979	56G 563 21	U702	
31		INTEGRATED CIRCUIT (TSUM16AK PQFP-128)		E-00005806	56G 562100	U401	
32		IC Reset 4.38V_G690H438T73U		E-00006315	56G 643 20	U406	
33		LCD Panel		E-00006641	750GLK70E1131N		
34		LCD panel CLAA170EA07P 17''	Added on 10/23/06	E-00008093	750GLC70A7P 12N		
35		LCD Panel	Added on 10/23/06	E-00008107	750GLB70A7P11N		
36		PM25LV010-25SCE	Replace and Update Part # 10/20/06	~~E-00006642~~ E-00006711	~~56G1133 63KV3~~ 56G1133 63	U402	
37		Speaker		E-00006658	78G 455 3 K		
38	**Hardware:**	Washer - EVA		HW-00006476	44G3231 12 A		
39		Hinge		HW-00006644	37G 561 1		
40	**Miscellaneous:**	Main Frame	Updated Vendor Part # 10/20/06	M-00006643	~~J15G8312 1~~ J15G8312 2 SG		
41	**Packing Material:**	PE BAG		P-00005642	45G 76 28 V3		
42		PE BAG FOR BASE		P-00005643	45G 88606		
43		PE BAG		P-00005644	45G 88607		
44		EPE BAG		P-00005645	45G 88609 B		
45		Foam - EPS(L)		P-00006647	J44G7003 1		
46		Foam - EPS(R)		P-00006648	J44G7003 2		
47		Carton (BOX)	Updated Vendor Part # 10/20/06	P-00006662	~~J44G7003709 1A~~		
48		N/A			J44G7003709 1B		
49	**Plastics:**	Function Button		PL-00006485	33G5019 KD C		
50		Pedestal		PL-00006512	A34G0027 KR L		

Remark 1: Above listed items are examples, supplier can expand the rows to add more necessary items.

Remark 2: All revised RSPLs with newly added items or any change made should be highlighted and correlated with the ECN/ECR approved by ViewSonic Corporation. This is to eliminate repeated cross checks of each item between this version and prior versions.

BOM LIST (VA703b-1)

ViewSonic Model Number: VS11280

Rev: 1b

Serial No. Prefix: Q85

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	B-00008144	CBPC780KC5VWP	CONVERSION BOARD			1
2	B-00005797	KEPC560KE1P	KEPC BOARD			1
3	B-00008145	PWPC742CV2P	POWER BOARD			1
4	N/A	23G3178709 4A	VSC17-LCD FRONT LOGO			1
5	N/A	23G3178709 6A	BIRD LOGO (E015-006)			1
6	HW-00006644	37G 561 1	HINGE			1
7	DC-00005812	40G 45760819A	MODEL LABEL			1
8	DC-00003727	40G 459709 1B	CARTON LABEL			1
9	DC-00003729	40G 459709 4A	H/V WARNING LABEL			1
10	DC-00003731	40G 459709 5A	HI-POT LABEL FOR 17-LCD			1
11	DC-00005636	40G 58162435A	MANUAL P/N LABEL			1
12	DC-00003730	40G457B709 1A	Hg LABEL			1
13	DC-00005639	40G581B709 3A	8ms STICKER			1
14	DC-00005635	40G581B709 4A	S/N LABEL			2
15	HW-00006476	44G3231 12 A	EVA WASHER			1
16	P-00005642	45G 76 28 V3	PE BAG			1
17	P-00005643	45G 88606	PE BAG FOR BASE			1
18	P-00005644	45G 88607	PE BAG			1
19	CB-00006702	89G 725HAA704	SIGNAL CABLE 1.5M			1
20	A-00003716	89G402A18N LS	POWER CORD			1
21	CB-00006638	95G8014 16702 X	KEY HARNESS			1
22	CB-00006639	95G8018 30695	LVDS			1
23	N/A	M1G 130 5120	SCREW M3X5	XN01A		4
24	N/A	M1G 330 4120	SCREW	XN01A		4
25	N/A	M1G 330 6 47 CR3	SCREW	XN01A		4
26	N/A	M1G1140 6120	SCREW	XN01A		1
27	N/A	M1G1730 6120	M3*6	XN01B		3
28	N/A	M1G1730 6120	M3*6	XN01C		4
29	N/A	M1G2640 10 47 CR3	SCREW	XN01A		4
30	N/A	Q1G 330 6120	SCREW M3X6MM	XN01A		3
31	N/A	Q1G1140 8120	SCREW	XN01A		1
32	N/A	Q1G1140 10120	SCREW	XN01B		2
33	E-00008107	750GLB70A7P11N	CLAA170EA07P 17" LCD PA			1
34	C-00006637	A34G0025 4Z 2L	REAR COVER PSWG/W AUDIO			1
35	C-00006636	A34G0026B4Z L	BEZEL			1
36	PL-00006486	A34G0027 4Z L	STAND			1
37	C-00006487	A34G0028 4Z L	BASE			1
38	C-00006488	A34G0029 4Z L	HINGE COVER			1
39	M-00006643	J15G8312 2 SG	MAIN FRAME			1
40	N/A	J15G8313 1 SG	AC SOCKET BRKT			1
41	DC-00008141	J40G170T70911A	ID VA703B-C			1
42	DC-00006481	J40GSTAR709 1A	EPA LABEL			1
43	DC-00006645	J41G7801709 7B	QSG			1
44	N/A	J41G780170914A	INSERT CARD			1
45	P-00006647	J44G7003 1	EPS(L)			1
46	P-00006648	J44G7003 2	EPS(R)			1
47	P-00006649	J44G7003709 2B	CARTON			1
48	DC-00006640	J70G170170917A	CD MANUAL			1
49	N/A	J85G 740 1 2	MAIN SHIELD			1
50	N/A	Q52G6025 11997	INSULATION			1

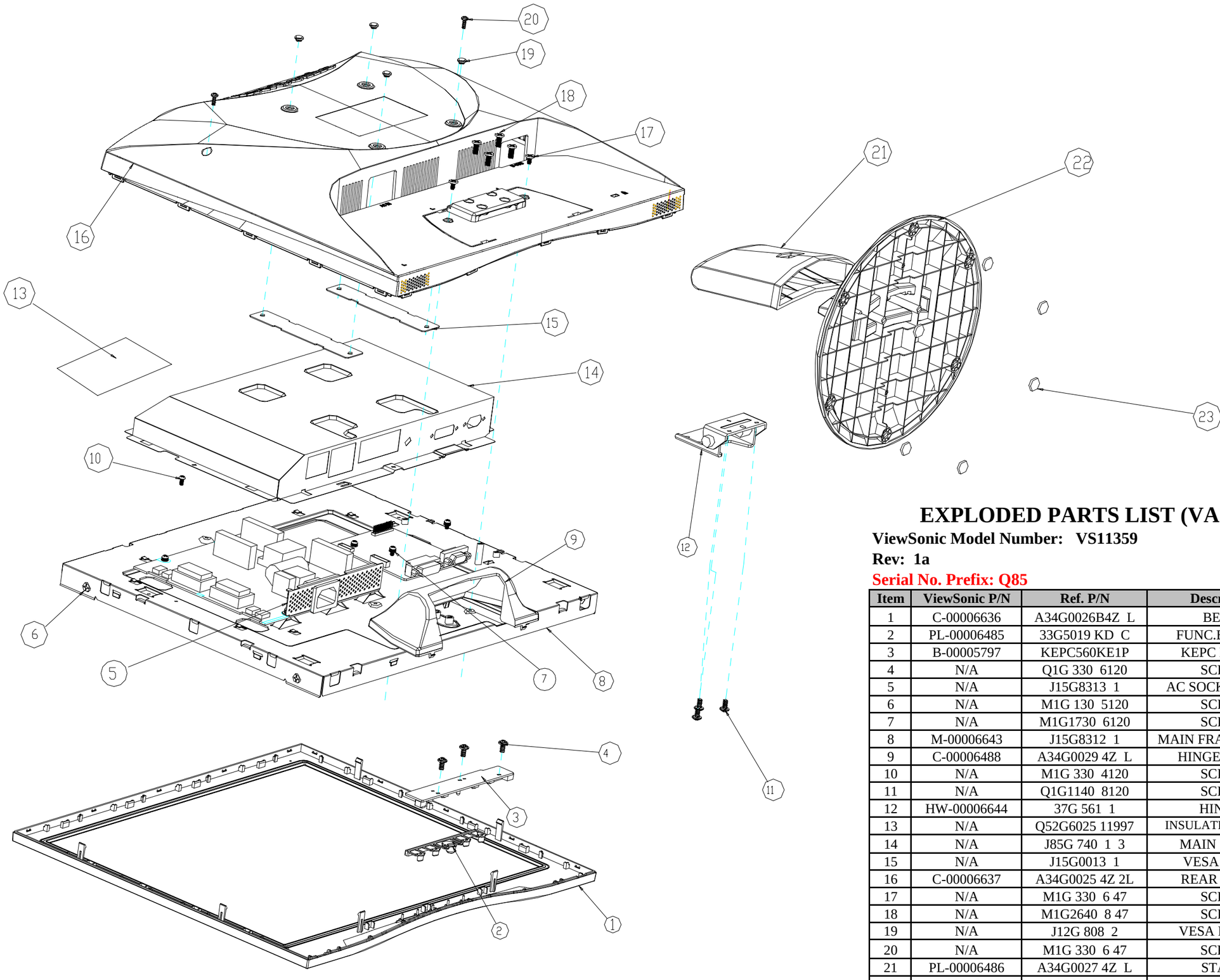
BOM LIST (VA703m-1)

ViewSonic Model Number: VS11280

Rev: 1b

Serial No. Prefix: Q86

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	B-00006489	AUPC780B4P	AUDIO BOARD			1
2	N/A	CBPC780KC5VWAP	CONVERSION BOARD			1
3	B-00005824	KEPC560KD9P	KEPC BOARD			1
4	B-00008145	PWPC742CV2P	POWER BOARD			1
5	N/A	23G3178709 4A	VSC17-LCD FRONT LOGO			1
6	N/A	23G3178709 6A	BIRD LOGO (E015-006)			1
7	HW-00006644	37G 561 1	HINGE			1
8	DC-00005812	40G 45760819A	MODEL NAME			1
9	DC-00003727	40G 459709 1B	CARTON LABEL			1
10	DC-00003729	40G 459709 4A	H/V WARNING LABEL			1
11	DC-00003731	40G 459709 5A	HI-POT LABEL FOR 17-LCD			1
12	DC-00005636	40G 58162435A	MANUAL P/N LABEL			1
13	DC-00003730	40G457B709 1A	Hg LABEL			1
14	DC-00005639	40G581B709 3A	8ms STICKER			1
15	DC-00005635	40G581B709 4A	S/N LABEL			2
16	HW-00006476	44G3231 12 A	EVA WASHER			1
17	P-00005642	45G 76 28 V3	PE BAG			1
18	P-00005643	45G 88606	PE BAG FOR BASE			1
19	P-00005644	45G 88607	PE BAG			1
20	P-00005645	45G 88609 B	EPE COVER			1
21	E-00006658	78G 455 3 K	SPEAKER,8OHM 1.5W			2
22	CB-00004972	89G 173 56 31	AUDIO CABLE			1
23	CB-00006702	89G 725HAA704	SIGNAL CABLE 1.5M			1
24	A-00003716	89G402A18N LS	POWER CORD			1
25	CB-00006638	95G8014 16702 X	KEY HARNESS			1
26	CB-00006639	95G8018 30695	LVDS			1
27	N/A	M1G 130 5120	SCREW M3X5	XN01A		4
28	N/A	M1G 330 4120	SCREW	XN01A		4
29	N/A	M1G 330 6 47 CR3	SCREW	XN01A		4
30	N/A	M1G1140 6120	SCREW	XN01A		1
31	N/A	M1G1730 6120	M3*6	XN01A		2
32	N/A	M1G1730 6120	M3*6	XN01B		3
33	N/A	M1G1730 6120	M3*6	XN01C		4
34	N/A	M1G2640 10 47 CR3	SCREW	XN01A		4
35	N/A	Q1G 330 6120	SCREW M3X6MM	XN01A		3
36	N/A	Q1G1140 8120	SCREW	XN01A		1
37	N/A	Q1G1140 10120	SCREW	XN01B		2
38	E-00008107	750GLB70A7P11N	CLAA170EA07P 17" LCD PAN			1
39	C-00006656	A34G0025 KR 1L	REAR COVER PSWG/W AUDIO			1
40	C-00006655	A34G0026AKD L	BEZEL			1
41	PL-00006512	A34G0027 KR L	STAND			1
42	C-00006513	A34G0028 KR L	BASE			1
43	C-00006514	A34G0029 KR L	HINGE COVER			1
44	M-00006643	J15G8312 2 SG	MAIN FRAME			1
45	N/A	J15G8313 1 SG	AC SOCKET BRKT			1
46	DC-00008142	J40G170T70912A	ID VA703M-C			1
47	DC-00006481	J40GSTAR709 1A	EPA LABEL			1
48	DC-00006660	J41G7801709 8B	QSG			1
49	N/A	J41G780170914A	INSERT CARD			1
50	P-00006647	J44G7003 1	EPS(L)			1
51	P-00006648	J44G7003 2	EPS(R)			1
52	N/A	J44G7003709 1B	CARTON			1
53	DC-00006657	J70G170170918A	CD MANUAL			1
54	N/A	J85G 740 1 3	MAIN SHIELD			1
55	N/A	Q52G6025 11997	INSULATION			1



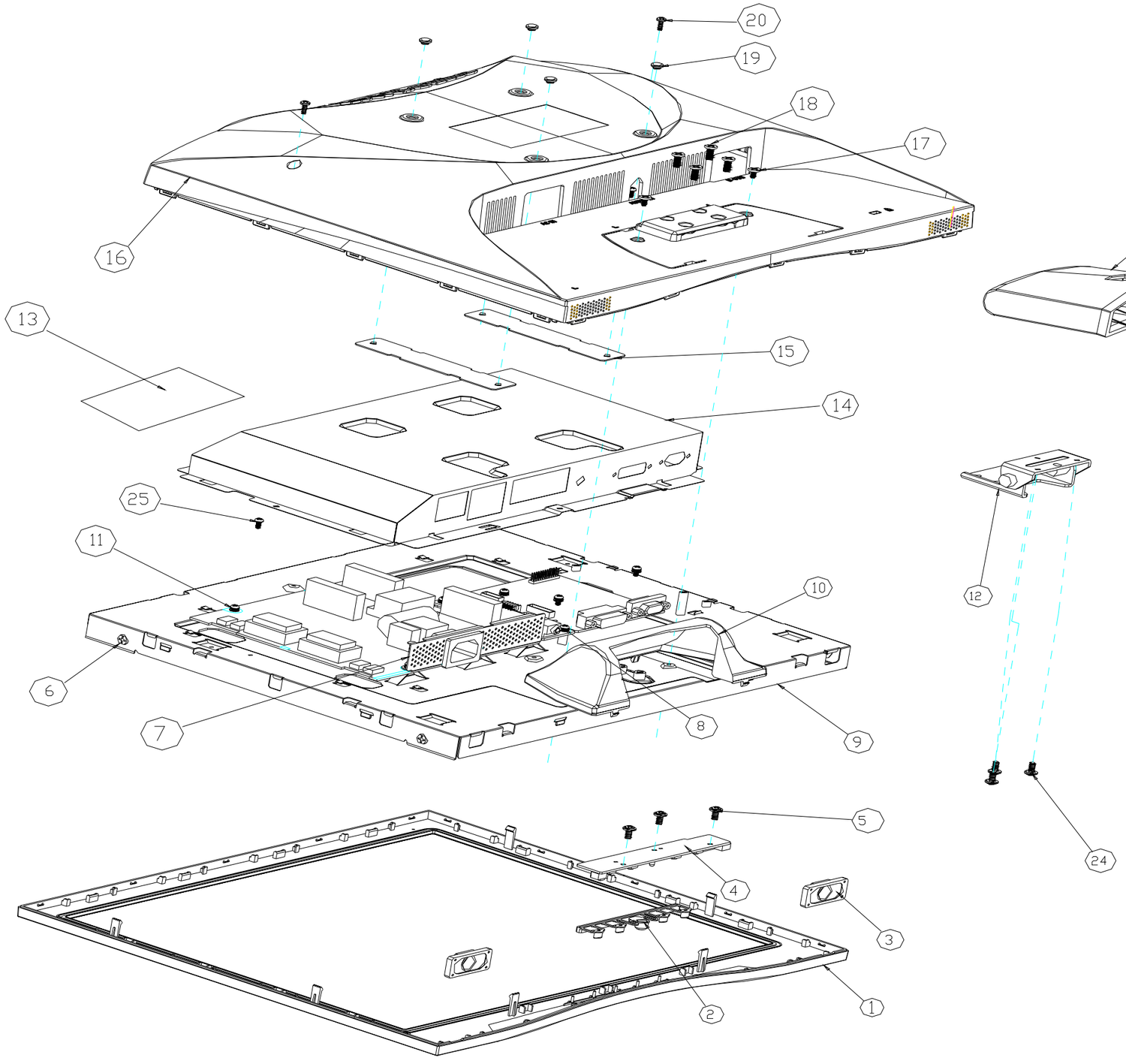
EXPLODED PARTS LIST (VA703b-1)

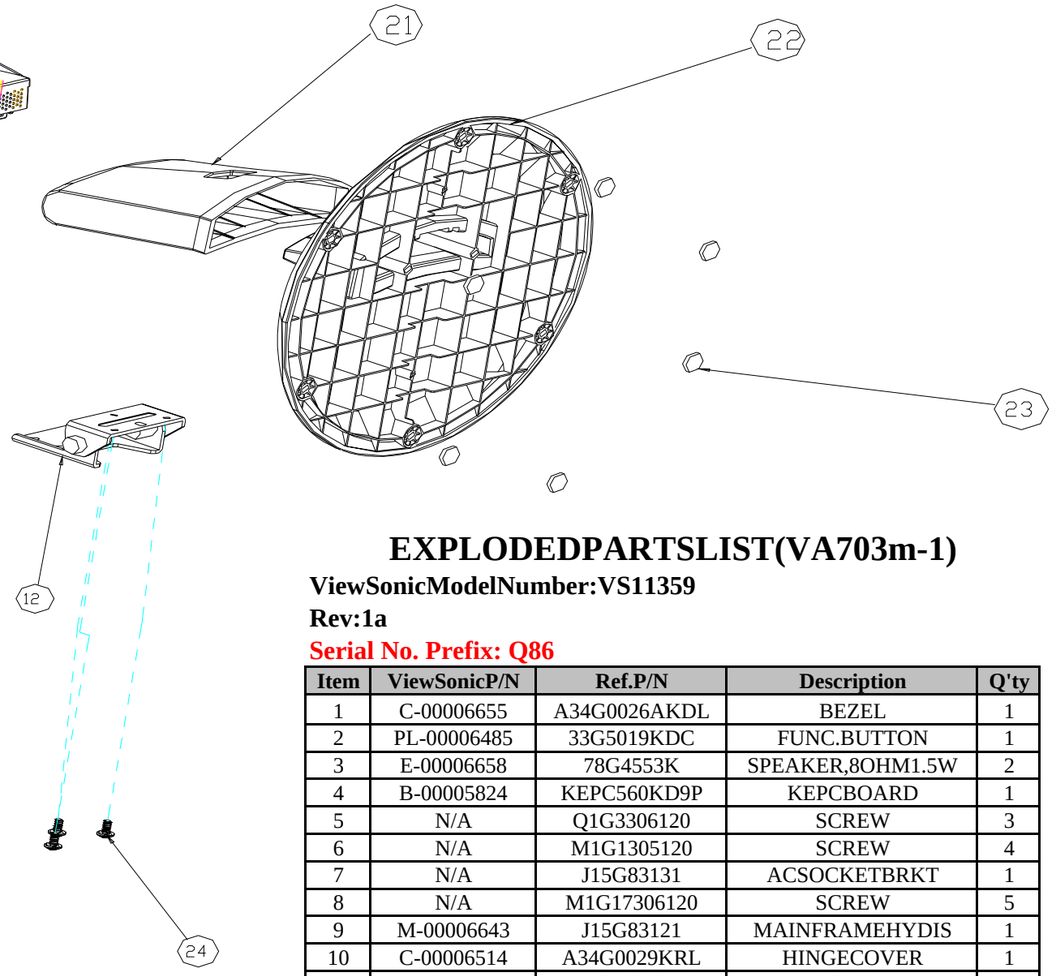
ViewSonic Model Number: VS11359

Rev: 1a

Serial No. Prefix: Q85

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	C-00006636	A34G0026B4Z L	BEZEL	1
2	PL-00006485	33G5019 KD C	FUNC.BUTTON	1
3	B-00005797	KEPC560KE1P	KEPC BOARD	1
4	N/A	Q1G 330 6120	SCREW	3
5	N/A	J15G8313 1	AC SOCKET BRKT	1
6	N/A	M1G 130 5120	SCREW	4
7	N/A	M1G1730 6120	SCREW	7
8	M-00006643	J15G8312 1	MAIN FRAME HYDIS	1
9	C-00006488	A34G0029 4Z L	HINGE COVER	1
10	N/A	M1G 330 4120	SCREW	4
11	N/A	Q1G1140 8120	SCREW	3
12	HW-00006644	37G 561 1	HINGE	1
13	N/A	Q52G6025 11997	INSULATION SPACER	1
14	N/A	J85G 740 1 3	MAIN SHIELD	1
15	N/A	J15G0013 1	VESA PLATE	2
16	C-00006637	A34G0025 4Z 2L	REAR COVER	1
17	N/A	M1G 330 6 47	SCREW	2
18	N/A	M1G2640 8 47	SCREW	4
19	N/A	J12G 808 2	VESA RUBBER	4
20	N/A	M1G 330 6 47	SCREW	2
21	PL-00006486	A34G0027 4Z L	STAND	1
22	C-00006487	A34G0028 4Z L	BASE	1
23	N/A	J12G 394800	FOOT	6





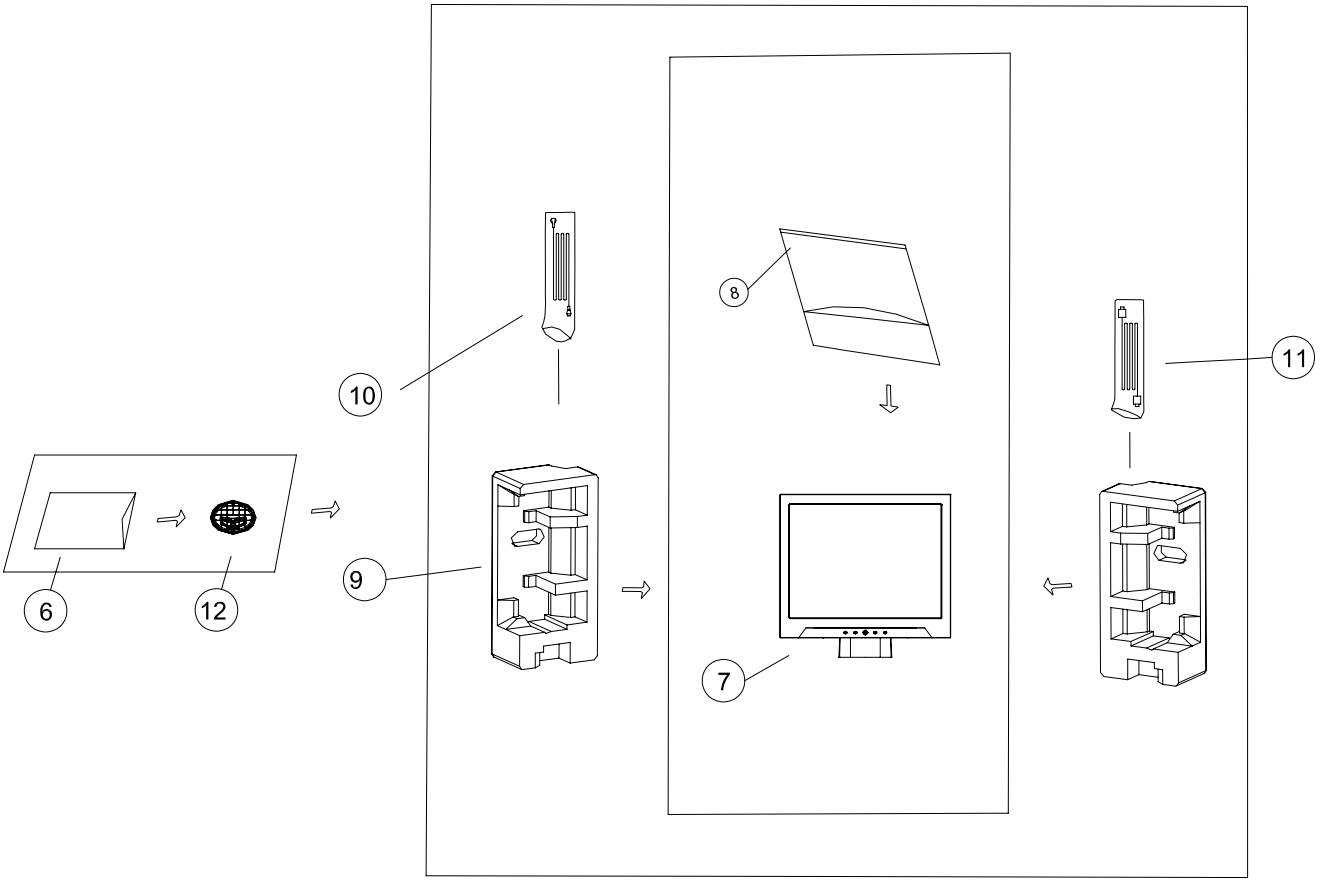
EXPLODEDPARTSLIST(VA703m-1)

ViewSonicModelNumber:VS11359

Rev:1a

Serial No. Prefix: Q86

Item	ViewSonicP/N	Ref.P/N	Description	Q'ty
1	C-00006655	A34G0026AKDL	BEZEL	1
2	PL-00006485	33G5019KDC	FUNC.BUTTON	1
3	E-00006658	78G4553K	SPEAKER,8OHM1.5W	2
4	B-00005824	KEPC560KD9P	KEPCBOARD	1
5	N/A	Q1G3306120	SCREW	3
6	N/A	M1G1305120	SCREW	4
7	N/A	J15G83131	ACSOCKETBRKT	1
8	N/A	M1G17306120	SCREW	5
9	M-00006643	J15G83121	MAINFRAMEHYDIS	1
10	C-00006514	A34G0029KRL	HINGECOVER	1
11	N/A	M1G17306120	SCREW	4
12	HW-00006644	37G5611	HINGE	1
13	N/A	Q52G602511997	INSULATION SPACER	1
14	N/A	J85G74013	MAINSHIELD	1
15	N/A	J15G00131	VESAPLATE	2
16	C-00006656	A34G0025KR1L	REARCOVER	1
17	N/A	M1G330647	SCREW	2
18	N/A	M1G2640847	SCREW	4
19	N/A	J12G8081	VESARUBBER	4
20	N/A	M1G330647	SCREW	2
21	PL-00006512	A34G0027KRL	STAND	1
22	C-00006513	A34G0028KRL	BASE	1
23	N/A	J12G394800	FOOT	6
24	N/A	Q1G11408120	SCREW	3
25	N/A	M1G3304120	SCREW	4

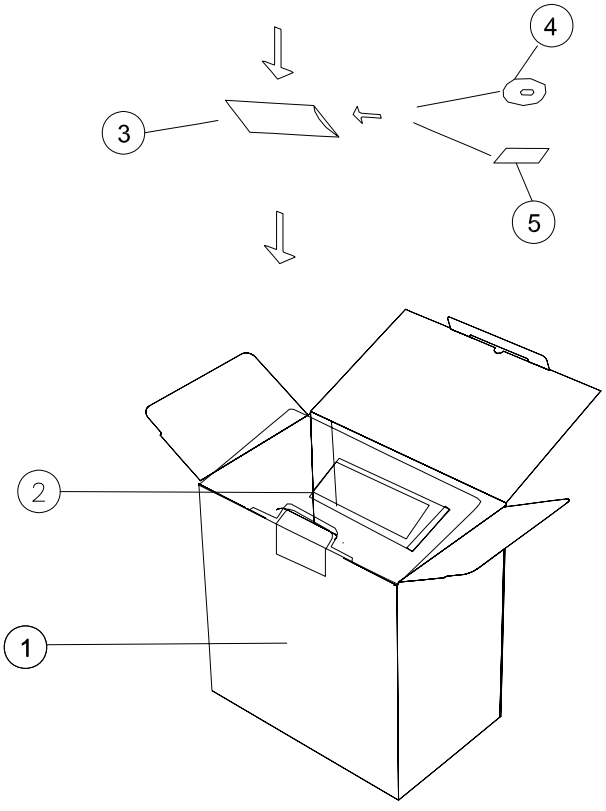


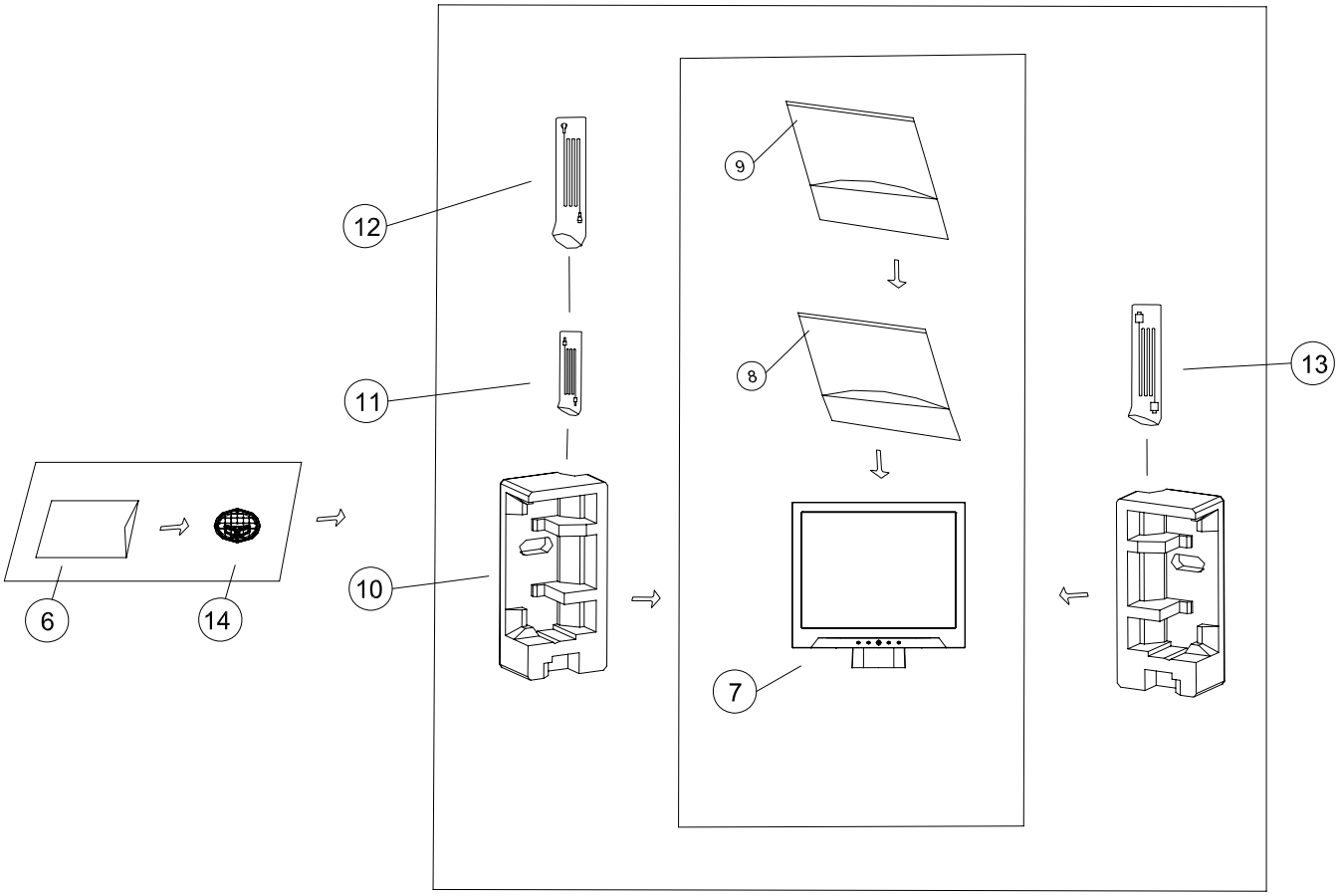
PACKING PART LIST (VA703b-1)

ViewSonic Model Number: VS11359

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	P-00006649	J44G7003709 2A	CARTON	1
2	N/A	50G 600 2/3	HANDLE1/2	1
3	P-00005642	45G 76 28 V3	PE BAG	1
4	DC-00006640	J70G170170913A	CD MANUAL	1
5	DC-00005803	41G7801709 7A	QSG	1
6	P-00005643	45G 88606	PE BAG FOR BASE	1
7	N/A	T780KK5HKUVWNBP	MONITOR	1
8	P-00005644	45G 88607	PE BAG	1
9	N/A	J44G7003 1/2	EPS	1
10	A-00003716	89G402A18N LS	POWER CORD	1
11	CB-00005795	89G 725HAA903	SIGNAL CABLE	1
12	C-00006487	A34G0028 4Z L	BASE	1



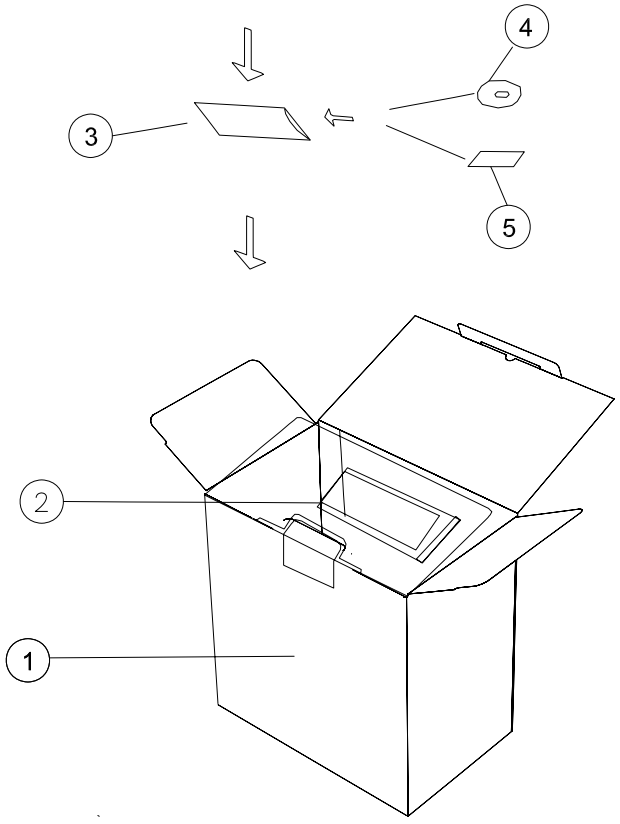


PACKING PARTS LIST (VA703m-1)

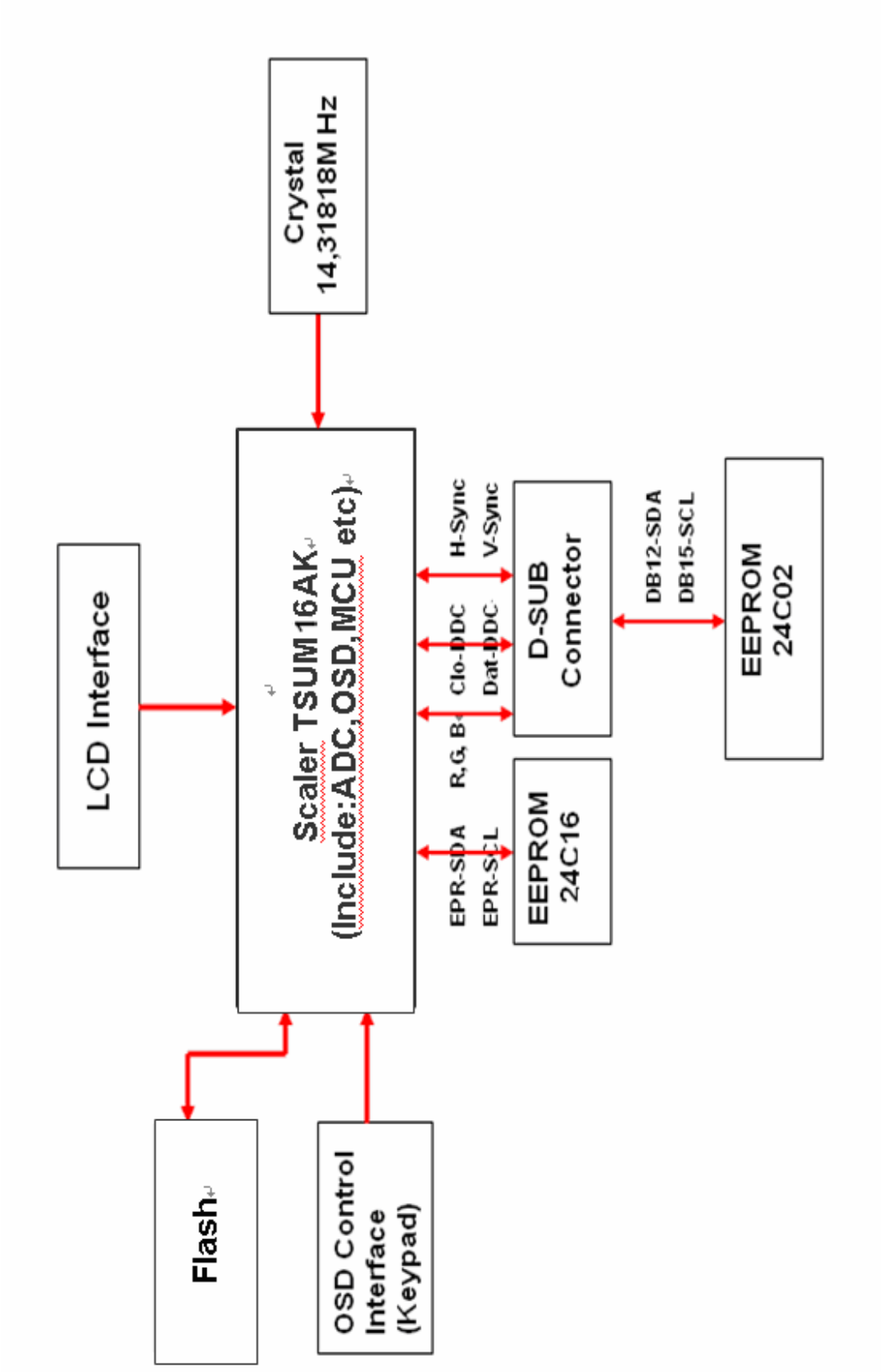
ViewSonic Model Number: VS11359

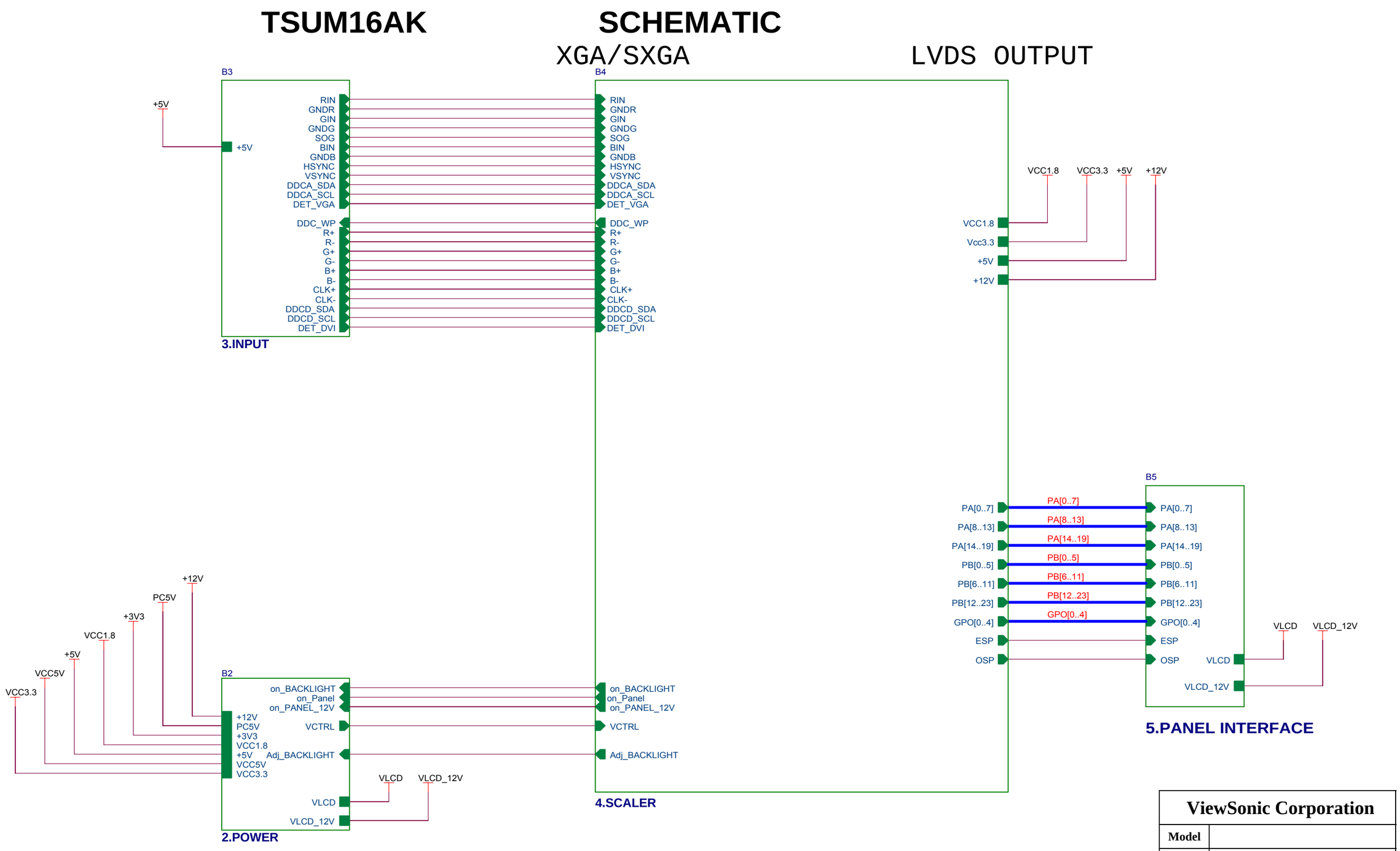
Rev: 1a

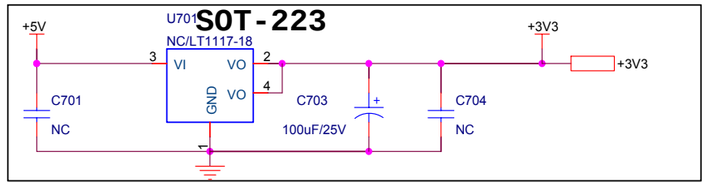
Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1	N/A	J44G7003709 2A	CARTON	1
2	N/A	50G 600 2/3	HANDLE1/2	1
3	N/A	45G 76 28 V3	PE BAG	1
4	N/A	J70G170170913A	CD MANUAL	1
5	DC-00006496	41G7801709 8A	QSG	1
6	N/A	45G 88606	PE BAG FOR BASE	1
7	N/A	T780KK5HKUVWABP	MONITOR	1
8	N/A	45G 88609 B	EPE BAG	1
9	N/A	45G 88607	PE BAG	1
10	P-00006647	J44G7003 1	EPS	1
	P-00006648	J44G7003 2	EPS	1
11	N/A	89G 173 56 31	AUDIO CABLE	1
12	N/A	89G402A18N LS	POWER CORD	1
13	N/A	89G 725HAA903	SIGNAL CABLE	1
14	C-00006513	A34G0028 KR L	BASE	1

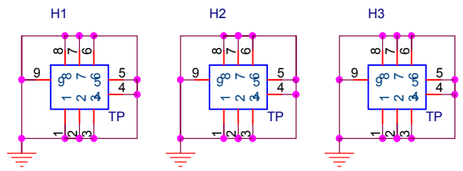


9. Block Diagram



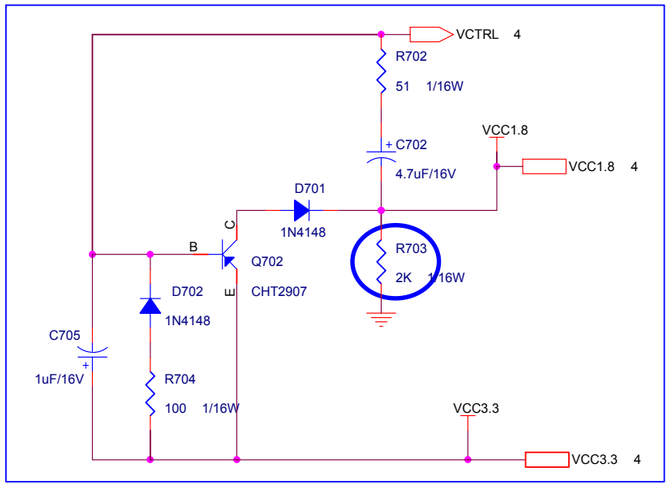

TSUM16AK
SCHEMATIC
XGA/SXGA
LVDS OUTPUT
B3
+5V
RIN
GNDR
GIN
GNDG
SOG
BIN
GNDB
HSYNC
VSYNC
DDCA_SDA
DDCA_SCL
DET_VGA
DDC_WP
R+
R-
G+
G-
B+
B-
CLK+
CLK-
DDCD_SDA
DDCD_SCL
DET_DVI
3.INPUT
B4
VCC1.8
VCC3.3
+5V
+12V
B5
PA[0..7]
PA[8..13]
PA[14..19]
PB[0..5]
PB[6..11]
PB[12..23]
GPO[0..4]
ESP
OSP
VLCD
VLCD_12V
5.PANEL INTERFACE
+12V
PC5V
+3V3
VCC1.8
+5V
VCC5V
VCC3.3
B2
on_BACKLIGHT
on_Panel
on_PANEL_12V
VCTRL
Adj_BACKLIGHT
2.POWER
4.SCALER
ViewSonic Corporation
Model
Title
TOP
Date
Rev:



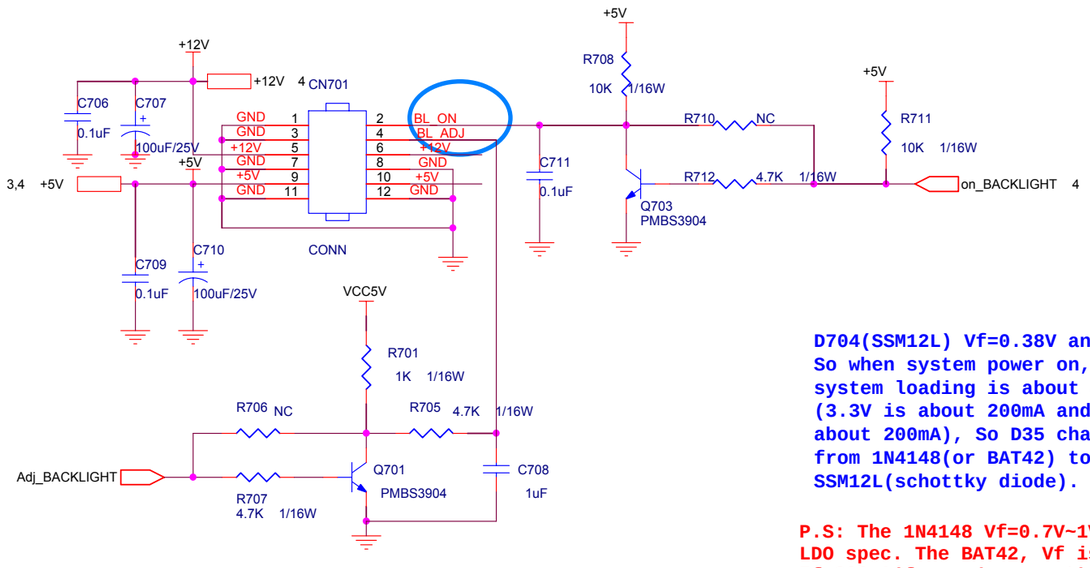


BL_ADJ(DC)	R31	C51	R32	R29	R33	Q4
0V ~ 3.3V	4.7K	1UF	0	X	X	X
0V ~ 5V	4.7K	1UF	X	1K	4.7K	MMBT3904

BL_ADJ	R31	C32
P W M	47	N.C
D C	4K7	1uF

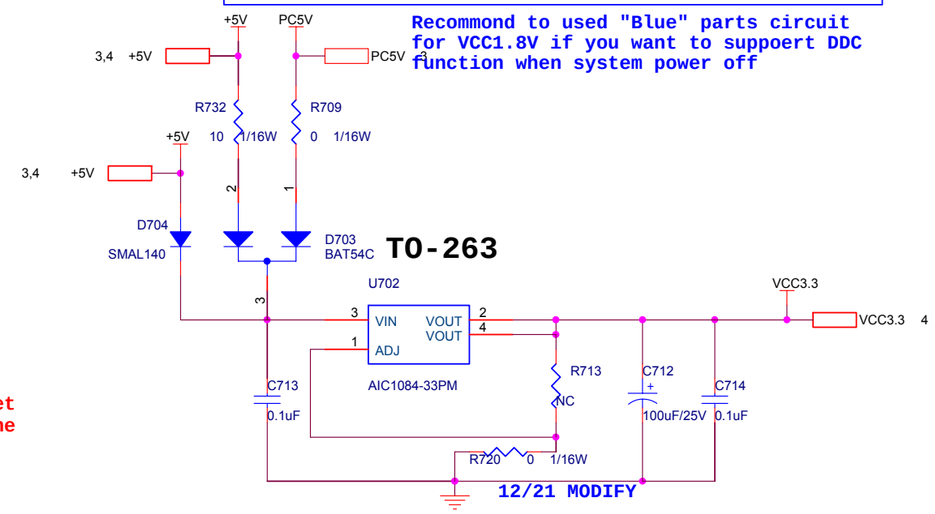


Recommond to used "Blue" parts circuit for VCC1.8V if you want to suppoert DDC function when system power off

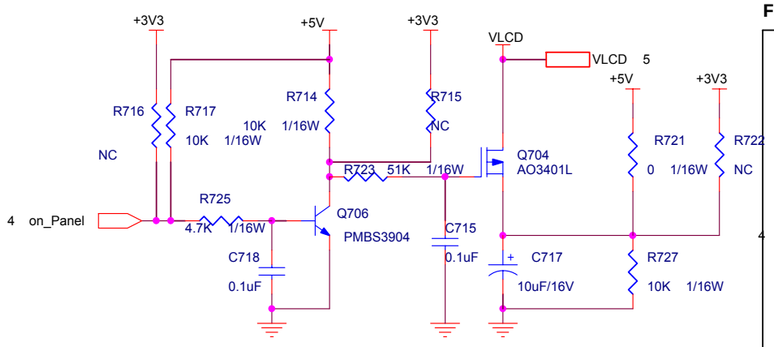


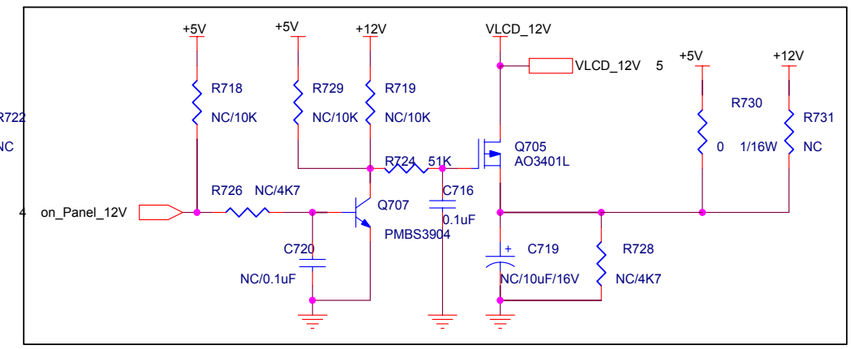
D704(SSM12L) Vf=0.38V and If=1A. So when system power on, the system loading is about 400mA (3.3V is about 200mA and 1.8V is about 200mA), So D35 changed from 1N4148(or BAT42) to SSM12L(schottky diode).

P.S: The 1N4148 Vf=0.7V~1V can't meet LDO spec. The BAT42, Vf is OK but the If=200mA(forward current) can not meet current spec.

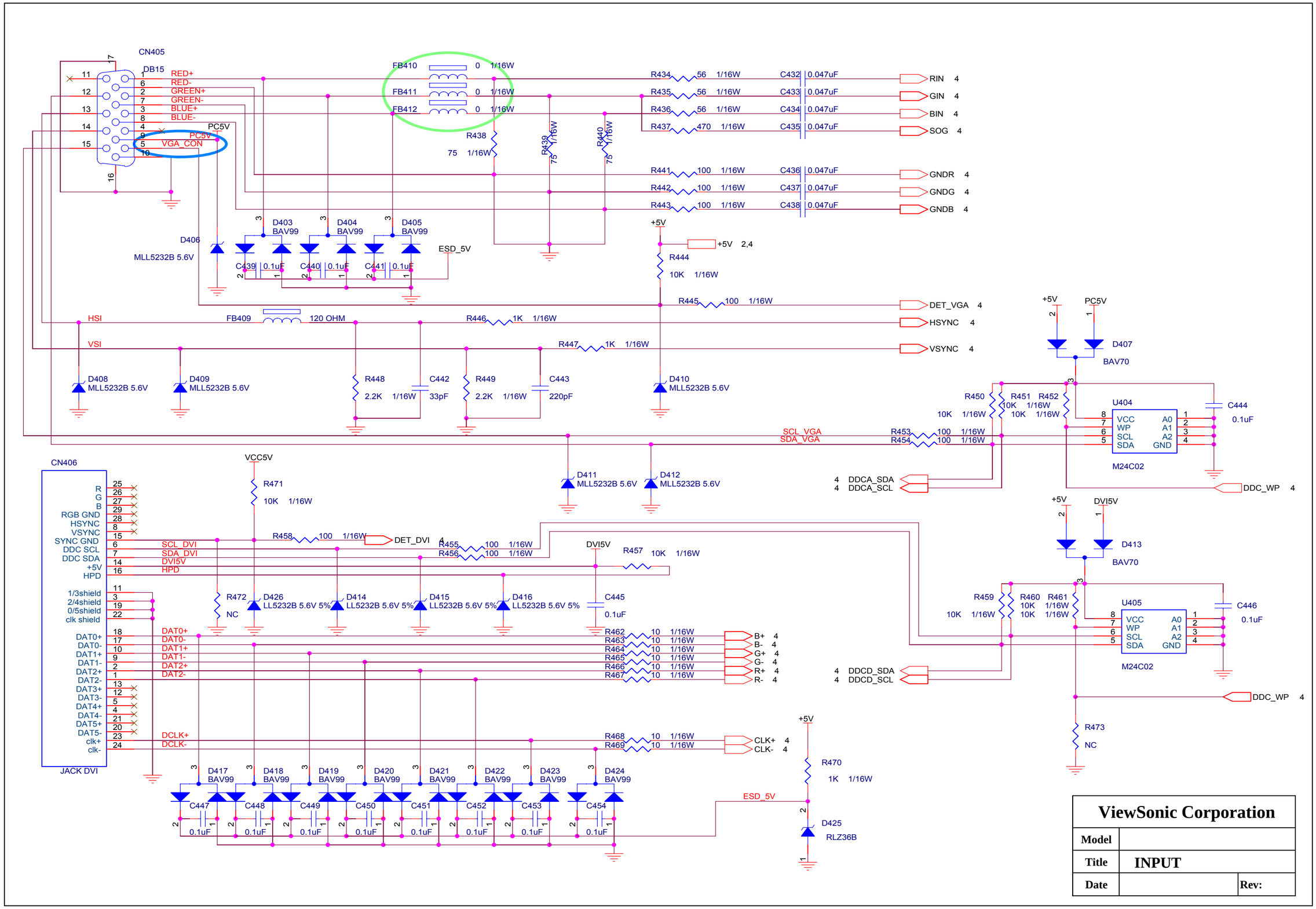


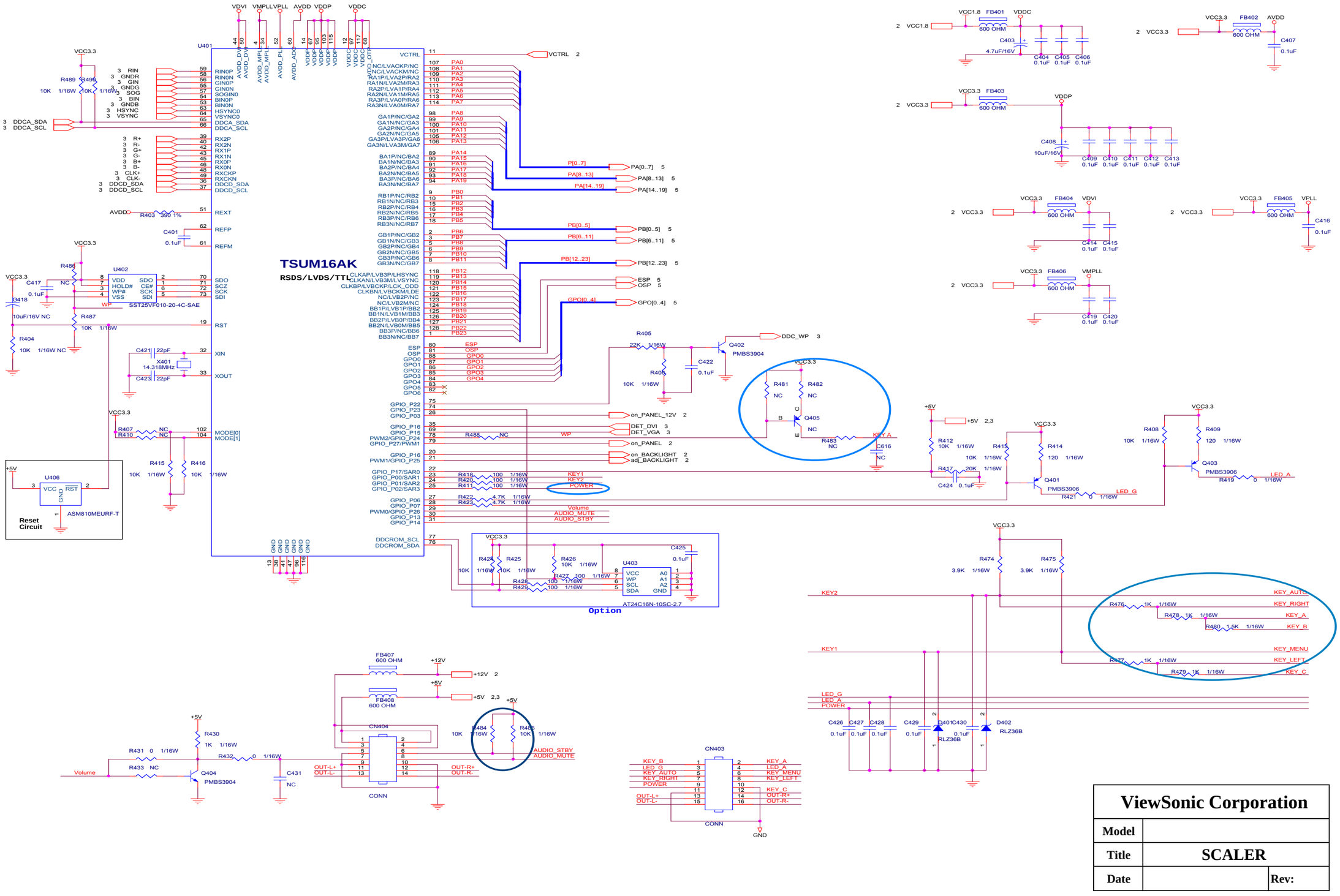
For RSDS and Panel VCC=12V



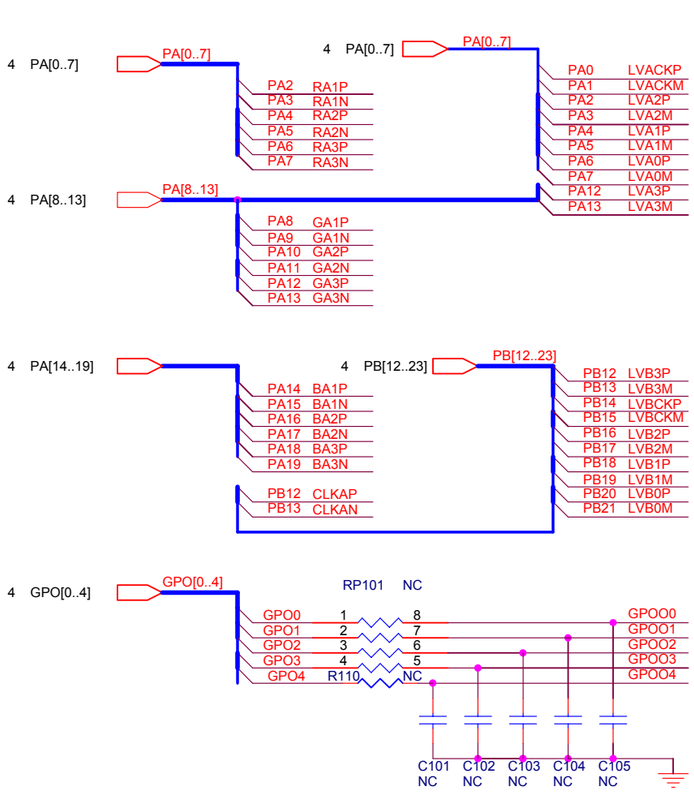


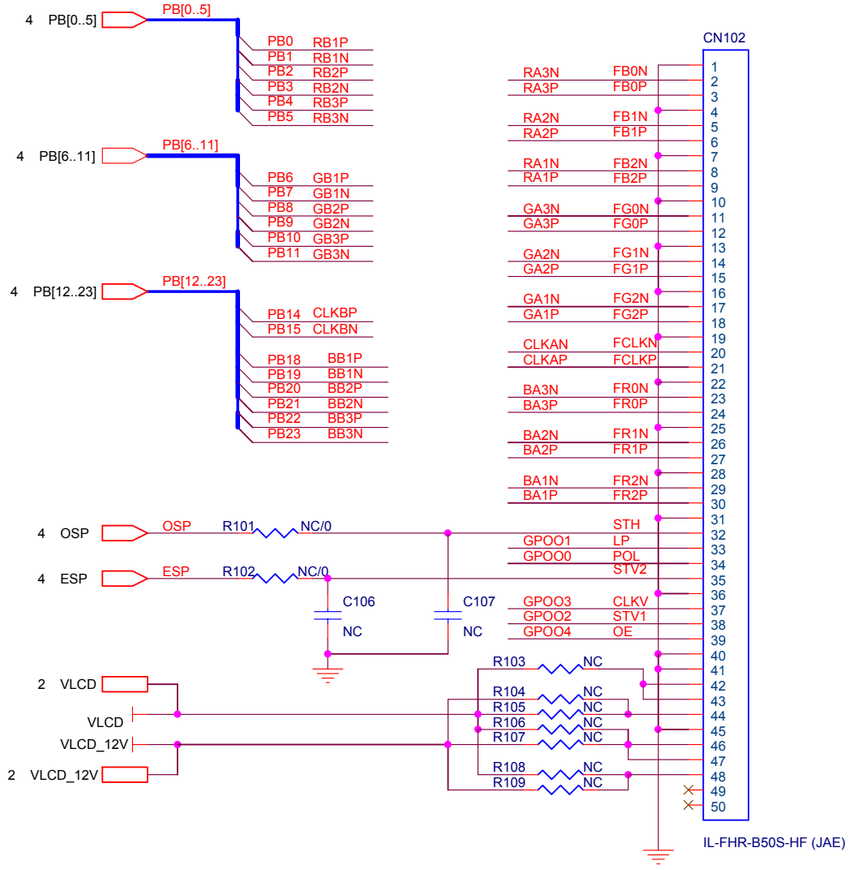
ViewSonic Corporation		
Model		
Title	POWER	
Date		Rev:

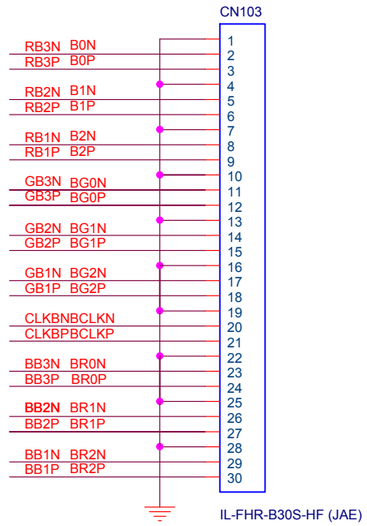

CN405
DB15
RED+
RED-
GREEN+
GREEN-
BLUE+
BLUE-
PC5V
PC5V
VGA_CON
FB410 0 1/16W
FB411 0 1/16W
FB412 0 1/16W
R438 75 1/16W
R439 75 1/16W
R440 75 1/16W
R434 56 1/16W
R435 56 1/16W
R436 56 1/16W
R437 470 1/16W
C432 0.047uF
C433 0.047uF
C434 0.047uF
C435 0.047uF
RIN 4
GIN 4
BIN 4
SOG 4
R441 100 1/16W
R442 100 1/16W
R443 100 1/16W
C436 0.047uF
C437 0.047uF
C438 0.047uF
GNDR 4
GNDG 4
GNDB 4
D403 BAV99
D404 BAV99
D405 BAV99
D406 MLL5232B 5.6V
ESD_5V
C439 0.1uF
C440 0.1uF
C441 0.1uF
+5V
+5V 2,4
R444 10K 1/16W
R445 100 1/16W
DET_VGA 4
HSI
FB409 120 OHM
R446 1K 1/16W
HSYNC 4
VSI
R447 1K 1/16W
VSYNC 4
D408 MLL5232B 5.6V
D409 MLL5232B 5.6V
R448 2.2K 1/16W
C442 33pF
R449 2.2K 1/16W
C443 220pF
D410 MLL5232B 5.6V
+5V
PC5V
D407 BAV70
R450 10K 1/16W
R451 10K 1/16W
R452 10K 1/16W
U404
M24C02
C444 0.1uF
SCL_VGA
SDA_VGA
R453 100 1/16W
R454 100 1/16W
4 DDCA_SDA
4 DDCA_SCL
DDC_WP 4
CN406
JACK DVI
VCC5V
R471 10K 1/16W
D411 MLL5232B 5.6V
D412 MLL5232B 5.6V
R458 100 1/16W
DET_DVI 4
R455 100 1/16W
R456 100 1/16W
DVI5V
R457 10K 1/16W
+5V
DVI5V
D413 BAV70
SCL_DVI
SDA_DVI
DVI5V
HPD
R472 NC
D426 LL5232B 5.6V 5%
D414 LL5232B 5.6V 5%
D415 LL5232B 5.6V 5%
D416 LL5232B 5.6V 5%
C445 0.1uF
R459 10K 1/16W
R460 10K 1/16W
R461 10K 1/16W
U405
M24C02
C446 0.1uF
4 DDCD_SDA
4 DDCD_SCL
DDC_WP 4
R473 NC
DAT0+
DAT0-
DAT1+
DAT1-
DAT2+
DAT2-
R462 10 1/16W
R463 10 1/16W
R464 10 1/16W
R465 10 1/16W
R466 10 1/16W
R467 10 1/16W
B+ 4
B- 4
G+ 4
G- 4
R+ 4
R- 4
DCLK+
DCLK-
R468 10 1/16W
R469 10 1/16W
CLK+ 4
CLK- 4
D417 BAV99
D418 BAV99
D419 BAV99
D420 BAV99
D421 BAV99
D422 BAV99
D423 BAV99
D424 BAV99
C447 0.1uF
C448 0.1uF
C449 0.1uF
C450 0.1uF
C451 0.1uF
C452 0.1uF
C453 0.1uF
C454 0.1uF
+5V
R470 1K 1/16W
ESD_5V
D425 RLZ36B
ViewSonic Corporation
Model
Title INPUT
Date
Rev:

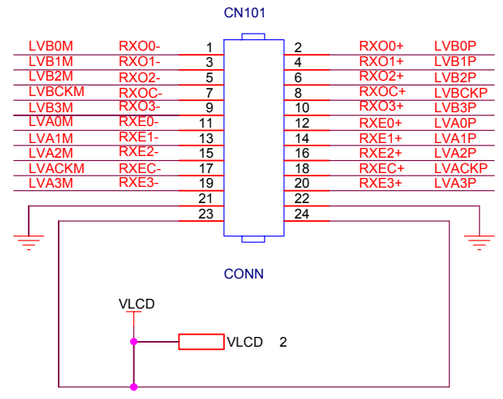


ViewSonic Corporation		
Model		
Title	SCALER	
Date		Rev:





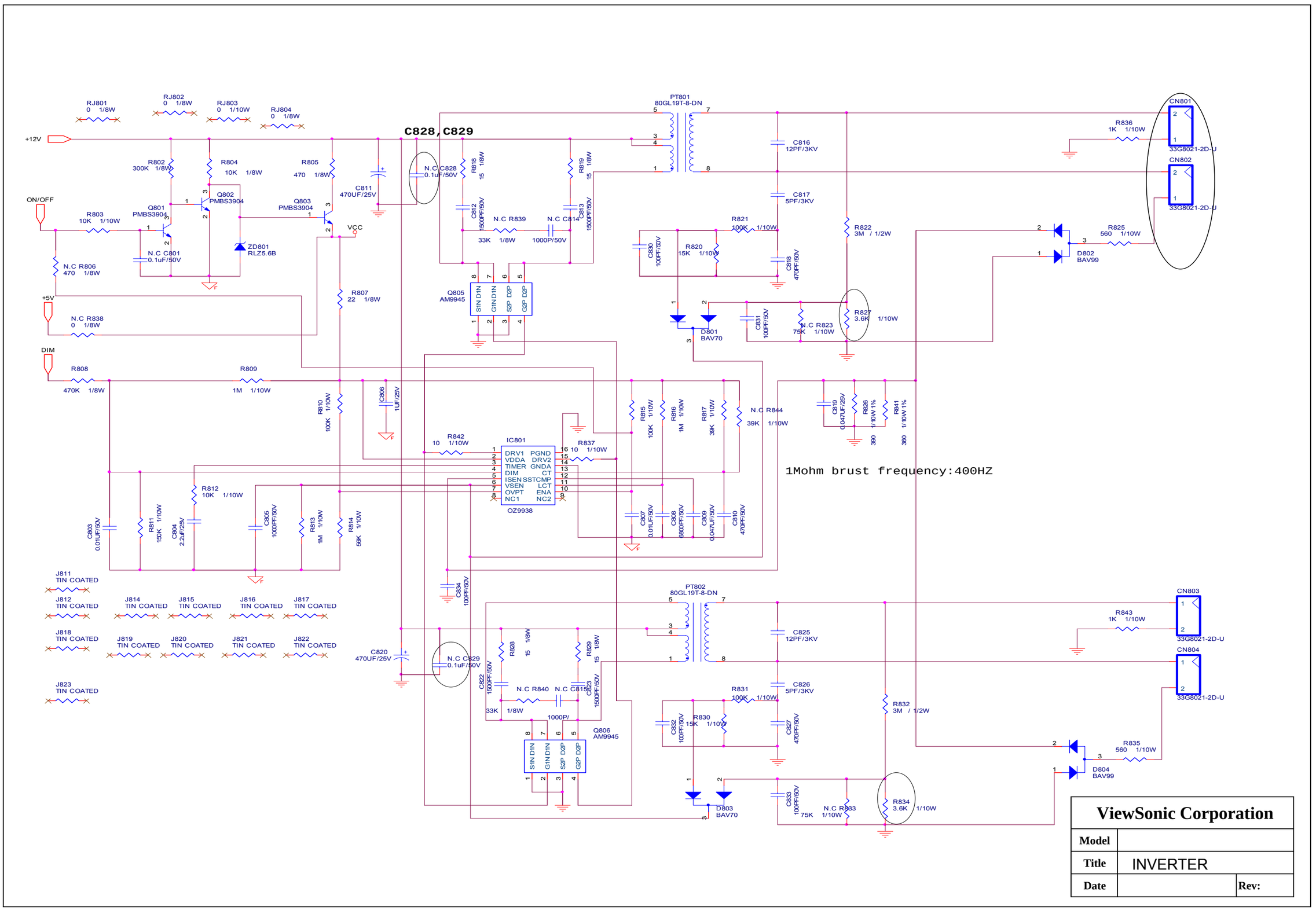


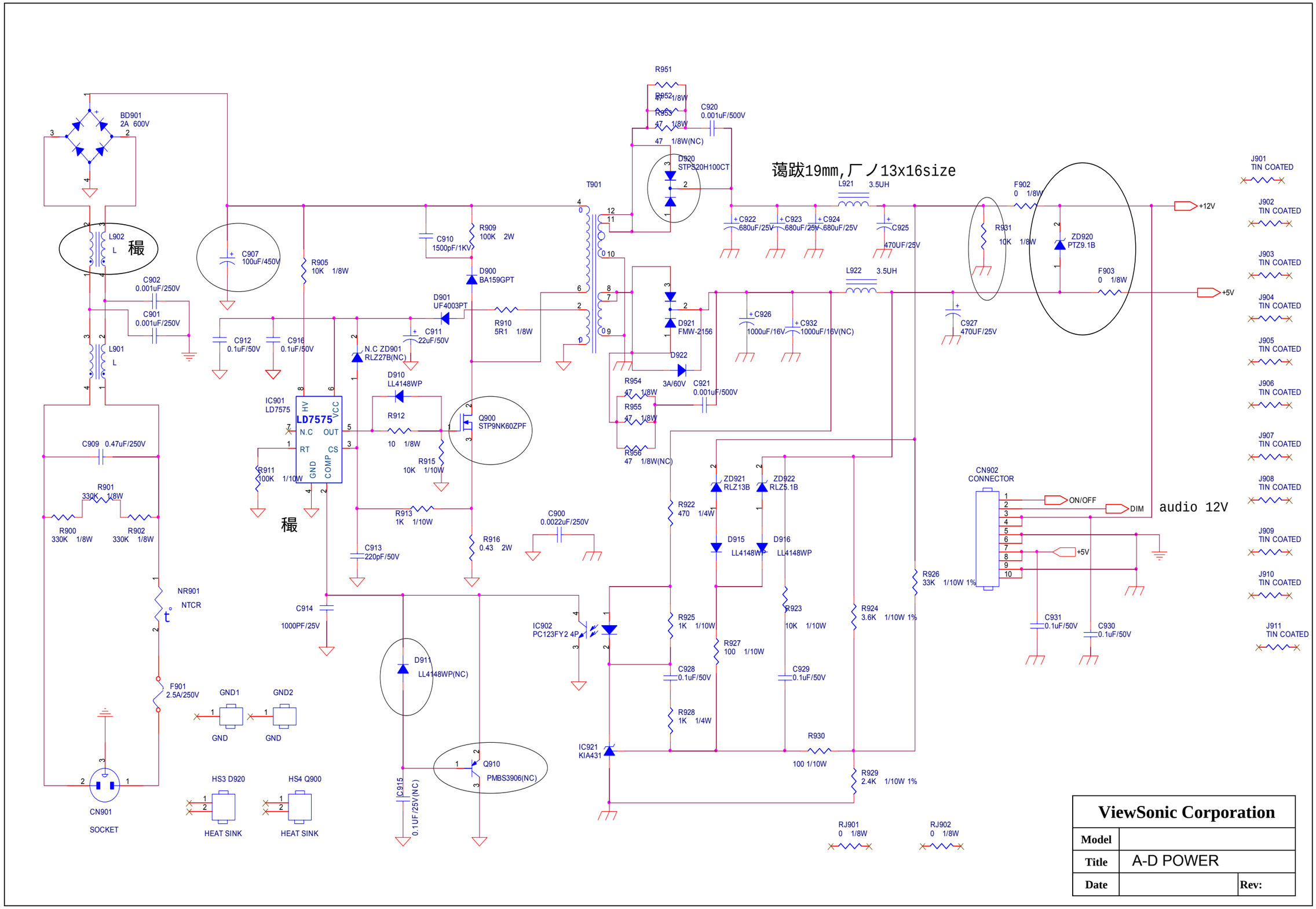


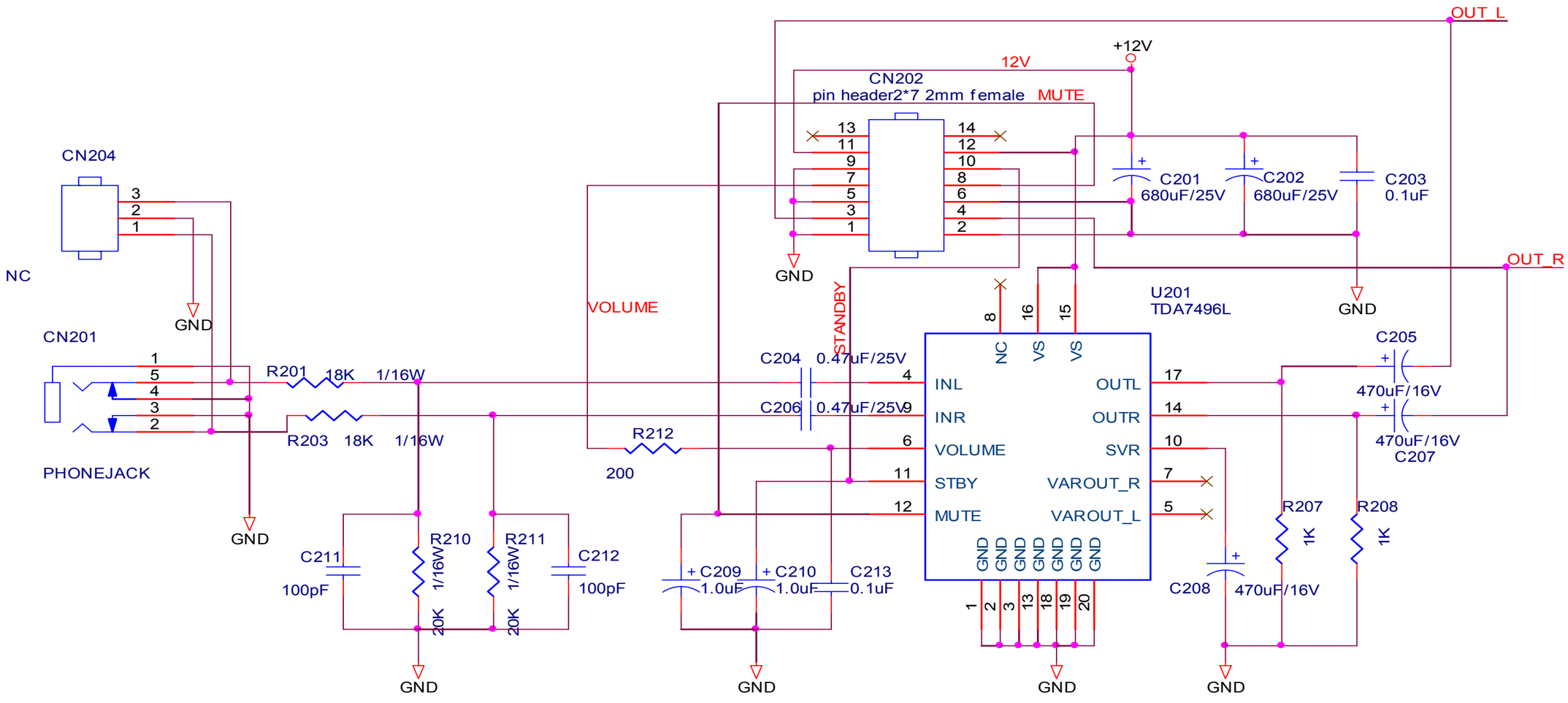
	CN7	CN8	CN9	RP1	R88	R89	R91	Table 1
LVDS Panel	X	X	V	X	X	X	X	X
RSDS Panel	V	V	X	V	V	V	V	V

Table 1	R90	R92	R93	R94	R95	R96	R97
AU 17	NC	NC	5V 0R	5V 0R	NC	5V 0R	NC
QDI 17 CPT 17	3.3V 0R	12V 0R	NC	NC	12V 0R	NC	12V 0R
INNOLUX 15	3.3V 0R	NC	3.3V 0R	NC	NC	NC	NC
HannStar 15 CPT 15	3.3V 0R	NC	3.3V 0R	NC	12V 0R	NC	NC
LG 15	3.3V 0R	NC	3.3V 0R	NC	NC	NC	NC
Innolux 17"	NC	NC	3.3V 0R	3.3V 0R	NC	3.3V 0R	NC

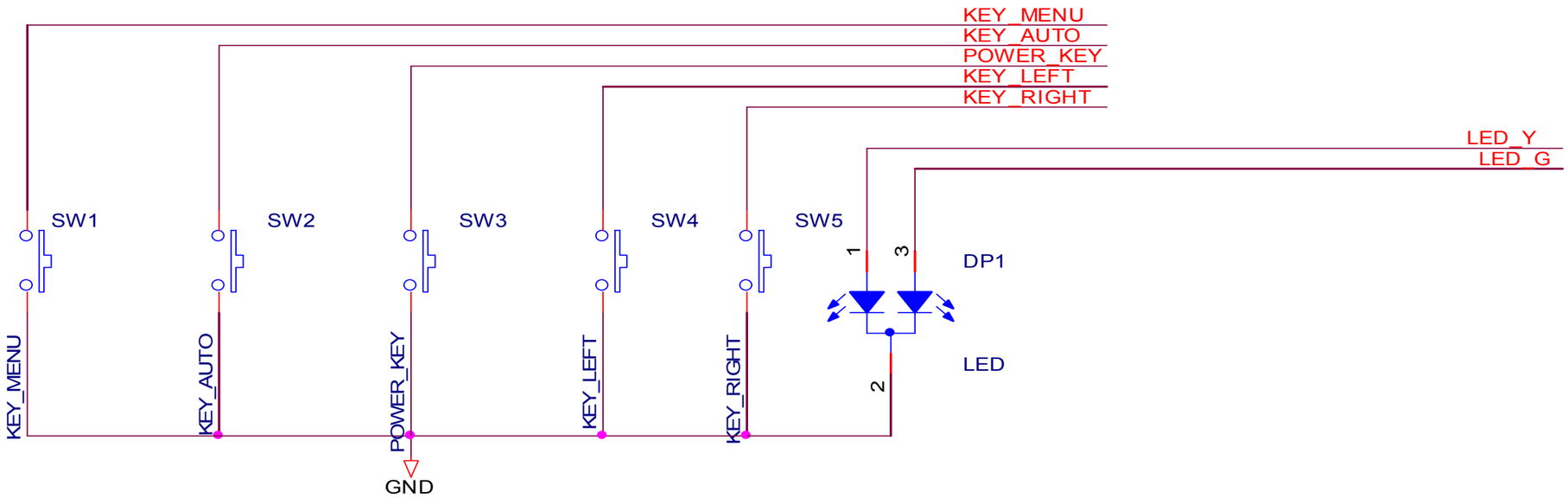
ViewSonic Corporation		
Model		
Title	PANEL INTERFACE	
Date		Rev:

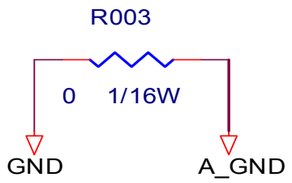

RJ801 0 1/8W
RJ802 0 1/8W
RJ803 0 1/10W
RJ804 0 1/8W
+12V
C828,C829
PT801 80GL19T-8-DN
CN801
CN802
33G8021-2D-U
R836 1K 1/10W
R802 300K 1/8W
R804 10K 1/8W
R805 470 1/8W
C811 470UF/25V
N.C C828 0.1uF/50V
R818 15 1/8W
R819 15 1/8W
C812 1500PF/50V
C813 1500PF/50V
N.C R839 33K 1/8W
N.C C814 1000P/50V
C816 12PF/3KV
C817 5PF/3KV
ON/OFF
Q801 PMBS3904
Q802 PMBS3904
Q803 PMBS3904
ZD801 RLZ5.6B
R803 10K 1/10W
N.C C801 0.1uF/50V
VCC
R821 100K 1/10W
C830 100PF/50V
R820 15K 1/10W
C818 470PF/50V
R822 3M / 1/2W
R825 560 1/10W
D802 BAV99
N.C R806 470 1/8W
+5V
R807 22 1/8W
Q805 AM9945
S1N D1N G1N D1N S2P D2P G2P D2P
N.C R838 0 1/8W
D801 BAV70
C831 100PF/50V
N.C R823 75K 1/10W
R827 3.6K 1/10W
DIM
R808 470K 1/8W
R809 1M 1/10W
C806 1UF/25V
R810 100K 1/10W
R842 10 1/10W
IC801
DRV1 PGND
VDDA DRV2
TIMER GNDA
DIM CT
ISEN SSTCMP
VSEN LCT
OVPT ENA
NC1 NC2
OZ9938
R837 10 1/10W
R815 100K 1/10W
R816 1M 1/10W
R817 39K 1/10W
N.C R844 39K 1/10W
C819 0.047UF/25V
R826 1/10W 1%
R841 1/10W 1%
390
360
R812 10K 1/10W
C803 0.01UF/50V
R811 150K 1/10W
C804 2.2UF/25V
C805 1000PF/50V
R813 1M 1/10W
R814 56K 1/10W
C807 0.01UF/50V
C808 6800PF/50V
C809 0.047UF/50V
C810 470PF/50V
1Mohm brust frequency:400HZ
J811 TIN COATED
J812 TIN COATED
J814 TIN COATED
J815 TIN COATED
J816 TIN COATED
J817 TIN COATED
J818 TIN COATED
J819 TIN COATED
J820 TIN COATED
J821 TIN COATED
J822 TIN COATED
J823 TIN COATED
C834 100PF/50V
PT802 80GL19T-8-DN
CN803
CN804
R843 1K 1/10W
C820 470UF/25V
N.C C829 0.1uF/50V
R828 15 1/8W
R829 15 1/8W
C822 1500PF/50V
C823 1500PF/50V
N.C R840 33K 1/8W
N.C C815 1000P/
C825 12PF/3KV
C826 5PF/3KV
R831 100K 1/10W
R830 15K 1/10W
C832 100PF/50V
C827 470PF/50V
R832 3M / 1/2W
Q806 AM9945
R835 560 1/10W
D804 BAV99
D803 BAV70
C833 100PF/50V
N.C R833 75K 1/10W
R834 3.6K 1/10W
ViewSonic Corporation
Model
Title INVERTER
Date
Rev:

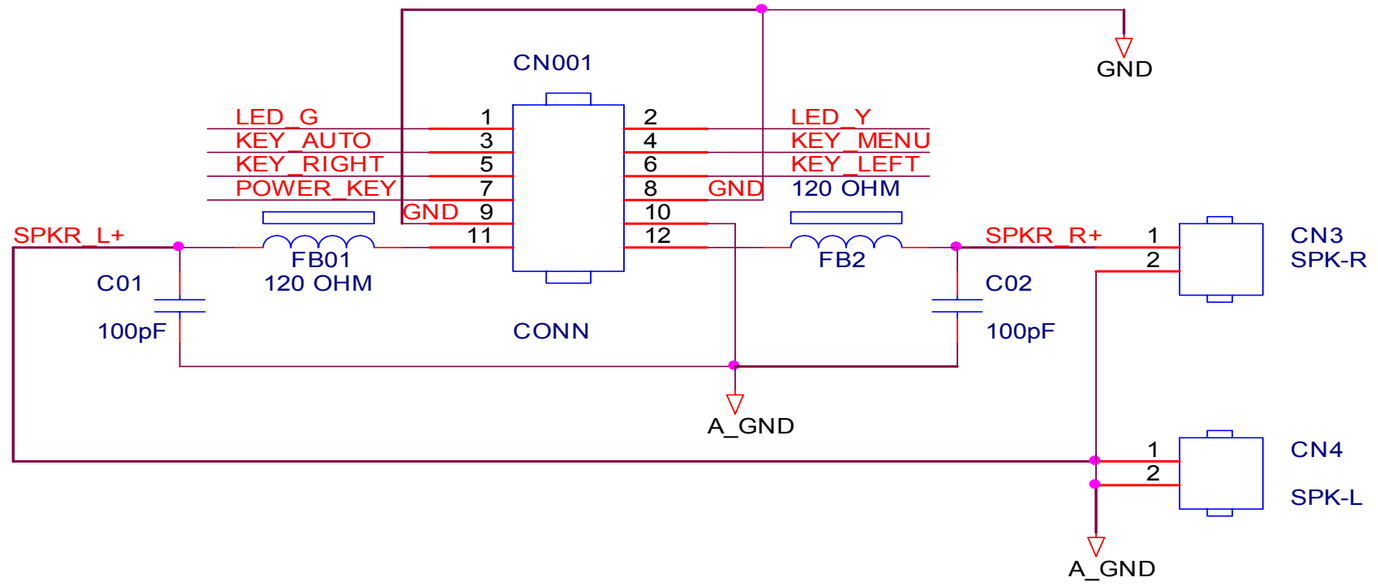

BD901
2A 600V
L902
L
穩
C902
0.001uF/250V
C901
0.001uF/250V
L901
L
C909 0.47uF/250V
R901
330K 1/8W
R900
330K 1/8W
R902
330K 1/8W
NR901
NTCR
F901
2.5A/250V
CN901
SOCKET
GND1
GND
GND2
GND
HS3 D920
HEAT SINK
HS4 Q900
HEAT SINK
C907
100uF/450V
R905
10K 1/8W
C912
0.1uF/50V
C916
0.1uF/50V
IC901
LD7575
HV
VCC
N.C
OUT
RT
CS
GND
COMP
R911
100K 1/10W
穩
N.C ZD901
RLZ27B(NC)
C911
22uF/50V
D910
LL4148WP
R912
10 1/8W
R915
10K 1/10W
R913
1K 1/10W
C913
220pF/50V
C910
1500pF/1KV
R909
100K 2W
D900
BA159GPT
D901
UF4003PT
R910
5R1 1/8W
R916
0.43 2W
C914
1000PF/25V
D911
LL4148WP(NC)
C915
0.1UF/25V(NC)
Q900
STP9NK60ZPF
Q910
PMBS3906(NC)
T901
R951
R952
47 1/8W
R953
47 1/8W
47 1/8W(NC)
C920
0.001uF/500V
D920
STPS20H100CT
L921 3.5UH
C922
680uF/25V
C923
680uF/25V
C924
680uF/25V
C925
470UF/25V
L922 3.5UH
D921
FMW-2156
C926
1000uF/16V
C932
1000uF/16V(NC)
C927
470UF/25V
D922
3A/60V
C921
0.001uF/500V
R954
47 1/8W
R955
47 1/8W
R956
47 1/8W(NC)
ZD921
RLZ13B
ZD922
RLZ5.1B
R922
470 1/4W
D915
LL4148WP
D916
LL4148WP
R923
10K 1/10W
R924
3.6K 1/10W 1%
R925
1K 1/10W
R927
100 1/10W
C928
0.1uF/50V
C929
0.1uF/50V
R928
1K 1/4W
IC902
PC123FY2 4P
IC921
KIA431
R930
100 1/10W
R929
2.4K 1/10W 1%
R926
33K 1/10W 1%
R931
10K 1/8W
F902
0 1/8W
ZD920
PTZ9.1B
F903
0 1/8W
+12V
+5V
J901
TIN COATED
J902
TIN COATED
J903
TIN COATED
J904
TIN COATED
J905
TIN COATED
J906
TIN COATED
J907
TIN COATED
J908
TIN COATED
J909
TIN COATED
J910
TIN COATED
J911
TIN COATED
CN902
CONNECTOR
ON/OFF
DIM
+5V
C931
0.1uF/50V
C930
0.1uF/50V
RJ901
0 1/8W
RJ902
0 1/8W
蔼跋19mm,厂ノ13x16size
audio 12V
ViewSonic Corporation
Model
Title
A-D POWER
Date
Rev:



ViewSonic Corporation		
Model		
Title	Audio	
Date		Rev:



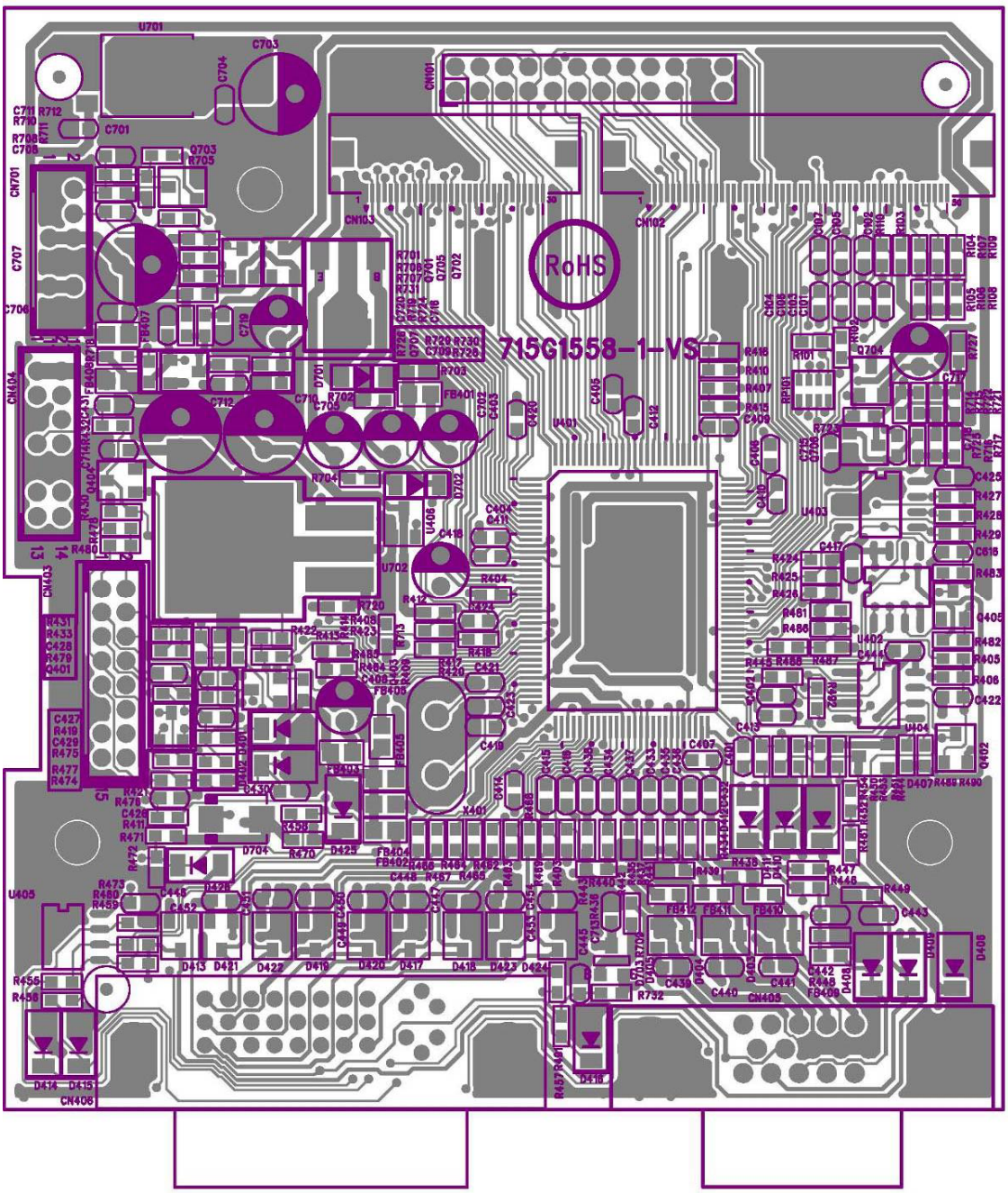




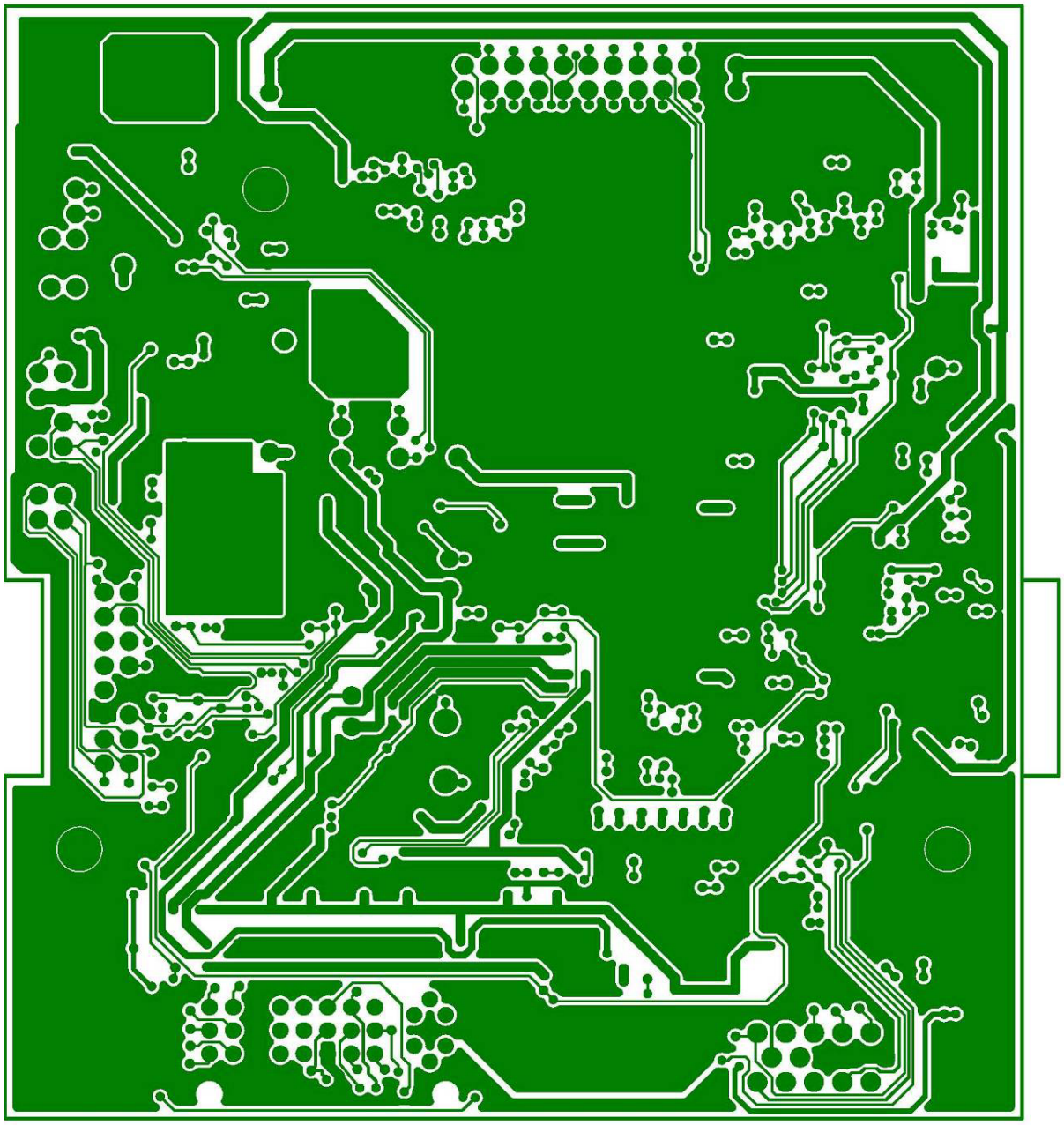
ViewSonic Corporation		
Model		
Title	Key Pad	
Date		Rev:

11. PCB Layout Diagrams

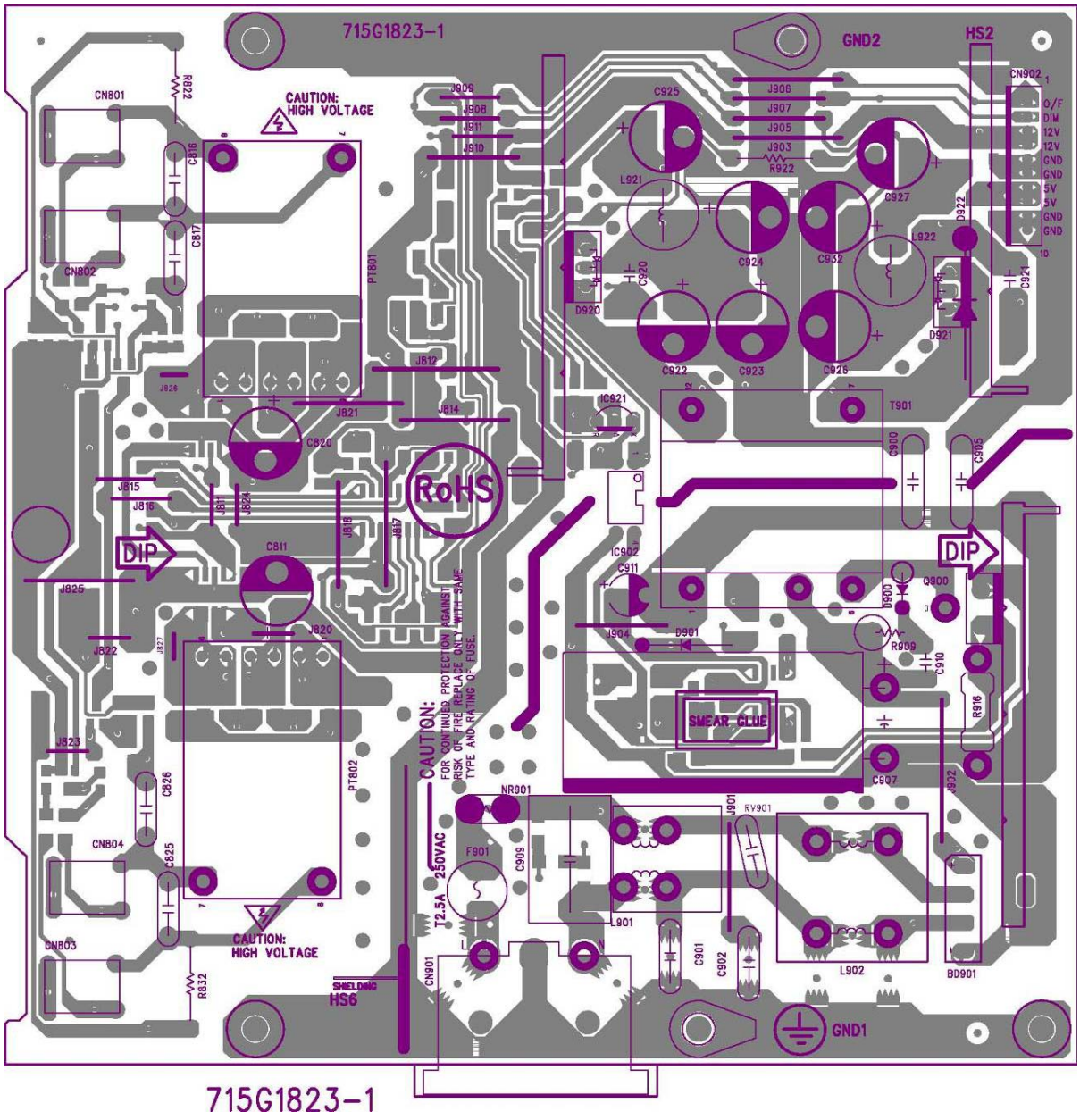
11.1 MAIN BOARD PCB TOP VIEW



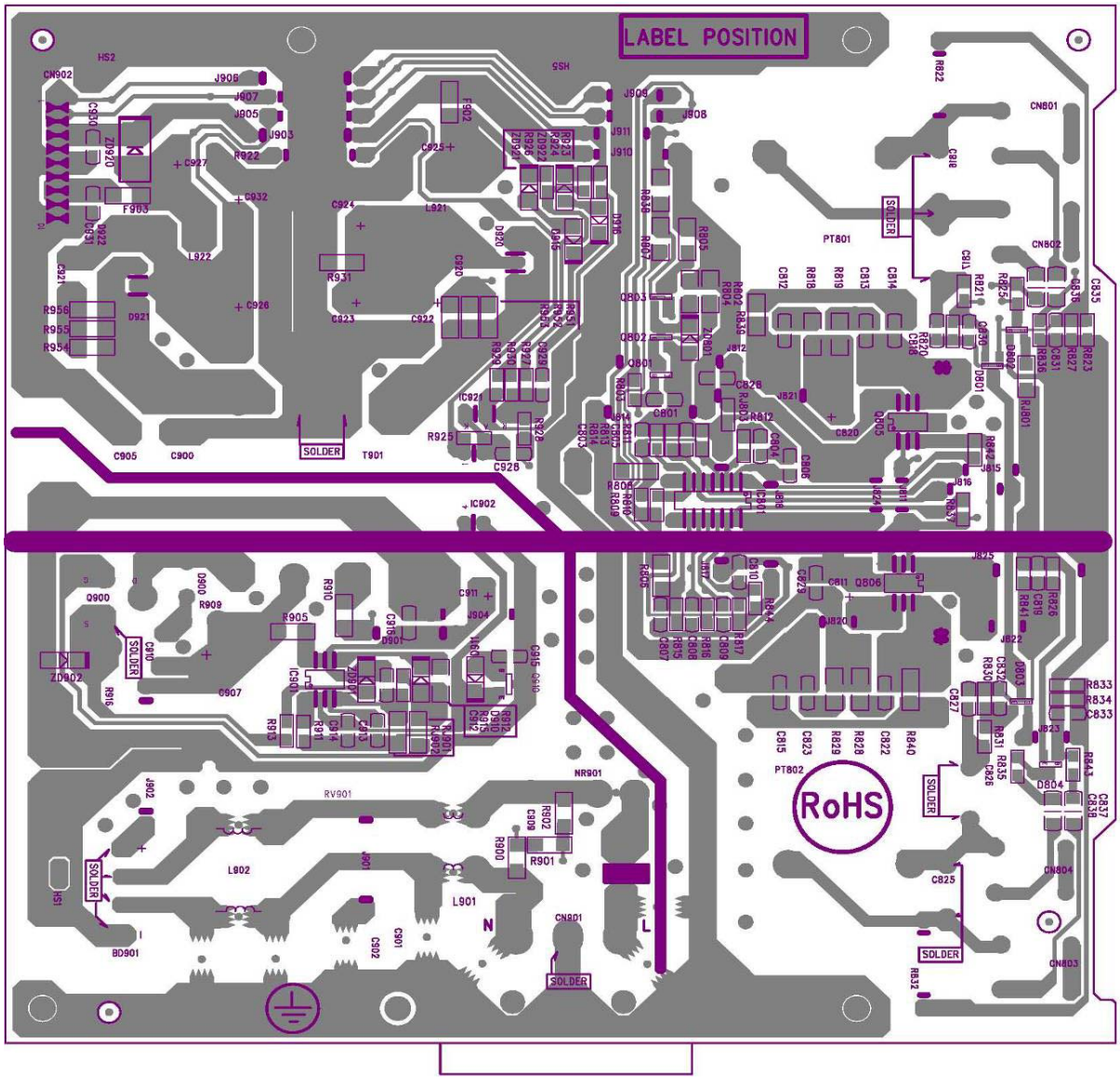
11.2 MAIN BOARD PCB BUTTON VIEW



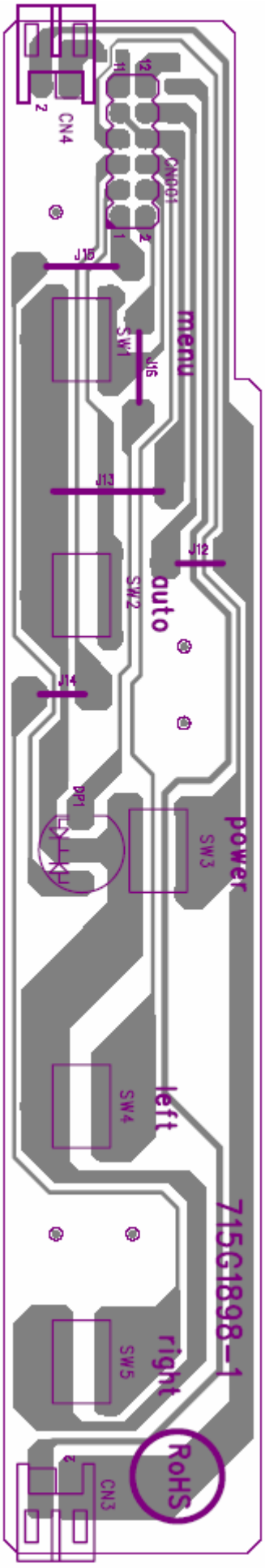
11..3 POWER PCB TOP VIEW



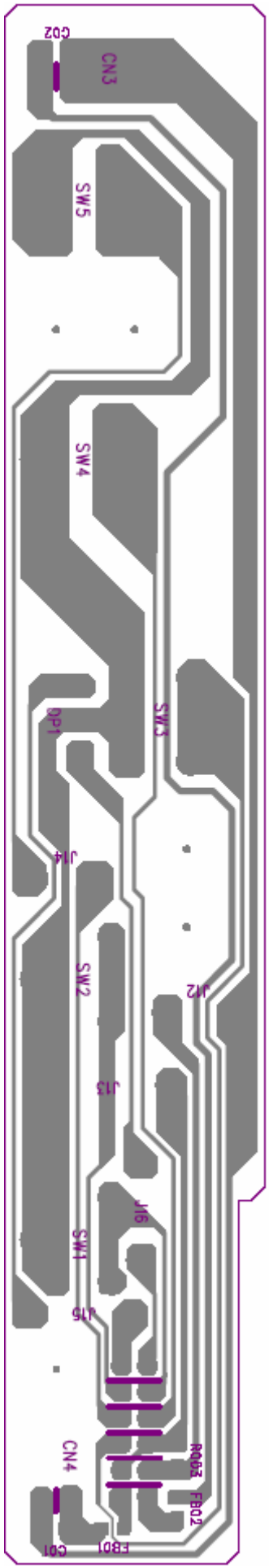
11.4 POWER PCB BUTTON VIEW



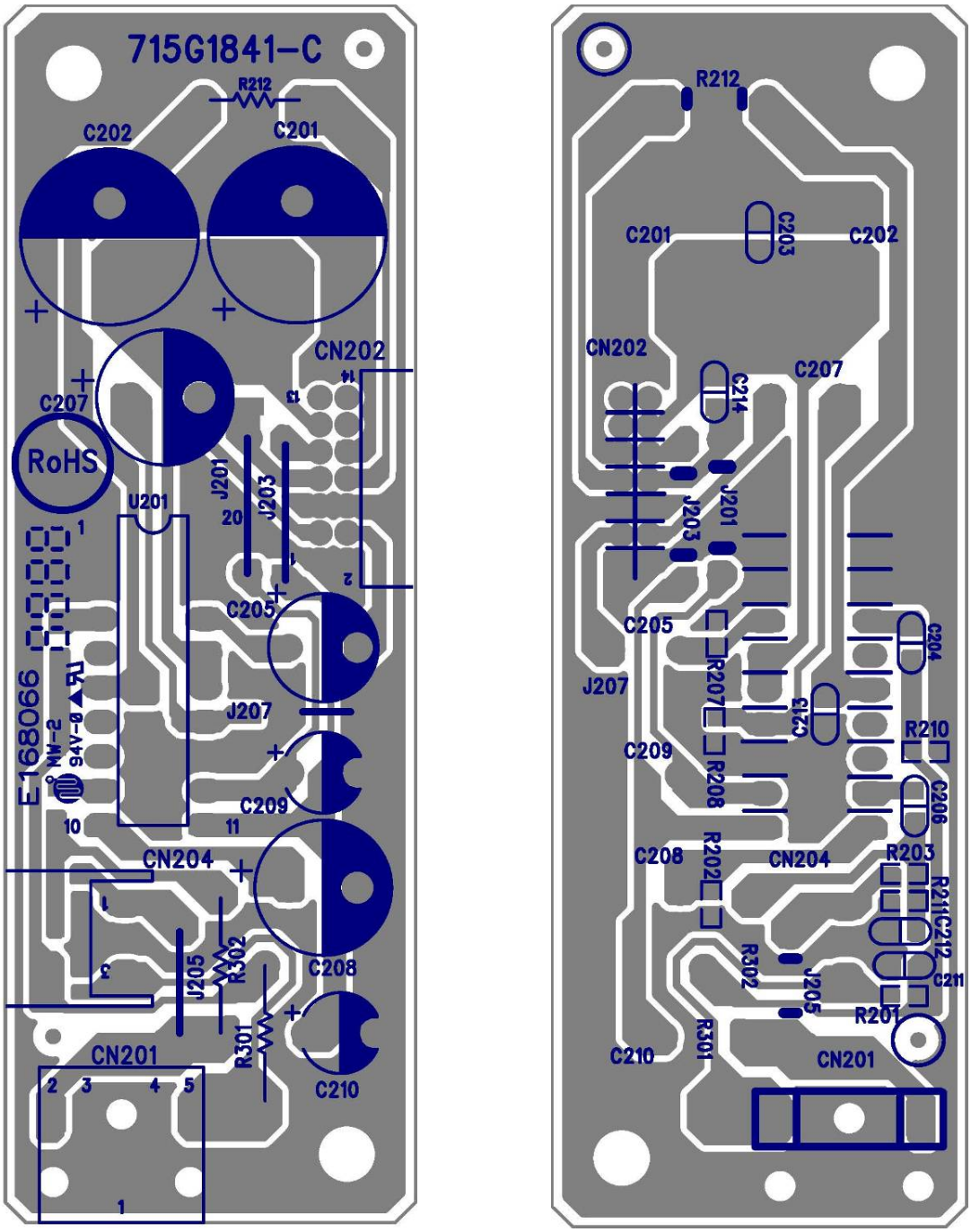
11.5 KEY BOARD TOP VIEW



11.6 KEY BOARD BUTTON VIEW



11.7 AUDIO PCB TOP VIEW & BUTTON VIEW



* 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 of this Service Manual?

Unit	*Excellent*	*Good*	*Fair*	*Bad*
1. Precautions and Safety Notices				
2. Specification				
3. Front Panel Function Control Description				
4. Circuit Description				
5. Adjustment Procedure				
6. Troubleshooting Flow Chart				
7. Recommended Spare Parts List				
8. Exploded Diagram and Exploded Parts List				
9. Block Diagrams				
10. Schematic Diagrams				
11.PCB Layout Diagrams				

B. Are you satisfied with this Service Manual?

Item	*Excellent*	*Good*	*Fair*	*Bad*
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinions or suggestions regarding this service manual?

Reader's basic dada:

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)