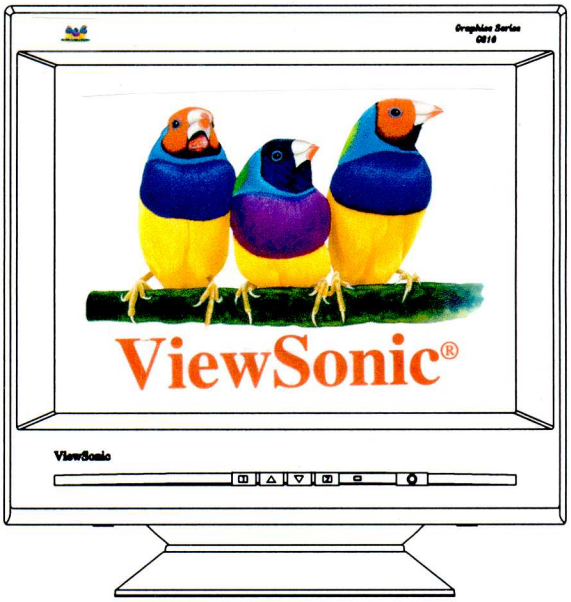
Service Manual

ViewSonic G810-6

Model No. VCDTS23852-6

21" Digital Controlled Color Monitor



(G810-6_SM_524- Rev. 1a – March 2002)

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Revision History

Revision	Date	Description Of Changes	Approval
1a	4/4/02	Initial Release DCN-2163	K.Yang

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I
Safety Precautions

⚠ WARNING

This service information designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians.

Any attempt to service or repair the product or products dealt within this service information by anyone else could result in serious injury or death.

1. **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 guide lines.

2. **SAFETY CHECK**

Care should be taken while servicing this CRT display because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

3. **FIRE & SHOCK HAZARD**

3-1 Insert an isolation transformer between the CRT display and AC power line before servicing the chassis.

3-2 In servicing, pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.

3-3 All the protective devices must be reinstalled in original design.

3-4 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be sure to remove all foreign material.

4. **LEAKAGE CURRENT COLD CHECK**

4-1 Unplug the AC cord and connect a jumper between the two prongs on the plug.

4-2 Turn the CRT display power switch "on".

4-3 Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part on the CRT display such as the metal frame, screwheads, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 1.8 megohm minimum.

5. **LEAKAGE CURRENT HOT CHECK**

5-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.

5-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15uF capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).

5-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15uF capacitor.

5-4 Move the resistor connection to each exposed metallic part and measure the voltage.

5-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.

5-6 Measured voltage must not exceed 7.5 volt RMS, from any exposed metallic part to ground. A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In case the measurement of current exceeds the 5.0 milliamp value, a rework is required to eliminate the chance of shock hazard.

Note : High voltage is present when this CRT display is operating. Always discharge the anode of the picture tube to the display chassis to prevent shock hazard.

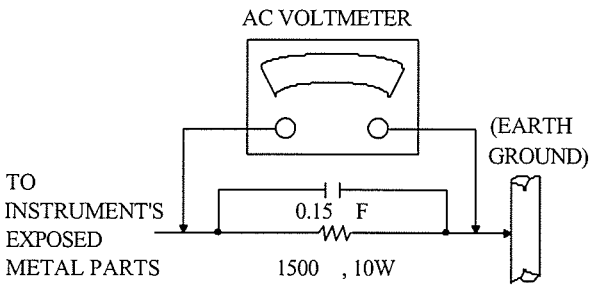


Fig. 1

6. IMPLOSION PROTECTION

Picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation.

7. X-RADIATION

WARNING : The only potential source of X-Radiation is the picture tube. However when the high voltage circuit is operating properly there is no possibility of X-Radiation problem. The basic precaution must be exercised to to keep the high voltage at the following factory-recommended level.

Note : It is important to use an accurate periodically calibrated high voltage meter.

7-1 The procedure for adjusting high voltage is shown on page 49.

7-2 If high voltage cannot be set to 26KV, immediate service is required to prevent the possibility of premature component failure.

7-3 To prevent X-Radiation possibility, it is essential to use the specified picture tube.

IMPORTANT SAFETY NOTICE

There are special components used in this CRT displays which are important for safety. These parts are identified by the international symbol ⚠ on the sschematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacture's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design or this will void the original parts and labor guarantee.

1.0 SCOPE

This specification defines the performance of G810-6 21- inch digital OSD controlled color monitor. This color monitor is designed to accept timing signals within horizontal frequency ranging from 30KHz to 96KHz and vertical frequency ranging from 50Hz to 180Hz. It is compatible with VGA, super VGA, and enhanced VESA standards for 640x480 , 800x600 , 1024x768 , 1280x1024 and 1600x1200 non-interlaced display. All parameters within this specification must be met at any line voltage, line frequency and temperature within the limits specified in this document.

2.0 GENERAL PERFORMANCE

2.1 Display mode & resolution

15 settings of display parameters are pre-adjusted and stored in memory for user's convenience, another 10 settings of memory are available for user to adjust and store parameters.

PRESET MODE RESOLUTION	FREQUENCY HOR.	VER.	SYNC POLARITY HOR.	VER.
640x400	31.47KHz	70Hz	-	+
640x480	31.47KHz	60Hz	-	-
640x480	35KHz	66.7Hz	-	-
640x480	37.5KHz	75Hz	-	-
800x600	46.875KHz	75Hz	+	+
800x600	53.674KHz	85.01Hz	+	+
1024x768	48.363KHz	60.04Hz	+	+
1024x768	60.023KHz	75.029Hz	+	+
1024x768	68.677KHz	84.997Hz	+	+
1280x1024	79.976KHz	75.025Hz	+	+
1280x1024	91.146KHz	85.024Hz	+	+
1600x1200	93.750KHz	60.00Hz	+	+
1600x1200	75KHz	75.00Hz	+	+
832x624	49.714KHz	75.534Hz	-	-
1152x870	68.681KHz	75.061Hz	-	-

2.2 Scanning Frequency : 30KHz to 97KHz for Horizontal
50Hz to 180Hz for Vertical

2.3 Display Size : 390mm x 290mm for all modes

2.4 Display Brightness : 30±3 FL at center of screen (Full white pattern)
33±3 FL at center of screen (20% window block pattern)
(Brightness set to 50% & Contrast set to 100%)

2.5 White Balance : CIE coordinates

9300K
x = 0.283±0.015
y = 0.297±0.015

6500K
x = 0.313±0.015
y = 0.329±0.015
5000K
x = 0.346±0.015
y = 0.359±0.015

2.6 Power Input Range : AC 90 to 264V, 50/60Hz ± 3Hz

2.7 Power Consumption : 115 Watts max.

2.8 Degauss : both Automatic and Manual

2.9 Display Data Channel : DDC1/2B

2.10 Mechanical Adjustment : with Tilt & Swivel base

2.11 Display controls :

a. Power on/off switch

b. Digital On Screen Display controls`

Contrast	Brightness
Horizontal size	Horizontal Position
Vertical size	Vertical Position
Zoom	
Pincushion	Pin Balance
Trapezoid	Parallel
Top Hook	Bottom hook
Tilt	
Degauss	
H- moiré	V- moiré
Color (9300, 6500 5000 , user color)	
Input level	
Language	
OSD H-position	OSD V-position
View meter	
Memory recall	Exit

3.0 REGULATORY REQUIREMENT

3.1 Safety Approvals

The unit design shall meet the standards of the following domestic and foreign agencies:

UL listed : UL1950 listing (Information processing and business equipment)

CSA : CSA C22.2 No.950 (Information technology equipment)

TUV : EN60950 (for business machines)

TUV/GS	:	EN60950/EKI/ISO 9241-3,-7,-8
IEC Standard	:	IEC 60950 (Information technology and business equipment)
MPRII	:	MPR 1990 : 8 / MPR 1990 : 10
TCO99 (OPTION)	:	July, 1998 / Emission, Energe

3.2 EMI Emission Approvals

The unit shall meet following EMI specifications.

FCC Compliance	: FCC Rules and Regulations, Part 15, sub-part J, Class B
CE	: EN55022, EN55024

3.3 DHHS

The unit must comply with all applicable radiation limit and labeling and licensing requirement of DHHS Rule 21 CFR Sub-chapter J for X-ray radiation limits.

4.0 INTERFACE REQUIREMENT

4.1 Power input requirements

4.1.1 Operating voltage range : 90 ~ 264VAC , 50/60 ± 3Hz

4.1.2 Input Current at 120V

a. Operating : 2.0Amps RMS maximum
b. Inrush current : 40 Amps peak maximum

4.1.3 Input Current at 240V

a. Operating : 1.0 Amps RMS maximum
b. Inrush current : 80 Amps peak maximum

4.1.4 Power management

MODE	H-SYNC	V-SYNC	POWER	INDICATOR
NORMAL	YES	YES	≦115W	GREEN
Power saving	NO	YES	≦8W	AMBER
Power saving	YES	NO	≦8W	AMBER
Power saving	NO	NO	≦3W	AMBER

4.2 Signal Input Requirement

4.2.1 Connector

a. 15 pin D-sub high-density connector for video and sync signals. (See Appendix A for pin assignment)
b. Cable length : 1.8meters with ivory color.

4.2.2 Video Signals

a. Red, Green, Blue channels analog input.
b. Amplitude : 0.7Vp-p/1Vp-p(OSD SLECT)
c. Polarity : Positive bright, 0.7Vp-p for full intensity and 0Vp-p for black.
d. Impedance : 75 ohms±5%

4.2.3 Sync signal

a. Separate H and V sync or composite H+V sync.
b. Voltage level : Standard TTL
c. Input impedance : 2KÙ
d. Polarity : Negative or Positive.

5.0 GENERAL DEFINITION AND TEST CONDITION

Unless otherwise specified, all QA tests to verify specifications must be performed under standard operating condition as following.

5.1 Test signals
Chroma 2250 or Quamtum Data 903 video pattern generator.

5.2 Warm-up time
30 minutes min. after power switch on with specified power line voltage and signal applied.

5.3 Direction
CRT neck should face magnetic west.

5.4 Ambient luminance
400 to 600 LUX.

5.5 Ambient magnetic field
The magnetic field shall be same as the earth magnetic field of the country where the product will be sold.

5.6 Ambient temperature
25 ± 5℃, less than 2℃ fluctuation are allowed during test.

5.7 AC Input power
120VAC ± 10%, 60 ± 3Hz or 240VAC ± 10%, 50 ± 3Hz.

5.8 Inspection Equipment
a. Customer Graticule.
b. Minolta CA-100 color analyzer or equivalent.
c. Klein convergence error measurement gauge CM7AG.
d. Microscope 10X.

Unless otherwise specified, the brightness control must be set at 50%, and adjust contrast control to 40FL measured with 20% video white window pattern.

6.0 SCREEN DISPLAY & PERFORMANCE SPECIFICATION

6.1 CRT specification

Cathode ray tube to be used 21 inch flat (diagonal) tube with 90 degrees magnetic deflection and low voltage focus.(Samsung M51QBN291X115)

6.1.1 Type : 21" in line anti-glare anti-static tube

6.1.2 Phosphor : P22 medium short persistence phosphor

6.1.3 Dot trio pitch : 0.25mm

6.1.4 Light transmission : 45% typical

6.1.5 Implosion protection : Tension band

6.2 Active Display Area

Horizontal : 390 ± 4.0mm

Vertical : 290 ± 4.0mm

All modes must be able to meet the above spec. by adjusting horizontal size and vertical size from front panel.

6.3 Picture Centering (refer to FIG.5)

Horizontal centering : | g3-g4 | ≦4mm

Vertical centering : | g1-g2 | ≦4mm

All modes must be able to meet the above spec. by adjusting horizontal position and vertical position from front panel.

6.4 Tilt (refer to FIG.6)

Maximum : 2.0mm

6.5 Trapezoid Distortion (refer to FIG.4)

Vertical : 2.0mm

Horizontal : 2.0mm

6.6 Geometry Distortion

a. Barrel (refer to FIG.3)

Top & bottom : a2≦1.5mm , b2≦1.5mm

Left & right : c2≦1.5mm , d2≦1.5mm

b. Pincushion (refer to FIG.2)

Top & bottom : a1≦2.0mm , b1≦2.0mm

Left & right : c1≦2.0mm , d1≦2.0mm

6.7 Linearity (refer to FIG.1)

Horizontal : (Xmax. – Xmin.) / (Xmax. + Xmin.)×100% ≦5%

Vertical : (Ymax.–Ymin .) / (Ymax. + Ymin.)×100% ≦5%

6.8 Size variation

Picture size deviation should not change beyond the specification with the following variance.

a. High Voltage variance, max.
From 1 to 20FL : 1.5mm

b. Temperature variance, max.
Across op. Range : 2.5mm

c. Line voltage, max.
Across op. Range : 2mm

d. Wavy, Jitter & Noise
Viewed at 50cm : No objectionable.

6.9 Centering drift across operating temperature
Horizontal maximum : 4mm
Vertical maximum : 4mm

6.10 Size control range
Horizontal : Max $\geqq$ 400, Min $\leqq$ 350mm
Vertical : Max $\geqq$ 300, Min $\leqq$ 260mm

6.11 Turn off spot

No persistent spot when turn off the monitor.

6.12 Color Tracking

When the 20% window block pattern is displayed at preset color condition, the difference of white balance between contrast max. and low contrast (10FL) must be less than following value:

$| x \text{ (at 30FL)} - x \text{ (at 10FL)} | \leqq 0.02$
$| y \text{ (at 30FL)} - y \text{ (at 10FL)} | \leqq 0.02$

6.13 Contrast control range

Set brightness control to raster just cut-off, adjust contrast control from minimum to maximum.
The control range must be : No less than 12db.

Calculated by the formula = $20 \log \frac{\text{Max. luminance}}{\text{Min. luminance}}$

6.14 Video Amplifier response

a. Rise / Fall time : Less than 7ns
b. Over shoot : 10% max., first over shoot

Note : Video rise / Fall times are measured at the cathode and actual achieved value calculated using the following formula :

$$RT = \sqrt{RM^2 - GR^2 - PR^2 - SR^2}$$

Where, RT = Specified rise time
RM = Measured rise time
GR = Generator rise time
PR = Probe rise time
SR = Scope rise time

6.15 Focus

With the active video adjusted with a screen brightness of 25FL at center. (full white pattern measured at center) The focus through out the screen shall be such that all dots and characters of each screen field are individually distinguishable.

6.16 Misconvergence

Zone A : 0.3mm
Zone B : 0.4mm

The zone area are defined as follows :

Zone A : The circle of diameter equals to the active video height.
Zone B : Active display area except Zone A.

6.17 Purity

Hue variation is not perceptible over the entire visible area when checked with 20FL full white pattern and relative luminance of full red, green and blue pattern.

6.18 Retrace time

Horizontal : 3.0us
Vertical : 500us

6.19 Luminance uniformity

Measure the luminance of corners and center while displaying full white pattern. The luminance uniformity must be no less than 70% when calculated by the formula :

$$\frac{\text{the luminance of lowest corner}}{\text{luminance of center}} \times 100\%$$

6.20 Arc-over protection

The CRT and associated circuitry shall be protected against arc-over from the anode and any of the CRT electrodes except heater. The performance of the arc-over protection circuitry and the adequate ground shall be evaluated by arcing test fixture discharge to the cathode of the CRT 50 times. This shall not result in any permanent damage.

6.21 Acoustic noise

Less than 32db at 2 feet far for top and 3 feet far for others.

7.0 ENVIRONMENTAL REQUIREMENTS

The monitor shall be operated reliably within the following operating condition and may be safely stored within the non-operating condition.

7.1 Temperature
Operating : 0 to +40℃
Storage : -40 to +60℃

7.2 Humidity (Relative)
Operating : 10 to 80% non-condensing
Storage : 0 to 90% non-condensing

7.3 Altitude
Operating : 0 to 15,000 feet ASL
Storage : 0 to 40,000 feet ASL

8.0 VERY LOW RADIATION FIELD (OPTION)

Model LR has lower magnetic and electric radiated field emissions. Internationally agreed Standard have not yet been established. The LR model shall meet the Swedish MPRII limits :

Measurement Freq.	5Hz – 2KHz	2KHz – 400KHz
Alt. Electric Field	< 25V/m RMS	< 2.5V/m RMS
Alt. Magnetic Field	< 250nT RMS	< 25nT RMS

9.0 MECHANICAL PERFORMANCE & TRANSPORTATION

9.1 Vibration (packaged, non-operating)

General test

Ramdom : 5~500Hz , 1.5Grams

PSD : 5~100Hz , 0.008G /Hz

100~137Hz , -6dB

137~350Hz , 0.004G /Hz

350~500Hz , -6dB

Period : 30 Minutes/Axis

No electrical or mechanical damage shall occur after the test.

9.2 Mechanical Shock(non-operating)

Trapezoidal shock , non-operational.

Number of shocks : 1 shock per face.

Acceleration : 30G, Test also at 40 and 50 G's to find margin.

Delta V=5.75 meter per second.

Axis : All six face.

Mounting : As supported in shipping package using a ridged fixture.

9.3 Packaged unit drop

The packaged unit shall not sustain any damage when exposed one drop of 70 cm each onto one corner, three adjacent edges, and six faces of the package.

10.0 RELIABILITY AND SERVICEABILITY

10.1 Mean time between failure (MTBF)

The calculated MTBF shall not be less than 20,000 hours of continuous operation at 25℃ when calculated according to MIL-HDBK-217F and demonstrated to exceed 60,000 power-on hours. The calculation shall not include CRT.

10.2 Mean time to repair (MTTR)

The MTTR must be less than 30 minutes.

10.3 Fail rate

The product failure rate per one year shall be less than 1.5%.

11.0 PHYSICAL SPECIFICATION

11.1 Overall dimension

Height	: 500mm
Width	: 442mm
Dep	: 401mm

11.2 Weight

Net weight	: 23.0Kg

11.3 Mechanical adjustment

Tilt	: -5 / +15 degrees
Swivel	: -90 / +90 degrees

11.4 Outer surface

Material	: ABS 94V0
Color	: 860281

11.5 Packaging

11.5.1 Carton dimension

Height	: 656mm
Width	: 612mm
Depth	: 651mm

11.5.2 Shipping weight

25.0 Kg

11.6 Product accessory

a. User's manual

b. Power cord

APPENDIX A, VIDEO CONNECTOR PIN ASSIGNMENTS

Monitor interface signal definition for VGA monitors

1. Red
2. Green
3. Blue
4. Ground
5. Ground
6. Ground (Red return)
7. Ground (Green return)
8. Ground (Blue return)
9. +5V
10. Ground
11. Ground
12. SDA
13. Hor. Sync
14. Vert. Sync
15. SCL

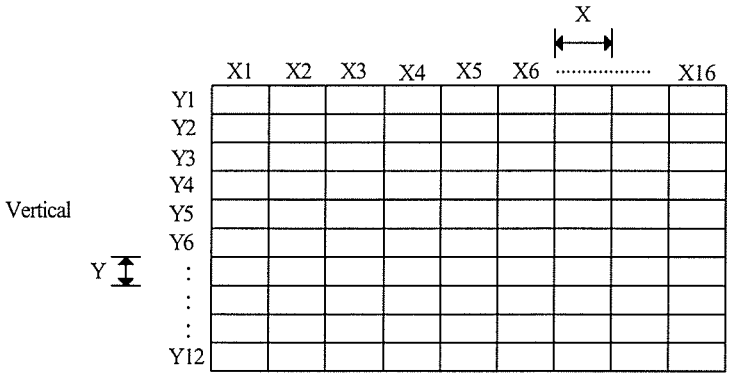


Fig. 1

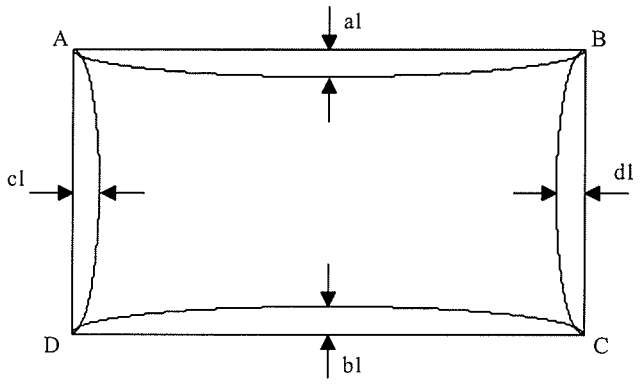


Fig. 2

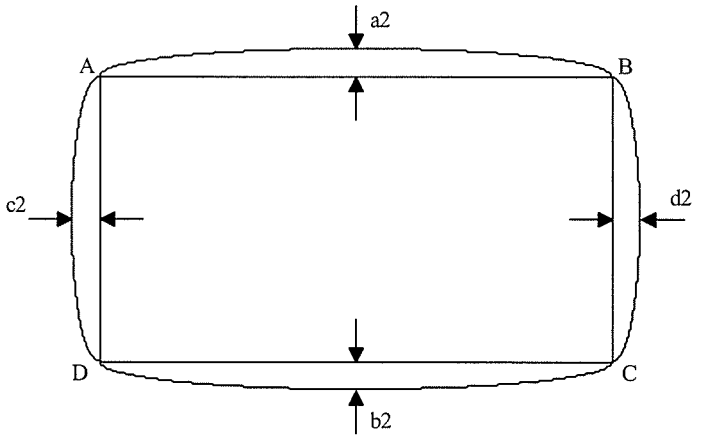


Fig. 3

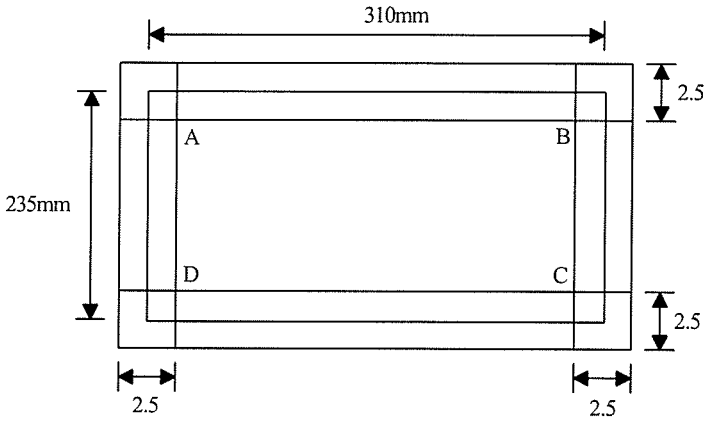


Fig. 4

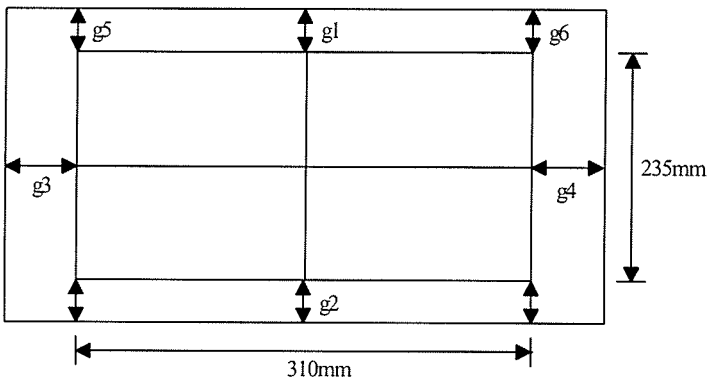


Fig. 5

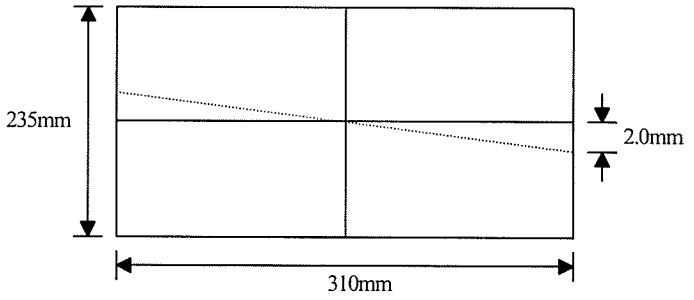


Fig. 6

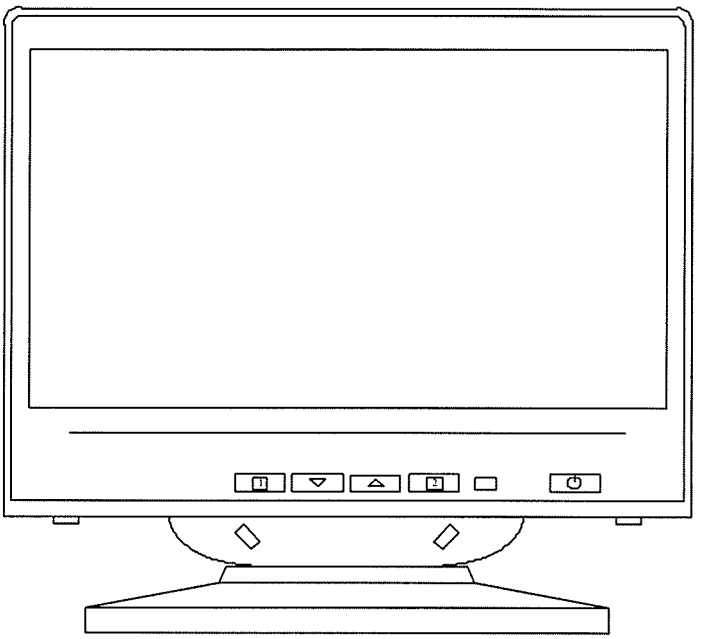
Ⅲ

Front panel function control description

Control function .

A . User control .

B . OSD function control .



Front panel function control description

A . User control .

Power switch : Soft power control .
Function select button : [1] , [2] .
Adjustment control button : ▽、△ .

Control name .

1 . Power switch : Push-on / push-off switch for soft power control .

2 . LED indication .

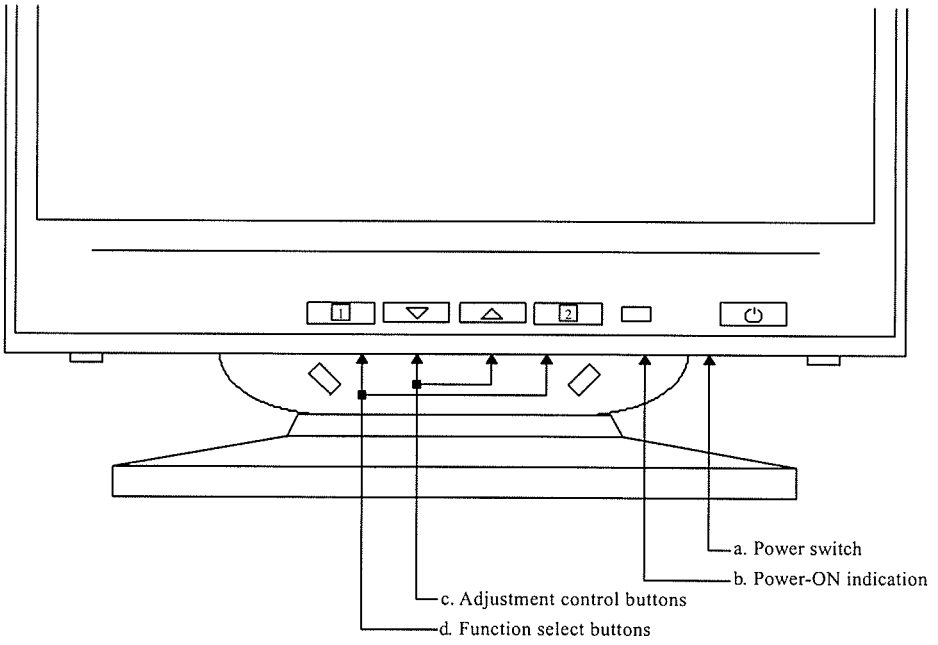
Status	LED
Power on	Green
Power saving	Orange
Over range freq.	Orange
Power off	Off

3 . Function select button :

Press the ' [1] ' button to display OSD me nu .
Press the ' ▽、△' button to select menu function or sub -function .
Press the ' [2] ' button to enter the select function .

4 . Adjustment control button :

Push the increased ' △' or decrease ' ▽' button for the desired adjustment , all adjustment are memo rized automatically immediately .



B. OSD (on screen display) function control method.

. Main menu, Part 1.

1. Contrast / Brightness.
2. H. size / Position.
3. V. size / Position.
4. ZOOM
5. Pincushion / Balance.
6. Trapezoid / Parallel.
7. Top/Bottom Hook.
8. Tilt

. Main menu, Part 2.

9. Degauss
10. H/V Moiré.
11. View match color.
12. Input Level
13. Language
14. OSD Position.
13. View meter.
14. Memory Recall.

Ⅳ
Circuit description

1 . Power Supply

1.1 Power Supply
1.2 Power Saving
1.3 Degauss
1.4 Tilt

2 . Vertical

2.1 Autosync Deflection Control and B^+ Control Circuit
2.2 Vertical Deflection
2.3 Boost Converter
2.4 X-Ray-Radiation Protection

3 . Horizontal

3.1 Horizontal Driver
3.2 Horizontal Output Circuit
3.3 E-W Pincushion and Width Control Circuit

4 . Video .

4.1 Video Pre-amplifier
4.2 On Screen Display（OSD）
4.3 Auto Beam Limit Circuit
4.4 Brightness Control
4.5 Blanking

5 . Micro

5.1 HS/VS Processor
5.2 PWM Control
5.3 Power Saving / Mute / LED Control
5.4 CS Control
5.5 KEY Control
5.6 I^2C Bus
5.7 External +5V with signal cable

1 . POWER SUPPLY .

1.1 Power supply .

A . Primary Side .

The raw DC voltage is built on C101 from AC line voltage through EMI filter, and bridge rectifier D102, D103, D108, D109 PFC, then composes with main transformer(T101), switching MOSFET(Q101)and PWM IC(IC102) to form a DC-DC voltage converter by flyback switching topology, which means that the power energy is pumped up at primary winding of transformer during duty "ON" cycle , then transfer the stored energy to primary side, and voltage regulated by PWM IC (3842) using way of pulse width modulation .

PFC : Is composed of CX105, D111, D110, D107, T102 in the system the input volt is increased by the T102, even if it is lower than the volt across C101, thus enabling the charging current to flow across C101, and there by C101 can be charged is a wide range of one cycle of the commercial power frequency to correct the power factor.

The IC101 starts up through some components composed of R125, R104, R124, Q102, ZD102, D113,.R105, R122 to build up VCC voltage at pin7, and supplied by transformer once secondary voltage is established. At pin1 of T101 through L106, R151, D104, C114 to IC102 pin7, and the R115, R111, C110, R121 to IC101 pin2 (the inverting input of error amplifier), IC105, IC203 composed a error amplifier compensation pin1 and provide +5V reference a pin8, a output driver pulse at pin6 for Q101 gate.

IC101 have to work synchronously with horizontal sync by feeding flyback pulse through C128, D105, R120, R117, C112 to pin4. R116, C111, D112 composed a soft-start circuit to prevent over-stress occurred during power start .
The TP201 : 170V voltage can be adjusted through VR201 .

The IC101 pin3 is current sense input of comparator PWM latch, if the volt reach 1.0V, The pin6 pulse output will be terminate.

B . Secondary .

Each raw of DC voltage output from T101 .

a . TP201 voltage output from T101 pin11 and is rectified by D201, C203 .
b . TP202 voltage output from T101 pin10 and is rectified by D203, C205, L202, C202 .
c . TP203 voltage output from T101 pin14 and is rectified by D204, C209 .
d . TP204 voltage output from T101 pin15 and is rectified by D206, C213 .
e . TP205 voltage output from T101 pin16 and is rectified by D211, C218 .

1.2 Power saving .

The EPA power management state as follows :

State	SUS	Pd	Power consummation	LED
Normal	H	H	≤ 115 W	Green
Active off	L	L	≤ 8W	Amber

SUS = IC301 (MCU) pin17 output .
PD = IC301 (MCU) pin18 output .

There is no output from Q206 and Q203 while is in Active off mode and SUS (IC301 pin17) and PD (IC301 pin18) are at low level voltage . That is, there is no output for 12V and 6.3V .

1.3 Degauss .

When the power is on and when press manual degauss, IC301 pin16 output high level voltage to turn on Q209, RL101 and activate Degauss .

1.4 . Tilt .

IC301 pin2 PWM to tilt circuit, Q211 and Q210 control flow of current of Rotation coil, when the base of C208 increase from 0 to 12V, As Q210 will turn on gradually , the current starts from 14V to 6.3V via Rotate coil . When C215decrease from 12V to 0V, the current will change from 6.3V to GND .

2 . VERTICAL .

2.1 Auto SYNC Deflection control and B+ control circuit Horizontal and vertical sync through IC401 TDA4841 transmit .

Deflection controller IC401 TDA4841 :

a . The control input (V-position, H-position, V-size, H-size, Pincushion, Pin-Balance, Trapezoid, Parallelogram..TOP Corner. Bottom Corner .Zoom, moire) are use I^2C control .

b . SYNC input :
H-sync (pin1) (From IC301 pin33) .
V-sync (pin2) (From IC301 pin32) .

c . Output :
* B^+ Driver (pin6) .
* H-Driver (pin8) .
* EW-Driver (pin11) .
* Focus (pin32) .
* Vout (pin12, 13) .

2.1.1 Horizontal .

a . Then take a HFLB pulse from horizontal output Q415 collector C428 and C429 mid voltage to IC401 for AFC to make pin8 control H-Drive .

b . Pin27 and pin28 (R408, R409) control horizontal hold in range .

2.1.2 Vertical .

a. V-sync outputs from MCU IC301 pin32 to IC401 pin14, then sent from pin12, pin 13 to IC501 TDA8172 pin1and pin7 .

b. IC401 pin24 outputs to vertical hold in range is controlled by IC301 pin3 .

2.1.3 B^+ control .
Take a pulse from Q408 via Q406, Q407, C445, R450.
IC401 pin6 (buck circuit control).

2.2 Vertical deflection .

a . IC401 pin12 and pin13 output to IC501 (TDA8172) pin7 and pin1, then IC501 pin5 and pin7 make vertical deflection output .

b . Vertical blank : IC501 pin3 take a blanking pulse, After passing Q501 buffer can supply video blanking signal .

2.3 Buck converter .
The Buck converter mainly composes of p-channel MOSFET Q408 Transformer T402 and rectifier diode D409. IC401 pin6 B^+ driver output via Q406, Q407, to driver Buck converter and provide a puls e-voltage to provide B^+ H-output circuit use, As H-freq. change, IC401 pin6 B^+-driver will change its output, Buck converter will also change the B^+ it provides, H-freq. will varies from 30K ~ 97KHz, B+ will varies from 65V ~ 170V .

2.4 X-RAY radiation protection .
FBT pin6 outputs one pulse to pass through D4407. C4428 integration DC voltage, and through ZD4403, D4408, C4451 to Q4404 "B", when anode voltage abnormal increase, FBT pin6 and Q4404 "B" voltage to be increased , too . As Q4404 "B" ≅0.6V, Q4404, Q4411 are "ON", IC402 pin14 from +5V to low, pin8, pin11 will no pulse output, high voltage to shut-down .
The X-RAY radiation protection circuit used in this monitor is a latching type the monitor will shown down and continue until turn-off the monitor with power switch .

3 . Horizontal .

3.1 Horizontal driver circuit .

The output of IC401 pin8 H-Driver connect to Q410, Q411 H-Buffer transistor makes The Q412 output to Q415 H-driver ,push H-output Q415 to reach secondary via induction of T404 . For T404 is a Transformer of reduced Deflection and converted pole , Q415 will be turn off when Q412 is on , on the contrary , went Q412 is turn off and Q415 will be on .

3.2 Horizontal output circuit .

Horizontal output circuit is composed by Q415 (Horizontal Transistor), CRT YOKE.D410, C428 and C429.
H-output circuit , H-Driver circuit output via T402 to switch Q415 ON/OFF to output saw tooth wave and make DY able to control the circuit scanning of elections in the CRT .
T403, D411, D416, Q416, C498 and Q444 modify Horizontal linearity switching individually Via IC301 pin38.

3.3 EW-Pincushion and width control circuit

The parabolic waveform and DC voltage and generated from IC401 pin11 to R418, R419 to IC401 pin5 .
The parabolic decreased or increased for compensating the pincushion effect the DC voltage control the H-width .

3.4 High-voltage circuit

High-voltage circuit is composed by Q4401.T401 (FBT) and.C4406 .High-voltage output stage .
The IC 402 is PWM duty-cycle control.

1. Q4405 High voltage buffer stage.
2. Q4401 High voltage output stage.
3. Q4403 PWM control Driver stage.
4. Q4407.Q4408 .and Q4410 Brightness control circuit .
5. Q4406 D4406.R4429.R4430.VR4402 andC4427. ABL control circuit.
6. VR4401 High voltage control.
7. VR4402 ABL Lever control.

4 . Video .

4.1 Video amplifier (IC601) .

The video amplifier module is composed of three amplifiers for Red, Green, Blue channel .

The video input signal is fed to the video preamplifier IC601 (M61316SP) pin2 Red, pin4 Green, pin7 Blue, through AC coupling capacitor, C601, C602, C603 .

The clamping pulse comes from inverse pulse of H-Deflection .

IC603 output amplifier for B、R、G channel respectively .

4.2 On Screen Display (OSD) (IC602) .

IC602 (NT6827-0047) is a on screen display generator, pin5 for H-sync input, pin10 for V- sync input .
The IC602 is controlled by IC301 via SCL, SDA bus IC602 (pin7, pin8) .

The on screen display signal is output from pin15 (r), pin14 (g), pin13 (b) and OSD BLK to IC601 pin13, pin14, pin15, pin12 .

4.3 Auto Beam Limit CKT (ABL CKT) .

When beam current pass through VR4402 over 500uA, the voltage build at base of Q4406 will be low enough to turn on Q4406, then the voltage of pin31 of IC601 will be pulled down accordingly to reduce the video preamplifier gain output .

4.4 Brightness Control .

Brightness is controlled by varying the DC voltage of G1 with the IC301 PIN1 (PWM) .

4.5 Blanking CKT .

IC501 (TDA8172) pin3 vertical blanking pulse are fed to the base of Q501 , The blanking pulse O/P is coupled to G1 by C507 .

Horizontal blanking pulse are fed to IC601 pin17 and let video O/P amp cut off during the period of horizontal retrace, while mode change, IC301 pin30 will pull high to turn off . The G1 voltage will down to -180V then CRT will cut off the video output .

5. Micro (IC301).

5.1 HS/VS Processor.

HS/VS input pin39 (HS), pin40 (VS), IC301 individually to work on frequency, polarity, process of H+V and power saving, then output horizontal sync (pin33) of negative polarity and vertical sync (pin32) of positive polarity to IC401 TDA4841 pin15, pin14.

5.2 PWM Control.

The PWM control of IC301 is pin1 (Brightness) and pin2 (Rotation), the PWM output via R, C after rectified may control each function.

5.3 Power saving / Mute / LED control.

IC301 pin17, pin18 are power saving control pin, the condition of power saving and mode change, pin30 will change from Low to Hi and active Mute function.

	Normal	Active	
Mute	L	H	
SUS	H	L	(Off mode)
PD	H	L	(Off mode)

IC301 pin17 (SUS) function as LED control, the mode is as listed:

	Power On	Power saving	Over range freq.
Pin17	Hi	Low	Low

5.4 CS control (CS1 ~ CS6).

To count H-SYNC by the output frequency, then output the cumulating as listed:

	f (KHz)	CS1	CS2	CS3	CS4	CS5	CS6
		C438	C437	C436	C435	C434	C433
1	30-33	0	0	0	0	0	0
2	33-36	0	0	1	1	1	1
3	36-39	1	0	0	0	0	0
4	39-41	1	0	0	1	0	1
5	41-45	1	0	1	0	0	1
6	45-49	1	0	1	1	1	1
7	49-54	1	1	0	0	0	0
8	54-57	1	1	0	0	1	1
9	57-61	1	1	0	1	0	1
10	61-66	1	1	0	1	1	1
11	66-71	1	1	1	0	0	1
12	71-78	1	1	1	0	1	1
13	78-83	1	1	1	1	0	1
14	83-89	1	1	1	1	1	0
15	89-95	1	1	1	1	1	1
LOCATION		Q424	Q423	Q422	Q421	Q420	Q419

5.5 Key Control: IC301 pin26~pin29 function as DAC switch input to control OSD display function.

Pin26 : [1].

Pin27 : ▽.

Pin28 : △.

Pin29 : [2].

5.6 I^2C Bus.

IC301 have two groups I^2C bus to control E^2PROM(IC302), IC401 deflection IC, Auto aliment, IC601 pre-AMP, IC602 OSD IC function.

5.7 External +5V with signal cable:

While PC VGA card pin9 with B+: +5V input, when monitor power off and PC power on, the PC should be can read the EDID data, which saved in IC302 the EXT +5V from PC through P601 pin12, P602 pin1, D304 to IC301 pin5 (VDD) and reset IC301 pin4.

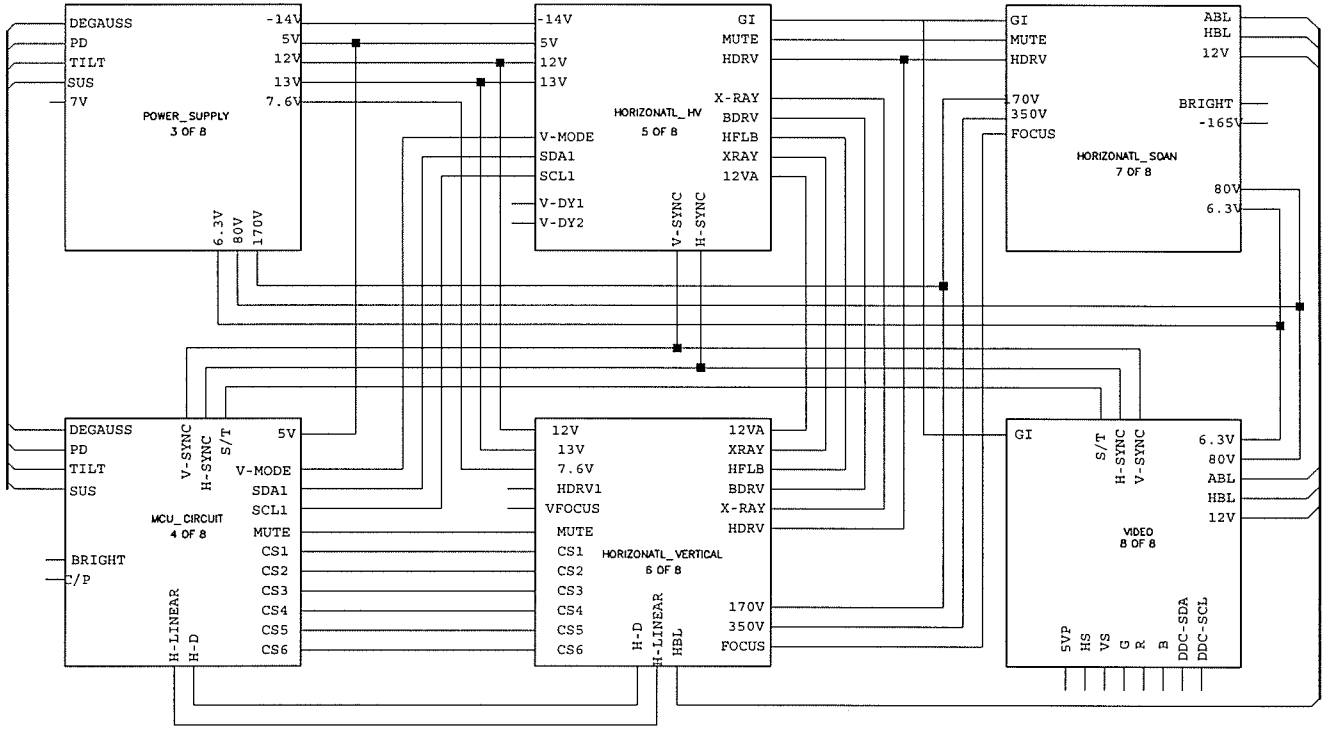
While PC first power on, IC401 is latch for no +12V power, second the monitor power on, the P-test will high to reset the IC301 again at pin15, to release the IC401 function of monitor deflection.

V

Circuit diagram

NO.	DESCRIPTION	DATE

G810-6



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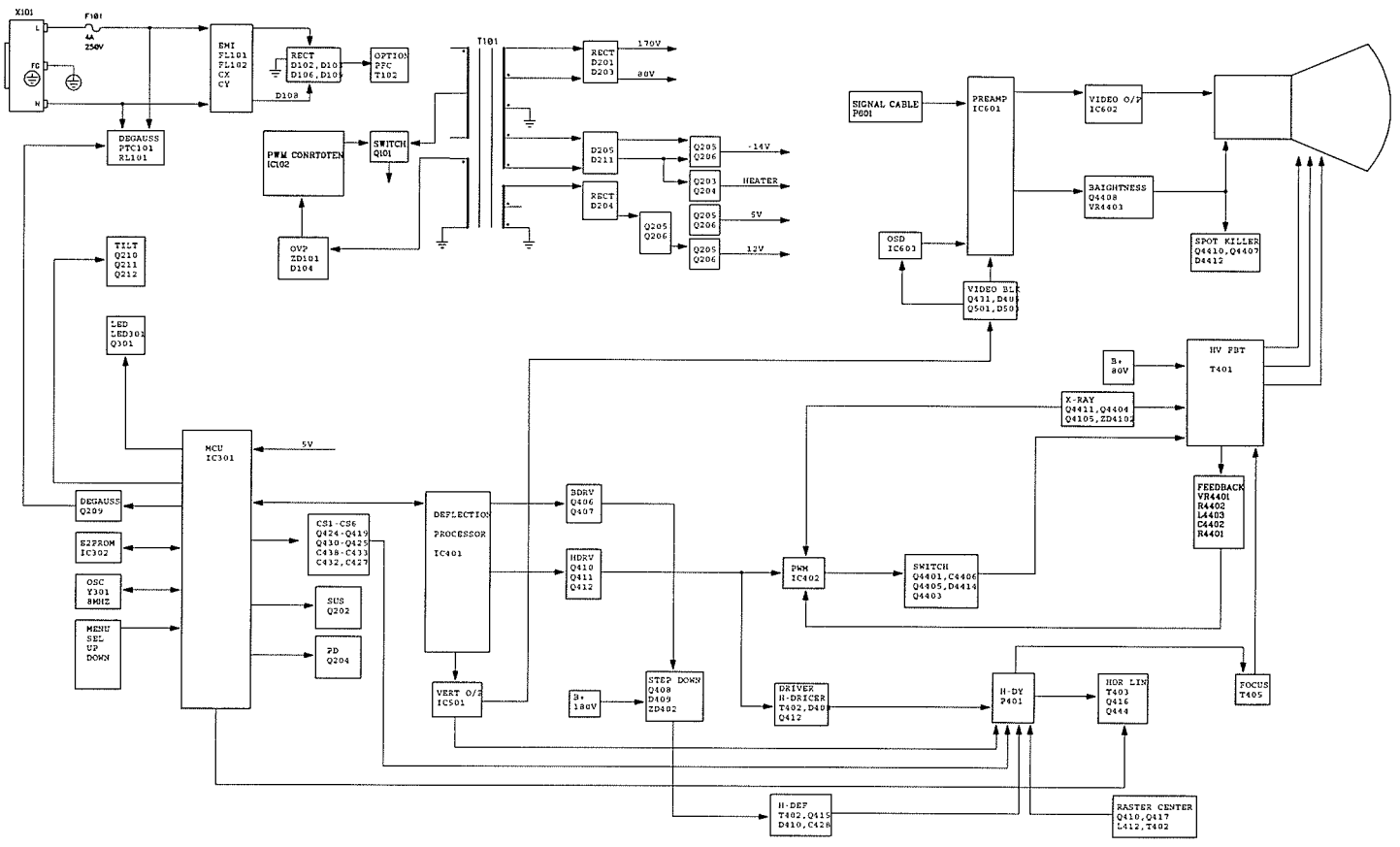
	DESCRIPTION: SCHEMATIC OF CRT MONITOR							

G810-6 COLOR MONITOR BLOCK DIAGRAM



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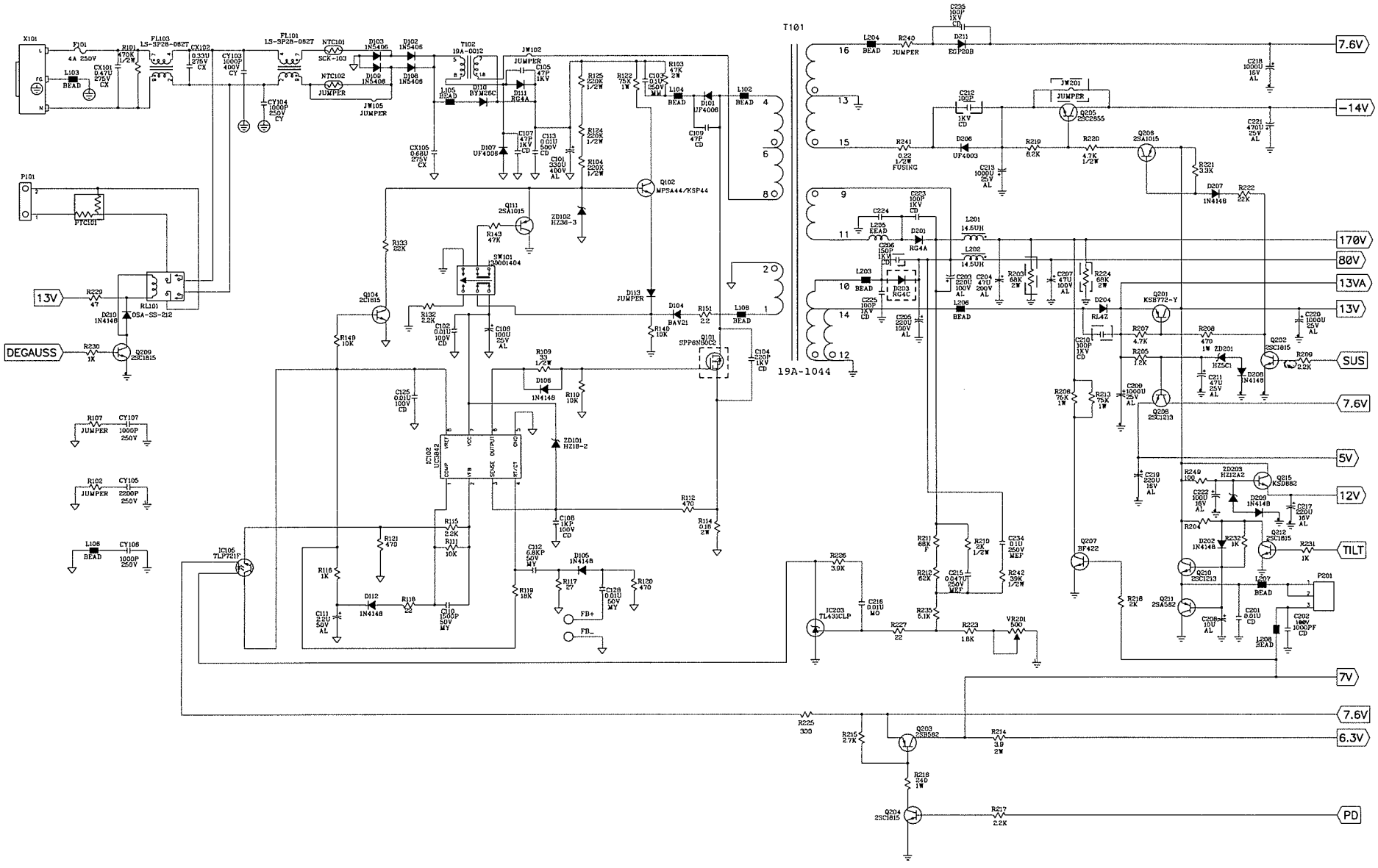

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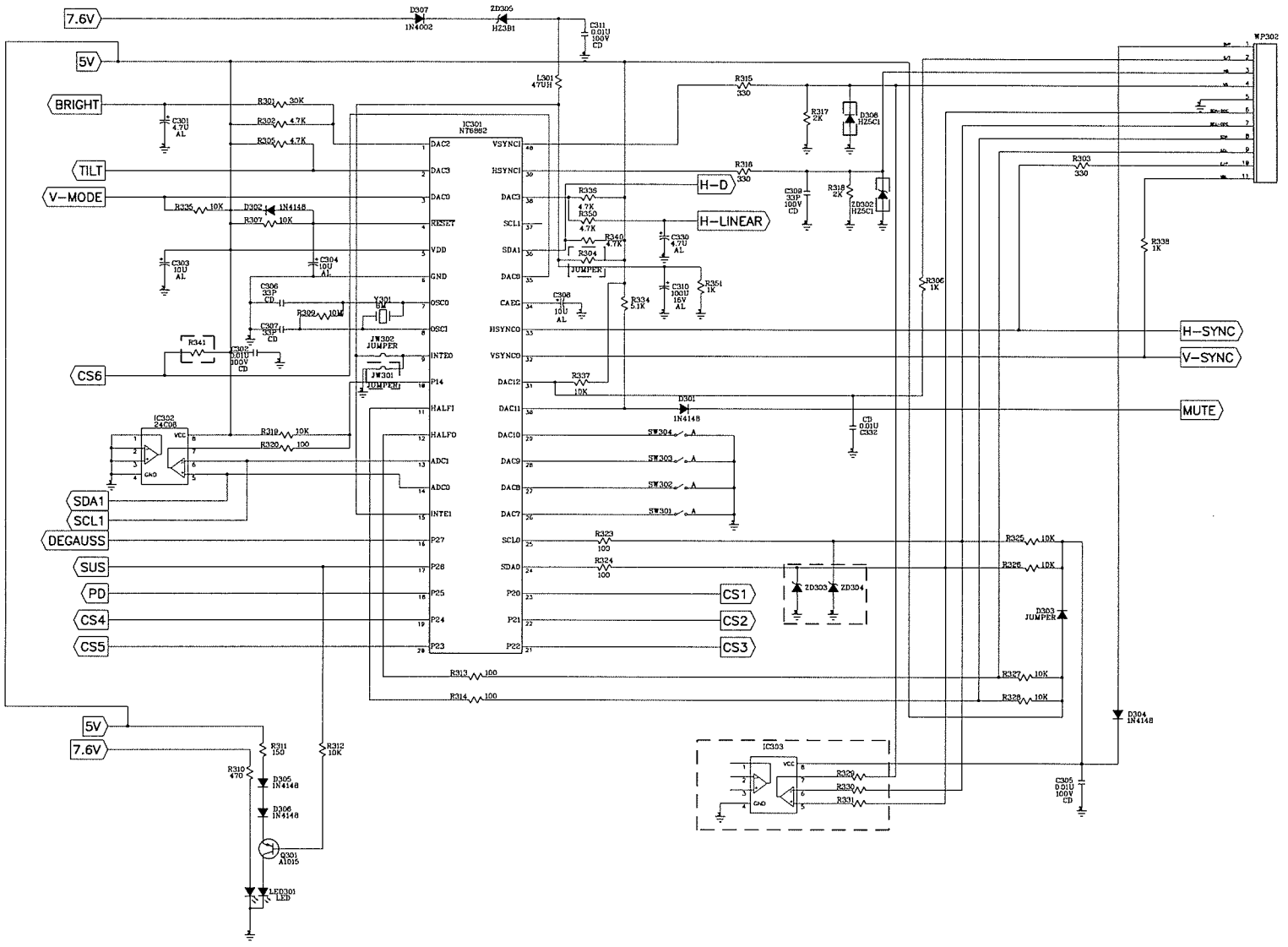

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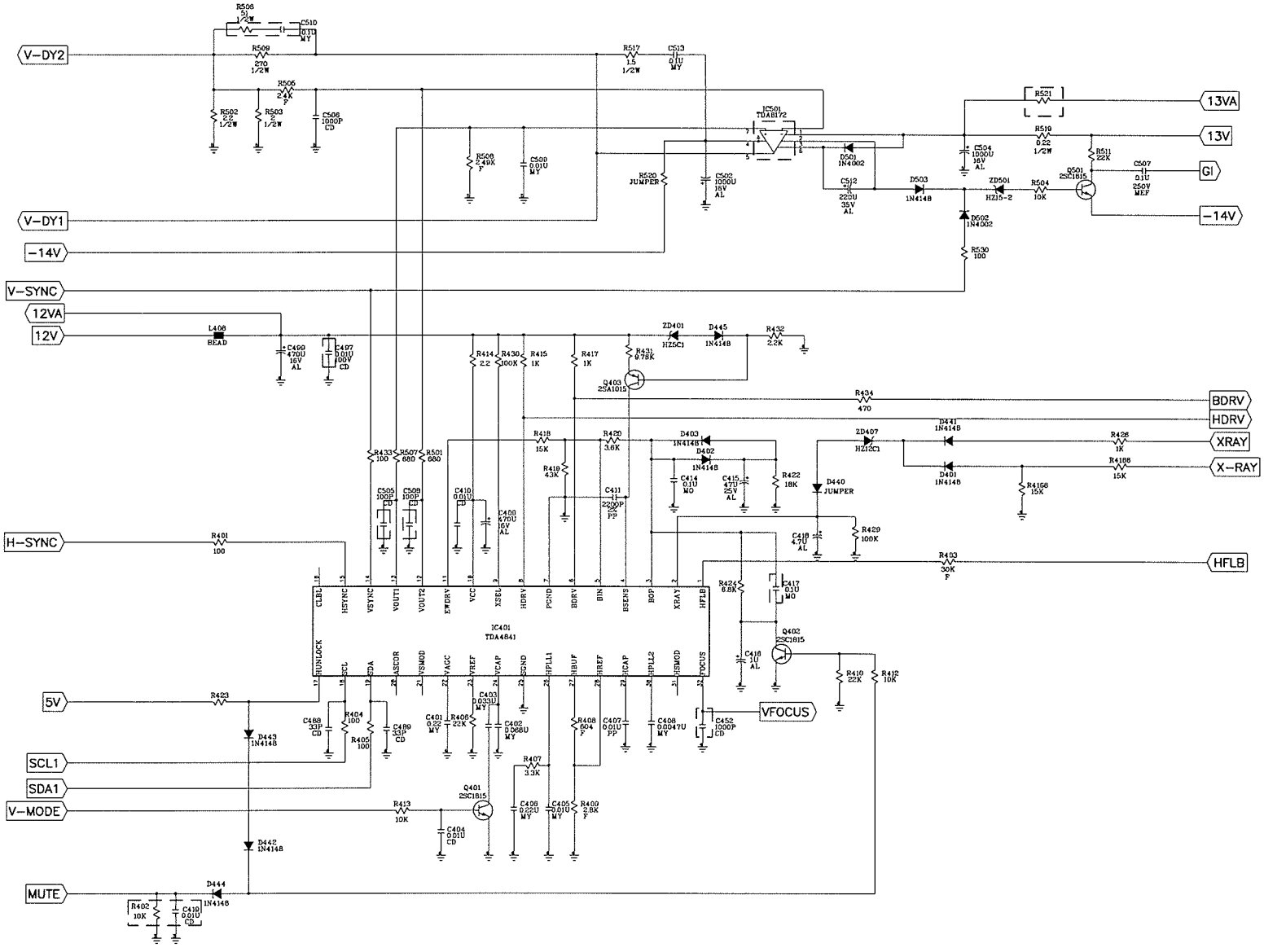

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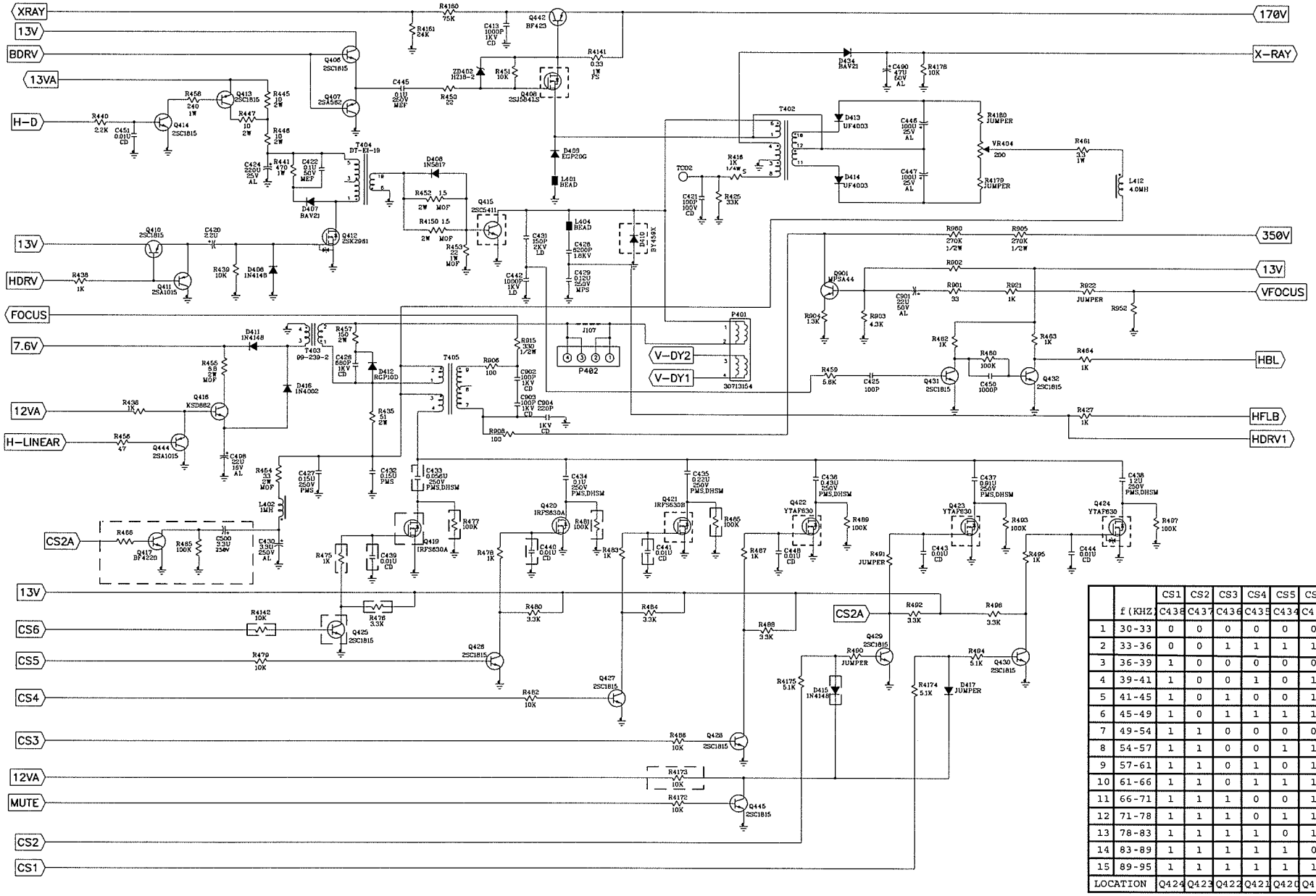

		CS1	CS2	CS3	CS4	CS5	CS6
	f(KHZ)	C438	C437	C436	C435	C434	C433
1	30-33	0	0	0	0	0	0
2	33-36	0	0	1	1	1	1
3	36-39	1	0	0	0	0	0
4	39-41	1	0	0	1	0	1
5	41-45	1	0	1	0	0	1
6	45-49	1	0	1	1	1	1
7	49-54	1	1	0	0	0	0
8	54-57	1	1	0	0	1	1
9	57-61	1	1	0	1	0	1
10	61-66	1	1	0	1	1	1
11	66-71	1	1	1	0	0	1
12	71-78	1	1	1	0	1	1
13	78-83	1	1	1	1	0	1
14	83-89	1	1	1	1	1	0
15	89-95	1	1	1	1	1	1
LOCATION		Q424	Q423	Q422	Q421	Q420	Q419

ViewSonic Corporation	Date: 01-16-2002	LY.REV:	Drawn: Poolsup.P	Checked	Approved	PART NO.	REV.	SHEET
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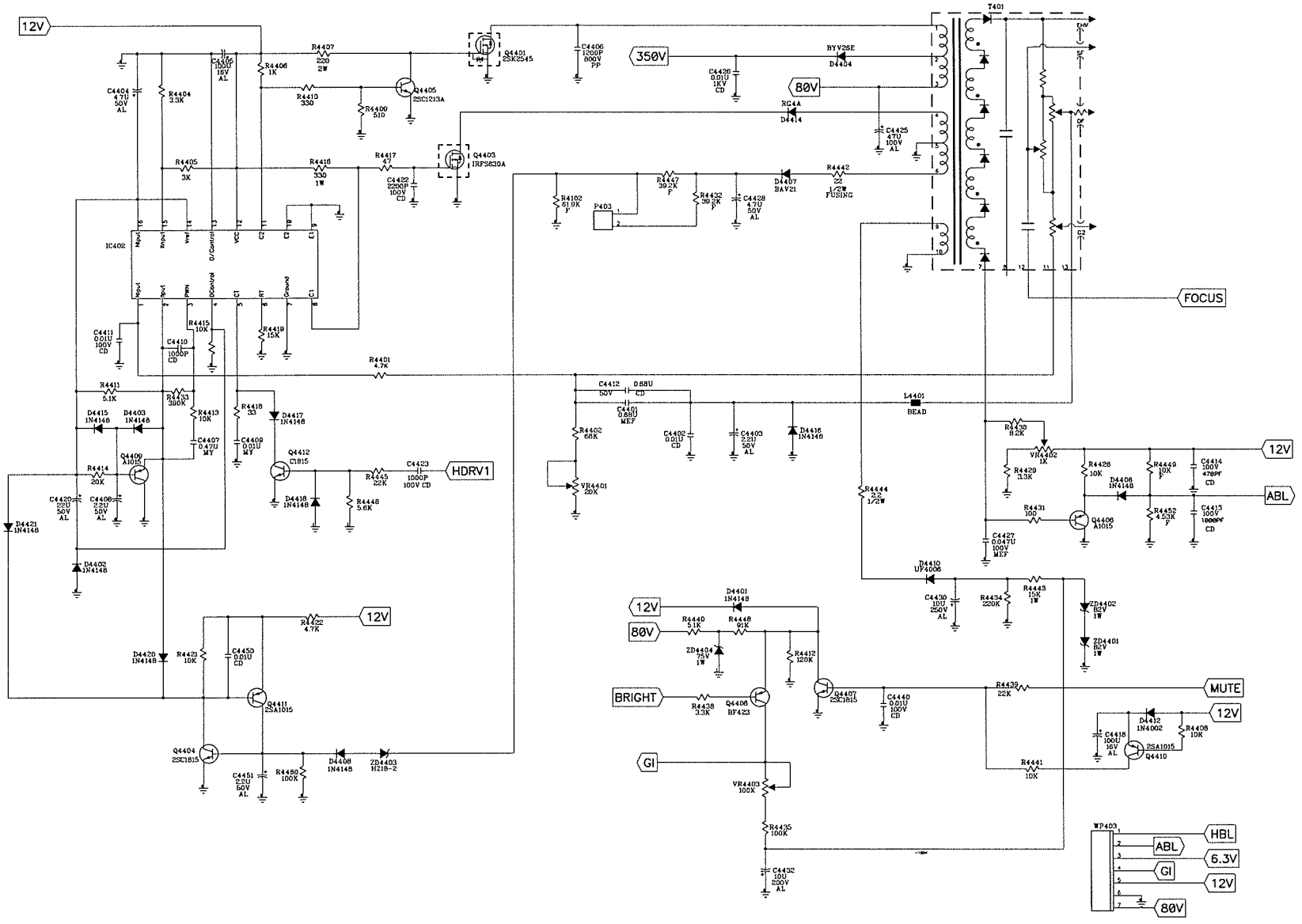

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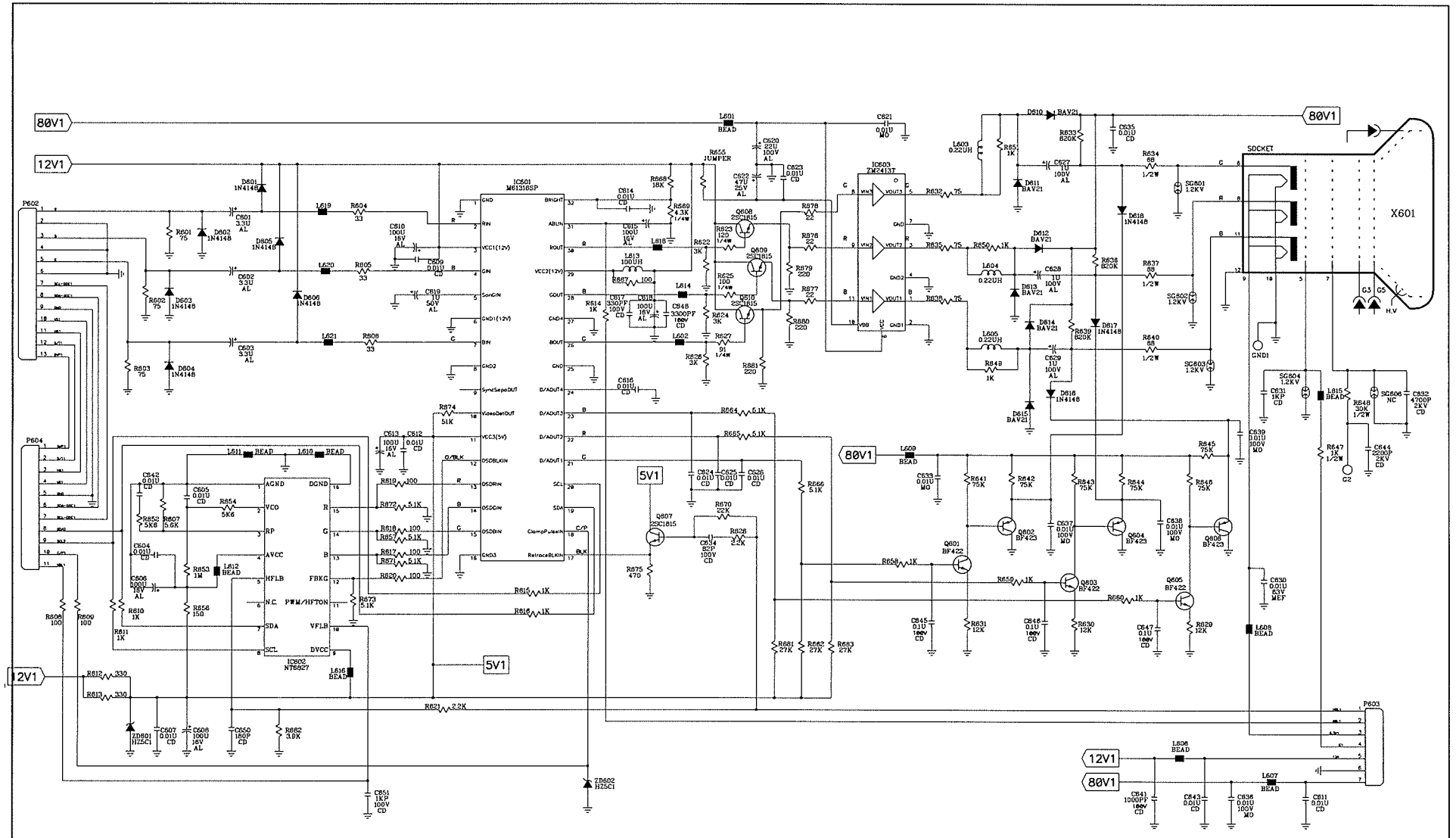

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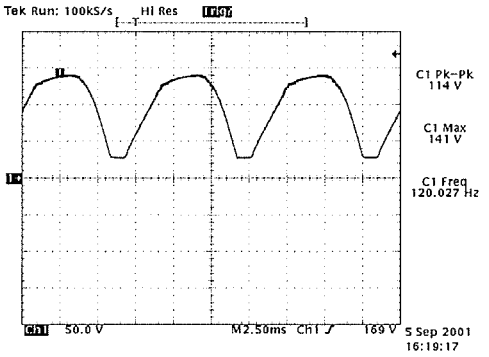
1


Tek Run: 100kS/s HI Res
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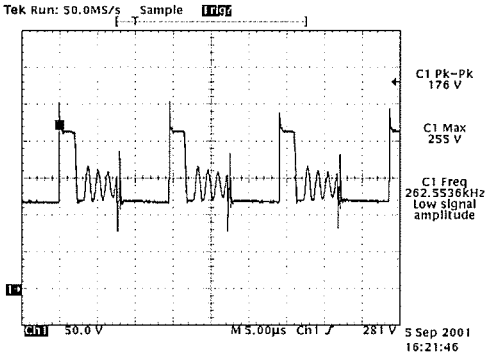
C1 Max 141 V
C1 Freq 120.027 Hz
Ch1 50.0 V M2.50ms Ch1 169 V
5 Sep 2001 16:19:17

2


Tek Run: 50.0MS/s Sample
C1 Pk-Pk 176 V
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C1 Freq 262.5536kHz Low signal amplitude
Ch1 50.0 V M5.00µs Ch1 281 V
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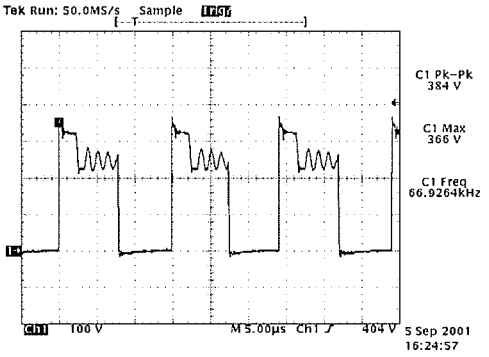
3


Tek Run: 50.0MS/s Sample
C1 Pk-Pk 384 V
C1 Max 366 V
C1 Freq 66.9264kHz
Ch1 100 V M5.00µs Ch1 404 V
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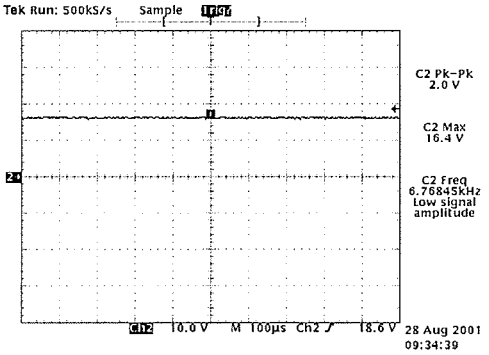
4


Tek Run: 500kS/s Sample
C2 Pk-Pk 2.0 V
C2 Max 16.4 V
C2 Freq 6.76845kHz Low signal amplitude
Ch2 10.0 V M 100µs Ch2 18.6 V
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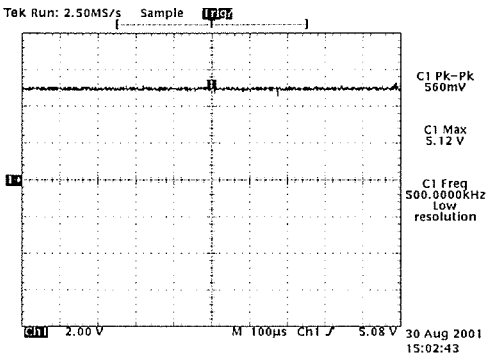
5


Tek Run: 2.50MS/s Sample
C1 Pk-Pk 560mV
C1 Max 5.12 V
C1 Freq 500.0000kHz Low resolution
Ch1 2.00 V M 100µs Ch1 5.08 V
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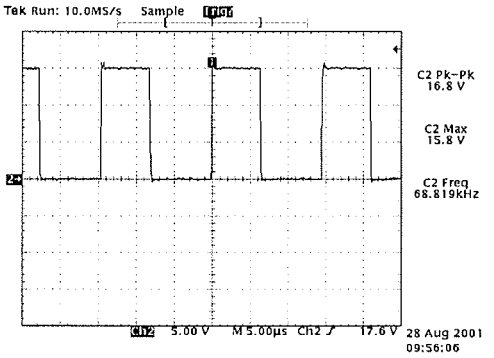
6


Tek Run: 10.0MS/s Sample
C2 Pk-Pk 16.8 V
C2 Max 15.8 V
C2 Freq 68.819kHz
Ch2 5.00 V M 5.00µs Ch2 17.6 V
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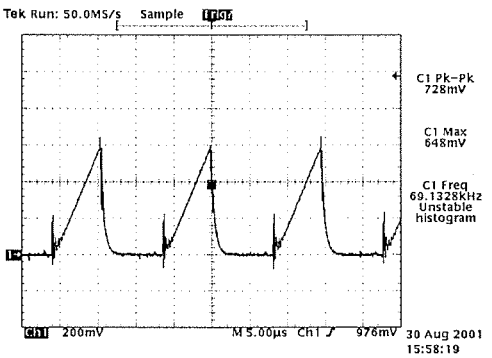
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C1 Pk-Pk 728mV
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C1 Freq 69.1328kHz Unstable histogram
Ch1 200mV M 5.00µs Ch1 976mV
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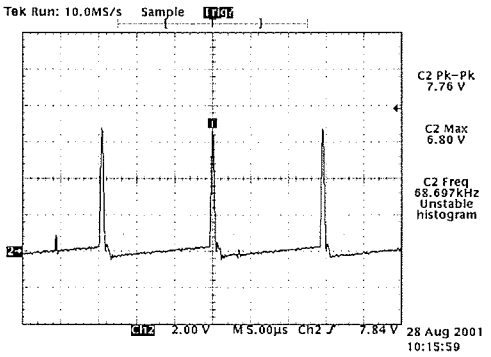
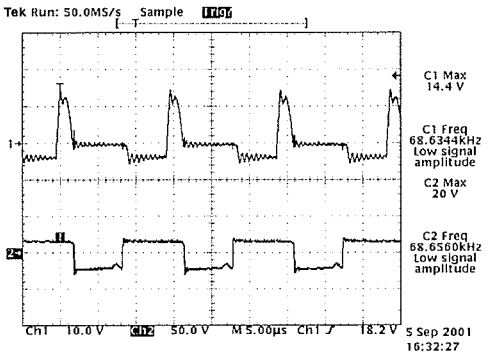
8


Tek Run: 10.0MS/s Sample
C2 Pk-Pk 7.76 V
C2 Max 6.80 V
C2 Freq 68.697kHz Unstable histogram
Ch2 2.00 V M 5.00µs Ch2 7.84 V
28 Aug 2001 10:15:59

Waveform

9



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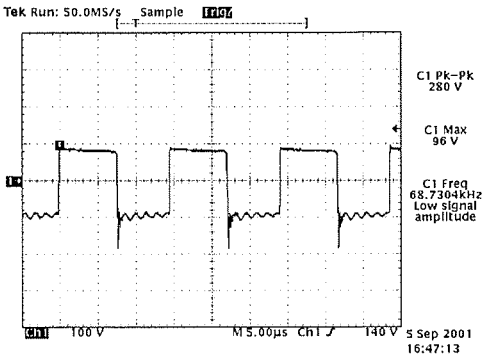

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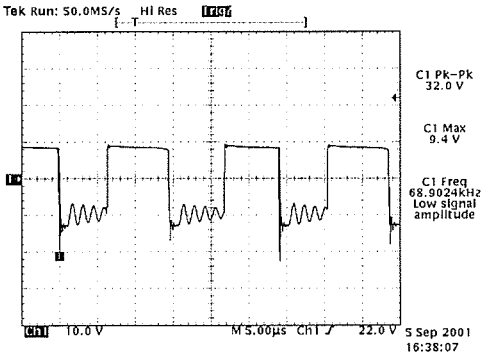

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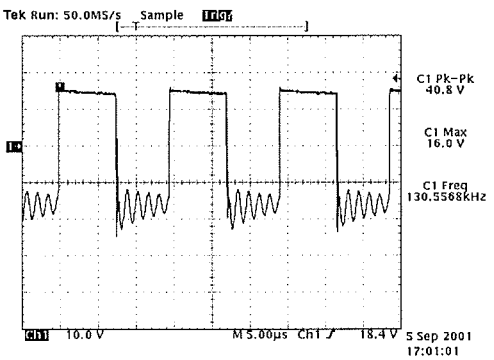

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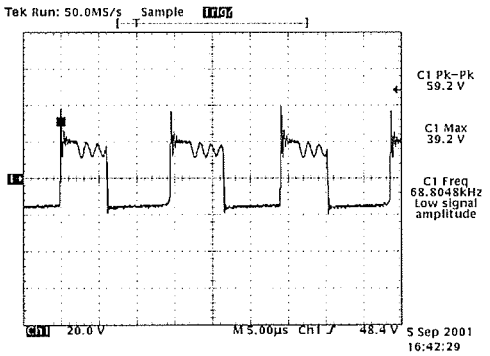

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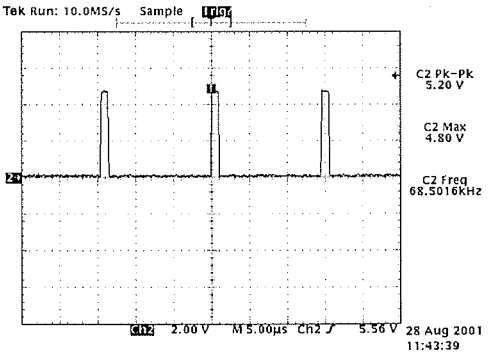

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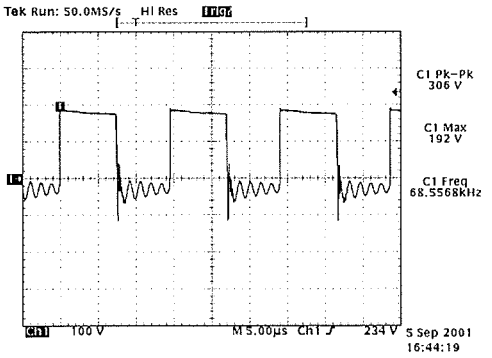

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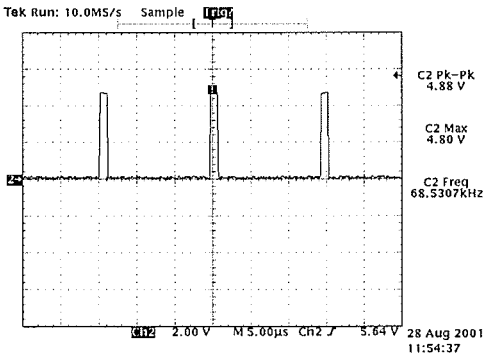
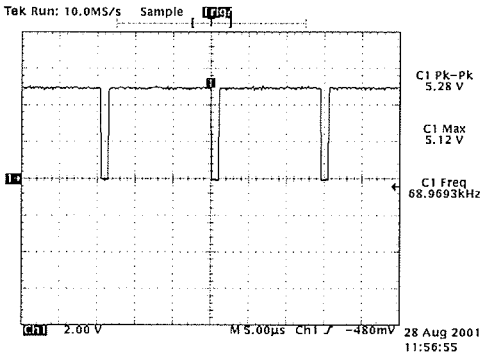


Waveform

18



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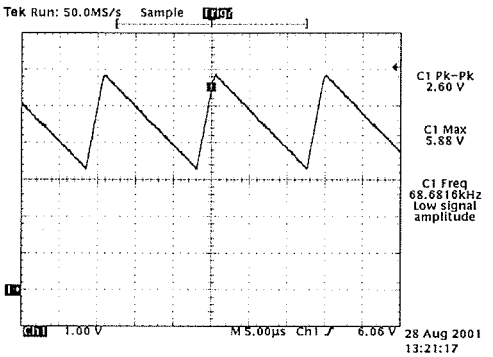

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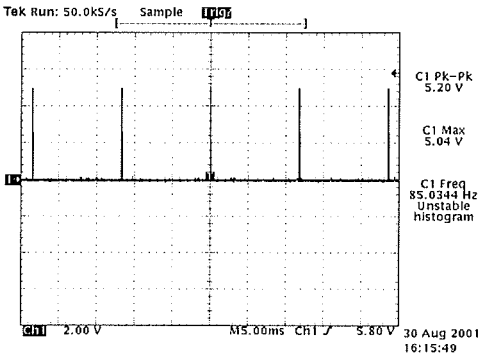

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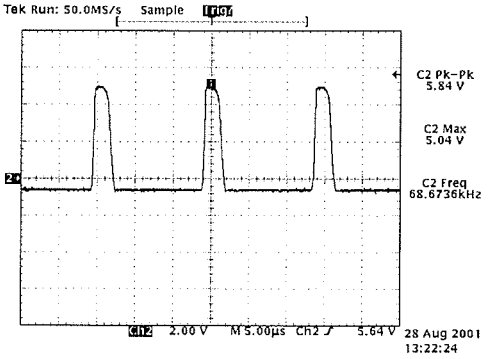

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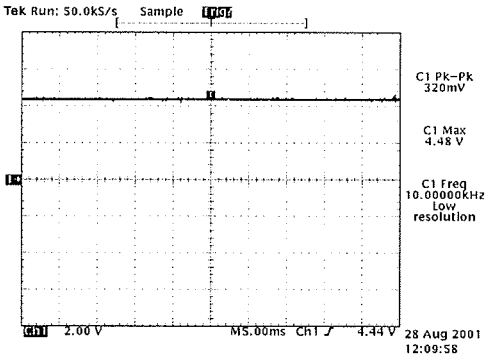

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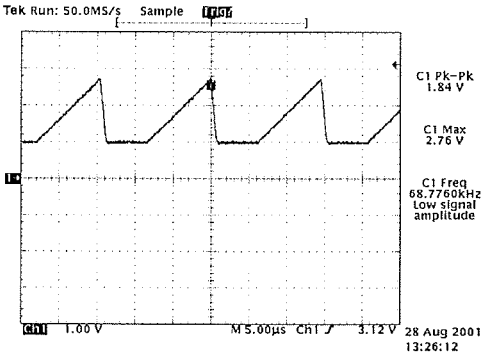

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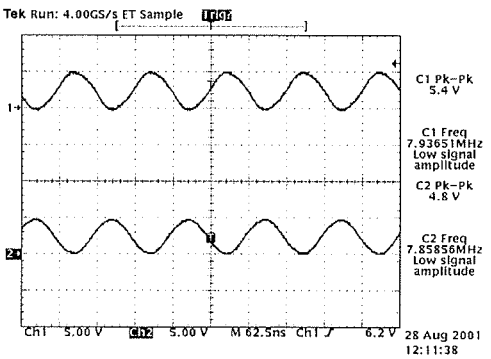

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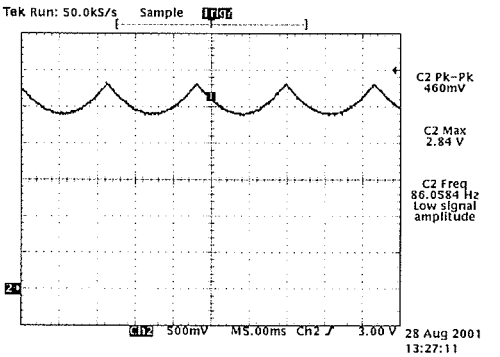

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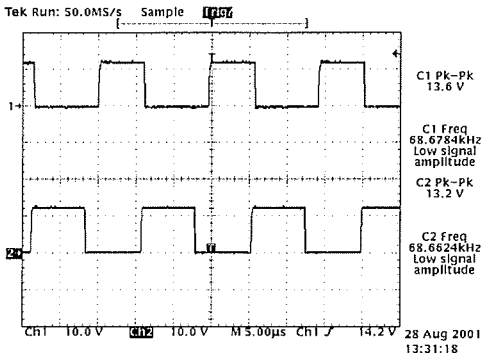

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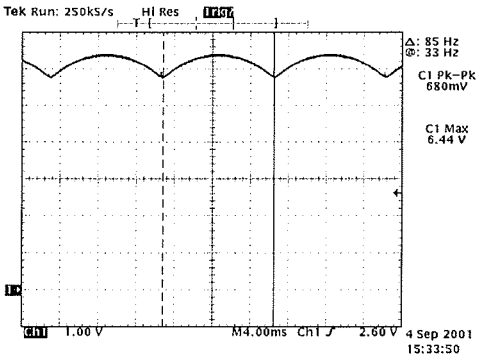

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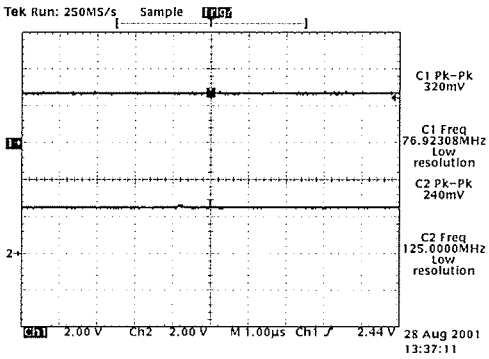

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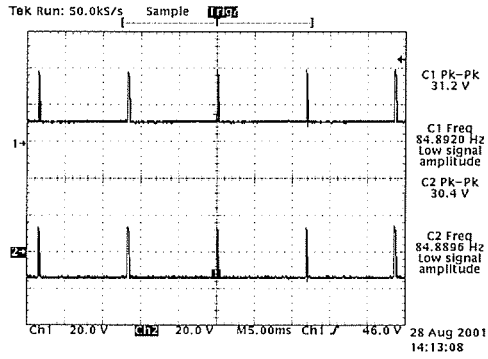

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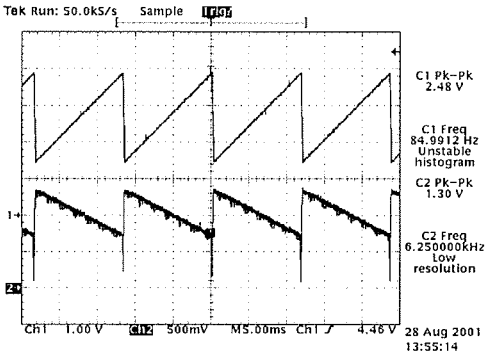

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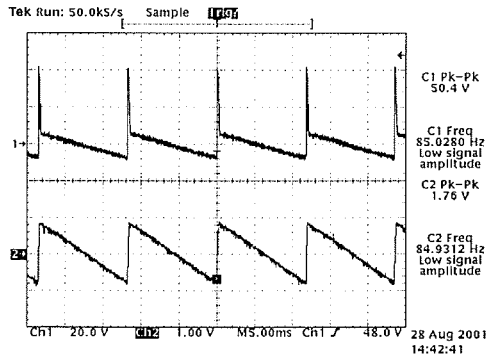

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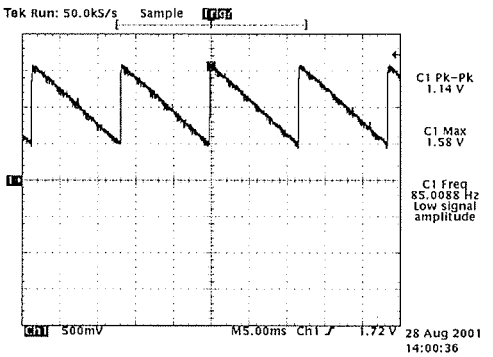

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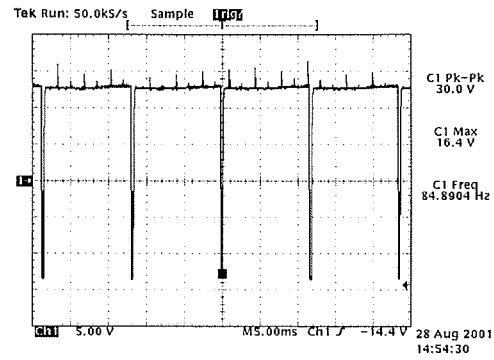

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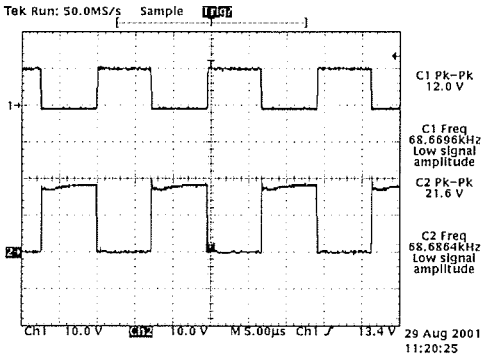

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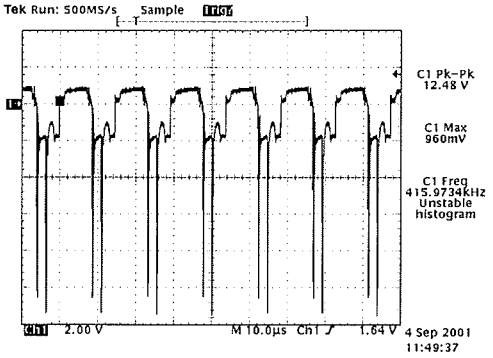

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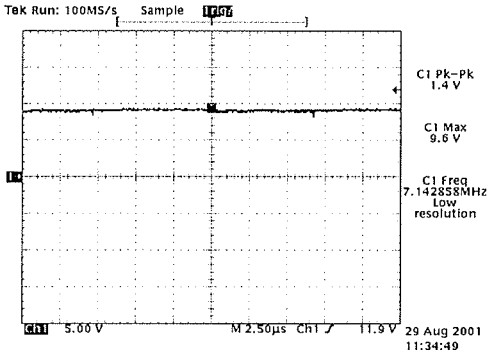

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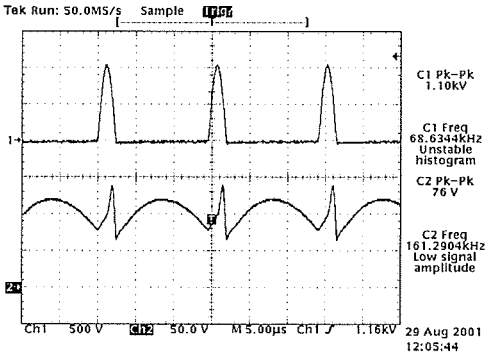

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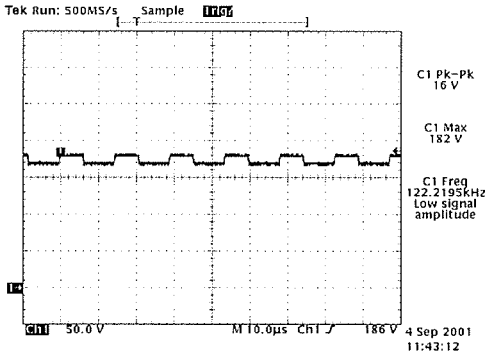

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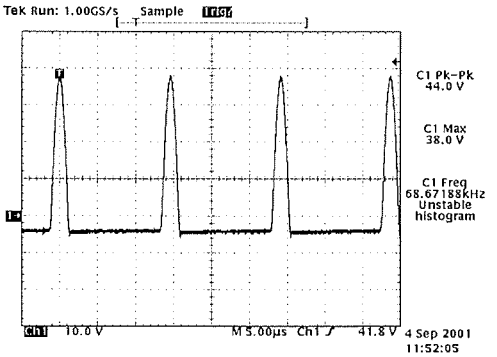

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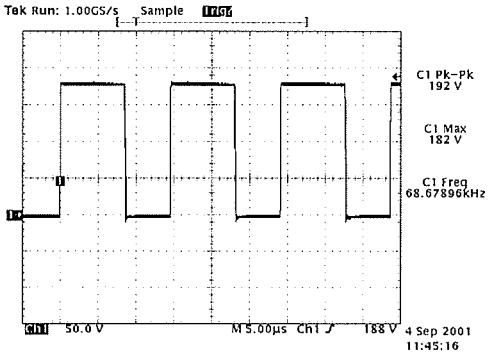

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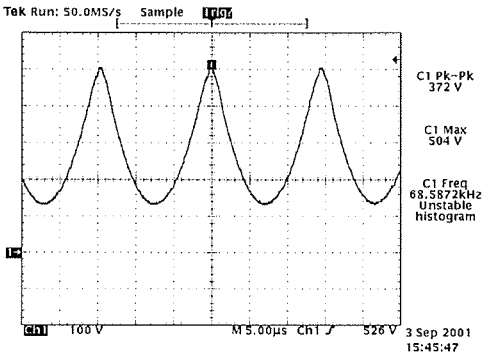

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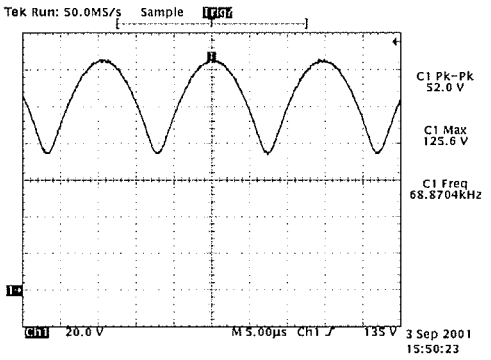

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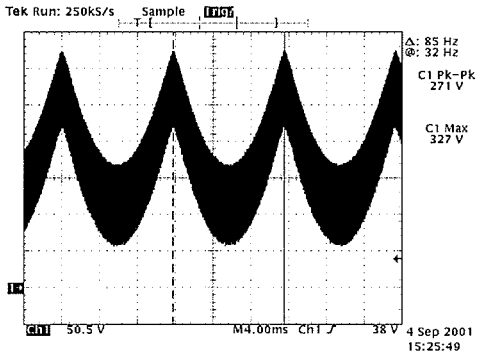

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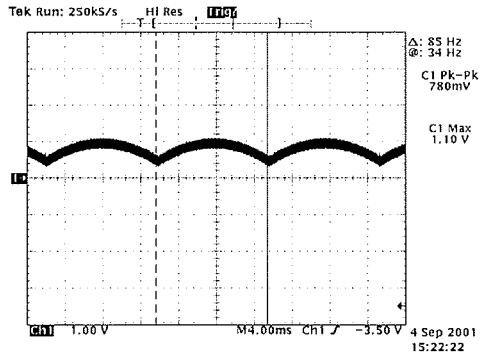

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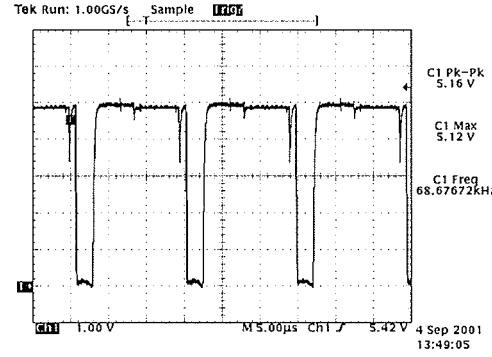

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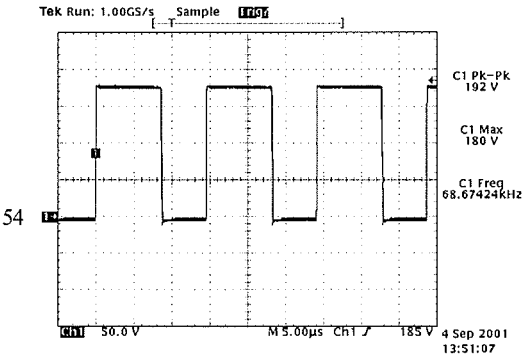

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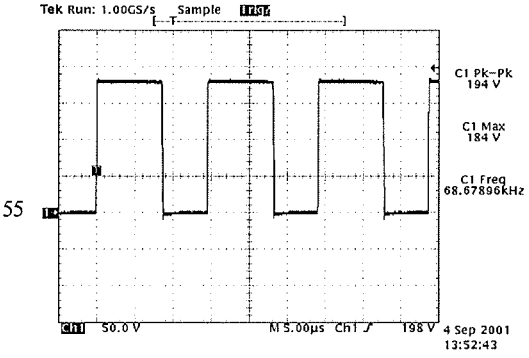

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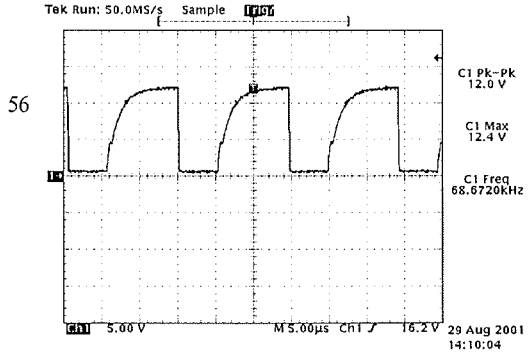

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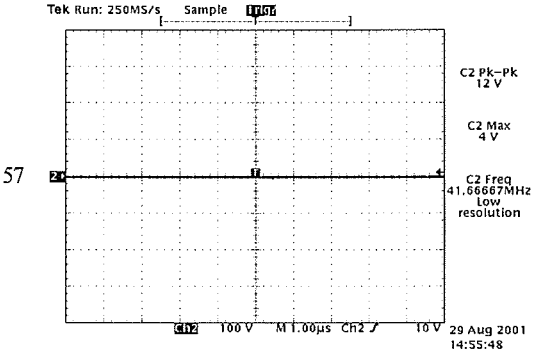

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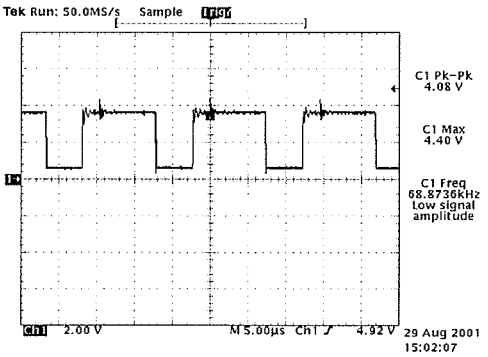

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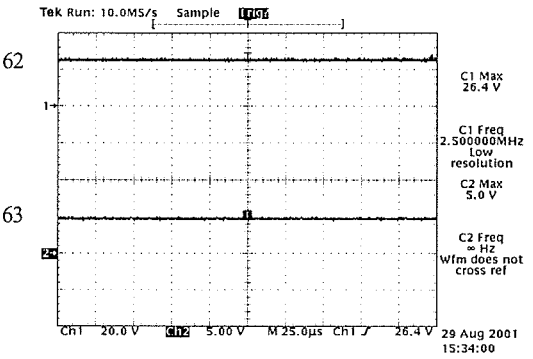

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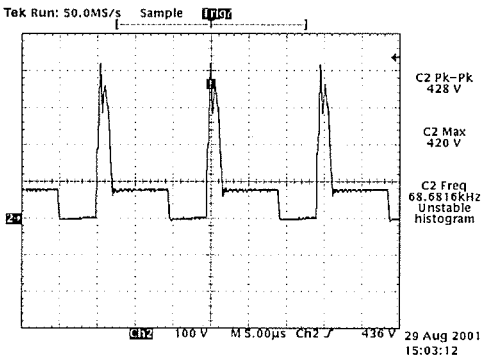

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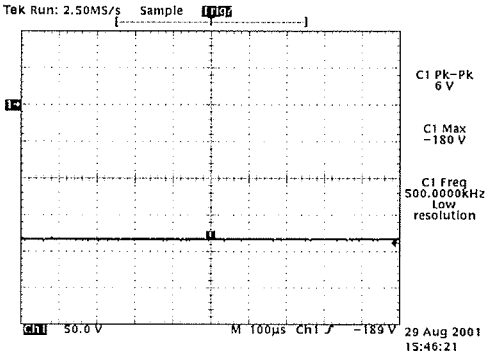

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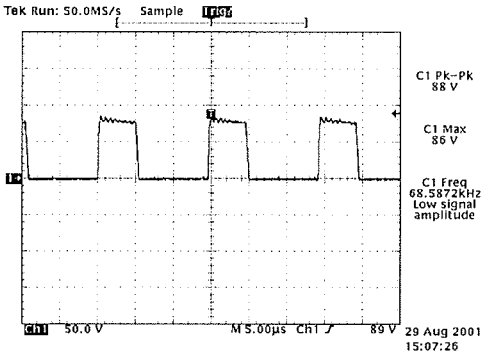

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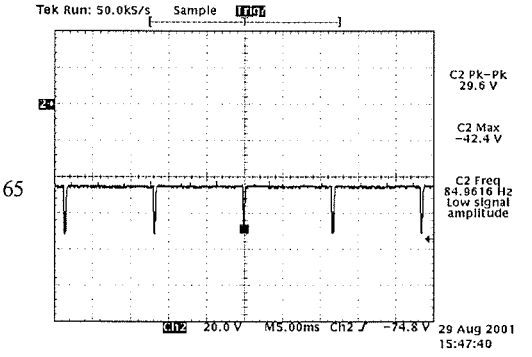

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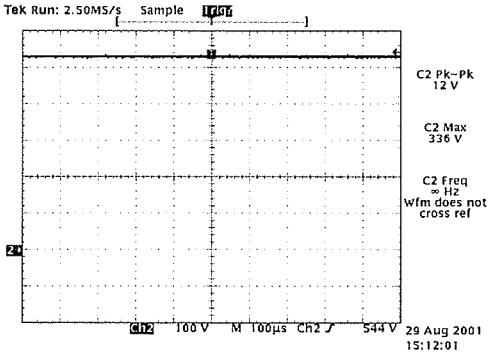

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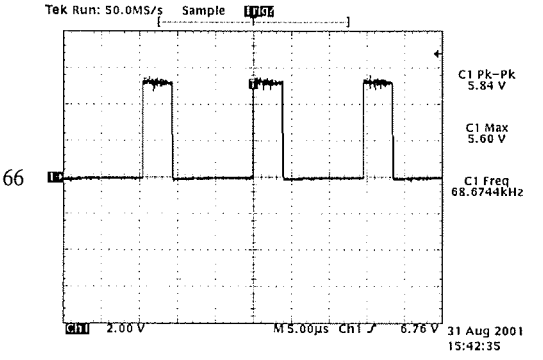

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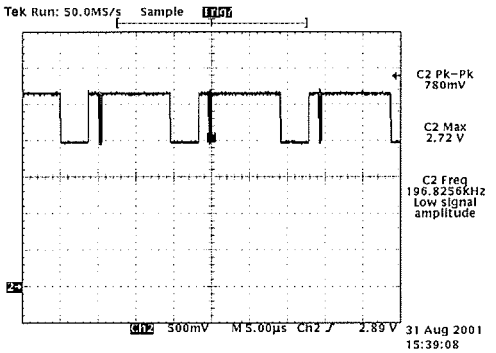

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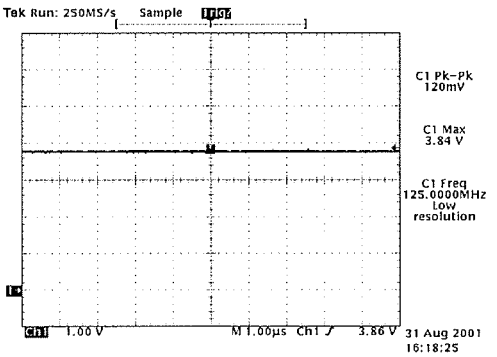

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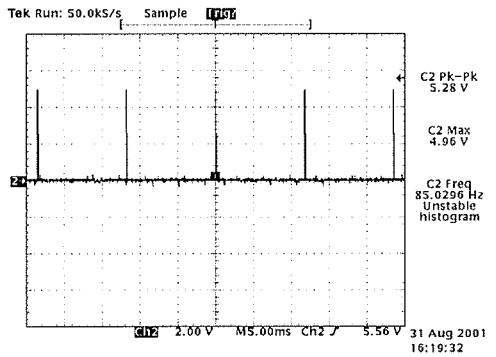

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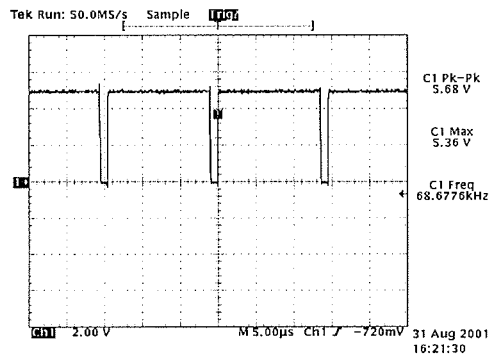

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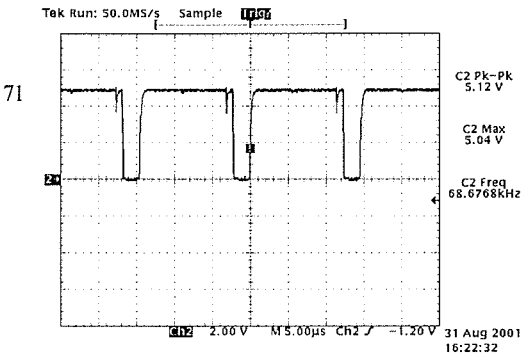

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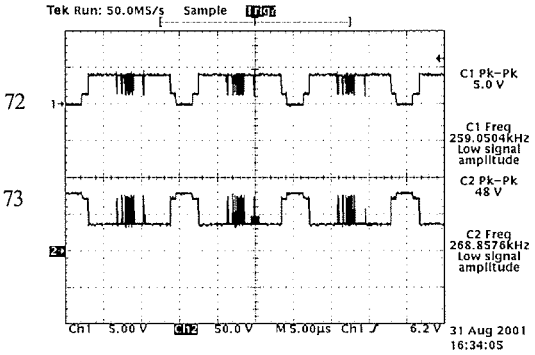

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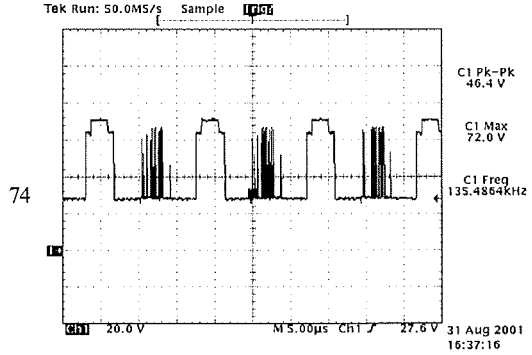

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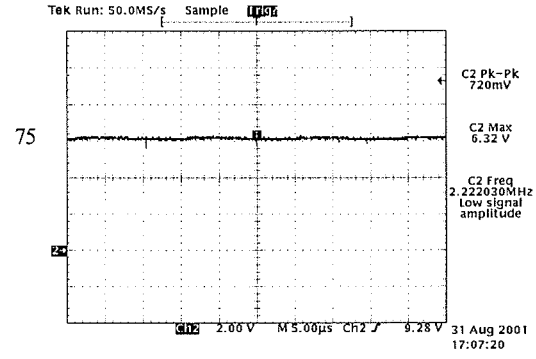

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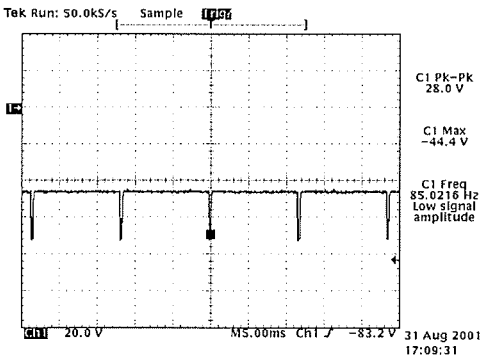

Tek Run: 50.0kS/s Sample
C1 Pk-Pk
28.0 V
C1 Max
-44.4 V
C1 Freq
85.0216 Hz
Low signal
amplitude
Ch1 20.0 V
M5.00ms Ch1 ƒ -83.2 V
31 Aug 2001
17:09:31

VI

Adjusting procedure

A . GENERAL .

B . INSTRUMENT ALIGNMENT .

1 . Deflection Presets .

2 . Power Supply Alignment .

3 . Size & Geometry Adjustment .

4 . Video Alignment / function memory recall .

5 . Focus adjustment .

C . PCB DEFINED .

D . FIXTURE FUNCTION DES CRIPTION .

A . GENERAL .

1. All specification must be met over line voltage range of 90vac to 264VAC 50Hz / 60Hz, unless otherwise specified .
2. Operating temperature range is 0℃ to 40℃ with a relative humidity of 10% or less to 90% .
3. The monitor must be operational in a usable state within 30 minutes after turn-on .
4. All signal levels are measured assuming termination at the monitor's input jacks or in its characteristic impedance .
5. An ambient lighting level of 400 to 600 Lux is assumed when setting brightness for raster extinction threshold .
6. All purity related specifications must be met without external degaussing .
7. All controls must have excess range (no control may be left at an end stop when proper alignment is completed) .
8. The monitor is not required to meet specs during the following but must tolerate, without damage to the CRT or circuits, any sequence or combination of power on and off, signal on and off, unplugging of power or signal, erratic, wrong frequency or noisy inputs while at any possible settings of user accessible controls likewise, the monitor should survive extended periods of operation with line voltage reduced below the specified minimum
9. An isolation transformer should be used when performing alignment and tests . Portions of the power supply board are hot ground . The remaining boards are cold ground .
10. Discharge of CRT anode should be done only to CRT ground strap .
11. Geometric measurements are assumed to be made along a straight surface with a flat rule or template .

B . INSTRUMENT ALIGNMENT .

1. Defection Presets .
   Control pots VR201、VR4403、VR4401、VR4402 are set at middle point. Screen, Focus VR set to min .

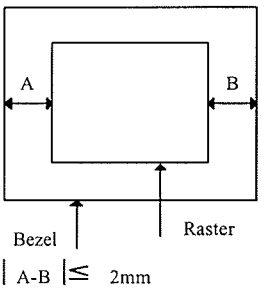
2. Power Supply Alignment .
   2.1 Input VESA (1280*1024 @85Hz) signal cross-hatch pattern & beam current set at 0μA .

   2.2 Adjust VR201 until TP201 = 170V± 0.2V at TP201 .

   2.3 Input VGA(480) signal cross-hatch pattern&beam current set at 0uA

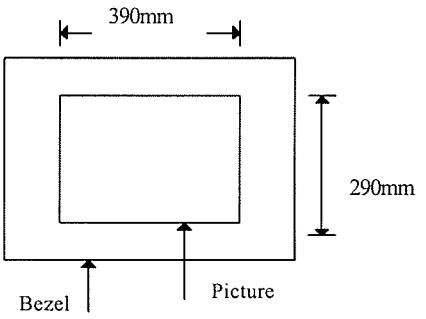
   2.4 Adjust VR4401must be high voltage 27KV +/- 0.1KV .

   2.5 Adjust Screen VR to let G2 580 +/- 10V

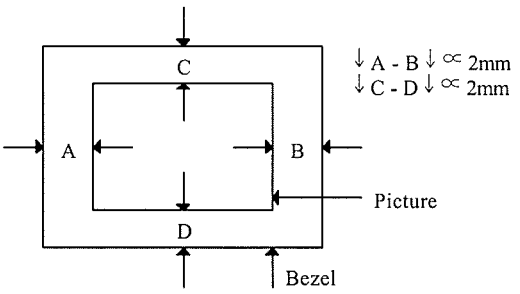


3. Size & Geometry Adjustment .
   3.1 Raster Centering .
      3.1.1 Input cross hatch pattern at 93K 1600*1200 mode .
      3.1.2 Adjust contrast to 10FL, adjust screen just raster visible .
      3.1.3 Adjust VR404 to center raster on screen such that the horizontal distance from the midpoint of the left display edge to the left bezel edge is within 2mm of the distance from the midpoint of the right display edge to the right bezel edge .

   3.2 Picture Size .
      Input mode 1~15 signal adjust V-size, H-size to achieve .
      H-SIZE : 390mm ± 2mm
      V-SIZE : 290mm ± 2mm



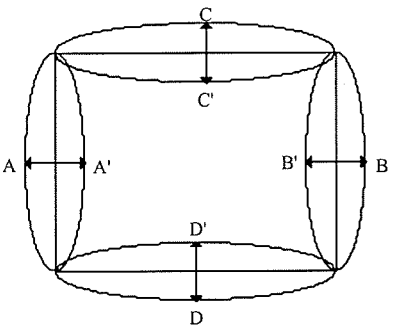
   3.3 Picture Centering .
      Input mode 1~15 adjust V-position,
      H-position such that the picture is centered with the screen .



3.4 Geometry Adjustment .

3.4.1 Input mode 1~15

3.4.2 Pincushion and barrel distortion .



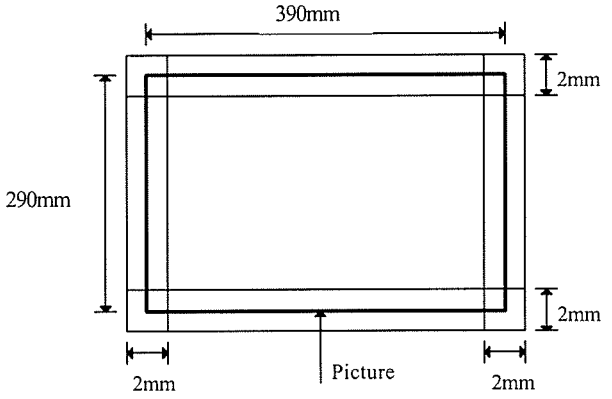
Pinchshion ≤ 1mm (A',B',C',D')

Barrel ≤ 1mm (A,B,C,D)

Pincushion / Barrel distortion

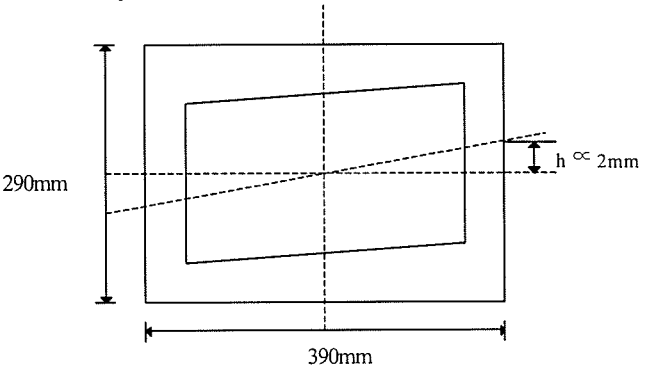
3.4.3 Trapezoid and parallelogram distortion

trapezoid / parallelogram≦1.5mm .



Trapezoid / Parallelogram distortion

3.4.4 Rotate adjustment .



4. Video Alignment / function memory recall .

4.1 Input 1280x1024 91KHz full black pattern .

4.2 Set Brightness 100% , Contrast 0% , turn the G2 knob to obtain raster light O/P about 0.7FL .

4.3 Adjust R、G、B bias Control to meet following chromatically spec .
9300°K → x = 0.283± 0.003, y = 0.297± 0.003, Y = 0.6± 0.3 FL .
6500°K → x = 0.313± 0.003, y = 0.329± 0.003, Y = 0.6± 0.3 FL .
5000°K → x = 0.346± 0.003, y = 0.359± 0.003, Y = 0.9± 0.3 FL .

4.4 Adjust Brightness to 50% , Contrast 100% .

4.5 Apply 70mmx70mm green window pattern , adjust G-Driver to obtain green window pattern light O/P about 23 ± 2FL (9300°K) .

4.6 Apply white window pattern , adjust R-Driver, B-Driver to meet following chromatically spec .
9300°K → x = 0.283± 0.003, y = 0.297± 0.003, Y = 33± 2 FL .

4.7 Apply 70mmx70mm green window pattern , adjust G-Driver to obtain green window pattern light O/P about 21 ± 2FL (6500°K), 19 ± 2FL for (5000°K) .

4.8 Apply white window pattern , adjust R-Driver, B-Driver to meet following chromatically spec .
6500°K → x = 0.313± 0.003, y = 0.329± 0.003, Y = 33± 2 FL .
5000°K → x = 0.346± 0.003, y = 0.359± 0.003, Y = 33± 2 FL .

4.9 Apply full white pattern .

4.10 Adjust VR4402 to obtain light O/P =30± 1 FL .

4.11 Apply full white pattern , adjust contrast from max to 10FL and check the chromatically meet following spec .
| x (at contrast, 25.75) – x (at contrast, 30FL) | ≦ 0.003 .
| y (at contrast, 25.75) – y (at contrast, 30FL) | ≦ 0.003 .
| x (at contrast, 25.75) – x (at contrast, 10FL) | ≦ 0.007 .
| y (at contrast, 25.75) – y (at contrast, 10FL) | ≦ 0.006 .

4.12 Functions "All mode recall" .
Push button "1" and power switch on , the picture should restore to that of factory mode .

5. Focus Adjustment .

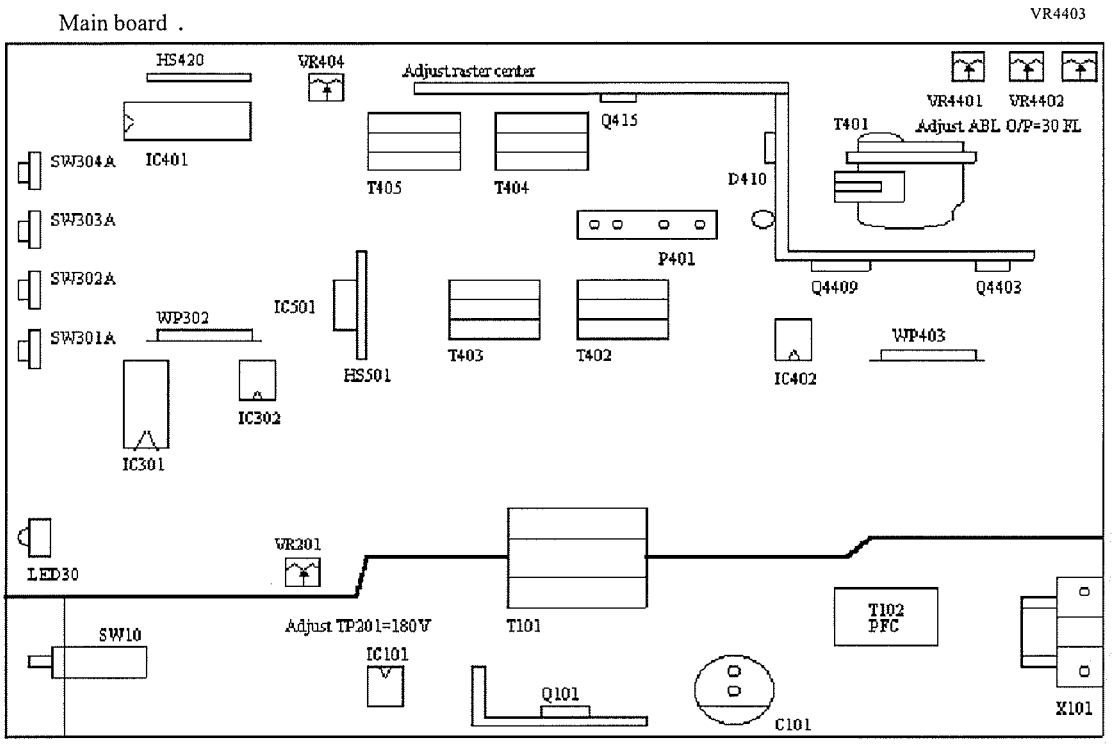
5.1 Apply signal ALL "mE" pattern at 1280*1024 91K mode .

5.2 Set Brightness 50% , Contrast 100% .

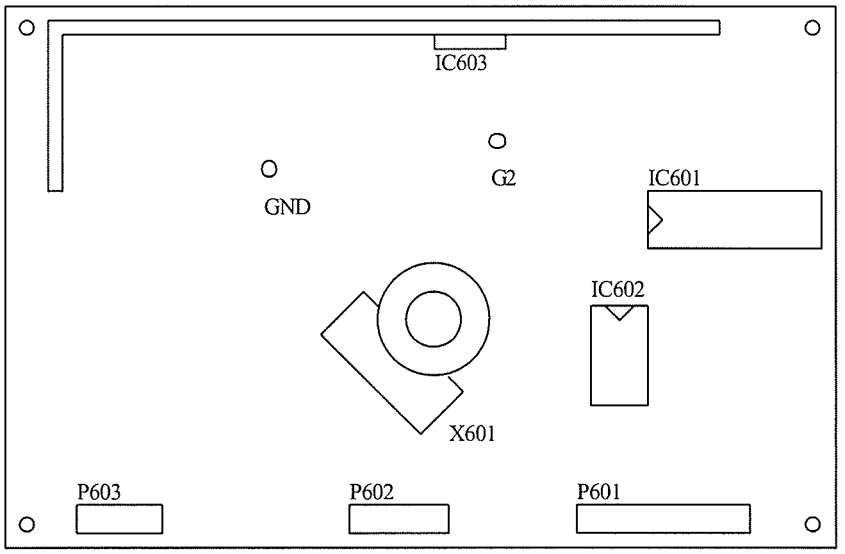
5.3 Set focus control for best focus .

C . PCB defined .

Main board .

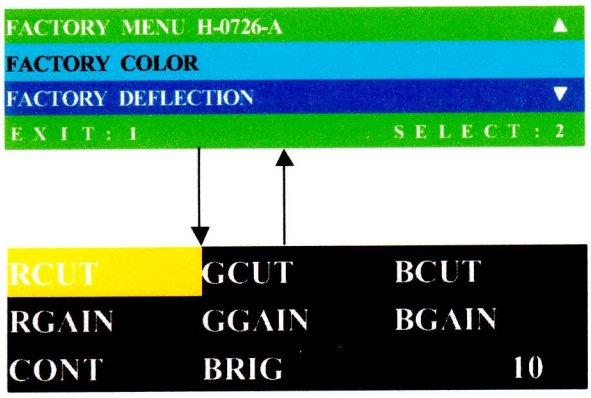


Video Board .

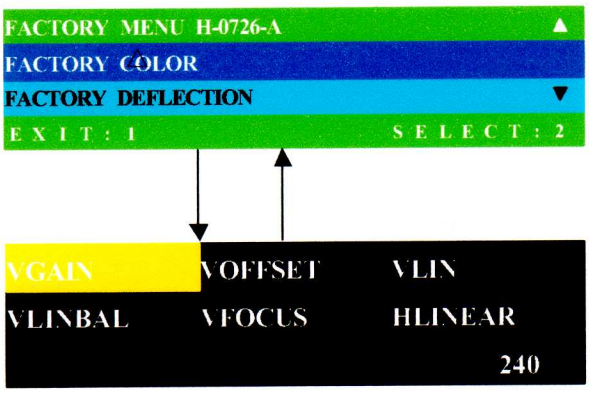


D. Fixture Function Description.

1. Push "▽" & "△" key, then turn on monitor, and select "FACTORY COLOR" or "FACTORY DEFLECTION" , the OSD into service adjust.



RCUT : R CUT Adjust
GCUT : G CUT Adjust
BCUT : B CUT Adjust
RGAIN : R GAIN Adjust
GGAIN : G GAIN Adjust
BGAIN : B GAIN Adjust
CONT : Contrast Adjust
BRIG : Brightnedd Adjust



VGAIN : Vertical gain adjust
VOFFSET : Vertical offset adjust
VLIN : Vertical linearity adjust
VLINBAL : Vertical linarity balance adjust
VFOCUS : Vertical focus adjust
HLINEAR : Horizontal linear adjust

2.

2.1 User control.

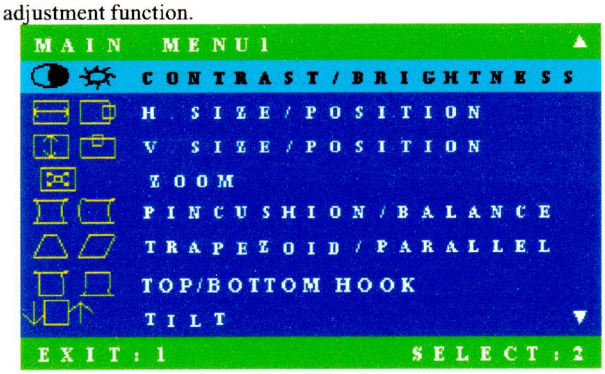
2.1.1 Power switch: Soft power control.

2.1.2 Function key.

Function select button: [1], [2].

Adjustment control button: ▽, △.

2.2 OSD adjustment function.



2.2.1 Main menu, Part 1.

Note: Press button [2] to toggle between all Controls that appear in pairs on the Main menu1.

Contrast adjusts the difference between the image background (black level) and the foreground (white level).

Brightness adjusts the background brightness of the screen image.

Horizontal size adjusts the width of the screen image.

Horizontal position moves the screen image left or right.

Vertical size adjusts the height of the screen image.

Vertical position moves the screen image up and down.

Zoom asjust the width and height of the screen image.

Pincushion curves the vertical side of the screen image.

Balance curves the vertical edges of the screen image to the right or left.

Trapezoidadjust the top and bottom of the screen image until they have equal length.

Parallel slants vertical edges of the screen image until they are parallel.

Top Hook horizontal corner correction at top of picture

Bottom Hook horizontal corner correction at bottom of picture

Tilt rotates the entire screen image.

2.2.2 Main menu, Part 2.

Degauss removes the build-up of magnetic fields that can cause irregular colors to appear around the edges of screen images. There are two ways to degauss the display: automatically by turning the monitor on or manually by selecting the Degauss control from the menu.
With Degauss selected from the menu, press button [2] to degauss the monitor manually.

Important: Do not degauss repeatedly. Doing so can be harmful to the display. Wait at least 20 minutes (before selecting this control again).

H/V Moiré (horizontal and vertical) reduces interference patterns that appear as ripples, waves, or unwanted background color textures. Interference patterns of this type are most noticeable when viewing images having closely spaced lines or finely detailed patterns.

View Match Color provides several color options: several preset color temperatures and User Color which allows you to adjust red (R), Green (G), and blue (B). The factory setting for this product is 9300°K.
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.
5000K - Adds blue and green to the screen image for a darker color.
User Color - Individual adjustments for red, green, and blue.

Input Level displays the voltage level of the video signal.
Note: the default selection is 0.7V.

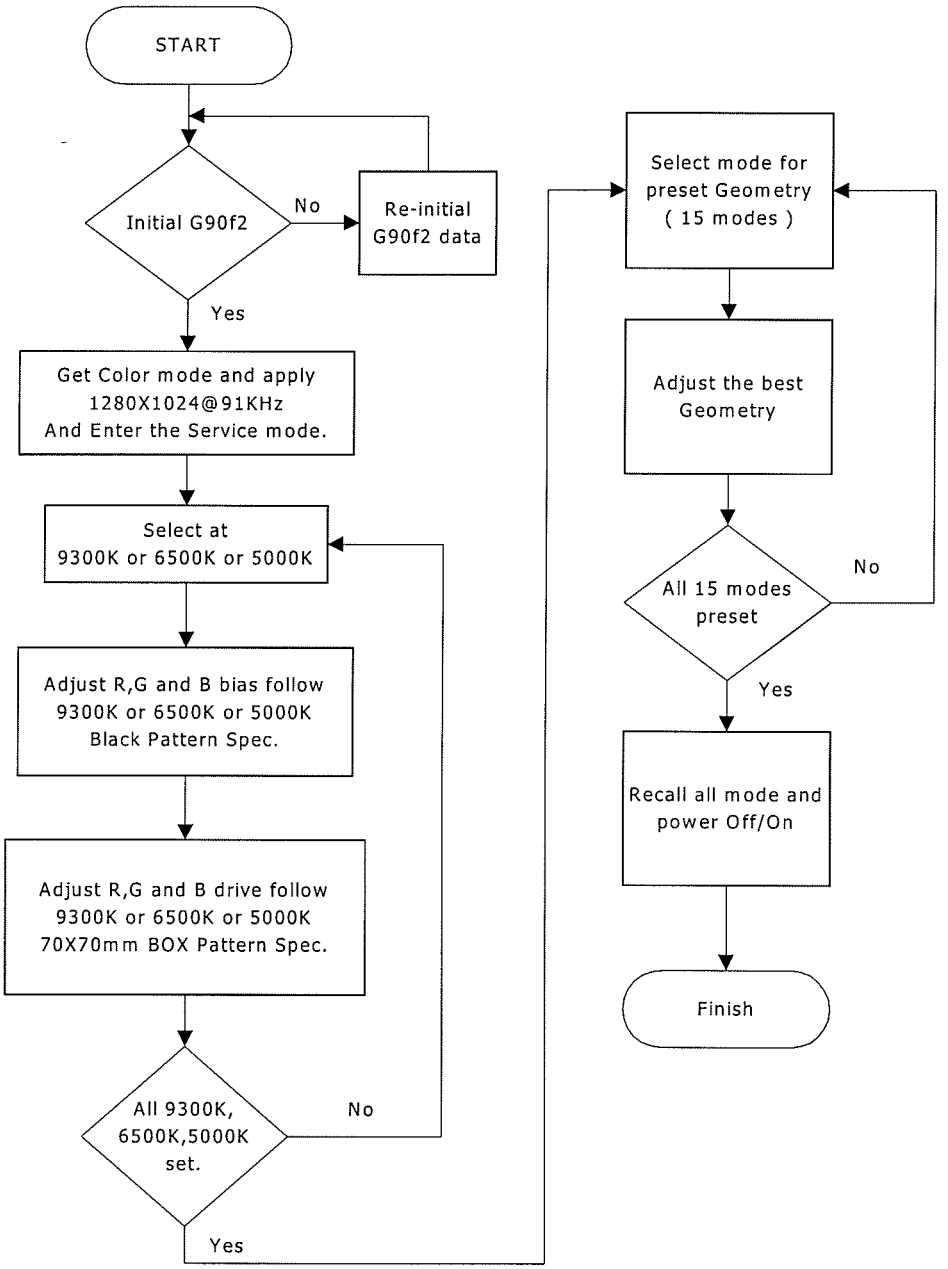
Language allows you to choose from among several languages for the menus and control screens: English, French, German, Italian, and Spanish.

OSD Position allows you to move the on-screen display menus and control screens.

View meter displays information regarding the current input signal coming from the graphics card of the computer.

Memory recall returns adjustment to the original factory setting if the display is operating in a factory preset timing mode listed in this user guide.
Exception: This control does not affect changes made with the **User Color** control.

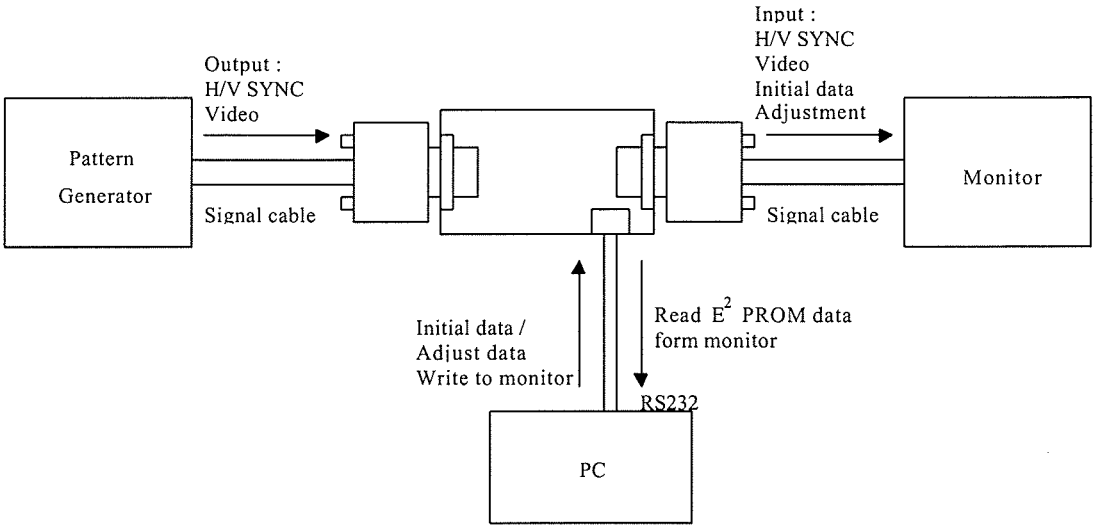
3. Fixture adjust procedure .



Remark: 1. Press menu key "2" and "DOWN" and power No for enter Burn in mode then press "1" and "UP" and power No for enter SERVICE mode.
2. In SERVICE MODE adjusting bar will change to adjusting data 0~255 and adjust by "DOWN / UP" key.
3. Before adjust color need burn in CRT around 30minuts (temperature ~45-60°C).
4. After finishing process **need DISABLE BURN IN** mode by press "UP" and "DOWN" and power On.

4. Fixture Connect .

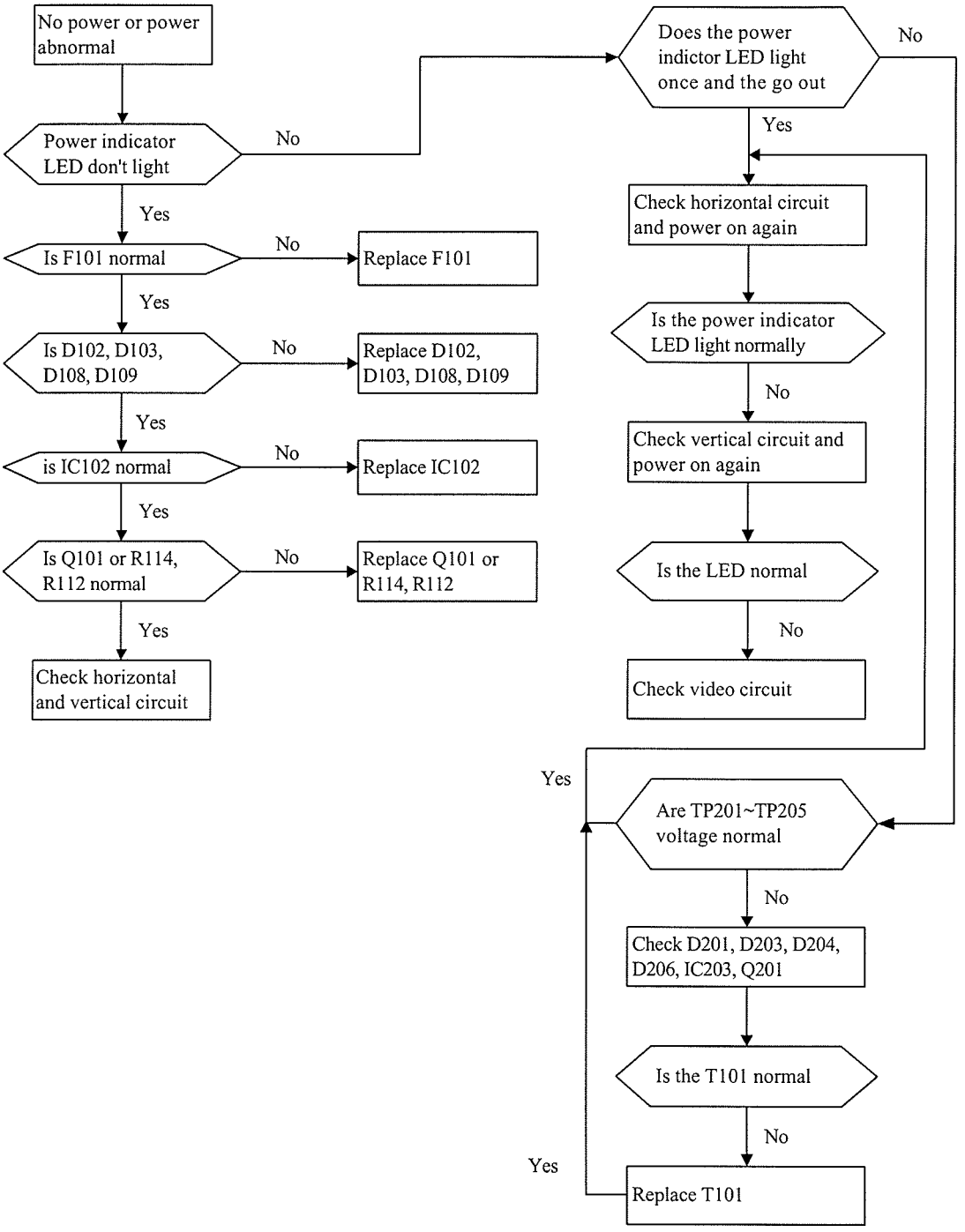
a. Fixture adjustment .



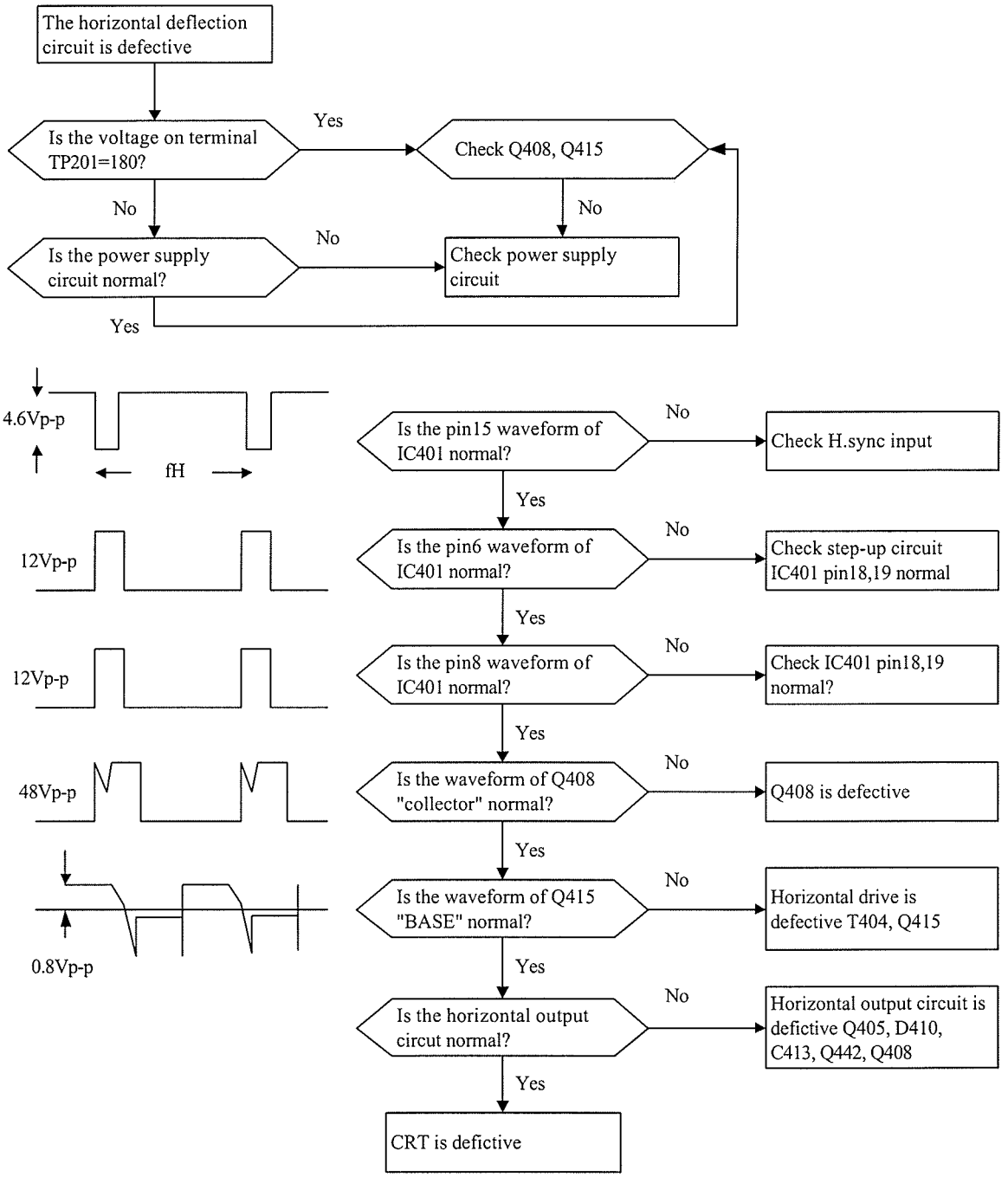
Ⅶ
Trouble shooting flow chart

1. Power supply is defective.
2. Horizontal deflection circuit is defective.
3. The raster don't appear.
4. Vertical deflection is defective.
5. Video is defective.

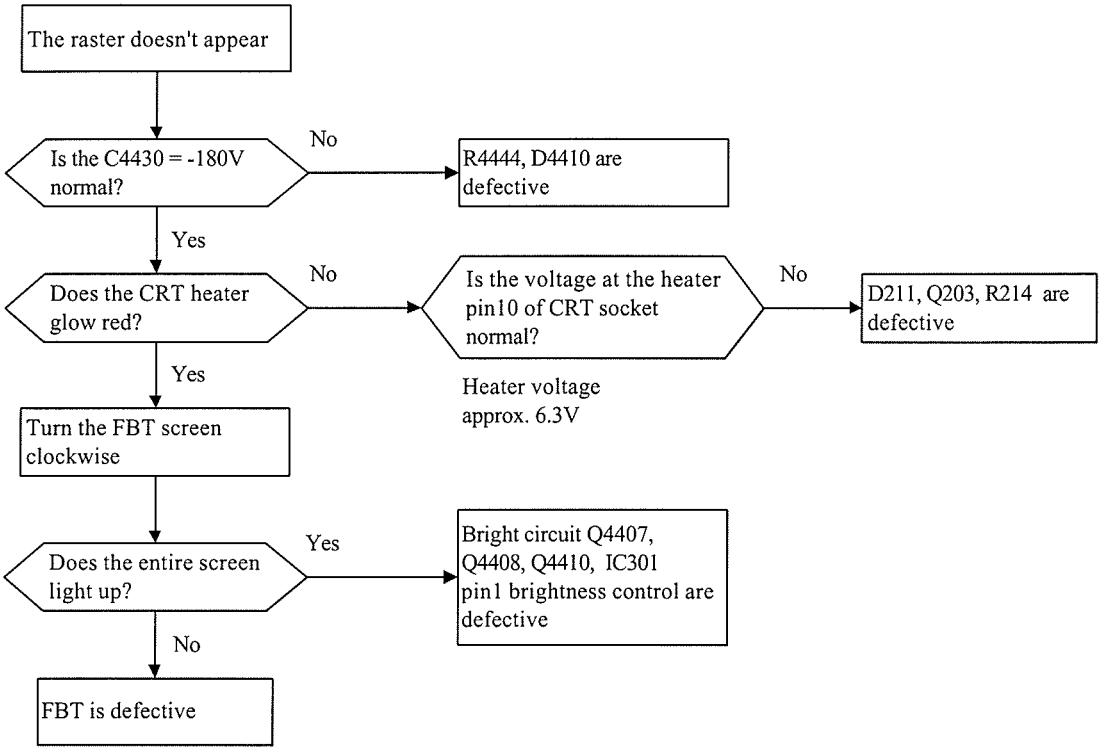
1. Power supply is defective .



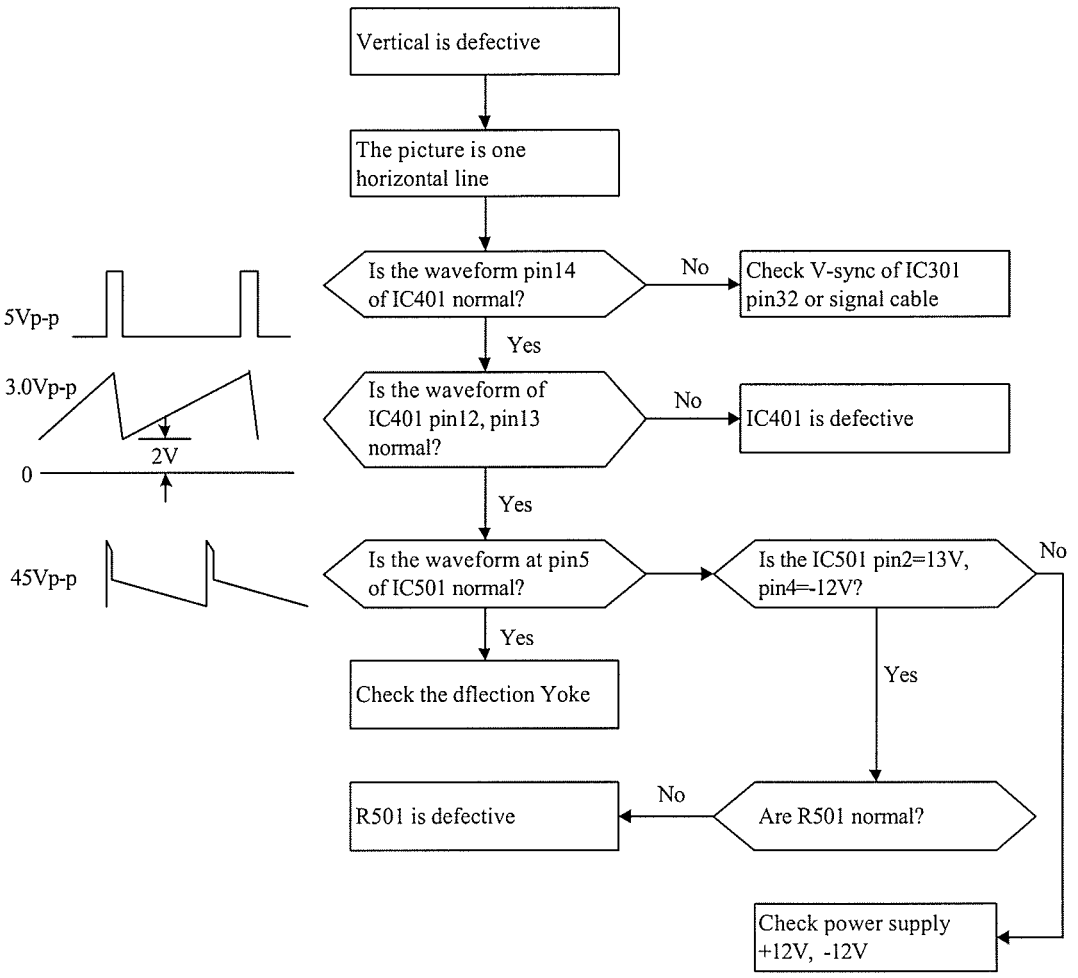
2. Horizontal deflection circuit is defective .



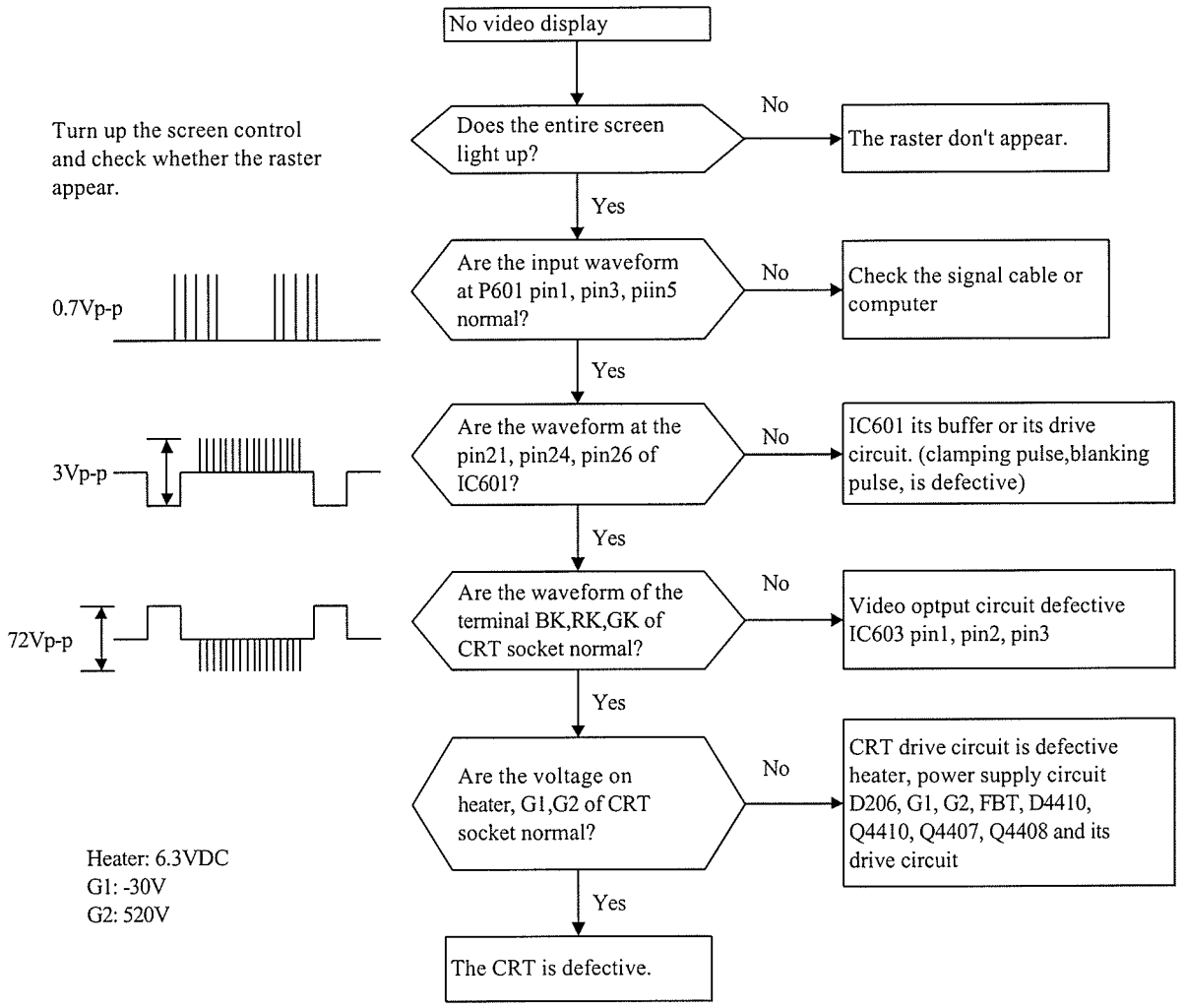
3. The raster doesn't appear



4. Vertical deflection is defective .



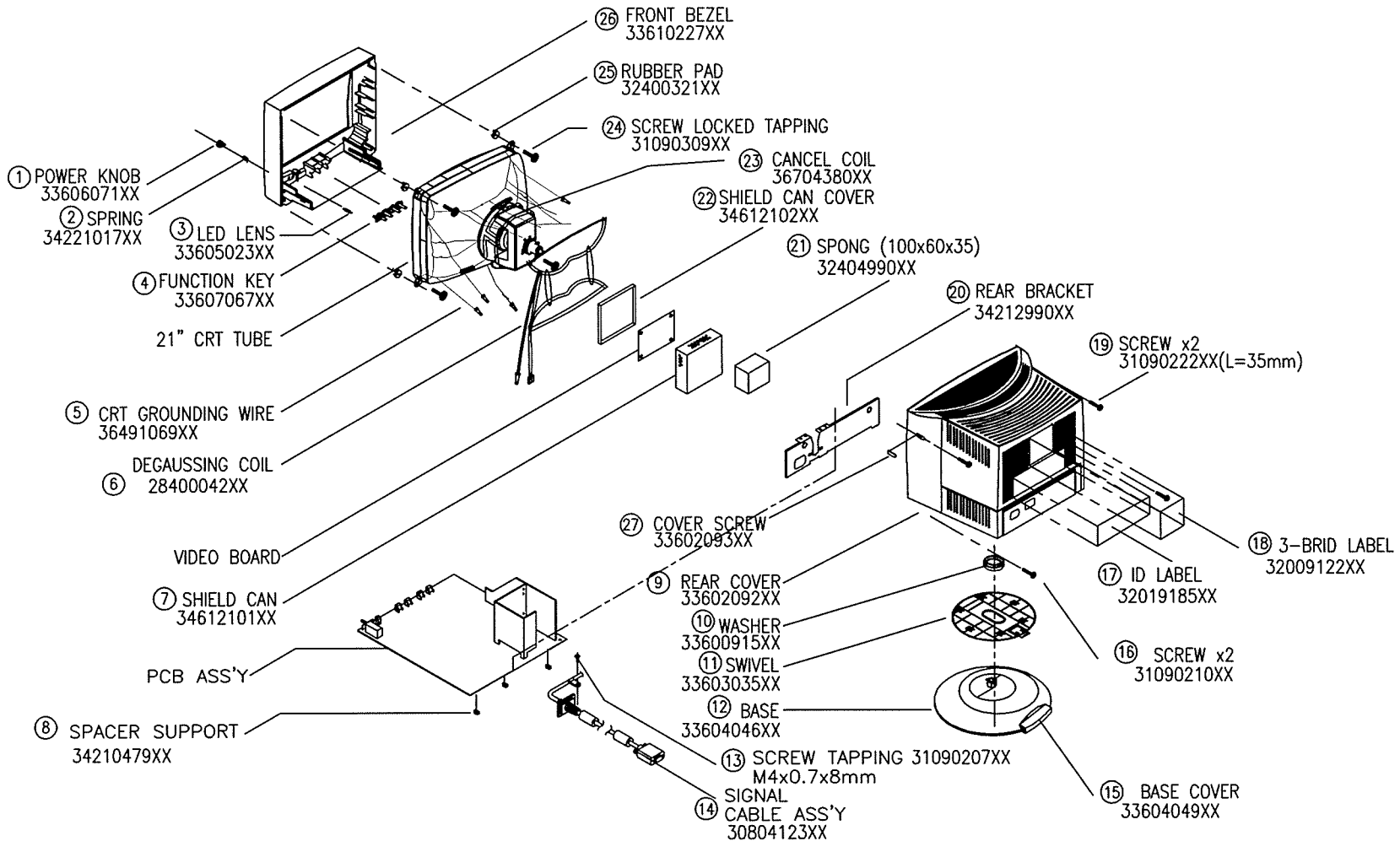
5. Video is defective .



Mechanical Assembly

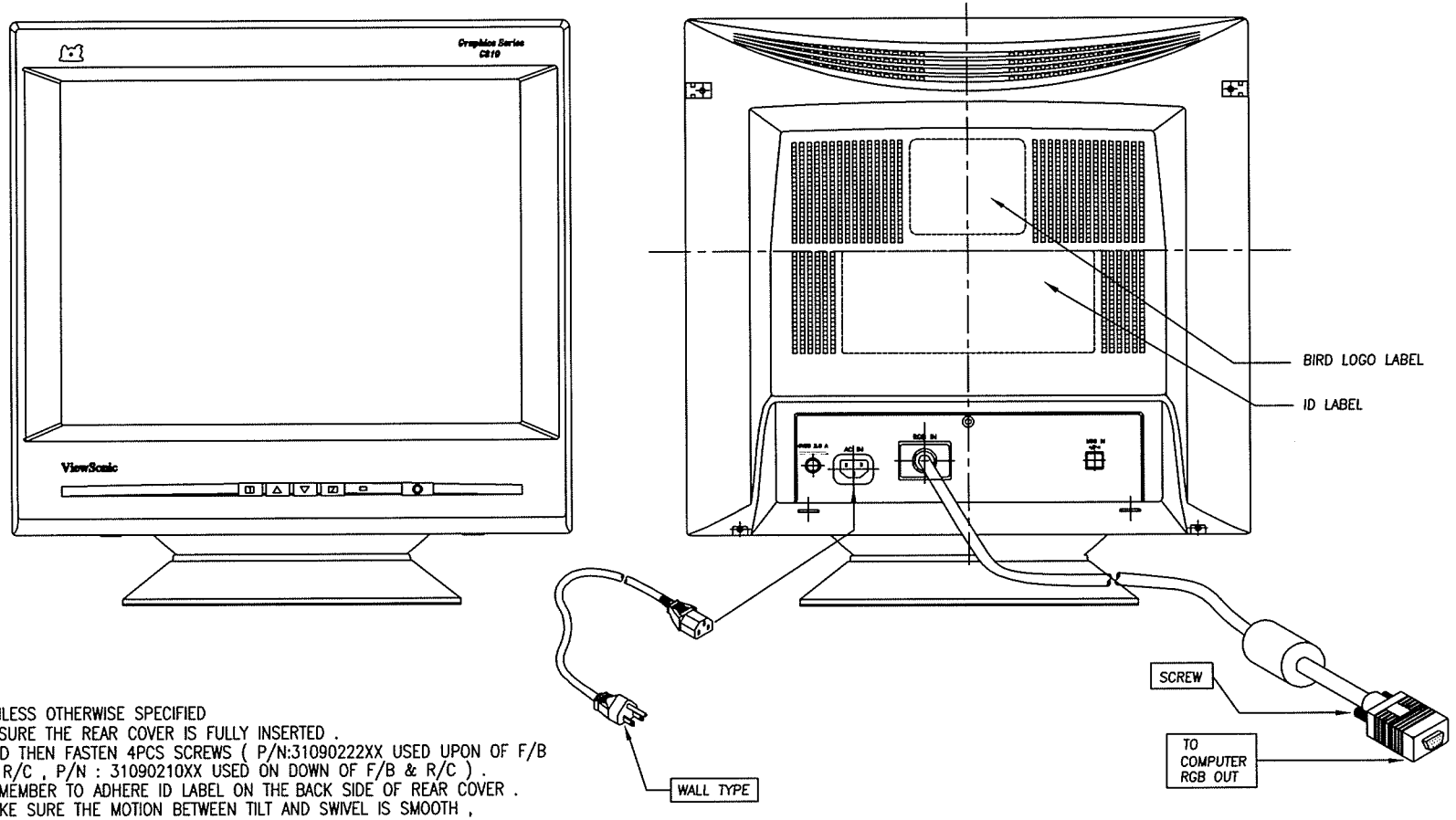
VIII

ITEM	PART DESCRIPTION	PART NUMBER	VIEWSONIC P/N
1	FRONT BEZEL	3361022700	C-FP-0301-0861
2	POWER KNOB	3360607100	PL-NB-0707-0150
3	SPRING	3422101700	M-MS-0808-4932
4	RUBBER PAD	3240927100	M-MS-0808-6875
5	LED LENS	3360502300	M-MS-0808-5667
6	FUNCTION KEY	3360706700	PL-FK-0709-0038
7	RUBBER PAD	3240927100	M-MS-0808-6875
8	SCREW LOCKED TAPPING	3109030900	M-SCW-0824-0395
9	CRT GROUNDING WIRE	3649106900	N/A
10	SPONG (100x60x35)	3240499000	M-MS-0808-4825
11	MACHINE SCREW	3100301000(X4)	N/A
12	BRACKET REAR	3421299001	M-MS-0808-7967
13	REAR COVER	3360209200	C-BC-0302-0288
14	SCREW	3109022200	M-SCW-0824-0394
15	SCREW	3109021001	M-SCW-0824-0414
16	WASHER	3360091500	M-MS-0808-3068
17	SWIVEL	3360303500	PL-TB-0717-0088
18	BASE	3360404600	PL-PS-0715-0112
19	RUBBER PAD	3240927100	M-MS-0808-6875
20	BASE COVER	3360404900	M-CV-0830-0178



ViewSonic Corporation	DIMENSIONAL TOLERANCES ( ) <30 : ±0.25 >30~100 : ±0.35 >100~300 : ±0.5 ABOVE 300 : ±0.8 HOLES: ±0.06 ( ) DECIMALS X : ±0.3 XX : ±0.2 XXX : ±0.1 ANGLES:±0.5° ( ) UP~100 : ±0.2 100~150 : ±0.25 150~200 : ±0.3 200~250 : ±0.35 250~300 : ±0.4 300~350 : ±0.45 350~400 : ±0.5 ( ) UP~600 : ±1.5 600~900 : ±2.4 900~OVER : ±3.1	Drawn: SAYAN.S Designed: SAYAN.S. Checked: ALAIN.YEH Approved: FRANK.LIN	THIRD ANGLE PROJECTION	DESCRIPTION: ENGINEERING NOTECES			
	SCALE — UNIT MM USED ON B197 SAW 01A		A4 SIZE	DRAWING NO.: 336M2197	REV. 00	SHEET 3 TO 4	

FRAME NAME : FR5-5R00.DWG



NOTE : UNLESS OTHERWISE SPECIFIED
1.ENSURE THE REAR COVER IS FULLY INSERTED . AND THEN FASTEN 4PCS SCREWS (P/N:31090222XX USED UPON OF F/B & R/C , P/N : 31090210XX USED ON DOWN OF F/B & R/C) .
2.REMEMBER TO ADHERE ID LABEL ON THE BACK SIDE OF REAR COVER .
3.MAKE SURE THE MOTION BETWEEN TILT AND SWIVEL IS SMOOTH , WITHOUT SQUEAKS AND GAPS , APPLY LUBRICANT ONTO FRICTION SURFACE OF SWIVEL DEVICES IS ACCEPTABLE .
4.PACKING MATERIAL HAVE TO MEET ENG , DEPT , SPEC .
5.INSPECTION REFER TO SPEC. 10000-0153.

ViewSonic Corporation

DIMENSIONAL TOLERANCES

( )		(√)		( )		( )	
<30	: ±0.25	DECIMALS		UP~100	: ±0.2	UP~600	: ±1.5
>30~100	: ±0.35	X	: ±0.3	100~150	: ±0.25	600~900	: ±2.4
>100~300	: ±0.5	XX	: ±0.2	150~200	: ±0.3	900~OVER	: ±3.1
ABOVE 300	: ±0.8	XXX	: ±0.1	200~250	: ±0.35		
HOLES:	±0.05	ANGLES:	±0.5°	250~300	: ±0.4		
				300~350	: ±0.45		
				350~400	: ±0.5		

SCALE		UNIT	MM	USED ON	B197 SAW 01A

Drawn: SAYAN.S
Designed: SAYAN.S
Checked: ALAIN.YEH
Approved: FRANK.LIN

THIRD ANGLE PROJECTION

DESCRIPTION: ENGINEERING NOTECES

A4 SIZE

DRAWING NO.: 336M2197

REV. 00

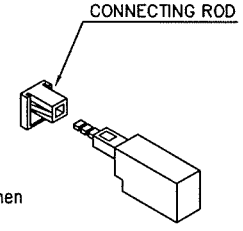
SHEET 2 TO 3

FRAME NAME : FR5-5R00.DWG

NOTE : UNLESS OTHERWISE SPECIFIED

A.FRONT BEZEL (F/B) & CRT ASS'Y

1.POWER SWITCH BUTTON INSERT THE COMPRESSION SPRING AND CONNECTING ROD TO INPUT POWER SWITCH.
2.The LED LENS fix to Front bezel that check lock RIB fix on front bezel.
3.Check lock RIB for 4 point on the front bezel when fix FUNCTION KEY to front bezel.
4.The CRT GROUNDING WIRE fix CRT MOUNTING LUG when the sprint must fix to CRT in the opposite position.
5.The DEGAUSSING COIL fix to CRT when HOUSING fix side as same as MAIN BD CONNECTOR side.
6.The CRT fix on the front bezel that must insert RUBBER PAD 4 pcs. to BOSS point on the front bezel brfore.
7.Use SCREW WITH LOCK WASHER (P/N : 31090309XX) that the screw fix through MOUNTING LUG of CRT on the front bezel. (must follow sequence when fix screw on the front bezel)
8. INSERT CONNECTING ROD TO POWER SWITCH AND ADD ADHESIVE GLUE BETWEEN CONNECTING ROD AND SWITCH

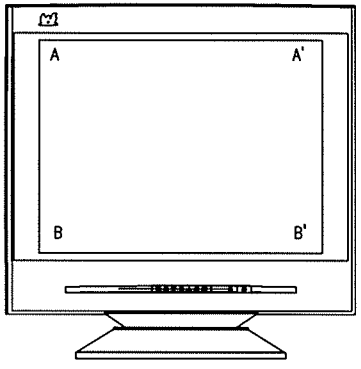


B.FRONT BEZEL ASS'Y & CRT ASS'Y :

1.Make sure the hook fix MAIN BD of two side on the front bezel when PCB ASS'Y (MAIN BOARD) insert to PCB GUIDE slide.
2.DEGAUSSING CONNECTOR 2PINS HOUSING insert to MAIN BD. P101 .location.
3.The YOKE (H-DY & V-DY) 4PINS HOUSING insert to MAIN BD. P401 location.
4.The VIDEO BOARD ASS'Y insert to CRT BASE SOCKET.
5.The FBT component insert LF(FOCUS) wire to CRT SOCKET SPARK GAP.
6.The FBT component insert LS(SCREEN) wire to VIDEO BD. for G2 point.
7.The CRT GROUNDING WIRE fix HOUSING (7 points) to VIDEO BD for GND1,GND 2 ROUND PIN & MAIN BD.EMI 2,3,5,6,7 ROUND PIN.

8. Assemble SHIELD CAN when the SHIELD CAN must solder four corner of the edge & center square hole.
9.9 PINS CONNECTOR insert to VIDEO BD. P604.
10.11 PINS CONNECTOR insert to VIDEO BD. P602.
11.The 11PINS CONNECTOR insert to VIDEO BD. P601 for signal cable.
12.The GROUNDING WIRE insert to SHIELD CAN hook for signal cable that the hook & grounding wire must solder it.
13.ADD ADHESIVE GLUE (TSE 3843-W OR EQUIVALENT) BETWEEN CRT BASE AND CRT SOCKET TO AVOID LOOSEN.
14.SPONGE SHOULD BE ADHERED ON THE SHIELD CAN.

15.THROUGH SIGNAL CABLE OVER THE HOLE (MARK AS "RGB IN") OF THE REAR COVER.
16.MAKE SURE ONE SPACER SUPPORT (P/N : 34210438XX) IS ALREADY ASSEMBLED ON THE BACK SIDE OF MAIN BOARD IN THE FINAL ASSEMBLY , THE SPACER SUPPORT CAN FIX PCB ON REAR COVER.
17.THE GAPS BETWEEN THE CRT GLASS AND THE BEZEL PLASTIC SHELL NOT BE GREATER THAN THE FOLLOWING SHOWN :



CORNER A,A' : 0.5mm (MAX)
EDGE A,A' : 0.5mm (MAX)
CORNER B,B' : 0.5mm (MAX)
EDGE AB,A'B',BB' : 0.5mm (MAX)

ViewSonic Corporation

DIMENSIONAL TOLERANCES

( )		( )		( )		( )	
<30	: ±0.25	DECIMALS		UP~100	: ±0.2	UP~600	: ±1.5
>30~100	: ±0.35	X	: ±0.3	100~150	: ±0.25	600~900	: ±2.4
>100~300	: ±0.5	XX	: ±0.2	150~200	: ±0.3	900~OVER	: ±3.1
ABOVE 300	: ±0.8	XXX	: ±0.1	200~250	: ±0.35		
HOLES: ±0.06		ANGLES: ±0.5°		250~300	: ±0.4		
				300~350	: ±0.45		
				350~400	: ±0.5		

SCALE	NP	UNIT	MM	USED ON	B197 SAW 01A

Drawn: SAYAN.S
Designed: SAYAN.S
Checked: ALAIN.YEH
Approved: FRANK.LIN

THIRD ANGLE PROJECTION

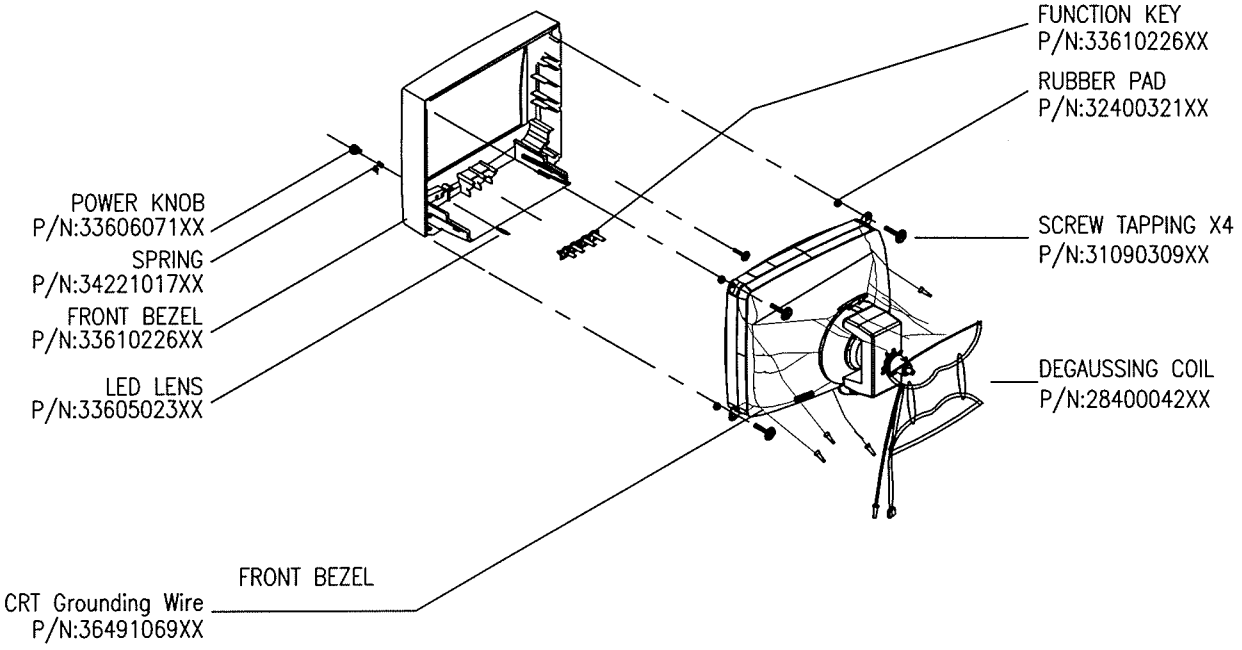
DESCRIPTION: ENGINEERING NOTICES

A4 SIZE

DRAWING NO.: 336M2197

REV. 00

SHEET 3 TO 65



NOTE:UNLESS OTHERWISE SPECIFIED for assemble

A. FRONT BEZEL + POWER KNOB +SPRING +FUNCTION KEY + LED LENS+ RUBBER = FRONT BEZEL ASS'Y

1.POWER KNOB plug to front bezel when the spring insert to power knob before.(Direct vector don't reverse by assemble)

2. Fix FUNCTION KEY to front bezel by glue.

3.FIX LED LENS to BOSS point on the front bezel by heat .

4.USE 2 PCS BUMBER FOOT TO FIX FRONT BEZEL BOTTOM, AND PRESS ON WITH BUMBER FOOT.

B.FRONT BEZEL ASS'Y + CRT ASS'Y by assemble way.

1.The CRT put on the F/B that insert RUBBER PADS (P/N:32409267XX) of 4 pcs. on the F/B before.

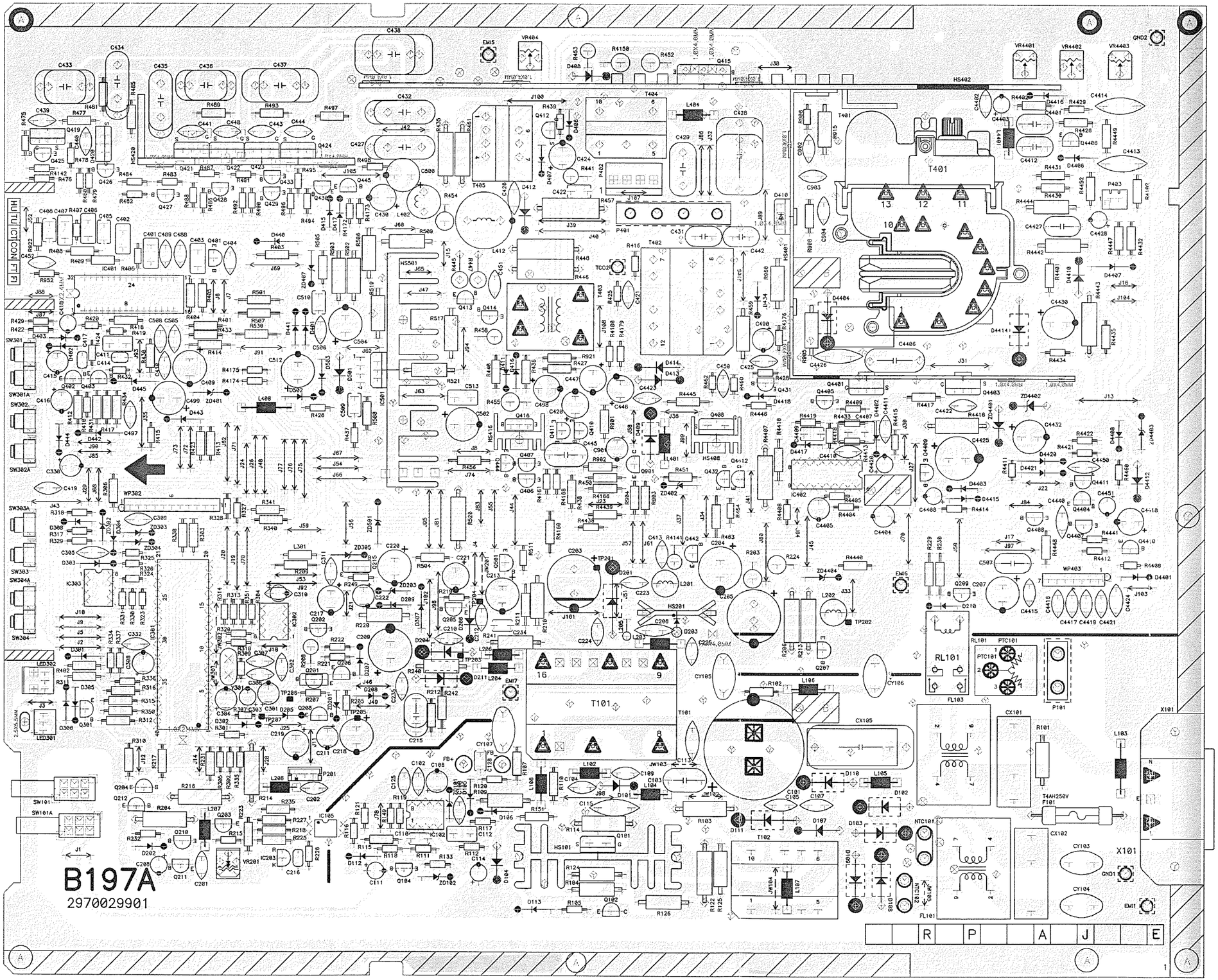
2.DEGAUSSING COIL CABLE TIE fix CRT of 4 pcs,when the scew fix CRT to FRONT BEZEL after.

3.Use SCREW WITH LOCK WASHER by fix CRT on the F/B that the CRT must align to CRT MOUNTING PURSE LOCK boss hole frist. setup screw driver torque to (20~25) kg/cm²& follow DELTA workmanship standard.

ViewSonic Corporation	DIMENSIONAL TOLERANCES ( ) <30 : ±0.25, >30~100 : ±0.35, >100~300 : ±0.5, ABOVE 300 : ±0.8, HOLES: ±0.05 ( ) DECIMALS X : ±0.3, XX : ±0.2, XXX : ±0.1, ANGLES:±0.5° ( ) UP~100 : ±0.2, 100~150 : ±0.25, 150~200 : ±0.3, 200~250 : ±0.35, 250~300 : ±0.4, 300~350 : ±0.45, 350~400 : ±0.5 ( ) UP~600 : ±1.5, 600~900 : ±2.4, 900~OVER : ±3.1 SCALE: NP / UNIT: MM / USED ON: B197 SAW 01A	Drawn: SAYAN.S Designed: SAYAN.S Checked: ALAIN.YEH Approved: FRANK.LIN	THIRD ANGLE PROJECTION A4 SIZE	DESCRIPTION: ENGINEERING NOTECES DRAWING NO.: 336M2197 SHEET 5 TO 6	REV. 00

IX

PCB layout diagram



Drill Symbol Table		
Hole Dia (mm)	Symbol	Quantity
0.70	+	32
0.80	X	86
0.90	Y	4
1.00	T	1409
1.0X2.4	⧖	2
1.0X4.0	⧓	13
1.10	⊔	52
1.20	◇	157
1.30	⧅	34
1.40	◈	7
1.50	⧆	6
1.60	⧁	17
1.70	⧈	6
1.80	⧁	8
1.90	⧅	1
2.00	◈	97
2.20	⧈	26
2.50	⧁	2
2.5X5.5	⧁	1
2.60	⧁	19
2.70	⊕	4
3.00	⊗	23
3.50	⧁	7
3.60	⧁	1
4.00	A	8
4.50	B	3

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G810-6 Complete Parts List

X

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
1	E-CRT-0409-0228	0742100010	CRT .25 21" 90D TCO	
2	E-CRT-0409-0229	0742100210	CRT .25 21" 90D TCO S/H	
3	E-L-0407-1503	2840004206	DEGAUSSING COIL 16.4 OHM K	
4	A-PC-0106-0114	3080104100	AC POWER CORD L1800 IVORY US	
5	M-MS-0808-8093	3080412300	CABEL D-SUB/HOUSING L1830 Y0-487 O	
6	A-PC-0106-0132	3090107700	AC POWER CORD L=1800 Y0-487 UL/CSA	
7	M-LB-0813-0465	3200912200	LABEL BIRD LOGO 90*75 VSC FOR R/C	
8	M-LB-0813-0684	3201918500	LABEL ID 200*80.5 G810-6M B197SAW0	
9	N/A	3360209300	COVER SCREW L ABS 94V-0	
10	M-MS-0808-5155	4020302808	PLASTIC ABS 94V0 Y0-487 AF-312	
11	M-MS-0808-5159	4020311408	PLASTIC ABS 94V0 NAT AF-312	
12	M-MS-0808-4211	4020303014	PLASTIC ABS 94V0 Y0-487 PA-765A	
13	M-MS-0808-5161	4020311414	PLASTIC ABS 94V0 NAT PA-765A	
14	M-MS-0808-4212	4020303509	PLASTIC ABS 94V0 Y0-487 VH-0810	
15	M-MS-0808-5160	4020311409	PLASTIC ABS 94V0 NAT VH-0810	
16	C-BC-0302-0399	3368076100	R/C ASSY A195SAW05A S1RA1LS	
17	M-MS-0808-4825	3240499000	SPONGE PU FOAM 100*60*35	
18	C-BC-0302-0288	3360209200	R/C PC+ABS Y0-487 S1RA1LS	
19	M-MS-0808-5157	4020306000	PLASTIC PC+ABS 94-5V Y0-487 C2800	
20	M-MS-0808-5158	4020306300	PLASTIC PC+ABS 94-5V Y0-487 FR-200	
21	M-MS-0808-6022	4020306308	PLASTIC PC+ABS 94-5V Y0-487 GN-500	
22	C-BS-0303-0238	3368090100	S/B ASSY A195SAW01A S1SA1LS&S1BA1L	
23	M-MS-0808-6875	3240927100	RUBBER PAD 14.6*11 BLACK	
24	M-MS-0808-3068	3360091500	FRICTION WASHER ABS Y0-487	
25	M-MS-0808-4210	4020302907	PLASTIC ABS 94HB Y0-487 D-180	
26	M-MS-0808-5163	4020311607	PLASTIC ABS 94HB NAT D-180	
27	M-MS-0808-5156	4020302914	PLASTIC ABS 94HB Y0-487 PA-707	
28	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
29	M-MS-0808-4213	4020305300	PLASTIC ABS 94HB Y0-487 PA-757	
30	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
31	PL-TB-0717-0088	3360303500	SWIVEL ABS Y0-487 S1SA1LS	
32	M-MS-0808-4210	4020302907	PLASTIC ABS 94HB Y0-487 D-180	
33	M-MS-0808-5163	4020311607	PLASTIC ABS 94HB NAT D-180	
34	M-MS-0808-5156	4020302914	PLASTIC ABS 94HB Y0-487 PA-707	
35	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
36	M-MS-0808-4213	4020305300	PLASTIC ABS 94HB Y0-487 PA-757	
37	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
38	PL-PS-0715-0112	3360404600	BASE ABS Y0-487 S1BA1LS	

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
39	M-MS-0808-4210	4020302907	PLASTIC ABS 94HB Y0-487 D-180	
40	M-MS-0808-5163	4020311607	PLASTIC ABS 94HB NAT D-180	
41	M-MS-0808-5156	4020302914	PLASTIC ABS 94HB Y0-487 PA-707	
42	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
43	M-MS-0808-4213	4020305300	PLASTIC ABS 94HB Y0-487 PA-757	
44	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
45	M-CV-0830-0178	3360404900	BASE COVER Y0-487 S7BB1EL	
46	M-MS-0808-4210	4020302907	PLASTIC ABS 94HB Y0-487 D-180	
47	M-MS-0808-5163	4020311607	PLASTIC ABS 94HB NAT D-180	
48	M-MS-0808-5156	4020302914	PLASTIC ABS 94HB Y0-487 PA-707	
49	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
50	M-MS-0808-4213	4020305300	PLASTIC ABS 94HB Y0-487 PA-757	
51	M-MS-0808-5164	4020311614	PLASTIC ABS 94HB NAT PA-707	
52	C-FP-0301-0846	3368102100	F/B ASSY A195SAW01A S1FA1LS	
53	M-LB-0813-0466	3209135100	NAME PLATE AL+PC VSC 3-BIRD LOGO 2	
54	M-MS-0808-6875	3240927100	RUBBER PAD 14.6*11 BLACK	
55	M-MS-0808-5667	3360502300	LED LENS PMMA NAT S1FALS	
56	PL-NB-0707-0150	3360607100	POWER KNOB ABS Y0-487 S1FA1LS	
57	M-MS-0808-5155	4020302808	PLASTIC ABS 94V0 Y0-487 AF-312	
58	M-MS-0808-5159	4020311408	PLASTIC ABS 94V0 NAT AF-312	
59	M-MS-0808-4211	4020303014	PLASTIC ABS 94V0 Y0-487 PA-765A	
60	M-MS-0808-5161	4020311414	PLASTIC ABS 94V0 NAT PA-765A	
61	M-MS-0808-4212	4020303509	PLASTIC ABS 94V0 Y0-487 VH-0810	
62	M-MS-0808-5160	4020311409	PLASTIC ABS 94V0 NAT VH-0810	
63	PL-FK-0709-0038	3360706700	FUNCTION KEY ABS Y0-487 S1FA1LS	
64	M-MS-0808-5155	4020302808	PLASTIC ABS 94V0 Y0-487 AF-312	
65	M-MS-0808-5159	4020311408	PLASTIC ABS 94V0 NAT AF-312	
66	M-MS-0808-4211	4020303014	PLASTIC ABS 94V0 Y0-487 PA-765A	
67	M-MS-0808-5161	4020311414	PLASTIC ABS 94V0 NAT PA-765A	
68	M-MS-0808-4212	4020303509	PLASTIC ABS 94V0 Y0-487 VH-0810	
69	M-MS-0808-5160	4020311409	PLASTIC ABS 94V0 NAT VH-0810	
70	C-FP-0301-0861	3361022700	F/B PC+ABS Y0-487 VSC G810 S1FA1LS	
71	M-MS-0808-5157	4020306000	PLASTIC PC+ABS 94-5V Y0-487 C2800	
72	M-MS-0808-5158	4020306300	PLASTIC PC+ABS 94-5V Y0-487 FR-200	
73	M-MS-0808-6022	4020306308	PLASTIC PC+ABS 94-5V Y0-487 GN-500	
74	N/A	4020306309	PLASTIC PC+ABS 94-5V Y0-487 NH-100	
75	M-MS-0808-4932	3422101700	SPRING COMPRESSION SUS-304 ID=7.8	
76	M-MS-0808-4206	3421047903	SPACER SUPPORT NYLON 94V-2 14*9*11	
77	P-BX-0601-0656	3512211900	CARTON 648*642*612 B197SAW01A G810	
78	M-MS-0808-4975	3221101500	TAPE W=76 PP47 4P	
79	P-FM-0602-0726	3500055000	END BLOCL-BOTTOM A195SAW01 162/40'	
80	P-FM-0602-0727	3500055100	END BLOCK-TOP A195SAW01 162/40'	

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
81	N/A	3500910500	PE BAG 980x1065 T=0.045 A195SAM	
82	M-MS-0808-5338	3510189701	ANGLE PAPER 1920*55*55	
83	N/A	3520035300	PALLET WOOD 1310*1330*120	
84	N/A	3520035400	PALLET WOOD 1310*665*120	
85	M-MS-0808-5135	3520082400	PE FILM t=0.02mm W=500	
86	M-MS-0808-4692	3520085800	PE BAG 360*140*0.06T	
87	N/A	3520094201	PE BAG 260*155*0.1T	
88	A-CD-G810-6	3532036200	CD-ROM WIZARD VSC G810-6	
89	M-MS-0808-8094	5011073200	MANUAL QUICK START GUIDE G810-6	
90	M-WR-0828-6001	3642017200	WIRE WITH HOUSING 1007 #18 GRN L40	
91	A-RC-0109-0017	5012009600	CARD TCO99 VSC PW137	
92	M-SCW-0824-0414	3109021001	SCREW TAPPING 4*20*16 ROUND ZN	
93	M-SCW-0824-0394	3109022200	SCREW TAPPING 4*35 ROUND ZN	
94	M-SCW-0824-0395	3109030900	SCREW TAPPING 5*16*25 ROUND&W ZN	
95	M-LB-0813-0316	3200294600	LABEL BAR CODE 76*76 VSC	
96	M-LB-0813-0357	3200361101	LABEL BAR CODE 46*20	
97	PL-CL-0710-0025	3230050300	F.B.T CLIP NY66 94V0 t=8.0	
98	M-MS-0808-6882	3240031902	RUBBER PAD 20*7.5*6 GRAY	
99	PL-PD-0714-0016	3240032100	RUBBER PAD 20*7.5*4 BLACK	
100	M-MS-0808-8095	3240930400	RUBBER PAD 25*10*4 BLACK STICK	
101	M-MS-0808-5008	3421030303	CABLE TIE NYLON66 94V-2	
102	M-MS-0808-5121	3421031600	CABLE TIE NYLON 94V-2 L=181	
103	M-MS-0808-5420	3421032500	CABLE TIE NYLON 94V-2 L=295	
104	N/A	3649106900	CRT GROUNDING WIRE B197SAW01A	
105	M-MS-0808-5669	3670438000	CANCEL COIL 1015 #22 GREY/BLUE 2TU	
106	E-R-0405-3090	0013101000	RES CF 1/4W 100 J	R401,R404,R405,R433, R4431,R530,R908
107	E-R-0405-5190	0013101800	RES CF 1/4W 100 J SMALL	R249,R313,R314,R320, R323,R324,R464,R906
108	E-R-0405-3195	0013102000	RES CF 1/4W 1K J	R230,R231,R338,R417, R427,R436,R438,R921
109	E-R-0405-5693	0013102800	RES CF 1/4W 1K J SMALL	R116,R232,R306,R351, R415,R416,R426,R4406 ,R462,R463,R478,R483 ,R487,R495
110	E-R-0405-3175	0013103000	RES CF 1/4W 10K J	R110,R312,R412,R413, R4426,R451,R504
111	E-R-0405-5694	0013103800	RES CF 1/4W 10K J SMALL	R111,R149,R307,R319, R325,R326,R327,R328, R335,R402,R4172,R4176 ,R439,R4408,R4413,R4415 ,R4421,R4441,R479

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
				R482,R486,R952
112	E-R-0405-3185	0013104000	RES CF 1/4W 100K J	R430,R489,R493,R497
113	E-R-0405-5690	0013104800	RES CF 1/4W 100K J SMALL	R429,R4460,R460
114	E-R-0405-5695	0013106800	RES CF 1/4W 10M J SMALL	R309
115	E-R-0405-5698	0013114000	RES CF 1/4W 110K J	R4435
116	E-R-0405-5700	0013122800	RES CF 1/4W 1.2K J SMALL	R205
117	E-R-0405-5810	0013124800	RES CF 1/4W 120K J SMALL	R4412
118	E-R-0405-2512	0013132000	RES CF 1/4W 1.3K J	R904
119	E-R-0405-6067	0013151000	RES CF 1/4W 150 J	R311
120	E-R-0405-2330	0013153000	RES CF 1/4W 15K J	R4166,R418
121	E-R-0405-5705	0013153800	RES CF 1/4W 15K J SMALL	R105,R4168
122	E-R-0405-6075	0013182800	RES CF 1/4W 1.8K J SMALL	R223
123	E-R-0405-5708	0013183800	RES CF 1/4W 18K J SMALL	R119,R422
124	E-R-0405-2858	0013202000	RES CF 1/4W 2K J	R218
125	E-R-0405-5710	0013202800	RES CF 1/4W 2K J SMALL	R317,R318
126	E-R-0405-5814	0013203800	RES CF 1/4W 20K J SMALL	R4414
127	E-R-0405-5887	0013220000	RES CF 1/4W 22 J	R227
128	E-R-0405-5711	0013220800	RES CF 1/4W 22 J SMALL	R118
129	E-R-0405-3072	0013222000	RES CF 1/4W 2.2K J	R115,R209,R217,R440
130	E-R-0405-5713	0013222800	RES CF 1/4W 2.2K J SMALL	R432
131	E-R-0405-2480	0013223000	RES CF 1/4W 22K J	R4439,R4445
132	E-R-0405-5714	0013223800	RES CF 1/4W 22K J SMALL	R133,R222,R406,R410,R511
133	E-R-0405-5932	0013224800	RES CF 1/4W 220K J SMALL	R4434
134	E-R-0405-5934	0013228000	RES CF 1/4W 2.2 J	R151,R414
135	E-R-0405-5718	0013243800	RES CF 1/4W 24K J SMALL	R4161
136	E-R-0405-6507	0013270000	RES CF 1/4W 27 J	R450
137	E-R-0405-5720	0013270800	RES CF 1/4W 27 J SMALL	R117
138	E-R-0405-5721	0013272800	RES CF 1/4W 2.7K J SMALL	R215
139	E-R-0405-5890	0013301000	RES CF 1/4W 300 J	R225
140	E-R-0405-2298	0013302000	RES CF 1/4W 3K J	R423
141	E-R-0405-5724	0013302800	RES CF 1/4W 3K J SMALL	R4405
142	E-R-0405-5725	0013303800	RES CF 1/4W 30K J SMALL	R301
143	E-R-0405-5819	0013330000	RES CF 1/4W 33 J	R901
144	E-R-0405-5730	0013330800	RES CF 1/4W 33 J SMALL	R4418
145	E-R-0405-6509	0013331000	RES CF 1/4W 330 J	R303,R315,R316,R4410
146	E-R-0405-5732	0013332800	RES CF 1/4W 3.3K J SMALL	R221,R407,R4404,R4429 ,R4438,R480,R484,R488 R492,R496
147	E-R-0405-5821	0013333800	RES CF 1/4W 33K J SMALL	R425
148	E-R-0405-5935	0013362800	RES CF 1/4W 3.6K J SMALL	R420
149	E-R-0405-5826	0013392800	RES CF 1/4W 3.9K J SMALL	R226
150	E-R-0405-5742	0013394800	RES CF 1/4W 390K J SMALL	R4433

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
151	E-R-0405-6513	0013432000	RES CF 1/4W 4.3K J	R903
152	E-R-0405-5744	0013433800	RES CF 1/4W 43K J SMALL	R419
153	E-R-0405-2462	0013470000	RES CF 1/4W 47 J	R229,R4417,R456
154	E-R-0405-2320	0013471000	RES CF 1/4W 470 J	R310,R434
155	E-R-0405-5749	0013471800	RES CF 1/4W 470 J SMALL	R112,R120,R121
156	E-R-0405-3210	0013472000	RES CF 1/4W 4.7K J	R350,R4401
157	E-R-0405-5750	0013472800	RES CF 1/4W 4.7K J SMALL	R207,R302,R305,R336, R337,R340,R4419,R4422
158	E-R-0405-6808	0013511800	RES CF 1/4W 510 J SMALL	R4409
159	E-R-0405-3199	0013512000	RES CF 1/4W 5.1K J	R235,R4440
160	E-R-0405-5828	0013512800	RES CF 1/4W 5.1K J SMALL	R334,R4174,R4175,R4411,R494
161	E-R-0405-5898	0013562000	RES CF 1/4W 5.6K J	R459
162	E-R-0405-5755	0013562800	RES CF 1/4W 5.6K J SMALL	R4446
163	E-R-0405-6809	0013623000	RES CF 1/4W 62K J	R212,R902
164	E-R-0405-6762	0013681000	RES CF 1/4W 680 J	R501,R507
165	E-R-0405-5756	0013682800	RES CF 1/4W 6.8K J SMALL	R424
166	E-R-0405-3455	0013753000	RES CF 1/4W 75K J	R4160
167	E-R-0405-2410	0013822000	RES CF 1/4W 8.2K J	R4430
168	E-R-0405-5835	0013822800	RES CF 1/4W 8.2K J SMALL	R219
169	E-R-0405-6670	0013913000	RES CF 1/4W 91K J	R4448
170	E-R-0405-5765	0023158000	RES CF 1/2W 1.5 J	R517
171	E-R-0405-6805	0023202000	RES CF 1/2W 2K J	R210
172	E-R-0405-6804	0023208000	RES CF 1/2W 2 J	R502
173	E-R-0405-5939	0023224000	RES CF 1/2W 220K J	R104,R124,R125
174	E-R-0405-3524	0023228000	RES CF 1/2W 2.2 J	R4442,R4444,R503
175	E-R-0405-5768	0023271000	RES CF 1/2W 270 J	R509
176	E-R-0405-2694	0023274000	RES CF 1/2W 270K J	R905,R960
177	E-R-0405-6806	0023330000	RES CF 1/2W 33 J	R109
178	E-R-0405-0046	0023331000	RES CF 1/2W 330 J	R915
179	E-R-0405-3942	0023472000	RES CF 1/2W 4.7K J	R220
180	E-R-0405-2382	0023474000	RES CF 1/2W 470K J	R101
181	E-R-0405-6811	0111046000	RES MF 1/4W 2.4K F	R505
182	E-R-0405-2854	0111059000	RES MF 1/4W 10K F	R4449
183	E-R-0405-6813	0111070000	RES MF 1/4W 30K F	R403
184	E-R-0405-6814	0111074000	RES MF 1/4W 39.2K F	R4432,R4447
185	E-R-0405-2465	0111081000	RES MF 1/4W 61.9K F	R4102
186	E-R-0405-3928	0111082000	RES MF 1/4W 68K F	R211,R4402
187	E-R-0405-5945	0111149000	RES MF 1/4W 604 F	R408
188	E-R-0405-6815	0111171000	RES MF 1/4W 4.53K F	R4452
189	E-R-0405-6810	0111183000	RES MF 1/4W 2.49K F	R508
190	E-R-0405-6812	0111246000	RES MF 1/4W 2.8K F	R409
191	E-R-0405-5946	0111393000	RES MF 1/4W 9.76K F	R431

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
192	E-R-0405-6956	0123229000	RES MOF 1/2W 0.22 J	R519
193	E-R-0405-6817	0133153000	RES MOF 1W 15K J	R4443
194	E-R-0405-5949	0133220000	RES MOF 1W 22 J	R453
195	E-R-0405-5950	0133241000	RES MOF 1W 240 J	R216,R458
196	E-R-0405-5820	0133331000	RES MOF 1W 330 J	R4416
197	E-R-0405-5951	0133338000	RES MOF 1W 3.3 J	R461
198	E-R-0405-5735	0133471000	RES MOF 1W 470 J	R208,R441
199	E-R-0405-5823	0133561000	RES MOF 1W 560 J	R204
200	E-R-0405-3923	0133753000	RES MOF 1W 75K J	R206,R213
201	E-R-0405-6667	0133753800	RES MOF 1W 75K J SMALL	R122
202	E-R-0405-3922	0143100000	RES MOF 2W 10 J	R446
203	E-R-0405-6957	0143100200	RES MOF 2W 10 J VDK	R445,R447
204	E-R-0405-5838	0143151000	RES MOF 2W 150 J	R457
205	E-R-0405-6818	0143158200	RES MOF 2W 1.5 J VDK	R4150,R452
206	E-R-0405-5954	0143189000	RES MOF 2W .18 J	R114
207	E-R-0405-6821	0143221000	RES MOF 2W 220 J	R4407
208	E-R-0405-5957	0143330200	RES MOF 2W 33 J VDK	R454
209	E-R-0405-3743	0143398000	RES MOF 2W 3.9 J	R214
210	E-R-0405-4136	0143473200	RES MOF 2W 47K J VDK	R103
211	E-R-0405-5908	0143510000	RES MOF 2W 51 J	R435
212	E-R-0405-5845	0143688200	RES MOF 2W 6.8 J VDK	R455
213	E-R-0405-0923	0190200400	RES FUSING MF 1/2W 0.22 J	R241
214	E-R-0405-5968	0190300900	RES FUSING MF 1W .33 J SMALL	R4141
215	E-R-0405-5776	0606101104	RES VR VERT 0.1W 1K T	VR4402
216	E-R-0405-6958	0606109004	RES VR VERT 0.1W 500 T	VR201
217	E-R-0405-5777	0606113004	RES VR VERT 0.1W 200 T	VR404
218	E-R-0405-6954	0606208013	RES VR HORI 0.3W 100K T	VR4403
219	E-R-0405-5971	0606212002	RES VR HORI 0.3W 20K T	VR4401
220	E-RL-0414-0074	0720060701	RELAY 240VAC/12VDC 5A DPST TV4	RL101
221	M-MS-0808-6871	0732120226	RESONATOR 8.0MHZ +-0.1%	Y301
222	E-FS-0410-0089	0805340702	FUSE TSC 4A 250V UL SEM PIG	F101
223	E-TH-0416-0112	0904580218	PTC R=100 & 4.5 OHM +30-20% 35A 22	PTC101
224	E-R-0405-6955	0911000211	NTC R=10 OHM L 3A	
225	E-TH-0416-0111	0911000216	NTC R=10 OHM L 3A	NTC101
226	E-C-0404-3961	1101045007	CAP Y CD 250VAC 1KP K B I	CY103,CY104,CY106
227	E-C-0404-4480	1101345027	CAP Y CD 250VAC 1KP M E II	CY107
228	E-C-0404-4690	1101346033	CAP Y CD 250VAC 2.2KP M E II	CY105
229	E-C-0404-3640	1120018800	CAP CD 100V 33P J C0G TP5	C306,C307,C309,C488,C489
230	E-C-0404-3642	1122354800	CAP CD 100V .01U M Z5U TP5	C102,C125,C201,C302, C305,C311,C332,C404, C410,C419,C4402,C4411 C443,C444,C4440,C450,C451

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
231	E-C-0404-3643	1122930800	CAP CD 100V 100P K Y5P TP5	C421,C425,C505,C508
232	E-C-0404-3646	1122942800	CAP CD 100V 470P K Y5P TP5	C4414
233	E-C-0404-3648	1122945800	CAP CD 100V 1KP K Y5P TP5	C108,C202,C4410,C4413,C4423,C450,C
234	E-C-0404-3649	1122946800	CAP CD 100V 2.2KP K Y5P TP5	C4422
235	E-C-0404-3654	1132945800	CAP CD 500V 1KP K Y5P TP5	C413
236	E-C-0404-3728	1140022800	CAP CD 1KV 47P J C0G TP5	C105,C107,C109
237	E-C-0404-4673	1140030800	CAP CD 1KV 100P J C0G TP5	C902,C903
238	E-C-0404-3655	1142930800	CAP CD 1KV 100P K Y5P TP5	C115,C223,C225,C235
239	E-C-0404-3729	1142938800	CAP CD 1KV 220P K Y5P TP5	C104,C904
240	E-C-0404-3822	1142944800	CAP CD 1KV 680P K Y5P TP5	C426
241	E-C-0404-4672	1142954300	CAP CD 1KV .01U K Y5P KI7.5	C4426
242	E-C-0404-3823	1145045012	CAP CD LD 1KV 1KP K B	C442,C448
243	E-C-0404-3824	1155034012	CAP CD LD 2KV 150P K B	C431
244	E-C-0404-3779	1200754000	CAP MO DP 50V .01U K X7R TP R	C216
245	E-C-0404-3660	1201758000	CAP MO DP 50V .1U M Z5U TP R	C414,C417
246	E-C-0404-4804	142121021200	CAP AL 16V 1KU M 10*20 TP5	C218
247	E-C-0404-4805	142122211200	CAP AL 16V 220U M 8*11.5 TP5	C217,C219,C222
248	E-C-0404-4806	142124711200	CAP AL 16V 470U M 10*12.5 TP5	C409,C499
249	E-C-0404-3839	142141011200	CAP AL 25V 100U M 6.3*11 TP5	C106,C310,C4405,C4418,C446,C447
250	E-C-0404-3841	142141021500	CAP AL 25V 1KU M 10*20 TP5	C220
251	E-C-0404-3844	142144701200	CAP AL 25V 47U M 5*11 TP5	C211,C415
252	E-C-0404-3846	142152211200	CAP AL 35V 220U M 10*12.5 TP5	C512
253	E-C-0404-3849	142161001200	CAP AL 50V 10U M 5*11 TP5	C208,C303,C304,C308
254	E-C-0404-3848	142161081200	CAP AL 50V 1U M 5*11 TP5	C416
255	E-C-0404-3852	142162201200	CAP AL 50V 22U M 5*11 TP5	C4420,C901
256	E-C-0404-3850	142162281200	CAP AL 50V 2.2U M 5*11 TP5	C111,C4451
257	E-C-0404-4116	142164701200	CAP AL 50V 47U M 6.3*11 TP5	C490
258	E-C-0404-3851	142164781200	CAP AL 50V 4.7U M 5*11 TP5	C301,C330,C418,C4404,C4428
259	E-C-0404-4081	142222211100	CAP AL 100V 220U M 16*25	C203,C205
260	E-C-0404-4118	142224701200	CAP AL 100V 47U M 10*16 TP5	C207
261	E-C-0404-4667	142301001200	CAP AL 200V 10U M 10*16 TP5	C4432
262	E-C-0404-4669	142304701100	CAP AL 200V 47U M 13*25	C204
263	E-C-0404-3675	142321001200	CAP AL 250V 10U M 10*20 TP5	C4430
264	E-C-0404-4804	144121021400	CAP AL 16V 1KU M 10*20 TP5	C502,C504
265	E-C-0404-3841	144141022200	CAP AL 25V 1KU M 10*20 TP5	C209,C213
266	E-C-0404-4088	144142211400	CAP AL 25V 220U M 8*11.5 TP5	C424
267	E-C-0404-3954	144144711400	CAP AL 25V 470U M 10*16 TP5	C221
268	E-C-0404-3852	144162201400	CAP AL 50V 22U M 5*11 TP5	C498
269	E-C-0404-3850	144162281400	CAP AL 50V 2.2U M 5*11 TP5	C420,C4403,C4408
270	E-C-0404-3851	144164781400	CAP AL 50V 4.7U M 5*11 TP5	C114
271	E-C-0404-4118	144224701400	CAP AL 100V 47U M 10*16 TP5	C4425
272	E-C-0404-3855	144323382200	CAP AL 250V 3.3U M 8*11.5 TP5	C430

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
273	E-C-0404-2546	146403310603	CAP AL 400V 330U M 30*40	C101
274	E-C-0404-4685	1604314237	CAP X MP PC 275VAC .33U M P15	CX102
275	E-C-0404-4688	1604315218	CAP X PP PC 275VAC .47U K P22.5	CX101
276	E-C-0404-3757	1604316037	CAP X MP PC 275VAC .68U M P27.5	CX105
277	E-C-0404-4802	1613160B26	CAP MM DP 50V .68U M KI7.5	C4412
278	E-C-0404-4676	1613160Z01	CAP MM DP 50V .68U M P7.5	C4401,C4412
279	E-C-0404-4675	1622100Y01	CAP MM DP 100V .047U K P10	C4427
280	E-C-0404-3866	1651120C01	CAP MM DP 250V .1U J KI10	C103,C445,C507
281	E-C-0404-4729	1652100Y01	CAP MM DP 250V .047U K P10	C215
282	E-C-0404-4509	1691121503	CAP MM PC 63V .1U J TP5	C422
283	E-C-0404-2095	1751121C06	CAP MP DP 250V .1U J KI10	C434
284	E-C-0404-2096	1751131C06	CAP MP DP 250V .22U J KI10	C435
285	E-C-0404-4311	1751221C06	CAP MP DP 250V .15U J KI10	C427,C432
286	E-C-0404-4715	1751361C06	CAP MP DP 250V 1.2U J KI10	C438
287	E-C-0404-2478	1751441C06	CAP MP DP 250V .12U J KI10	C429
288	E-C-0404-4803	1751741C06	CAP MP DP 250V .43U J KI10	C436
289	E-C-0404-4681	1751921D06	CAP MP DP 250V .91U J KI15	C437
290	E-C-0404-4777	17F430BF06	CAP MP DP 1.8KVH 6.2KP G KI20	C428
291	E-C-0404-3870	1851060501	CAP PP DP 50V .01U J TP5	C407
292	E-C-0404-3871	1854010501	CAP PP DP 50V 2.2KP G TP5	C411
293	E-C-0404-4683	1891350D06	CAP PP DP 800V 1.2KP J KI15	C4406
294	E-C-0404-3769	1950102101	CAP MY DP I 50V 4.7KP J TP5	C408
295	E-C-0404-3690	1950104101	CAP MY DP I 50V 6.8KP J TP5	C112
296	E-C-0404-3691	1950106101	CAP MY DP I 50V .01U J TP5	C128,C405,C4409,C509
297	E-C-0404-3770	1950109101	CAP MY DP I 50V .033U J TP5	C403
298	E-C-0404-3771	1950111101	CAP MY DP I 50V .068U J TP5	C402
299	E-C-0404-3772	1950112101	CAP MY DP I 50V .1U J TP5	C513
300	E-C-0404-3695	1950113101	CAP MY DP I 50V .22U J TP5	C401,C406
301	E-C-0404-4682	1950115001	CAP MY DP I 50V .47U J	C4407
302	E-C-0404-3774	1950126101	CAP MY DP I 50V 1.5KP J TP5	C110
303	E-D-0403-2015	201033420007	DIO FRD 12A 1500V SOD113 350nS	D410
304	E-D-0403-0920	201291360007	DIO FRD 2.3A 600V SOD64 30nS	D110
305	E-D-0403-2026	201300550223	DIO FRD 1A 100V DO-204AL(DO-41) 50	D413,D414
306	E-D-0403-0901	201300570223	DIO FRD 1A 200V DO-204AL(DO-41) 15	D412
307	E-D-0403-0913	201300570523	DIO FRD 1A 200V DO-204AL(DO-41) 50	D206
308	E-D-0403-1981	201300620023	DIO FRD 1A 800V DO-41 75nS	D101,D107,D4410
309	E-D-0403-0916	201311050023	DIO FRD 2A 100V DO-204AC(DO-15) 50	D211
310	E-D-0403-2027	201311090023	DIO FRD 2A 400V DO-204AC(DO-15) 50	D409
311	E-D-0403-2025	201330630007	DIO FRD 1A 1000V SOD57 75nS	D4404
312	E-D-0403-2024	201340840037	DIO FRD 1.2A 400V AX10 100nS	D409
313	E-D-0403-2016	202300290105	DIO SBD 1A 20V CASE59-04(DO-41)	D408
314	E-D-0403-1777	203303440005	DIO ZEN 1W 71.3-78.8V DO-41	ZD4404

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
315	**E-D-0403-1974**	203303450005	DIO ZEN 1W 77.9-86.1V DO-41	ZD4401,ZD4402
316	**E-D-0403-1658**	203322520311	DIO ZEN 0.5W 2.8-3.0V DO-35	ZD305
317	**E-D-0403-1973**	203322540331	DIO ZEN 0.5W 4.9-5.1V DO-35	ZD201,ZD401
318	**E-D-0403-1936**	203322610611	DIO ZEN 0.5W 11.9-12.4V DO-35	ZD203
319	**E-D-0403-1968**	203322620111	DIO ZEN 0.5W 13.2-13.7V DO-35	ZD407
320	**E-D-0403-1969**	203322640211	DIO ZEN 0.5W 14.5-15.1V DO-35	ZD501
321	**E-D-0403-1534**	203322670311	DIO ZEN 0.5W 17.5-18.3V DO-35	ZD101,ZD402,ZD4403
322	**E-D-0403-0923**	203322850011	DIO ZEN 0.5W 36.4-38.0V DO-35	ZD102
323	**E-D-0403-1982**	204320750011	DIO SW 0.15A 75V DO-35	D105,D106,D112,D113, D202,D207,D208,D209, D210,D301,D302,D304, D305,D306,D308,D401, D402,D403,D406,D411, D4401,D4402,D4403,D4 406,D4408,D441,D4415 ,D4416,D4417,D4418,D 442,D4420,D4421,D443 ,D444,D445,D503
324	**E-D-0403-1937**	204322000207	DIO SW 0.25A 200V SOD-27(DO-35)	D104,D407,D434,D4407
325	**E-D-0403-2028**	204322000231	DIO SW 0.25A 200V DO-35	D104,D434,D4407
326	**E-D-0403-1984**	205300550005	DIO SI 1A 100V DO-41	D307,D416,D501,D502
327	**E-D-0403-1984**	205300550023	DIO SI 1A 100V DO-204AL(DO-41)	D307,D416,D4412,D501,D502
328	**E-D-0403-1690**	205350610337	DIO SI 1A 600V RG4	D111,D201,D4414
329	**E-D-0403-1985**	205350630037	DIO SI 1A 1000V RG4 100NS	D203
330	**E-D-0403-1986**	205351610023	DIO SI 3A 600V DO-201AD	D102,D103,D108,D109
331	**E-D-0403-1884**	205351820037	DIO SI 3.5A 200V RL4 KI20	D204
332	**E-Q-0402-1081**	210057480006	TR 600V 18A 2-16E3A 4.5-6.5	Q415
333	**E-Q-0402-0906**	210102500011	TR 50V 0.5A TO-92 100-200	Q208,Q210,Q4405
334	**E-Q-0402-1475**	210102500306	TR 50V 0.15A TO-92 120-240	Q104,Q202,Q204,Q209, Q212,Q401,Q402,Q406, Q410,Q414,Q426,Q427, Q428,Q429,Q430,Q431, Q432,Q4404,Q4407,Q4412 Q445,Q501
335	**E-Q-0402-1207**	210105700006	TR 250V 0.05A TO-92 50	Q207
336	**E-Q-0402-1445**	210106500005	TR 400V 0.3A TO-92 40-200	Q102,Q901
337	**E-Q-0402-1210**	210161530117	TR 30V 3A TO-126 160-320	Q215,Q416
338	**E-Q-0402-1089**	210232520206	TR 50V 2A 2-5J1A(TO-92MOD) 120-240	Q205
339	**E-Q-0402-1479**	211101500106	TR -30V -0.5A TO-92 120-240	Q211,Q407
340	**E-Q-0402-1481**	211102500206	TR -50V -0.15A 2-5F1B 120-240	Q206,Q301,Q403,Q411, Q4406,Q4409,Q4410,Q4411,Q444
341	**E-Q-0402-1208**	211105700006	TR -250V -0.05A 2-5F1B 50	Q4408,Q442

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
342	E-Q-0402-1499	211161530017	TR -30V -3A TO-126 160-320	Q201
343	E-Q-0402-0504	211231010011	TR -20V -1A TO-92MOD 120-240	Q203,Q413
344	E-D-0403-1199	2300062706	LED 5mm ORG/GRN 3PIN	LED301
345	E-PC-0411-0080	2310015133	PHOTO 35V 4PIN 130-260%	IC105
346	E-IC-0401-1873	2310040008	PHOTO 55V 4PIN 100-300% VDE	IC105
347	E-Q-0402-0115	242006100106	FET 200V 10A 0.4ohm TO-220	Q422,Q423,Q424
348	E-Q-0402-1533	242008060131	FET 800V 11A 0.45ohm P-TO220-3-1	Q101
349	E-Q-0402-1258	242016100217	FET 200V 6.5A 0.4ohm TO-220F	Q420,Q421,Q4403
350	E-Q-0402-0156	242017400006	FET 600V 6A 1.25ohm TO-220F	Q4401
351	E-Q-0402-1497	242102500406	FET 60V 2A 0.2ohm TO-92	Q412
352	E-Q-0402-1495	243016300232	FET -250V -4.5A 1.2ohm TO-220FI-LS	Q408
353	E-IC-0401-0352	2500004003	IC VOL ADJ 37V 2.5V 2% T92	IC203
354	E-IC-0401-2272	2510002001	IC PWM 16PIN	IC402
355	E-IC-0401-2453	2510077247	IC DEFLECTION CONTROLLER SDIP-32	IC401
356	E-IC-0401-0005	2530010006	IC TV VERT DEFLECTION 7PIN	IC501
357	E-IC-0401-1998	2610188242	IC EEPROM 16K DIP-8	IC302
358	E-IC-0401-1824	2610363018	IC 8BIT MICROCONTROLLER DIP-40P(OT	IC301
359	M-FT-0827-0091	2805635000	LF 21.0mH MIN.	FL101,FL103
360	E-L-0407-1183	2816300400	CHOKE CD 14.5uH K	L201,L202
361	E-L-0407-0496	2816902500	CHOKE CD 4mH K	L412
362	E-L-0407-1518	2817111910	CHOKE CD 1.0mH K	L402
363	E-T-0408-0428	2817316000	X'FMR DT EI-19 60uH 7%	T404
364	E-T-0408-0377	2817319880	X'FMR EI30 75uH J	T102
365	E-T-0408-0459	2817328780	X'FMR EER28L 1.3mH K	T402
366	E-T-0408-0471	2817330380	X'FMR DT EI-22 1.0H MIN	T405
367	E-T-0408-0477	2817350480	X'FMR EER39LV 260uH J	T101
368	E-T-0408-0476	2817602410	LINEAR COIL 4.9UH L 4P	T403
369	E-L-0407-1407	2817602448	LINEAR COIL 4.9uH L 4P	T403
370	E-FBT-0406-0253	2850010010	FBT 21" 97KHZ 83uH	T401
371	E-L-0407-0494	2921020100	CORE BEAD 3.5*6*1.0	L102,L103,L104,L105, L106,L108,L203,L204, L205,L206,L207,L208, L404,L408,L4401,R102
372	E-L-0407-1427	2921050700	CORE BEAD 2.5*3*1.0 W5 T/R	L401
373	E-L-0407-1485	2922060104	COIL PEAKING 47uH K TP AXIAL 0307	L301
374	N/A	2970029900	PCB S0 L1 CEM-1 290*360 B197 SAW 0	
375	M-SW-0815-0155	3000092200	SWITCH TACTILE DC 12V 50mA	
376	M-SW-0815-0192	3000092220	SWITCH TACTILE DC 15V 50mA	
377	M-SW-0815-0156	3000140416	SWITCH PUSH SPST DC30V 0.3A	SW101
378	N/A	3071164300	WAFER NY66 94V0 4P P3.96 V	P402
379	M-MS-0808-5374	3071270301	HEADER NY66 94V0 4P 2.36 V	
380	M-MS-0808-5074	3071273134	HEADER NY66 94V0 4P P2.36 V	

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
381	M-MS-0808-6001	3071273148	HEADER NY66 94V0 4P P2..36 V	
382	M-MS-0808-5075	3071273334	HEADER NY66 94V0 6P P2.36 V	
383	M-MS-0808-6002	3071273348	HEADER NY66 94V0 6P P2.36 V	
384	M-MS-0808-5378	3071406334	HEADER NY66 94V0 3P P2.54 V	
385	M-SCW-0824-0420	3100100600	SCREW MACHINE 3*0.5*6 WASHER	
386	M-SCW-0824-0004	3100301000	SCREW MACHINE M3*0.5*10 PAN Zn	
387	M-SCW-0824-0461	3106150400	SCREW TAPPING 3*24*8 FLAT NI	
388	M-SCW-0824-0411	3109010300	SCREW TAPPING 3*0.5*10 FILLISTER Z	
389	M-SCW-0824-0413	3109011400	SCREW TAPPING 3*0.5*6 FILLISTER ZN	
390	M-SCW-0824-0617	3109017300	SCREW TAPPING 3*0.5*8 STAR WASHER	
391	M-SCW-0824-0619	3109020100	SCREW TAPPING 4*0.7*8 FILLISTER ZN	
392	M-SCW-0824-0393	3109020700	SCREW TAPPING 4*0.7*8 ROUND ZN	
393	M-MS-0808-7326	3110110400	NUT M3*0.5 S1010C	
394	M-LB-0813-0337	3200369100	LABEL REGISTRATION 30*12	
395	M-MS-0808-5103	3240180000	INSULATOR SILICON T=0.275 19.05*12	
396	M-MS-0808-5104	3240191000	BUSHING NY46 94V-0 6.1*3.5*2.9	
397	M-MS-0808-5105	3341020701	HSK AL T=1.4 23.5*41.4 X	
398	M-MS-0808-7030	3341052800	HSK AL T=2 50*19*50 H	
399	M-MS-0808-7031	3341072500	HSK AL T=2.2 15*10.8*50 H	
400	M-MS-0808-7962	3341266202	HSK AL T=1.5 210*90 I	
401	M-MS-0808-7963	3341307601	HSK AL 70*30*15.2	
402	M-MS-0808-6561	3341309200	HSK AL T=2.2 15*10.8*35 H	
403	M-MS-0808-7965	3342013001	HSK AL T=2 65*26 I	
404	M-MS-0808-7966	3342304402	HSK AL T=1 86.5*85.5*85 L	
405	E-C-0404-0300	3350141100	RIVET BRASS TIN PLATED 1.8*3.7*3	
406	M-MS-0808-5111	3350141900	RIVET BRASS TIN PLATED 1.5*3.2*3	
407	M-MS-0808-5112	3350143000	RIVET BRASS TIN PLATED 1.2*3*3	
408	M-MS-0808-5119	3350252200	PIN ROUND BRONZE 2.36*13.8 TIN PLA	
409	N/A	3360048700	CONNECTING ROD ABS Y0-487	
410	M-MS-0808-5155	4020302808	PLASTIC ABS 94V0 Y0-487 AF-312	
411	M-MS-0808-5159	4020311408	PLASTIC ABS 94V0 NAT AF-312	
412	M-MS-0808-4211	4020303014	PLASTIC ABS 94V0 Y0-487 PA-765A	
413	M-MS-0808-5161	4020311414	PLASTIC ABS 94V0 NAT PA-765A	
414	M-MS-0808-4212	4020303509	PLASTIC ABS 94V0 Y0-487 VH-0810	
415	M-MS-0808-5160	4020311409	PLASTIC ABS 94V0 NAT VH-0810	
416	M-MS-0808-4828	3360053201	LED HOLDER NY66 NAT	LED301
417	M-WR-0828-0224	3411000300	JUMP WIRE BRASS 0.6*7.5*4.0	J1,J103,J104,J12,J14 ,J15,J16,J17,J18,J21 ,J28,J3,J30,J64,J65, J78,J87,J88,J99,JW105 ,R4179,R4180,R490,R491
418	M-WR-0828-0249	3411000400	JUMP WIRE BRASS 0.6*10.0*4.0	D303,D417,J11,J23,J25

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
				,J29,J33,J36,J38,J4
				,J46,J47,J49,J51,J58 ,J59,J6,J60,J62,J63, J68,J7,J8,J83,J84,J85 ,J90,J93,JW102,R107,R922
419	M-MS-0808-2632	3411000500	JUMP WIRE BRASS 0.6*12.5*4.0	D440,J10,J2,J22,J34, J41,J42,J5,J53,J54,J56 ,J57,J61,J67,J72,J73 ,J74,J9,J91,J94
420	M-WR-0828-0388	3411000600	JUMP WIRE BRASS 0.6*15.0*4.0	J101,J106,J24,J27,J32 ,J35,J37,J43,J44,J45 ,J66,J69,J70,J76,J77 ,J86,J89,J92,J97,J98 ,JW302,R240
421	M-WR-0828-0389	3411000700	JUMP WIRE BRASS 0.6*17.5*4.0	J100,J102,J13,J19,J20 ,J26,J31,J39,J40,J48 ,J50,J55,J71,J75,J79 ,J80,J81,J82,J95,J96,R520
422	M-MS-0808-5122	3421160801	CLIP TIN SPTH 53.8*11 T=0.3	
423	M-MS-0808-7967	3421299001	BRACKET REAR SECC 292*64 T=1	
424	M-MS-0808-5835	3422002000	STAND OFF NYLON 94V-0 H=5	
425	M-MS-0808-5123	3429009300	CLIP TIN SPTH 32*7 T=0.3	
426	M-MS-0808-6792	3610180003	SOCKET ASSY AC DE770BA3	
427	M-MS-0808-5311	3020602916	SOCKET AC PCB MOUNT INPUT 10A 250V	
428	M-MS-0808-6790	3020603638	SOCKET AC PCB MOUNT INPUT 10A 250V	
429	M-MS-0808-4203	3030100900	SOCKET PBT 30%GF BLK SK-1019	
430	M-MS-0808-5739	3227001900	TUBE HS POLYOLEFIN 5*.25 BLACK	
431	M-WR-0828-0412	3641402501	WIRE WITH TERMINAL 1007 #18 Y/G L9	
432	M-WR-0828-0434	3640027300	WIRE BRAID 120/0.12 L140	
433	N/A	3640464700	WIRE WITH TERMINAL 1015 #16 BLK L3	
434	N/A	3641310100	WIRE WITH TERMINAL 1007 #18 BLK L1	
435	N/A	3649300300	WIRE BRAID TUBE 0.12/120 BLACK L24	
436	N/A	3670172200	WIRE WITH HOUSING 1007 #24 L420 11	
437	E-R-0405-5190	0013101800	RES CF 1/4W 100 J SMALL	R608,R609,R617,R618, R619,R620,R625,R667
438	E-R-0405-5693	0013102800	RES CF 1/4W 1K J SMALL	R610,R611,R614,R615, R616,R649,R650,R651, R658,R659,R660
439	E-R-0405-5807	0013105800	RES CF 1/4W 1M J SMALL	R653
440	E-R-0405-5931	0013121800	RES CF 1/4W 120 J SMALL	R623
441	E-R-0405-5809	0013123800	RES CF 1/4W 12K J SMALL	R629,R630,R631
442	E-R-0405-5812	0013151800	RES CF 1/4W 150 J SMALL	R656

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
443	E-R-0405-5708	0013183800	RES CF 1/4W 18K J SMALL	R668
444	E-R-0405-5711	0013220800	RES CF 1/4W 22 J SMALL	R676,R677,R678
445	E-R-0405-5712	0013221800	RES CF 1/4W 220 J SMALL	R679,R680,R681
446	E-R-0405-5713	0013222800	RES CF 1/4W 2.2K J SMALL	R621,R628
447	E-R-0405-5714	0013223800	RES CF 1/4W 22K J SMALL	R670
448	E-R-0405-5722	0013273800	RES CF 1/4W 27K J SMALL	R661,R662,R663
449	E-R-0405-5724	0013302800	RES CF 1/4W 3K J SMALL	R622,R624,R626
450	E-R-0405-5730	0013330800	RES CF 1/4W 33 J SMALL	R604,R605,R606
451	E-R-0405-5731	0013331800	RES CF 1/4W 330 J SMALL	R612,R613
452	E-R-0405-5826	0013392800	RES CF 1/4W 3.9K J SMALL	R682
453	E-R-0405-5743	0013432800	RES CF 1/4W 4.3K J SMALL	R669
454	E-R-0405-5749	0013471800	RES CF 1/4W 470 J SMALL	R675
455	E-R-0405-5828	0013512800	RES CF 1/4W 5.1K J SMALL	R657,R664,R665,R666,R671,R672,R673
456	E-R-0405-5829	0013513800	RES CF 1/4W 51K J SMALL	R674
457	E-R-0405-5755	0013562800	RES CF 1/4W 5.6K J SMALL	R607,R652,R654
458	E-R-0405-5758	0013750800	RES CF 1/4W 75 J SMALL	R601,R602,R603,R632,R635,R638
459	E-R-0405-5834	0013753800	RES CF 1/4W 75K J SMALL	R641,R642,R643,R644,R645,R646
460	E-R-0405-5760	0013824800	RES CF 1/4W 820K J SMALL	R633,R636,R639
461	E-R-0405-5836	0013910800	RES CF 1/4W 91 J SMALL	R627
462	E-R-0405-5764	0023102000	RES CF 1/2W 1K J	R647
463	E-R-0405-5770	0023303000	RES CF 1/2W 30K J	R648
464	E-R-0405-5773	0023680000	RES CF 1/2W 68 J	R634,R637,R640
465	E-SP-0417-0093	0921220117	SPARK GAP 1.2KV +-500V TP	SG601,SG602,SG603
466	E-C-0404-4482	1111358800	CAP CD 50V .1U Z Y5V TP5	C645,C646,C647
467	E-C-0404-3718	1120008800	CAP CD 100V 10P J C0G TP5	C649,C652,C653
468	E-C-0404-3820	1120028800	CAP CD 100V 82P J C0G TP5	C634
469	E-C-0404-3642	1122354800	CAP CD 100V .01U M Z5U TP5	C604,C605,C607,C609, C611,C612,C614,C616, C621,C623,C624,C625, C626,C630,C633,C635, C636,C641,C642
470	E-C-0404-3643	1122930800	CAP CD 100V 100P K Y5P TP5	C658,C659,C660,C661
471	E-C-0404-3722	1122936800	CAP CD 100V 180P K Y5P TP5	C650
472	E-C-0404-3723	1122940800	CAP CD 100V 330P K Y5P TP5	C617
473	E-C-0404-3646	1122942800	CAP CD 100V 470P K Y5P TP5	C655,C656,C657
474	E-C-0404-3648	1122945800	CAP CD 100V 1KP K Y5P TP5	C643,C651,C662
475	E-C-0404-4807	1122947800	CAP CD 100V 3.3KP K Y5P TP5	C648
476	E-C-0404-4674	1142946800	CAP CD 1KV 2.2KP K Y5P TP5	C654
477	E-C-0404-2567	1152349400	CAP CD 2KV 4.7KP M Z5U KI10	C632,C644
478	E-C-0404-3661	1210754000	CAP MO DP 100V .01U K X7R TP R	C637,C638,C639
479	E-C-0404-3676	142121011500	CAP AL 16V 100U M 5*11 TP5	C606,C608,C610,C613,C615,C618,C622
480	E-C-0404-3848	142161081500	CAP AL 50V 1U M 5*11 TP5	C619

ITEM	VIEWSONIC P/N	VENDOR P/N	DESCRIPTION	PART LOCATION
481	E-C-0404-3853	142163381200	CAP AL 50V 3.3U M 5*11 TP5	C601,C602,C603
482	E-C-0404-4120	144221081400	CAP AL 100V 1U M 5*11 TP5	C627,C628,C629
483	E-C-0404-4435	144222201400	CAP AL 100V 22U M 8*11.5 TP5	C620
484	E-D-0403-1536	203322540311	DIO ZEN 0.5W 4.9-5.1V DO-35	ZD601,ZD602
485	E-D-0403-1982	204320750011	DIO SW 0.15A 75V DO-35	D601,D602,D603,D604,D605,D606
486	E-D-0403-1937	204322000207	DIO SW 0.25A 200V SOD-27(DO-35)	D610,D611,D612,D613, D614,D615,D616,D617, D618
487	E-Q-0402-1539	210100500006	TR 15V 0.2A TO-92 40-240	Q608,Q609,Q610
488	E-Q-0402-1475	210102500306	TR 50V 0.15A TO-92 120-240	Q607
489	E-Q-0402-1207	210105700006	TR 250V 0.05A TO-92 50	Q601,Q603,Q605
490	E-Q-0402-1208	211105700006	TR -250V -0.05A 2-5F1B 50	Q602,Q604,Q606
491	E-IC-0401-2150	2500084111	IC MONO TRIPLES 4nS CRT DRIVER TA1	IC603
492	E-IC-0401-2151	2530199007	IC 150MHZ 3-CH VIDEO AMP 32P4B(SDI	IC601
493	E-IC-0401-2276	2640700601	IC 2610443018+5015002900 ASSY (OSD	IC602
494	E-L-0407-0494	2921020100	CORE BEAD 3.5*6*1.0	L601,L606,L607,L608,L609
495	E-L-0407-1427	2921050700	CORE BEAD 2.5*3*1.0 W5 T/R	J18,L610,L611,L612,L615,L616
496	E-L-0407-1485	2922060104	COIL PEAKING 47uH K TP AXIAL 0307	L617
497	E-L-0407-1429	2922110006	COIL PEAKING .1UH K TP AXIAL 0307	L603,L604,L605
498	E-L-0407-1187	2922280004	COIL PEAKING 100uH K TP AXIAL 0410	L613
499	N/A	2970030000	PCB S0 L1 FR-1(XPC) 115*125 B197 S	
500	M-MS-0808-4396	3020005400	SOCKET CRT NORMAL DOUBLE FOCUS	
501	N/A	3071400634	HEADER NYLON66 94V-0 7P P2.5	P603
502	M-MS-0808-5394	3071401034	HEADER NY66 94V0 11P P2.54 R	P604
503	N/A	3071401234	HEADER NYLON66 94V-0 13P P2.5	P602
504	M-SCW-0824-0391	3100300800	SCREW MACHINE 3*0.5*8 PAN S&P ASS	
505	M-MS-0808-7964	3341718500	HSK AL T=2 104*32 I	HS601
506	M-MS-0808-5111	3350141900	RIVET BRASS TIN PLATED 1.5*3.2*3	
507	M-MS-0808-5119	3350252200	PIN ROUND BRONZE 2.36*13.8 TIN PLA	
508	M-WR-0828-0344	3411000200	JUMP WIRE BRASS 0.6*5.0*4.0	J1,J16,J22,J24,J25,J8
509	M-WR-0828-0224	3411000300	JUMP WIRE BRASS 0.6*7.5*4.0	J11,J15,J17,J19,J20,J21,J7,J9,R655
510	M-WR-0828-0249	3411000400	JUMP WIRE BRASS 0.6*10.0*4.0	J12,J14,J23,J27,J29,J3,J4
511	M-MS-0808-2632	3411000500	JUMP WIRE BRASS 0.6*12.5*4.0	J26,J6
512	M-WR-0828-0388	3411000600	JUMP WIRE BRASS 0.6*15.0*4.0	J13
513	M-WR-0828-0390	3411000800	JUMP WIRE BRASS 0.6*20.0*4.0	J28
514	N/A	3461210100	SHIELD CAN-VIDEO SPTH 121*129 T=0.	
515	N/A	3461210200	SHIELD CAN-VIDEO COVER SPTH 122.6*	