Service Manual

ViewSonic Q9b-3

Model No. VS11455

19” Color TFT LCD Display

(Q9b-3_SM Rev. 1a Sep. 2006)

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Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	9/15/2006		Initial Release	Jamie Chang

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1. Precautions and Safety Notices

1. Appropriate Operation

(1) Turn off the product before cleaning.
(2) Use only a dry soft cloth when cleaning the LCD panel surface.
(3) Use a soft cloth soaked with mild detergent to clean the display housing.
(4) Disconnect the power plug from AC outlet if the product is not used for a long period of time.
(5) If smoke, abnormal noise, or strange odor is present, immediately switch the LCD display off.
(6) Do not touch the LCD panel surface with sharp or hard objects.
(7) Do not place heavy objects on the LCD display, video cable, or power cord.
(8) Do not use abrasive cleaners, waxes or solvents for your cleaning.
(9) Do not operate the product under the following conditions:
- Extremely hot, cold or humid environment.
- Areas susceptible to excessive dust and dirt.
- Near any appliance generating a strong magnetic field.
- Place in direct sunlight.

2. Caution

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar
with all of the following safety checks and servicing guidelines.

3. Safety Check

Care should be taken while servicing this LCD display. Because of the high voltage used in the inverter circuit, the voltage is exposed in such areas as the associated transformer circuits.

4. Power Supply Requirements

The external AC power operating range shall be from 90 to 264Vac

5. LCD Module Handling Precautions

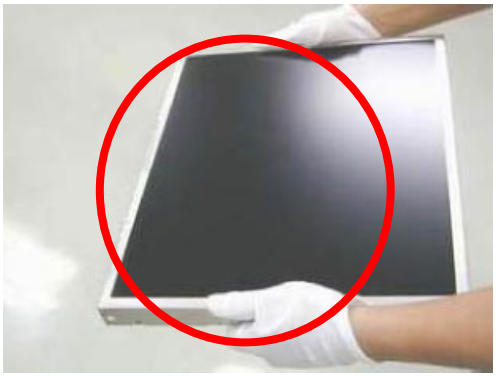
5.1. Handling Precautions

(1) Since front polarizer is easily damaged, pay attention not to scratch it.
(2) Be sure to turn off power supply when inserting or disconnecting from input connector.
(3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.
(4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.
(5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.
(6) Since CMOS LSI is used in this module, take care of static electricity and insure human earth when handling.
(7) Do not open nor modify the Module Assembly.
(8) Do not press the reflector sheet at the back of the module to any directions.
(9) In case if a Module has to be put back into the packing container slot after once it was taken out from the container, do not press the center of the CCFL Reflector edge. Instead, press at the far ends of the CFL Reflector edge softly. Otherwise the TFT Module may be damaged.
(10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT Module.
(11) After installation of the TFT Module into an enclosure (LCD monitor housing, for example), do not twist nor bend the TFT Module even momentary. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.
(12) Cold cathode fluorescent lamp in LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.
(13) Small amount of materials having no flammability grade is used in the LCD module.

The LCD module should be supplied by power complied with requirements of Limited Power Source (IEC60950 or UL1950), or be applied exemption.

(14) The LCD module is designed so that the CFL in it is supplied by Limited Current Circuit (IEC60950 or UL1950). Do not connect the CFL in Hazardous Voltage Circuit.

5.2. Handling 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”
	

2. Specification

1. General Requirements

General Specifications

Test Resolution & Frequency	"1280 x 1024" @ 60Hz
Test Image Size	Full Size
Contrast and Brightness Controls	Factory Default: Contrast =100%, Brightness = 100%

2. Signal Interface

Video Interface

Analog Input Connector	DB-15 (Analog)
Default Input Connector	Defaults to the first detected input
Video Cable Connector DB-15 Pin out	Compliant DDC 1/2B.
Video Signals	1. Video RGB (Analog) Separate Sync
Video Impedance	75 Ohms (Analog), 100 Ohms (Digital)
Exclusions	Not compatible with interlaced video.

3. Power

Power Supply

Input Voltage Range	90 to 264 VAC
Power Dissipation	37Watts (Typ.)

4. Electrical Requirements

Horizontal / Vertical Frequency

Horizontal Frequency	30 – 80 KHz
Vertical Refresh Rate	56– 75 Hz * For resolution 1280 x 1024, the vertical Refresh rate up to 75 Hz; for there rest Resolutions, the vertical refresh rate up To 75Hz.
Maximum Pixel Clock	135 MHz.
Sync Polarity	Independent of sync polarity.

Timing Table

Item	Timing	Analog
1	640 x 480 @ 60Hz, 31.5kHz	Yes
2	640 x 480 @ 67Hz, 35.0kHz	Yes
3	640 x 480 @ 75Hz, 37.5kHz	Yes
4	720 x 400 @ 70Hz, 31.5kHz	Yes
5	800 x 600 @ 56Hz, 35.1kHz	Yes
6	800 x 600 @ 60Hz, 37.9kHz	Yes
7	800 x 600 @ 75Hz, 46.9kHz	Yes
8	800 x 600 @ 72Hz, 48.1kHz	Yes
9	832 x 624 @ 75Hz, 49.7kHz	Yes
10	1024 x 768 @ 60Hz, 48.4kHz	Yes
11	1024 x 768 @ 70Hz, 56.5kHz	Yes
12	1024 x 768 @ 75Hz, 60.0kHz	Yes
13	1280 x 1024 @ 60Hz, 63.4kHz	Yes
14	1280 x 1024 @ 75Hz, 79.97kHz	Yes

Changing Modes

Maximum Mode Change Blank Time for image stability. Note: 1) Excluding "Auto Adjust" time 2) Under DOS mode (640 x 350, 720 x 400 & 640 x 400), there is no "Auto Adjust" feature. 3) The monitor needs to do "Auto Adjust" the first time a new mode is detected.	Under 5 seconds (Maximum) 1 seconds (Typ.) for recognized timings 1-2 seconds (Typ.) for unrecognized timing

5. LCD Panel

Panel Characteristics

1st Souce:

Panel Type	HSD190ME13-A02
Type	TN type with LVDS interface
Active Size	376.32 (H) x 301.06 (V)
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.294 mm
# of Backlights	4 CCFL edge-light (2 top / 2 bottom)
Backlight Life	40,000 Hours (minimum)
Panel Performance	
Luminance – Condition: CT = 6500K, Contrast = Max, Brightness = Max	250 cd/m2 (typ. after 30-minute warm-up)
Brightness Uniformity	≥ 80% Entire Area(Typ)
Contrast Ratio	600:1 (typ.), 450:1 (minimum)
Color Depth	16.2M colors (6-bits+2 bits FRC)
Viewing Angle (Horizontal)	140 degrees @ CR>10
Viewing Angle (Vertical)	130 degrees @ CR>10
Response Time 10%-90% @ Ta=25°C	8ms(Typ.)

2nd and 3rd Source:

Panel Type	2nd panel source : HSD190ME13-A10 3rd Panel source : HSD190ME13-A16
Type	TN type with LVDS interface
Active Size	376.32 (H) x 301.056 (V)
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.294 mm
# of Backlights	4 CCFL edge-light (2 top / 2 bottom)
Backlight Life	40,000 Hours (minimum)
Panel Performance	
Luminance – Condition: CT = 6500K, Contrast = Max, Brightness = Max	300 cd/m2 (typ. after 30-minute warm-up)
Brightness Uniformity	75%(Typ)/70%min
Contrast Ratio	700:1 (typ.), 450:1 (minimum)
Color Depth	16.2million colors (6 bits+2bits data)
Viewing Angle (Horizontal)	160degrees @ CR>10
Viewing Angle (Vertical)	155 degrees @ CR>10
Response Time 10%-90% @ Ta=25°C	8ms (Typ.)

6. Mechanical

Dimensions

Width	407 mm
Height	414 mm
Depth	200 mm
Monitor Weight	4.85kg / 10.67 lbs

Ergonomics

Tilt Up	20 DEGREES MINIMUM
Tilt Down	-5 degrees

Package Specifications

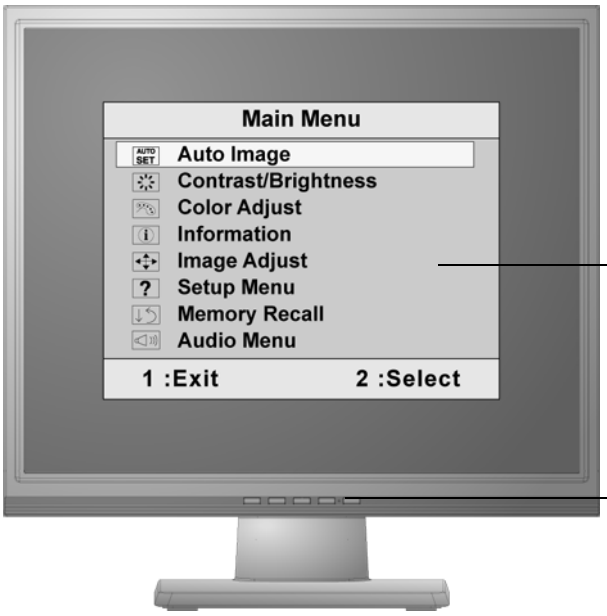
Width	465 mm
Height	445 mm
Depth	150 mm
Gross Weight	5.55kg (12.21 lbs)

7. Environmental

Environmental Conditions

Operating Temperature	0°C to +40°C
Storage Temperature	-20°C to +60°C
Operating Relative Humidity	10% to 90% RH Non-Condensing
Storage Relative Humidity	5% to 90% RH Non-Condensing
Operating Altitude	0 to +3,000 meters
Storage Altitude	0 to +12,000 meters

3. Front Panel Function Control Description



Main Menu
with OSD controls

Front Control Panel
shown below in detail

Scrolls through menu options and adjusts the displayed control.

Also a shortcut to display the Contrast adjustment control screen.

Displays the Main Menu or exits the control screen and saves adjustments.

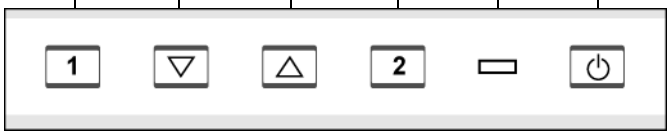
Displays the control screen for the highlighted control.

Also toggles between two controls on some screens.

Also a shortcut to Auto Image Adjust.

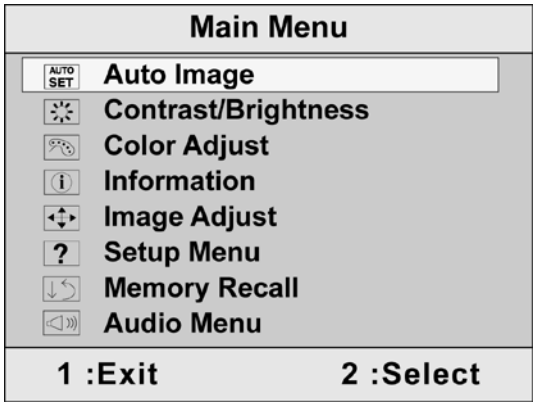
Power light
Green = ON
Orange = Power Saving

Standby Power On/Off



Do the following to adjust the display setting:

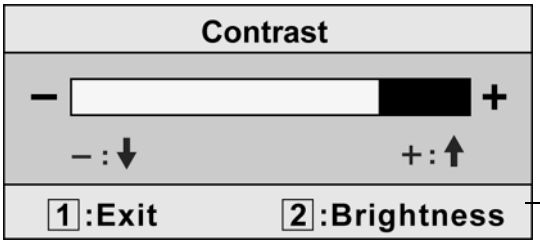
1. To display the Main Menu, press button [1].



NOTE: All OSD menus and adjustment screens disappear automatically after about 30 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 setting, press the up▲or down▼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 1280 x 1024 @ 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

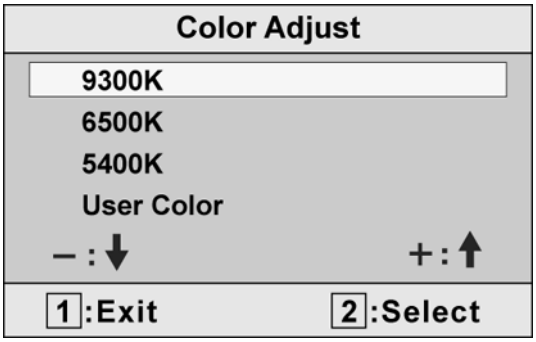
Auto Image Adjust automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion. Press the [2] button to obtain a sharper image.

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).



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▲or▼.

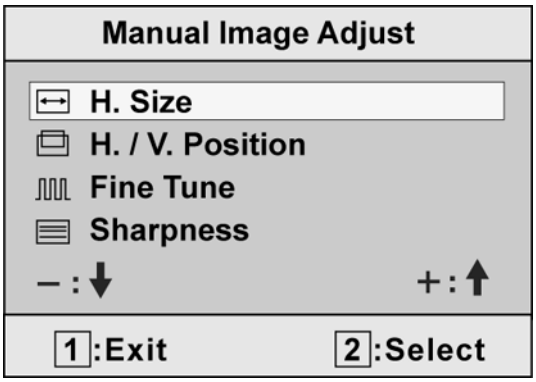
Important: If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.

Control	Explanation

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.



The **Manual Image Adjust** controls are explained below:

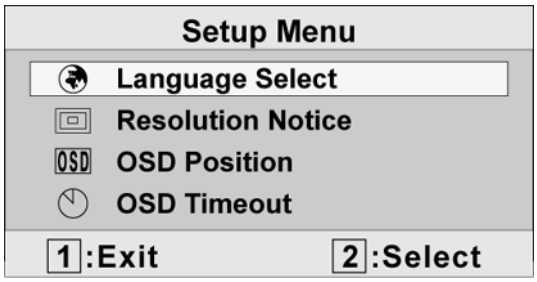
H. Size (Horizontal Size) adjusts the width of the screen image.

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

Fine Tune sharpens the focus by aligning the text and/or graphics with pixel boundaries.

Sharpness adjusts the clarity and focus of the screen image.

Setup Menu displays the menu shown below:



The **Setup Menu** controls are explained below:

Control Explanation

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

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.

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 or Power Lock setting.

Audio Adjust

Volume increases the volume, decreases the volume, and mutes the audio.

Mute temporarily silences audio output.

Short Cut Key

Function Key : 5 Keys → **1** **2** ⏻ ▼ ▲

[1]	Main Menu
[2]	1. Auto Image Adjust 2. toggle 720x400 and 640x400 mode when input 720x400 or 640x400 mode
[▼]	to immediately activate Brightness menu.
[▲]	to immediately activate Contrast menu.
[▼]+ [▲]	recall both of Contrast and Brightness to default
[1] + [▼]	Power Lock
[1] + [▲]	OSD Lock
[▼]+ [▲] + No signal message OSD	Burning mode
Signal + [▲] + [2] + [⏻]	Factory Mode
Remark : All the short cuts function are only available while OSD off (exclude Power Lock and OSD Lock)	

A. DC-DC CONVERTER

This brick convert is the 110-220AC input voltage to 12V AND 5V output for invert use and panel use and system controller use .
5V Out put at L804
VCC 12V In put at L803,F901

B. Scaling controller

The ADC is to convert RGB analog signal to digital signal that scaling chip can acknowledge.
The HSYNC input receives a logic signal and provides the frequency reference for pixel clock generation.
The scaling IC is to converts the input signal ranging from VGA to SXGA into SXGA resolution that panel can acknowledge.
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GENERAL DESCRIPTION

The TSUM16AK is total solution graphics processing IC for LCD monitors with panel resolutions up to SXGA. It is configured with a high-speed integrated triple-ADC/PLL, a high quality display processing engine, and an integrated output display interface that can support LVDS panel interface format. To further reduce system costs, the TSUM16AK also integrates intelligent power management control capability for green-mode requirements and spread-spectrum support for EMI management.
The TSUM16AK incorporates the world's first coherent oversampled RGB graphics ADC in a monitor controller system1. The oversampling ADC samples the input RGB signals at a frequency that is much higher than the signal source pixel rate. This can preserve details in the video signal that ordinarily would be lost due to input signal jitter or bandwidth limitations in non-oversampled systems.
The TSUM16AK also incorporates a new Dynamic Frame Rate (DFR) generator2 for the digital output video to the display panel that preserves the advantages of a fixed output clock rate, while eliminating the output end of frame short-line.

PIN DESCRIPTION

Analog Interface

Pin Name	Pin Type	Function	Pin
HSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog input HSYNC	63
VSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog VSYNC input	64
REFP		Internal ADC top de-coupling pin	62
REFM		Internal ADC bottom de-coupling pin	61
RIN0P	Analog Input	Analog red input	59
RIN0M	Analog Input	Reference ground for analog red input	58
SOGIN0	Analog Input	Sync-on-green input	57
GIN0P	Analog Input	Analog green input	56
GIN0M	Analog Input	Reference ground for analog green input	55
BIN0P	Analog Input	Analog blue input	54
BIN0M	Analog Input	Reference ground for analog blue input	53
REXT		External resistor 390 ohm to AVDD_ADC	51

Serial Flash Interface

Pin Name	Pin Type	Function	Pin
SDO	Input w/ 5V-Tolerant	SPI Flash Serial Data Output	70
CSZ	Output	SPI Flash Chip Select	71
SCK	Output	SPI Flash Serial Clock	72
SDI	Output	SPI Flash Serial Data Input	73

LVDS Interface

Pin Name	Pin Type	Function	Pin
LVA0M	Output	A-Link Negative LVDS Differential Data Output	114
LVA0P	Output	A-Link Positive LVDS Differential Data Output	113
LVA1M	Output	A-Link Negative LVDS Differential Data Output	112
LVA1P	Output	A-Link Positive LVDS Differential Data Output	111
LVA2M	Output	A-Link Negative LVDS Differential Data Output	110
LVA2P	Output	A-Link Positive LVDS Differential Data Output	109
LVA3M	Output	A-Link Negative LVDS Differential Data Output	106
LVA3P	Output	A-Link Positive LVDS Differential Data Output	105
LVACKM	Output	A-Link Negative LVDS Differential Clock Output	108
LVACKP	Output	A-Link Positive LVDS Differential Clock Output	107
LVB0M	Output	B-Link Negative LVDS Differential Data Output	127
LVB0P	Output	B-Link Positive LVDS Differential Data Output	126
LVB1M	Output	B-Link Negative LVDS Differential Data Output	125
LVB1P	Output	B-Link Positive LVDS Differential Data Output	124
LVB2M	Output	B-Link Negative LVDS Differential Data Output	123
LVB2P	Output	B-Link Positive LVDS Differential Data Output	122
LVB3M	Output	B-Link Negative LVDS Differential Data Output	119
LVB3P	Output	B-Link Positive LVDS Differential Data Output	118
LVBCKM	Output	B-Link Negative LVDS Differential Clock Output	121
LVBCKP	Output	B-Link Positive LVDS Differential Clock Output	120

GPIO Interface

Pin Name	Pin Type	Function	Pin
GPIO_P12	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA programmable driving strength	20
PWM1/ GPIO_P25	I/O w/ 5V-tolerant	Pulse Width Modulation Output; 4mA driving strength/ General Purpose Input/Output; 4mA driving strength	21
GPIO_P00/ SAR1	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	23
GPIO_P01/ SAR2	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	24
GPIO_P02/ SAR3	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ SAR ADC Input	25
GPIO_P03	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA programmable driving strength	26
GPIO_P06	I/O w/ 5V-tolerant	General Purpose Input/Output; 6/12mA programmable driving strength	27
GPIO_P07	I/O w/ 5V-tolerant	General Purpose Input/Output; 6/12mA programmable driving strength	28
PWM0/ GPIO_P26	I/O w/ 5V-tolerant	Pulse Width Modulation Output; 4mA driving strength/ General Purpose Input/Output; 4mA driving strength	29
GPIO_P13	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	30
GPIO_P14	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	31
GPIO_P16/ PWM2	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ idth Modulation Pulse W Output; 4mA driving strength	35

Pin Name	Pin Type	Function	Pin
GPIO_P15 /PWM0	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ Pulse Width Modulation Output; 4mA driving strength	69
GPIO_P23	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	74
GPIO_P22	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength	75
GPIO_P11/ I2C_MDA	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ I2C Master Data; 4mA driving strength	76
GPIO_P10/ I2C_MCL	I/O w/ 5V-Tolerant	General Purpose Input/Output; 4mA driving strength/ I2C Master Clock; 4mA driving strength	77
PWM2/ GPIO_P24	I/O w/ 5V-tolerant	Pulse Width Modulation Output; 4mA driving strength/ General Purpose Input/Output; 4mA driving strength	78
GPIO_P27 /PWM1	I/O w/ 5V-tolerant	General Purpose Input/Output; 4mA driving strength/ Pulse Width Modulation Output; 4mA driving strength	79

Misc. Interface

Pin Name	Pin Type	Function	Pin
BYPASS		For External Bypass Capacitor	4
RST	Input w/ 5V-Tolerant	Chip Reset; High Reset	19
RSTN	Input w/ 5V-Tolerant	Chip Reset; Low Reset	22
VCTRL	Output	Regulator Control	11
MODE[1:0]	Input	Chip Configuration Input	102, 104
		MODE[1:0]	
		00	
DDCA_SDA/ RS232_TX	I/O w/ 5V-tolerant	DDC Data for Analog Interface; 4mA driving strength/ UART Transmitter/GPIO	65
DDCA_SCL/ RS232_RX	Input w/ 5V-Tolerant	DDC Clock for Analog Interface/ UART Receiver/GPIO	66
XIN	Crystal Oscillator Input	Xin	32
XOUT	Crystal Oscillator Output	Xout	33

Power Pins

Pin Name	Pin Type	Function	Pin
AVDD_ADC	3.3V Power	ADC Power	44, 50, 60
AVDD_MPLL	3.3V Power	MPLL Power	34
AVDD_PLL	3.3V Power	PLL Power	52
VDDP	3.3V Power	Digital Output Power	14, 67, 95, 103, 115

Pin Name	Pin Type	Function	Pin
VDDC	1.8V Power	Digital Core Power	12, 68, 97, 117
GND	Ground	Ground	13, 38, 41, 47, 96, 116

No Connects

Pin Name	Pin Type	Function	Pin
NC		No connects	1-3, 5-10, 15-18, 36, 37, 39, 40, 42, 43, 45, 46, 48, 49, 80-94, 98-101, 128

INVERTER

In order to drive the CCFLs embedded in the panel module, there is a half bridge inverter to convert by the controller.
The input 12V up to hundreds of AC voltage output.
The inverter is formed by symmetric in order to drive the separate lamp modules.
The input stage consists of a PWM controller, half bridge inverter, and switching MOSFET to convert DC input into AC output.
The output stage consists of a tuning capacitor, coupling capacitor, transformer, push-pull

MOSFET pair to boost AC output up to hundreds of voltage.
And one resister is serial to lamp for output voltage feedback.
There are two signal to control the inverter which come from system.
Logic “high” level which send to I901 is turn on the inverter.
BRI signal control brightness by DC level which was integral from PWM signal.

AUDIO

General description

The TDA7496L is a stereo 2W+2W class AB
power amplifier assembled in the @ Powerdip
14+3+3 package, specially designed for high
quality sound, TV and Monitor applications.
Features of the TDA7496L include linear volume
control, Stand-by and mute functions
Ipeak Output Peak Current (internally limited) 0.7 0.9 A
Vin Input Signal 2.8 Vrms
GV Closed Loop Gain Vol Ctrl > 4.5V 28.5 30 31.5 dB
GvLine Monitor Out Gain Vol Ctrl > 4.5V; Zload > 30K ¸ -1.5 0 1.5 dB
AMin VOL Attenuation at Minimum Volume Vol Ctrl < 0.5V 80 dB
BW 0.6 MHz

ABSOLUTE MAXIMUM RATINGS

Symbol Parameter Value Unit

VS DC Supply Voltage 26 V
VIN Maximum Input Voltage 8 Vpp
Ptot Total Power Dissipation (Tcase = 60°C) 6 W
Tamb Ambient Operating Temperature 0 to 70 °C
Tstg, Tj Storage and Junction Temperature -40 to 150 °C
V6 Volume CTRL DC voltage 7 V
0 4 8 12 Area(cm2)

1. Function Test

1.1. Product
- 19" LCD Monitor

1.2. Test Equipment
- Color Video Signal & Pattern (or PC with SXGA resolution and a sound card)

1.3. Test Condition
Before function test and alignment, each LCD Monitor should be run-in and 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)

1.4. Test Display Modes & Pattern

1.4.1 Compatible Modes

Item	Timing
1	640 x 480 @ 60Hz, 31.5kHz
2	640 x 480 @ 67Hz, 35.0kHz
3	640 x 480 @ 75Hz, 37.5kHz
4	720 x 400 @ 70Hz, 31.5kHz
5	800 x 600 @ 56Hz, 35.1kHz
6	800 x 600 @ 60Hz, 37.9kHz
7	800 x 600 @ 75Hz, 46.9kHz
8	800 x 600 @ 72Hz, 48.1kHz
9	832 x 624 @ 75Hz, 49.7kHz
10	1024 x 768 @ 60Hz, 48.4kHz
11	1024 x 768 @ 70Hz, 56.5kHz
12	1024 x 768 @ 75Hz, 60.0kHz
13	1280 x 1024 @ 60Hz, 63.4kHz
14	1280 x 1024 @ 75Hz, 79.97kHz

1.4.2 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 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)

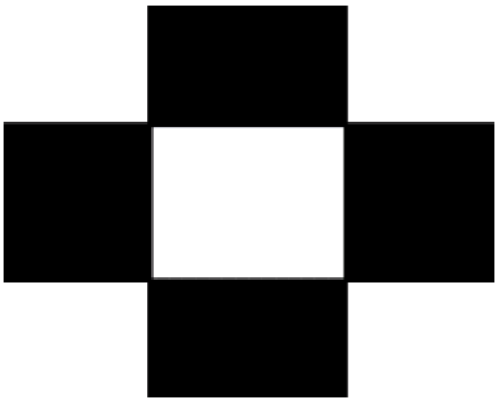
R. Color Pattern (Figure 4)

G. Color Pattern (Figure5)

B. Color Pattern (Figure 6)

Full White Patter (Figure 7)

Dark Screen Pattern (Figure 8)



Black-White Pattern (Figure 9)

1.5. Function Test and Alignment Procedure

1.5.1 All Modes Reset

You should do "Memory Recall" (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.

1.5.2 Auto Image Adjust

Please select and enter ***"Auto Adjust"*** function on Main Menu to see if it is workable. The ***"Auto 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.

1.5.3 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.

1.5.4 DDC

Test Pattern: EDID program
- Make sure it can pass test program.

1.5.5 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 "**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.

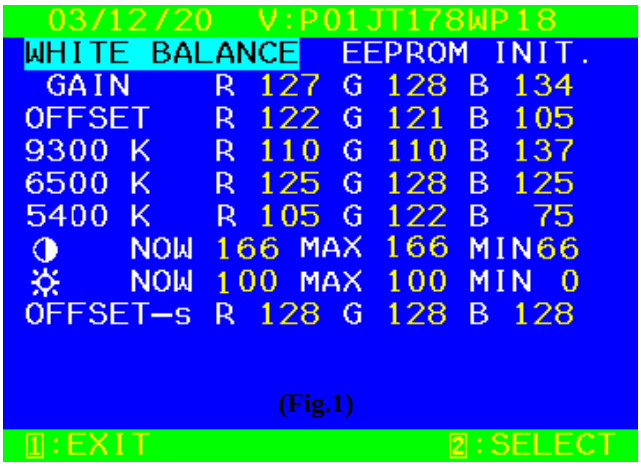
1.5.6 Boundary

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 "**Image Adjust**" function on OSD Main Menu.

(b) Then, select and enter "**H. Size**" or "**H./V. Position**" function to adjust the video boundary to be full scanned and within screen frame.

1.5.7 White Balance

A. TIMING: 1280x1024 64KHz/60Hz.
B. PATTERN: 5 Blocks.
C. LCD MONITOR set to 1280x1024 80K/75Hz BURN IN and warm up over 30 minutes.
D. CA110 color analizer at the center of screen and along a perpendicular to the screen at 20cm from the display.
E. Power turn off, Press "▲" and "2" and turn on power at the same time after power LED is on, release "▲" and "2" key, Then press "1" key go to factory mode. (Fig.1)



(Fig.1)

F. Adjust Color Temperature:
(1) EEPROM INIT (5 BLOCKS):
Press "▼" key move cursor to EEPROM INIT, Press "2" key then monitor will INIT ADC value.
(2) Press "▲" key move cursor to "White Balance", Press "2" key do white balance adjustment.
(3) Press "▼" key move cursor to "Color Temperature Adjust", Press "2" key, Then OSD will display Fig.2

(Fig.2)

(4) 9300K verify: move cursor to 9300K Press "2" key.
Press "▼", "▲" key adjust R.G.B value
x=0.283 ± 0.02
y=0.298 ± 0.02
Press "1" key return to Fig.2

(5) 6500K verify: Repeat (4) press "▼", "▲" move cursor to 6500K press "2" key
x=0.313 ± 0.02
y=0.329 ± 0.02

(6) 5400K verify: Repeat (4) press "▼", "▲" move cursor to 5400K press "2" key
x=0.332 ± 0.02
y=0.348 ± 0.02

(7) Press "1" key go back to Fig.2, Then press "1" key return to Fig.1, Power key OFF/ON quit factory mode.

G. Color Temperature Verify:
BRIGHTNESS MAX, CONTRAST MAX
9300K: x=0.283 ± 0.02 y=0.298 ± 0.02
6500K: x=0.313 ± 0.02 y=0.329 ± 0.02
5400K: x=0.332 ± 0.02 y=0.348 ± 0.02

H. Luminance Verify:
BRIGHTNESS MAX, CONTRAST MAX
HSD190ME13A10/A16: Luminance :240(min)
HSD190ME13A02 : Luminance: 200(min)

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.

1.5.9 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.

1.5.11 Mura

Test Pattern: White, RGB, Black, & Grey
Test Tool: 8% ND Filter
- Check if the Mura can pass 8% ND Filter.

1.5.13 Check for Secondary Display Modes

Test Signal:
Analog: 640*350@70Hz; 640*480@60HZ
720*400@70Hz; 800*600@60HZ/70HZ/75HZ
832*624@75Hz, 1024*768@60HZ/70HZ/75HZ
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 be great possible to 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.

1.5.14 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.

1.5.15 Power Off Monitor

Turn off the monitor by pressing “Power” button.

2. Firmware Upgrade Procedure

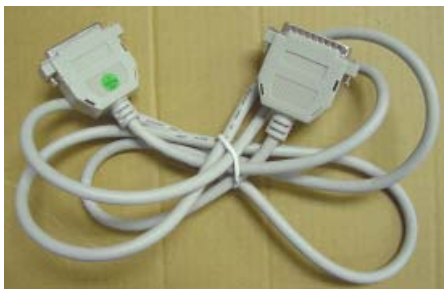
When you receive the returned monitor, please check whether the firmware version is the latest. If not, please do the following procedures to upgrade it to the latest version.

2.1. Equipment Needed

- Q9/b-3 Monitor
- Fixture for Firmware Upgrade
- VGA Cable
- PC (Personal Computer)
- LPT Cable
- Firmware Upgrade Program
- One additional monitor for checking the program execution

PC

Q9b-3



LPT Cable

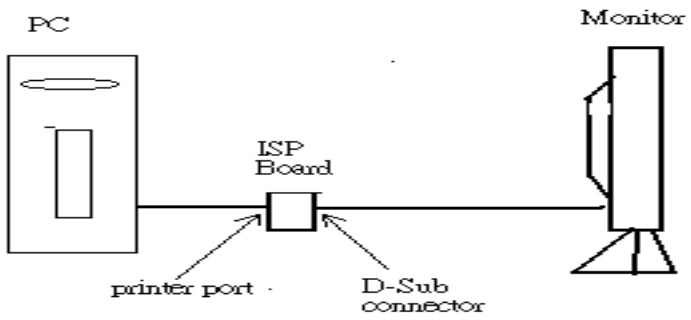
VGA Cable

2.2. Setup Procedure

2.2.1 Connect P2 of Fixture with printer port of PC by LPT Cable.
2.2.2 Connect P1 of Fixture with Q9/B-3 Monitor by VGA Cable.
2.2.4 Connect Power Cord to Q9/b-3 Monitor.
2.2.5 Connect PC to the additional monitor.

2.3. ISP Download program procedure

2.3.1 Hardware Connect status:



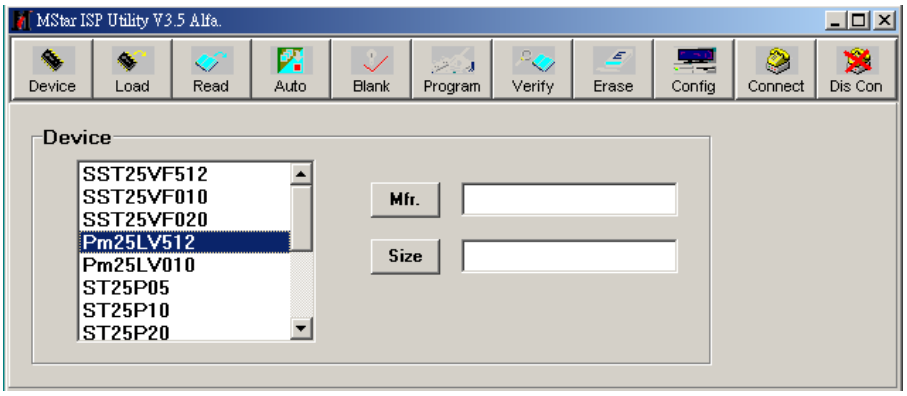
2.3.2 Down load isp program

Step 1: Execute ISP.exe

Step 2: Select device type

Pressing the 

button to select the type of the device, It need to be selected the Pm25LV512 for this project.



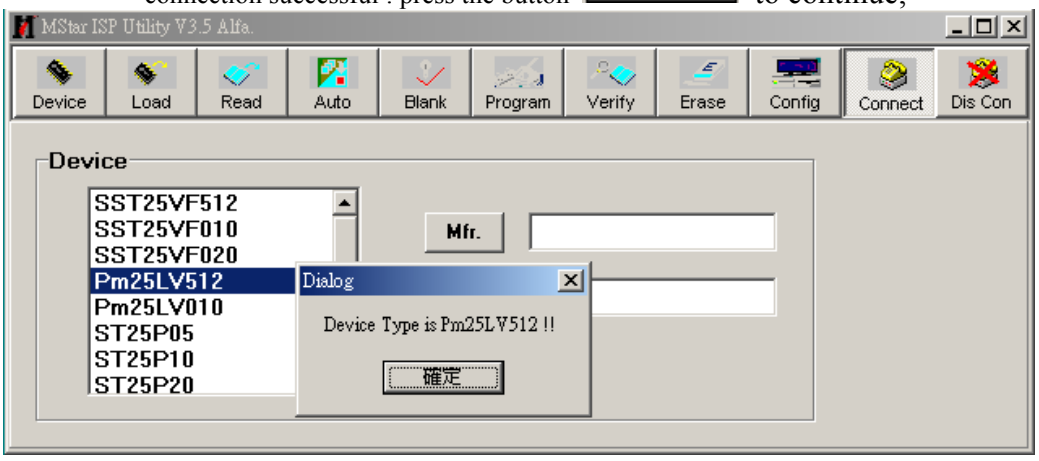
Step 3: Connect device

Then press the 

button to connect device.

connection successful : press the button 

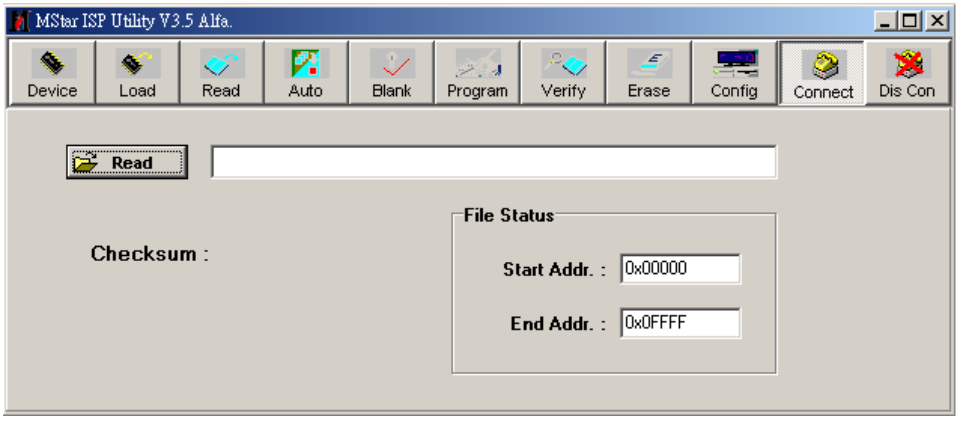
to continue;



Step 4: Read file

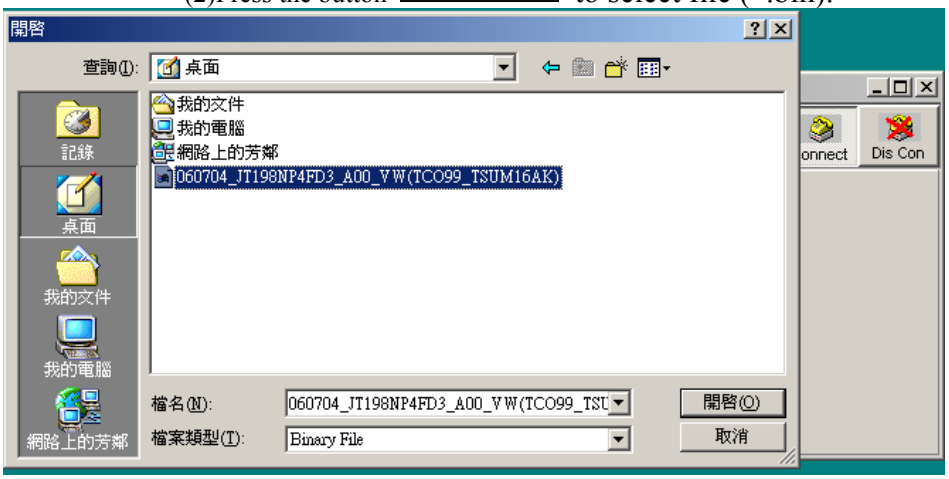
(1)Press the button 

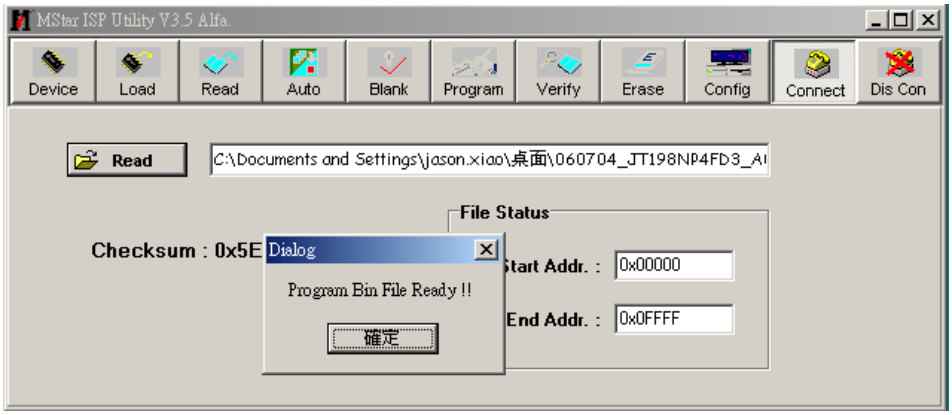
to enter the read-file page.



(2)Press the button 

to select file (*.bin).



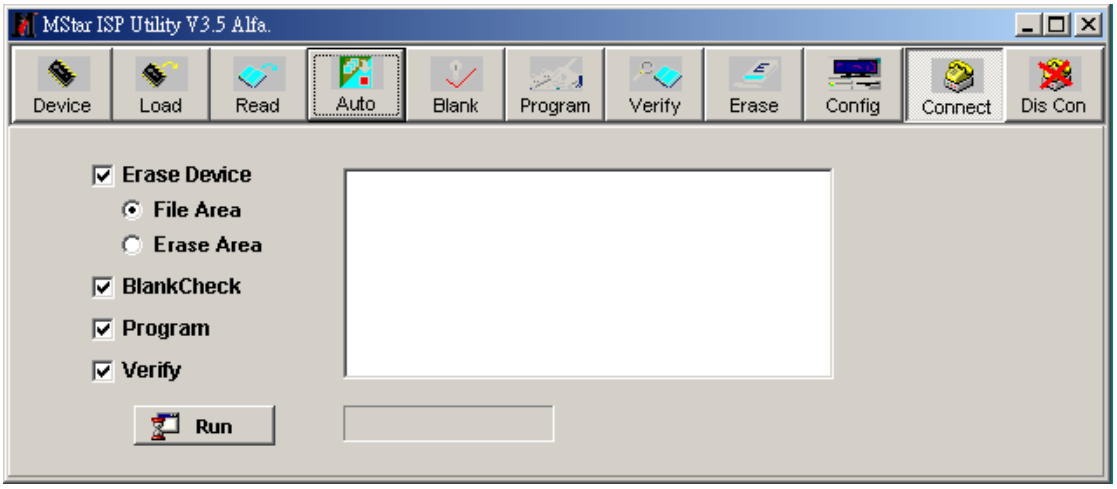


Step 5: Run

Pressing the 

Button to enter the auto-download page. Press 

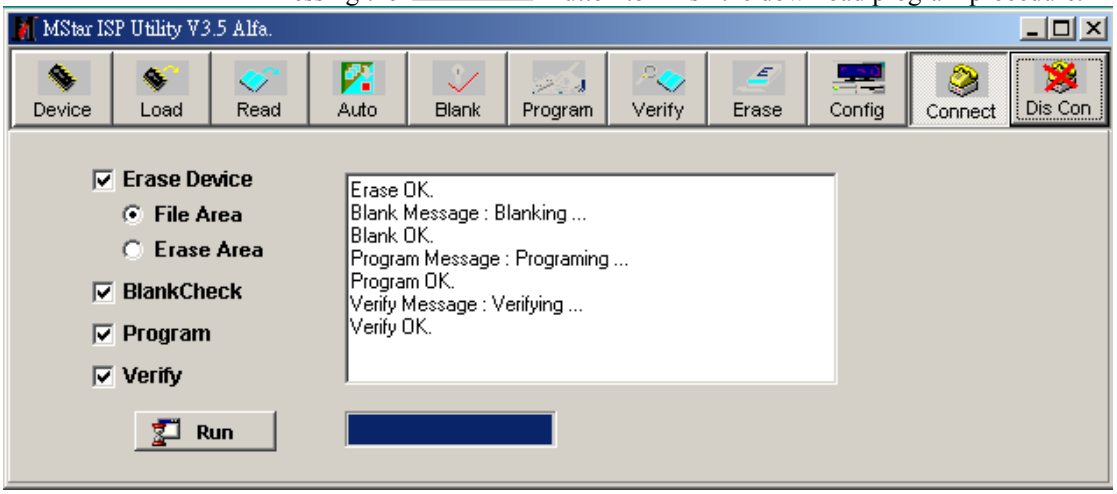
button to download the firmware.



Step 6: Download program finish

Pressing the 

Button to finish the download program procedure.



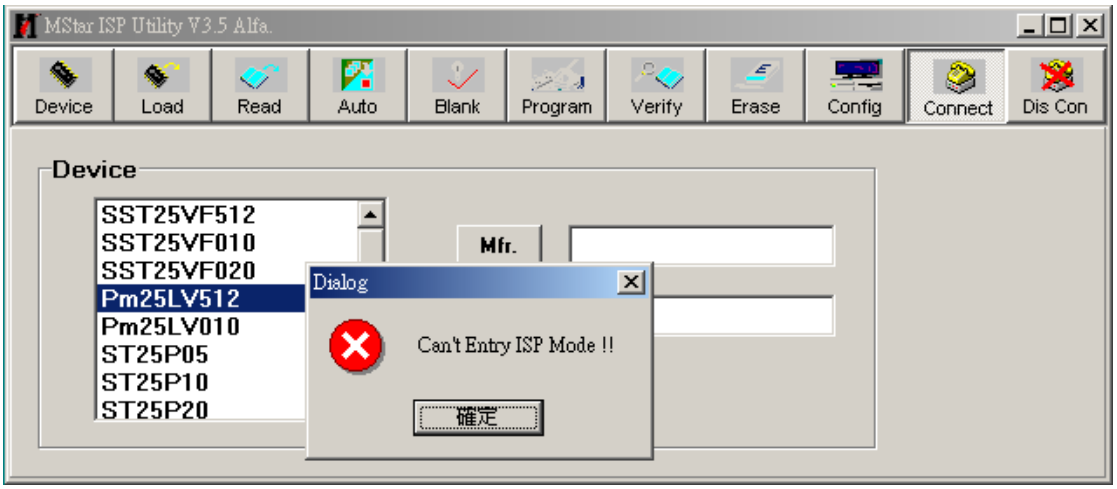
Trouble shooting:

If you find the status like the follow picture. Please check the following item.

a. The connecting status between PC and ISP board.

b. The connecting status between ISP status and Monitor.

Turn off the power of monitor (AC plug off) and disconnect the D-Sub connector . To connect the D-Sub connector and then turn on the power of monitor.(AC plug on)



If the test result shows "passed," it means the connection is well. If not (failed), it means the connection has problems.Then you need to check the setup procedure or reboot the PC, or simply use another PC to do the firmware upgrade.

3. DDC Key In Procedure

Note:
1. Every time after replacing the main board, you have to do the DDC key in.
2. If you find the DDC does not conform to the monitor, you have to do the DDC key in.

3.1. Equipment Needed

- JT198NP4FD3 Monitor
- DDC Card
- PC
- RS232 cable
- Barcode Reader
- VGA Cable

Q9b-3

DDC Card

PC

RS-232 Cable

VGA Cable

Barcode Reader

3.2. Setup Procedure

3.2.1 Connect VGA Card and DDC Card with RS-232 cable.

3.2.2 Barcode Reader connect with keyboard and PC keyboard port.

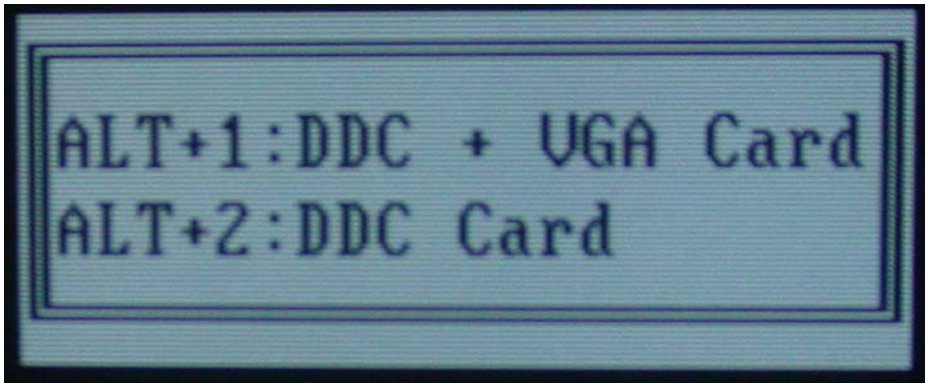
3.2.3 Connect RS-232 Cable and JT198NP4FD3 with VGA Cable.

3.2.4 Connect Power Cord to JT198NP4FD3 Monitor.

3.3. DDC Key In Procedure

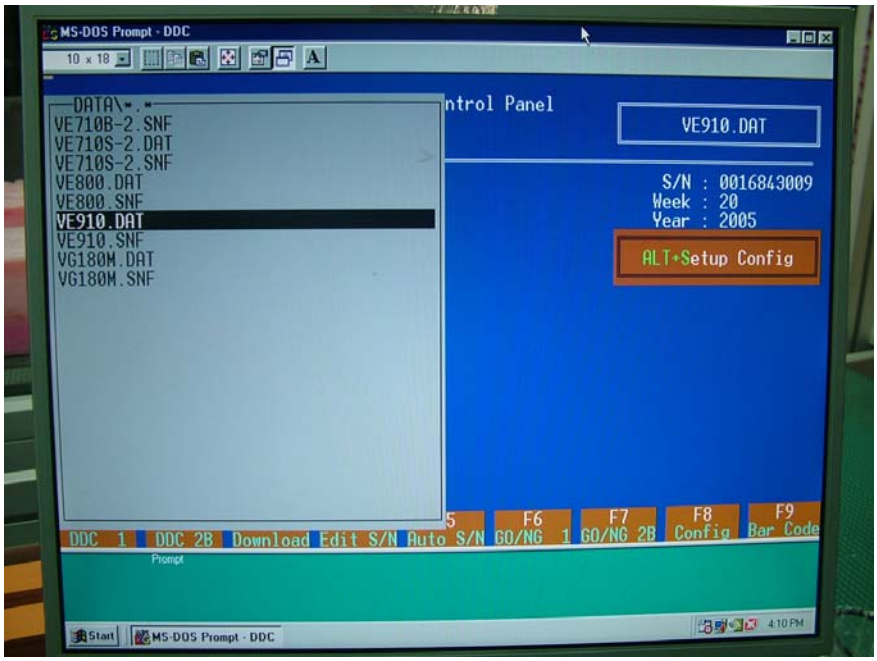
3.3.1 Run DDC.exe
3.3.2 Choose model number and conform the Time then Press “ENTER” key.

3.3.3 When appear the PIC “ choose DDC Card”, Press ALT+2 Enter DDC 2B test interface.



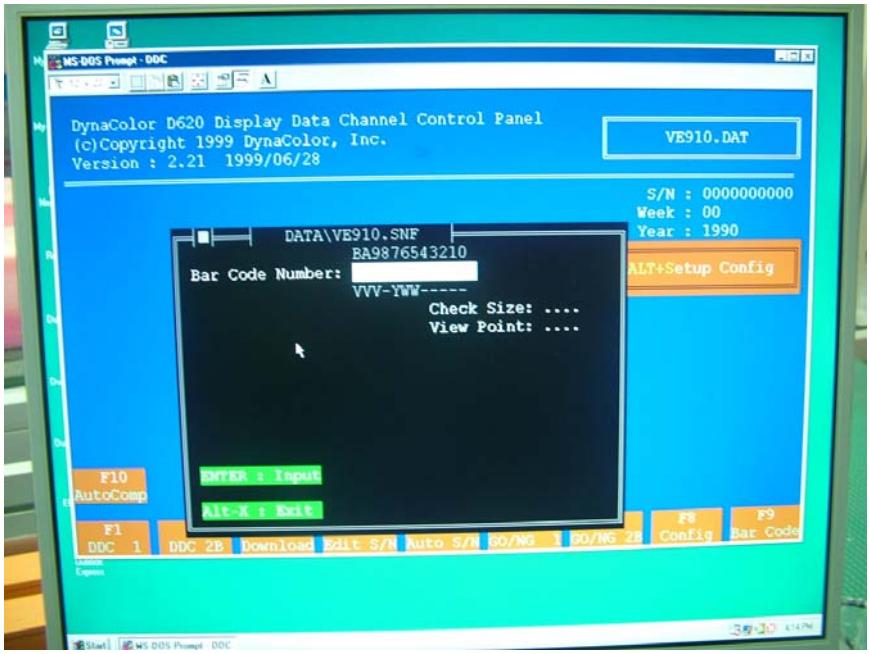
Choose DDC Card

3.3.4 Press F8 to choose corresponding model.DAT (Q9-3.DAT press “ENTER” key)

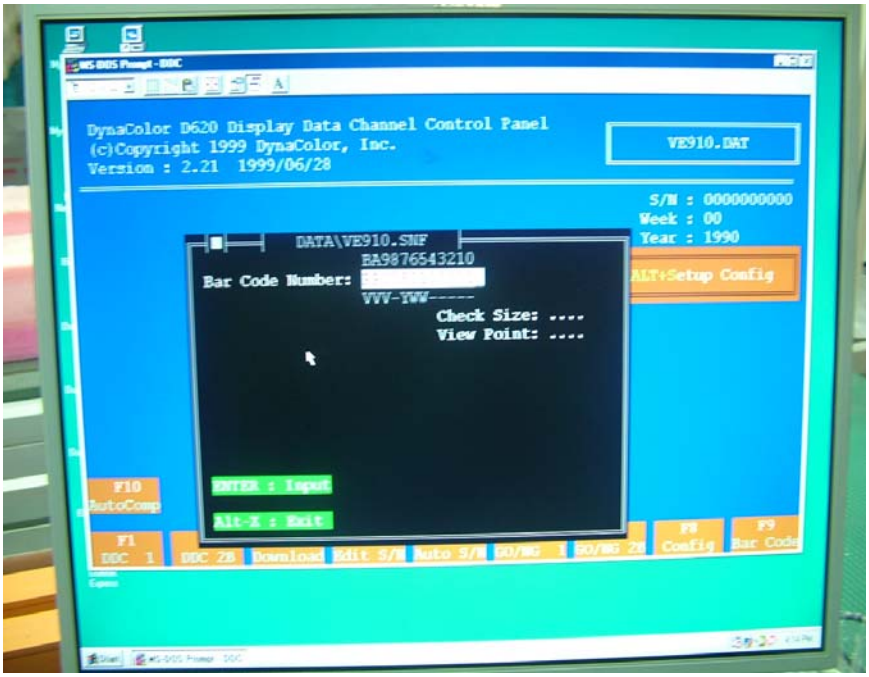


(The filename on this picture is a example only, the exact one, please refer to your model.)

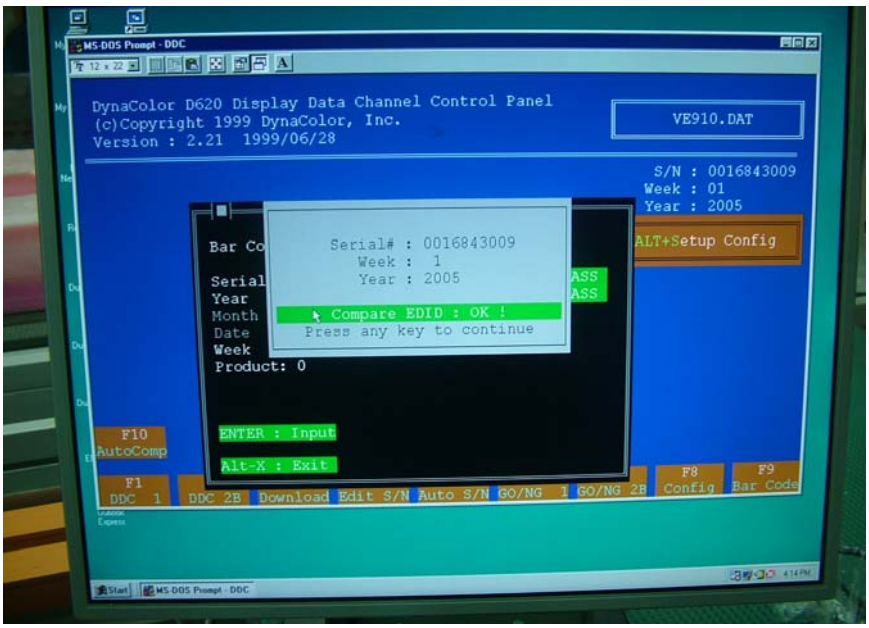
3.3.5 Press F9 enter the download interface



3.3.6 Key in the serial number or use the barcode reader to scan the barcode of the monitor, and press “ENTER” key.

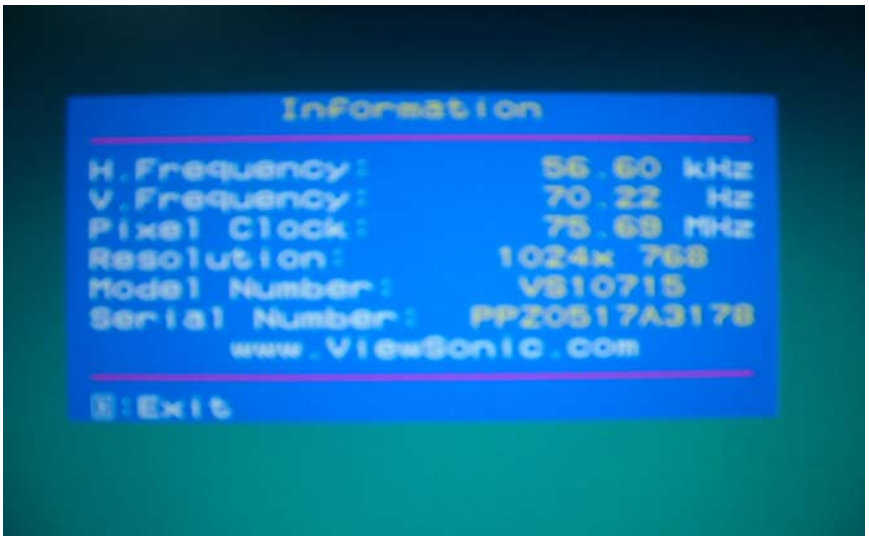


3.3.7 The successful picture is as follows. ”Compare EDID ：OK! Press any key to continue”.



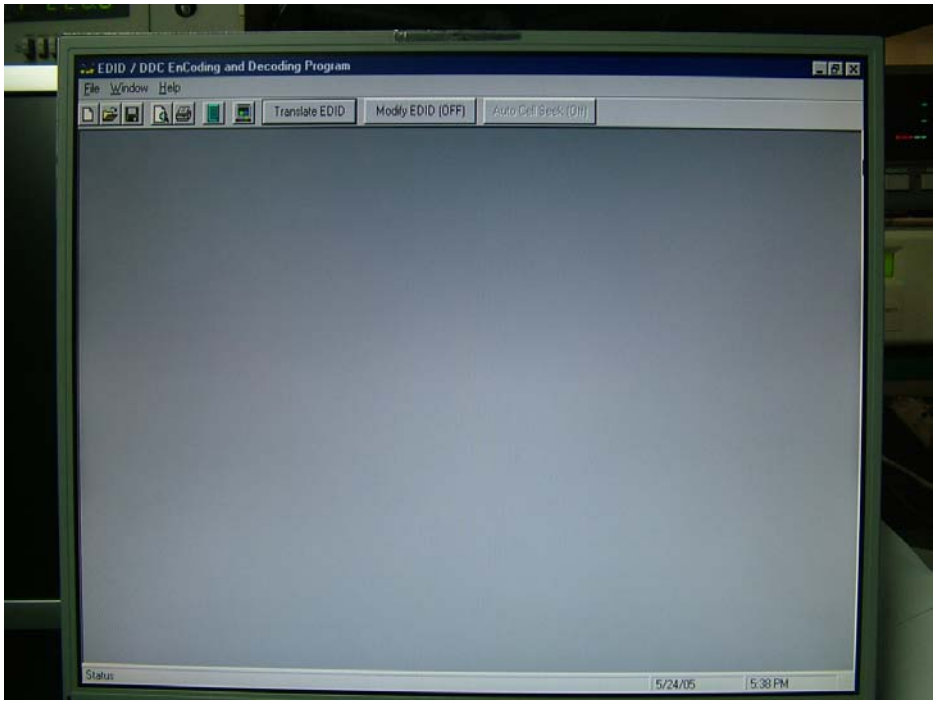
3.3.8 Let Q9-3 active then see the information in OSD, it shows ”Serial NO : PPZ0517A3178”

(The Serial NO. provided above is a example only; the exact one, please refer to your monitor.)

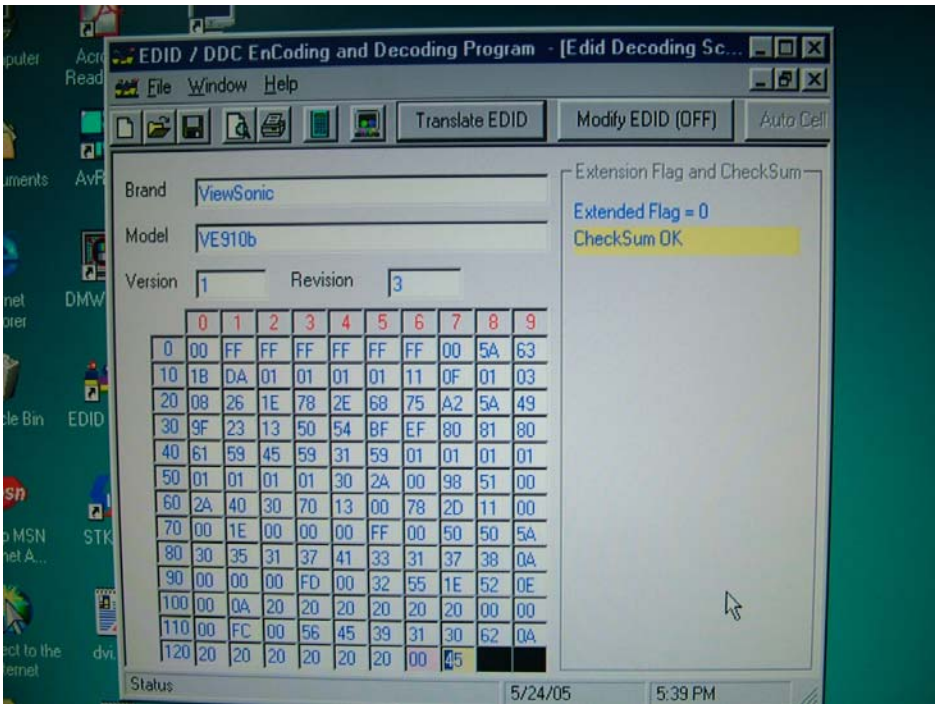


3.4. Check Method

Use ViewSonic EDID Editor



Connect the Q9-3 Monitor to PC with VGA Cable. Excute the EDID Editor, then Press Ctrl+F5. If the DDC is correct, you can see the information as follow:



(The data on this picture is a example only; the exact one, please refer to your monitor.)

Packing For Shipping And Disassembly Procedure

Packing For Shipping

1. Packing Procedure

1.1 Paste protection film to protect the monitor. (Figure 1)

1.2 Put the monitor in the PE bag and seal the bag with tape. (Figure 2/3)

Figure 1

Figure 2

Figure 3

1.3 Put the cushions on the monitor. (Figure 4)

1.4 Place the monitor into the carton and then put all the accessories into the carton. At last, close the carton and seal it with tape. (Figure 5)

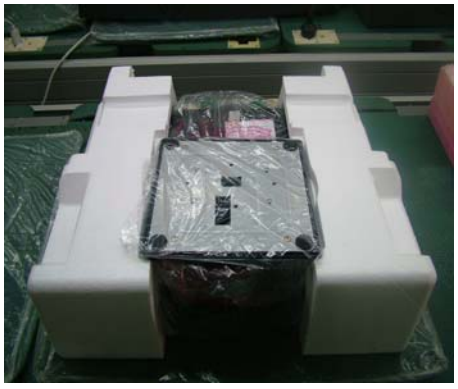


Figure 4

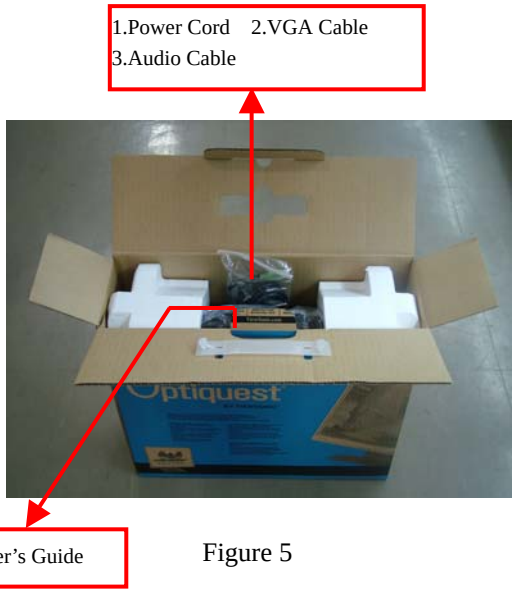


Figure 5

Disassembly Procedure

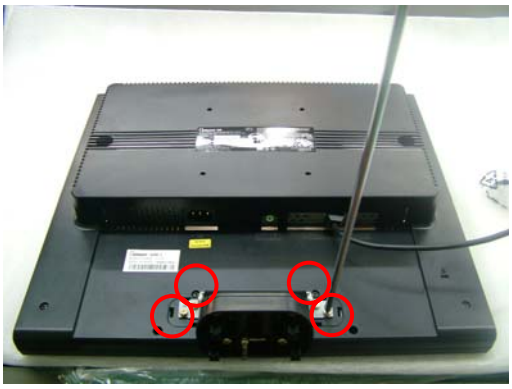
1. Disassembly of Stand unit from Monitor

1.1 Remove Dust Cover.

Dust cover

1.2 Remove Stand Unit.

1.3 Unscrew 4 screws to remove Hinge.

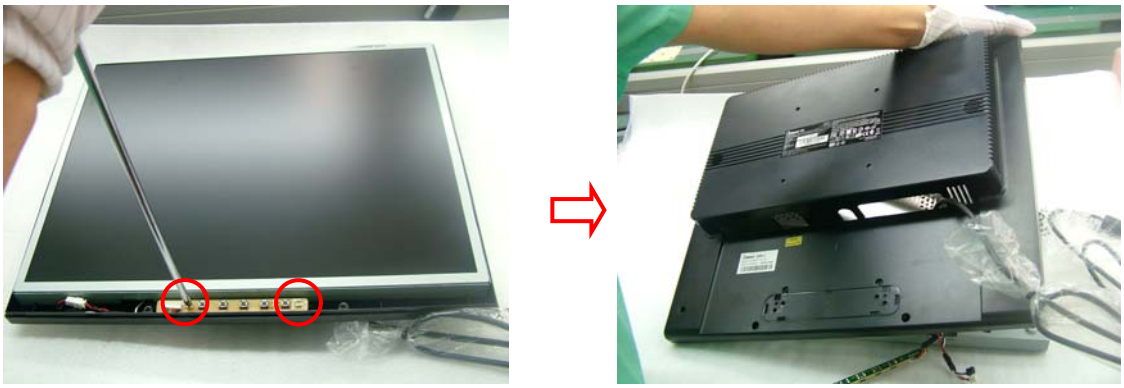


2. Disassembly of Front Cover and Rear Cover

2.1 Unscrew two screws that secure Rear Cover to remove Front Cover.

Front Cover

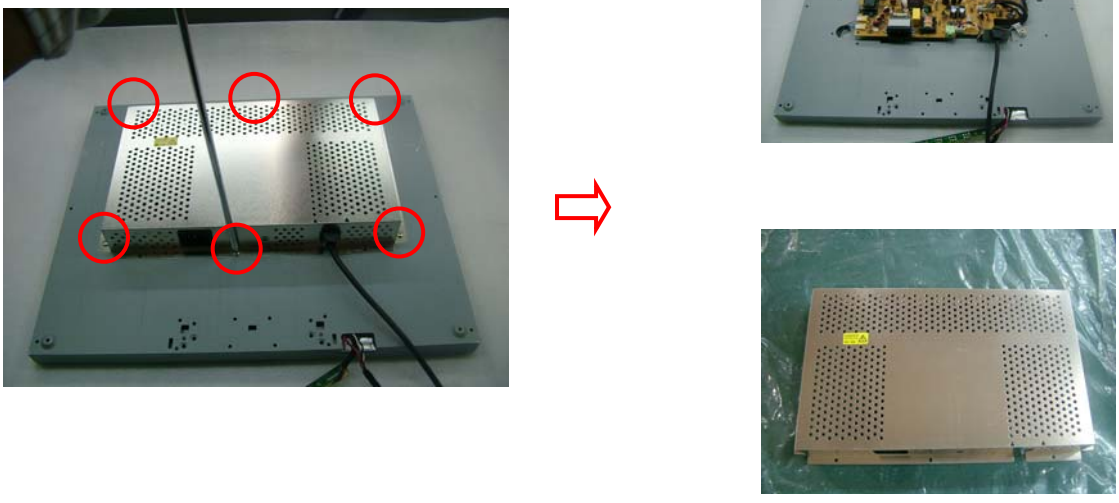
2.2 Unscrew 2 screws to remove Rear Cover.



Rear Cover

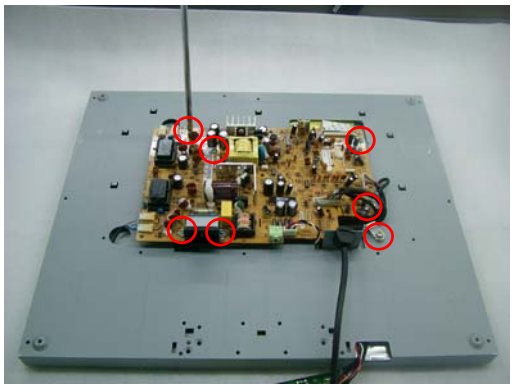
3. Disassembly of Main Board, Keypad Board and Panel Unit

3.1 Unscrew 6 screws to remove Shielding Plate.



Shielding Plate

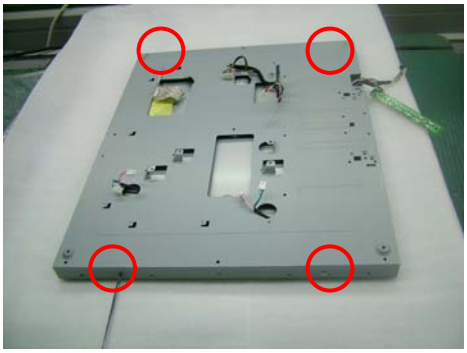
3.2. Unscrew 7 screws and disconnect the wires to remove Main Board.



Main Board

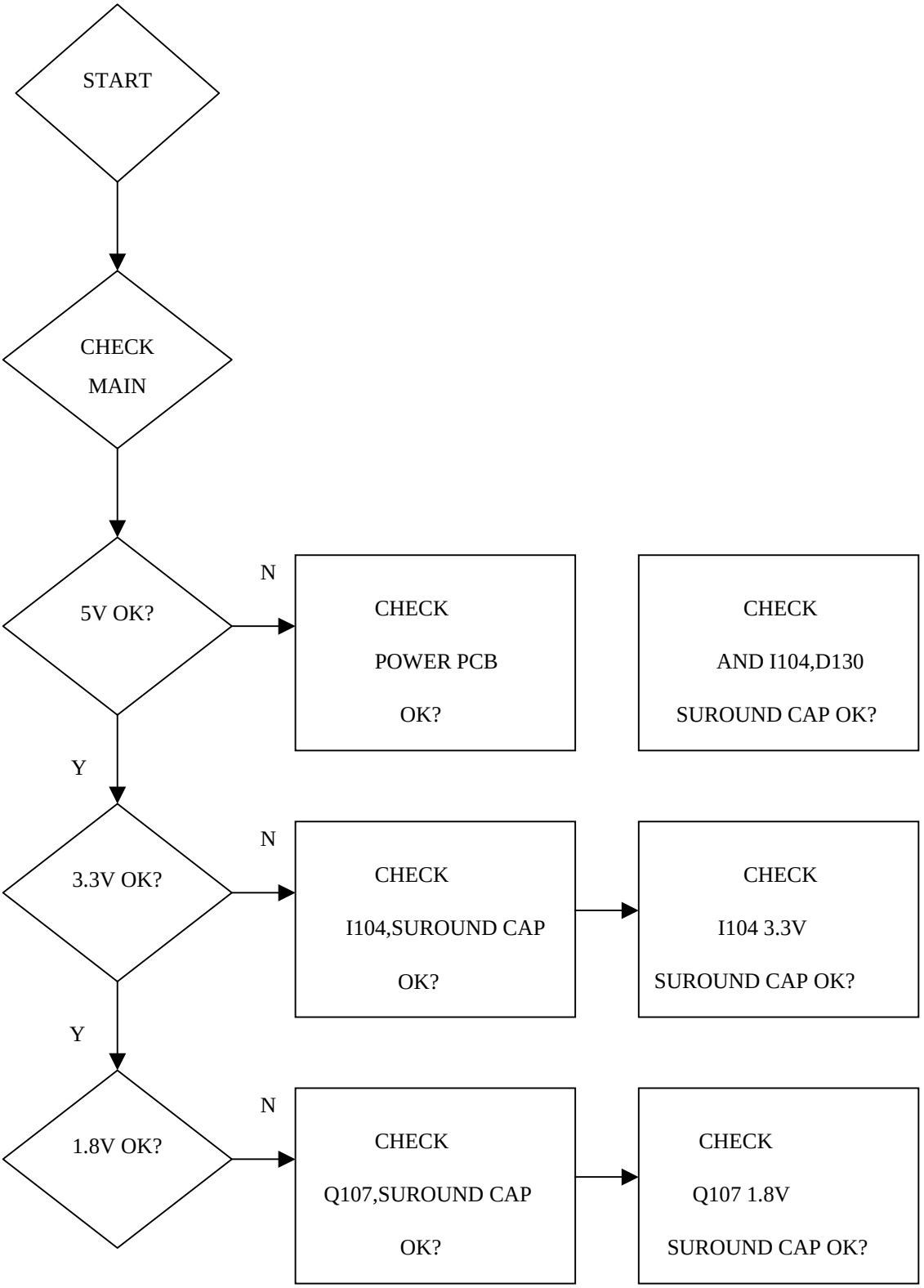
3.3. Lay Panel Unit facedown and unscrew 4 screws on its right and left sides to remove Panel Unit and Keypad Board.

Panel Unit

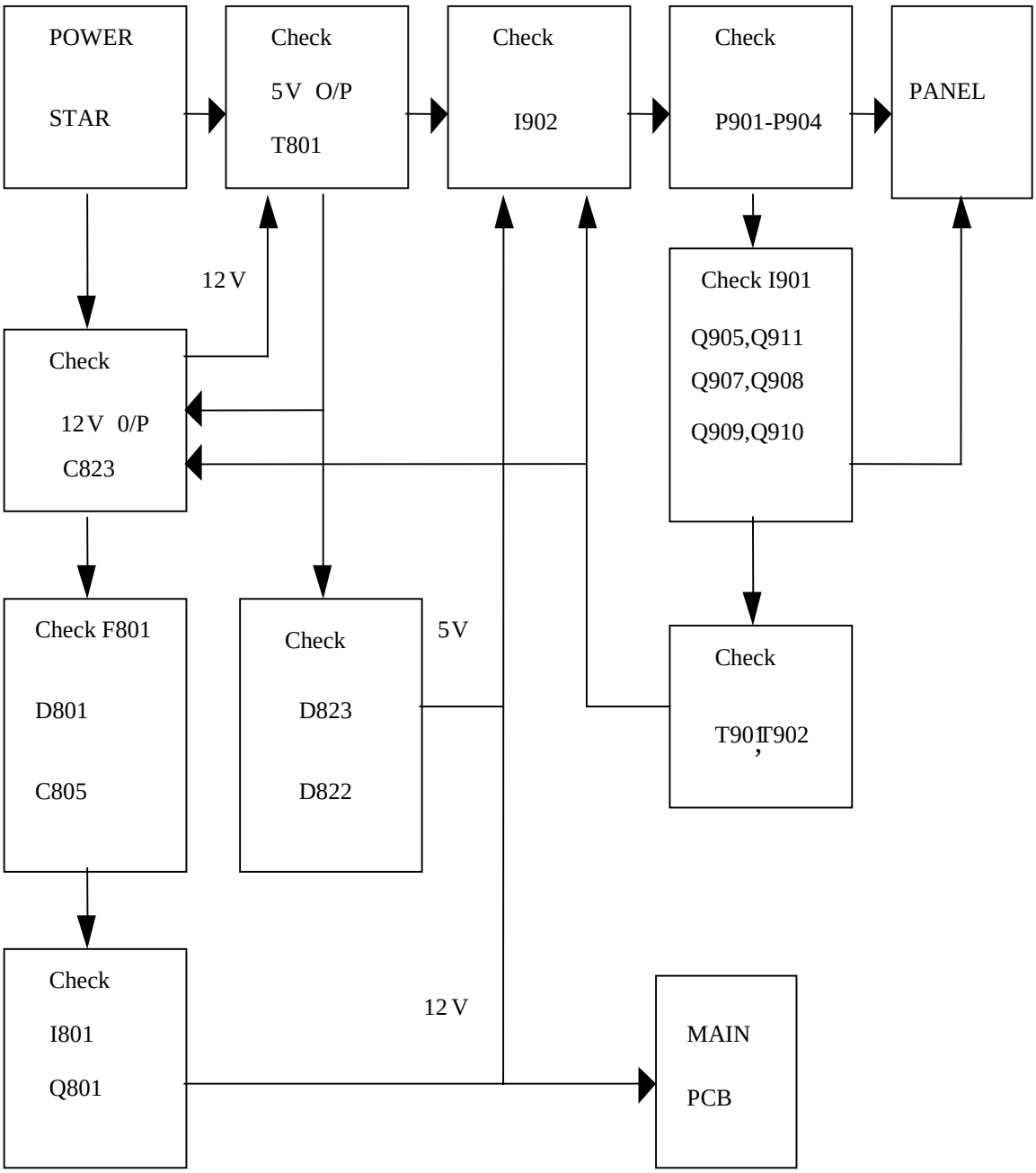


Panel Bracket

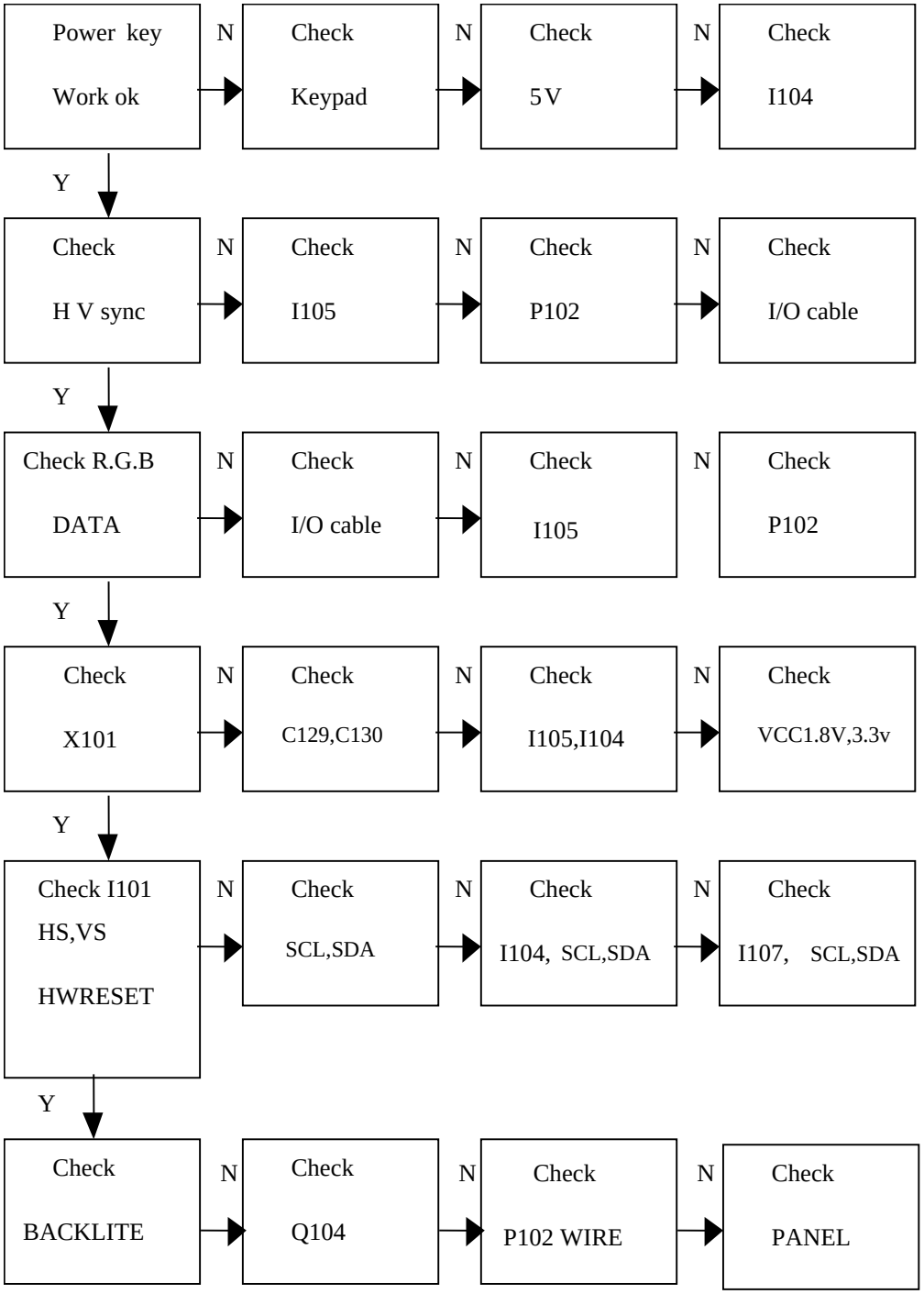
Keypad Board


START
CHECK
MAIN
5V OK?
N
CHECK
POWER PCB
OK?
CHECK
AND I104,D130
SUROUND CAP OK?
Y
3.3V OK?
N
CHECK
I104,SUROUND CAP
OK?
CHECK
I104 3.3V
SUROUND CAP OK?
Y
1.8V OK?
N
CHECK
Q107,SUROUND CAP
OK?
CHECK
Q107 1.8V
SUROUND CAP OK?

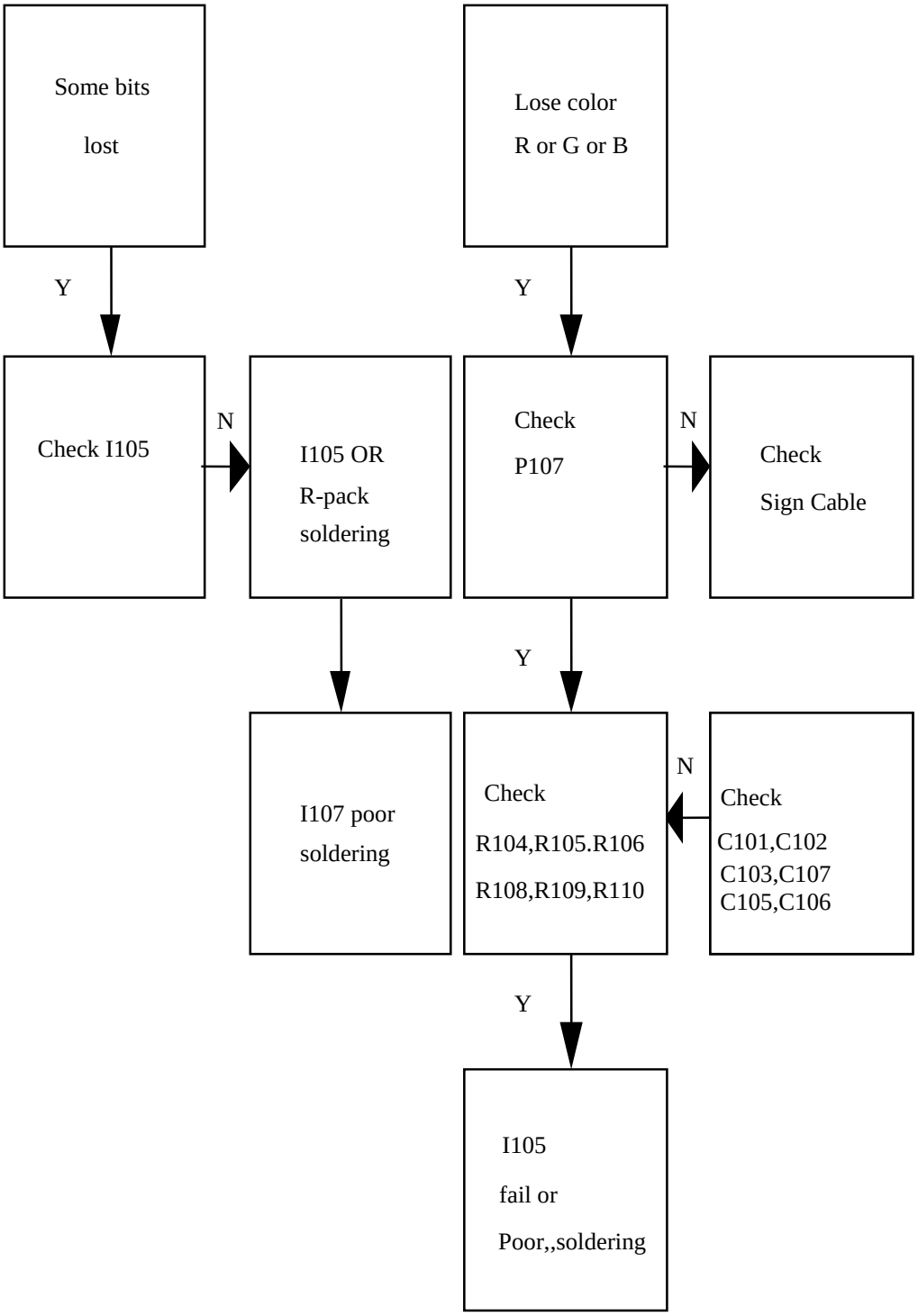
6.1. NO POWER


POWER
STAR
Check
5V O/P
T801
Check
I902
Check
P901-P904
PANEL
12V
Check
12V 0/P
C823
Check I901
Q905,Q911
Q907,Q908
Q909,Q910
Check F801
D801
C805
Check
D823
D822
5V
Check
T901,T902
Check
I801
Q801
12V
MAIN
PCB

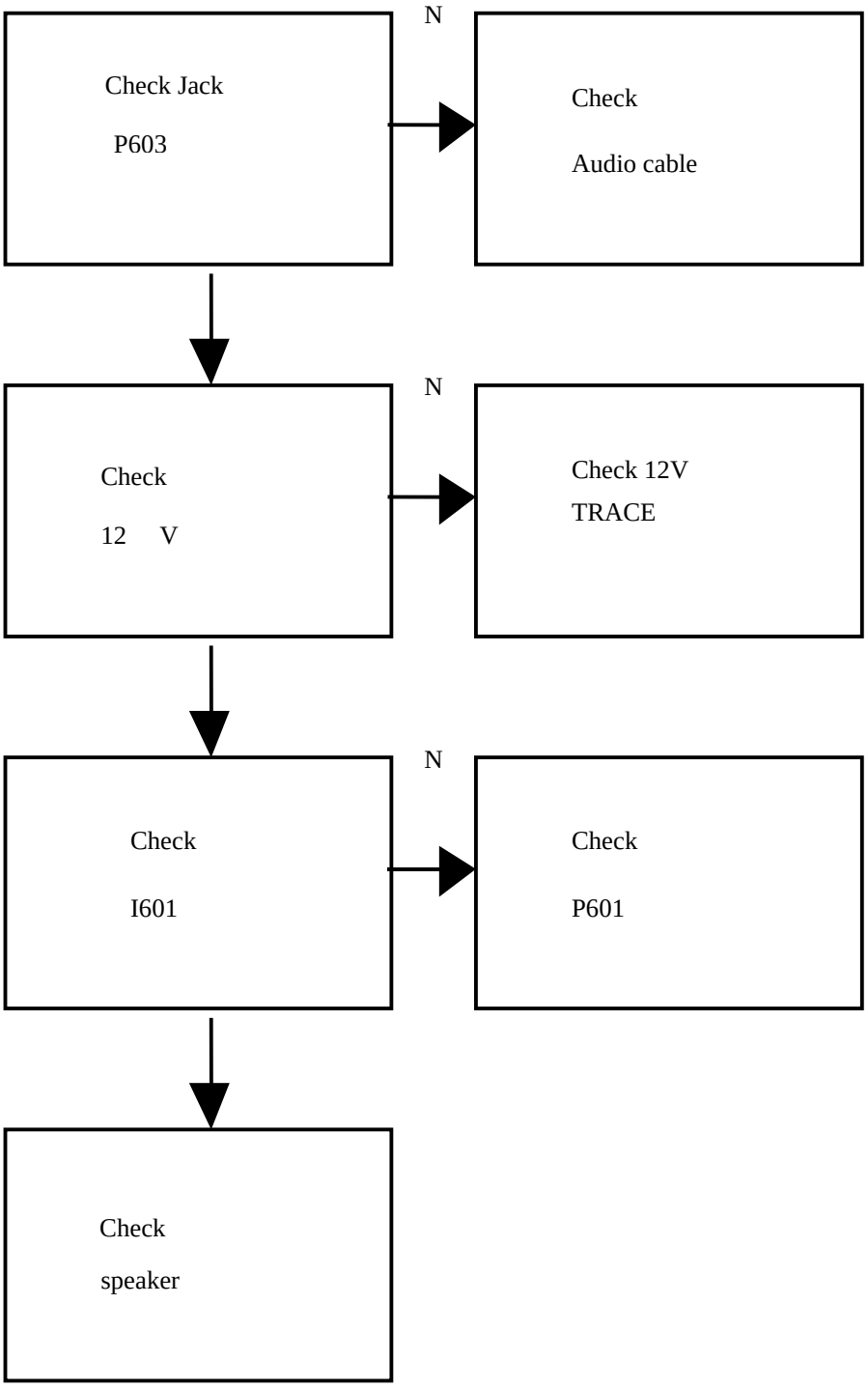
6.2. NO DISPLAY



6.3. LOSE COLOR



6.4. NO AUDIO


Check Jack
P603
N
Check
Audio cable
Check
12 V
N
Check 12V
TRACE
Check
I601
N
Check
P601
Check
speaker

7. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (Q9b-3)

ViewSonic Model Number: VS11455

Serial No. Prefix: QD8 **Rev: 1a**

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#
1	**Accessories:**	Power Cord (German) 1.83M		A-00006133	2427130047P	P951	
2	**PC Board Assembly:**	Main Board		B-00008067	6201-7998344F31		
3		Power Supply Board		B-00008068	6202-7998344F31		
4	**Cabinets:**	Neck 178 W/Arm Up ABS 94HB		C-00003192	2028553002	5B01	
5		Neck 178 W/Arm Up ABS 94HB RoHS		C-00008093	2028553002P	5B01	
6		Neck 178 W/ Arm Down ABS 94HB		C-00003195	2028553102	5B04	
7		Neck 178 W/ Arm Down ABS 94HB RoHS		C-00008094	2028553102P	5B04	
8		Front Panel		C-00008091	2603308070		
9		Back Cover		C-00008092	2603407714		
10	**Cables:**	I/O CABLE		CB-00003009	2427501191P	P961	
11		Cable - (Ear 3.5 1.8M)		CB-00005735	2427721841P	P962	
12	**Documentation:**	Quick Start Guide		DC-00008082	2002370048P	6P84	
13		CD-Rom		DC-00008083	2438570036P	6P80	
14	**Electronic**	LCD Panel - HSD190ME13-A02		E-00003479	2212007901P	V901	
15	**Components:**	Speaker (Right)		E-00008049	2391301098P	W601	
16		Speaker (Left)		E-00008050	2391301099P	W602	
17	**Packing Material:**	POLYETHY BAG		M-MS-0808-1316	2013222536P	6P75	
18		POLYETHY BAG		M-MS-0808-1317	2013053000P	6P60	
19		Craft Box		P-00008075	2011020070P	6P01	
20		Foam (Right)		P-00008076	2012189500P	6P20	
21		Foam (Left)		P-00008077	2012189600P	6P21	
22		POLYETHY BAG		P-00008078	2013228805P	6P85	
23	**Plastics:**	Pedestal (JT198DP) Black		PL-00003187	2028258702	5B08	
24		Pedestal (JT198DP) Black RoHS		PL-00008023	2028258702P	5B08	

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 (Q9b-3)

ViewSonic Model Number: VS11455

Rev: 1a

Serial No. Prefix: QD8

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
1	N/A	2024273702P	FRONT BEZEL JT198N ABS 94HB BLACK C	1F01		1
2	N/A	2053756201P	LED INDIC.-PWR JT198N/PMMA 94HB	1F02		1
3	N/A	2044268003P	FUNCTION KEY VP920/ABS 94HB BLACK C	1F03		1
4	N/A	2022267202P	CABI BACK JT198V ABS HB BLACK C-F AUDIO	2C01		1
5	M-BK-0805-0070	2071869400P	BRACKET,FIX METAL PLATE 1.0MM KENSINGTON	2C02		1
6	HW-00003031	2071872900P	BRACKET,FIX JT198QP SECC 0.8T WALL MOUNT	2C03		1
7	N/A	2061254400P	SPONGE SPONG BLK 50*20*3.0T	2C06		1
8	N/A	2061254400P	SPONGE SPONG BLK 50*20*3.0T	2C07		1
9	C-00008093	2028553002P	NECK 178W/ARM UP ABS 94HB BLACK C	5B01		1
10	N/A	2106656900P	HINGE JT198QP -1'~20'	5B02		1
11	N/A	2106656901P	HINGE JT198QP 0'~20' H.Y	5B02		1
12	N/A	2084740122P	SCREW,BND T+ M4*12 (BND T+)	5B03		4
13	C-00008094	2028553102P	NECK 178W/ARM DOWN ABS 94HB BLACK C	5B04		1
14	N/A	2105251800P	SPRING PLATE JT178WP/EMI PLATE	5B05		1
15	M-SCW-0824-0812	2084730062P	SCREW,BND T+ M3X6(BND T+)	5B06		1
16	N/A	2084740122P	SCREW,BND T+ M4*12 (BND T+)	5B07		4
17	N/A	2028258702P	STAND JT198DP ABS94HB #4001 BLACK	5B08		1
18	N/A	2071973400P	METAL FITTG JT198DP SECC 1.0T STAND	5B09		1
19	M-SCW-0824-0812	2084730062P	SCREW,BND T+ M3X6(BND T+)	5B10		4
20	PL-PD-0714-0113	2039819301P	FOOT PAD RUBBER O20*2TMM SQUARE GRAIN	5B11		4
21	N/A	2055690057P	LABEL JT198NP4FD3 Q9b STAND INSTALL	5B12		1
22	N/A	2071979500P	METAL FITTG JT198V SECC 0.6T F	5F01		1
23	N/A	2080002200P	SCREW,SPE L355 M3x6 DH NICKEL-PLATED	5F02		4
24	N/A	2082630064P	SCREW M3*6 P=0.5 BLACK	6B01		4
25	N/A	2084730104P	SCREW,BND T+ M3X10(BND T+)BLACK	6B02		2
26	N/A	2086240132P	SCREW,P SW+ M4*12 PSW+ 2N	6B03		4
27	N/A	2027258102P	DUST COVER JT178WP/ABS 94HB BLACK C	6B04		1
28	M-SCW-0824-0285	2084730082P	SCREW,BND T+ M3X8(BND T+)	6B05		2
29	N/A	2082630064P	SCREW M3*6 P=0.5 BLACK	6B06		2
30	M-SCW-0824-0811	2080003700P	SCREW,SPE ISZZTER001A M3*6L MSWR17/FZMYI	6F01		6
31	N/A	2081440082P	SCREW,(WASH) M4X8 P=0.7(TOOTH WASHER)	6F04		1
32	N/A	2071678800P	SHIELD PLATE JT198V SPTE 0.3T F-PHONE	6F05		1
33	N/A	2082630042P	SCREW M3*4 P=0.5	6F06		3
34	HW-00003028	2071874300P	BRACKET,FIX SECC T=0.8 VE910 ACINLET	6F11		1
35	P-00008075	2011020070P	CARTON BOX JT198NP4FD3 Q9b VS11455 WW	6P01		1
36	N/A	2055670103P	LABEL JT198NP4FD3 Q9b-3 VS11455 (E)	6P02		1
37	N/A	2055690060P	LABEL ENERGYSTAR LABEL 11X11MM NO PP	6P03		1
38	N/A	2055690056P	LABEL Q9b-3 VS11455 SMALL LABEL	6P05		1
39	N/A	2055613379P	LABEL VIEWSONIC CONTAINER LABEL	6P11		25
40	M-LB-0813-0530	2055617101P	LABEL 10*20 HI-POT TESTED OK	6P13		1
41	M-LB-0813-0959	2055613392P	LABEL VSC HIGH VOLTAGE WARNING LABEL	6P14		1
42	P-00008076	2012189500P	POLYFOAM JT198N-X,D/EPS (R)	6P20		1
43	P-00008077	2012189600P	POLYFOAM JT198N-X D/EPS (L)	6P21		1
44	N/A	2055170164P	LABEL JT198NP4FD3 Q9b VS11455 TCO99	6P50		1
45	M-MS-0808-1317	2013053000P	POLYETHY BAG 90CMX75CMX0.02t PE-LD	6P60		1
46	M-MS-0808-1316	2013222536P	POLYETHY BAG 250mmX350mmX0.3t ADD>PE-LD<	6P75		1
47	DC-00008083	2438570036P	CD-OWNER GUIDE Q9b-3 WIZARD CD HSD	6P80		1
48	DC-00008082	2002370048P	GUARANT CARD VIEWSONIC Q9b-3 QSG	6P84		1
49	P-00008078	2013228805P	POLYETHY BAG 175X280X0.03T mm LDPE A5	6P85		1
50	N/A	2072253903P	HEAT SINK JT178DP SPTE T=1MM	9H01		1
51	N/A	2072261500P	HEAT SINK JT178DP 40L*35W*20H AL T=3	9H02		1
52	N/A	2072261401P	HEAT SINK JT178QP AL6063S-75 30*20*15	9H03		1
53	N/A	2105251400P	SPRING PLATE SPTE T=0.4MM (GROUND PLATE)	9H11		1
54	N/A	2105251400P	SPRING PLATE SPTE T=0.4MM (GROUND PLATE)	9H12		1
55	N/A	2105251400P	SPRING PLATE SPTE T=0.4MM (GROUND PLATE)	9H13		1
56	M-SCW-0824-0285	2084730082P	SCREW,BND T+ M3X8(BND T+)	9S01		1
57	M-SCW-0824-0285	2084730082P	SCREW,BND T+ M3X8(BND T+)	9S02		1
58	M-SCW-0824-0285	2084730082P	SCREW,BND T+ M3X8(BND T+)	9S03		1
59	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C101		1
60	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C102		1
61	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C103		1
62	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C105		1
63	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C106		1
64	N/A	2281447391P	CAP CER CC 0.047u/ 50V Y5V P=5.0 Z T	C107		1
65	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C116		1
66	N/A	2333347691P	CAP ELE 105'C EC 47u/ 16V 5*11 P=5.0 T	C117		1
67	N/A	2333347691P	CAP ELE 105'C EC 47u/ 16V 5*11 P=5.0 T	C119		1
68	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C120		1
69	E-C-0404-1834	2333647591P	CAP ELE 105'C EC 4.7u/ 50V 5*11 P=5.0 T	C124		1
70	E-C-0404-1424	2333610591P	CAP ELE 105'C EC 1u/ 50V 5*11 P=5.0 T	C125		1
71	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C126		1
72	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C127		1
73	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C128		1
74	N/A	2272122091P	CAP CER TC 22p/50V CH P=5.0 J T	C129		1
75	N/A	2272122091P	CAP CER TC 22p/50V CH P=5.0 J T	C130		1
76	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C131		1
77	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C132		1
78	E-C-0404-1834	2333647591P	CAP ELE 105'C EC 4.7u/ 50V 5*11 P=5.0 T	C134		1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
79	N/A	2281410401P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C135		1
80	N/A	2281410401P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C136		1
81	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C137		1
82	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C138		1
83	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C139		1
84	E-C-0404-1119	2272122191P	CAP CER TC 220p/50V CH P=5.0 J T	C140		1
85	N/A	2272122091P	CAP CER TC 22p/50V CH P=5.0 J T	C141		1
86	N/A	2333610601P	CAP,ELE 105'C EC 10u/ 50V 5*11 P=2.0 C	C142		1
87	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C143		1
88	N/A	2281410401P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C144		1
89	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C145		1
90	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C146		1
91	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C148		1
92	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C149		1
93	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C150		1
94	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C151		1
95	N/A	2281410401P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C153		1
96	N/A	2333347691P	CAP ELE 105'C EC 47u/ 16V 5*11 P=5.0 T	C156		1
97	N/A	2333347691P	CAP ELE 105'C EC 47u/ 16V 5*11 P=5.0 T	C157		1
98	E-C-0404-2271	2333310791P	CAP ELE 105'C EC 100u/ 16V 6.3*11 P=5.0 T	C168		1
99	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C169		1
100	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C172		1
101	N/A	2333310812P	CAP ELE 105'C EC 1000u/ 16V10*17 P=5.0 K	C601		1
102	N/A	2333322691P	CAP,ELE 105'C EC 22u/ 16V 5*11 P=5.0 T	C602		1
103	E-C-0404-1424	2333610591P	CAP ELE 105'C EC 1u/ 50V 5*11 P=5.0 T	C603		1
104	E-C-0404-1424	2333610591P	CAP ELE 105'C EC 1u/ 50V 5*11 P=5.0 T	C604		1
105	N/A	2333347791P	CAP ELE 105'C EC 470u/ 16V 10*12.5 P=5.0 T	C605		1
106	N/A	2333347791P	CAP ELE 105'C EC 470u/ 16V 10*12.5 P=5.0 T	C606		1
107	N/A	2333322791P	CAP ELE 105'C EC 220u/ 16V 8*11 P=5.0 T	C610		1
108	E-C-0404-1815	2281410491P	CAP CER CC 0.1u/ 50V Y5V P=5.0 Z T	C615		1
109	N/A	2300947401P	CAP,MTL MINI X2 0.47u/275V P=15.0 M C	C801		1
110	E-00005729	2300947481P	X CAP MINI X2 0.47u/275V P=15.0 K C	C801		1
111	E-C-0404-1855	2287247212P	CAP CER Y2 4700p/250V Y5V P=10.0 M K	C802		1
112	E-C-0404-1855	2287247212P	CAP CER Y2 4700p/250V Y5V P=10.0 M K	C803		1
113	N/A	2357510708P	EC HI-RIPPLE 105C 400V EC 100u/400V 18*32 P=7.5 S	C805		1
114	E-C-0404-2262	2285110291P	CAP CER CC 1000P/1KV Y5P P=5.0 K T	C806		1
115	N/A	2281147191P	CAP CER CC 470pF/50V P=5.0 K T	C808		1
116	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C810		1
117	N/A	2283322291P	CAP CER 125'C CC 2200p/500V X7R P=5.0 K T	C820		1
118	N/A	2283322291P	CAP CER 125'C CC 2200p/500V X7R P=5.0 K T	C821		1
119	N/A	2336010811P	HI-LIFE LOW ESR ELE CAP EC 1000u/ 16V 10*16 P=5.0 C	C822		1
120	N/A	2330006491P	CAP ELE SPECIAL (3000HR) EC 470u /16V 10*13 P=5.0 T	C823		1
121	N/A	2336010801P	HI-LIFE LOW ESR ELE CAP EC 1000u/ 10V 8*20 P=3.5 C	C824		1
122	N/A	2335347773P	CAP,ELE LOW ESR 105'C (6 000HR) EC 470u/ 16V 10*13 P=5.0 T	C825		1
123	N/A	2281110491P	CAP CER CC 0.1u/50V (Y5P) P=5.0 K T	C826		1
124	E-C-0404-1838	2333610691P	CAP ELE 105'C EC 10u/ 50V 5*11 P=5.0 T	C827		1
125	N/A	2285122191P	CAP CER CC 220P/1KV Y5P P=5.0 K T	C828		1
126	N/A	2335310841P	CAP,ELE LOW ESR 105'C EC 1000u/ 16V 10*16 P=5.0 C	C829		1
127	N/A	2287210300P	CAP CER Y2 0.01uF/250V P=10.0 M	C831		1
128	N/A	2302047391P	CAP,MTL MEF 0.047uF/50V P=5.0 J T	C901		1
129	N/A	2275422001P	CAP CER TC 22P/3KV SL P=7.5 J C	C902		1
130	E-00005730	2284022291P	CAP CER CC 2200p/50V X7R P=5.0 K T	C903		1
131	E-00005730	2284022291P	CAP CER CC 2200p/50V X7R P=5.0 K T	C904		1
132	N/A	2275450901P	CAP CER TC 5P/3KV SL P=7.5 J C	C905		1
133	N/A	2330006491P	CAP ELE SPECIAL (3000HR) EC 470u /16V 10*13 P=5.0 T	C906		1
134	E-00003555	2302047291P	CAP,MTL MEF 4700pF/50V P=5.0 J T	C908		1
135	N/A	2284010391P	CAP CER CC 0.01u/50V X7R P=5.0 K T	C910		1
136	N/A	2281110491P	CAP CER CC 0.1u/50V (Y5P) P=5.0 K T	C911		1
137	N/A	2284010391P	CAP CER CC 0.01u/50V X7R P=5.0 K T	C912		1
138	N/A	2284010391P	CAP CER CC 0.01u/50V X7R P=5.0 K T	C913		1
139	N/A	2281110491P	CAP CER CC 0.1u/50V (Y5P) P=5.0 K T	C914		1
140	N/A	2275422001P	CAP CER TC 22P/3KV SL P=7.5 J C	C916		1
141	N/A	2284010291P	CAP CER CC 1000p/50V X7R P=5.0 K T	C917		1
142	N/A	2275450901P	CAP CER TC 5P/3KV SL P=7.5 J C	C918		1
143	E-00003555	2302047291P	CAP,MTL MEF 4700pF/50V P=5.0 J T	C919		1
144	N/A	2330006491P	CAP ELE SPECIAL (3000HR) EC 470u /16V 10*13 P=5.0 T	C922		1
145	N/A	2302068391P	CAP,MTL MEF 0.068u/50V P=5.0 J T	C924		1
146	N/A	2281110491P	CAP CER CC 0.1u/50V (Y5P) P=5.0 K T	C925		1
147	E-00005730	2284022291P	CAP CER CC 2200p/50V X7R P=5.0 K T	C926		1
148	E-00005730	2284022291P	CAP CER CC 2200p/50V X7R P=5.0 K T	C927		1
149	N/A	2281110491P	CAP CER CC 0.1u/50V (Y5P) P=5.0 K T	C928		1
150	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D101		1
151	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D101		1
152	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D101		1
153	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D102		1
154	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D102		1
155	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D102		1
156	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D103		1
157	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D103		1
158	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D103		1
159	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D104		1
160	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D104		1
161	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D104		1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
162	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D105		1
163	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D105		1
164	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D105		1
165	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D106		1
166	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D106		1
167	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D106		1
168	N/A	2363516895P	DIODE,ZENER HZ6B-2 5.6-5.9V DO-35 HITACHI	D107		1
169	N/A	2363516895P	DIODE,ZENER HZ6B-2 5.6-5.9V DO-35 HITACHI	D108		1
170	N/A	2363516895P	DIODE,ZENER HZ6B-2 5.6-5.9V DO-35 HITACHI	D110		1
171	N/A	2363516895P	DIODE,ZENER HZ6B-2 5.6-5.9V DO-35 HITACHI	D111		1
172	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D124		1
173	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D124		1
174	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D124		1
175	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D125		1
176	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D125		1
177	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D125		1
178	N/A	2363516895P	DIODE,ZENER HZ6B-2 5.6-5.9V DO-35 HITACHI	D126		1
179	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D127		1
180	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D127		1
181	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D127		1
182	N/A	2428106125P	JUMPER § 0.6*12.5mm	D128		1
183	E-D-0403-1500	2363222195P	DIODE,RECT SB140 DO-41 PEC	D129		1
184	E-D-0403-1500	2363222195P	DIODE,RECT SB140 DO-41 PEC	D130		1
185	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D601		1
186	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D601		1
187	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D601		1
188	N/A	2363703808P	LED 3 § GRN/YEL H=7.5mm	D701		1
189	N/A	2368501800P	RECT,BRIDGE 2KBP06M 600V/2A PEC	D801		1
190	N/A	2368502800P	RECT,BRIDGE 2KBP06M(LF) 600V/2A MOSPEC	D801		1
191	N/A	2363231995P	DIODE,RECT UF4007 DO-41 1000V/1A PEC	D806		1
192	N/A	2363234995P	DIODE,RECT UF4007 DO-41 MOSPEC	D806		1
193	E-D-0403-1465	2363220395P	DIODE,RECT UF4004G DO-41 PEC	D807		1
194	N/A	2363235195P	DIODE,RECT UPG10G DO-204AL ZOWIE	D807		1
195	N/A	2363303900P	DIODE,SCHOTTKY GMR10H125C TO-220AB GAMMA	D821		1
196	N/A	2363303700P	DIODE,SCHOTTKY GMR10H100C TO-220AB GAMMA	D821		1
197	N/A	2363303300P	DIODE,SCHOTTKY FCH10U10 TO-220AB NI	D821		1
198	N/A	2363300212P	DIODE,SCHOTTKY 31DQ06FC 60V/1.6A H=21.4 NI	D822		1
199	N/A	2363234012P	DIODE,RECT SR306(LF) DO-201AD MOSPEC	D822		1
200	N/A	2363300212P	DIODE,SCHOTTKY 31DQ06FC 60V/1.6A H=21.4 NI	D823		1
201	N/A	2363234012P	DIODE,RECT SR306(LF) DO-201AD MOSPEC	D823		1
202	N/A	2428106075P	JUMPER 0.6 § *7.5mm	D901		1
203	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D902		1
204	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D902		1
205	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D902		1
206	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D905		1
207	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D905		1
208	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D905		1
209	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D906		1
210	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D906		1
211	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D906		1
212	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D907		1
213	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D907		1
214	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D907		1
215	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D908		1
216	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D908		1
217	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D908		1
218	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D909		1
219	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D909		1
220	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D909		1
221	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D910		1
222	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D910		1
223	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D910		1
224	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D911		1
225	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D911		1
226	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D911		1
227	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D912		1
228	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D912		1
229	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D912		1
230	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D913		1
231	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D913		1
232	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D913		1
233	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D915		1
234	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D915		1
235	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D915		1
236	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D916		1
237	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D916		1
238	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D916		1
239	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D917		1
240	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D917		1
241	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D917		1
242	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D918		1
243	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D918		1
244	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D918		1

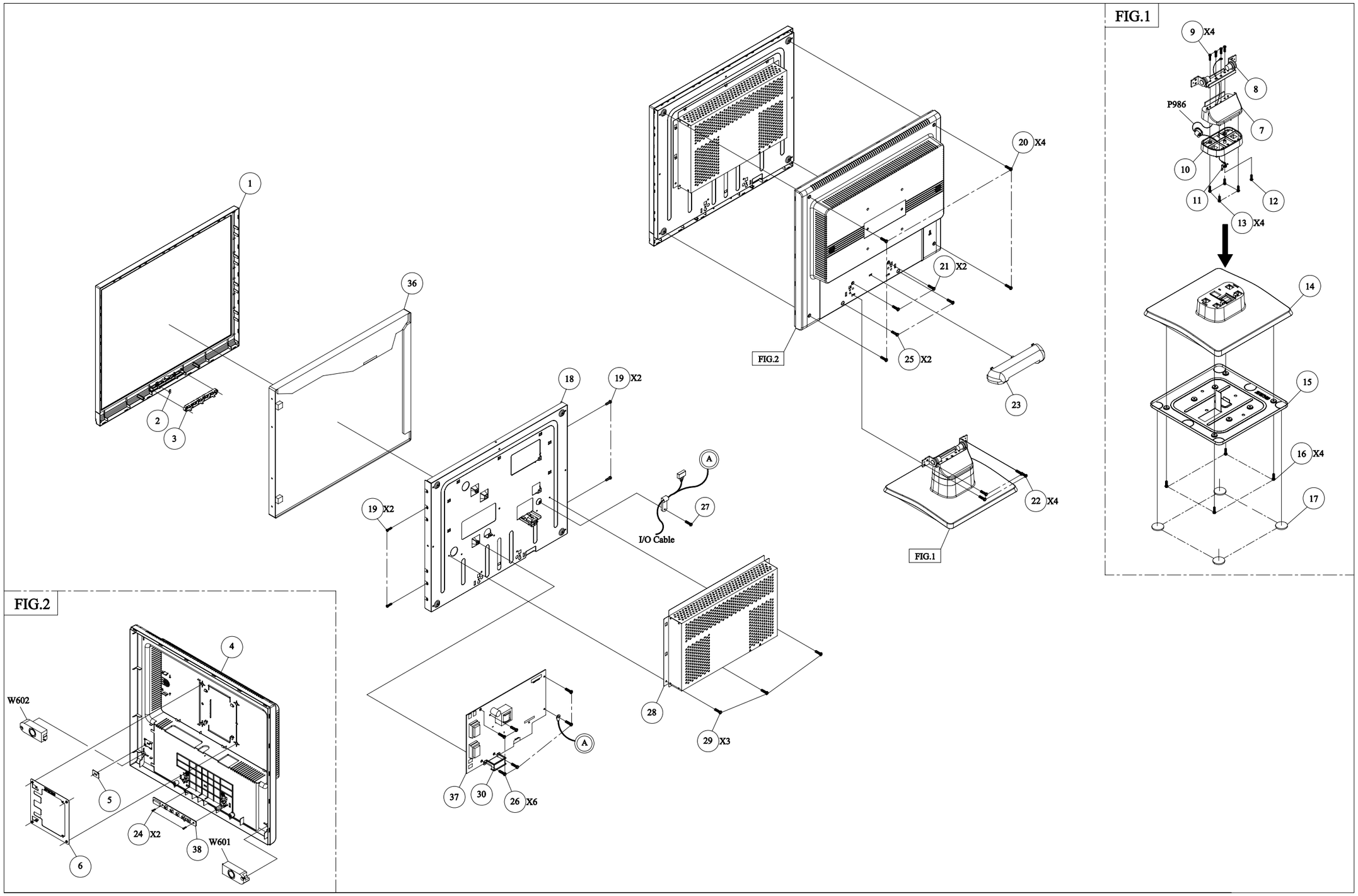
Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
245	E-D-0403-0531	2363600195P	DIODE,SWITCH 1N4148 DO-35 WILLAS	D919		1
246	N/A	2363601795P	DIODE,SWITCH 1N4148TA_NL DO-35 FAIRCHILD	D919		1
247	N/A	2363601895P	DIODE,SWITCH 1N4148 DO-35 TSC	D919		1
248	E-FS-0410-0009	2213125207P	FUSE 21502.5(2.5A) LITTEL	F801		1
249	N/A	2213125211P	FUSE FUSE 2.5A/250V SG501302.5 PICO	F801		1
250	M-WR-0828-0460	2428106125P	JUMPER § 0.6*12.5mm	F802		1
251	N/A	2365335010P	LINEAR IC AP1084T33L TO-220 Anachip	I104		1
252	N/A	2365335060P	LINEAR IC AIC1084-33PT TO-220 AIC	I104		1
253	N/A	2365425216P	DIGITAL IC TSUM16AK-LF PQFP-128 Mstar	I105		1
254	N/A	2365106196P	MEMORY IC (FLASH) PM25LV512SCE SO-8 PMC	I106 RA		1
255	N/A	2365106696P	MEMORY IC (FLASH) PS25LV512-33SCE SOIC-8 Mstar	I106 RB		1
256	N/A	2365915896P	IC,DIGITAL SMD 24LC16BT/SN SO-8 MICROCHIP	I107 RA		1
257	N/A	2365100996P	MEMORY IC AT24C16AN-10SU-2.7 SO-8 AMTEL	I107 RB		1
258	N/A	2365106396P	MEMORY IC (EEPROM) M24C16-WMN6TP SO-8 ST	I107 RC		1
259	N/A	2365335280P	LINEAR IC GMA7496L-D20 DIP-20 GAMMA	I601		1
260	N/A	2365329700P	LINEAR IC TDA7496L DIP-20 ST	I601		1
261	N/A	2365335266P	LINEAR IC LD7575PS SOP-8 Leadtrend	I801		1
262	E-PC-0411-0083	2362401800P	PHOTO COUPLR TLP621 TOSHIBA	I802		1
263	E-00005306	2362402300P	PHOTO COUPLR TLP421 DIP4 TOSHIBA	I802		1
264	N/A	2365328191P	LINEAR IC AP431VLA TO-92 ATC	I803		1
265	E-IC-0401-1270	2365319391P	LINEAR IC TL431CLPRE3 TO-92 TI	I803		1
266	E-IC-0401-2152	2365321991P	LINEAR IC KA431AZTA TO-92 FAIRCHILD	I803		1
267	N/A	2365327691P	LINEAR IC CM431GDCN TO-92 CHAMPION	I803		1
268	N/A	2365335236P	LINEAR IC OZ9936GN SOIC-8 O2-MICRO	I901		1
269	N/A	2428106250P	JUMPER 0.6φ25.00MM	J102		1
270	N/A	2428106250P	JUMPER 0.6φ25.00MM	J103		1
271	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J104		1
272	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J105		1
273	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J106		1
274	n/A	2428106125P	JUMPER § 0.6*12.5mm	J107		1
275	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J108		1
276	N/A	2428208125P	WIRE,STRIP § 0.8*12.5mm	J109		1
277	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J110		1
278	N/A	2428106125P	JUMPER § 0.6*12.5mm	J111		1
279	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J112		1
280	N/A	2428208100P	WIRE,STRIP § 0.8*10.0mm	J113		1
281	N/A	2428208200P	WIRE,STRIP § 0.8*20.0mm	J114		1
282	N/A	2428208050P	WIRE,STRIP § 0.8*5.0mm	J115		1
283	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J116		1
284	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J117		1
285	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J118		1
286	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J119		1
287	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J120		1
288	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J121		1
289	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J122		1
290	N/A	2428208050P	WIRE,STRIP § 0.8*5.0mm	J123		1
291	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J124		1
292	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J125		1
293	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J126		1
294	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J127		1
295	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J128		1
296	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J129		1
297	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J130		1
298	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J131		1
299	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J132		1
300	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J133		1
301	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J134		1
302	N/A	2428106125P	JUMPER § 0.6*12.5mm	J135		1
303	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J136		1
304	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J137		1
305	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J138		1
306	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J139		1
307	N/A	2428106150P	JUMPER 0.6 § *15.0mm	J140		1
308	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J141		1
309	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J142		1
310	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J601		1
311	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J602		1
312	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J603		1
313	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J604		1
314	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J805		1
315	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J806		1
316	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J807		1
317	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J808		1
318	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J809		1
319	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J901		1
320	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J902		1
321	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	J903		1
322	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J904		1
323	N/A	2428106100P	JUMPER 0.6 § *10.0mm	J905		1
324	N/A	2233422095P	RES,CBN 1/4 S RD 1/4WS 22 ohm J T52	J906		1
325	N/A	2233422095P	RES,CBN 1/4 S RD 1/4WS 22 ohm J T52	J907		1

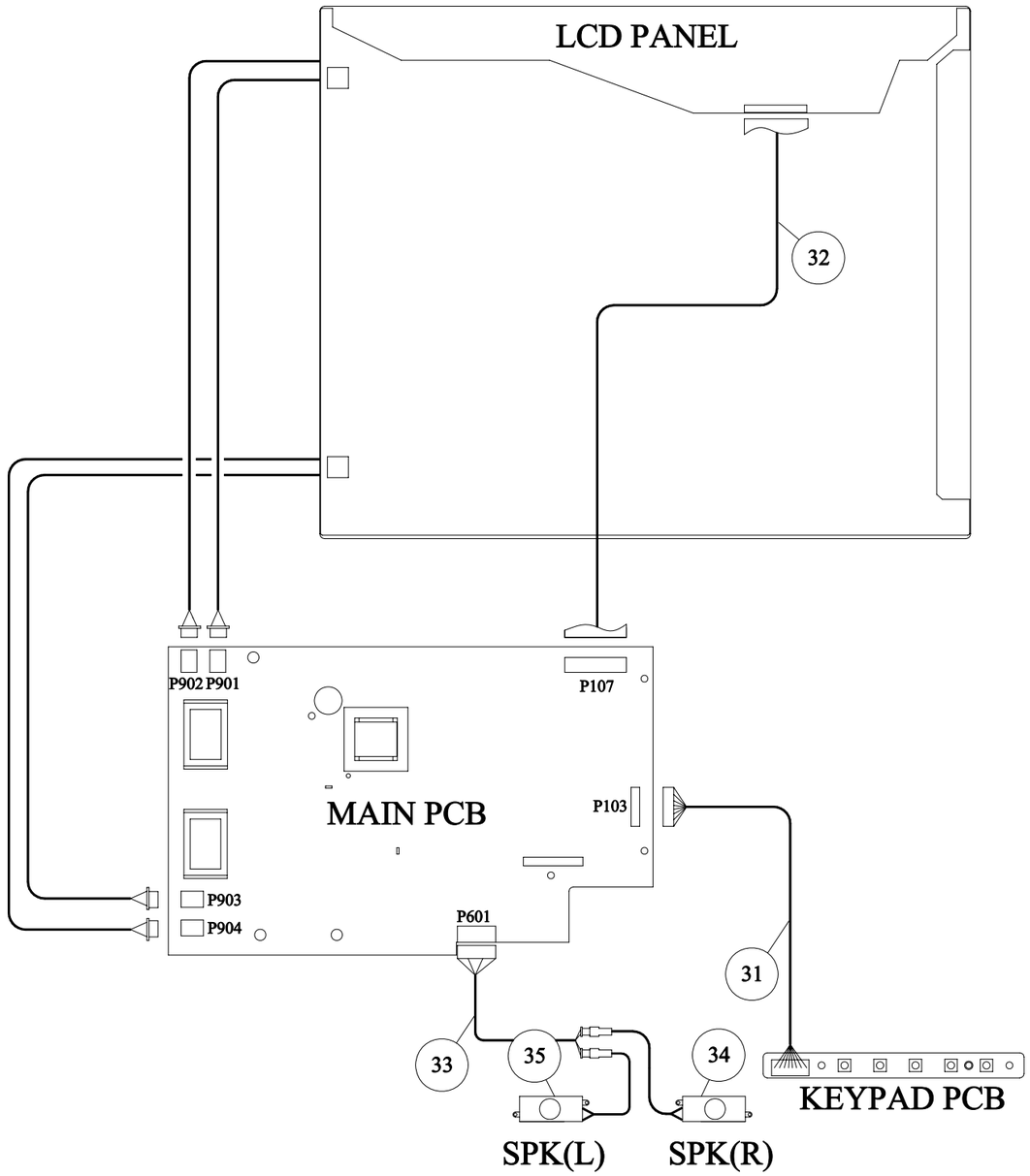
Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
326	N/A	2428106200P	JUMPER 0.6 § *20mm	J908		1
327	N/A	2428106150P	JUMPER 0.6 § *15.0mm	J909		1
328	N/A	2428106175P	JUMPER 0.6 § *17.5mm	J910		1
329	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J911		1
330	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J912		1
331	N/A	2428106075P	JUMPER 0.6 § *7.5mm	J913		1
332	N/A	2434325603P	SHIELDING TAPE W25*L60mm (AL)	K901		1
333	N/A	2434325603P	SHIELDING TAPE W25*L60mm (AL)	K902		1
334	N/A	2434325603P	SHIELDING TAPE W25*L60mm (AL)	K903		1
335	N/A	2428106125P	JUMPER § 0.6*12.5mm	L101		1
336	N/A	2428106125P	JUMPER § 0.6*12.5mm	L102		1
337	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L103		1
338	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L104		1
339	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L105		1
340	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L106		1
341	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L107		1
342	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L108		1
343	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L109		1
344	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L601		1
345	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L602		1
346	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L603		1
347	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L604		1
348	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L608		1
349	E-L-0407-0041	2379101595P	FERRITE CORE 3.5*0.8*4.5	L801		1
350	E-L-0407-0013	2379101495P	FERRITE CORE 3.5*9*0.8	L802		1
351	N/A	2371150903P	COIL,CHOKE 5uH 7.8*10 2UEW 0.65mm/12.5Ts	L803		1
352	N/A	2371150903P	COIL,CHOKE 5uH 7.8*10 2UEW 0.65mm/12.5Ts	L804		1
353	N/A	2371160302P	COIL,CHOKE ET-20 60mH 0.26mm/57Ts LI TAI	L805		1
354	N/A	2371160301P	COIL,CHOKE ET-20 60mH 0.26mm/57Ts LSE	L805		1
355	E-L-0407-1606	2379103500P	FERRITE CORE 0.5 § /3Ts 6*10	L806		1
356	N/A	2379104400P	FERRITE CORE 5*5*2.5 55 ohm 100MHZ Min	L807		2
357	M-WR-0828-0455	2428106050P	JUMPER § 0.6*5.0mm	L808		1
358	N/A	2428106125P	JUMPER § 0.6*12.5mm	L901		1
359	N/A	2404371012P	CONNECTOR JST PH 13P TOP P=2.0 OR EQUAL	P102		1
360	N/A	2404371007P	CONNECTOR JST PH 8P TOP P=2.0 OR EQUAL	P103		1
361	N/A	2404321230P	CONNECTOR CF10301D0T0 CVILUX	P107		1
362	N/A	2404300003P	CONNECTOR JST XH 4P TOP P=2.5 OR EQUAL	P601		1
363	N/A	2405106000P	EARPHONE JACK 2SJ-P520-A04 (577C) SINGATRON	P603		1
364	N/A	2427408016P	WIRE HARNESS 8/8P H/B 1061#26 L=250mm	P701		1
365	N/A	2404380302P	CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL	P901		1
366	N/A	2404380302P	CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL	P902		1
367	N/A	2404380302P	CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL	P903		1
368	N/A	2404380302P	CONNECTOR 87210-0236 P=3.5 ACE OR EQUAL	P904		1
369	A-00006133	2427130047P	AC POWER CORD GERMAN WALL 1.83M BLACK	P951		1
370	CB-00003009	2427501191P	I/O CABLE D15/C13 20276(4.5) 1.83M BLACK	P961		1
371	CB-00005735	2427721841P	CABLE EAR 3.5(577C) 2547#28 1.8M BLK	P962		1
372	N/A	2420330151P	FFC CABLE FFC 30P*P1.0mm*L153mm	P980		1
373	N/A	2427309040P	LUG W/WIRE § 4.3/TAB0.5 1007#18 BLK 60L	P986		1
374	CB-00005400	2427404011P	WIRE HARNESS 4/2+2P H/A 1007#24 L=230 P=2.5	P988		1
375	M-00003554	2097400301P	EYELET BSS3-1/2H T=0.25 SN 3uM	PG85		1
376	M-00003554	2097400301P	EYELET BSS3-1/2H T=0.25 SN 3uM	PG86		1
377	M-00003554	2097400301P	EYELET BSS3-1/2H T=0.25 SN 3uM	PG87		1
378	E-Q-0402-1624	2360301696P	XISTOR,NPN R SMD PMBS3904 SOT-23 PHILIPS	Q103 RA		1
379	E-Q-0402-1180	2360301296P	XISTOR,NPN R SMD MMBT3904-F SOT23 DIODES	Q103 RB		1
380	E-Q-0402-1608	2360300896P	XISTOR,NPN R SMD MMBT3904K SOT-23 FAIRCHILD	Q103 RC		1
381	N/A	2360501396P	FET,P-CH SMD AP2305GN SOT23 APEC	Q104 RA		1
382	N/A	2360502196P	FET,P-CH SMD STS2301 SOT-23 SamHop	Q104 RB		1
383	N/A	2360302296P	XISTOR,PNP R SMD MMBT2907A SOT-23 DIODES	Q107 RA		1
384	E-00003851	2360302496P	XISTOR,PNP R SMD MMBT2907ALT1G SOT-23 ON	Q107 RB		1
385	E-Q-0402-1106	2361100491P	XISTOR,PNP R 2SA733-AP-TP TO-92 NEC	Q109		1
386	E-Q-0402-0720	2361111491P	XISTOR,PNP R 2PA733P TO-92 PHILIPS	Q109		1
387	E-Q-0402-1106	2361100491P	XISTOR,PNP R 2SA733-AP-TP TO-92 NEC	Q110		1
388	E-Q-0402-0720	2361111491P	XISTOR,PNP R 2PA733P TO-92 PHILIPS	Q110		1
389	E-Q-0402-0718	2361316191P	XISTOR,NPN R 2PC945P TO-92 PHILIPS	Q601		1
390	E-Q-0402-0428	2361302591P	XISTOR,NPN R 2SC945-AP TO-92 NEC	Q601		1
391	N/A	2361610900P	FET,N-CH AP04N70BF-H(LF) TO-220FM APEC	Q801		1
392	E-00004445	2361611200P	FET,N-CH AP04N70BF-A(LF) TO-220FM APEC	Q801		1
393	E-Q-0402-0718	2361316191P	XISTOR,NPN R 2PC945P TO-92 PHILIPS	Q802		1
394	E-Q-0402-0555	2361313691P	XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD	Q802		1
395	E-Q-0402-0428	2361302591P	XISTOR,NPN R 2SC945-AP TO-92 NEC	Q802		1
396	E-Q-0402-0718	2361316191P	XISTOR,NPN R 2PC945P TO-92 PHILIPS	Q901		1
397	E-Q-0402-0555	2361313691P	XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD	Q901		1
398	E-Q-0402-0428	2361302591P	XISTOR,NPN R 2SC945-AP TO-92 NEC	Q901		1
399	N/A	2360609596P	FET,N-CH(SMD) AP9977GM SO-8 APEC	Q905 RA		1
400	E-00005732	2360609696P	FET,N-CH(SMD) STM6930A SO-8 SamHop	Q905 RB		1
401	E-Q-0402-0718	2361316191P	XISTOR,NPN R 2PC945P TO-92 PHILIPS	Q907		1
402	E-Q-0402-0555	2361313691P	XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD	Q907		1
403	E-Q-0402-0428	2361302591P	XISTOR,NPN R 2SC945-AP TO-92 NEC	Q907		1
404	E-Q-0402-0718	2361316191P	XISTOR,NPN R 2PC945P TO-92 PHILIPS	Q908		1
405	E-Q-0402-0555	2361313691P	XISTOR,NPN R KSC945CGTA TO-92 FAIRCHILD	Q908		1
406	E-Q-0402-0428	2361302591P	XISTOR,NPN R 2SC945-AP TO-92 NEC	Q908		1
407	N/A	2361609891P	FET,N-CH 2N7000TA TO-92 FAIRCHILD	Q909		1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
408	N/A	2361612091P	FET,N-CH MW2N7000 TO-92 MAXWELLS	Q909		1
409	N/A	2360609596P	FET,N-CH(SMD) AP9977GM SO-8 APEC	Q911 RA		1
410	E-00005732	2360609696P	FET,N-CH(SMD) STM6930A SO-8 SamHop	Q911 RB		1
411	N/A	2239275095P	RES,PRE 1/4 S RN 1/4WS 75 ohm F T52	R101		1
412	N/A	2239275095P	RES,PRE 1/4 S RN 1/4WS 75 ohm F T52	R102		1
413	N/A	2239275095P	RES,PRE 1/4 S RN 1/4WS 75 ohm F T52	R103		1
414	N/A	2233456095P	RES,CBN 1/4 S RD 1/4WS 56.00 J T52 MINI	R104		1
415	N/A	2233456095P	RES,CBN 1/4 S RD 1/4WS 56.00 J T52 MINI	R105		1
416	N/A	2233456095P	RES,CBN 1/4 S RD 1/4WS 56.00 J T52 MINI	R106		1
417	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R108		1
418	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R109		1
419	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R110		1
420	N/A	2233422295P	RES,CBN 1/4 S RD 1/4WS 2.2Kohm J T52	R112		1
421	N/A	2233422295P	RES,CBN 1/4 S RD 1/4WS 2.2Kohm J T52	R113		1
422	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R115		1
423	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R116		1
424	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R125		1
425	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R127		1
426	N/A	2428106075P	JUMPER 0.6 § *7.5mm	R128		1
427	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R130		1
428	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R131		1
429	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R135		1
430	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R136		1
431	N/A	2233422195P	RES,CBN 1/4 S RD 1/4WS 220.00 J T52 MINI	R137		1
432	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R138		1
433	N/A	2233451095P	RES,CBN 1/4 S RD 1/4WS 51.00 J T52 MINI	R147		1
434	E-R-0405-2309	2233420295P	RES,CBN 1/4 S RD 1/4WS 2.0Kohm J T52	R148		1
435	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R149		1
436	E-R-0405-3430	2233439195P	RES,CBN 1/4 S RD 1/4WS 390 ohm J T52	R152		1
437	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R153		1
438	N/A	2233410511P	RES,CBN 1/4 S RD 1/4WS 1.0Mohm J P=7.0	R154		1
439	N/A	2233410311P	RES,CBN 1/4 S RD 1/4WS 10Kohm J P=7.0	R157		1
440	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R158		1
441	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R162		1
442	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R163		1
443	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R164		1
444	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R165		1
445	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R166		1
446	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R167		1
447	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R168		1
448	N/A	2233420395P	RES,CBN 1/4 S RD 1/4WS 20.00K J T52 MINI	R169		1
449	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R170		1
450	E-R-0405-3215	2233447195P	RES,CBN 1/4 S RD 1/4WS 470 ohm J T52	R172		1
451	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R173		1
452	E-R-0405-3215	2233447195P	RES,CBN 1/4 S RD 1/4WS 470 ohm J T52	R175		1
453	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R194		1
454	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R204		1
455	E-R-0405-3429	2233475095P	RES,CBN 1/4 S RD 1/4WS 75.00 J T52 MINI	R205		1
456	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R206		1
457	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R207		1
458	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R208		1
459	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R210		1
460	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R211		1
461	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R212		1
462	N/A	2233456295P	RES,CBN 1/4 S RD 1/4WS 5.6Kohm J T52	R213		1
463	E-R-0405-3221	2233410495P	RES,CBN 1/4 S RD 1/4WS 100Kohm J T52	R601		1
464	E-R-0405-3442	2233439295P	RES,CBN 1/4 S RD 1/4WS 3.9Kohm J T52	R602		1
465	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R610		1
466	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R611		1
467	N/A	2233422395P	RES,CBN 1/4 S RD 1/4WS 22Kohm J T52	R612		1
468	N/A	2233422395P	RES,CBN 1/4 S RD 1/4WS 22Kohm J T52	R613		1
469	E-R-0405-3211	2233447295P	RES,CBN 1/4 S RD 1/4WS 4.7Kohm J T52	R620		1
470	E-TH-0416-0042	2229201212P	THERMISTOR,PTH SCK-103 THINKING	R802		1
471	N/A	2233491495P	RES,CBN 1/4 S RD 1/4WS 910Kohm J T52	R803		1
472	N/A	2428106075P	JUMPER 0.6 § *7.5mm	R804		1
473	N/A	2239261935P	RES,PRE 1/4 S RN 1/4WS 619Kohm F T52	R805		1
474	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R806		1
475	N/A	2233439095P	RES,CBN 1/4 S RD 1/4WS 39 ohm J T52	R807		1
476	N/A	2239210735P	RES,PRE 1/4 S RN 1/4WS 107Kohm F T52	R808		1
477	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R809		1
478	N/A	2239556276P	RES PRE RN 2WS 0.562 ohm F P=7.0	R811		1
479	N/A	2233491495P	RES,CBN 1/4 S RD 1/4WS 910Kohm J T52	R812		1
480	N/A	2235422003P	RES,MTL 1 RS 1W 22ohm J P=15.0	R820		1
481	N/A	2233622095P	RES,CBN 1/2WS RD 1/2WS 22 ohm J T52	R821		1
482	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R823		1
483	N/A	2239236015P	RES,PRE 1/4 S RN 1/4WS 3.60K F T52 MINI	R824		1
484	N/A	2239212115P	RES,PRE 1/4 S RN 1/4WS 1.21Kohm F T	R825		1
485	E-R-0405-3235	2233410295P	RES,CBN 1/4 S RD 1/4WS 1Kohm J T52	R827		1
486	N/A	2239233025P	RES,PRE 1/4 S RN 1/4WS 33.00K F	R828		1
487	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R831		1
488	N/A	2233482195P	RES,CBN 1/4 S RD 1/4WS 820 ohm J T52	R832		1
489	E-R-0405-3221	2233410495P	RES,CBN 1/4 S RD 1/4WS 100Kohm J T52	R833		1
490	E-R-0405-3221	2233410495P	RES,CBN 1/4 S RD 1/4WS 100Kohm J T52	R834		1

Item	ViewSonic P/N	Ref. P/N	Description	Location	Universal number#	Q'ty
491	E-R-0405-3221	2233410495P	RES,CBN 1/4 S RD 1/4WS 100Kohm J T52	R835		1
492	E-R-0405-3221	2233410495P	RES,CBN 1/4 S RD 1/4WS 100Kohm J T52	R836		1
493	N/A	2235522103P	RES,MTL 2 RS 2W 220ohm J P=20.0	R837		1
494	N/A	2239261935P	RES,PRE 1/4 S RN 1/4WS 619Kohm F T52	R839		1
495	E-R-0405-3235	2233410295P	RES,CBN 1/4 S RD 1/4WS 1Kohm J T52	R842		1
496	N/A	2428106075P	JUMPER 0.6 § *7.5mm	R843		1
497	N/A	2239261935P	RES,PRE 1/4 S RN 1/4WS 619Kohm F T52	R844		1
498	N/A	2239212115P	RES,PRE 1/4 S RN 1/4WS 1.21Kohm F T	R851		1
499	E-R-0405-1757	2233410195P	RES,CBN 1/4 S RD 1/4WS 100 ohm J T52	R854		1
500	N/A	2242330595P	HIGH VOLTAGE RESISTOR RD 1/2W 3.0Mohm J T52	R905		1
501	E-R-0405-2725	2233410095P	RES,CBN 1/4 S RD 1/4WS 10 ohm J T52	R906		1
502	E-R-0405-2725	2233410095P	RES,CBN 1/4 S RD 1/4WS 10 ohm J T52	R907		1
503	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R908		1
504	N/A	2239233215P	RES,PRE 1/4 S RN 1/4WS 3.32K F T52 MINI	R909		1
505	E-R-0405-2725	2233410095P	RES,CBN 1/4 S RD 1/4WS 10 ohm J T52	R911		1
506	E-R-0405-2725	2233410095P	RES,CBN 1/4 S RD 1/4WS 10 ohm J T52	R912		1
507	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R913		1
508	E-R-0405-2306	2233433295P	RES,CBN 1/4 S RD 1/4WS 3.3Kohm J T52	R914		1
509	N/A	2239210735P	RES,PRE 1/4 S RN 1/4WS 107Kohm F T52	R918		1
510	E-R-0405-2309	2233420295P	RES,CBN 1/4 S RD 1/4WS 2.0Kohm J T52	R920		1
511	N/A	2239256245P	RES,PRE 1/4 S RN 1/4WS 5.62Mohm F T52	R922		1
512	E-R-0405-3213	2233410595P	RES,CBN 1/4 S RD 1/4WS 1.0Mohm J T52	R924		1
513	N/A	2242330595P	HIGH VOLTAGE RESISTOR RD 1/2W 3.0Mohm J T52	R925		1
514	N/A	2239233215P	RES,PRE 1/4 S RN 1/4WS 3.32K F T52 MINI	R927		1
515	E-R-0405-3214	2233410395P	RES,CBN 1/4 S RD 1/4WS 10Kohm J T52	R929		1
516	N/A	2239243205P	RES,PRE 1/4 S RN 1/4WS 432 ohm F T	R937		1
517	N/A	2259210308P	RES,CHIP NETWORKS 8P4R 1/16W 10Kohm J P=0.8	RP01		1
518	N/A	2259210108P	RES,CHIP NETWORKS 8P4R 1/16W 100 ohm J P=0.8	RP02		1
519	M-SW-0815-0182	2403702200P	TACT SWITCH TSAA-2 HUAJIE	S701		1
520	M-SW-0815-0182	2403702200P	TACT SWITCH TSAA-2 HUAJIE	S702		1
521	M-SW-0815-0182	2403702200P	TACT SWITCH TSAA-2 HUAJIE	S703		1
522	M-SW-0815-0182	2403702200P	TACT SWITCH TSAA-2 HUAJIE	S704		1
523	M-SW-0815-0182	2403702200P	TACT SWITCH TSAA-2 HUAJIE	S705		1
524	N/A	2407413100P	SOCKET 0711-02-P10-9 INALWAYS	S801		1
525	N/A	2407413300P	SOCKET SC-8R-F15A9 SUPERCOM	S801		1
526	N/A	2407200991P	HOLDER,FUSE CQ-05T CONQUER	S802		1
527	N/A	2407200791P	HOLDER,FUSE FC-05C	S802		1
528	N/A	2407200991P	HOLDER,FUSE CQ-05T CONQUER	S803		1
529	N/A	2407200791P	HOLDER,FUSE FC-05C	S803		1
530	N/A	2374228032P	XFORMER,POWR PT004399 ER-28 750uH LI TAI	T801		1
531	N/A	2374228031P	XFORMER,POWR ER-28 750uH LSE	T801		1
532	N/A	2374228036P	XFORMER,POWR YAO SHENG	T801		1
533	N/A	2374301405P	XFORMER INVERTER (DARFON) EEL-19 20/2000Ts 0.1*20/0.06mm	T901		1
534	N/A	2374301404P	XFORMER INVERTER TLT-1285 20/2000Ts 70uH Tailon	T901		1
535	N/A	2374301405P	XFORMER INVERTER (DARFON) EEL-19 20/2000Ts 0.1*20/0.06mm	T902		1
536	N/A	2374301404P	XFORMER INVERTER TLT-1285 20/2000Ts 70uH Tailon	T902		1
537	N/A	2202132500P	PC BOARD JT178QP4FW RSDR CEM1 228*148	U101		1
538	N/A	2202133300P	PC BOARD VP720 K/B FR1 125*12	U701		1
539	E-00003479	2212007901P	LCD PANEL HSD190ME13-A02 (A-) 8ms HSD	V901		1
540	N/A	2212010311P	LCD PANEL HSD190ME13-A10 (A-) 8ms HSD	V901		1
541	N/A	2212010701P	LCD PANEL HSD190ME13-A16 (A-) HSD	V901		1
542	E-00008049	2391301098P	SPEAKER ASS'Y 1W/8ohm W20*L50*H10.5mm (R)	W601		1
543	E-00008050	2391301099P	SPEAKER ASS'Y 1W/8ohm W20*L50*H10.5mm (L)	W602		1
544	N/A	2369102901P	XTAL,OSC 14.31818MHZ/49US 0.1mW/30PF	X101		1
545	N/A	2363500395P	DIODE,ZENER HZ12A-3 12.2-12.7V 0.5W HITACH	Z801		1
546	N/A	2363500395P	DIODE,ZENER HZ12A-3 12.2-12.7V 0.5W HITACH	Z802		1

8. Exploded Diagram and Exploded Parts List




LCD PANEL
32
P902 P901
P107
MAIN PCB
P103
P903
P904
P601
31
33
35
34
KEYPAD PCB
SPK(L)
SPK(R)

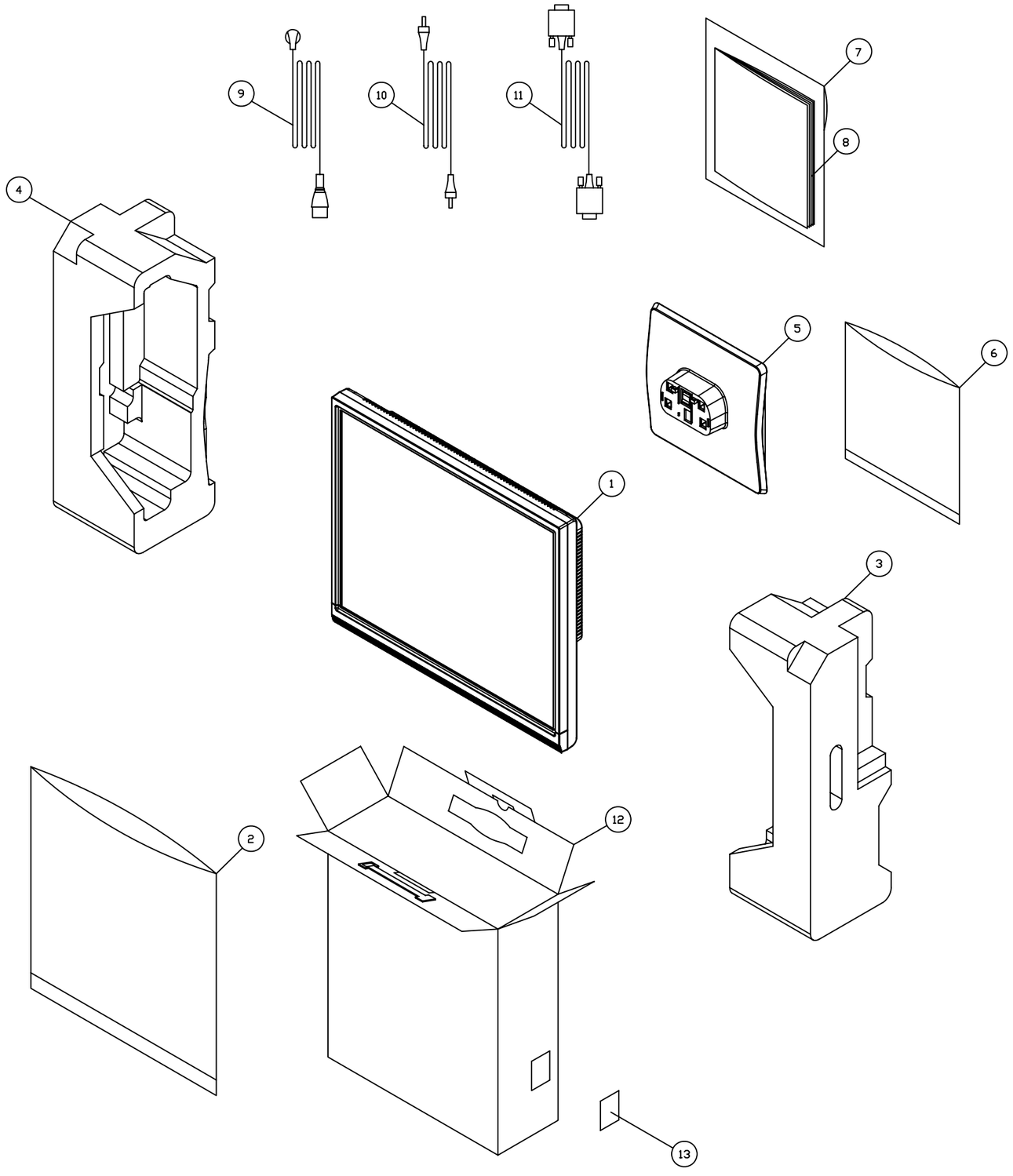
EXPLODED PARTS LIST (Q9b-3)

ViewSonic Model Number: VS11455

Rev: 1a

Serial No. Prefix: QD8

Item	ViewSonic P/N	Ref. P/N	Description		Q'ty
1	N/A	2024273702P	FRONT BEZEL	JT198N ABS 94HB BLACK C	1
2	N/A	2053756201P	LED INDIC.-PWR	JT198N/PMMA 94HB	1
3	N/A	2044268003P	FUNCTION KEY	VP920/ABS 94HB BLACK C	1
4	N/A	2022267202P	CABI BACK	JT198V ABS HB BLACK C-F AUDIO	1
5	M-BK-0805-0070	2071869400P	BRACKET,FIX	METAL PLATE 1.0MM KENSINGTON	1
6	HW-00003031	2071872900P	BRACKET,FIX	JT198QP SECC 0.8T WALL MOUNT	1
7	C-00008093	2028553002P	NECK	178W/ARM UP ABS 94HB BLACK C	1
8	N/A	2106656900P	HINGE(RA)	JT198QP -1'~20'	1
8	N/A	2106656901P	HINGE(RB)	JT198QP 0'~20' H.Y	1
9	N/A	2084740122P	SCREW,BND T+	M4*12 (BND T+)	4
10	C-00008094	2028553102P	NECK	178W/ARM DOWN ABS 94HB BLACK C	1
11	N/A	2105251800P	SPRING PLATE	JT178WP/EMI PLATE	1
12	M-SCW-0824-0812	2084730062P	SCREW,BND T+	M3X6(BND T+)	1
13	N/A	2084740122P	SCREW,BND T+	M4*12 (BND T+)	4
14	N/A	2028258702P	STAND	JT198DP ABS94HB #4001 BLACK	1
15	N/A	2071973400P	METAL FITTG	JT198DP SECC 1.0T STAND	1
16	M-SCW-0824-0812	2084730062P	SCREW,BND T+	M3X6(BND T+)	4
17	PL-PD-0714-0113	2039819301P	FOOT PAD	RUBBER O20*2TMM SQUARE GRAIN	4
18	N/A	2071979500P	METAL FITTG	JT198V SECC 0.6T F	1
19	N/A	2080002200P	SCREW,SPE	L355 M3x6 DH NICKEL-PLATED	4
20	N/A	2082630064P	SCREW	M3*6 P=0.5 BLACK	4
21	N/A	2084730104P	SCREW,BND T+	M3X10(BND T+)BLACK	2
22	N/A	2086240132P	SCREW,P SW+	M4*12 PSW+ 2N	4
23	N/A	2027258102P	DUST COVER	JT178WP/ABS 94HB BLACK C	1
24	M-SCW-0824-0285	2084730082P	SCREW,BND T+	M3X8(BND T+)	2
25	N/A	2082630064P	SCREW	M3*6 P=0.5 BLACK	2
26	M-SCW-0824-0811	2080003700P	SCREW,SPE	ISZZTER001A M3*6L MSWR17/FZMYI	6
27	N/A	2081440082P	SCREW,(WASH)	M4X8 P=0.7(TOOTH WASHER)	1
28	N/A	2071678800P	SHIELD PLATE	JT198V SPTE 0.3T F-PHONE	1
29	N/A	2082630042P	SCREW	M3*4 P=0.5	3
30	HW-00003028	2071874300P	BRACKET,FIX	SECC T=0.8 VE910 ACINLET	1
31	N/A	2427408016P	WIRE HARNESS	8/8P H/B 1061#26 L=250mm	1
32	N/A	2420330151P	FFC CABLE	FFC 30P*P1.0mm*L153mm	1
33	CB-00005400	2427404011P	WIRE HARNESS	4/2+2P H/A 1007#24 L=230 P=2.5	1
34	E-00008049	2391301098P	SPEAKER ASS'Y	1W/8ohm W20*L50*H10.5mm (R)	1
35	E-00008050	2391301099P	SPEAKER ASS'Y	1W/8ohm W20*L50*H10.5mm (L)	1
36	E-00003479	2212007901P	LCD PANEL	HSD190ME13-A02 (A-) 8ms HSD	1
37	B-00008067	6201-7998344F31	MAIN PCBA	Q9b-3	1
38	B-00008068	6202-7998344F31	KEYPAD PCBA	Q9b-3	1



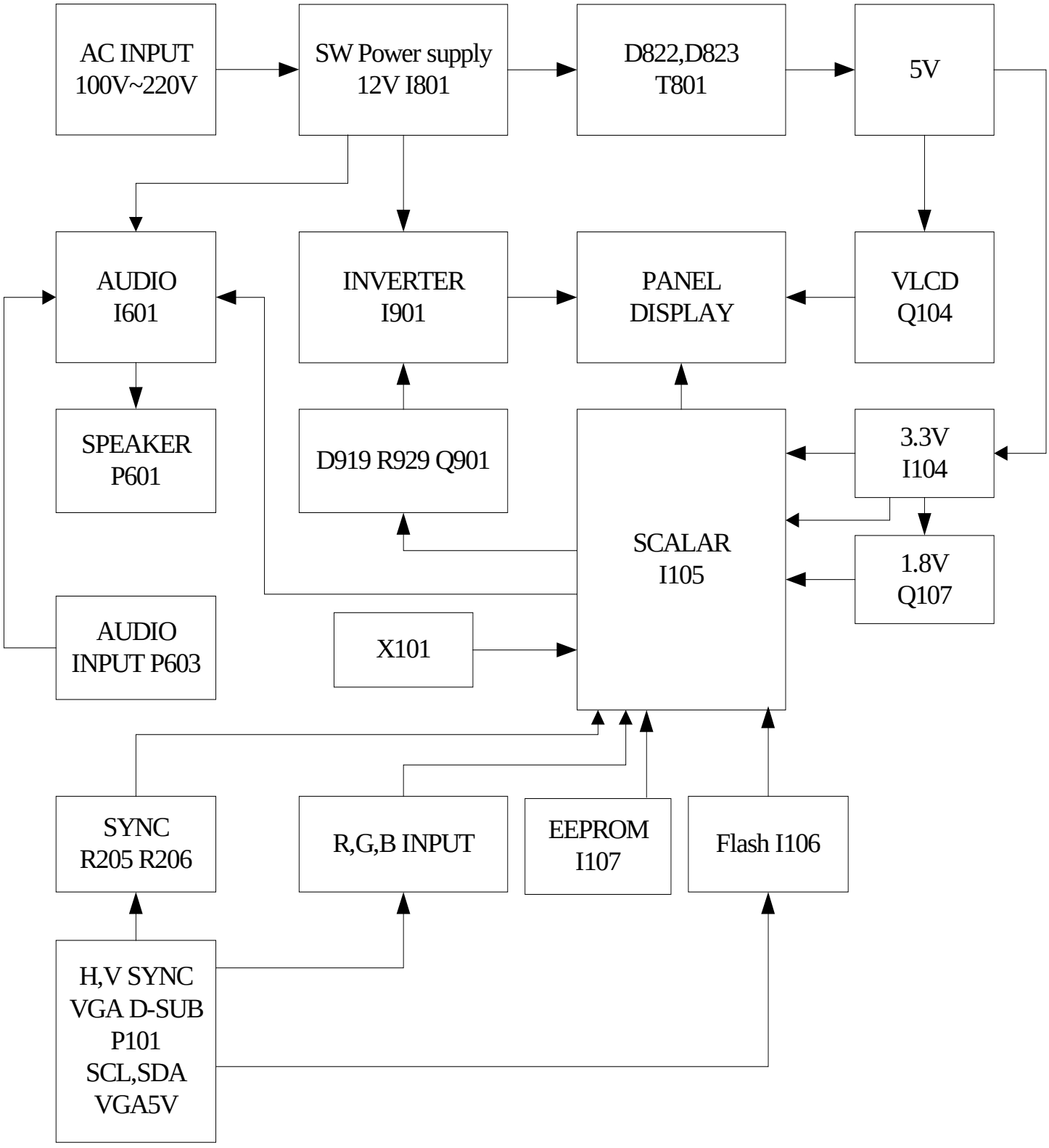
PACKING PART LIST (Q9b-3)

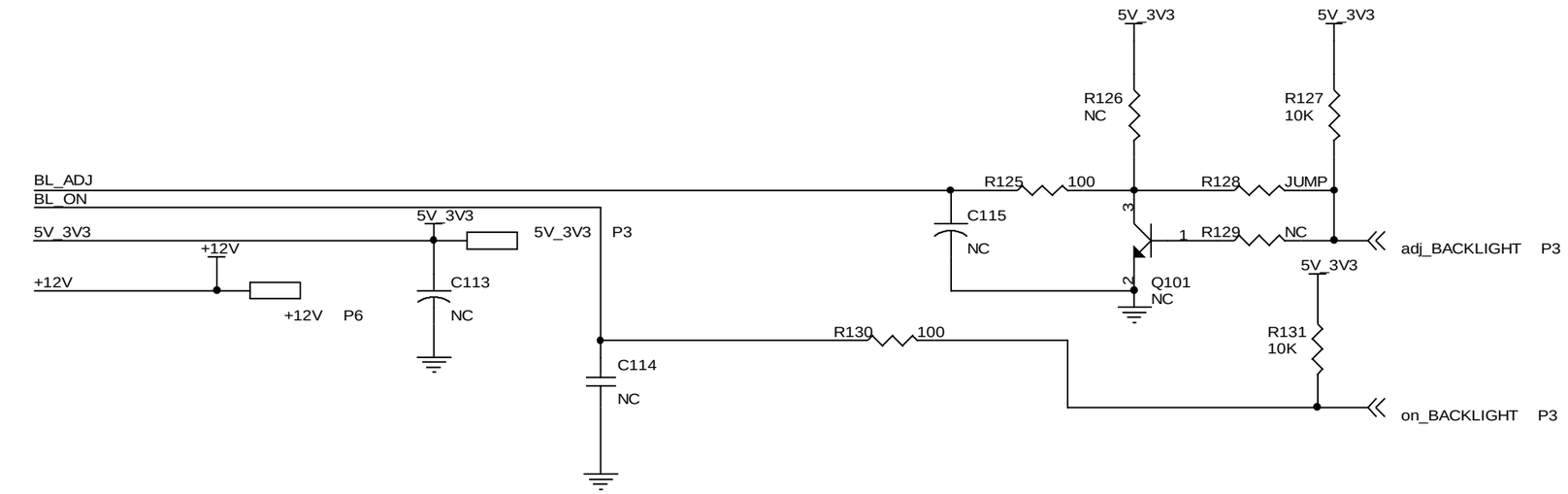
ViewSonic Model Number: VS11455

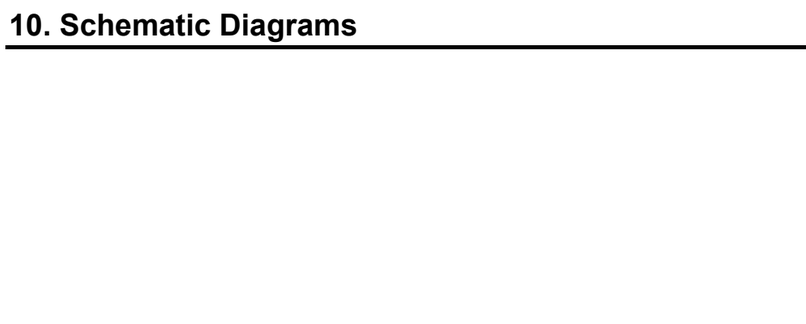
Rev: 1a

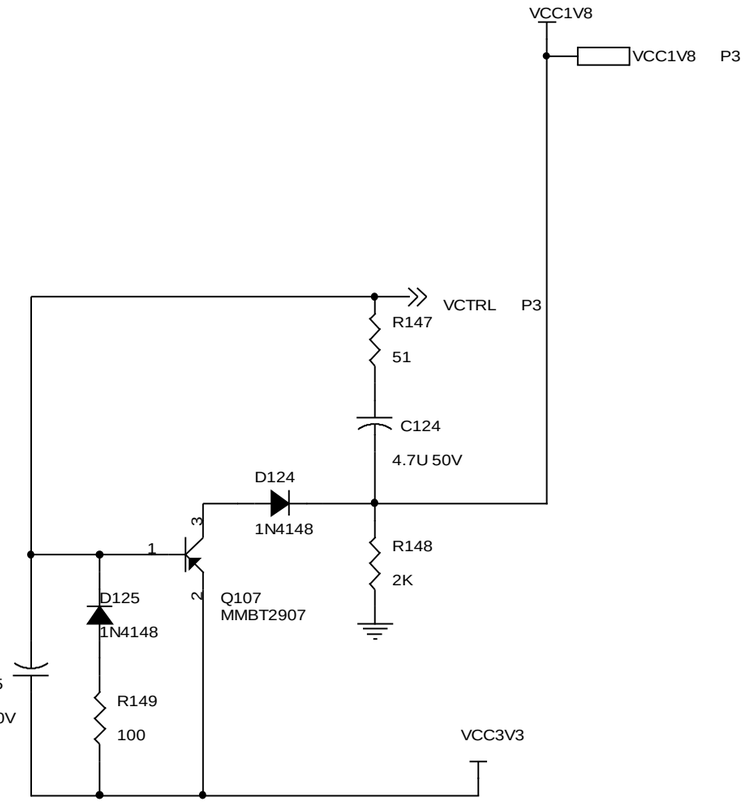
Item	ViewSonic P/N	Ref. P/N	Location	Q'ty
1			Q9b-3 monitor	1
2	M-MS-0808-1317	2013053000P	POLYETHY BAG	1
3	P-00008076	2012189500P	POLYFOAM (R)	1
4	P-00008077	2012189600P	POLYFOAM (L)	1
5			BASE ASS'Y	1
6	M-MS-0808-1316	2013222536P	POLYETHY BAG	1
7	DC-00008083	2438570036P	CD-OWNER GUIDE	1
8	DC-00008082	2002370048P	GUARANT CARD(QSG)	1
9	A-00006133	2427130047P	AC POWER CORD	1
10	CB-00005735	2427721841P	AUDIO CABLE	1
11	CB-00003009	2427501191P	VGA CABLE	1
12	P-00008075	2011020070P	CARTON BOX	1
13	N/A	2055670103P	LABEL	1

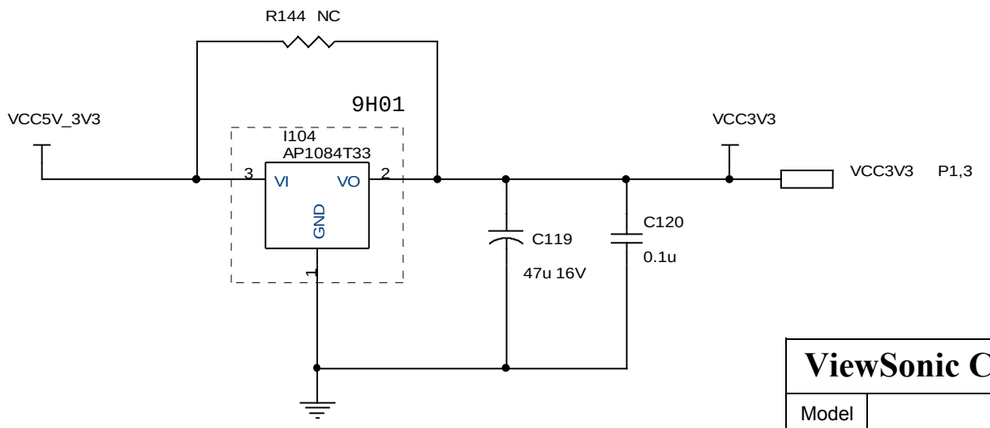
9. Block Diagram



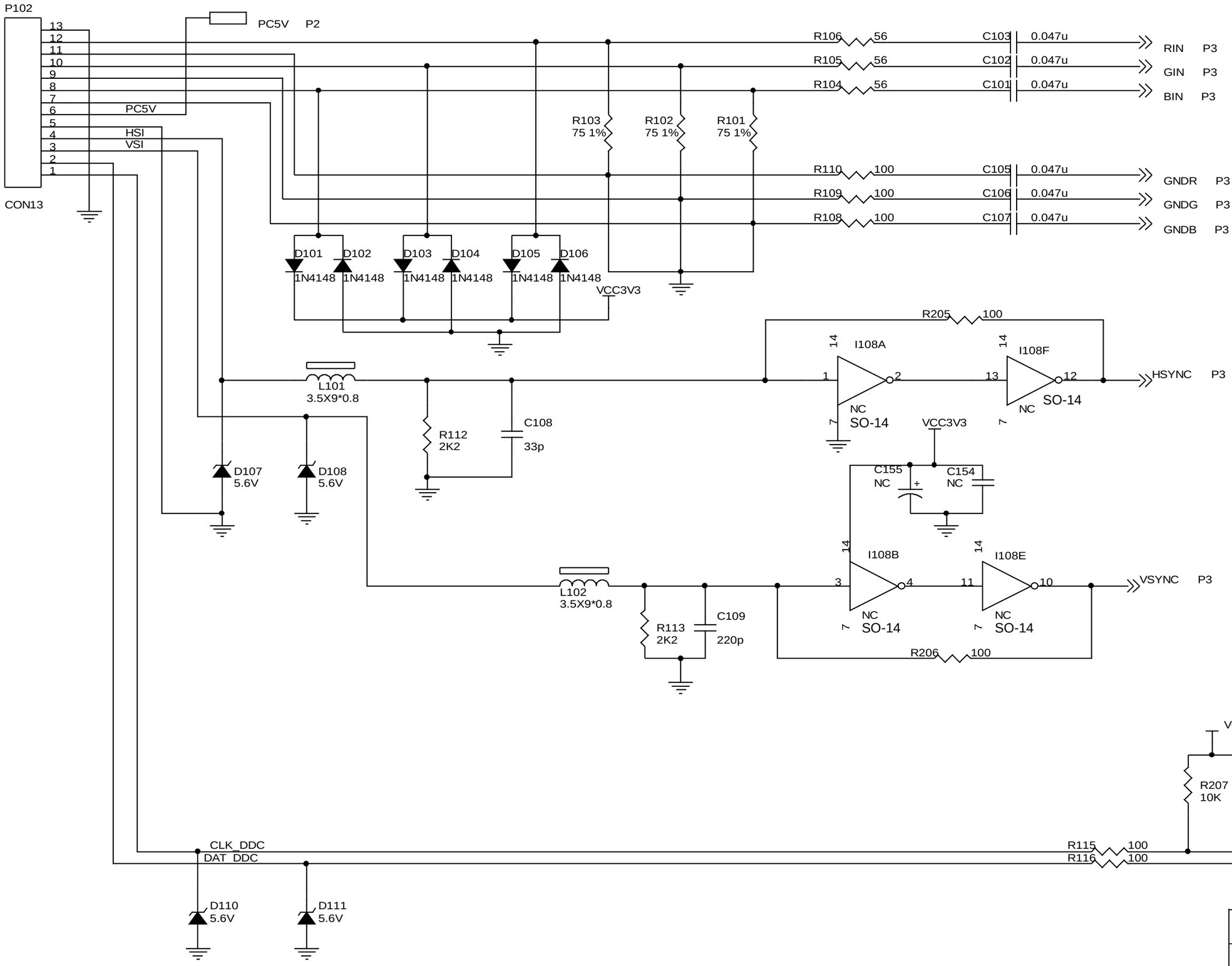




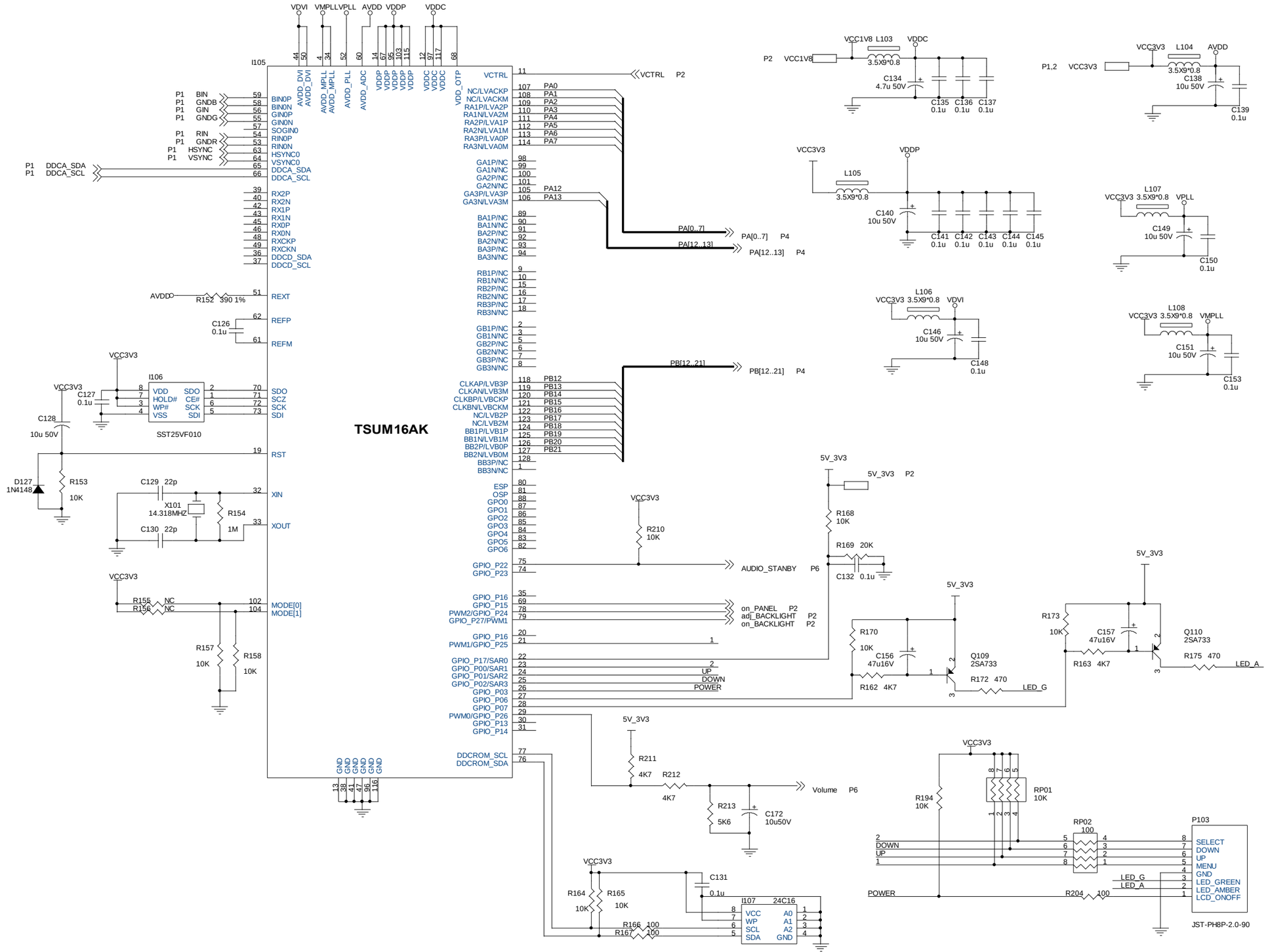




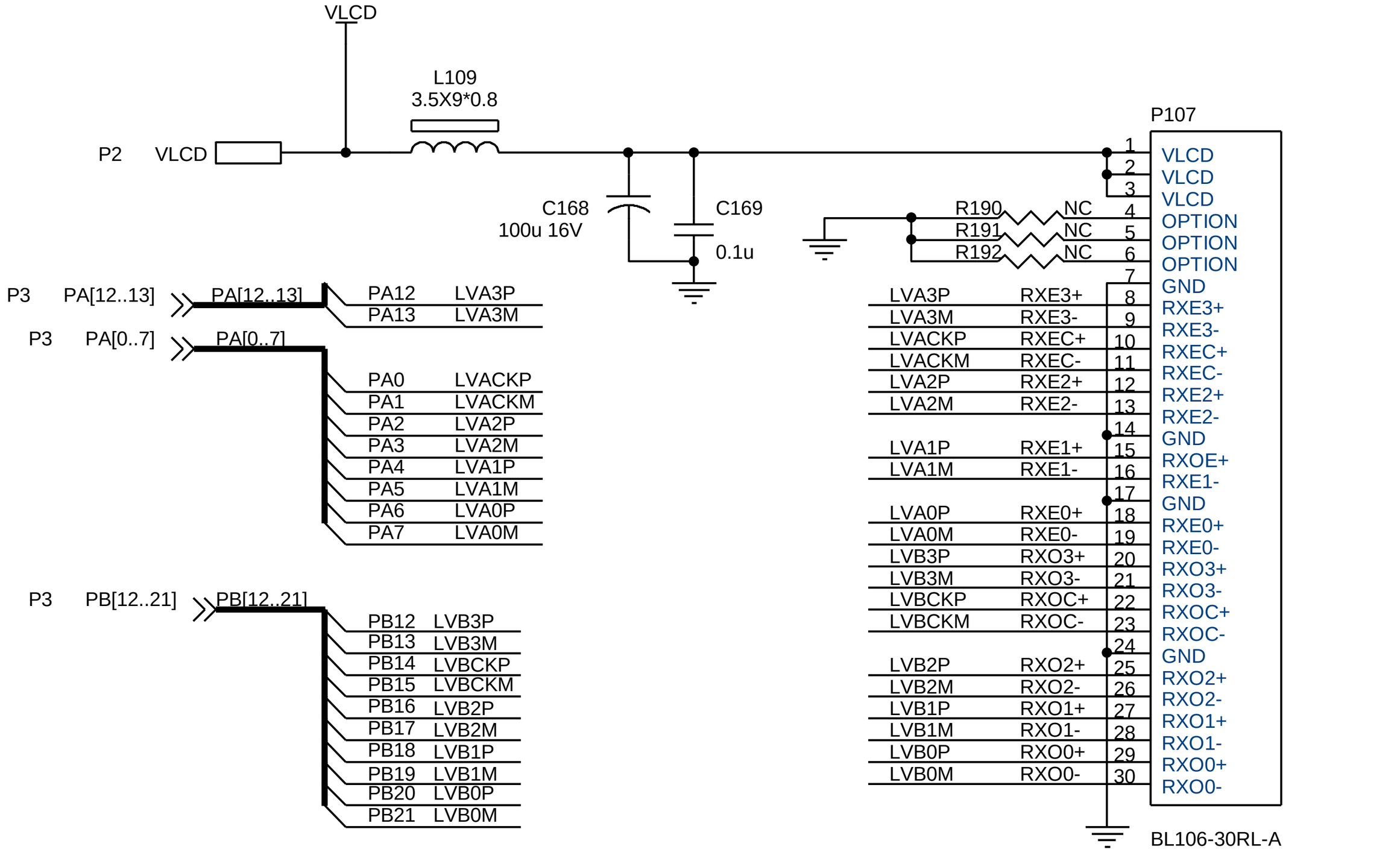
ViewSonic Corporation		
Model		
Title	DC to DC POWER	
Date		Rev:



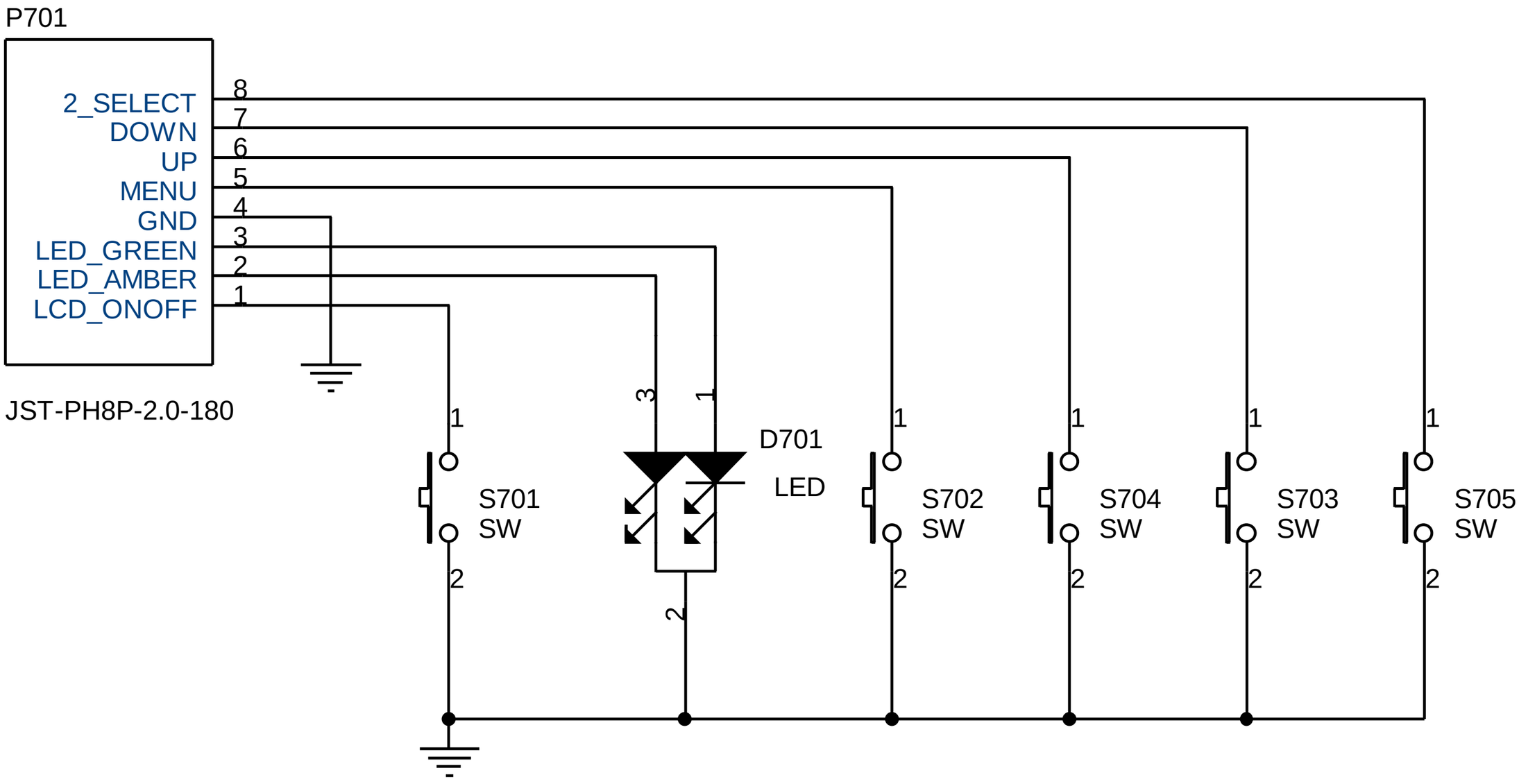
ViewSonic Corporation		
Model		
Title	INPUT	
Date		Rev:



ViewSonic Corporation		
Model		
Title	SCALER	
Date		Rev:



ViewSonic Corporation		
Model		
Title	PANEL INTERFACE	
Date		Rev:

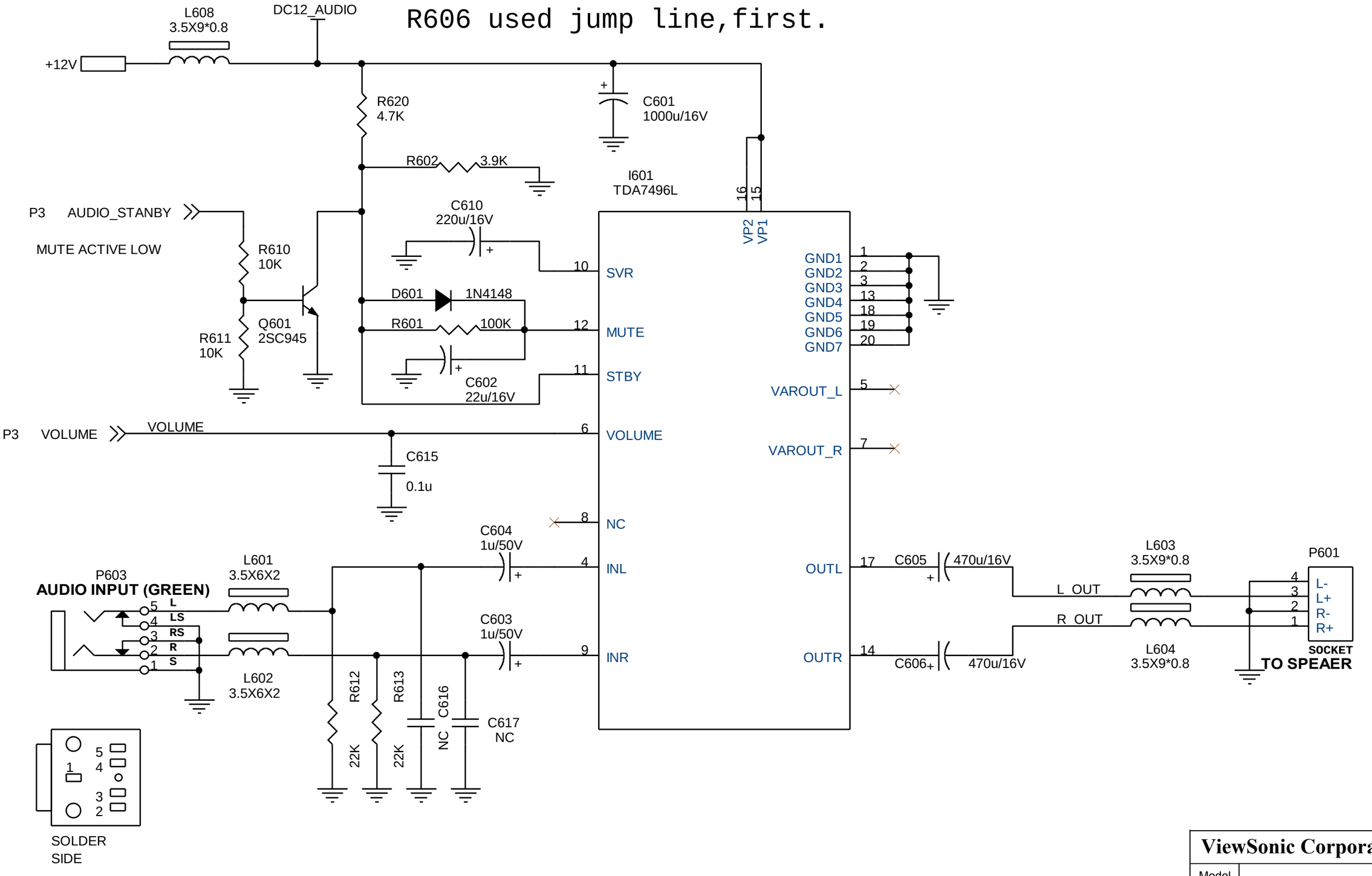


Key_pad

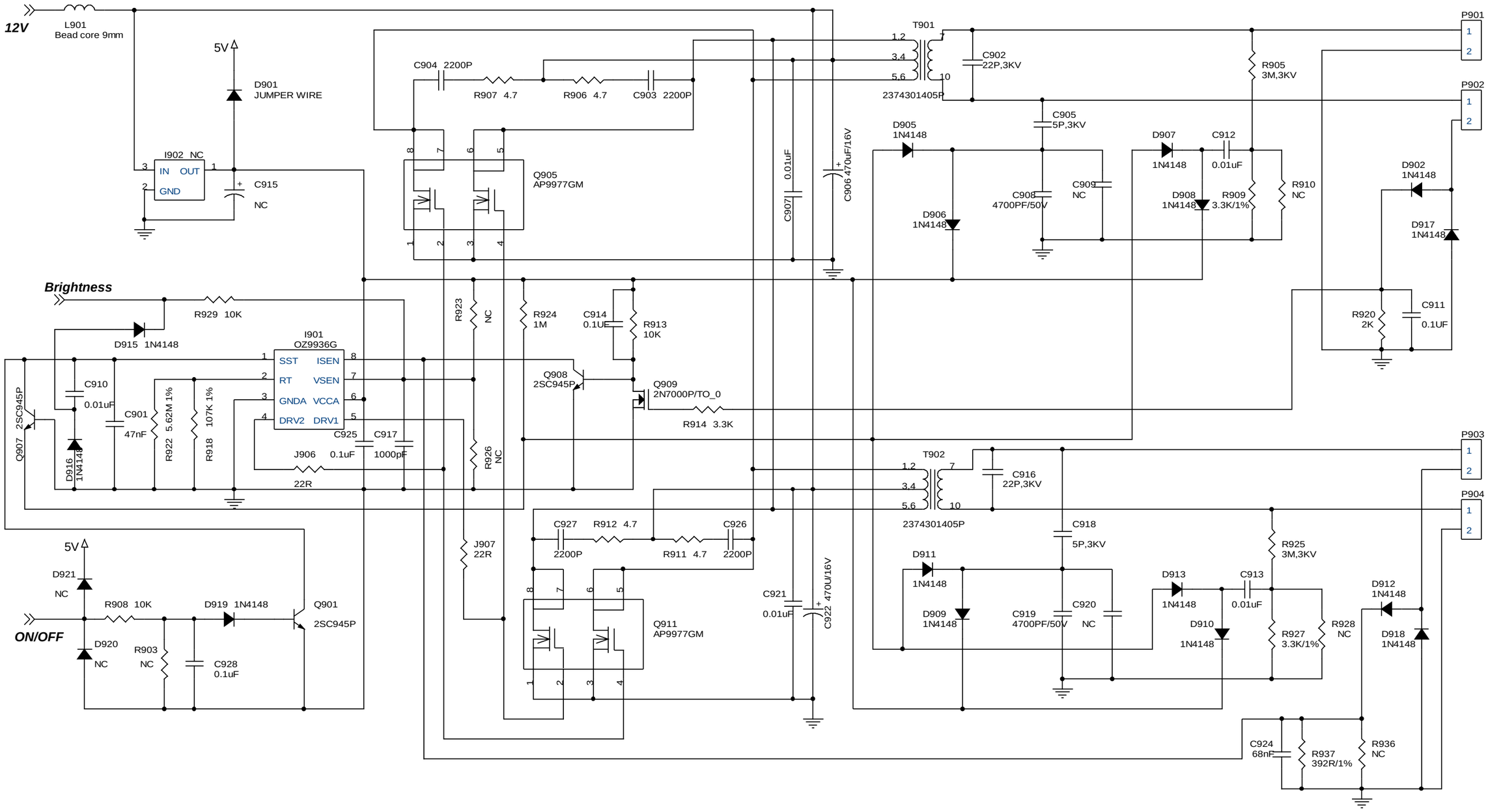
P/N : 2202125100

ViewSonic Corporation		
Model		
Title	KEY PAD	
Date		Rev:

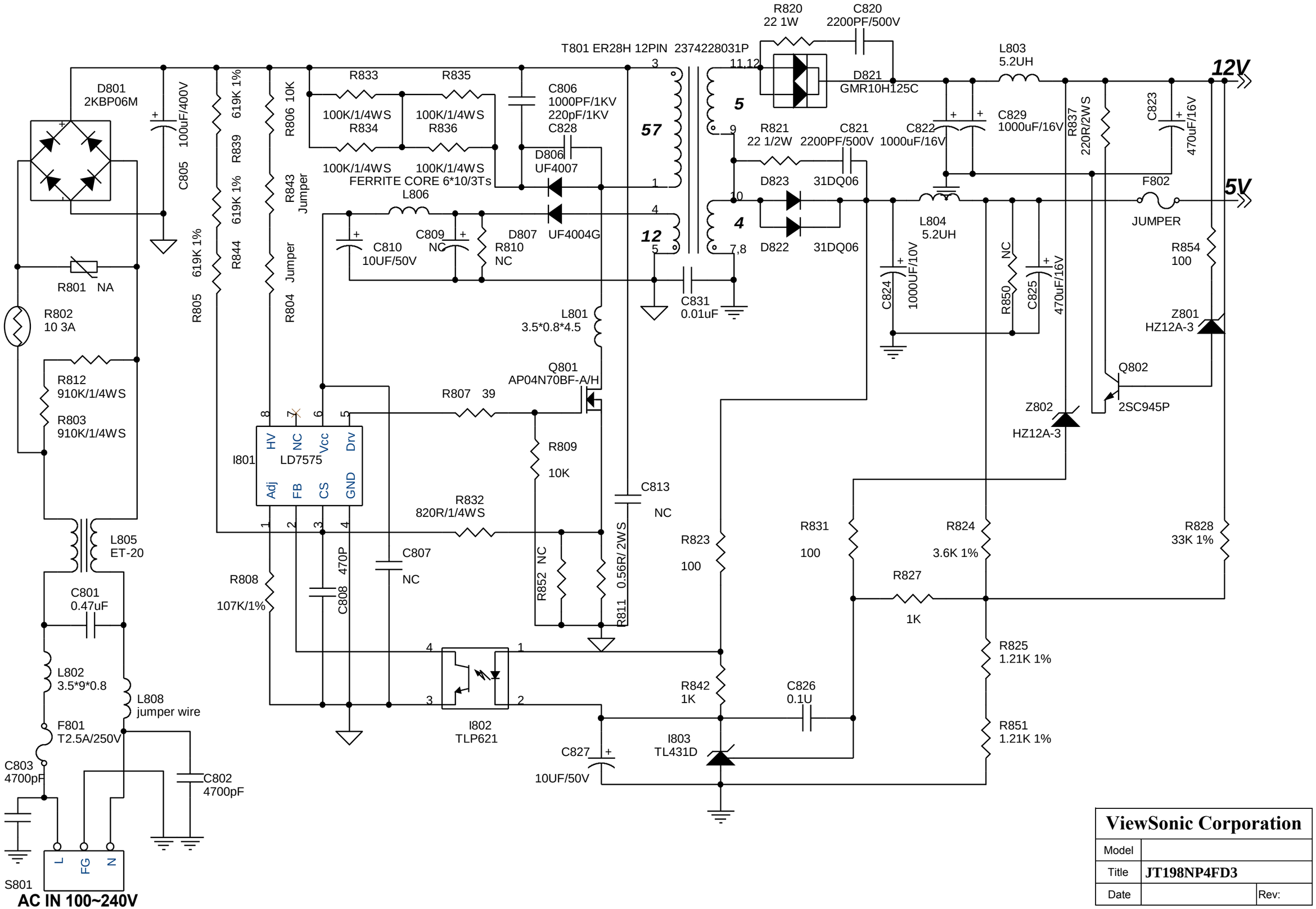
R606 used jump line,first.



ViewSonic Corporation		
Model		
Title	AUDIO	
Date		Rev:



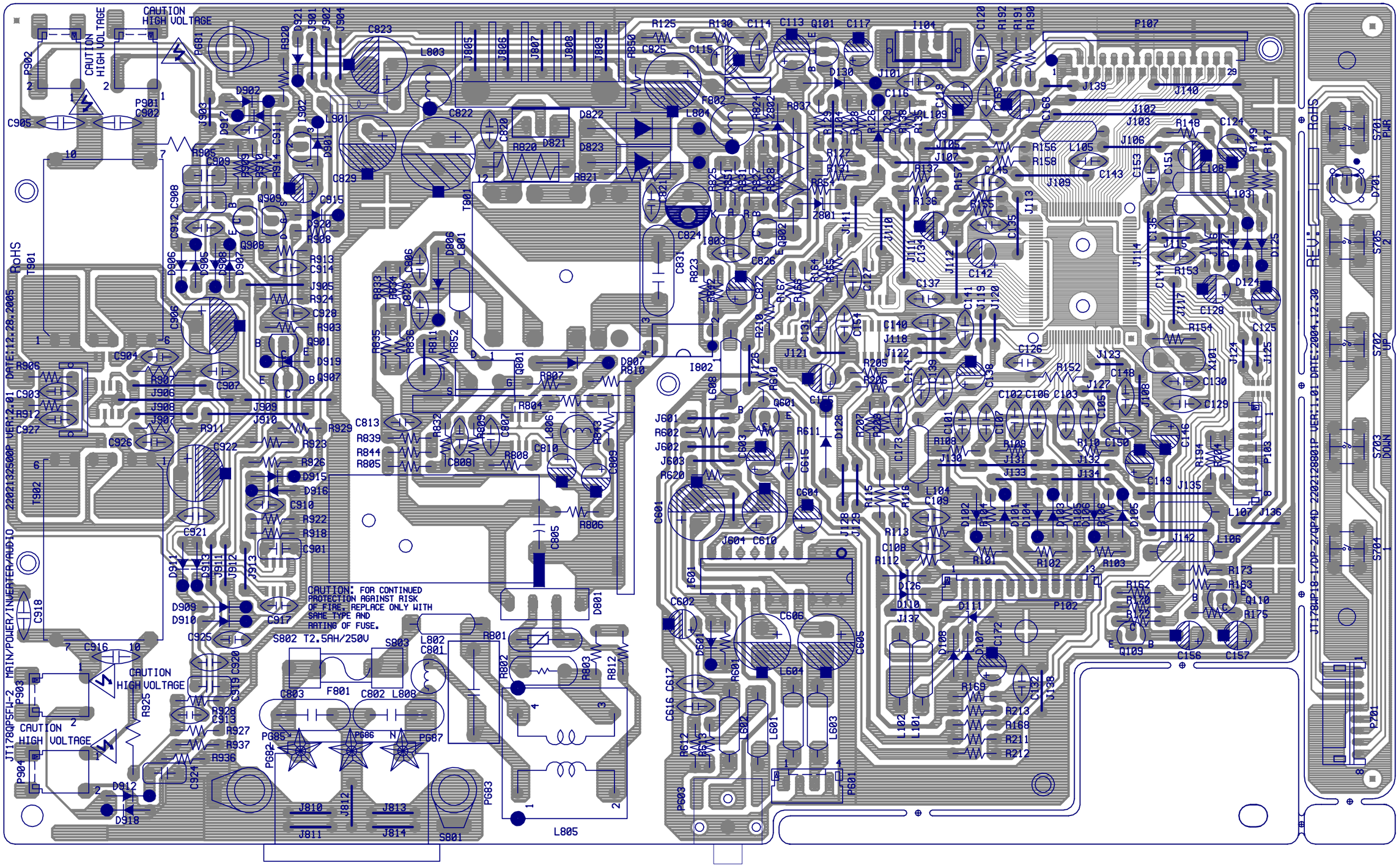
ViewSonic Corporation		
Model		
Title	**Inverter**	
Date		Rev:



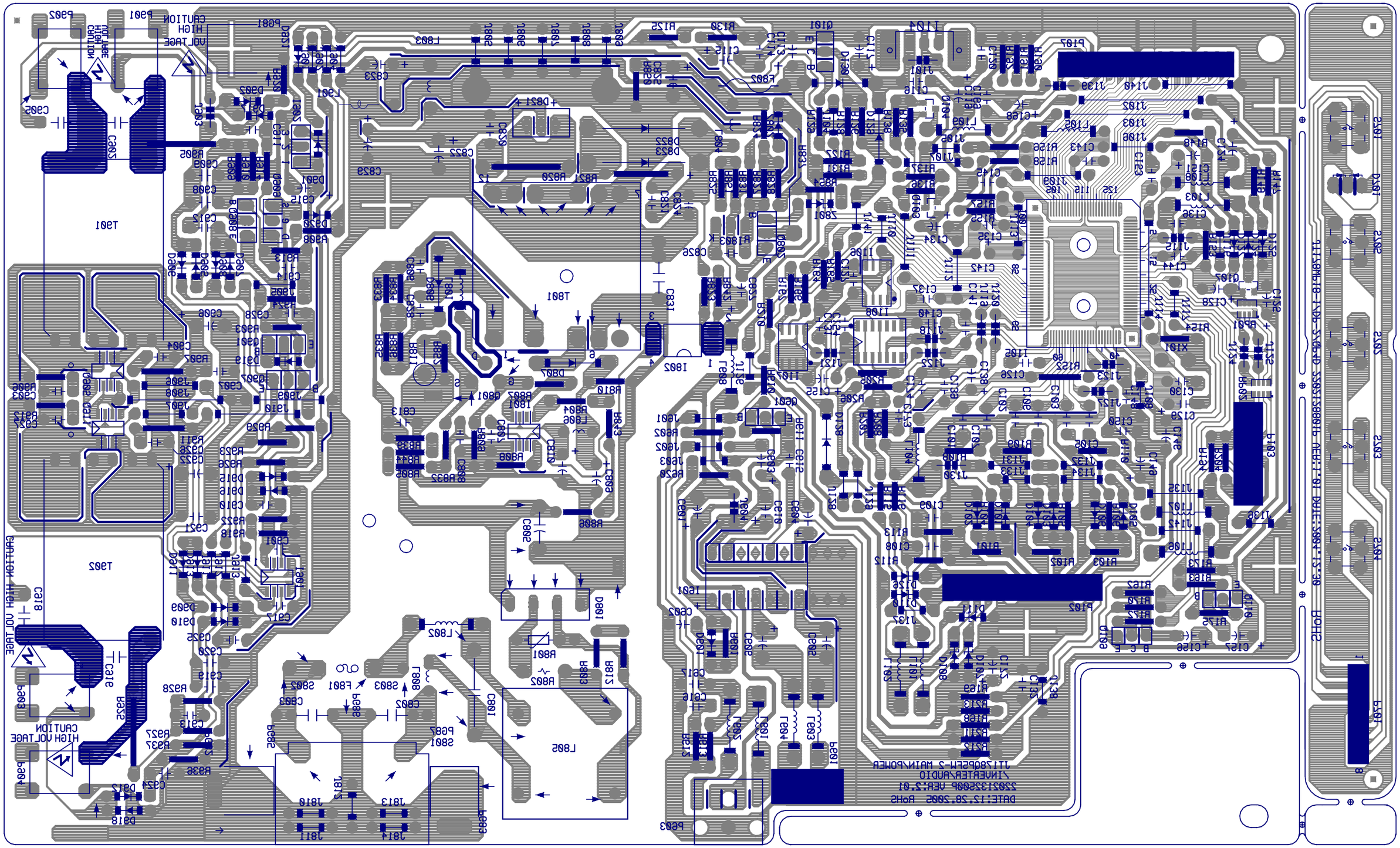
ViewSonic Corporation		
Model		
Title	JT198NP4FD3	
Date		Rev:

11. PCB Layout Diagrams

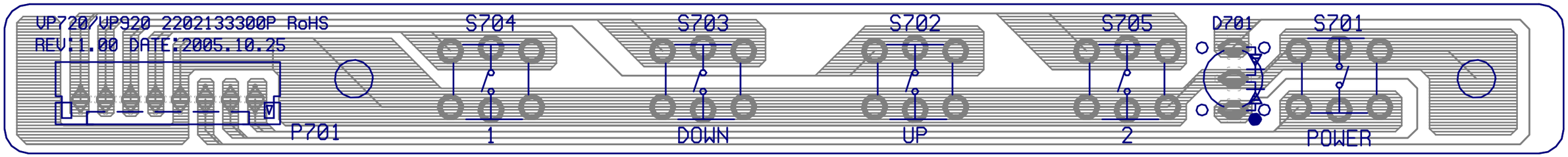
POWER PCB TOP VIEW



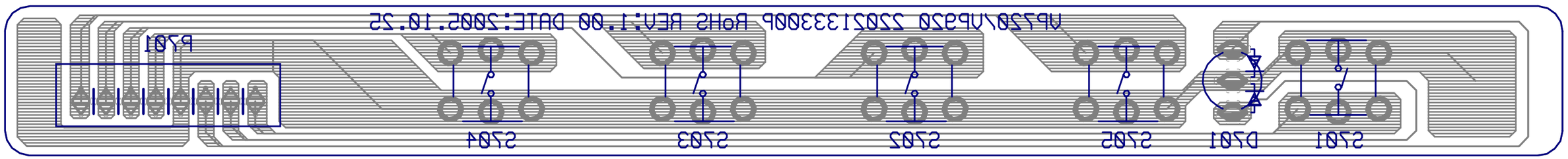
POWER PCB BOTTOM VIEW



CON PCB TOP VIEW



CON PCB BOTTOM 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:			
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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)