Service Manual

ViewSonic VA702/b

Model No. VS10781

17” Color TFT LCD Display

(VA702/b_SM Rev. 1a Oct. 2005)

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Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	10/20/05		Initial Release	G. Han

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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) Use only a high quality, safety approved AC/DC power cord.
(5) Disconnect the power plug from the AC outlet if the product will not be used for a long period of time.
(6) If smoke, abnormal noise, or strange odor is present, immediately switch the LCD display off.
(7) Do not touch the LCD panel surface with sharp or hard objects.
(8) Do not place heavy objects on the LCD display, video cable, or power cord.
(9) Do not use abrasive cleaners, waxes or solvents for your cleaning.
(10) Do not operate the product under the following conditions:
- Extremely hot, cold or humid environment.
- Areas containing excessive dust and dirt.
- Near any appliance generating a strong magnetic field.
- 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. LCD Module Handling Precautions

4.1 Handling Precautions

(1) Since front polarizer is easily damaged, pay attention not to scratch it.
(2) Be sure to turn off power supply when connecting or disconnecting input connector.
(3) Wipe off water drops 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 ensure human earth when handling.
(7) Do not open or modify the Module Assembly.
(8) Do not press the reflector sheet at the back of the module in any direction.
(9) In the event that a Module must be put back into the packing container slot after it was taken out of 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 or 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 or bend the TFT Module even momentarily. When designing the enclosure, it should be taken into consideration that no bending/twisting forces may be applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.

(12) The cold cathode fluorescent lamp in the LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.

(13) The LCD module contains a small amount of materials having no flammability grade. The LCD module should be supplied with power that complies with the requirements of Limited Power Source (IEC60950 or UL1950), or an exemption should be applied for.

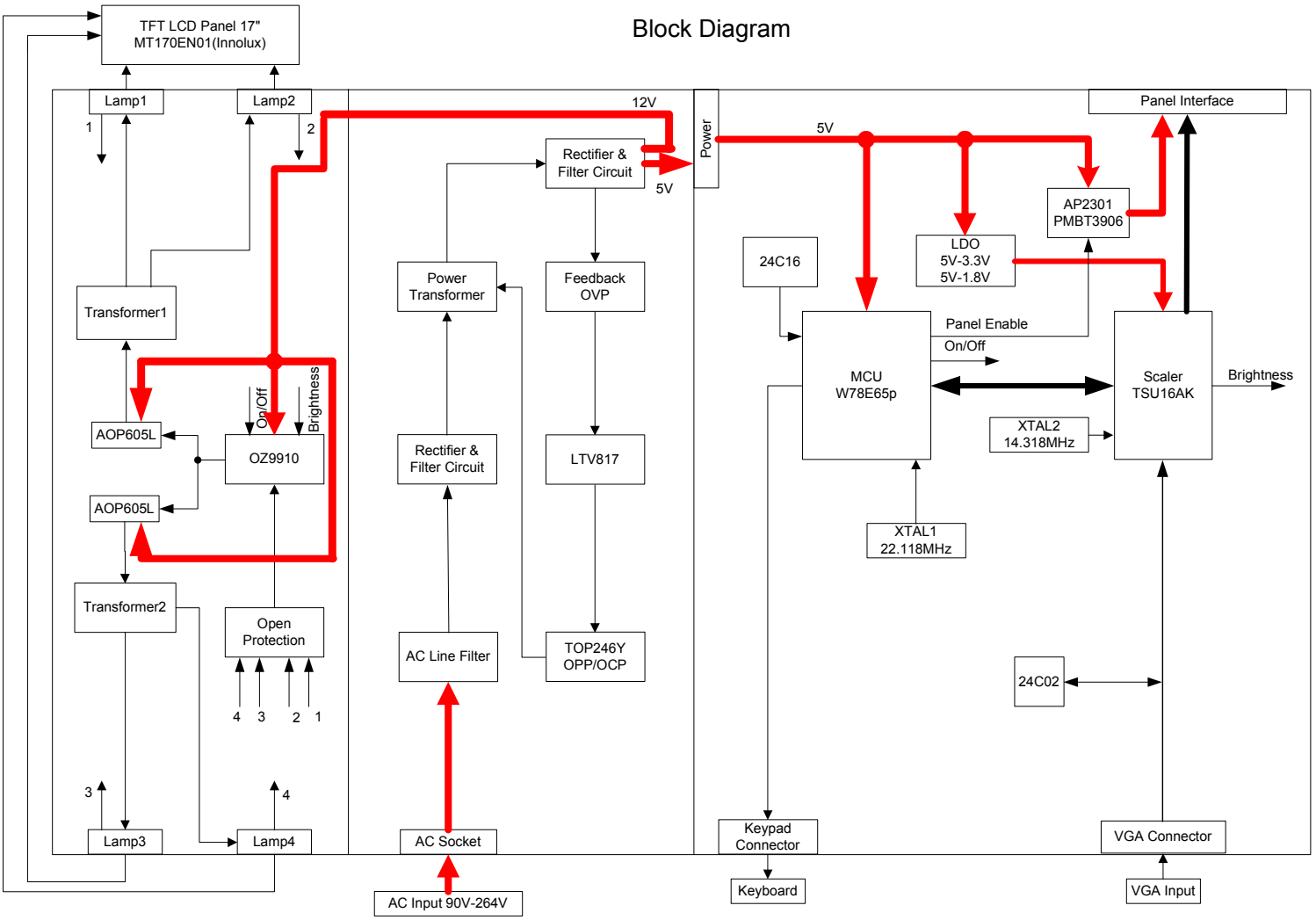
(14) The LCD module is designed so that the CCFL in it is supplied by a Limited Current Circuit (IEC60950 or UL1950). Do not connect the CCFL to a Hazardous Voltage Circuit.

2. SERVICE TOOLS & EQUIPMENT REQUIRED

1. SIGNAL GENERATOR
2. MULTIMETER
3. SCREW DRIVER
4. OSCILLOSCOPE
5. Soldering IRON
6. SOLDER
7. VGA Cable (Black, 15pins point to point)
8. Color Analyzer
9. ISP Board
10. EDID Board
11. FOXISP. EXE file
12. EDID program file
13. Power Adapter output 5V/2A

3. CIRCUIT THEORY

1. Block Diagram



2. Electronic Circuit Theory

2.1 Switching Mode Power Supply

2.1.1 AC Current Input Circuit

P801 is a connector for connecting AC Power. F801 is a fuse to protect all the circuit. AC input voltage is from 90V to 264V. R820 and R821 joined between two inputting main circuit to prevent man from shock. L801 is used to clear up low frequency wave. C801 and C806 are used to discharge the waves that L801 produced. High frequency waves are damped by C801 and C806. D801 is a rectifier which composed of 4 build-in diodes, it inverts AC to DC.

2.1.2 High Voltage to Low Voltage Control Circuit

C805 is used to smooth the wave from rectifier. IC802 is a highly integrated PWM controller, which build-in a power MOSFET. When rectified DC high voltage is applied to the DRAIN pin during start-up, the MOSFET is off initially, and the CONTROL pin capacitor is charged through a switched high voltage current source connected internally between the DRAIN and CONTROL pins. When the CONTROL pin voltage Vc reaches approximately 5.8V, the control circuitry is activated and the soft-start begins. The soft-start circuit gradually increases the duty cycle of the MOSFET from zero to the maximum value over approximately 10ms. If no external feedback/supply current is fed into the CONTROL pin by the end of the soft-start, the high voltage current source is turned off and the CONTROL pin will start discharging in response to the supply current drawn by the control circuitry.

Resistor R803, R807, R824 and R825 are for line over voltage shut-down (OVP) and line under-voltage detection (UVP).Resistors R801, R805, R822, and R823 are for external current limit adjustment, and used to reduce the current limit externally to a value close to the operating peak current of primary about 1.35A. The mean is power will protected when the primary current over about 1.35A.

When PWM is turned off, the main current flow will be consumed through D804 and ZD802, This will prevent MOSFET which built-in IC802 from being damaged under large current impulse and voltage spike.

D806 and C815 provide internal Auxiliary current to CONTROL pin during normal operation. In addition, error amplifier and feedback current to the CONTROL pin are for duty cycle control.

2.1.3 DC_5V and DC_14V Output Circuit

For DC 5V, D805 is used to rectify the inducted current. R806 and C811 are used to store energy when current is reversed. The parts including C812, C814, C822, C821, B801 and L803 are used to smooth the current waves.
For DC 14V, D803 is used to rectify the inducted current. R802 and C802 are used to store energy when current is reversed. The parts including C808, C810 and L802 are used to smooth the current waves.

2.1.4 Feedback and OVP Protect Circuit

Pin R of IC803 is supplied 2.5V stable voltage. It is connected to 5V and 14V output through R811, R810 and R818. R811, R810 and R818 are output sampling resistor. When the sampling voltage more than 2.5V or less than 2.5V, feedback current of IC802 will change, this can change the voltage from transformer T801.

For $5V_{DC}$ output OVP, ZD803 is a zener diode, when 5V output voltage becomes up to 5.6V, the zener current cause R819 voltage become up to 0.7V, Q801 is triggered and OVP starts. For $12V_{DC}$ output OVP, ZD804 is a Zener Diode, when 14V output voltage becomes up to 16V, the zener current cause R819 voltage become up to 0.7V, Q801 is triggered and OVP starts. The collector current of Q801 is used to make build-in diode light. FB Current of IC802 will be changed; it can change the voltage from T801.

Q802, R827, R828 and ZD801 make up of dummy loading circuit. For start-up sequence, during 5V output take place high loading first, this dummy loading circuit operated to insure 14V not be increased.

2. 2 Inverter circuit

2.2.1 Low voltage to high voltage circuit

$12V_{DC}$ supplies the power to IC501 through F501; the control signals that BRIGHTNESS and ON/OFF

come from I/F board. ON/OFF signal connect to pin8 of IC501 and makes IC501 enabled. BRIGHTNESS is connected to pin7 of IC501 to adjust the panel luminance. R524, R529, C505 make up of a delay-time circuit and R528, R523, R524 make up of a voltage divided circuit. C504 is used to filter the high frequency noise. The operation frequency is determined by R522 and C529. For BURST MODE, its dimming frequency is determined by R527 and C506. C502 is used for soft start and compensation, C502, C528 are used to filter noise.
The output drives, including NDR4, NDRV2, PDRV3, PDRV1 (pins1, 3, 15, 16 respectively), generate a square pulses to drive MOSFET U501, U502. And U501, U502 works as full-bridge topology, it is high efficient, zero voltage switch.

During start up, VSEN (pin9) detects the voltage at the transformer secondary. When VSEN reaches 3.0V, the output voltage is regulated. If no current is detected for around 1.5 seconds, IC501 will shut down.
The current flowing through CCFL is detected and regulated through sense resistor R509, R511. The feedback voltage through R506, R507, and C508 connected to Pin11 (ISEN), and then compared with a reference voltage (1.5V) via a current amplifier, resulting in PWM drive outputs to full-bridge switches.

2.2.2 Protection circuit

Over Voltage Protection: R501and R502 are connected in high voltage output connector, the divided AC voltage is inverted DC voltage through D508, R505 and C507are used to rectify wave & dump noise. Then the voltage signal reaches Pin9 VSEN of IC501, when the voltage changes, build-in PWM of IC501 will adjust output voltage.
Open Lamp Protection: In normal operation, the resistors R510, R511, R512, R509 are sensed a high level AC voltage, the AC signal IS1 invert DC voltage through D509, R515, C533, and the high level DC voltage reaches the gate pin of Q502, similarly, the gate pin of Q503, Q504, Q505 has high level DC voltage. So the gate pin of Q501 has a low level voltage, and the IC501 is normal operation. Once one of signal IS1, IS2, IS3, and IS4 is low, the voltages of Q501 gate pin is high level, and make the voltage of ISEN low level, the IC501 will shut down.

2.3 I/F Board Circuit

2.3.1 Power Input

+5V is from the power board and supply for U101(FS8860-18PJ)、U102(FS8860-33PJ)、U105(MCU:W78E65P) and panel. +3.3V output is generated from +5V through C169 and C102 filtering, and U102 outputs. +3.3V is used for U104 (Scaler: TSU16AK). +1.8V output is generated from +5V through C169, C105 and C102 filtering, and U101 outputs. +1.8V is also used for U104.

2.3.2 MCU (W78E65P)

VDD is +5V and its frequency of XTAL1 is 22.1184MHz. U105 #2 is defined as panel-enable. When the I/O port is low, Q101 and Q102 are conducted. And then after C109 and C110 filtering, obtain the voltage of VLCD, which will be connected to CN103. U105 #3 is defined as CCFL-enable. When the I/O port is low, Q103 is pulled up and the backlights are on; When the I/O port is high, Q103 is conducted and the backlights are off. U105 #4 is defined as DET-VGA, connected with CN102 #5. U105 #14, #36, #37, #38, #39, #40, #41, #42, #43 are the communications with U104 (Scaler), which are connected to #72, #31, #78, #77, #30, #70, #71, #69, #32 of Scaler. U105 #43 outputs reset signal to U104 (Scaler).
U106 is EEPROM used for saving EDID data, which is connected by SCL and SDA pins with #16 and #17 of MCU. Connect #12 to #26 of U105 for ISP.

2.3.3 Scaler (TSU16AK)

The frequency of XTAL2 is 14.318MHz. U104 #1, #102-#103, #106-#113, #118-#125, #128 output LVDS digital data of 8 bit to panel control circuit through CN103. U104 #73 generates a PWM waveform by regulating the duty to control the brightness of the backlights. U104 #30-#32, #69-#72, #77-#78 are the communications with U105 (MCU) that are connected to #36-#43 of MCU. These communications include HWRESET, CSZ/ALE, SCL/RDZ, SDA/WRZ, and AD0-AD3.

2.3.4 VGA Input

Signal R, G, B, SOG input through CN102 #1, #2, #3, and C115, C116, C117 and C118 filtering the

high frequency noise. Signal HSYNC and VSYNC input through CN102 #13 and #14, and C119, R119, C120, R120 filtering. Then the analog signal enters U104, and then U104 deals with it internally. In addition, TVS101, TVS102, TVS103 (the three are BAV99), TVS104, TVS105, TVS106, TVS107 (they are constant voltage diode of 5V6) are ESD protector. Signal DDC-SCL inputs via CN102 #15, and then passes through TVS107 for ESD protection, goes into EDID EEPROM IC U103. Signal DDC-SDA inputs via CN102 #12, and then passes through TVS106 for ESD protection, goes into EDID EEPROM IC U103. CN102 #5 is defined as cable detect pin, this detector realizes via R107 and U105 #4. The PC-5V of U103 is supplied by PC via CN103 #9 with D103 for ESD protection, or supplied by Monitor self via D104.U103 is an EEPROM IC, which is a kind of memory and used for saving EDID data.

2.3.5 Button Control

Button "Key-Power" is defined as power on/off, which is connected to U105 #24 through CN106 #4.
Button "Key-2" is defined as two functions of selecting and adjustment, which is connected to U105 #25 through CN106 #1.
Button "Key-Up" is defined as plus, which is connected to U105 #26 through CN106 #3.
Button "Key-Down" is defined as minus, which is connected to U105 #27 through CN106 #5.
Button "Key-1" is defined as two functions of menu and exit, which is connected to U105 #28 through CN106 #2.
LED indicator on the front bezel is defined as follows:

a. When press button "Key-Power", U105 #6 is pulled down and U105 #7 is pulled high, so Q104 is conducted and the LED indicator is green.
b. When in power-saving mode, U105 #6 is pulled high and U105 #7 is pulled down, so Q105 is conducted and the LED indicator is orange.

3. FACTORY PRESET TIMING TABLE

Item	Resolution	H-Freq. (KHz)	V-Freq. (Hz)	Dot Clock (MHz)
1	640 x 350	31.5kHz	70Hz	25.2
2	640 x 400	31.5kHz	60Hz	25.2
3	640 x 400	31.5kHz	70Hz	25.2
4	640 x 480	24.7kHz	50Hz	19.8
5		31.5kHz	60Hz	25.2
6		35.0kHz	67Hz	30.2
7		37.9kHz	72Hz,	31.5
8		37.5kHz	75Hz,	31.5
9		43.27kHz	85Hz	36.0
10	720 x 400	31.5kHz	70Hz	28.3
11	800 x 600	35.1kHz	56Hz	36.0
12		37.9kHz	60Hz	40.0
13		48.1kHz	72Hz	50.0
14		46.9kHz	75Hz	49.5
15		53.7kHz	85Hz	56.3
16	832 x 624	49.7kHz	75Hz	57.3
17	1024 x 768	48.4kHz	60Hz	65.0
18		56.5kHz	70Hz	75.0
19		58.1kHz	72Hz	78.5
20		60.0kHz	75Hz	78.8
21		68.67kHz	85Hz	94.5
22	1152 x 870	68.6kHz	75Hz	100
23	1280 x 1024	63.4kHz	60Hz	108
24		79.97kHz	75Hz	135
25	1280 x 720	45kHz	60Hz	74.2

4. Power On/Off Sequence

4.1 Hardware Power ON

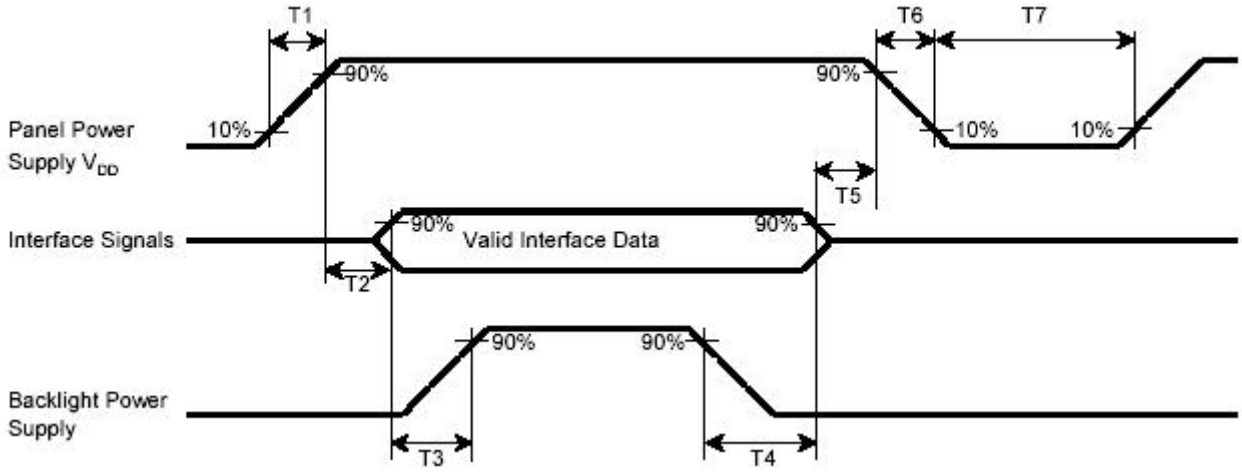
When power cord is plugged into AC socket, SMPS starts work and provides U105 and U106 with VCC5V. When VCPU inputs to U105, U105 resets circuit active, sets U105 all registers to preset modes, and then U105 #43 sends out a HWRESET signal voltage to reset U104, and then monitor goes into stand-by mode. That means hardware power on has been completed.

4.2 Software Power ON/OFF

When press power key, U105 #24 recieves low pulse, and sends out "Power on/off" order back to U104, and then U104 will do the power on/off.

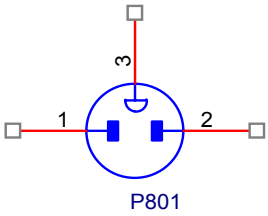
- If Power ON, U105 #6 (LED_Green) will send out High potential, and then LED green on.
- If Power OFF, U105 #7 (LED_Orange) will send out High potential, and then LED Orange on.

The Panel_Vcc, Backlight_En, CLK/DATA output to panel will follow the following sequency.



T1 (ms)	T2 (ms)	T3 (ms)	T4 (ms)	T5 (ms)	T6 (ms)	T7 (ms)
0.1~10	**0~10**	**>200**	**>100**	**0~50**	**0.1~10**	**>1000**

5. AC Outlet Pin Assignment



Pin	Symbol	Description
1	L	Live
2	N	Neutral
3	E	GND

6. Inner Connector Pin Assignment

6.1 CN501, CN502, CN503, CN504 (Connect to Panel Backlight, SM02B-BHSS-1-TB or equivalent)

Pin	Symbol	Description
1	H.V.	High voltage for lamp
2	L.V.	Low voltage for lamp

6.2 CN101 (Power BD to Interface BD)

Pin No.	Symbol	Description
1,2	+5V (VCC5V)	+5.2V output
3,6	GND	Ground

4	BRIGHTNESS	Brightness Control
5	ON/OFF	CCFL on/off Control

6.3 CN106 (Interface BD to Keypad)

Pin No.	Symbol	Description
1	KEY_SELECT/AUTO	Select control and auto adjustment control
2	KEY_MENU/EXIT	OSD page selection and exit
3	KEY_UP	OSD "▲" control to adjust value to increase
4	KEY_POWER	DC power on/off control
5	KEY_DOWN	OSD "▼" control to adjust value to decrease
6	LED_GREEN	Green LED lighting control
7	GND	Ground
8	LED_ORANGE	Orange LED lighting control

6.4 CN103 (Connect I/F BD to panel, FI-X30S-H or Equivalent)

Pin No.	Symbol	Function
1	RXO0-	minus signal of odd channel 0(LVDS)
2	RXO0+	plus signal of odd channel 0(LVDS)
3	RXO1-	minus signal of odd channel 1(LVDS)
4	RXO1+	plus signal of odd channel 1(LVDS)
5	RXO2-	minus signal of odd channel 2(LVDS)
6	RXO2+	plus signal of odd channel 2(LVDS)
7	GND	Ground
8	RXOC-	minus signal of odd clock channel (LVDS)
9	RXOC+	plus signal of odd clock channel (LVDS)
10	RXO3-	minus signal of odd channel 3(LVDS)
11	RXO3+	plus signal of odd channel 3(LVDS)
12	RXE0-	minus signal of even channel 0(LVDS)
13	RXE0+	plus signal of even channel 0(LVDS)
14	GND	Ground
15	RXE1-	minus signal of even channel 1(LVDS)
16	RXE1+	plus signal of even channel 1(LVDS)
17	GND	Ground
18	RXE2-	minus signal of even channel 2(LVDS)
19	RXE2+	plus signal of even channel 2(LVDS)
20	RXEC-	minus signal of even clock channel (LVDS)
21	RXEC+	plus signal of even clock channel (LVDS)
22	RXE3-	minus signal of even channel 3(LVDS)
23	RXE3+	plus signal of even channel 3(LVDS)
24	GND	Ground
25	GND	Ground
26	GND	Ground or Open
27	GND	Ground
28	VCC	Power supply (5.0 V)
29	VCC	Power supply (5.0 V)
30	VCC	Power supply (5.0 V)

6.5 **CN102 (D-SUB Connector)**

Pin	Symbol	Pin	Symbol	Pin	Symbol
1	Red video input	6	Red GND	11	NC
2	Green video input	7	Green GND	12	Serial data (SDA)
3	Blue video input	8	Blue GND	13	H / H+V SYNC

4	NC	9	+5V(from PC)	14	VSYNC
5	Cable Detect	10	GND	15	Data clock line (SCL)

7. Key Parts Pin Assignment

7.1 **IC802 (TOP246Y, Power Control IC)**

Pin	Symbol	I/O	Description
1	C	I	Control
2	L	I	Line Sense
3	X	I	External Current Limit
4	S	O	Source of MOSFET(GND)
5	F	I	Frequency
6	D	I	Drain of MOSFET

7.2 IC501 (OZ9910G, CCFL inverter controller IC)

Pin No.	Symbol	I/O	Description
1	NDRV4	O	Bottom MOSFET gate drive output in dual forward converter
2	PGND		High-current power ground
3	NDRV2	O	Bottom MOSFET gate drive output in dual forward converter
4	GNDA		Low-current signal ground
5	CT	I	Timing capacitor of high frequency oscillator
6	LCT	I	Timing capacitor of set LPWM frequency
7	ADJ	I	Control command input –DC
8	ENA	I	Enable input
9	VSEN	I	Voltage sense feedback
10	CMP_SST	I	Soft start and loop compensation capacitor
11	ISEN	I	Current sense feedback
12	VREF	O	Reference voltage output
13	VIN	I	Supply voltage for IC
14	HSB	I	High side driver buffer output
15	PDRV3	O	Top MOSFET gate drive output in dual forward converter
16	PDRV1	O	Top MOSFET gate drive output in dual forward converter

7.3 **U104 (TSU16AK)**

Pin	Symbol	I/O	Description
1	LVBOM	O	B-Link Negative LVDS Differential Data
2	GND		Ground
3	BYPASS		For External Bypass Capacitor
4	NC		Not connected
5	NC		Not connected
6	BUSTYPE	IN	Low : Serial bus; High : Direct bus
7	NC		Not connected
8	NC		Not connected
9	NC		Not connected
10	GND		Ground
11	VDDP	O	Digital Output Power
12	NC		Not connected
13	NC		Not connected
14	NC		Not connected
15	NC		Not connected
16	NC		Not connected

17	NC		Not connected
18	VDDC	I	Digital Core Power
19	GND		Ground
20	GND		Ground
21	VDDP	O	Digital Output Power
22	NC		Not connected
23	NC		Not connected
24	NC		Not connected
25	NC		Not connected
26	NC		Not connected
27	NC		Not connected
28	NC		Not connected
29	NC		Not connected
30	AD0	I/O	DDR direct bus AD0; 4mA driving strength
31	AD3	I/O	DDR direct bus AD3; 4mA driving strength
32	HWRESET	I	Hardware reset; active high
33	XIN	I	Crystal Oscillator Input
34	XOUT	O	Crystal Oscillator Output
35	AVDD_MPLL		MPLL Power
36	GND		Ground
37	HSYNC0	I	Analog HSYNC input
38	VSYNC0	I	Analog VSYNC input
39	GND		Ground
40	NC		Not connected
41	NC		Not connected
42	GND		Ground
43	NC		Not connected
44	NC		Not connected
45	VDD_ADC	I	ADC Power
46	NC		Not connected
47	NC		Not connected
48	GND		Ground
49	NC		Not connected
50	NC		Not connected
51	VDD_ADC	I	ADC Power
52	REXT		External resistor 390 ohm to AVDD_ADC
53	AVDD_PLL	I	PLL Power
54	GND		Ground
55	AVDD_ADC	I	ADC Power
56	GND		Ground
57	BINOM	I	Reference ground for analog blue input
58	BINO	I	Analog blue input
59	GINOM	I	Reference ground for analog green input
60	GINO	I	Analog green input
61	SOGIN0	I	Sync-on-green input
62	RINOM	I	Reference ground for analog red input
63	RINO	I	Analog red input
64	GND		Ground
65	AVDD_ADC	I	ADC Power
66	REFP		Internal ADC top de-coupling pin
67	REFM		Internal ADC bottom de-coupling pin
68	GND		Ground
69	ALE/CS	I	DDR direct bus ALE; active high
70	WRZ/SDA	I/O	DDR direct bus WRZ; active low
71	RDZ/SCL	I	DDR direct bus RDZ; active low
72	INT	O	CPU interrupt; 4mA driving strength
73	PWM0	O	PWM0; 4mA driving strength
74	PWM1	O	PWM1; 4mA driving strength
75	NC		Not connected
76	NC		Not connected

77	AD1	I/O	DDR direct bus AD1; 8mA driving strength
78	AD2	I/O	DDR direct bus AD2; 8mA driving strength
79	NC		Not connected
80	NC		Not connected
81	NC		Not connected
82	NC		Not connected
83	NC		Not connected
84	VDDP	O	Digital Output Power
85	GND		Ground
86	GND		Ground
87	VDDC	I	Digital Core Power
88	NC		Not connected
89	NC		Not connected
90	NC		Not connected
91	NC		Not connected
92	NC		Not connected
93	NC		Not connected
94	VDDP	O	Digital Output Power
95	GND		Ground
96	GND		Ground
97	VDDC	I	Digital Core Power
98	NC		Not connected
99	NC		Not connected
100	NC		Not connected
101	NC		Not connected
102	LVA3P	O	A-Link Positive LVDS Differential Data
103	LVA3M	O	A-Link Negative LVDS Differential Data
104	VDDP	O	Digital Output Power
105	GND		Ground
106	LVACKP	O	A-Link Positive LVDS Differential Clock
107	LVACKM	O	A-Link Negative LVDS Differential Clock
108	LVA2P	O	A-Link Positive LVDS Differential Data
109	LVA2M	O	A-Link Negative LVDS Differential Data
110	LVA1P	O	A-Link Positive LVDS Differential Data
111	LVA1M	O	A-Link Negative LVDS Differential Data
112	LVA0P	O	A-Link Positive LVDS Differential Data
113	LVA0M	O	A-Link Negative LVDS Differential Data
114	VDDP	O	Digital Output Power
115	GND		Ground
116	GND		Ground
117	VDDC		Digital Core Power
118	LVB3P	O	B-Link Positive LVDS Differential Data
119	LVB3M	O	B-Link Negative LVDS Differential Data
120	LVBCKP	O	B-Link Positive LVDS Differential Clock
121	LVBCKM	O	B-Link Negative LVDS Differential Clock
122	LVB2P	O	B-Link Positive LVDS Differential Data
123	LVB2M	O	B-Link Negative LVDS Differential Data
124	LVB1P	O	B-Link Positive LVDS Differential Data
125	LVB1M	O	B-Link Negative LVDS Differential Data
126	VDDP	O	Digital Output Power

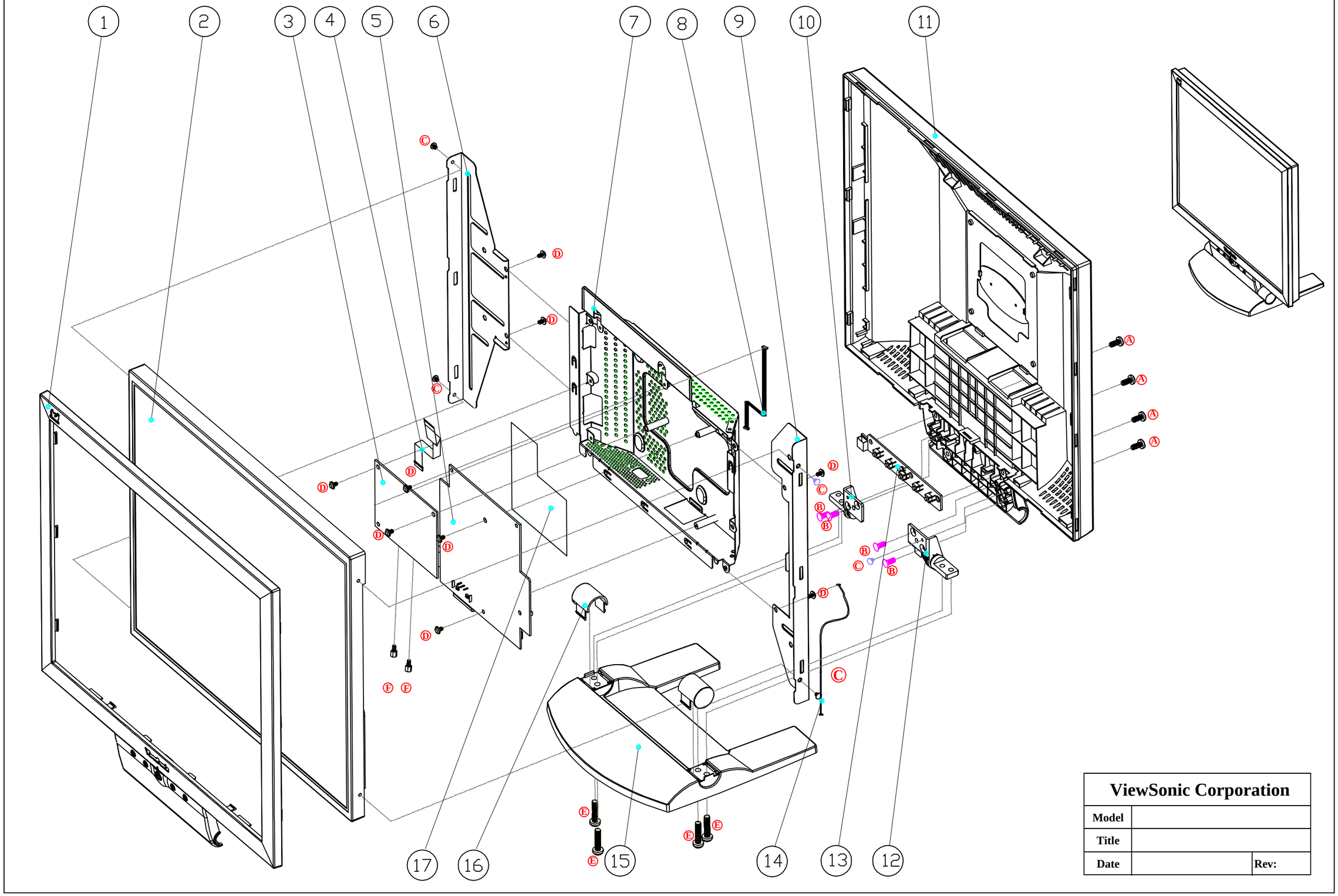
127	GND		Ground
128	LVBOP	O	B-Link Positive LVDS Differential Data

7.4 **U105 (Micro-controller: W78E65P-40)**

Pin	Symbol	I/O	Description
1	P4.2/INT3		A bi-directional I/O port with alternate
2	P1,0/T2	O	Enable panel power on
3	P1.1/T2EX	O	Enable CCFL work
4	P1.2	I	VGA cable detection
5	P1.3/PWM0	O	provide alternated function of PWM Volume
6	P1.4/PWM1	O	provide alternated function of PWM Green
7	P1.5/PWM2	O	provide alternated function of PWM Orange
8	P1.6/PWM3		Function is the same as that of standard 8052
9	P1.7/PWM4		Function is the same as that of standard 8052
10	RST	I	Reset control pin
11	P3.0/RXD		SCL line of I2C for EDID, debug function
12	P4.3/INT2		PORT 4: A bi-directional I/O port with
13	P3.1/TXD		SDA line of I2C for EDID, debug function
14	P3.2/INT0	I	Interrupt request control pin
15	P3.3/INT1	O	Shut Down Volume Mute
16	P3.4/T0	O	SCL line of I2C communication with
17	P3.5/T1	I/O	SDA line of I2C communication with
18	P3.6/WR	I	DVI cable detection
19	P3.7/RD	O	EEPROM write protection control for DVI
20	XTAL2		Crystal 22.1184MHz In
21	XTAL1		Crystal 22.1184MHz out
22	GND		Sink voltage ground
23	P4.0		A bi-directional I/O port with alternate
24	P2.0/A8		DC power on/off control
25	P2.1/A9		OSD "►" control to adjust value to increase
26	P2.2/A10		OSD "◄" control to adjust value to decrease
27	P2.3/A11		Selection of menu command listed
28	P2.4/A12		OSD page selection
29	P2.5/A13		Auto adjustment control
30	P2.6/A14		A bi-directional I/O port with internal
31	P2.7/A15		A bi-directional I/O port with internal
32	PSEN		Program Store Enable
33	ALE		Address Latch Enable
34	P4.1		A bi-directional I/O port with alternate
35	EA	I	External Access Enable
36	P0.7/AD7	I/O	DDR Direct Bus Communication with Scaler
37	P0.6/AD6	I/O	DDR Direct Bus Communication with Scaler
38	P0.5/AD5	I/O	DDR Direct Bus Communication with Scaler
39	P0.4/AD4	I/O	DDR Direct Bus Communication with Scaler
40	P0.3/AD3	I/O	WRZ line of DDR Direct Bus
41	P0.2/AD2	I/O	RDZ line of DDR Direct Bus
42	P0.1/AD1	I/O	ALE line of DDR Direct Bus
43	P0.0/AD0	O	Hardware reset to Scaler
44	+5V	I	+5V for MCU working voltage

4. DISASSEMBLY &ASSEMBLY

1. Exploded Diagram



ViewSonic Corporation		
Model		
Title		
Date		Rev:

EXPLODED PARTS LIST (VA702-1)

ViewSonic Model Number: VS10781-1W

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	C-00003154	714030002400	ASSY,BEZEL(S),LE1709	1
2	E-00003048	631102070270	LCD PANEL 17" MT170EN01-V1(INNOLUX)	1
3	B-00003041	790411300600	PCBA,IF BOARD, LE1709-6A0	1
4	CB-00003155	430303000140	HRN LVDS FFC 30P 234mm,ACCX30234KU28MY	1
5	B-00003043	790411400600	PCBA,PWR&INV./B, LE1709-6A0	1
6	HW-00003156	502020300700	BRACKET,LEFT, LE1709	1
7	B-00003172	502090301300	CHASSIS, LE1709	1
8	CB-00003157	430300800320	HRN ASS'Y 4x2P 189mm UL2651#28SZ504479B	1
9	HW-00003158	502020300710	BRACKET,RIGHT, LE1709	1
10	HW-00003159	502060401900	HINGE,LEFT, LE1709	1
11	C-00003160	714050002400	ASSY,BACK COVER, LE1709	1
12	HW-00003161	502060401910	HINGE,RIGHT, LE1709	1
13	B-00003042	790411500000	PCBA,KEYPAD BOARD, LE1709	1
14	CB-00003162	430300100190	HRN ASS'Y 1P 157mm BLACK,UL1007#20	1
15	C-00003163	714020002400	ASSY,BASE, LE1709	1
16	C-00003164	501020203000	COVER,HINGE, LE1709	2
17	M-00003165	505040202000	INSULATOR,MYLAR,L79.7xW62.7mm,CHASSIS, L (Chassis)	1
18	HW-00003166	509412610500	SCREW,B,CROSS,T.T-4*10,BLK (Back cover & Bezel)	4
19	HW-00003167	509212610300	SCREW,F,CROSS,T.T-4*10,Ni (Hinge & Back cover)	4
20	HW-00003168	509016304102	SCREW,I,CROSS,M3*4,Zw (chassis&bracket*4,GND*1)	5
21	HW-00003169	509146305300	SCREW,PW,CROSS W/WAS,M3*5,Ni (PCB&chassis*5, Bracket & Chassis*4	9
22	HW-00003170	509116822300	SCREW,P,CROSS,M5*22,Ni (Hinge & Base ASM)	4
23	M-00003171	509000000700	BOLT,#4-40x11.8,NiFOR D-SUB/DVI CONN. (D-SUB)	2

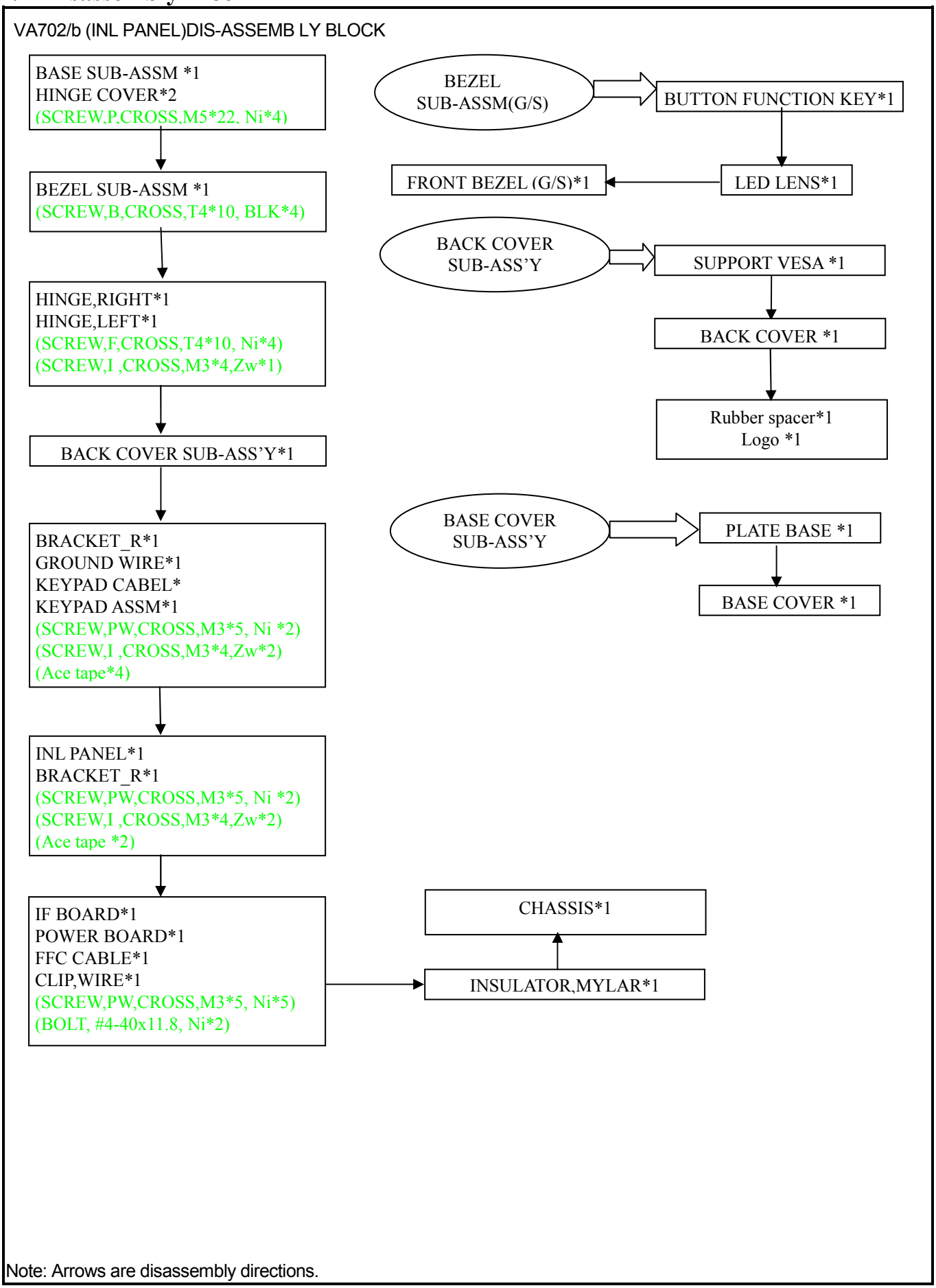
EXPLODED PARTS LIST (VA702b-1)

ViewSonic Model Number: VS10781-1W

Rev: 1a

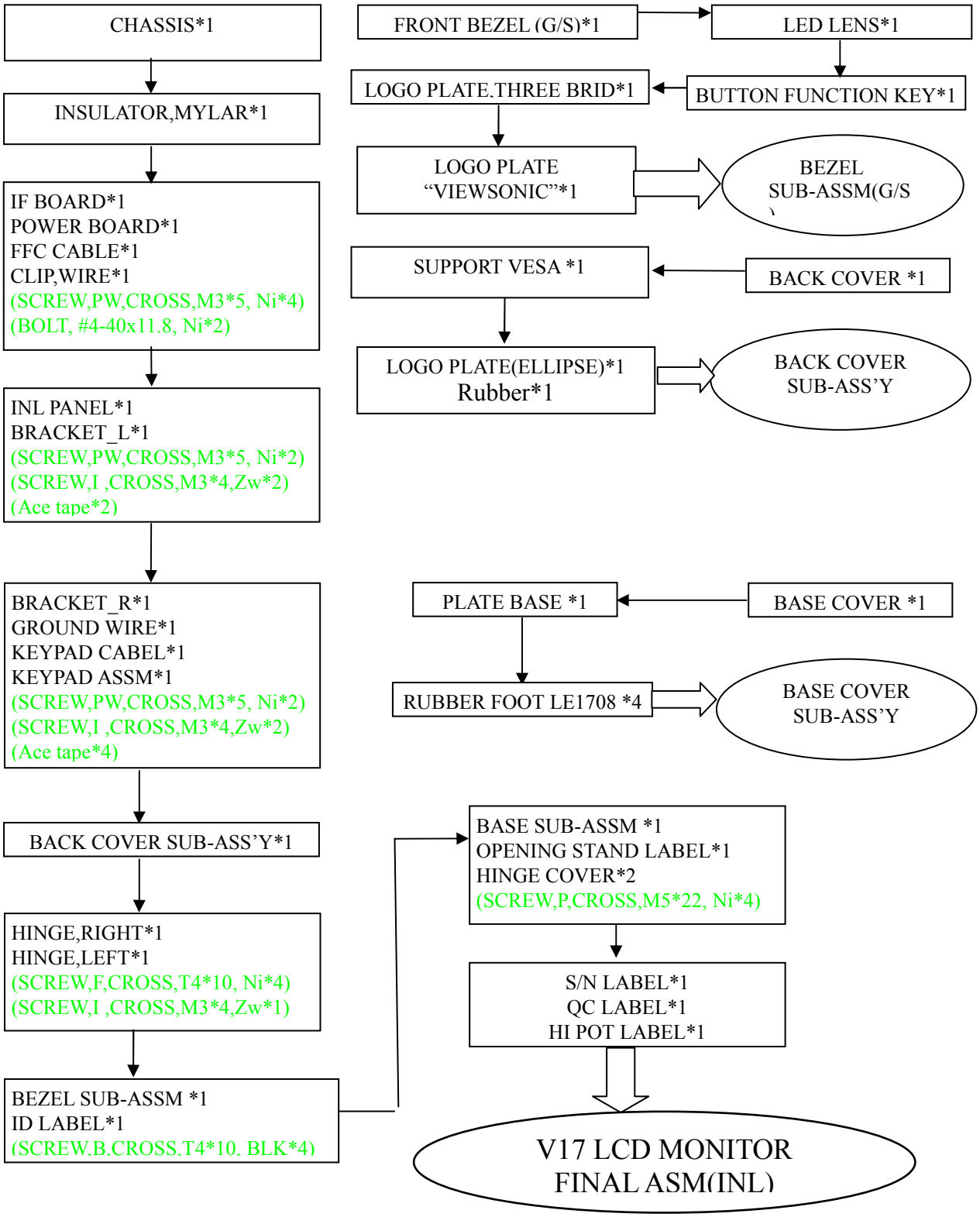
Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1	C-00003173	714030002410	ASSY,BEZEL(G),LE1709	1
2	E-00003048	631102070270	LCD PANEL 17" MT170EN01-V1(INNOLUX)	1
3	B-00003041	790411300600	PCBA,IF BOARD, LE1709-6A0	1
4	CB-00003155	430303000140	HRN LVDS FFC 30P 234mm,ACCX30234KU28MY	1
5	B-00003043	790411400600	PCBA,PWR&INV./B, LE1709-6A0	1
6	HW-00003156	502020300700	BRACKET,LEFT, LE1709	1
7	B-00003172	502090301300	CHASSIS, LE1709	1
8	CB-00003157	430300800320	HRN ASS'Y 4x2P 189mm	1
9	HW-00003158	502020300710	BRACKET,RIGHT, LE1709	1
10	HW-00003159	502060401900	HINGE,LEFT, LE1709	1
11	C-00003160	714050002400	ASSY,BACK COVER, LE1709	1
12	HW-00003161	502060401910	HINGE,RIGHT, LE1709	1
13	B-00003042	790411500000	PCBA,KEYPAD BOARD, LE1709	1
14	CB-00003162	430300100190	HRN ASS'Y 1P 157mm BLACK,UL1007#20	1
15	C-00003163	714020002400	ASSY,BASE, LE1709	1
16	C-00003164	501020203000	COVER,HINGE, LE1709	2
17	M-00003165	505040202000	INSULATOR,MYLAR,L79.7xW62.7mm,CHASSIS, L (Chassis)	1
18	HW-00003166	509412610500	SCREW,B,CROSS,T.T-4*10,BLK (Back cover & Bezel)	4
19	HW-00003167	509212610300	SCREW,F,CROSS,T.T-4*10,Ni (Hinge & Back cover)	4
20	HW-00003168	509016304102	SCREW,I,CROSS,M3*4,Zw (chassis&bracket*4,GND*1)	5
21	HW-00003169	509146305300	SCREW,PW,CROSS W/WAS,M3*5,Ni (PCB&chassis*5, Bracket & Chassis*4	9
22	HW-00003170	509116822300	SCREW,P,CROSS,M5*22,Ni (Hinge & Base ASM)	4
23	HW-00003171	509000000700	BOLT,#4-40x11.8,NiFOR D-SUB/DVI CONN. (D-SUB)	2

2. Disassembly Block



3. Assembly Block

VA702/b (INL panel)ASSEMBLY BLOCK



Note: Arrows are assembly directions.

5. TEST AND ADJUSTMENT

1. Key Function Description

CONTROL KEY	KEYS FUNCTION
[AUTO] [2]	By pressing [AUTO] key, "Auto Image Adjust" is performed
[MENU] [1]	By pressing [MENU] key, Main menu display
[▼] [▲]	A. When "MENU OSD" display, press these keys to change the contents of an adjustment item, or change an adjustment value B. When "MENU OSD" is un-display, press these keys to change brightness and contrast
[POWER]	Power on or power off the monitor

2. Hot Key Operation

CONTROL KEY	KEYS FUNCTION
[▼] + [▲]	Recall Contrast or Brightness while in the Contrast or Brightness adjustment, or recall both of Contrast and Brightness when the OSD is not open.
[1] + [2]	Toggle 720x400 and 640x400 mode when input 720x400 or 640x400 mode.
[1] + [▼] + [▲]	White Balance (Not shown on user's guide)
[1] + [▼]	Power Lock
[1] + [▲]	OSD Lock
Remark : All the short cuts function are only available while OSD off	

3. OSD Control

3.1 OSD table

Layer 1	Layer 2	Layer 3
Auto Image Adjust		
Contrast/Brightness	Contrast (+ / -)	
	Brightness (+ / -)	
Color Adjust	Srgb	
	9300K	
	6500K	
	5400K	
	User Color	Red (+ / -)
		Green (+ / -)
		Blue (+ / -)
Information		
Manual Image Adjust	H/V Position	H Position (+ / -)
		V Position (+ / -)
	H Size	+ / -

	Fine Tune	+ / -
	Sharpness	+ / -
Setup Menu	Language Select	English
		French
		German
		Italian
		Spanish
		Finnish
		Japanese
		Simplified Chinese
		Traditional Chinese
	Resolution Notice	On/Off
	OSD Position	H Position (+ / -)
		V Position (+ / -)
	OSD Time Out	
	OSD Background	On/Off
Memory Recall		

3.2 OSD lock Menu function

OSD Lock Menu Function Check		
Item	Method	Phenomenon
Activate OSD lock	[1] + [▲] 10S	Press any of buttons"1", "▼", "▲", "2" will appear "OSD Locked" 3s
Deactivate OSD lock:	[1] + [▲] 10S(again)	
NOTICE: When the OSD is locked will lock all functions. Status bar indicating OSD Lock or Unlock is in progress and when complete it will indicate “OSD Locked” OSD Lock should not lock Power Button and Power Lock function		

3.3 Power lock Menu function

Power Lock Menu Function Check		
Item	Method	Phenomenon
Activate Power Lock	[1] + [▼] 10S	Can not turn off the LCD; Press the power button will appear "Power Button Locked" OSD 3s; LCD would automatically turn back "On" when power is restored after a power failure
Deactivate Power Lock	[1] + [▼] 10S(again)	
NOTICE: Status bar indicating Power Button lock or unlock is in progress and when complete it will indicate “Power Button Locked” Power should only be lockable in the “On State”		

3.4 Resolution notice function

Resolution Notice Menu		
Item	Method	Phenomenon
Activate Resolution Notice Menu	Resolution Notice OSD should show on screen after changing to non-native mode for 30 sec, And it should disappear after 10s or by pushing button [1] or [2]	------
Deactivate Resolution Notice Menu	Push button [2] under Resolution Notice OSD, select Disable	-------

3.5 Factory Mode Introduction

When input the signal, press "power key" to turn off the monitor. Press" **[▼] +[▲] +[⏻]** "at the same time so as to enter factory mode. After power on, press ''Menu[1]'' key, you can see the Factory menu.

INL : Currently using panel model name
V2 050526 : Currently using firmware version information.
Auto Color : Automatically calibrate chip ADC parameter by using chip internal DAC
Color Temperature : The R, G, B of 9300K and 6500K and 5400K and User Mode Colors are all generated from scaling back end.

4. Burn-in pattern

If it is a new monitor, and in factory mode, if no VGA signal input, Burn-in pattern will self generate automatically. Burn in patterns are: full Red, Green, Blue, White and Black. You can not escape from Burn-in pattern until plug in VGA Cable, and then press the power key. Turn the monitor off and then turn it on.

5. Auto Color (Automatically calibrate chip ADC parameter by using chip internal DAC)

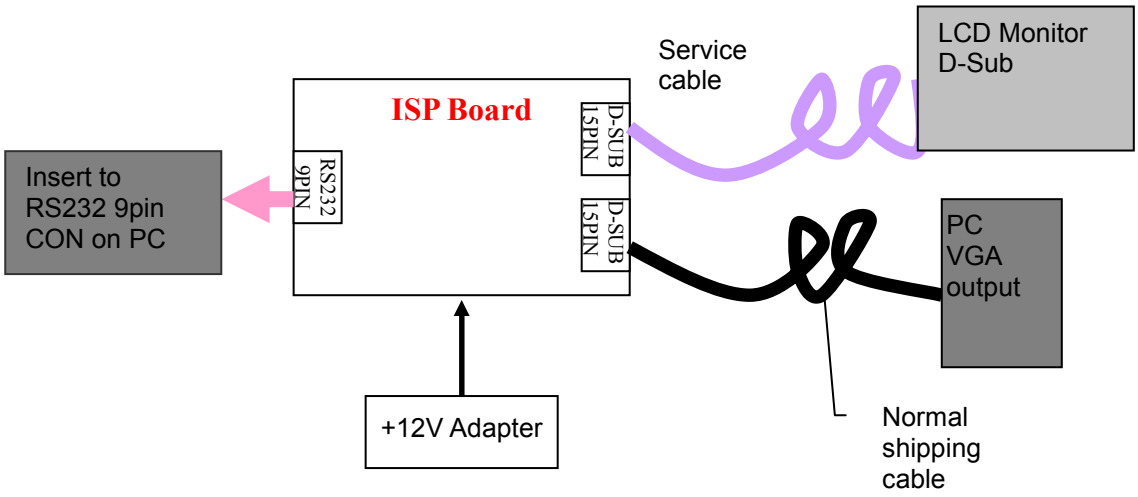
If it is a new-built set and it is first time to do the "auto color", please confirm the following steps:
-Connect the VGA cable with the standard video pattern generator and display 16-gray pattern on the monitor.
- Press "Power" to power off the monitor.
- Press" **[▼] +[▲] +[⏻]** "simultaneously to enter factory mode.
- Press ''Menu[1]'', then press ''Auto[2]'' to execute Auto color item.
- After the "Auto Color" process finished, please press "Power" to restart monitor.

6. EDID (Rewrite EDID data to EEPROM)

If we need to rewrite the EEPROM data, please confirm the following steps.
1. Plug in VGA Cable; we can rewrite the EDID data to EEPROM by using "EDID Rewrite" program.
2. If the "EDID Rewrite" process finished, please pull out VGA cable and press ''2''+"▲" at the same time.
3. Pull out AC power cable or press power key to restart.

7. Upload firmware to MCU via VGA Cable

7.1 Connect ISP board between monitor and PC as below configure



7.2 Before plug in the power cord, make sure keep "▲" key to be pressed, when power on you can enter ISP mode.

7.3 8051ispwriter.exe will detect automatically which MCU used in this monitor. Do it as the order shown on the screen, choose the corresponding firmware version, and load to MCU.

7.4 After finish, please plug out power cable and re-start monitor again.

8 After repair, to ensure the quality you should do the following test and adjustment

Item	Content	Equipment
Test OSD function	1.Signal is set as 1280x1024@60Hz 2. LCM button are from left to right, checking whether each single function key and compound function key can be worked.	Chroma Signal Generator
Contrast Check	1. Set input mode to 1280x1024@60Hz 2. Set Pattern to 32 gray shades 3. Set contrast to the max. The brightest 5~6 shades brightness cannot be distinguished.	Chroma Signal Generator
Color Temperature	1. Do "Auto color" at 1280 x 1024@60Hz, 32gray shades 2. Measure color temperature, check it complies with the following temperature: 5400K x=0.335 +/- 0.02, y=0.350 +/- 0.02 6500K x=0.313 +/- 0.02, y=0.329 +/- 0.02 9300K x=0.283 +/- 0.02, y=0.298 +/- 0.02	Chroma Signal Generator and color analyzer
Modes switching check	1. Use Chroma Pattern Generator to make sequence. VESA (640x480 800x600 1024x768 1280x1024), MAC 832x624 DOS (640x350 720x400), the detail supported modes and power saving signal. 2. Confirm the above timing modes must be full screen and the picture must be normal. 3. LED is Orange at power saving mode.	Chroma Signal Generator

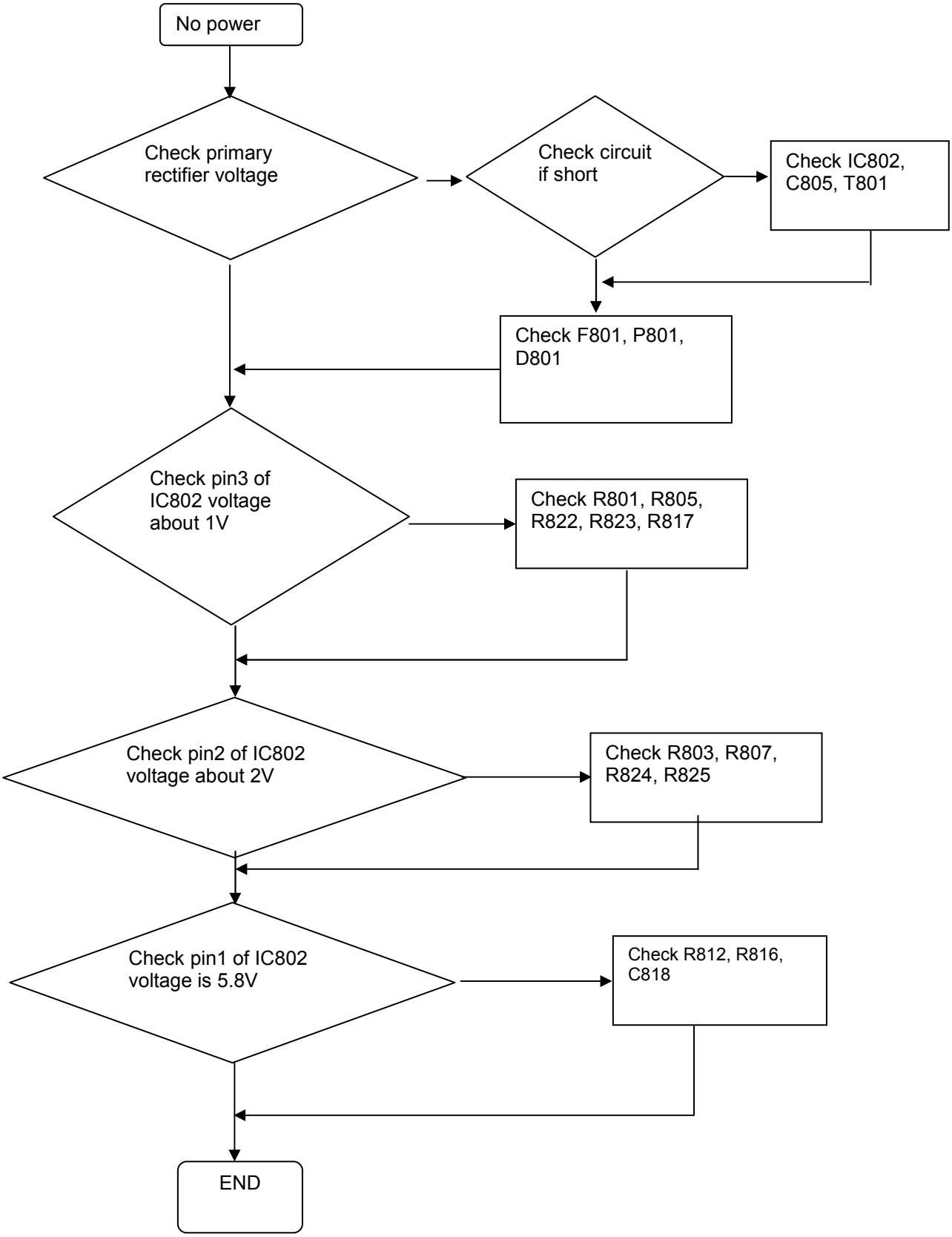
<table>
<tr><td>Y measurement at default setting</td><td>1. Set brightness to default value 100 and contrast to default value 70 at 6500K
2. At full white patter, Measure Y, which should be 250+/-10cd/m² (QDI 220+/- 10cd/m²)</td><td>Chroma Signal Generator and Color Analyzer</td></tr>
<tr><td>Panel Flicker check</td><td>1. Mode: 1280x1024@60Hz
2. Set Brightness& contrast to default value
3. Do “Auto Image Adjust”
4. Shut down PC to check whether there’s glitter on the center of the picture.</td><td>Equipment::
Chroma Signal Generator & PC</td></tr>
<tr><td>Power saving</td><td>1. Mode: 1280x1024@60Hz
2. Pattern: full white
3. Brightness: Max.
4. Contrast: Default
5. Check power consumption at each modes
<table>
<tr><th>State</th><th>Power Consumption</th><th>LED color</th></tr>
<tr><td>Normal</td><td>＜38W</td><td>Green</td></tr>
<tr><td>Stand By</td><td>＜1W</td><td>Orange</td></tr>
<tr><td>Power Key Off</td><td>＜1W</td><td>No</td></tr>
</table></td><td>Chroma signal generator and Power meter
AC input: 230V/50Hz</td></tr>
</table>

6. TROUBLE SHOOTING

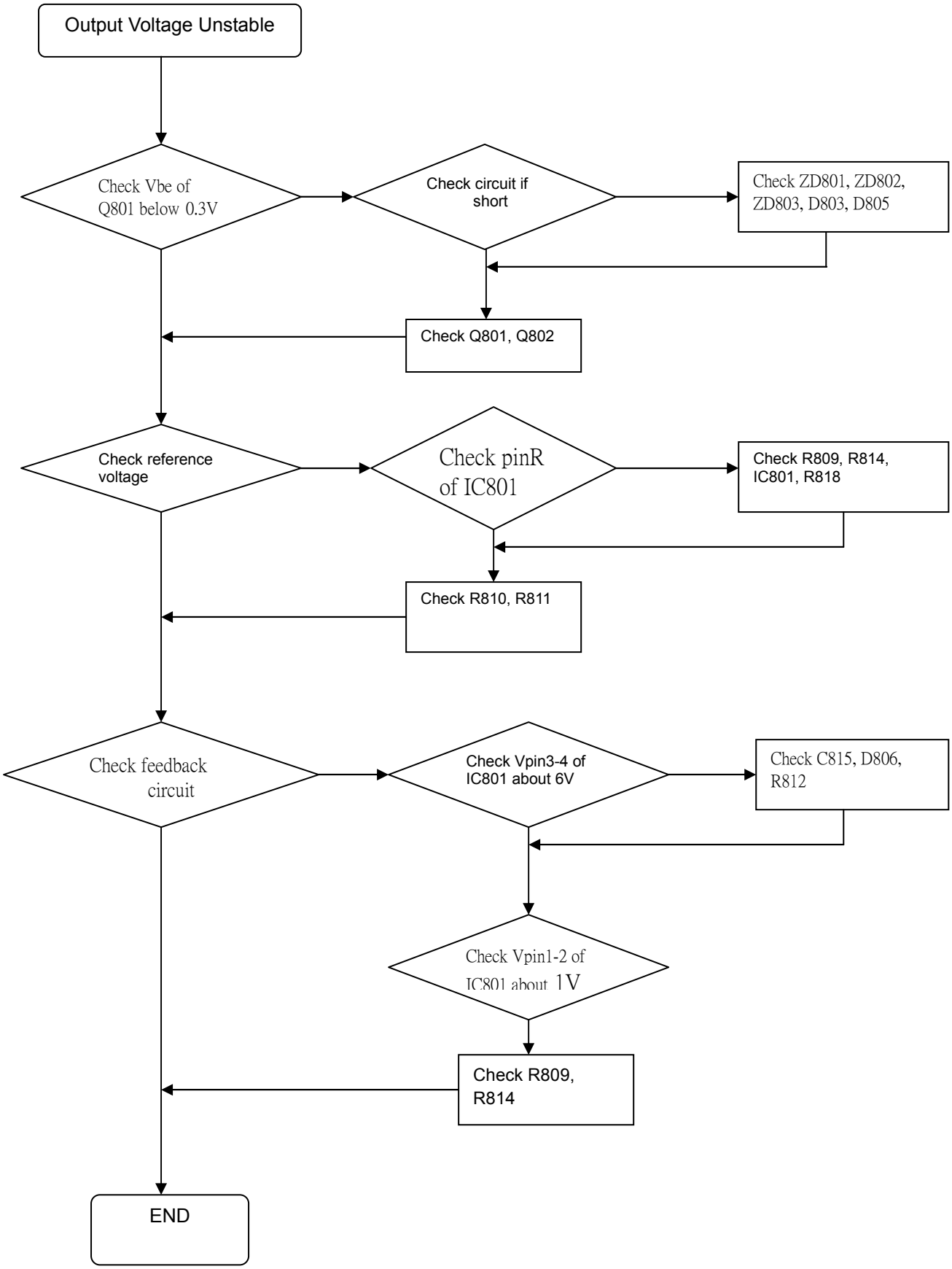
1. Common Acknowledge

- If you change the interface board, be sure that the U105, U106 and U103 these three components also changed to the new I/F board because there was program inside. If not, please re-write EDID or upload firmware into MCU via VGA Cable.
- If you adjust clock and phase, please do it at the condition of Windows shut down pattern.
- If you confirm the R.G.B. color is normal or not, please do it under 16-grey scalar pattern.
- This LCM is analog interface. So if the entire screen is an abnormal color that means the problem happen in the analog circuit part, if only some scale appears abnormal color that stand the problem happen in the digital circuit part.
- If you check the H/V position, please use the crosshatch pattern.
- This LCM support more than 30 timing modes, if the input timing mode is out of specification, the picture may appears abnormally.
- If brightness uneven, repairs Inverter circuit or change a new panel.
- If you find the vertical line or horizontal line lost on the screen, please change panel.

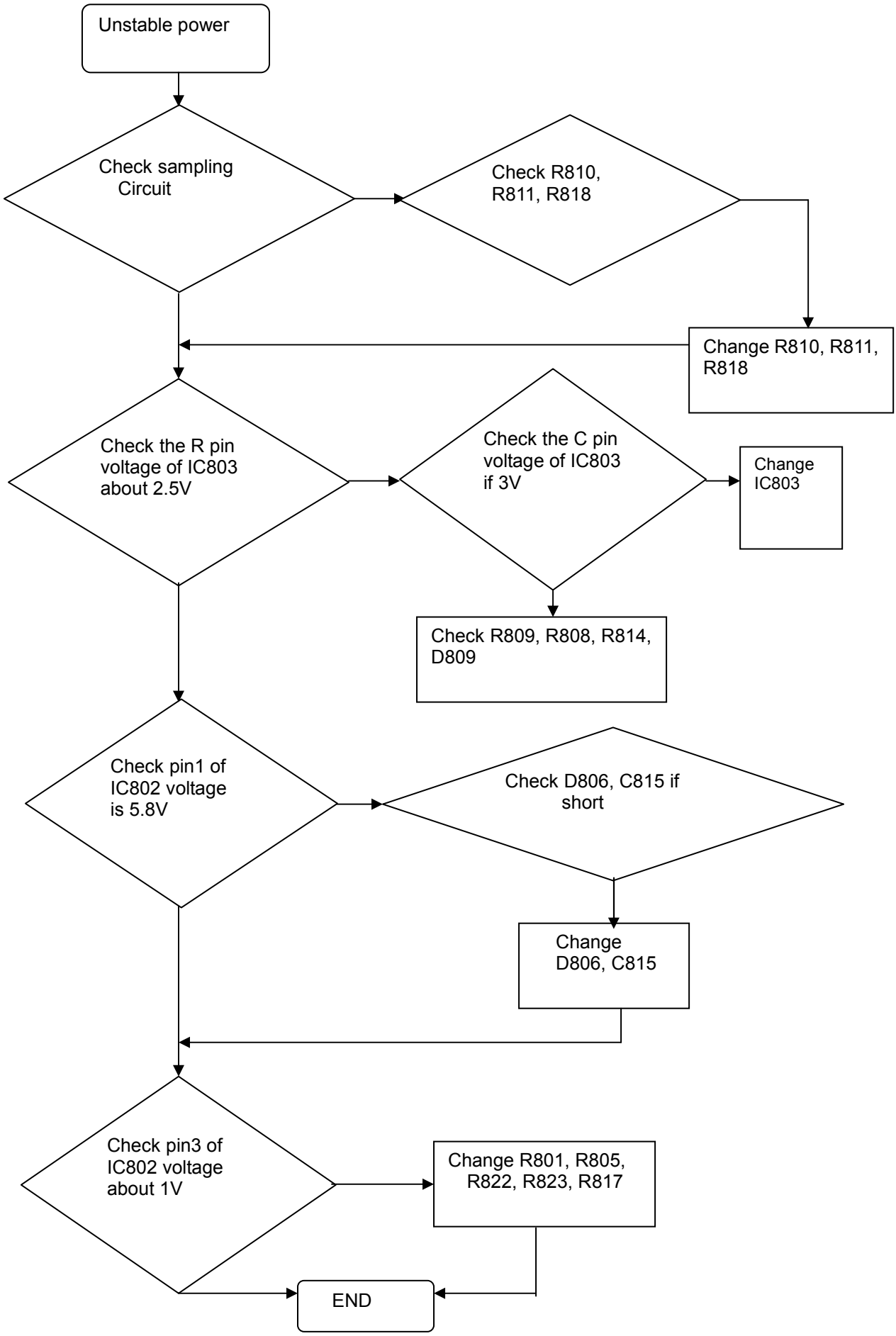
2. No Power & Power LED Off



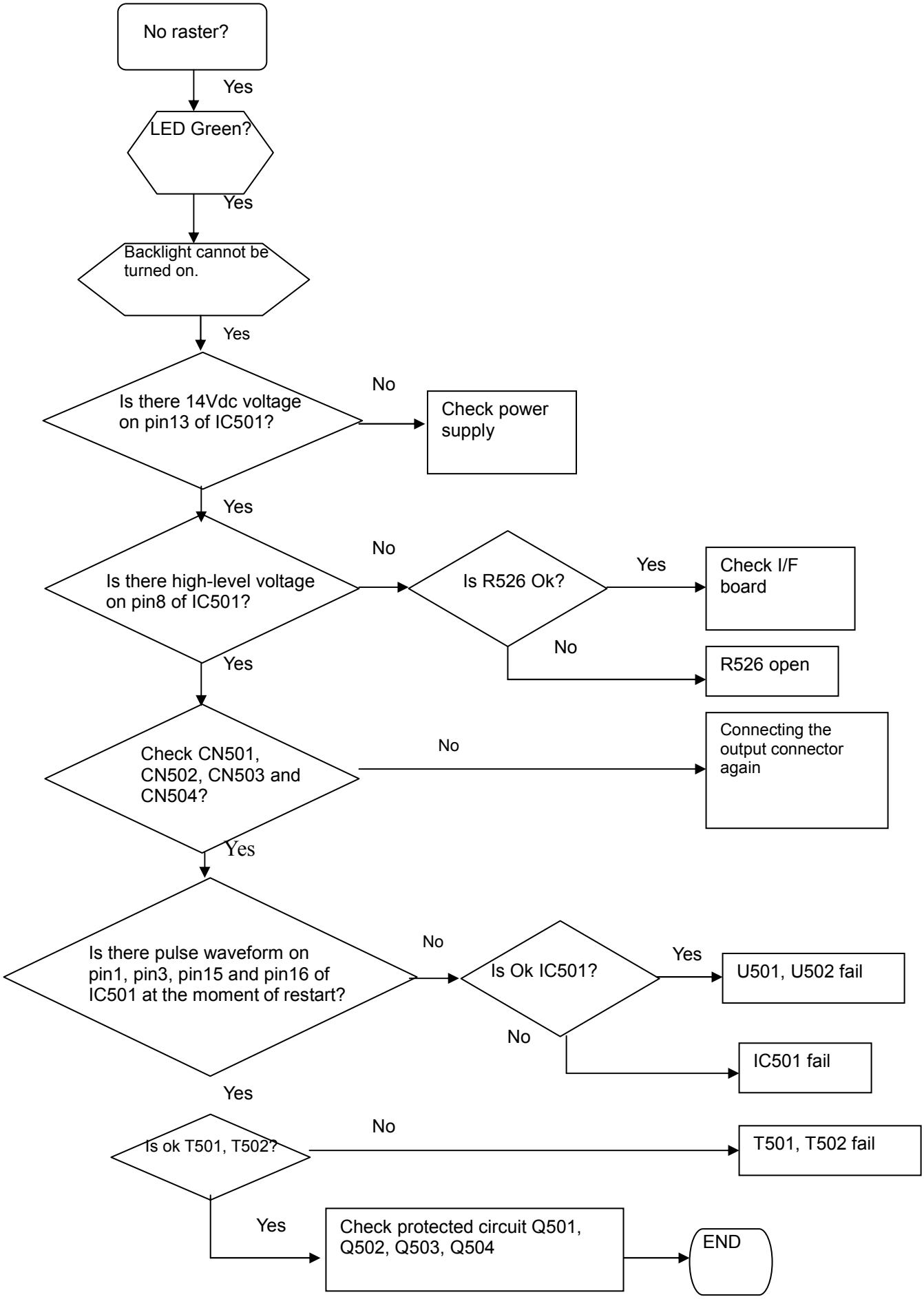
3. DC output voltage is unstable



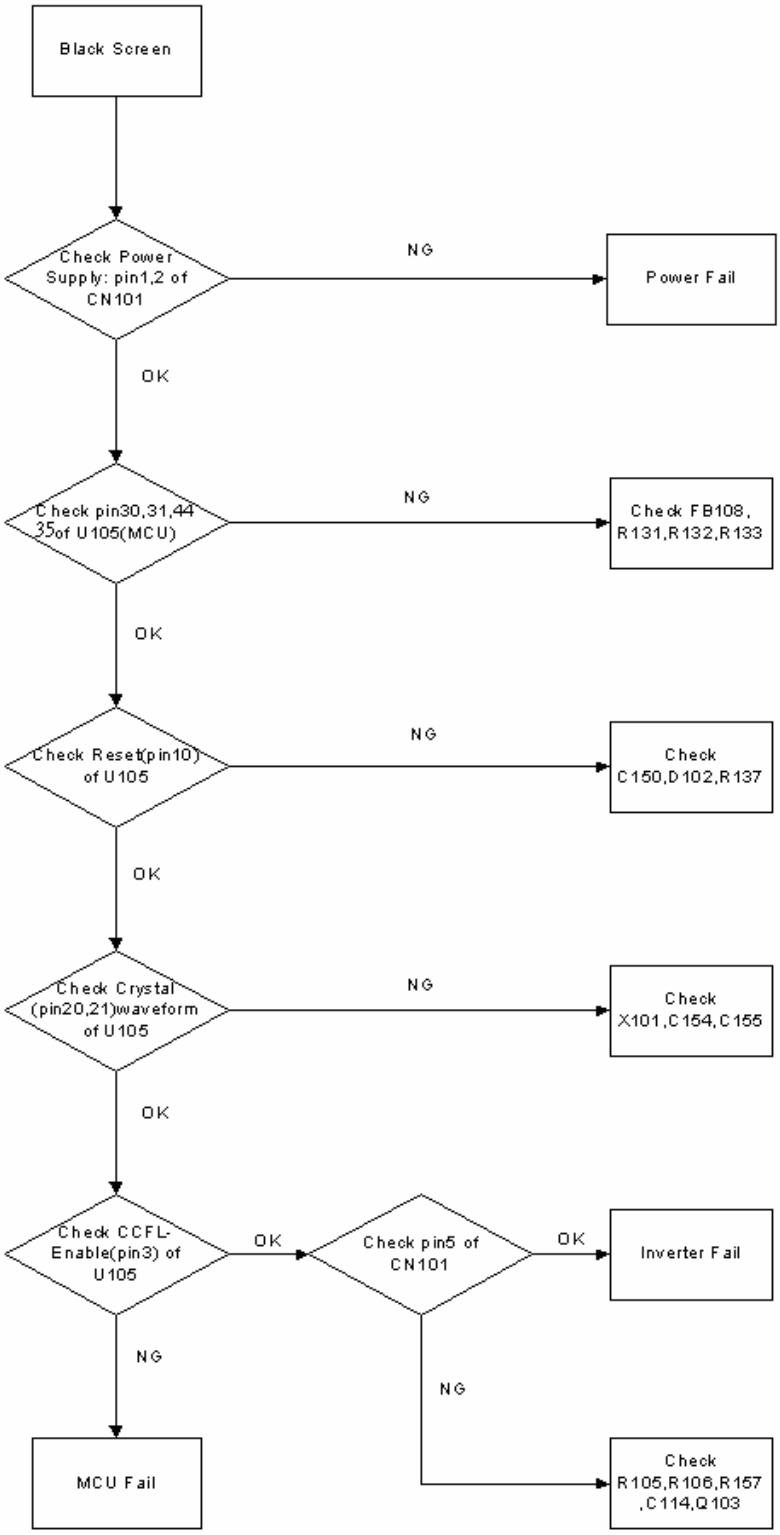
4. Output power is unstable



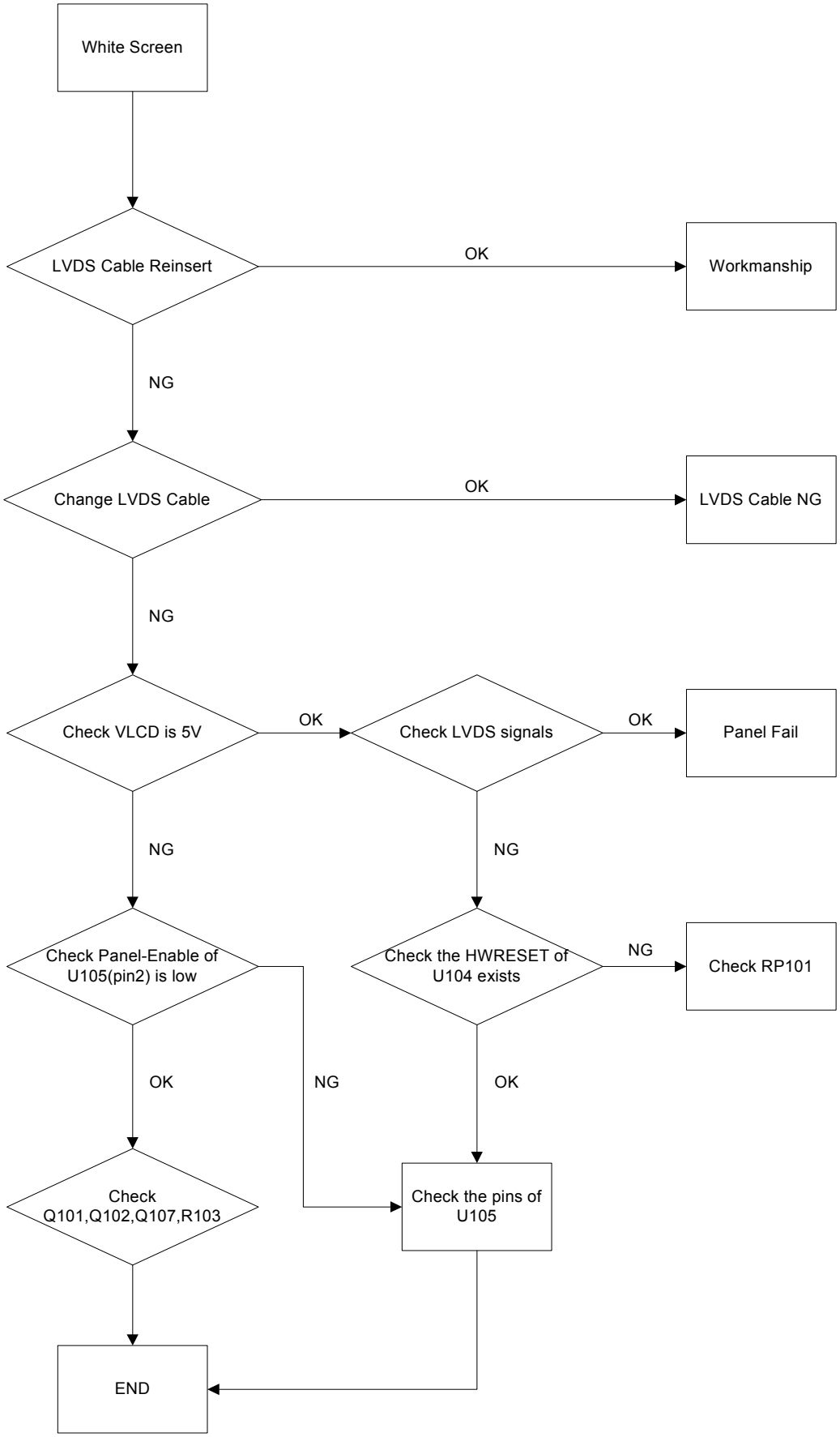
5. Backlight can't be turned on



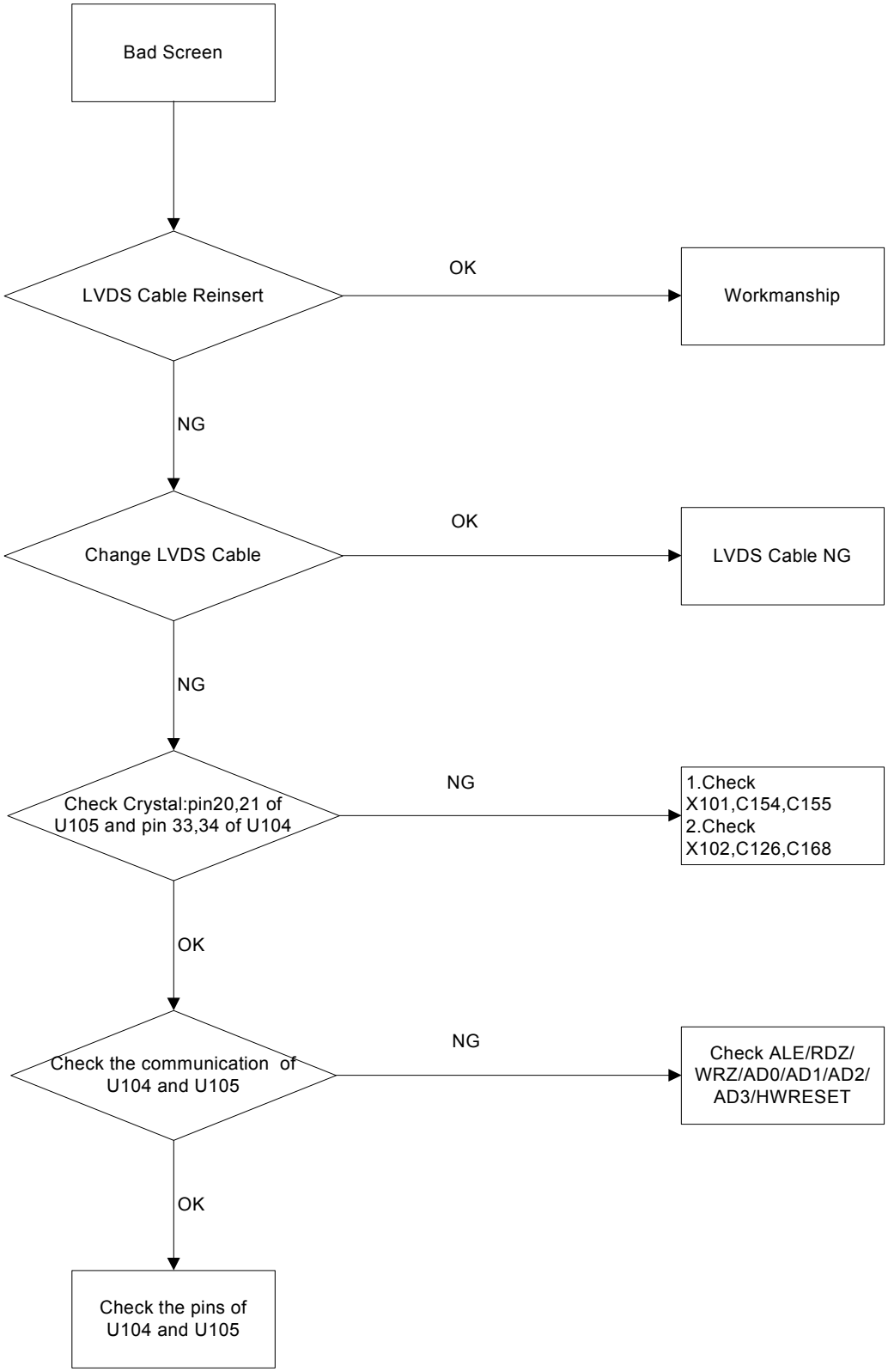
6. Black Screen and backlight turn on



7. White Screen



8. Bad Screen


Bad Screen
LVDS Cable Reinsert
OK
Workmanship
NG
Change LVDS Cable
OK
LVDS Cable NG
NG
Check Crystal:pin20,21 of U105 and pin 33,34 of U104
NG
1.Check X101,C154,C155
2.Check X102,C126,C168
OK
Check the communication of U104 and U105
NG
Check ALE/RDZ/ WRZ/AD0/AD1/AD2/ AD3/HWRESET
OK
Check the pins of U104 and U105

7. RECOMMENDED PART LIST

RECOMMENDED SPARE PARTS LIST (VA702-1 for "Innolux V1 (12ms) Panel")

ViewSonic Model Number: VS10781-1W

Rev: 1a

Serial No. Prefix: PST

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#	Q'ty
1	**Accessories:**	KIT,ACCESSORY(INL), LE1709		A-00003039	703000000500			10
2		PWR CORD 10A/125V BLK 6FT UL/CSA,SVT 18x		A-00003040	453070800250			100
3	**Board Assembly:**	PCBA,IF BOARD, LE1709-6A0		B-00003041	790411300600			100
4		PCBA,KEYPAD BOARD, LE1709		B-00003042	790411500000			100
5		PCBA,PWR&INV./B, LE1709-6A0		B-00003043	790411400600			100
14	**Cabinets:**	BASE, LE1709		C-00003044	501240201000			100
6		BEZEL,FRONT(SILVER),VA702, LE1709		C-00003045	501010202700			50
7		COVER,BACK, LE1709		C-00003046	501020202900			50
8	**Cables:**	CABLE,D-SUB 15P MALE 6FT BLACK/BLUE,SZ40		CB-00003047	453010100100			100
9	**Electronic Components:**	LCD PANEL 17" MT170EN01-V1(INNOLUX)		E-00003048	631102070270			100
10	**Packing Material:**	BAG,PLASTIC,L550xW450xT0.05mm,LE1709		P-00003049	506120004300			200
11		CARTON,VA702, LE1709		P-00003050	506020006800			100
12		CUSHION,EPS-L, LE1709		P-00003051	506040005500			100
13		CUSHION,EPS-R, LE1709		P-00003052	506040005510			200
15	**Plastics:**	RUBBER,FOOT,OD14.1xT2.5mm,3M, LE1708		PL-00003053	503020002600			100

RECOMMENDED SPARE PARTS LIST (VA702b-1 for "Innolux V1 (12ms) Panel")

ViewSonic Model Number: VS10781-1W

Rev: 1a

Serial No. Prefix: PSX

Item	Description		ECR/ECN	ViewSonic P/N	Ref. P/N	Location	Universal number#	Q'ty
1	**Accessories:**	KIT,ACCESSORY,VA702B-INL,LE1709		A-00003054	703000000510			10
2		PWR CORD 10A/125V BLK 6FT UL/CSA,SVT 18x		A-00003040	453070800250			100
3	**Board Assembly:**	PCBA,IF BOARD, LE1709-6A0		B-00003041	790411300600			100
4		PCBA,KEYPAD BOARD, LE1709		B-00003042	790411500000			100
5		PCBA,PWR&INV./B, LE1709-6A0		B-00003043	790411400600			100
14	**Cabinets:**	BASE, LE1709		C-00003044	501240201000			100
6		BEZEL,FRONT(GRAY),VA702b, LE1709		C-00003055	501010202710			50
7		COVER,BACK, LE1709		C-00003046	501020202900			50
8	**Cables:**	CABLE,D-SUB 15P MALE 6FT BLACK/BLUE,SZ40		CB-00003047	453010100100			100
9	**Electronic Components:**	LCD PANEL 17" MT170EN01-V1(INNOLUX)		E-00003048	631102070270			100
10	**Packing Material:**	CUSHION,EPS-L, LE1709		P-00003051	506040005500			100
11		CUSHION,EPS-R, LE1709		P-00003052	506040005510			200
12		BAG,PLASTIC,L550xW450xT0.05mm,LE1709		P-00003049	506120004300			200
13		CARTON,VA702B, LE1709		P-00003056	506020006810			200
15	**Plastics:**	RUBBER,FOOT,OD14.1xT2.5mm,3M, LE1708		PL-00003053	503020002600			100

BOM LIST (VA702-1 for "Innolux V1 (12ms) Panel")

ViewSonic Model Number: VS10781

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty	
1	CB-00003047	453010100100	CABLE,D-SUB 15P MALE 6FT BLACK/BLUE,SZ40		1	PC
2	A-00003040	453070800250	PWR CORD 10A/125V BLK 6FT UL/CSA,SVT 18x		1	PC
3	#N/A	506250005100	LBL,AGENCY(VA702), LE1709		1	PC
4	#N/A	506440002300	LABEL,BLANK,76.2x76.2mm,LE1709(UPC)		1	PC
5	#N/A	506440002400	LABEL,BLANK,50x25mm,LE1709(S/N)		1	PC
6	#N/A	506390000400	LABEL,OPENING STAND, LE1709		1	PC
7	#N/A	506390000500	LABEL,QC-PASS, LE1709		1	PC
8	#N/A	506390000600	LABEL,HI-POT PASS, LE1709		1	PC
9	P-00003052	506040005510	CUSHION,EPS-R, LE1709		1	PC
10	P-00003051	506040005500	CUSHION,EPS-L, LE1709		1	PC
11	P-00003050	506020006800	CARTON,VA702, LE1709		1	PC
12	P-00003049	506120004300	BAG,PLASTIC,L550xW450xT0.05mm,LE1709		1	PC
13	#N/A	506380001800	TAPE,WRAPPING TYPE,48mmx50M LE1X04/05		0.024	ROL
14	#N/A	506431000300	FILM,PE 500mmx900M		0.0004	ROL
15	#N/A	506039002301	CORNER PAPER,2050x50x50xT3mm,LE1705		0.0556	PC
16	#N/A	506039001200	CORNER PAPER,820x50x50mm		0.0556	PC
17	#N/A	506150001310	PALLET,1120x980x120mm,LE1709		0.0139	PC
18	#N/A	506037003700	CARDBOARD,COVER,L1120xW980xH120xT5mm,LE1		0.0278	PC
19	A-00003039	703000000500	KIT,ACCESSORY(INL), LE1709		1	PC
20	#N/A	714072760100	ASSY,FIANL(S), LE1709-6A0		1	PC
21	#N/A	501020203000	COVER,HINGE, LE1709		2	PC
22	#N/A	502060401910	HINGE,RIGHT, LE1709		1	PC
23	#N/A	502060401900	HINGE,LEFT, LE1709		1	PC
24	#N/A	509412610500	SCREW,B,CROSS,T.T-4*10,BLK		4	PC
25	#N/A	509212610300	SCREW,F,CROSS,T.T-4*10,Ni		4	PC
26	#N/A	509116822300	SCREW,P,CROSS,M5*22,Ni		4	PC
27	#N/A	714030002400	ASSY,BEZEL(S),LE1709		1	PC
28	C-00003045	501010202700	BEZEL,FRONT(SILVER),VA702, LE1709		1	PC
29	#N/A	501030201900	BUTTON,FUNCTION KEY, LE1709		1	PC
30	#N/A	501120101200	LENS, LE1709		1	PC
31	#N/A	506102000400	LOGO PLATE,VIEWSONIC, LE1709(THREE BIRDS		1	PC
32	#N/A	506102000300	LOGO PLATE,VIEWSONIC, LE1709		1	PC
33	#N/A	714050002400	ASSY,BACK COVER, LE1709		1	PC
34	C-00003046	501020202900	COVER,BACK, LE1709		1	PC
35	#N/A	502080300300	SUPPORT,VESA, LE1709		1	PC
36	#N/A	506102000500	LOGO PLATE,VIEWSONIC, LE1709(ELLIPSE)		1	PC
37	#N/A	714020002400	ASSY,BASE, LE1709		1	PC
38	C-00003044	501240201000	BASE, LE1709		1	PC
39	#N/A	502170300400	PLATE,BASE,LE1709		1	PC
40	PL-00003053	503020002600	RUBBER,FOOT,OD14.1xT2.5mm,3M, LE1708		4	PC
41	#N/A	714072761100	ASSY,PANEL(S), LE1709-6A0		1	PC
42	E-00003048	631102070270	LCD PANEL 17" MT170EN01-V1(INNOLUX)		1	PC
43	#N/A	430303000140	HRN LVDS FFC 30P 234mm,ACCX30234KU28MY		1	PC
44	B-00003042	790411500000	PCBA,KEYPAD BOARD, LE1709		1	PC
45	#N/A	430300800320	HRN ASS'Y 4x2P 189mm UL2651#28SZ504479B		1	PC
46	B-00003043	790411400600	PCBA,PWR&INV./B, LE1709-6A0		1	PC
47	B-00003041	790411300600	PCBA,IF BOARD, LE1709-6A0		1	PC
48	#N/A	430300100190	HRN ASS'Y 1P 157mm BLACK,UL1007#20		1	PC
49	#N/A	506381000700	TAPE,ACE,45mmx30M(PC=10x45mm),LE1709		0.002	ROL
50	#N/A	502090301300	CHASSIS, LE1709		1	PC
51	#N/A	502020300700	BRACKET,LEFT, LE1709		1	PC
52	#N/A	502020300710	BRACKET,RIGHT, LE1709		1	PC
53	#N/A	509146305300	SCREW,PW,CROSS W/WAS,M3*5,Ni		8	PC
54	#N/A	509000000700	BOLT,#4-40x11.8,NiFOR D-SUB/DVI CONN.		2	PC
55	#N/A	509016304102	SCREW,I,CROSS,M3*4,Zw		4	PC
56	#N/A	511100001500	CLIP,WIRE.CH-01P(PG), LE1709		1	PC
57	#N/A	505040202000	INSULATOR,MYLAR,L79.7xW62.7mm,CHASSIS, L		1	PC
58	#N/A	509016304102	SCREW,I,CROSS,M3*4,Zw		1	PC
59	#N/A	506440002600	LABEL,BLANK,210x65mm,LE1709(PALLET)		0.0278	PC

BOM LIST (VA702-1 PCB Assemblies)

ViewSonic Model Number: VS10781

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
1	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0	VER: AA		
2	#N/A	444099030030	CON, SMD 1.0mm 30PIN AL2309-A0G1Z	CN103	1	PC
3	#N/A	412000399690	IC FS8860-18PJ SOT-223 (FORTUNE)	U101	1	PC
4	#N/A	412000330020	IC LD1117A-1.8-A SOT223 (UTC)		1	PC
5	#N/A	412000398690	IC FS8860-33PJ SOT-223 (FORTUNE)	U102	1	PC
6	#N/A	412000372020	IC LD1117AL-3.3V-A SOT-223(UTC		1	PC
7	#N/A	412000008481	IC AT24C02N-10SI-2.7 SOP8 2K(ATMEL)	U103	1	PC
8	#N/A	412000361990	IC CAT24WC02W-TE13 SOIC-8(CATALYST)		1	PC
9	#N/A	412000010280	IC M24C02-WMN6TP SO8 2K(ST)		1	PC
10	#N/A	735110003200	ASSY,MCU&PROGRAM, LE1709-6A0		1	PC
11	#N/A	412000400190	IC TSU16AK PQFP128 (MSTAR)	U104	1	PC
12	#N/A	412000224480	IC AT24C16AN-10SI-2.7 16K(ATMEL)	U106	1	PC
13	#N/A	412000224990	IC CAT24WC16W-TE13 SOIC-8 (CATALYST)		1	PC
14	#N/A	412000224280	IC M24C16-WMN6TP SO8 16K (ST)		1	PC
15	#N/A	410500044290	XSTR AP2301N P-CH SOT23(APEC)	Q101	1	PC
16	#N/A	410500044120	XSTR SI2301DS P-CH SOT23(VISHAY)		1	PC
17	#N/A	410500046210	XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIPS)	Q102,Q104,Q105	3	PC
18	#N/A	410500046180	XSTR MMBT3906LT1 PNP 200MA,40V		3	PC
19	#N/A	410500045210	XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIPS)	Q103,Q107	2	PC
20	#N/A	410500045140	XSTR MMBT3904LT1 NPN 200MA(ON)40V SOT23		2	PC
21	#N/A	411020026210	DIO BAV99 350mW 70V SOT-23(PHI	TVS101,TVS102,TVS103	3	PC
22	#N/A	411020026020	DIO BAV99 350mW 70V SOT-23(FEC		3	PC
23	#N/A	411023004021	DIO SN4148 75V/0.15A SMD(FEC)1206	D102,D103,D104	3	PC
24	#N/A	411020046410	DIO MW4148 75V/0.15A (MMC)DO-213AA		3	PC
25	#N/A	432002360012	BEAD CORE SMD(0805)60O 800mA GBK201209T-600Y-N	FB102,FB103,FB104,FB105	7	PC
26	#N/A			FB106,FB107,FB108		
27	#N/A	411150356950	ZENER 5.6V MTZS05-5.6,SOD-123 (MMC)	TVS104,TVS105,TVS106	4	PC
28	#N/A			TVS107		
29	#N/A	411101156950	ZENER BZV55-C5V6 SOD80C(PHILIPS)		4	PC
30	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0		VER: AA	
31	#N/A	411100656950	ZENER 5.6V ZMM55-C5V6 DO-213AA (FEC)		4	PC
32	#N/A	419341054670	C SMD(0805) Y5V 1uF/16V Z	C113,C125	2	PC
33	#N/A	419303300560	C SMD(0603) NPO 33PF/50V J	C119	1	PC
34	#N/A	419302210560	C SMD(0603) NPO 220PF/50V J	C120	1	PC
35	#N/A	419302200560	C SMD(0603) NPO 22PF/50V J	C126,C168	2	PC
36	#N/A	419301200560	C SMD(0603) NPO 12PF/50V J	C154,C155	2	PC
37	#N/A	419301010560	C SMD(0603) NPO 100PF/50V J	C162,C163,C164	3	PC
38	#N/A	419314730060	C SMD(0603) X7R 0.047uF/50V K	C115,C116,C117,C121,C122	6	PC
39	#N/A			C123		
40	#N/A	419311020060	C SMD(0603) X7R 1000PF/50V K	C156,C157,C158,C159,C160	5	PC
41	#N/A	419341064650	C SMD(1206) Y5V 10uF/16V Z	C128,C134,C138,C140,C142	8	PC
42	#N/A			C144,C148,C150		
43	#N/A	419311040060	C SMD(0603) X7R 0.1uF/50V K	C102,C104,C107,C108,C110	28	PC
44	#N/A			C111,C114,C124,C127,C129		
45	#N/A			C130,C131,C132,C133,C135		
46	#N/A			C136,C137,C139,C141,C143		
47	#N/A			C145,C149,C151,C170,C171		
48	#N/A			C172,C173,C174		
49	#N/A	415751035080	RP(0612)10KOx4 1/16W J 8P4R	RP101,RP102,RP103,RP104	4	PC
50	#N/A	414916010350	RES SMD (0603) 10KO J,RT	R101,R106,R114,R124,R125	13	PC
51	#N/A			R132,R133,R134,R137,R138		
52	#N/A			R139,R155,R156		
53	#N/A	414916047250	RES SMD (0603) 4.7KO J,RT	R103,R104,R105,R129,R143	7	PC
54	#N/A			R144,R157		
55	#N/A	414916010150	RES SMD (0603) 100O J,RT	R107,R110,R126,R127,R140	8	PC
56	#N/A			R141,R152,R153		
57	#N/A	414916750910	RES SMD (0603) 75O F,RT	R111,R112,R113	3	PC
58	#N/A	414916022250	RES SMD (0603) 2.2KO J,RT	R119,R120	2	PC
59	#N/A	414916390010	RES SMD (0603) 390O F,RT	R128	1	PC
60	#N/A	414916022150	RES SMD (0603) 220O J,RT	R142,R145,R159	3	PC
61	#N/A	414916010250	RES SMD (0603) 1KO J,RT	R108,R109,R146,R147,R148	10	PC
62	#N/A			R149,R150,R162,R163,R164		
63	#N/A	414916000050	RES SMD (0603) 0O J,RT	R131,R170	2	PC
64	#N/A	414908000050	RES SMD (0805) 0O J,RT	R165,R166,R167,R168	4	PC
65	#N/A	414916051050	RES SMD (0603) 51O J,RT	R158	1	PC
66	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0		VER: AA	
67	#N/A	414916022050	RES SMD (0603) 22O J,RT	R115,R116,R117	3	PC
68	#N/A	414916047050	RES SMD (0603) 47O J,RT	R121,R122,R123	3	PC
69	#N/A	414916022350	RES SMD (0603) 22KO J,RT	R169	1	PC
70	#N/A	490411300100	PCB,INTERFACE, LE1X09-XA0	PCB	1	PC
71	#N/A	790411320600	PCBA,IF BOARD,OTHRS,LE1709-6A0		VER: AA	
72	#N/A	430631060020	WAFER 2.0mm 6P 180°	CN101	1	PC
73	#N/A	440819015070	CON,D-SUB,FEM.15P RA W/O SCREW DV11201-H5K8-4F	CN102	1	PC
74	#N/A	432008010330	XTAL 22.1184MHz AT-49 DIP,15pF 30PPM	X101	1	PC
75	#N/A	432008010270	XTAL 14.31818MHz HC-49US DIP 16pF 30PPM	X102	1	PC
76	#N/A	506140005700	LABEL,BARCODE,BLANK,33x7mm FOR PCB		1	PC
77	#N/A	415350919540	RES MOF 2W 9.1O J,AT MINI	R174	1	PC
78	#N/A	420431010461	CAP EC 100uF 16V M,105℃ ST 5x11(SK)	C101,C103,C105,C106,C109	6	PC
79	#N/A			C169		
80	#N/A	430631080130	WAFER 2x4P 2.0mm,200PHD-2*4ST	CN106	1	PC
81	#N/A	735110003200	ASSY,MCU&PROGRAM, LE1709-6A0		VER: V1	A
82	#N/A	629030003200	PROGRAM, LE1709-6A0		1	PC
83	#N/A	412000329560	IC W78E65P-40 PLCC44(WINBOND)	U105	1	PC
84	#N/A	506390180100	LABEL,PROGRAM LE1501-030		1	PC

Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
85	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0			
86	#N/A	410500045210	XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIPS)	Q801	1	PC
87	#N/A	410500045140	XSTR MMBT3904LT1 NPN 200MA(ON) 40V SOT23		1	PC
88	#N/A	410500045241	XSTR MMBT3904 NPN 200mA,40V(FC SOT23		1	PC
89	#N/A	410500050210	XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)	Q501,Q502,Q503,Q504,Q505	5	PC
90	#N/A	410500050130	XSTR SN7002 N-C SOT-23(INFINEON)		5	PC
91	#N/A	411020026210	DIO BAV99 350mW 70V SOT-23(PHI	D501,D502,D503,D504,D505	8	PC
92	#N/A			D506,D507,D508		
93	#N/A	411020026020	DIO BAV99 350mW 70V SOT-23(FEC		8	PC
94	#N/A	411023004021	DIO SN4148 75V/0.15A SMD(FEC) 1206	D509,D510,D511,D512	4	PC
95	#N/A	411020046410	DIO MW4148 75V/0.15A (MMC) DO-213AA		4	PC
96	#N/A	411090020410	SCHTKY SKS20-04AT 40V/2A THIN SMA(MMC)	D513,D514	2	PC
97	#N/A	411090005011	SCHTKY SK24A 40V/2A SMA(TSC) DO-214AA		2	PC
98	#N/A	411150356950	ZENER 5.6V MTZS05-5.6,SOD-123 (MMC)	ZD803	1	PC
99	#N/A	411101156950	ZENER BZV55-C5V6 SOD80C(PHILIPS)		1	PC
100	#N/A	411100656950	ZENER 5.6V ZMM55-C5V6 DO-213AA(FEC)		1	PC
101	#N/A	411150391950	ZENER 9.1V MTZS05-9.1,SOD-123(MMC)	ZD801	1	PC
102	#N/A	411101191920	ZENER BZV55-B9V1 SOD80C(PHILIPS)		1	PC
103	#N/A	411101116050	ZENER BZV55-C16 SOD80C(PHILIPS	ZD804	1	PC
104	#N/A	411150316050	ZENER 16V MTZS05-16,SOD-123(MMC)		1	PC
105	#N/A	411154016010	ZENER 16V ZMM5246B DO-213AA(FEC)		1	PC
106	#N/A	412000354630	IC OZ9910G SOP16 (O2 MICRO)	IC501	1	PC
107	#N/A	414904100010	RES SMD (1206) 100O F,RT	R809	1	PC
108	#N/A					
109	#N/A	414908010350	RES SMD (0805) 10KO J,RT	R808,R819,R827	3	PC
110	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0		VER: AA	
111	#N/A	414908024550	RES SMD (0805) 2.4MO J,RT	R801,R805,R822,R823	4	PC
112	#N/A					
113	#N/A	414908010250	RES SMD (0805) 1KO J,RT	R813,R814,R815	3	PC
114	#N/A					
115	#N/A	414908047450	RES SMD (0805) 470KO J,RT	R825	1	PC
116	#N/A					
117	#N/A	414908051450	RES SMD (0805) 510KO J,RT	R803,R807,R824	3	PC
118	#N/A					
119	#N/A	414908510110	RES SMD (0805) 5.1KO F,RT	R810	1	PC
120	#N/A					
121	#N/A	414908330110	RES SMD (0805) 3.3KO F,RT	R818	1	PC
122	#N/A					
123	#N/A	414908068950	RES SMD (0805) 6.8O J RT	R812,R816	2	PC
124	#N/A					
125	#N/A	414916510210	RES SMD (0603) 51KO F,RT	R811	1	PC
126	#N/A					
127	#N/A	414908120210	RES SMD (0805) 12K F RT	R817	1	PC
128	#N/A					
129	#N/A	414904010050	RES SMD (1206) 10O J,RT	R802,R806	2	PC
130	#N/A					
131	#N/A	414916330410	RES SMD (0603) 3.3M F RT	R527	1	PC
132	#N/A					
133	#N/A	414916010410	RES SMD (0603) 100K F,RT	R508,R523	2	PC
134	#N/A					
135	#N/A	414916470210	RES SMD (0603) 47KO F,RT	R524,R526	2	PC
136	#N/A					
137	#N/A	414916182310	RES SMD (0603) 182KO F,RT	R528	1	PC
138	#N/A					
139	#N/A	414908390110	RES SMD (0805) 3.9KO F,RT	R502,R504	2	PC
140	#N/A					
141	#N/A	414916910210	RES SMD (0603) 91KO F,RT	R522	1	PC
142	#N/A					
143	#N/A	414916510010	RES SMD (0603) 510O F,RT	R513,R514	2	PC
144	#N/A					
145	#N/A	414916010550	RES SMD (0603) 1MO J,RT	R505,R515,R517,R519,R521	6	PC
146	#N/A			R529		
147	#N/A	414916390110	RES SMD (0603) 3.9KO F,RT	R506,R507	2	PC
148	#N/A					
149	#N/A	414904010550	RES SMD (1206) 1MO J,RT	R820,R821	2	PC
150	#N/A					
151	#N/A	414908020150	RES SMD (0805) 200O J,RT	R829	1	PC
152	#N/A					
153	#N/A	414916100110	RES SMD (0603) 1KO F,RT	R510,R512	2	PC
154	#N/A					
155	#N/A	414916560010	RES SMD (0603) 560O F,RT	R509,R511	2	PC
156	#N/A					
157	#N/A	419311040060	C SMD(0603) X7R 0.1uF/50V K	C531,C532,C533,C534,C503	6	PC
158	#N/A			C821		
159	#N/A	419311030060	C SMD(0603) X7R 0.01uF/50V K	C505	1	PC
160	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0		VER: AA	
161	#N/A	419301023560	C SMD(0603) NPO 1000PF/25V J	C504	1	PC
162	#N/A	419314720060	C SMD(0603) X7R 4700PF/50V K	C506	1	PC
163	#N/A	419312220060	C SMD(0603) X7R 2200PF/50V K	C507	1	PC
164	#N/A	419312230060	C SMD(0603) X7R 0.022uF/50V K	C508	1	PC
165	#N/A	419342253670	C SMD(0805) Y5V 2.2uF/25V Z	C502,C511	2	PC
166	#N/A	419316820070	C SMD(0805) X7R 6800PF/50V K	C523,C530	2	PC
167	#N/A	419341053670	C SMD(0805) Y5V 1uF/25V Z	C528	1	PC
168	#N/A	419302210160	C SMD(0603) NPO 220PF/50V G	C529	1	PC
169	#N/A	790411420600	PCBA,PWR&INV/B,OTHR,LE1X09-XA0		VER: AA	
170	#N/A	412140002380	IC LTV817M-VB VDE (LITE-ON) P=10mm	IC801	1	PC
171	#N/A	412140001390	IC EL817M-B (EVERLIGHT		1	PC
172	#N/A	410500072270	XSTR AOP605 N&P-CH PDIP-8(AO)	U501,U502	2	PC

Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
173	#N/A	411050005020	DIO BRDG BL4-06-BF52 600V/4A FRONTIER	D801	1	PC
174	#N/A	411050007010	DIO BRDG KBL405G 600V/4A(TSC)		1	PC
175	#N/A	416194743011	CAP MEX 0.47uF 275V K X2,F15	C804	1	PC
176	#N/A	416202224610	CAP MEY 2200pF 400V M Y,F10mm	C820	1	PC
177	#N/A	416202223610	CAP MEY 2200pF 250V M Y2 Y5V P=7.5mm	C801,C806	2	PC
178	#N/A	420421020102	CAP EC 1000uF/10V M,105℃ N-F 10x16(L-ESR)	C812,C826	2	PC
179	#N/A	420421020211	CAP SD 1000uF 25V M,105℃ F 13x20	C808	1	PC
180	#N/A	420431014082	CAP SEK 100uF/450V M,105℃ CF18x40(2.5)	C805	1	PC
181	#N/A	416204724610	CAP MEY 4700pF 400V M Y,F10mm	C824	1	PC
182	#N/A	418110058510	CAP CD SL 10pF 3KV J,F7.5	C524,C526	2	PC
183	#N/A		CC45SL3FD100JYNN(TDK)			
184	#N/A	418105058010	CAP CD SL 5pF 3KV K,F7.5	C525,C527	2	PC
185	#N/A	425000010530	COIL CHK 5uH 7.8X10 CHK-053 0181085R0L	L802,L803	2	PC
186	#N/A	426000050070	CHOKE L-FILTER 12mH LIN-007 ET-20	L801	1	PC
187	#N/A	426000090490	XFMR SW 93uH EEL19 DIP SPW-049	T501,T502	2	PC
188	#N/A	426000090510	XFMR 750u@1K,+-8%,3m,113m,SPW-051,DIP-11,NC-H0494-1	T801	1	PC
189	#N/A	432009400701	NTC 5O 4A 10? P=5mm, FN10SP005L-Y1Ba	RT801	1	PC
190	#N/A	430613420290	FUSE SLOW 2,250,Axial Lead,3.6x10mm	F801	1	PC
191	#N/A	440149000100	SKT AC 10A/250V U/C/V,TU-301-SP-SR7-AD3	P801	1	PC
192	#N/A	440149000140	SKT AC 10A/250V U/C/VR-301SN(C137)		1	PC
193	#N/A	430637020020	WFR. 2P P=3.5mm 90º4100-D02	CN501,CN502,CN503,CN504	4	PC
194	#N/A	430300600070	HRN ASS'Y 6P 100mm UL1007#24	CN801	1	PC
195	#N/A	511110000101	HOT-MELT ADHESIVES (#526)		0.015	KG
196	#N/A	735100005000	ASSY,H/S SRF5-04CT/8-10CT,LE1704/05		1	PC
197	#N/A	735100005900	ASSY,H/S TOP246Y, LE1X09		1	PC
198	#N/A	790411410600	PCBA,PWR&INV./B,AI,LE1X09-XA0		VER: AA	
199	#N/A	790411450600	PCBA,PWR&INV./B,AI/A,LE1X09-XA		1	PC
200	#N/A	790411460600	PCBA,PWR&INV./B,AI/R,LE1X09-XA		1	PC
201	#N/A	735100005000	ASSY,H/S SRF5-04CT/8-10CT, LE1		704/05 VE	R: A
202	#N/A	411090015020	SCHTKY SRF5-04CT ITO-220AB(FEC	D805	1	PC
203	#N/A	411090016020	SCHTKY SRF8-10CT ITO-220AB(FEC	D803	1	PC
204	#N/A	507200003800	HEATSINK,56x20xt10mm LE1904/05		1	PC
205	#N/A	509112306100	SCREW,P,CROSS,T.T-3*6,Zn		2	PC
206	#N/A	735100005900	ASSY,H/S TOP246Y, LE1X09 VER		: A	ASSM.
207	#N/A	412000379270	IC TOP246YN,TO-220-7C(POWER IN TEGRATION)	IC802	1	PC
208	#N/A	507200003700	HEATSINK,46x20xt10mm LE1704/05		1	PC
209	#N/A	509112306100	SCREW,P,CROSS,T.T-3*6,Zn		1	PC
210	#N/A	790411450600	PCBA,PWR&INV./B,AI/A,LE1X09-XA		0 VER: A	A
211	#N/A	415130680540	RES CF 1/2W 68O J,AT	R804	1	PC
212	#N/A	415340101540	RES MOF 1W 100O J,AT MINI	R828	1	PC
213	#N/A	414870305540	RES MG HV 1/2Ws 3MO 3KV J,AT	R501,R503	2	PC
214	#N/A	411020052020	DIO A02 200V/1A R1(FEC)	D806	1	PC
215	#N/A	411020059440	DIO TA10-02 1A/200V DO-41(TJZH		1	PC
216	#N/A	411022003210	DIO 1N4148 75V/0.2A AT (PHIL)	D809	1	PC
217	#N/A	411022003020	DIO 1N4148 75V/0.15A AT(FEC)		1	PC
218	#N/A	411020055330	DIO MUR1100ERL AXIAL LEAD(ON)	D804	1	PC
219	#N/A	411032006020	DIO FR10-10 1000V/1A AT(FRONTIER)		1	PC
220	#N/A	411022020330	DIO P6KE200ARL 600W/100A AT(ON	ZD802	1	PC
221	#N/A	411022020090	DIO P6KE200A 600W/100A ATPEC		1	PC
222	#N/A	411022020240	DIO P6KE200A 600W/100A ATFAIRCHILD)		1	PC
223	#N/A	506140005700	LABEL,BARCODE,BLANK,33x7mm FOR PCB		1	PC
224	#N/A	432002200160	BEAD CORE BF30TA-3.5x9x0.8 AT	B801	1	PC
225	#N/A	430405007590	JMPR 7.5mm D=0.6mm,AT	J501,J504,J505,J509,J801	9	PC
226	#N/A			J812,J813,J814,J815		
227	#N/A	430405010090	JMPR 10mm D=0.6mm,AT	J503,J506,J507,J802,J804	8	PC
228	#N/A			J808,J809,J810		
229	#N/A	430405012590	JMPR 12.5mm D=0.6mm,AT	J803,J806,J807,J811	4	PC
230	#N/A	430405015090	JMPR 15mm D=0.6mm,AT	J805	1	PC
231	#N/A	430405017590	JMPR 17.5mm D=0.6mm,AT	J502	1	PC
232	#N/A	430405020090	JMPR 20mm D=0.6mm,AT	J508	1	PC
233	#N/A	490411400100	PCB,PWR&INV./B, LE1X09-XA0	PCB	1	PC
234	#N/A	790411460600	PCBA,PWR&INV./B,AI/R,LE1X09-XA		0 VER: A	A
235	#N/A	418247233030	CAP CD X7R 4700pF 1KV K VT	C803	1	PC
236	#N/A	418147038530	CAP CD NPO 47pF 1KV J,VT	C813	1	PC
237	#N/A	418210227030	CAP CD X7R 1000pF 500V K VT	C802,C811	2	PC
238	#N/A	418310413630	CAP CD Y5V 0.1uF 50V Z,VT	C817,C822	2	PC
239	#N/A	420434700230	CAP EC 47uF 25V M,105℃ VT5x11	C814,C815,C818,C819	4	PC
240	#N/A	420422210230	CAP SD 220uF 25V M,105℃ VT8x12	C509,C522,C810	3	PC
241	#N/A	410072013370	XSTR 2SC1815-GR VT (TOSHIBA)	Q802	1	PC
242	#N/A	410072013210	XSTR 2PC1815GR*I VT (PHILIPS)		1	PC
243	#N/A	410072013150	XSTR UTC2SC1815L-GR NPN TO92(UTC)		1	PC
244	#N/A	412022002840	IC TL431ACLP TO-92 1%,VT (ON)	IC803	1	PC
245	#N/A	412022002240	IC KA431AZ 1%,VT (FAIRCHILD)		1	PC
246	#N/A	412022002300	IC AP431 TO-92 1%,VT (ATC)		1	PC
247	#N/A	416231041530	CAP MEB 0.1uF 100V J,(RSB),VTRSBEC3100DQJ	C816	1	PC
248	#N/A	790411500000	SW TACT 5mm 160gf VERT.1P DIP	SW101,SW102,SW103,SW104	5	PC
249	#N/A	430602980060	TC-0103X	SW105		
250	#N/A		LED G/Y ∮3x5mm (HONGTONG)	LED101	1	PC
251	#N/A	411071003500	WAFER 2x4P 2.0mm R/A	CN105	1	PC
252	#N/A	430631080100	PCB,KEY PAD,LE1709	PCB	1	PC
253	#N/A	490411500100				

BOM LIST (VA702b-1 for "Innolux V1 (12ms) Panel")

ViewSonic Model Number: VS10781-1W

Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Location	Q'ty	
1	CB-00003047	453010100100	CABLE,D-SUB 15P MALE 6FT BLACK/BLUE,SZ40		1	PC
2	A-00003040	453070800250	PWR CORD 10A/125V BLK 6FT UL/CSA,SVT 18x		1	PC
3	#N/A	506250005110	LBL,AGENCY(VA702B), LE1709		1	PC
4	#N/A	506440002300	LABEL,BLANK,76.2x76.2mm,LE1709(UPC)		1	PC
5	#N/A	506440002400	LABEL,BLANK,50x25mm,LE1709(S/N)		1	PC
6	#N/A	506390000400	LABEL,OPENING STAND, LE1709		1	PC
7	#N/A	506390000500	LABEL,QC-PASS, LE1709		1	PC
8	#N/A	506390000600	LABEL,HI-POT PASS, LE1709		1	PC
9	P-00003052	506040005510	CUSHION,EPS-R, LE1709		1	PC
10	P-00003051	506040005500	CUSHION,EPS-L, LE1709		1	PC
11	P-00003056	506020006810	CARTON,VA702B, LE1709		1	PC
12	P-00003049	506120004300	BAG,PLASTIC,L550xW450xT0.05mm,LE1709		1	PC
13	#N/A	506380001800	TAPE,WRAPPING TYPE,48mmx50M LE1X04/05		0.024	ROL
14	#N/A	506431000300	FILM,PE 500mmx900M		0.0004	ROL
15	#N/A	506039002301	CORNER PAPER,2050x50x50xT3mm,LE1705		0.05556	PC
16	#N/A	506039001200	CORNER PAPER,820x50x50mm		0.05556	PC
17	#N/A	506150001310	PALLET,1120x980x120mm,LE1709		0.01389	PC
18	#N/A	506037003700	CARDBOARD,COVER,L1120xW980xH120xT5mm,LE1		0.02778	PC
19	#N/A	714072760101	ASSY,FIANL(G), LE1709-6A0		1	PC
20	#N/A	501020203000	COVER,HINGE, LE1709		1	PC
21	#N/A	502060401910	HINGE,RIGHT, LE1709		2	PC
22	#N/A	502060401900	HINGE,LEFT, LE1709		1	PC
23	#N/A	509412610500	SCREW,B,CROSS,T.T-4*10,BLK		1	PC
24	#N/A	509212610300	SCREW,F,CROSS,T.T-4*10,Ni		4	PC
25	#N/A	509116822300	SCREW,P,CROSS,M5*22,Ni		4	PC
26	#N/A	714030002410	ASSY,BEZEL(G),LE1709		4	PC
27	C-00003055	501010202710	BEZEL,FRONT(GRAY),VA702b, LE1709		1	PC
28	#N/A	501030201900	BUTTON,FUNCTION KEY, LE1709		1	PC
29	#N/A	501120101200	LENS, LE1709		1	PC
30	#N/A	506102000400	LOGO PLATE,VIEWSONIC, LE1709(THREE BIRDS		1	PC
31	#N/A	506102000300	LOGO PLATE,VIEWSONIC, LE1709		1	PC
32	#N/A	714050002400	ASSY,BACK COVER, LE1709		1	PC
33	C-00003046	501020202900	COVER,BACK, LE1709		1	PC
34	#N/A	502080300300	SUPPORT,VESA, LE1709		1	PC
35	#N/A	506102000500	LOGO PLATE,VIEWSONIC, LE1709(ELLIPSE)		1	PC
36	#N/A	714020002400	ASSY,BASE, LE1709		1	PC
37	C-00003044	501240201000	BASE, LE1709		1	PC
38	#N/A	502170300400	PLATE,BASE,LE1709		1	PC
39	PL-00003053	503020002600	RUBBER,FOOT,OD14.1xT2.5mm,3M, LE1708		1	PC
40	#N/A	714072761100	ASSY,PANEL(S), LE1709-6A0		4	PC
41	E-00003048	631102070270	LCD PANEL 17" MT170EN01-V1(INNOLUX)		1	PC
42	#N/A	430303000140	HRN LVDS FFC 30P 234mm,ACCX30234KU28MY		1	PC
43	B-00003042	790411500000	PCBA,KEYPAD BOARD, LE1709		1	PC
44	#N/A	430300800320	HRN ASS'Y 4x2P 189mm UL2651#28SZ504479B		1	PC
45	B-00003043	790411400600	PCBA,PWR&INV./B, LE1709-6A0		1	PC
46	B-00003041	790411300600	PCBA,IF BOARD, LE1709-6A0		1	PC
47	#N/A	430300100190	HRN ASS'Y 1P 157mm BLACK,UL1007#20		1	PC
48	#N/A	506381000700	TAPE,ACE,45mmx30M(PC=10x45mm),LE1709		1	PC
49	#N/A	502090301300	CHASSIS, LE1709		0.002	ROL
50	#N/A	502020300700	BRACKET,LEFT, LE1709		1	PC
51	#N/A	502020300710	BRACKET,RIGHT, LE1709		1	PC
52	#N/A	509146305300	SCREW,PW,CROSS W/WAS,M3*5,Ni		1	PC
53	#N/A	509000000700	BOLT,#4-40x11.8,NiFOR D-SUB/DVI CONN.		8	PC
54	#N/A	509016304102	SCREW,I,CROSS,M3*4,Zw		2	PC
55	#N/A	511100001500	CLIP,WIRE.CH-01P(PG), LE1709		4	PC
56	#N/A	505040202000	INSULATOR,MYLAR,L79.7xW62.7mm,CHASSIS, L		1	PC
57	#N/A	509016304102	SCREW,I,CROSS,M3*4,Zw		1	PC
58	#N/A	506440002600	LABEL,BLANK,210x65mm,LE1709(PALLET)		1	PC
59	A-00003054	703000000510	KIT,ACCESSORY,VA702B-INL,LE1709		0.02778	PC

BOM LIST (VA702-1 PCB Assemblies)

ViewSonic Model Number: VS10781

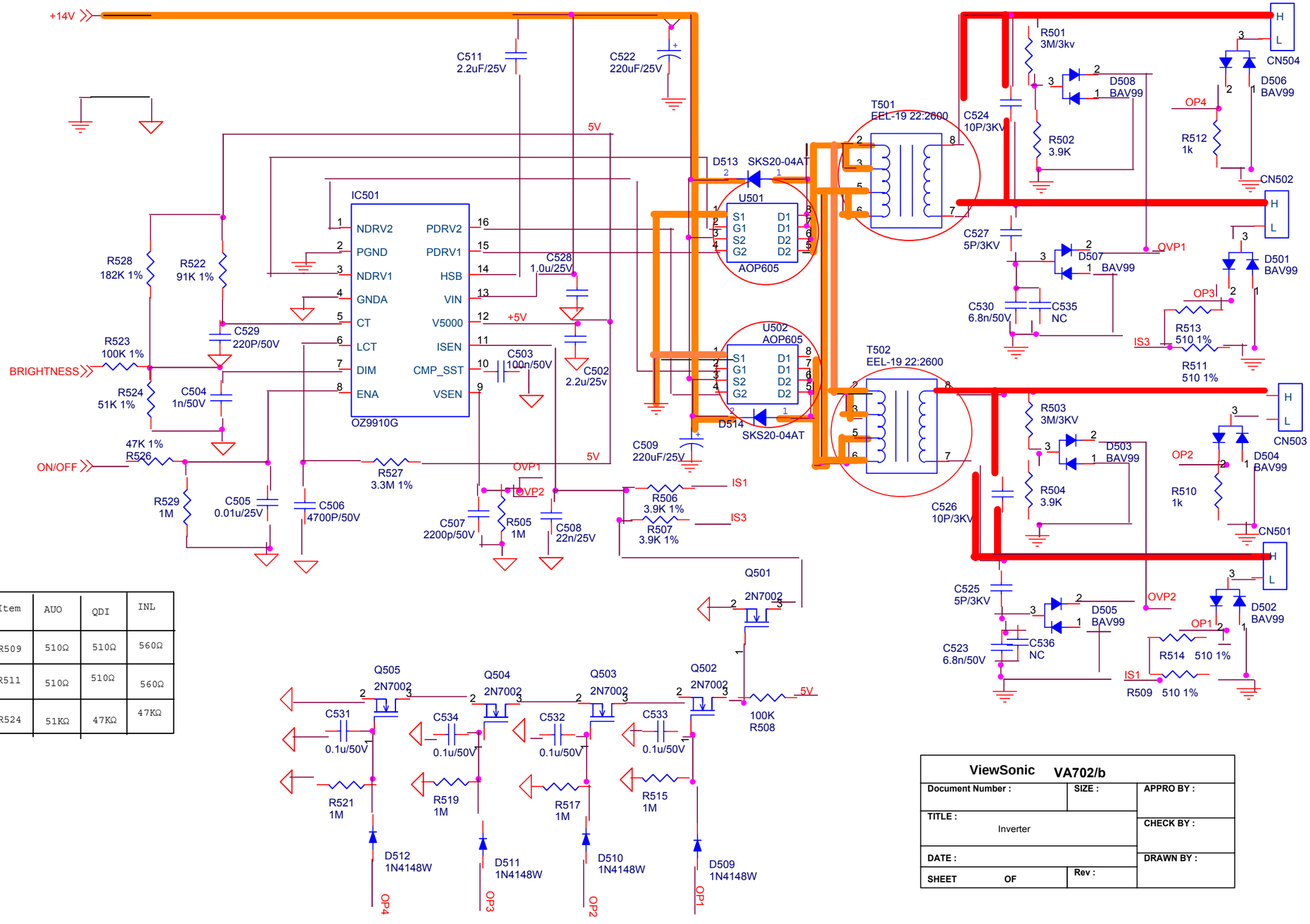
Rev: 1a

Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
1	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0	VER: AA		
2	#N/A	444099030030	CON, SMD 1.0mm 30PIN AL2309-A0G1Z	CN103	1	PC
3	#N/A	412000399690	IC FS8860-18PJ SOT-223 (FORTUNE)	U101	1	PC
4	#N/A	412000330020	IC LD1117A-1.8-A SOT223 (UTC)		1	PC
5	#N/A	412000398690	IC FS8860-33PJ SOT-223 (FORTUNE)	U102	1	PC
6	#N/A	412000372020	IC LD1117AL-3.3V-A SOT-223(UTC		1	PC
7	#N/A	412000008481	IC AT24C02N-10SI-2.7 SOP8 2K(ATMEL)	U103	1	PC
8	#N/A	412000361990	IC CAT24WC02W-TE13 SOIC-8(CATALYST)		1	PC
9	#N/A	412000010280	IC M24C02-WMN6TP SO8 2K(ST)		1	PC
10	#N/A	735110003200	ASSY,MCU&PROGRAM, LE1709-6A0		1	PC
11	#N/A	412000400190	IC TSU16AK PQFP128 (MSTAR)	U104	1	PC
12	#N/A	412000224480	IC AT24C16AN-10SI-2.7 16K(ATMEL)	U106	1	PC
13	#N/A	412000224990	IC CAT24WC16W-TE13 SOIC-8 (CATALYST)		1	PC
14	#N/A	412000224280	IC M24C16-WMN6TP SO8 16K (ST)		1	PC
15	#N/A	410500044290	XSTR AP2301N P-CH SOT23(APEC)	Q101	1	PC
16	#N/A	410500044120	XSTR SI2301DS P-CH SOT23(VISHAY)		1	PC
17	#N/A	410500046210	XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIPS)	Q102,Q104,Q105	3	PC
18	#N/A	410500046180	XSTR MMBT3906LT1 PNP 200MA,40V		3	PC
19	#N/A	410500045210	XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIPS)	Q103,Q107	2	PC
20	#N/A	410500045140	XSTR MMBT3904LT1 NPN 200MA(ON)40V SOT23		2	PC
21	#N/A	411020026210	DIO BAV99 350mW 70V SOT-23(PHI	TVS101,TVS102,TVS103	3	PC
22	#N/A	411020026020	DIO BAV99 350mW 70V SOT-23(FEC		3	PC
23	#N/A	411023004021	DIO SN4148 75V/0.15A SMD(FEC)1206	D102,D103,D104	3	PC
24	#N/A	411020046410	DIO MW4148 75V/0.15A (MMC)DO-213AA		3	PC
25	#N/A	432002360012	BEAD CORE SMD(0805)60O 800mA GBK201209T-600Y-N	FB102,FB103,FB104,FB105	7	PC
26	#N/A			FB106,FB107,FB108		
27	#N/A	411150356950	ZENER 5.6V MTZS05-5.6,SOD-123 (MMC)	TVS104,TVS105,TVS106	4	PC
28	#N/A			TVS107		
29	#N/A	411101156950	ZENER BZV55-C5V6 SOD80C(PHILIPS)		4	PC
30	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0		VER: AA	
31	#N/A	411100656950	ZENER 5.6V ZMM55-C5V6 DO-213AA (FEC)		4	PC
32	#N/A	419341054670	C SMD(0805) Y5V 1uF/16V Z	C113,C125	2	PC
33	#N/A	419303300560	C SMD(0603) NPO 33PF/50V J	C119	1	PC
34	#N/A	419302210560	C SMD(0603) NPO 220PF/50V J	C120	1	PC
35	#N/A	419302200560	C SMD(0603) NPO 22PF/50V J	C126,C168	2	PC
36	#N/A	419301200560	C SMD(0603) NPO 12PF/50V J	C154,C155	2	PC
37	#N/A	419301010560	C SMD(0603) NPO 100PF/50V J	C162,C163,C164	3	PC
38	#N/A	419314730060	C SMD(0603) X7R 0.047uF/50V K	C115,C116,C117,C121,C122	6	PC
39	#N/A			C123		
40	#N/A	419311020060	C SMD(0603) X7R 1000PF/50V K	C156,C157,C158,C159,C160	5	PC
41	#N/A	419341064650	C SMD(1206) Y5V 10uF/16V Z	C128,C134,C138,C140,C142	8	PC
42	#N/A			C144,C148,C150		
43	#N/A	419311040060	C SMD(0603) X7R 0.1uF/50V K	C102,C104,C107,C108,C110	28	PC
44	#N/A			C111,C114,C124,C127,C129		
45	#N/A			C130,C131,C132,C133,C135		
46	#N/A			C136,C137,C139,C141,C143		
47	#N/A			C145,C149,C151,C170,C171		
48	#N/A			C172,C173,C174		
49	#N/A	415751035080	RP(0612)10KOx4 1/16W J 8P4R	RP101,RP102,RP103,RP104	4	PC
50	#N/A	414916010350	RES SMD (0603) 10KO J,RT	R101,R106,R114,R124,R125	13	PC
51	#N/A			R132,R133,R134,R137,R138		
52	#N/A			R139,R155,R156		
53	#N/A	414916047250	RES SMD (0603) 4.7KO J,RT	R103,R104,R105,R129,R143	7	PC
54	#N/A			R144,R157		
55	#N/A	414916010150	RES SMD (0603) 100O J,RT	R107,R110,R126,R127,R140	8	PC
56	#N/A			R141,R152,R153		
57	#N/A	414916750910	RES SMD (0603) 75O F,RT	R111,R112,R113	3	PC
58	#N/A	414916022250	RES SMD (0603) 2.2KO J,RT	R119,R120	2	PC
59	#N/A	414916390010	RES SMD (0603) 390O F,RT	R128	1	PC
60	#N/A	414916022150	RES SMD (0603) 220O J,RT	R142,R145,R159	3	PC
61	#N/A	414916010250	RES SMD (0603) 1KO J,RT	R108,R109,R146,R147,R148	10	PC
62	#N/A			R149,R150,R162,R163,R164		
63	#N/A	414916000050	RES SMD (0603) 0O J,RT	R131,R170	2	PC
64	#N/A	414908000050	RES SMD (0805) 0O J,RT	R165,R166,R167,R168	4	PC
65	#N/A	414916051050	RES SMD (0603) 51O J,RT	R158	1	PC
66	#N/A	790411340600	PCBA,IF BOARD,SMD, LE1709-6A0		VER: AA	
67	#N/A	414916022050	RES SMD (0603) 22O J,RT	R115,R116,R117	3	PC
68	#N/A	414916047050	RES SMD (0603) 47O J,RT	R121,R122,R123	3	PC
69	#N/A	414916022350	RES SMD (0603) 22KO J,RT	R169	1	PC
70	#N/A	490411300100	PCB,INTERFACE, LE1X09-XA0	PCB	1	PC
71	#N/A	790411320600	PCBA,IF BOARD,OTHRS,LE1709-6A0		VER: AA	
72	#N/A	430631060020	WAFER 2.0mm 6P 180°	CN101	1	PC
73	#N/A	440819015070	CON,D-SUB,FEM.15P RA W/O SCREW DV11201-H5K8-4F	CN102	1	PC
74	#N/A	432008010330	XTAL 22.1184MHz AT-49 DIP,15pF 30PPM	X101	1	PC
75	#N/A	432008010270	XTAL 14.31818MHz HC-49US DIP 16pF 30PPM	X102	1	PC
76	#N/A	506140005700	LABEL,BARCODE,BLANK,33x7mm FOR PCB		1	PC
77	#N/A	415350919540	RES MOF 2W 9.1O J,AT MINI	R174	1	PC
78	#N/A	420431010461	CAP EC 100uF 16V M,105℃ ST 5x11(SK)	C101,C103,C105,C106,C109	6	PC
79	#N/A			C169		
80	#N/A	430631080130	WAFER 2x4P 2.0mm,200PHD-2*4ST	CN106	1	PC
81	#N/A	735110003200	ASSY,MCU&PROGRAM, LE1709-6A0		VER: V1	A
82	#N/A	629030003200	PROGRAM, LE1709-6A0		1	PC
83	#N/A	412000329560	IC W78E65P-40 PLCC44(WINBOND)	U105	1	PC
84	#N/A	506390180100	LABEL,PROGRAM LE1501-030		1	PC

Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
85	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0			
86	#N/A	410500045210	XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIPS)	Q801	1	PC
87	#N/A	410500045140	XSTR MMBT3904LT1 NPN 200MA(ON) 40V SOT23		1	PC
88	#N/A	410500045241	XSTR MMBT3904 NPN 200mA,40V(FC SOT23		1	PC
89	#N/A	410500050210	XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)	Q501,Q502,Q503,Q504,Q505	5	PC
90	#N/A	410500050130	XSTR SN7002 N-C SOT-23(INFINEON)		5	PC
91	#N/A	411020026210	DIO BAV99 350mW 70V SOT-23(PHI	D501,D502,D503,D504,D505	8	PC
92	#N/A			D506,D507,D508		
93	#N/A	411020026020	DIO BAV99 350mW 70V SOT-23(FEC		8	PC
94	#N/A	411023004021	DIO SN4148 75V/0.15A SMD(FEC) 1206	D509,D510,D511,D512	4	PC
95	#N/A	411020046410	DIO MW4148 75V/0.15A (MMC) DO-213AA		4	PC
96	#N/A	411090020410	SCHTKY SKS20-04AT 40V/2A THIN SMA(MMC)	D513,D514	2	PC
97	#N/A	411090005011	SCHTKY SK24A 40V/2A SMA(TSC) DO-214AA		2	PC
98	#N/A	411150356950	ZENER 5.6V MTZS05-5.6,SOD-123 (MMC)	ZD803	1	PC
99	#N/A	411101156950	ZENER BZV55-C5V6 SOD80C(PHILIPS)		1	PC
100	#N/A	411100656950	ZENER 5.6V ZMM55-C5V6 DO-213AA(FEC)		1	PC
101	#N/A	411150391950	ZENER 9.1V MTZS05-9.1,SOD-123(MMC)	ZD801	1	PC
102	#N/A	411101191920	ZENER BZV55-B9V1 SOD80C(PHILIPS)		1	PC
103	#N/A	411101116050	ZENER BZV55-C16 SOD80C(PHILIPS	ZD804	1	PC
104	#N/A	411150316050	ZENER 16V MTZS05-16,SOD-123(MMC)		1	PC
105	#N/A	411154016010	ZENER 16V ZMM5246B DO-213AA(FEC)		1	PC
106	#N/A	412000354630	IC OZ9910G SOP16 (O2 MICRO)	IC501	1	PC
107	#N/A	414904100010	RES SMD (1206) 100O F,RT	R809	1	PC
108	#N/A					
109	#N/A	414908010350	RES SMD (0805) 10KO J,RT	R808,R819,R827	3	PC
110	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0		VER: AA	
111	#N/A	414908024550	RES SMD (0805) 2.4MO J,RT	R801,R805,R822,R823	4	PC
112	#N/A					
113	#N/A	414908010250	RES SMD (0805) 1KO J,RT	R813,R814,R815	3	PC
114	#N/A					
115	#N/A	414908047450	RES SMD (0805) 470KO J,RT	R825	1	PC
116	#N/A					
117	#N/A	414908051450	RES SMD (0805) 510KO J,RT	R803,R807,R824	3	PC
118	#N/A					
119	#N/A	414908510110	RES SMD (0805) 5.1KO F,RT	R810	1	PC
120	#N/A					
121	#N/A	414908330110	RES SMD (0805) 3.3KO F,RT	R818	1	PC
122	#N/A					
123	#N/A	414908068950	RES SMD (0805) 6.8O J RT	R812,R816	2	PC
124	#N/A					
125	#N/A	414916510210	RES SMD (0603) 51KO F,RT	R811	1	PC
126	#N/A					
127	#N/A	414908120210	RES SMD (0805) 12K F RT	R817	1	PC
128	#N/A					
129	#N/A	414904010050	RES SMD (1206) 10O J,RT	R802,R806	2	PC
130	#N/A					
131	#N/A	414916330410	RES SMD (0603) 3.3M F RT	R527	1	PC
132	#N/A					
133	#N/A	414916010410	RES SMD (0603) 100K F,RT	R508,R523	2	PC
134	#N/A					
135	#N/A	414916470210	RES SMD (0603) 47KO F,RT	R524,R526	2	PC
136	#N/A					
137	#N/A	414916182310	RES SMD (0603) 182KO F,RT	R528	1	PC
138	#N/A					
139	#N/A	414908390110	RES SMD (0805) 3.9KO F,RT	R502,R504	2	PC
140	#N/A					
141	#N/A	414916910210	RES SMD (0603) 91KO F,RT	R522	1	PC
142	#N/A					
143	#N/A	414916510010	RES SMD (0603) 510O F,RT	R513,R514	2	PC
144	#N/A					
145	#N/A	414916010550	RES SMD (0603) 1MO J,RT	R505,R515,R517,R519,R521	6	PC
146	#N/A			R529		
147	#N/A	414916390110	RES SMD (0603) 3.9KO F,RT	R506,R507	2	PC
148	#N/A					
149	#N/A	414904010550	RES SMD (1206) 1MO J,RT	R820,R821	2	PC
150	#N/A					
151	#N/A	414908020150	RES SMD (0805) 200O J,RT	R829	1	PC
152	#N/A					
153	#N/A	414916100110	RES SMD (0603) 1KO F,RT	R510,R512	2	PC
154	#N/A					
155	#N/A	414916560010	RES SMD (0603) 560O F,RT	R509,R511	2	PC
156	#N/A					
157	#N/A	419311040060	C SMD(0603) X7R 0.1uF/50V K	C531,C532,C533,C534,C503	6	PC
158	#N/A			C821		
159	#N/A	419311030060	C SMD(0603) X7R 0.01uF/50V K	C505	1	PC
160	#N/A	790411440600	PCBA,PWR&INV./B,SMD,LE1709-6A0		VER: AA	
161	#N/A	419301023560	C SMD(0603) NPO 1000PF/25V J	C504	1	PC
162	#N/A	419314720060	C SMD(0603) X7R 4700PF/50V K	C506	1	PC
163	#N/A	419312220060	C SMD(0603) X7R 2200PF/50V K	C507	1	PC
164	#N/A	419312230060	C SMD(0603) X7R 0.022uF/50V K	C508	1	PC
165	#N/A	419342253670	C SMD(0805) Y5V 2.2uF/25V Z	C502,C511	2	PC
166	#N/A	419316820070	C SMD(0805) X7R 6800PF/50V K	C523,C530	2	PC
167	#N/A	419341053670	C SMD(0805) Y5V 1uF/25V Z	C528	1	PC
168	#N/A	419302210160	C SMD(0603) NPO 220PF/50V G	C529	1	PC
169	#N/A	790411420600	PCBA,PWR&INV/B,OTHR,LE1X09-XA0		VER: AA	
170	#N/A	412140002380	IC LTV817M-VB VDE (LITE-ON) P=10mm	IC801	1	PC
171	#N/A	412140001390	IC EL817M-B (EVERLIGHT		1	PC
172	#N/A	410500072270	XSTR AOP605 N&P-CH PDIP-8(AO)	U501,U502	2	PC

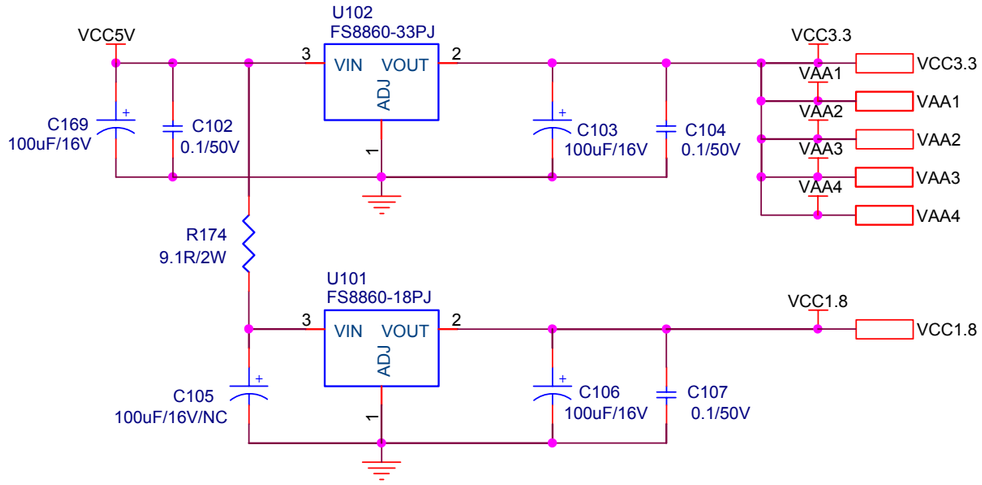
Item	ViewSonic P/N	Ref. P/N	Description	Location	Qty	
173	#N/A	411050005020	DIO BRDG BL4-06-BF52 600V/4A FRONTIER	D801	1	PC
174	#N/A	411050007010	DIO BRDG KBL405G 600V/4A(TSC)		1	PC
175	#N/A	416194743011	CAP MEX 0.47uF 275V K X2,F15	C804	1	PC
176	#N/A	416202224610	CAP MEY 2200pF 400V M Y,F10mm	C820	1	PC
177	#N/A	416202223610	CAP MEY 2200pF 250V M Y2 Y5V P=7.5mm	C801,C806	2	PC
178	#N/A	420421020102	CAP EC 1000uF/10V M,105℃ N-F 10x16(L-ESR)	C812,C826	2	PC
179	#N/A	420421020211	CAP SD 1000uF 25V M,105℃ F 13x20	C808	1	PC
180	#N/A	420431014082	CAP SEK 100uF/450V M,105℃ CF18x40(2.5)	C805	1	PC
181	#N/A	416204724610	CAP MEY 4700pF 400V M Y,F10mm	C824	1	PC
182	#N/A	418110058510	CAP CD SL 10pF 3KV J,F7.5	C524,C526	2	PC
183	#N/A		CC45SL3FD100JYNN(TDK)			
184	#N/A	418105058010	CAP CD SL 5pF 3KV K,F7.5	C525,C527	2	PC
185	#N/A	425000010530	COIL CHK 5uH 7.8X10 CHK-053 0181085R0L	L802,L803	2	PC
186	#N/A	426000050070	CHOKE L-FILTER 12mH LIN-007 ET-20	L801	1	PC
187	#N/A	426000090490	XFMR SW 93uH EEL19 DIP SPW-049	T501,T502	2	PC
188	#N/A	426000090510	XFMR 750u@1K,+-8%,3m,113m,SPW-051,DIP-11,NC-H0494-1	T801	1	PC
189	#N/A	432009400701	NTC 5O 4A 10? P=5mm, FN10SP005L-Y1Ba	RT801	1	PC
190	#N/A	430613420290	FUSE SLOW 2,250,Axial Lead,3.6x10mm	F801	1	PC
191	#N/A	440149000100	SKT AC 10A/250V U/C/V,TU-301-SP-SR7-AD3	P801	1	PC
192	#N/A	440149000140	SKT AC 10A/250V U/C/VR-301SN(C137)		1	PC
193	#N/A	430637020020	WFR. 2P P=3.5mm 90º4100-D02	CN501,CN502,CN503,CN504	4	PC
194	#N/A	430300600070	HRN ASS'Y 6P 100mm UL1007#24	CN801	1	PC
195	#N/A	511110000101	HOT-MELT ADHESIVES (#526)		0.015	KG
196	#N/A	735100005000	ASSY,H/S SRF5-04CT/8-10CT,LE1704/05		1	PC
197	#N/A	735100005900	ASSY,H/S TOP246Y, LE1X09		1	PC
198	#N/A	790411410600	PCBA,PWR&INV./B,AI,LE1X09-XA0		VER: AA	
199	#N/A	790411450600	PCBA,PWR&INV./B,AI/A,LE1X09-XA		1	PC
200	#N/A	790411460600	PCBA,PWR&INV./B,AI/R,LE1X09-XA		1	PC
201	#N/A	735100005000	ASSY,H/S SRF5-04CT/8-10CT, LE1		704/05 VE	R: A
202	#N/A	411090015020	SCHTKY SRF5-04CT ITO-220AB(FEC	D805	1	PC
203	#N/A	411090016020	SCHTKY SRF8-10CT ITO-220AB(FEC	D803	1	PC
204	#N/A	507200003800	HEATSINK,56x20xt10mm LE1904/05		1	PC
205	#N/A	509112306100	SCREW,P,CROSS,T.T-3*6,Zn		2	PC
206	#N/A	735100005900	ASSY,H/S TOP246Y, LE1X09 VER		: A	ASSM.
207	#N/A	412000379270	IC TOP246YN,TO-220-7C(POWER IN TEGRATION)	IC802	1	PC
208	#N/A	507200003700	HEATSINK,46x20xt10mm LE1704/05		1	PC
209	#N/A	509112306100	SCREW,P,CROSS,T.T-3*6,Zn		1	PC
210	#N/A	790411450600	PCBA,PWR&INV./B,AI/A,LE1X09-XA		0 VER: A	A
211	#N/A	415130680540	RES CF 1/2W 68O J,AT	R804	1	PC
212	#N/A	415340101540	RES MOF 1W 100O J,AT MINI	R828	1	PC
213	#N/A	414870305540	RES MG HV 1/2Ws 3MO 3KV J,AT	R501,R503	2	PC
214	#N/A	411020052020	DIO A02 200V/1A R1(FEC)	D806	1	PC
215	#N/A	411020059440	DIO TA10-02 1A/200V DO-41(TJZH		1	PC
216	#N/A	411022003210	DIO 1N4148 75V/0.2A AT (PHIL)	D809	1	PC
217	#N/A	411022003020	DIO 1N4148 75V/0.15A AT(FEC)		1	PC
218	#N/A	411020055330	DIO MUR1100ERL AXIAL LEAD(ON)	D804	1	PC
219	#N/A	411032006020	DIO FR10-10 1000V/1A AT(FRONTIER)		1	PC
220	#N/A	411022020330	DIO P6KE200ARL 600W/100A AT(ON	ZD802	1	PC
221	#N/A	411022020090	DIO P6KE200A 600W/100A ATPEC		1	PC
222	#N/A	411022020240	DIO P6KE200A 600W/100A ATFAIRCHILD)		1	PC
223	#N/A	506140005700	LABEL,BARCODE,BLANK,33x7mm FOR PCB		1	PC
224	#N/A	432002200160	BEAD CORE BF30TA-3.5x9x0.8 AT	B801	1	PC
225	#N/A	430405007590	JMPR 7.5mm D=0.6mm,AT	J501,J504,J505,J509,J801	9	PC
226	#N/A			J812,J813,J814,J815		
227	#N/A	430405010090	JMPR 10mm D=0.6mm,AT	J503,J506,J507,J802,J804	8	PC
228	#N/A			J808,J809,J810		
229	#N/A	430405012590	JMPR 12.5mm D=0.6mm,AT	J803,J806,J807,J811	4	PC
230	#N/A	430405015090	JMPR 15mm D=0.6mm,AT	J805	1	PC
231	#N/A	430405017590	JMPR 17.5mm D=0.6mm,AT	J502	1	PC
232	#N/A	430405020090	JMPR 20mm D=0.6mm,AT	J508	1	PC
233	#N/A	490411400100	PCB,PWR&INV./B, LE1X09-XA0	PCB	1	PC
234	#N/A	790411460600	PCBA,PWR&INV./B,AI/R,LE1X09-XA		0 VER: A	A
235	#N/A	418247233030	CAP CD X7R 4700pF 1KV K VT	C803	1	PC
236	#N/A	418147038530	CAP CD NPO 47pF 1KV J,VT	C813	1	PC
237	#N/A	418210227030	CAP CD X7R 1000pF 500V K VT	C802,C811	2	PC
238	#N/A	418310413630	CAP CD Y5V 0.1uF 50V Z,VT	C817,C822	2	PC
239	#N/A	420434700230	CAP EC 47uF 25V M,105℃ VT5x11	C814,C815,C818,C819	4	PC
240	#N/A	420422210230	CAP SD 220uF 25V M,105℃ VT8x12	C509,C522,C810	3	PC
241	#N/A	410072013370	XSTR 2SC1815-GR VT (TOSHIBA)	Q802	1	PC
242	#N/A	410072013210	XSTR 2PC1815GR*I VT (PHILIPS)		1	PC
243	#N/A	410072013150	XSTR UTC2SC1815L-GR NPN TO92(UTC)		1	PC
244	#N/A	412022002840	IC TL431ACLP TO-92 1%,VT (ON)	IC803	1	PC
245	#N/A	412022002240	IC KA431AZ 1%,VT (FAIRCHILD)		1	PC
246	#N/A	412022002300	IC AP431 TO-92 1%,VT (ATC)		1	PC
247	#N/A	416231041530	CAP MEB 0.1uF 100V J,(RSB),VTRSBEC3100DQJ	C816	1	PC
248	#N/A	790411500000	SW TACT 5mm 160gf VERT.1P DIP	SW101,SW102,SW103,SW104	5	PC
249	#N/A	430602980060	TC-0103X	SW105		
250	#N/A		LED G/Y ∮3x5mm (HONGTONG)	LED101	1	PC
251	#N/A	411071003500	WAFER 2x4P 2.0mm R/A	CN105	1	PC
252	#N/A	430631080100	PCB,KEY PAD,LE1709	PCB	1	PC
253	#N/A	490411500100				

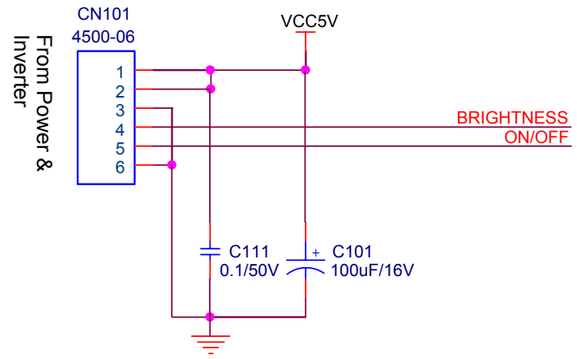
8. SCHEMATIC DIAGRAM

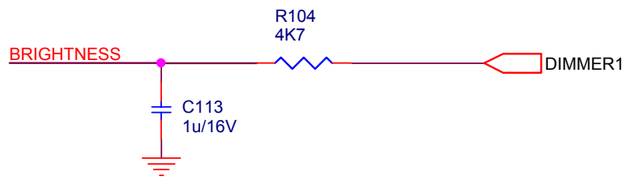


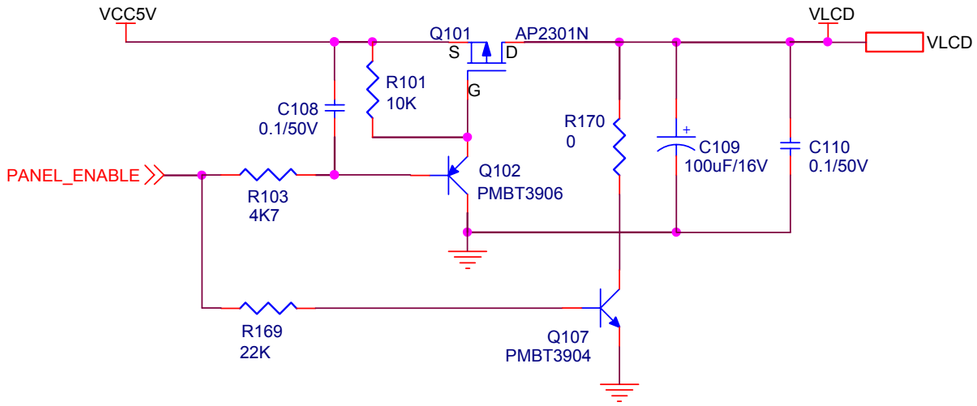
Item	AUO	QDI	INL
R509	510Ω	510Ω	560Ω
R511	510Ω	510Ω	560Ω
R524	51KΩ	47KΩ	47KΩ

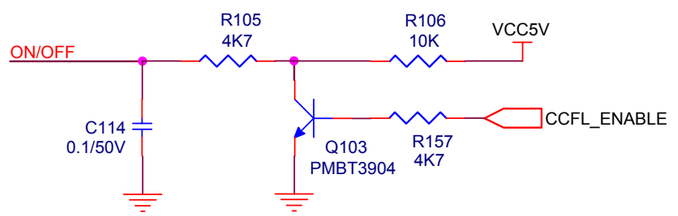
ViewSonic VA702/b		
Document Number :	SIZE :	APPRO BY :
TITLE : Inverter		CHECK BY :
DATE :		DRAWN BY :
SHEET OF	Rev :	











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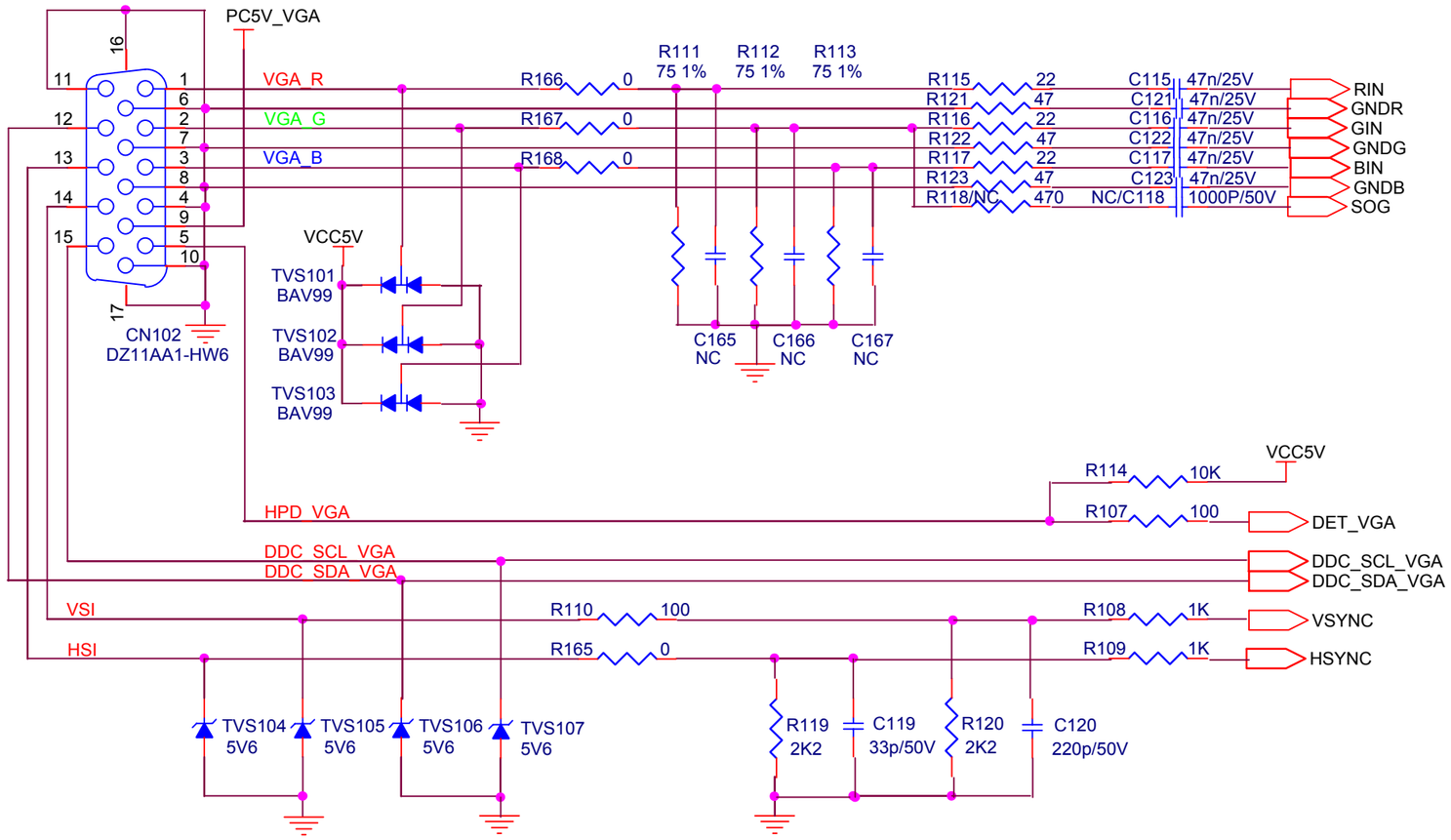
SHEET OF	Rev :	



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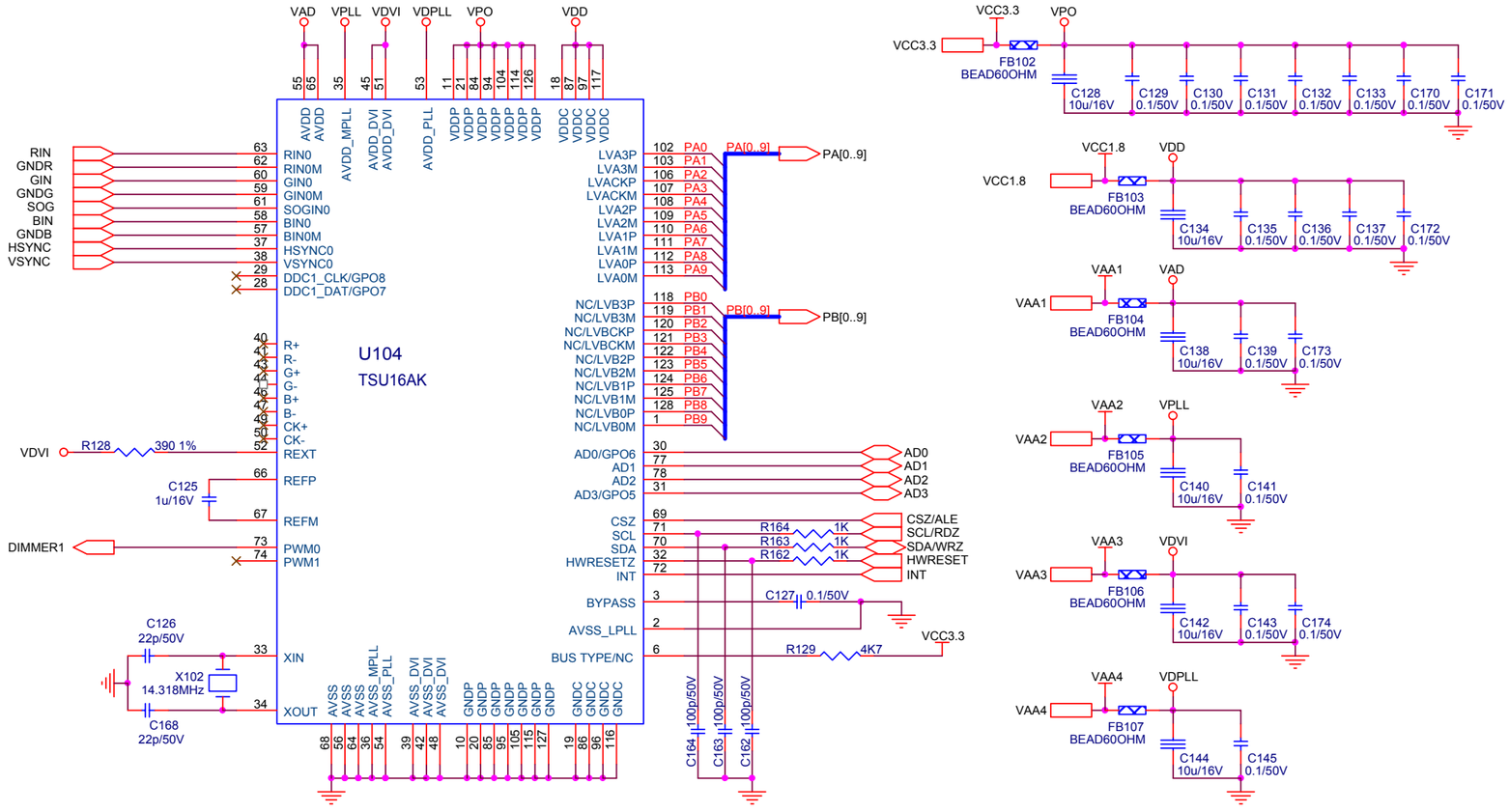

Note: U104 pin4,5,7~9,12~17,22~27,75,76,79~83,88~93,98~101 are all NC (open)

ViewSonic	VA702/b	
Document Number :	SIZE :	APPRO BY :
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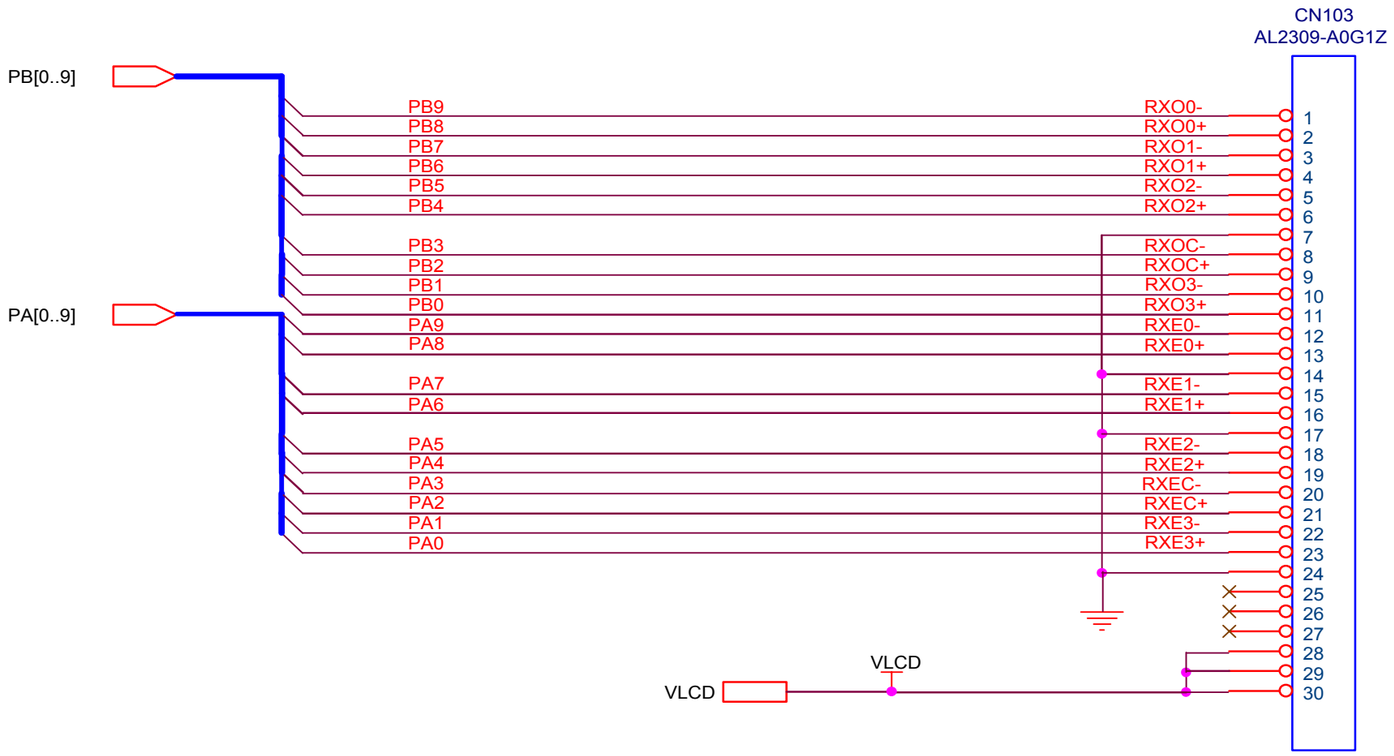
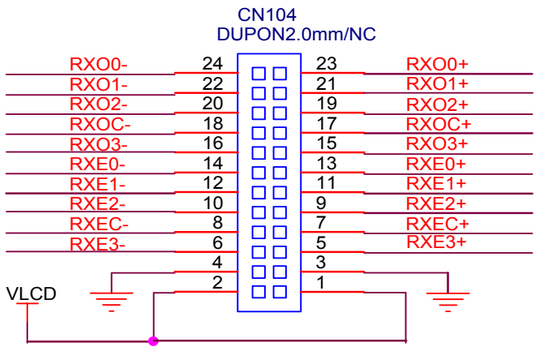
DATE :		DRAWN BY :
SHEET OF	Rev :	





ViewSonic VA702/b		
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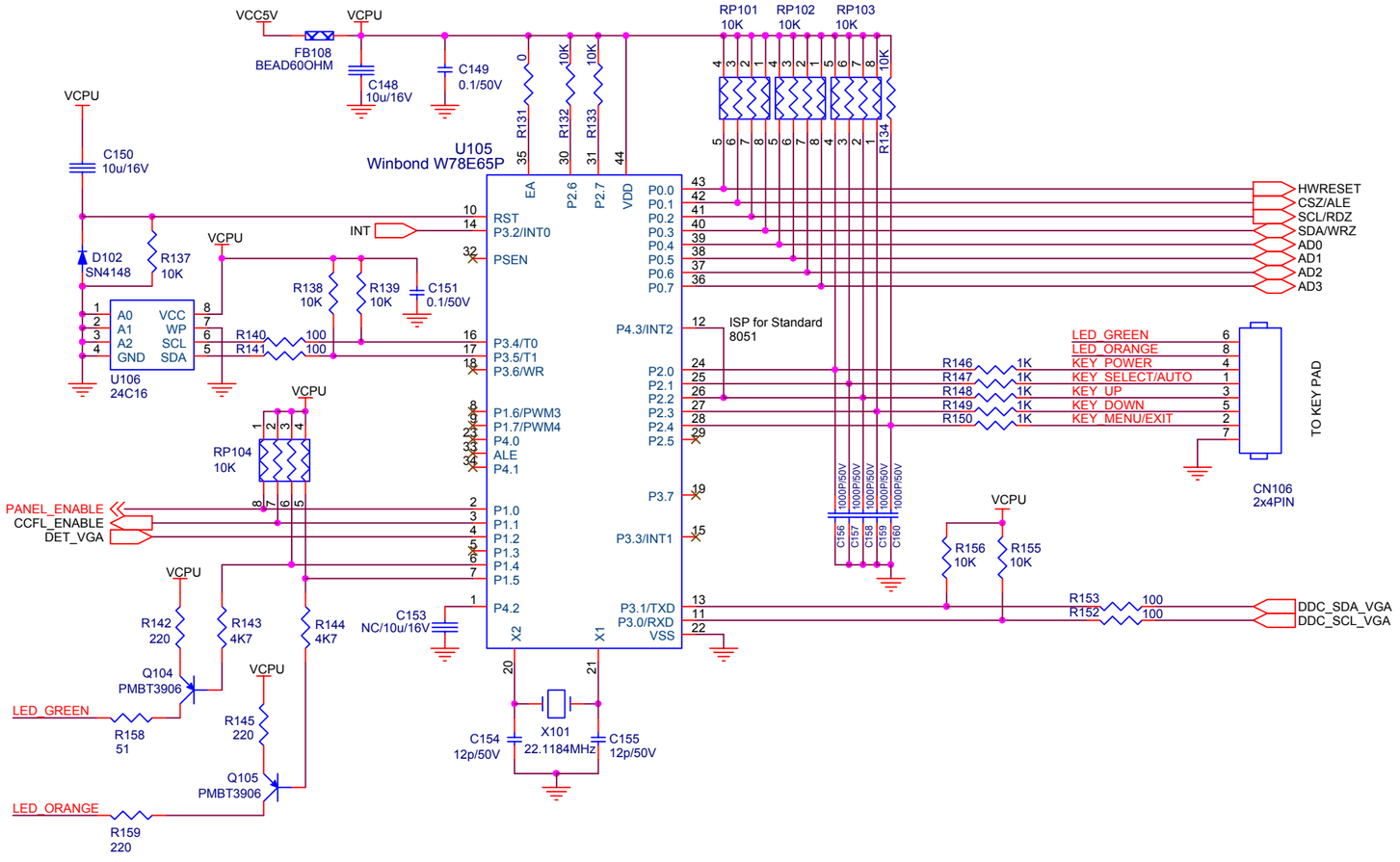
DATE :		DRAWN BY :
SHEET OF	Rev :	



ViewSonic	VA702/b	
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TITLE : MCU		CHECK BY :
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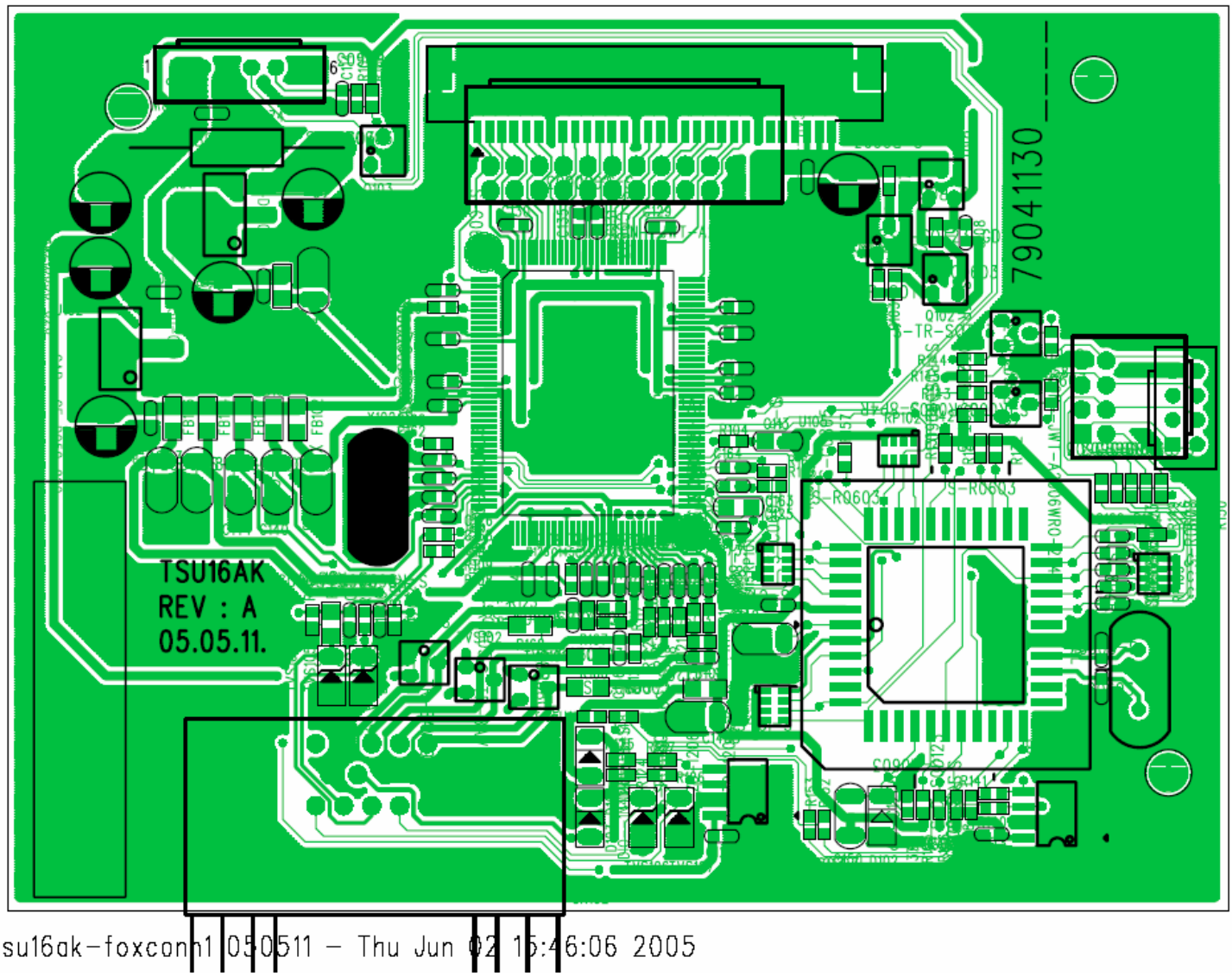
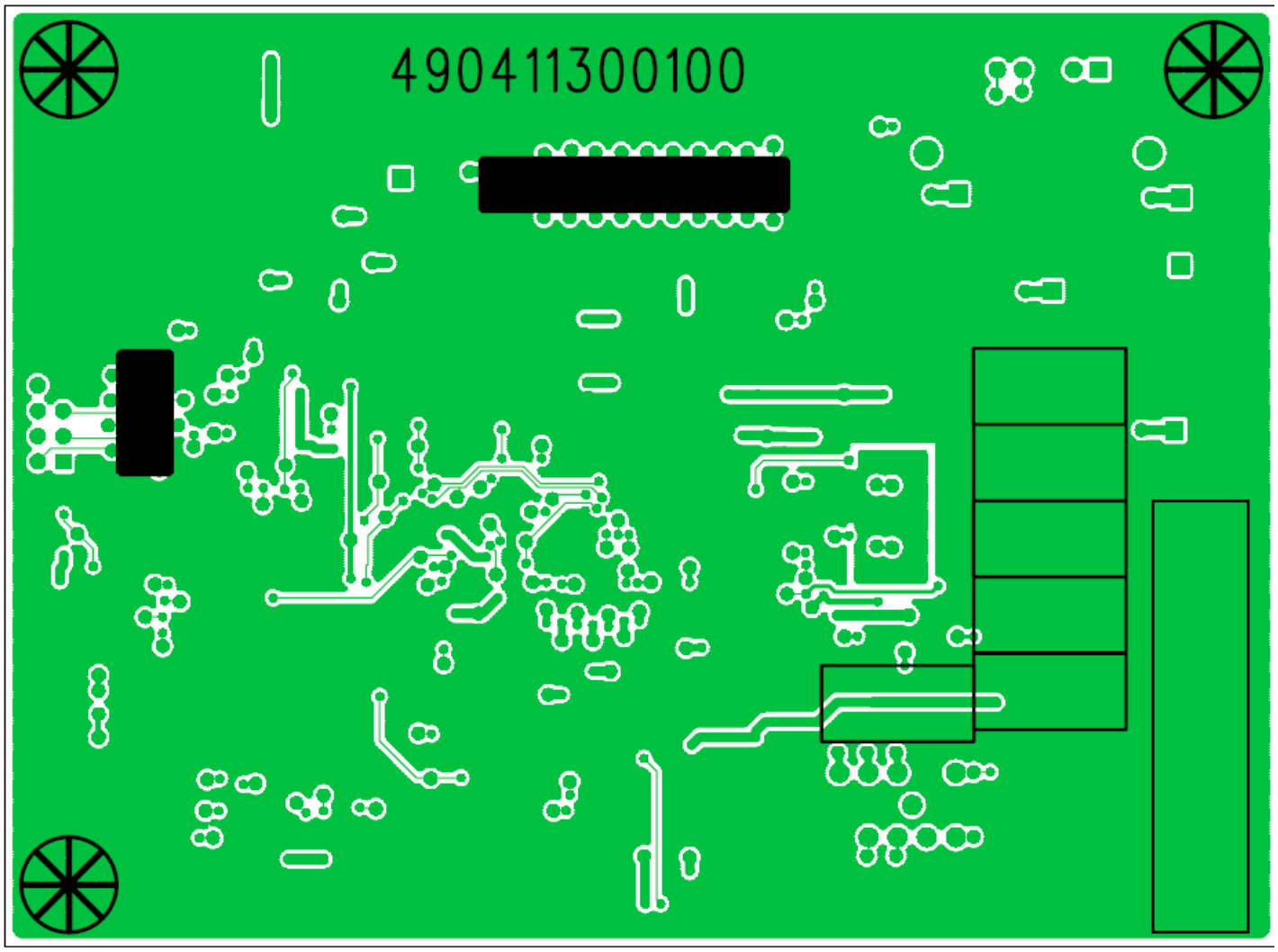
9. PCB Layout

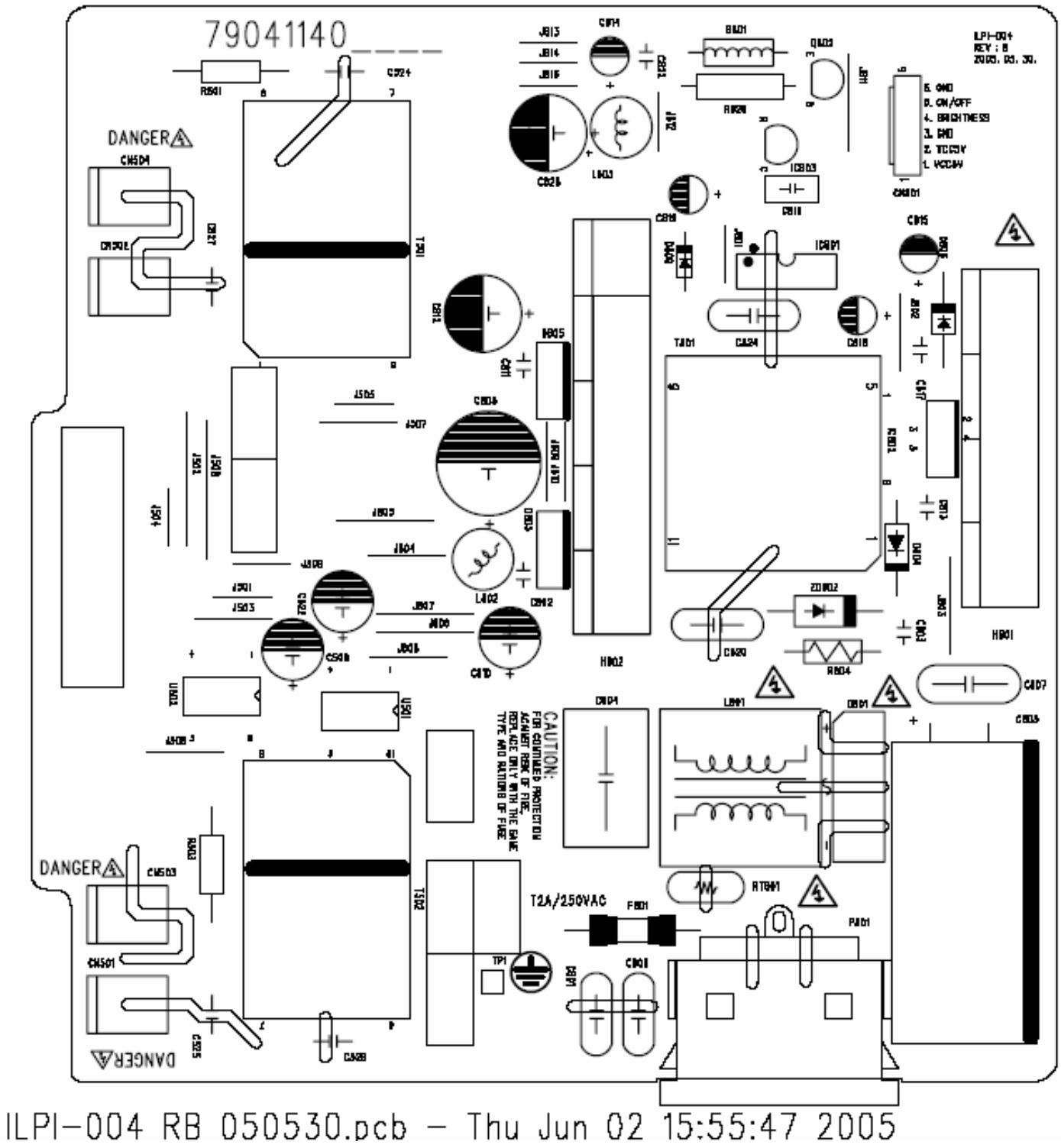
Main board Top layout



Main board bottom Layout



POWER board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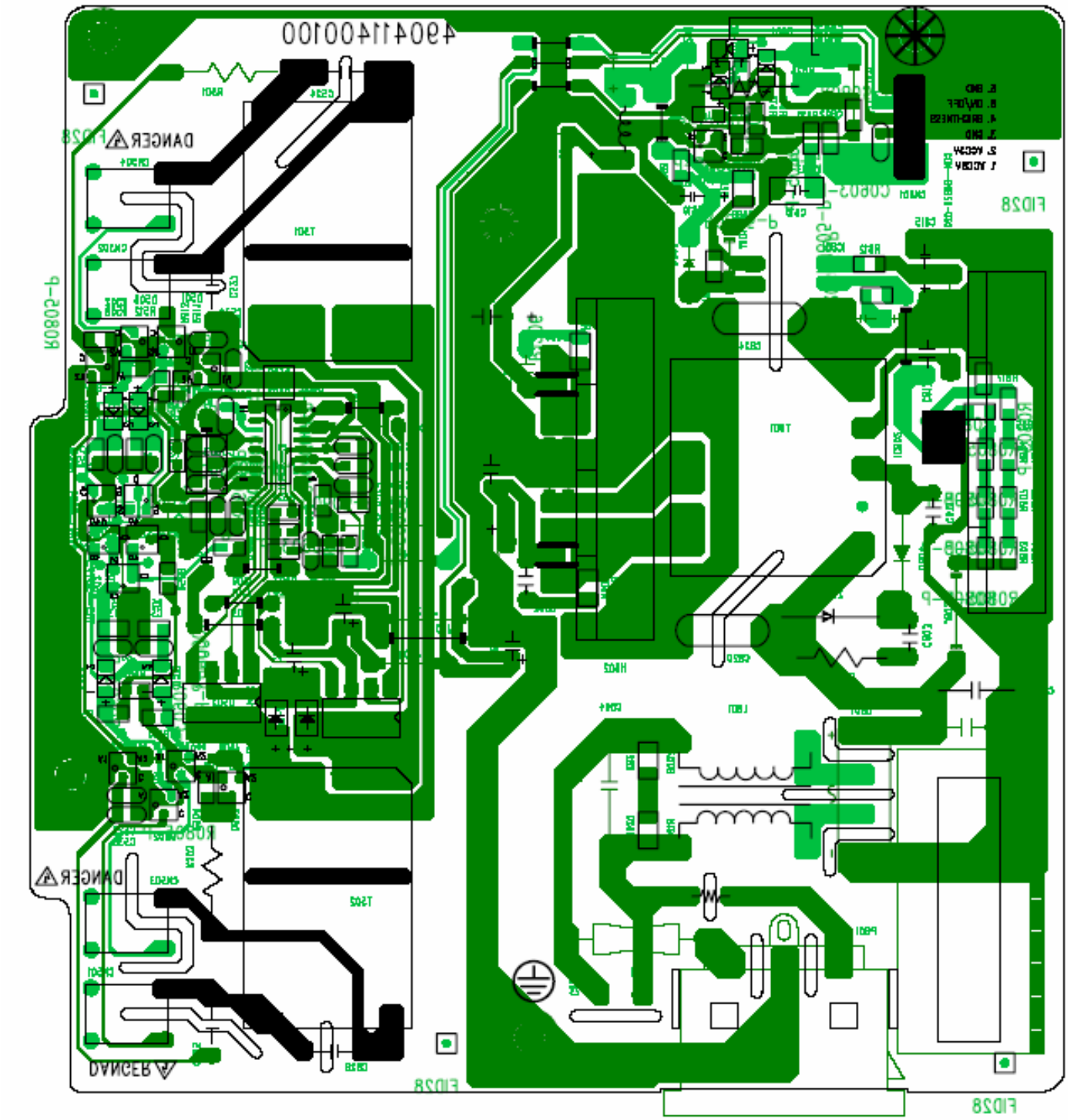
T2A/250VAC
ILPI-004 RB 050530.pcb - Thu Jun 02 15:55:47 2005


ILPI-004 RB 050530.pcb - Thu Jun 02 16:35:42 2005

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 Diagram				
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 data:

Name:		Title:	
Company:			
Add.:			
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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)