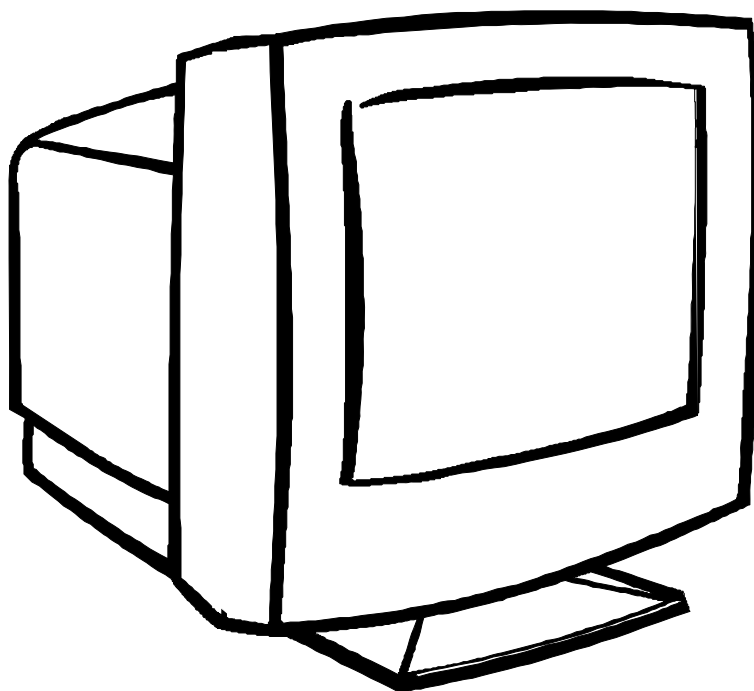


# SERVICE MANUAL

## 17" CDT MONITOR

### MV7540E



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## Revision List

[illegible]

# 1. Monitor Specifications

1. CRT : 43.2CM(17") 90 Deflection, 29mm Neck, 0.27mm Dot Pitch, Pure Flat, Non-Glare Screen
2. Viewable image Size: 40.6CM (16") diagonal
3. Display Color: Unlimited Colors
4. External Controls:  
Power On/Off, Power led, Function knob( Contrast, Brightness, H-Center, H-Size, V-Center, V-Size, Rotation, Pincushion, Trapezoid, Pin-Balance, Parallelogram, Color Temperature, Degaussing, Recall, Moiré,
5. Input Video Signal

Mode	1	2	3	4	5	6	7	8	9
Horizontal Freq. (KHz)	31.47	31.47	37.500	43.27	46.87	53.674	60.023	68.677	63.981
Dot Clock (MHz)	28.30	25.175	31.500	36.00	49.50	56.25	78.75	94.50	108.00
Horizontal Lines	720	640	640	640	800	800	1024	1024	1280
Vertical Lines	400	480	480	480	600	600	768	768	1024
H. Sync Polarity	NEG	NEG	NEG	NEG	POS	POS	POS	POS	POS
H. Period (μs)	31.921	31.778	26.667	23.111	21.333	18.631	16.660	14.561	15.630
H. Sync Width (μs)	3.814	3.813	2.032	1.556	1.616	1.138	1.219	1.016	1.037
H. Back Porch (μs)	1.907	1.589	3.810	2.222	3.232	2.702	2.235	2.201	2.296
H. Active (μs)	25.424	25.422	20.317	17.778	16.162	14.222	13.328	10.836	11.852
H. Front Porch (μs)	0.911	0.318	0.508	1.556	0.323	0.569	0.203	0.508	0.444
H. Blanking (μs)	5.861	5.720	6.349	5.333	5.172	4.409	3.657	3.725	3.778
Vertical Freq. (Hz)	69.616	59.940	75.000	85.008	75.00	85.061	75.029	84.997	60.020
V. Sync Polarity	POS	NEG	NEG	NEG	POS	POS	POS	POS	POS
V. Period (ms)	14.364	16.683	13.333	11.764	13.333	11.756	13.003	11.765	16.661
V. Sync Width (ms)	0.064	0.064	0.080	0.069	0.064	0.056	0.050	0.044	0.047
V. Back Porch (ms)	1.149	0.794	0.427	0.578	0.448	0.503	0.466	0.524	0.596
V. Active (ms)	12.768	15.253	12.800	11.093	12.800	11.179	12.795	11.183	16.005
V. Front Porch (ms)	0.000	0.064	0.027	0.023	0.021	0.019	0.017	0.015	0.016
V. Blanking (ms)	1.149	0.922	0.533	0.670	0.533	0.578	0.533	0.582	0.656

## 6. Scanning Frequencies

Horizontal	30KHz ~ 70KHz
Vertical	50 Hz ~ 160 Hz

7. Factory Preset Timings:9  
User Timings: 8
8. Video Bandwidth: 110 MHz
9. Power Source:  
Switching Mode Power Supply  
AC 90 ~265V, 50/60Hz Universal Type
10. Operating Temperature: 10°C to 35°C Ambient

11. Humidity: 20% to 80% Relative, Non-Condensing
12. External Connection:  
15 Pin D-type Connector  
AC Power Cord
13. The rotation can't be recall in user mode.
14. Press the "MENU" function and don't release it, then press power switch on, the monitor will enter the burn-in mode if it is no signal input.
15. Regulations: UL, CSA, FDA, FCC, TÜV/GS, CE, MPR-II, TCO, CCC

## 2. Precautions And Notices

### 2-1 Safety Precautions

1. Observe all caution and safety related notes located inside the display cabinet.
2. Operation of the display with the cover removed, may cause a serious shock hazard from the display power supply. Work on the display should not be attempted by anyone who is not thoroughly familiar with precautions necessary when working on high voltage equipment.
3. Do not install, remove or handle the picture tube in any manner unless shatter-proof goggles are worn. People who are not so equipped should be kept away while handling picture tube. Keep picture tube away from the body while handling.
4. The picture tube is constructed to limit X-RAY radiation to 0.5 mR/HR. For continued protection, use the designated replacement tube only, and adjust the voltages so that the designated maximum rating at the anode will not be exceeded.
5. Symbol "★" means safety relative parts. The use of substitute replacement parts which do not have the same characteristics as specified in the parts list may create shock, fire or explode etc.
6. Symbol "⚠" means X-ray relative parts. Before replacing any of these components please read the parts list in this manual carefully to avoid creating higher anode voltage or x-ray. Especially for sealed controls, such as VR902 and FBT screen VR etc, which were sealed by the manufacturer once their optimum position has been set, please don't dismantle them as your likes, otherwise you will break or damage the component. If you need replace the parts with sealed control, please adjust the relative VR to make sure the B+ voltage about 66.0V and well seal it with A+B glue or equivalent, which you can not move away with one screw driver
7. Before returning a serviced display to the customer, a thorough safety test must be performed to verify that the display is safe to operate without danger or shock. Always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as screw heads.  
Test method for current leakage is described as follow.
  - (a) Plug the AC line cord directly into rated AC outlet (do not use a line isolation transformer during this check).
  - (b) Use an AC voltmeter having 5000 ohms per volt or with more sensitivity in the following manner: Connect a 1500 ohms 10 Watt resistor, paralleled by a 0.15UF, AC type capacitor between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts simultaneously. Measure the AC voltage across the combination of 1500 ohms resistor and 0.15UF capacitor.
  - (c) Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part.
  - (d) Voltage measured must not exceed 0.5 volts RMS. This corresponds to 0.35 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

### 2-2 Product Safety Notice

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

### 2-3 Service Notes

1. When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.
2. When replacing a high wattage resistor (more than 1/2W of metal oxide film resistor) in circuit board, keep the resistor about 10mm (1/2 in) away from circuit board.
3. Keep wires away from high voltage or high temperature components.
4. Keep wires in their original position so as to reduce interference.

## 2-4 High Voltage Warning

Operation of monitor outside of cabinet or with back removed may cause a serious shock hazard. Work on this model should only be performed by those who are thoroughly familiar with precautions necessary when working on high voltage equipment.

Exercise care when servicing this chassis with power applied. Many B plus and high voltage terminals are exposed which, if carelessly contacted, can cause serious shock or result in damage to the chassis. Maintain interconnecting ground lead connections between chassis and picture tube dag when operating chassis.

Certain HV failures can increase X-ray radiation. Monitor should not be operated with HV levels exceeding the specified rating for the chassis type. The maximum operating HV specified for the chassis used in this monitor is

24.8KV  $\pm$  1KV

with a line voltage of 120/240 VAC. Higher voltage may also increase possibility of failure in HV supply.

It is important to maintain specified values of all components in the horizontal and high voltage circuits and anywhere else in the monitor that could cause a rise in high voltage or operating supply voltages. No changes should be made to the original design of the monitor. Components shown in the shaded areas on the schematic should be replaced with exact factory replacement parts. The use of unauthorized substitute parts may create a shock, fire or other hazard.

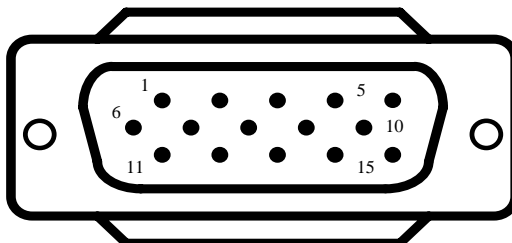
To determine the presence of high voltage, use accurate, high impedance, HV meter connected between second anode lead and CRT dag grounding device. When servicing the High Voltage System, remove static charge from it by connecting a 10K ohm resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead.(AC line cord disconnected from AC power outlet.)

The picture tube used in this monitor employs integral implosion protection. Replace with tube of the same type number for continue safety. Do not lift picture tube by the neck. Handle the picture tube only after discharging the high voltage completely.

### 3. Operating Instructions

This procedure gives you instructions for installing and using the Color display.

1. Position the display on the desired operation and plug the power cord into a convenient AC outlet. Three-wire power cord must be shielded and is provided as a safety precaution as it connects the chassis and cabinet to the electrical conduit ground. If the AC outlet in your location does not have provisions for the grounded type plug, the installer should attach the proper adapter to ensure a safe ground potential.
2. Connect the 15-pin color display shielded signal cable to your signal system device and lock both screws on the connector to ensure firm grounding. The connector information is as follow:



15 - Pin Color Display Signal Cable

Pin No.	Description	Pin No.	Description
1.	RED	9.	5V
2.	GREEN	10.	SYNC. GND
3.	BLUE	11.	NC
4.	NC	12.	SDA
5.	GND	13.	HORIZ. SYNC
6.	GND-R	14.	VERT. SYNC (*VCLK)
7.	GND-G	15.	SCL
8.	GND-B		

3. Apply power to the display by turning the power switch to the "ON" position and allow about thirty seconds for display tube warm-up. The Power-On indicator lights when the display is on.
4. With proper signals feed to the display, a pattern or data should appear on the screen, adjust the brightness and contrast to the most pleasing display.
5. This monitor has power saving function following the VESA DPMS. Be sure to connect the signal cable to the PC.
6. If your color display requires service, it must be returned with the power cord.



## 4. Adjustment

### 4-1 Adjustment Conditions And Precautions

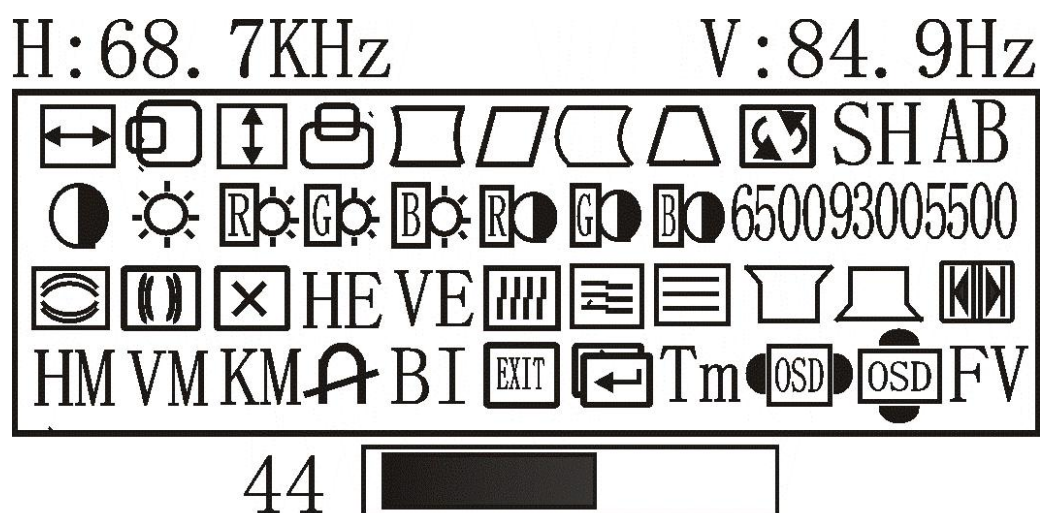
1. Approximately 30 minutes should be allowed for warm up before proceeding.
2. Adjustments should be undertaken only on those necessary elements since most of them have been carefully preset at the factory.

### 4-2 Main Adjustments
































No.	Function	Location	Designation
1	B + ADJ	PCB - MAIN	VR902
2	SCREEN ADJ	FLY BACK TRANS	T402
3	FOCUS ADJ	FLY BACK TRANS	T402
4	ABL ADJ	FACTORY OSD	ABL FUNCTION
5	FUNCTION ADJ	- SELECT	PCB - MAIN
		- DOWN (-)	PCB - MAIN
		- UP (+)	PCB - MAIN
		- MENU	PCB - MAIN

### 4-3 Adjustment Method


1. B + & HV voltage adjustment:
  - A. Chroma-2000 Signal generator or PC equivalent set mode 1, VGA 640X480 pattern 1.0 .
  - B. Connect a DC Volt meter between D925 cathode and ground, then adjust VR902 to be 66.0 VDC for CPT CRT or LPD CRT.
2. Factory preset Timings Adjustment:
  - A. Press MENU Key to show OSD window press Up or Down Key to switch the functional controls.
  - B. Press the Up Key to select the "MORIE" function, then press the SELECT Key. While do not release the SELECT Key until the OSD window changed to the Factory preset window.
  - C. The Factory preset window contains the following functional controls. Select one of the control. Then press the Up/Down Key to adjust its value for the optimum picture.



(The OSD menu for factory preset FOR WT CPU)

	H-SIZE		H-MOIRE REDUCE
	H-CENTER		V-MOIRE REDUCE
	V-SIZE		MOIRE DISABLE
	V-CENTER	<b>HE</b>	NO USE
	PINCUSHION	<b>VE</b>	NO USE
	PARALLELOGRAM		NO USE
	PIN-BALANCE		V-LINEARITY
	TRAPEZOID		V-LINEARITY
	ROTATION		TOP CORNER
<b>SH</b>	NO USE		BOT CORNER
<b>AB</b>	ABL ADJUST		FREQUENCY SELECT
	CONTRAST	<b>HM</b>	MAX-HSIZE MODIFY
	BRIGHTNESS	<b>VM</b>	MAX-VSIZE MODIFY
	R-BIAS	<b>KM</b>	MAX-TRAPEZOID MODIFY
	G-BIAS	<b>BI</b>	BI SELECT FUNCTION
	R-BIAS		DEGAUSS
	R-GAIN		OSD EXIT
	G-GAIN		RETURN
	B-GAIN	<b>Tm</b>	BURN IN TIME
<b>9300</b>	COLOR TEMPERATURE		USER OSD HORIZONTAL LOCATION ADJUST
<b>6500</b>	COLOR TEMPERATURE		USER OSD VERTICAL LOCATION ADJUST
<b>5500</b>	COLOR TEMPERATURE	<b>FV</b>	FACTORY OSD VERTICAL LOCATION ADJUST

D. To switches the input signal to the other Timing Mode. Please follow step A ~ C to get the optimum picture.(H/V-size:312\*234mm)















E. Select the "  " RETURN function and press the MENU Key, then the Factor Preset window will be returned to the original OSD window.(user's operating condition)

F. The setting data of the CONTRAST, BRIGHTNESS, ROTATION, COLOR TEMPERATURE are common mode saved in the memory. Don't needed adjust it individual at every timing Mode and save in the memory.

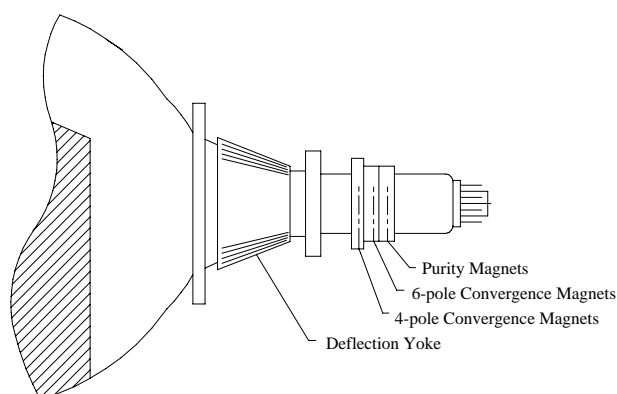
### 3. White Balance, Luminance adjustment:

#### A. Bias (Raster) adjustment:

- Set mode8 1024×768 @85Hz full white pattern(100% white field).
- To make the adjustment condition is under the Factory preset OSD menu.  
Same as step 2-B.
- Warm up more than 20 minutes.

- (d) Put the probe in the middle of screen, Brightness  set to maximum. Contrast  set to max. change to Raster pattern(No video)1024x768 @85Hz, set G-Bias  45, then adjust B-Bias , R-Bias  and FBT screen VR, to make the color temperature  $x = 260 \pm 10$ ,  $y = 290 \pm 10$ ,  $Y = 0.6 \pm 0.02$  FL.
- (e) Press up or down key to select cursor on 9300 icon and then press menu key for saved the bias data to EEPROM.
- B. 9300 and 6500 5500 color temperature window pattern(20% white field) adjustment:
- Set mode 1024x768 @ 85Hz Raster pattern.
  - adjust Brightness, to make raster Luminance is 0.06 FL.
  - Change mode to 1024x768 @ 85Hz window pattern(20% white field). put the probe in the middle of screen, Adjust G-Gain , B-Gain , R-Gain , to make color temperature  $x = 283 \pm 10$ ,  $y = 297 \pm 10$ ,  $Y = 48 \pm 0.6$  FL. then save to 9300. (use up/down key select cursor on 9300 icon and then press menu key)
  - Adjust G-Gain , B-Gain , R-Gain , to make color temperature  $x = 313 \pm 10$ ,  $y = 329 \pm 10$ ,  $Y = 42 \pm 0.6$  FL. then save to 6500.
  - Adjust G-Gain , B-Gain , R-Gain , to make color temperature  $x = 333 \pm 10$ ,  $y = 348 \pm 10$ ,  $Y = 42 \pm 0.6$  FL. then save to 5500.
- C. Full white luminance(100% white field) for 9300:
- Set mode 1024x768 @ 85Hz full white field
  - Adjust function key **AB** to the luminance at  $33 \pm 0.3$  FL.
- D. Cut off adjustment:
- Set mode 1024x768 @85Hz Raster pattern.
  - Adjust Brightness, to make  $Y = 0.06$  FL. then return from factory OSD mode to user OSD mode.
4. Focus Adjustment:
- Set mode 1024x768 @85Hz with crosshatch pattern.
  - Then adjust focus VR1 to a fine vertical line.
  - Adjust focus VR2 to a fine horizontal line.
  - Repeat step B & C. and change to full text pattern double check focus uniformity.
5. Purity Adjustment
- Be sure that the display is not being exposed to any external magnetic fields.
  - Ensure that the spacing between the Purity, Convergence, Magnet, (PCM), assembly and the CRT stem is 29mm. (See below diagram)
  - Produce a complete, red pattern on the display. Adjust the purity magnet rings on the PCM assembly to obtain a complete field of the color red. This is done by moving the two tabs in such a manner that they advance in an opposite direction but at the same time to obtain the same angle between the two tabs, which should be approximately 180°.
  - Check the complete blue and complete green patterns to observe their respective color purity. Make minor adjustments if needed.

### Relative Placement Of Typical Components



**6. Convergence adjustment**

- A. Produce a magenta crosshatch on the display.
- B. Adjust the focus for the best overall focus on the display.  
Also adjust the brightness to the desired condition.
- C. Vertical red and blue lines are converged by varying the angle between the two tabs of the 4 pole magnets on the PCM assembly. (See above diagrams)
- D. Horizontal red and blue lines are converged by varying the two tabs together, keeping the angle between them constant.
- E. Produce a white crosshatch pattern on the display.
- F. Vertical green and magenta lines are converged by varying the angle between the two tabs of the 6-pole magnets.
- G. Horizontal green and magenta lines are converged by varying the two tabs together, keeping the angle between them constant.

## 5. Circuit Description

### 5-1 Micro Controller Circuit

#### MICRO Controller

The IC101 contains a 6502/8051 8-bit CPU core, 512 bytes of RAM, 16K bytes of ROM, 14 channel 8 bit PWM D/A converters, 2 channel A/D converters for key detection, one 8 bit pre-loadable base timer, internal H-sync and V-sync signals processor providing mode detection, watch-dog timer preventing system from abnormal operation, and an I<sup>2</sup>C bus interface.

#### H/V sync signals processor

The functions of the sync processor include polarity detection, H-SYNC & V-SYNC signals counting, Programmable SYNC signals output, free running signal generator. Pin41/Pin42 are for the H-SYNC and V-SYNC input, Pin33/Pin34 will output the same signal as input sync signal without delay, and the polarity are setting in the positive. When no signal input, the Pin33 will output a 72Hz V-SYNC free run signal. The Pin34 will output a 48KHz H-SYNC free run signal. for the monitor testing use.

### 5-2 Deflection Circuit

The deflection circuit is achieved by a high performance and efficient solution IC401 (STV9118) for this monitor. The concept is fully DC controllable and can be used in applications with a micro-controller solutions. The STV9118 provides sync. Processing with full auto sync. Capability, a flexible SMPS block and an extensive set of geometry control facilities. Further the IC generates the drive waveforms for DC coupled vertical boosters to the TDA9302A.

#### Horizontal Oscillator

The oscillator is of the relaxation type and requires a capacitor of C409 at pin6. The free running frequency is determined by a resistor R412 from pin8 to ground.

#### PLL 1 Phase Detector

The phase detector is a standard one using switched current sources. It compares the middle of H-sync. with a fixed point on the oscillator saw-tooth voltage. The PLL loop filter C435, C437, R411 is connected to Pin9.

#### PLL2 Phase Detector

This phase detector is similar to the PLL1 detector and compares the line flyback pulse at pin 12 with the oscillator saw-tooth voltage. The PLL2 detector thus compensates for the delay in the external H-deflection circuit by adjusting the phase of the HDRV output pulses. The phase between H-flyback and H-sync can be controlled at pin5.

#### X-ray Protection

The X-ray protection input pin25 provides a voltage detector with a precise threshold. If the voltage exceeds this threshold for a certain time, an internal latch switches the whole IC into protection mode. In this mode several pins are forced into defined states:

Pin28 (BDRV) is floating

Pin26 (HDRV) is floating

#### Vertical Oscillator

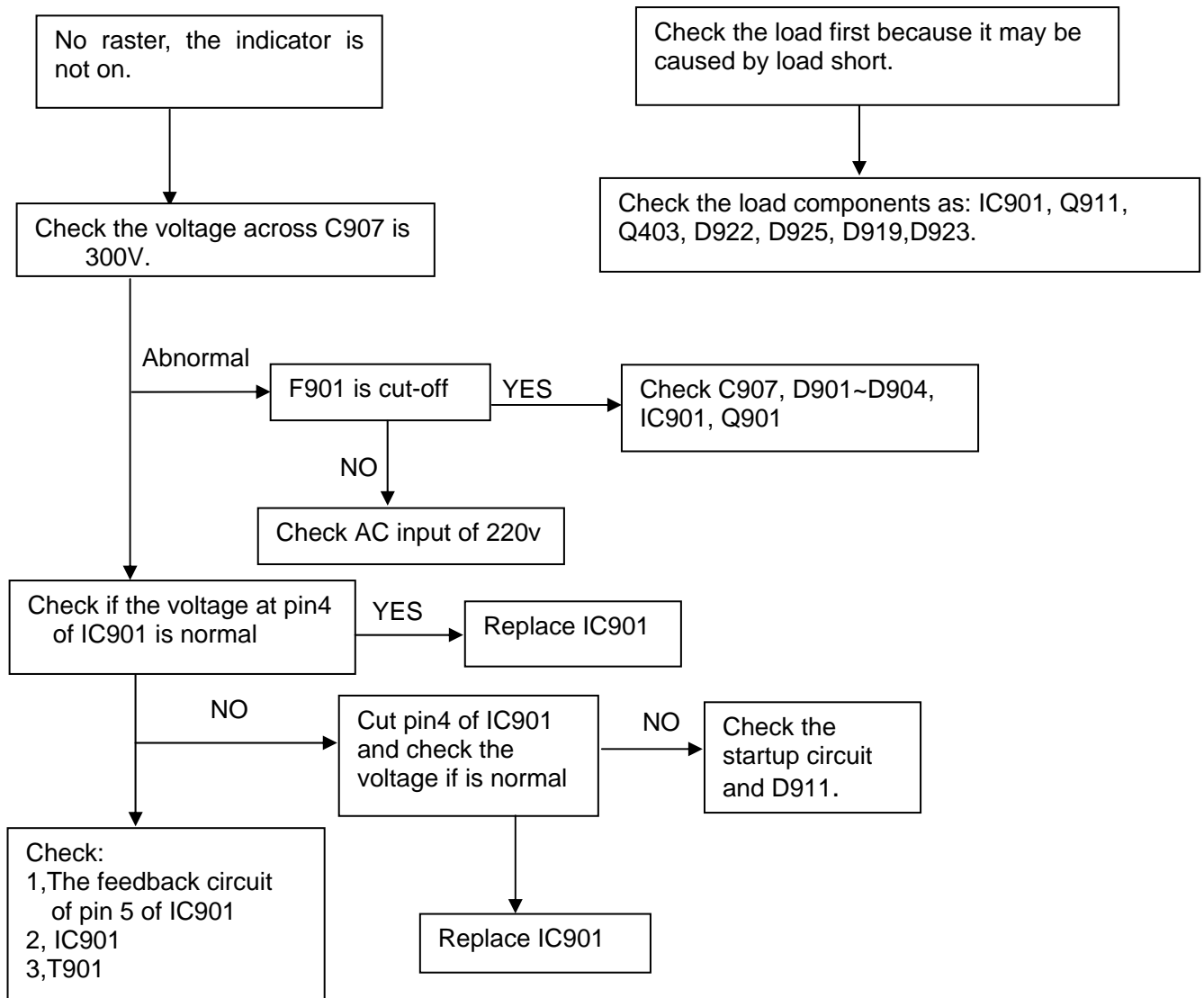
The vertical free –running frequency is determined by the capacitance C613 at pin22. Usually the free-running frequency should be lower than the minimum trigger frequency.

### 5-3 Transistor & Diode Circuit

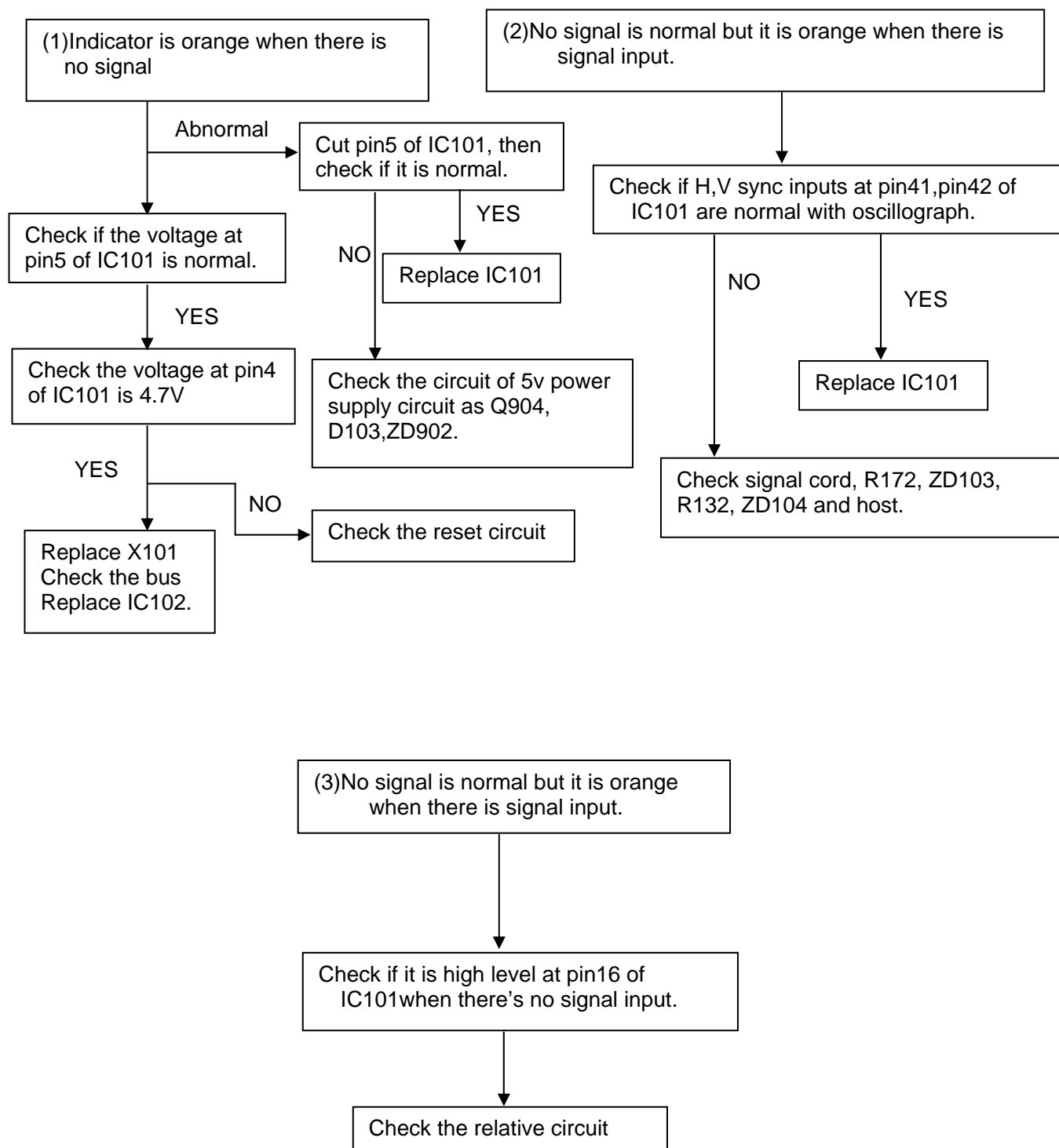
Location	Circuit Function Description
D901~D904	Bridge Rectifier for AC Source
D910	Clamp Diode for snub CKT
D919	Rectifier for Output Voltage
D922	Rectifier for Output Voltage
D923	Rectifier for Output Voltage
D925	Rectifier for B+ Supply
D929	B+ Feed Back Rectifier from F.B.T Pulse
IC901	Power IC for Switching Power Control. (Build-in MOS FET)
Q907, Q908	Use for Power Saving to Cut-off 6.3V Supply Voltage
Q909, Q910	Use for Power Saving to Cut-off 12.5V Supply Voltage
Q912, Q920	Push-Pull Topology to Drive Q911
Q913	Degaussing Switcher Transistor
Q904	5V Regulator Transistor
Q403	HOR. Driver Transistor
IC403	Horizontal s correction control MOSFET(Four in one)
Q404, Q405	As Differential Amp. to Drive Q406
Q406	Transistor for H-Size Control
Q705	Brightness Control CKT
Q742	V-Dynamic focus CKT

## 6.Trouble Shooting Chart

### 6-1 No Power

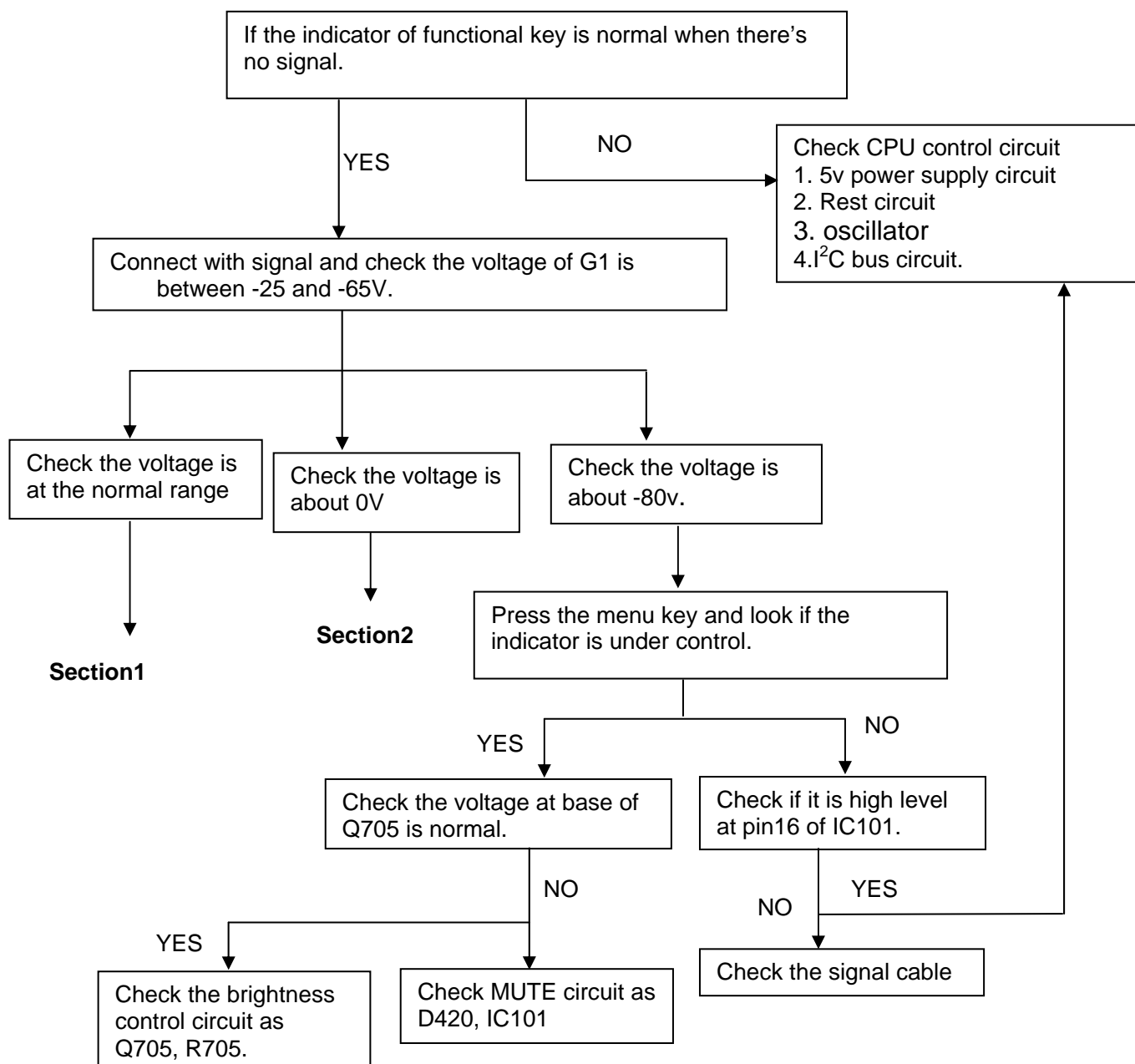


## 6-2. No Raster, No High Voltage, Indicator Is Orange

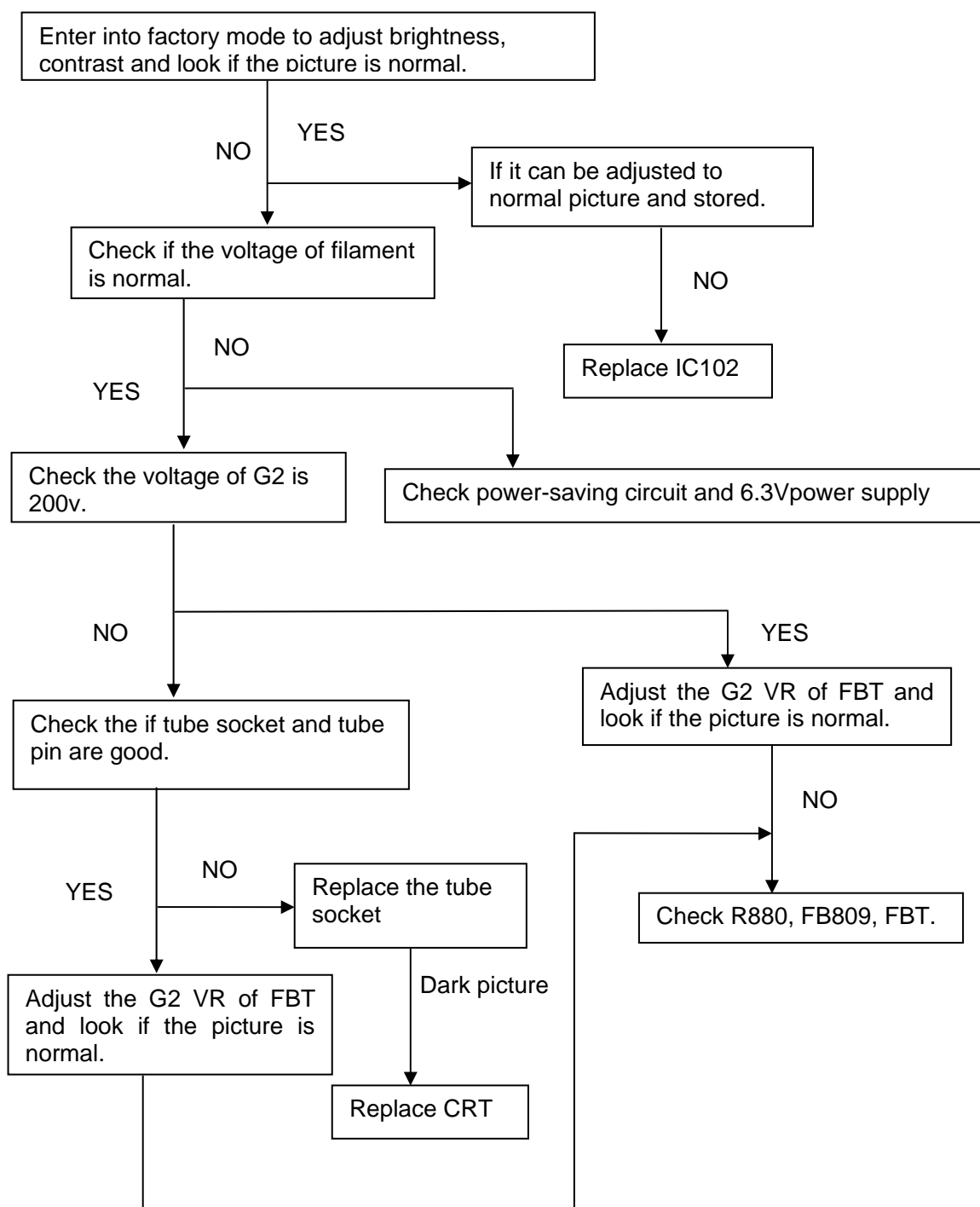




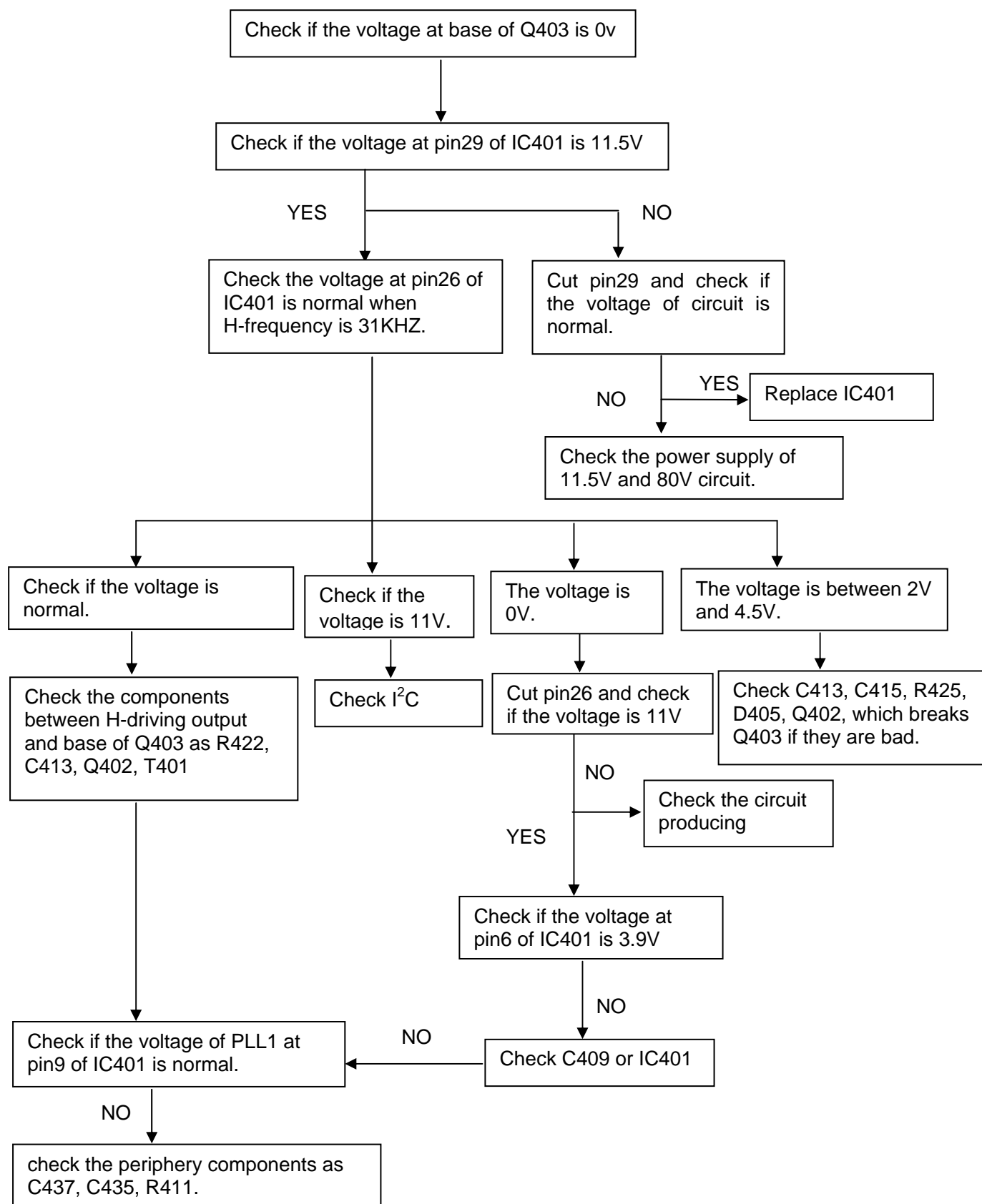
## 6-3. No Raster, Indicator Is Green



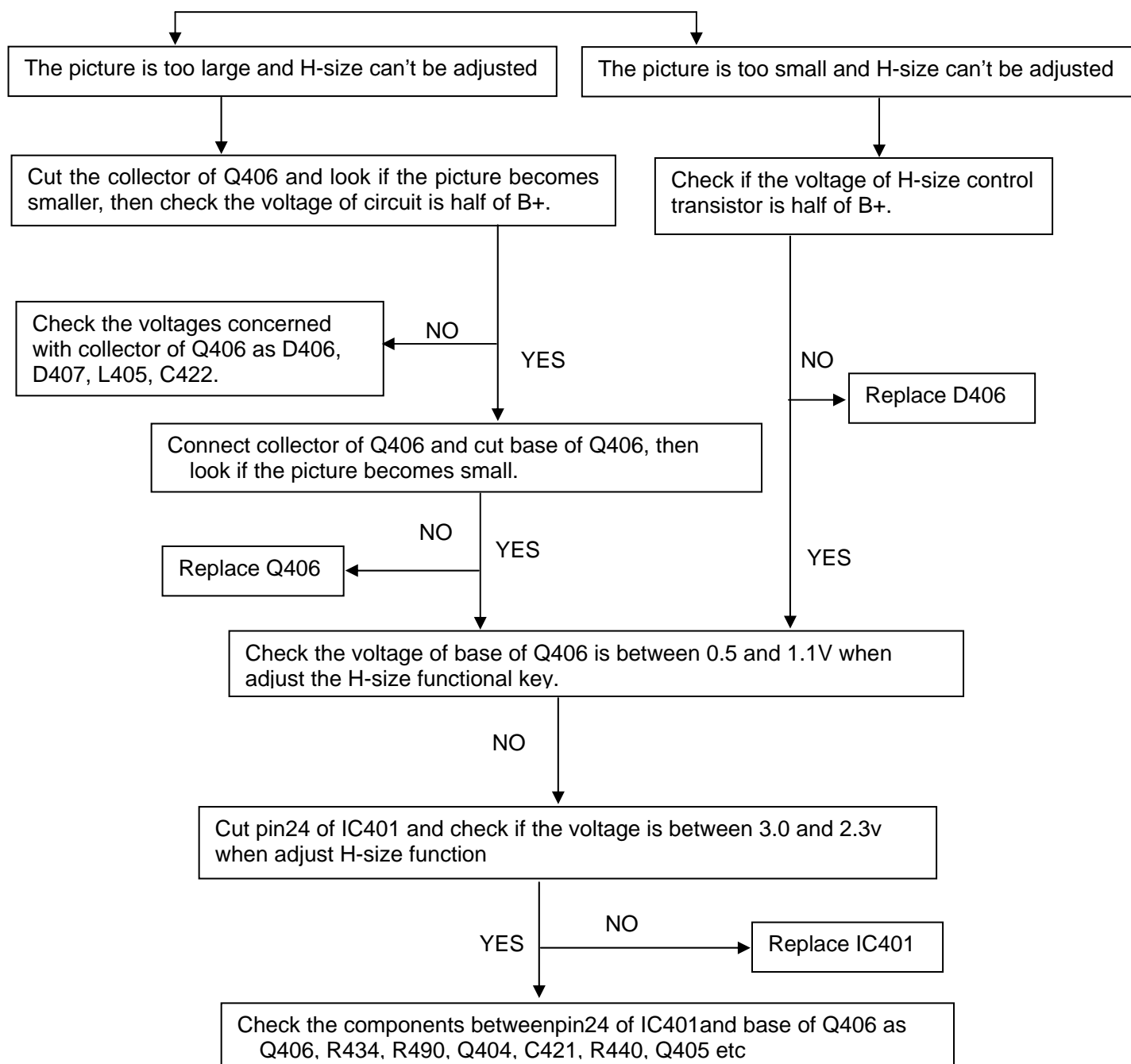
## Section1



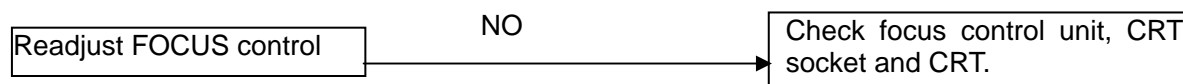
## Section2



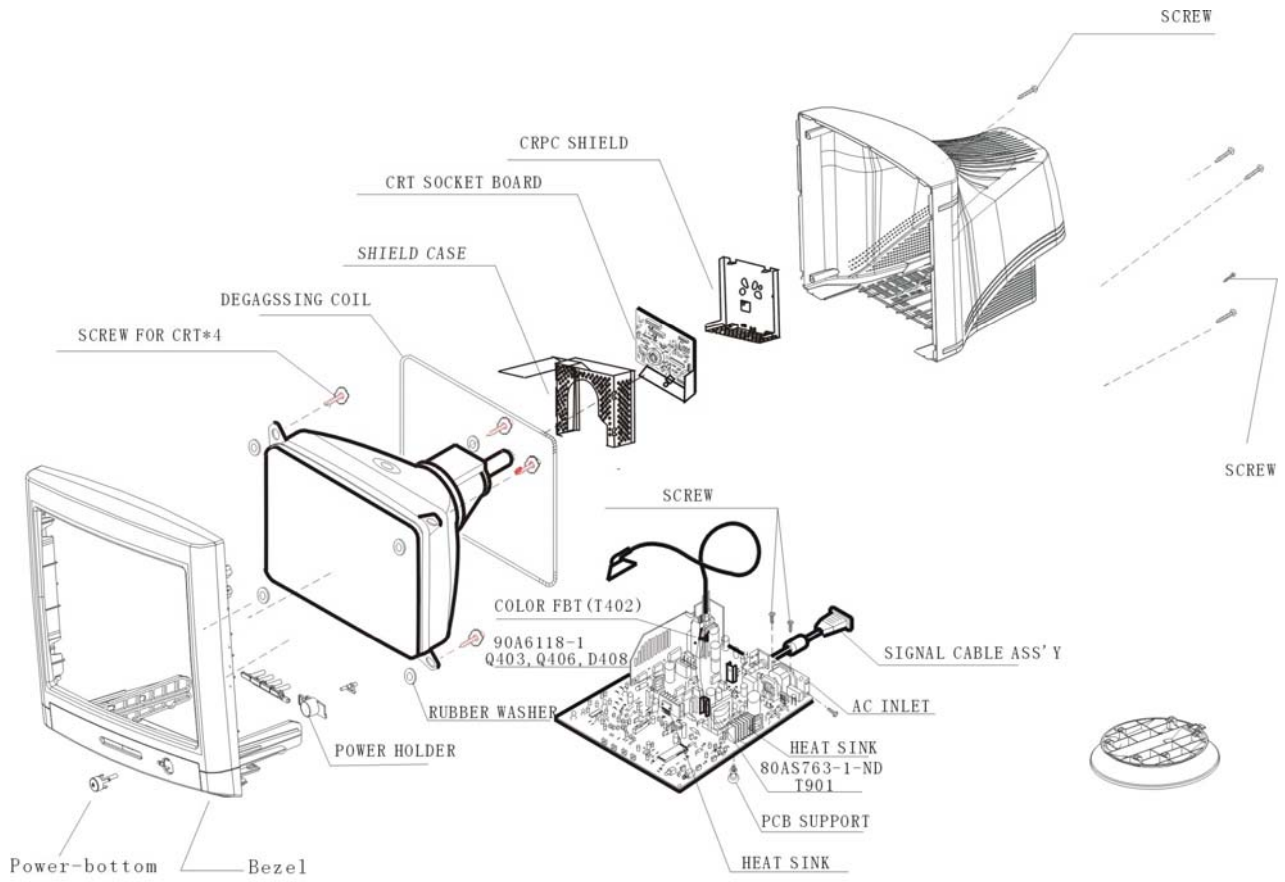
## 6-4 H-Size Fails To Be Adjusted



## 6-5 Bad Focus



## 7.Mechanical Of Cabinet Front Dis-Assembly



## 8.Parts List

S774BMCLCP02P

Location	Part Number	Description	Quantity	Unit
	CMS774B2NHPP	CHASSIS FOR S774B-2P HP	1	PCS
	1C 503504 47	SCREW FOR CRT	4	PCS
	5C600604075S	CRT WASHER	4	PCS
	11C 112 1	WIRE MONNTS	1	PCS
	11C 112500	WIRE MOUNT	1	PCS
	11C 115500	FBT CLIP	1	PCS
	11C6033 1	PCB SUPPORT	2	PCS
	19C 403 7	STEEL	1	PCS
	19C 506 5	SPRING	1	PCS
	33C3663 1	CRT SUPPORT	2	PCS
	33C6183 A5 A	POWER KNOB	1	PCS
	33C6184 A5 A	KEY PAD	1	PCS
	33C6185 Y A	POWER HOLDER	1	PCS
	33C6186 1	POWER LENS	1	PCS
	34C6114 EY 2A	BACK COVER	1	PCS
	34C6115 EY L	SWIVEL	1	PCS
	34C6116 EY L	BASE	1	PCS
	34C6117DA5 2A	FRONT PANEL	1	PCS
	40C 58162435A	MANUAL P/N LABEL	1	PCS
	40C 581716 3A	CARTON LABEL	1.1	PCS
	40C 70S716 2B	ID LABEL	1	PCS
	41C 6871623E	DOC KIT (375738-375)	1	PCS
	41C 6871629A	QSG (375685-B21)	1	PCS
	44C67C4 1	EPS CUSHION	1	PCS
	44C67C4 2	EPS CUSHION	1	PCS
	44C67C4716 1F	CARTON	1	PCS
	45C 88 7 H	PE BAG FOR MONITOR	1	PCS
	45C 88601	EPE COVER	1	PCS
	50C 500500	CABLE TIE	1	PCS
	50C 502 1	PLASTIC TIE	1	PCS
	50C 502 2	PLASTIC TIE	2	PCS
	50C 502 5	CABLE TIE	1	PCS
	51C 6 4502	SILICON	9	G
	52C 1150 C	TAPE	12	CM
	52C 1185	MIDDLE TAPE FOR CARTON	150	CM
	52C 1185 1	BIG TAPE	150	CM
	52C 1186	SMALL TAPE	5.5	CM
	55C 100613	SOLDER BAR	3.8	G
	85C6020505	GROWDED PLATE	2	PCS
	85C6027601	SHIELD CASE	1	PCS
	85C6028500	SHIELD CASE	1	PCS
	95C 91205755	WIRE HARNESS	1	PCS
	95C2070521	COPPER BRAID	1	PCS
	95C2070547	WIRE	2	PCS
	B1C1035 10 47	SCREW	1	PCS
	D1C1140 7128	SCREW 4X7(FOR AC)	1	PCS
	Q1C 340 16 47	SCREW	4	PCS
	Q1C1030 10128	SCRIW	1	PCS
	705C 78A HP AS	SPEAKER	1	PCS

	750A1697504JAG	DEGAUSSING COIL	1	PCS
AS1	95C205T 3006A	Wire Harness	1	PCS
E089A	89C412A19NLS3	POWER CORD	2	PCS
E089B	89C174B5MC CG	SIGNAL CABLE	1	PCS
	AMS774B2NHPQP	MAIN BOARD	1	PCS
	CRS774B2NHPQP	CRT BOARD	1	PCS
	1C 421 4128	SCREW	2	PCS
	15C5640 1 A B	GND LUG	1	PCS
	15C5643501	REAR BRACKET	1	PCS
	15C5689 1 A	GND LUG	1	PCS
	40C 581624 2B	CHASSIS LABEL	1	PCS
	55C 100611	SOLDER BAR	22	G
	71C 100 7	FERRITE CORE	1	PCS
	71C 100 8	FERRITE CORE 12*25*15	1	PCS
	71C 100 9	FERRITE CORE 28.5*17.5*	1	PCS
	95C2070586	WIRE HARNESS	1	PCS
	B1C1040 12128	SCREW	1	PCS
	D1C1140 7128	SCREW 4X7(FOR AC)	2	PCS
	M1C1140 6128	SCREW	1	PCS
	705C774BC56 1C	WT CPU ASS'Y	1	PCS
	705C774BC5602C	IC901 ASS'Y	1	PCS
	705C774BC57 3C	Q911 ASS'Y	1	PCS
	705C774BC5701C	Q403/D408/D406 ASS'Y	1	PCS
	705C774BC6101C	NR901 ASS'Y	1	PCS
	705C774BC84 2H	F901 ASS'Y	1	PCS
	705C774BC8702C	CN901 ASS'Y	1	PCS
	705C774BC93 2H	D911 ASS'Y	1	PCS
	705C774BC9301C	D919 ASS'Y	1	PCS
	705C774PC85 01	EMI ASS'Y	1	PCS
<SW101>	77C 602 1 CJ	TACT SWITCH TSVB-2-T-NP	1	PCS
<SW102>	77C 602 1 CJ	TACT SWITCH TSVB-2-T-NP	1	PCS
<SW103>	77C 602 1 CJ	TACT SWITCH TSVB-2-T-NP	1	PCS
<SW104>	77C 602 1 CJ	TACT SWITCH TSVB-2-T-NP	1	PCS
A3-A4	95C 201 69032	WIRE	1	PCS
C401	67C 309102 3	1000UF +-20% 16V	1	PCS
C402	67C 309470 9	47UF +-20% 100V	1	PCS
C405	67C 309102 3	1000UF +-20% 16V	1	PCS
C418	63C210J5127CC	.0051UF +-5% 1500V	1	PCS
C419	63C210J4325CU	4.3nF/1KV +-5%	1	PCS
C420	63C210J1842CC	0.18UF +-5% 250V FOR CA	1	PCS
C422	64C100J225 59	2.2UF +-5% 100V	1	PCS
C427	63C210J2042CC	0.2UF 250V BY CAMEL	1	PCS
C428	63C210J6442CC	0.64U 250V CAMEL	1	PCS
C432	67C 21547011J	47UF +-20% 200V JAMICON	1	PCS
C482	67C 21547011J	47UF +-20% 200V JAMICON	1	PCS
C713	67C 305100 12	10UF +-20% 250V	1	PCS
C900	63C107K474 US	470NF,275VAC,X2,K	1	PCS
C901	63C107K474 US	470NF,275VAC,X2,K	1	PCS
C907	67C 3022115K	220UF +-20% 450V	1	PCS
C911	65C 1K101 5T6921	100PF/1KV Y5P+-10%	1	PCS
C919	65C 2M103 3B6921	0.01UF 2KV 20% Z5U	1	PCS
C920	64C 45G4711AT	470PF +-20% 100V	1	PCS
C931	67C 215221 9J	220UF +-20% 100V JAMICO	1	PCS

C936	67C 305102 4	1000UF +-20% 25V	1	PCS
C960	65C305M3322B2	3.3NF,400VAC,Y2,M	1	PCS
C961	65C305M3322BH	Y2 3300PF +-20% 250VAC/	1	PCS
C962	65C305M4722B2	4.7NF,400VAC,Y2,M	1	PCS
C963	65C305M4722B2	4.7NF,400VAC,Y2,M	1	PCS
C964	65C305M1032BH	10NF,400VAC,Y2,M	1	PCS
CN902	33C3074 1	2P PLUG	1	PCS
CN903	33C3803 3	WAFER EH-E	1	PCS
D901	93C 5255P52T	1N5408 PEC	1	PCS
D902	93C 5255P52T	1N5408 PEC	1	PCS
D903	93C 5255P52T	1N5408 PEC	1	PCS
D904	93C 5255P52T	1N5408 PEC	1	PCS
D922	93C30408AT	RG-4S	1	PCS
D925	93C30408AT	RG-4S	1	PCS
DF901	71C 55 2 A A	FERRITE BEAD 3*5*1.5	2	PCS
DF902	71C 55 2 A A	FERRITE BEAD 3*5*1.5	2	PCS
DF903	71C 55 2 A A	FERRITE BEAD 3*5*1.5	2	PCS
DF904	71C 55 2 A A	FERRITE BEAD 3*5*1.5	2	PCS
DF925	71C 55 2 A A	FERRITE BEAD 3*5*1.5	1	PCS
FB902	71C 55 21 B	FERRITE BEAD 10*6.0*0.8	1	PCS
FB903	71C 55 21 B	FERRITE BEAD 10*6.0*0.8	1	PCS
FB907	71C 55503	FERRITE BEAD	1	PCS
GND1	9C 203 8	BRASS PIN	1	PCS
GND2	9C 203 8	BRASS PIN	1	PCS
H802	95C8013 14616	WIRE HARNESS	1	PCS
IC401	56C 573513	E-STV9118	1	PCS
IC403	57C 767 2	STA524A	1	PCS
J036	71C 55 29	FERRITE BEAD	1	PCS
L400	73C 147523HA2	CINEARITY COIL	1	PCS
L405	73C 253 69 T	150UH +-10% FOR TDK	1	PCS
L901	73A 174 7S3G	LINE FILTER	1	PCS
L902	73A 174 2HAG	LINE FILTER	1	PCS
L906	73C 253 88 TB	CHOCK	1	PCS
LED1	81C 11500GGP	LED	1	PCS
P402	33C3192 4	4P PLUG	1	PCS
P803	33C3278 7D	WAFER*PLUG	1	PCS
PR901	61C 52 27 4J	PTCR	1	PCS
Q907	57C2015 1A	2SB772-P	1	PCS
Q909	57C2015 1A	2SB772-P	1	PCS
R401	61C152M109 64	MOFR 1 OHM +-5% 2W	1	PCS
R407	61C152M158 64	0.15 OHM +-5% 2W	1	PCS
R426	61C153M330 59	MOFR 33 OHM +-5% 3W	1	PCS
R428	61C153M688 59	MOFR 0.68 OHM +-5% 3W	1	PCS
R456	61C153M271 59	MOFR 270 OHM+-5% 3W	1	PCS
R608	61C152M109 64	MOFR 1 OHM +-5% 2W	1	PCS
R701	61C152M100 64	MOFR 10 OHM+-5% 2W	1	PCS
R907	61C 208681 64	MOFR 680 OHM +-5% 1W	1	PCS
R911	61C152M820 64	MOFR 82 OHM+-5% 2W	1	PCS
R912	61C152M829 64	MOFR 8.2 OHM+-5% 2W	1	PCS
R914	61C 208680 64	MOFR 68 OHM +-5% 1W	1	PCS
R927	61C 208333 64	MOFR 33K OHM +-5% 1W	1	PCS
R929	61C152M228 64	MOFR 0.22 OHM+-5% 2W	1	PCS
RY901	77C 260 5 4	RELAY	1	PCS



SG489	62C 10 16 J	SPARK GAP 1KV +500-100V	1	PCS
SS1	95C2070548	WIRE	1	PCS
SW902	77C411A 2 CJ	MINI PUSH SWITCH	1	PCS
T401	79C 167125 T	DRIVE TRANSFORMER	1	PCS
T402	79A 774 1 BG	FLYBACK TRANSFOMER	1	PCS
T403	79C 167124 H	DRIVER TRANSFORMER	1	PCS
T901	80AS774 2 NG	TRANSFORMER	1	PCS
VR902	75A 334303	CFVR 30K OHM +-20%	1	PCS
X101	93C 2243A PT	CRYSTAL	1	PCS
XGND	95C 90 23	JUMPER	1	PCS
	AMS774B2NHPQP			
	6C 31500	EYELET	2	PCS
	6C 31501	BRASS	2	PCS
	6C 31502	BRASS	2	PCS
	6C 31 4	BRASS	21	PCS
	6C 31500	EYELET	2	PCS
	6C 31501	BRASS	2	PCS
	6C 31501	BRASS	2	PCS
	6C 31502	BRASS	6	PCS
	715C1316 5HPQ	CMPC	1	PCS
C100	67C 309470 3T	47UF +-20% 16V	1	PCS
C101	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C103	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C104	67C 309101 3T	100UF +-20% 16V	1	PCS
C105	65C 444101 5T	100 PF 10% 50V Y5P	1	PCS
C106	65C 444101 5T	100 PF 10% 50V Y5P	1	PCS
C107	65C 44222013T	22PF +-5% NPO 50V	1	PCS
C108	65C 44222013T	22PF +-5% NPO 50V	1	PCS
C109	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C111	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C112	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C113	67C 309101 3T	100UF +-20% 16V	1	PCS
C115	67C 309330 3T	33UF +-20% 16V	1	PCS
C116	65C 44210113T6921	100PF +-5% NPO 50V	1	PCS
C117	65C 44210113T6921	100PF +-5% NPO 50V	1	PCS
C118	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C119	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C130	65C 444102 5T	1000 PF 10% 50V Y5P	1	PCS
C131	65C 44233013T	33PF +-5% NPO 50V	1	PCS
C146	67C 309470 3T	47UF +-20% 16V	1	PCS
C403	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C404	67C 305479 7T	4.7UF +-20% 50V	1	PCS
C406	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C409	64C700J1020AT	PEN 0.001UF/50V +-5%	1	PCS
C410	64C178J154 1T	C121X 0.15UF 100V +-5%	1	PCS
C411	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C412	65C 44215113T6921	150PF +-5% NPO 50V	1	PCS
C413	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C414	64C178J474 1T	C121X 0.47UF 100V +-5%	1	PCS
C415	64C 44J4721AT	4700PF 100V PEI	1	PCS
C417	64C178J224 1T	C121X 0.22UF 100V +-5%	1	PCS
C421	65C517K102 2T	1000PF 10% Z5P 500V	1	PCS
C423	64C176J823 1T	.082UF +-5% 100V	1	PCS

C424	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C434	67C 309479 7T	4.7UF +-20% 50V	1	PCS
C435	64C178J103 1T	CL21X 0.01UF 100V +-5%	1	PCS
C436	67C 309220 7T	22UF +-20% 50V	1	PCS
C437	67C 309479 7T	4.7UF +-20% 50V	1	PCS
C443	67C 309470 3T	47UF +-20% 16V	1	PCS
C444	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C446	65C 44210113T6921	100PF +-5% NPO 50V	1	PCS
C447	64C178J822 1T	CL21X 8200PF 100V +-5%	1	PCS
C449	64C178J473 1T	0.047UF	1	PCS
C460	64C176J473 1T	0.047UF 100V	1	PCS
C463	64C 44J1031AT	.01UF +-5% 100V	1	PCS
C470	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C480	65C 1K470 5T6052	47P/1KV	1	PCS
C483	67C 305221 3T	220UF +-20% 16V	1	PCS
C488	65C 2K820 5T6921	82PF/2KV Y5P+-10%	1	PCS
C601	64C178J152 1T	"1500PF 100V +-5%"	1	PCS
C603	67C 305471 3T6371	470UF +-20% 16V	1	PCS
C604	65C 44422213T6921	2200PF +-10% Z5P 50V	1	PCS
C605	67C 305471 3T6371	470UF +-20% 16V	1	PCS
C607	64C178J103 1T	CL21X 0.01UF 100V +-5%	1	PCS
C608	64C178J474 1T	C121X 0.47UF 100V +-5%	1	PCS
C609	67C 309470 7T	47UF +-20% 50V	1	PCS
C610	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C611	64C178J474 0T	CL21X. 0.47UF 63V +-5%	1	PCS
C613	64C701J1540AT	0.15UF 50V +-5%	1	PCS
C614	65C 44210113T6921	100PF +-5% NPO 50V	1	PCS
C703	64C178J472 1T	4700PF 100V	1	PCS
C710	64C178J473 2T	C121X 0.047UF 250V +-5%	1	PCS
C720	65C 1K102 5T6921	1NF/1KV Y5P+-10%	1	PCS
C740	65C 2K102 5T6921	1000PF/2KV	1	PCS
C741	65C 444331 5T	330PF 10% 50V	1	PCS
C743	67C 309100 7T	10UF +-20% 50V	1	PCS
C908	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C910	67C 305220 7T	22UF +-20% 50V	1	PCS
C914	64C 44J2231AT	22NF 100V	1	PCS
C916	65C 2K271 5T6921	270PF 2KV	1	PCS
C921	64C178J104 1T	C121X 0.1UF 100V +-5%	1	PCS
C922	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C923	65C 1K820 5T6921	CAP C 82P 10% 1KV Y5P	1	PCS
C934	65C 1K101 5T6921	100PF/1KV Y5P+-10%	1	PCS
C937	67C 309471 3T	470UF +-20% 16V	1	PCS
C939	67C 305471 3T6366	470UF +-20% 16V	1	PCS
C941	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C943	64C 44J1521AT	1500PF/100V	1	PCS
C944	67C 305100 7T	10UF +-20% 50V	1	PCS
C945	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C946	63C212J1042AT	MPE 0.1UF/250V +-5%	1	PCS
C947	67C 309470 7T	47UF +-20% 50V	1	PCS
D100	93C 64 1152T	IN4148	1	PCS
D101	93C1002 1W52T	1N5817	1	PCS
D102	93C 64 1152T	IN4148	1	PCS
D103	93C1002 1W52T	1N5817	1	PCS

D104	93C 64 1152T	IN4148	1	PCS
D105	93C 64 1152T	IN4148	1	PCS
D400	93C 64 1152T	IN4148	1	PCS
D401	93C 6021P52T	PS156R	1	PCS
D402	93C 64 1152T	IN4148	1	PCS
D403	93C1040 252T	UF4004	1	PCS
D404	93C1040 252T	UF4004	1	PCS
D405	93C1002 1F52T	1N5817/	1	PCS
D406	93C 6021P52T	PS156R	1	PCS
D407	93C 6021P52T	PS156R	1	PCS
D411	93C 64 1152T	IN4148	1	PCS
D420	93C 64 1152T	IN4148	1	PCS
D421	93C 6026W52T	FR107	1	PCS
D427	93C 5247P52T	1N4004	1	PCS
D450	93C 64 1152T	IN4148	1	PCS
D470	93C 6026W52T	FR107	1	PCS
D471	93C 5247P52T	1N4004	1	PCS
D472	93C 5247P52T	1N4004	1	PCS
D474	93C 6026W52T	FR107	1	PCS
D601	93C 5247P52T	1N4004	1	PCS
D602	93C 64 1152T	IN4148	1	PCS
D603	93C 64 1152T	IN4148	1	PCS
D701	93C 64 1152T	IN4148	1	PCS
D706	93C 6044T52T	RECTIFIER DIODE FR157S	1	PCS
D740	93C1040 252T	UF4004	1	PCS
D910	93C 6021P52T	PS156R	1	PCS
D912	93C 64 1152T	IN4148	1	PCS
D916	93C 64 1152T	IN4148	1	PCS
D923	93C2020 552T	ER202	1	PCS
D926	93C 64 1152T	IN4148	1	PCS
D929	93C1040 252T	UF4004	1	PCS
D939	93C 64 1152T	IN4148	1	PCS
FB401	93C1002 1F52T	1N5817/	1	PCS
FB402	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
FB403	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
FB901	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
J001	71C 55 29	FERRITE BEAD	1	PCS
J002	71C 55 29	FERRITE BEAD	1	PCS
J035	61C 21036352T	36KOHM 1/6W	1	PCS
J052	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
J065	61C175L10052T	CFR 10 OHM +-5% 1/2W	1	PCS
J080	61C 21036352T	36KOHM 1/6W	1	PCS
NR601	61C 58251 UT	NTCR350OHM+-15%3000K UP	1	PCS
Q402	57C 530503 T	2SD1207T	1	PCS
Q404	57C 420 PP T	2PA733P PHILIPS PNP TRA	1	PCS
Q405	57C 420502 T	2SA733P	1	PCS
Q705	57C 498 1 T	BF423	1	PCS
Q742	57C 708 1 T	2SC4002E	1	PCS
Q902	57C 446501 T	2SC2120-Y	1	PCS
Q903	57C 419503 T	2SC945P	1	PCS
Q904	57C 446501 T	2SC2120-Y	1	PCS
Q905	57C 420 PP T	2PA733P PHILIPS PNP TRA	1	PCS
Q908	57C 419 PP T	2PC945	1	PCS

Q910	57C 419503 T	2SC945P	1	PCS
Q912	57C 419503 T	2SC945P	1	PCS
Q913	57C 419503 T	2SC945P	1	PCS
Q920	57C 420502 T	2SA733P	1	PCS
R100	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R101	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R102	61C 60262152T	CFR 620 OHM+-5% 1/6W	1	PCS
R103	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R104	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R105	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R106	61C 60220252T	CFR 2K OHM+-5% 1/6W	1	PCS
R107	61C 60230352T	CFR 30K OHM+-5% 1/6W	1	PCS
R108	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R109	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R112	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R115	61C 60247152T	CFR 470 OHM +-5% 1/6W	1	PCS
R116	61C 60247152T	CFR 470 OHM +-5% 1/6W	1	PCS
R117	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R119	61C 60210052T	CFR 10 OHM +-5% 1/6W	1	PCS
R120	61C 60210052T	CFR 10 OHM +-5% 1/6W	1	PCS
R121	61C 60247152T	CFR 470 OHM +-5% 1/6W	1	PCS
R123	61C172S22152T	RES CF 5% 1/4W 220OHM A	1	PCS
R124	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R125	61C 60247052T	CFR 47 OHM +-5% 1/6W	1	PCS
R126	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R127	61C 60227352T	CFR 27K OHM+-5% 1/6W	1	PCS
R128	61C 60216352T	CFR 16K OHM +-5% 1/6W	1	PCS
R129	61C 60247152T	CFR 470 OHM +-5% 1/6W	1	PCS
R130	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R131	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R132	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R133	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R134	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R135	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R136	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R137	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R143	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R153	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R156	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R157	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R172	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R181	61C 60227252T	CFR 2.7K OHM+-5% 1/6W	1	PCS
R182	61C 60239252T	CFR 3.9K OHM+-5% 1/6W	1	PCS
R402	61C 17212252T	CFR 1.2K OHM +-5% 1/4W	1	PCS
R403	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R404	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R405	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R406	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R410	61C175L10052T	CFR 10 OHM +-5% 1/2W	1	PCS
R411	61C 60256252T	CFR 5.6KOHM+-5% 1/6W	1	PCS
R412	61C 21051252T	MFR 5.1KOHM +-1% 1/6W	1	PCS
R413	61C 17210052T	CFR 10OHM+-5% 1/4W	1	PCS
R414	61C 60227252T	CFR 2.7K OHM+-5% 1/6W	1	PCS

R415	61C 17247352T	CFR 47K OHM +-5% 1/4W	1	PCS
R416	61C 20051252T	5.1KOHM 1/4W	1	PCS
R418	61C 20011252T	1.1KOHM 1/4W	1	PCS
R419	61C 17247352T	CFR 47K OHM +-5% 1/4W	1	PCS
R422	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R424	61C 17210052T	CFR 100OHM+-5% 1/4W	1	PCS
R425	61C 17210152T	CFR 100OHM+-5% 1/4W	1	PCS
R429	61C175L10052T	CFR 10 OHM +-5% 1/2W	1	PCS
R430	61C 17218452T	CFR 180KOHM+-5% 1/4W	1	PCS
R431	61C 17262252T	CFR 6.2K OHM +-5% 1/4W	1	PCS
R432	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R433	61C 21010252T	MFR 1K OHM +- 1% 1/6W	1	PCS
R434	61C 17239252T	CFR 3.9K OHM +-5% 1/4W	1	PCS
R436	61C 21022252T	MFR 2.2K OHM +- 1% 1/6W	1	PCS
R439	61C 17247252T	CFR 4.7K OHM +-5% 1/4W	1	PCS
R440	61C 20033252T	MFR 3.3KOHM+-1% 1/4W	1	PCS
R441	61C175L82352T	CFR 82K OHM +-5% 1/2W	1	PCS
R450	61C 17247352T	CFR 47K OHM +-5% 1/4W	1	PCS
R453	61C 17222452T	CFR 220KOHM+-5% 1/4W	1	PCS
R454	61C 17210052T	CFR 100OHM+-5% 1/4W	1	PCS
R462	61C 17220352T	CFR 20KOHM+-5% 1/4W	1	PCS
R463	61C 17220552T	CFR 2MOHM+-5% 1/4W	1	PCS
R472	61C 17222452T	CFR 220KOHM+-5% 1/4W	1	PCS
R473	61C 17247252T	CFR 4.7K OHM +-5% 1/4W	1	PCS
R474	61C 17247352T	CFR 47K OHM +-5% 1/4W	1	PCS
R478	61C 17222452T	CFR 220KOHM+-5% 1/4W	1	PCS
R486	61C 17247252T	CFR 4.7K OHM +-5% 1/4W	1	PCS
R490	61C 17212352T	CFR 12K OHM +-5% 1/4W	1	PCS
R601	61C 17224352T	CFR 24KOHM+-5% 1/4W	1	PCS
R602	61C 20039252T	MFR 3.9KOHM +-1% 1/4W	1	PCS
R603	61C 17212352T	CFR 12K OHM +-5% 1/4W	1	PCS
R604	61C 20056252T	MFR 5.6KOHM+-1% 1/4W	1	PCS
R605	61C175L15952T	CFR 1.5 OHM +-5% 1/2W	1	PCS
R606	61C175L12152T	CFR 120 OHM +-5% 1/2W	1	PCS
R609	61C 21075352T	75KOHM 1/6W	1	PCS
R610	61C 17212452T	CFR 120K OHM +-5% 1/4W	1	PCS
R611	61C 21012452T	120KOHM 1/6W	1	PCS
R612	61C 17222252T	CFR 2.2KOHM+-5% 1/4W	1	PCS
R613	61C 17210252T	CFR 1KOHM +-5% 1/4W	1	PCS
R615	61C 17212452T	CFR 120K OHM +-5% 1/4W	1	PCS
R617	61C 21062352T	62KOHM 1/6W	1	PCS
R621	61C 21025352T	MFR 25KOHM +-1% 1/6W	1	PCS
R703	61C 17215152T	CFR 150 OHM +-5% 1/4W	1	PCS
R706	61C 60230152T	300OHM 1/6W	1	PCS
R713	61C 60256252T	CFR 5.6KOHM+-5% 1/6W	1	PCS
R715	61C172S36352T	36KO 1/4W	1	PCS
R720	61C 17239252T	CFR 3.9K OHM +-5% 1/4W	1	PCS
R721	61C175L10252T	CFR 1K OHM +-5% 1/2W	1	PCS
R725	61A212Y56352T	MGFR 56K OHM +-5% 1/2W	1	PCS
R726	93C 64 1152T	IN4148	1	PCS
R740	61C175L56352T	CFR 56K OHM +-5% 1/2W	1	PCS
R741	61C175L12452T	CFR 120K OHM +-5% 1/2W	1	PCS
R748	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS

R749	61C 17210452T	CFR100K OHM +-5% 1/4W	1	PCS
R751	61C 60268152T	CFR 680 OHM +-5% 1/6W	1	PCS
R776	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R901	61C175L10552T	CFR 1M OHM +-5% 1/2W	1	PCS
R902	61C 60239252T	CFR 3.9K OHM+-5% 1/6W	1	PCS
R904	61C 17212252T	CFR 1.2K OHM +-5% 1/4W	1	PCS
R905	61C 60251252T	CFR 5.1K OHM+-5% 1/6W	1	PCS
R906	61C 17210052T	CFR 10OHM+-5% 1/4W	1	PCS
R908	61C175L75952T	CFR 7.5 OHM +-5% 1/2W	1	PCS
R909	61C 17210152T	CFR 100OHM+-5% 1/4W	1	PCS
R910	61C 60291352T	CFR 91K OHM +-5% 1/6W	1	PCS
R913	61C 17210452T	CFR100K OHM +-5% 1/4W	1	PCS
R917	61A214Y27252T	2.7K 1/4W	1	PCS
R921	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R930	61C 17268152T	CFR 680 OHM +-5% 1/4W	1	PCS
R933	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R939	61A212Y75452T	750KOHM 1/2W	1	PCS
R941	61C 17251152T	CFR 510 OHM +-5% 1/4W	1	PCS
R951	61C 17247152T	CFR 470OHM +-5% 1/4W	1	PCS
R952	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R953	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R957	61C 60247352T	CFR 47K OHM+-5% 1/6W	1	PCS
R958	61C 17210252T	CFR 1KOHM +-5% 1/4W	1	PCS
R959	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R960	61C 17247352T	CFR 47K OHM +-5% 1/4W	1	PCS
R962	61C 17247052T	CFR 47 OHM +-5% 1/4W	1	PCS
R965	61C 17247952T	CFR 4.7 OHM +-5% 1/4W	1	PCS
R966	61C 17230252T	CFR 3KOHM+-5% 1/4W	1	PCS
R967	61A212Y62352T	62KOHM 1/2W	1	PCS
R968	61C 17216452T	CFR 160KOHM +-5% 1/4W	1	PCS
R969	61C 17212452T	CFR 120K OHM +-5% 1/4W	1	PCS
R972	61C 17220352T	CFR 20KOHM+-5% 1/4W	1	PCS
R980	61C 17222152T	CFR 220OHM+-5% 1/4W	1	PCS
R981	61C175L10152T	CFR 100 OHM +-5% 1/2W	1	PCS
R982	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R983	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R994	61C 17220352T	CFR 20KOHM+-5% 1/4W	1	PCS
ZD100	93C 64 1152T	IN4148	1	PCS
ZD101	93C 3951752T	TZX6V2C	1	PCS
ZD102	93C 3951752T	TZX6V2C	1	PCS
ZD103	93C 3951752T	TZX6V2C	1	PCS
ZD104	93C 3951752T	TZX6V2C	1	PCS
ZD702	93C 3960052T	HZ4A3-E	1	PCS
ZD901	93C 3951652T	TZX5V1B	1	PCS
ZD902	93C 396V1 V	TZX6V2B	1	PCS
ZD903	93C 3953252T	TZX24B	1	PCS
<b>CRS774B2NHPQP</b>				
	ARS774B2NHPQP	CRT BOARD	1	PCS
	40C 45762412B	LABEL	1	PCS
	87C3504 ZW	CRT SOCKET(QQ FOCUS)	1	PCS
	90C6113 5	HEAT SINK FOR IC801	1	PCS
	705C774BR5601C	IC802 ASS'Y	1	PCS
C825	65C 1M103 3A6921	0.01UF 1K Z5U	1	PCS

C828	65C 2M103 3A6921	10000PF 2KV	1	PCS
C829	67C 305470 9	47UF +-20% 100V	1	PCS
C839	65C 1K101 5T6921	100PF/1KV Y5P+-10%	1	PCS
C874	65C 2M1033FB6921	10000PF -20%~+18% 2KV	1	PCS
C877	65C 44210113T	100PF +-5% NPO 50V	1	PCS
FB809	71C 5519R	FERRITE BEAD 9X3.5X0.8	1	PCS
G2	9C 203 8	BRASS PIN	1	PCS
IC801	56C 366515	LM1237BDKE	1	PCS
IC803	56C 539 6	LM2480NA/NOPB	1	PCS
L805	71C 55506 H1	BEAD OF SIX PIN	1	PCS
P801	33C3278 6D	WAFER	1	PCS
P802	33C327814D	WAFER& PLUG	1	PCS
R879	61A212Y10152T	100 OHM 1/2W	1	PCS
RF879	71C 55 2 A A	FERRITE BEAD 3*5*1.5	1	PCS
	6C 31 4	BRASS	3	PCS
	715C 992 4HPQ	PCB	1	PCS
C801	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C802	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C803	64C178J104 0T	CL21X0.1UF 63V +-5%	1	PCS
C804	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C805	67C 309101 3T	100UF +-20% 16V	1	PCS
C806	67C 309109 7T	1.0UF +-20% 50V	1	PCS
C808	65C 44210013T	10PF +-5% NPO 50V	1	PCS
C809	67C 309339 7T	3.3UF +-20% 50V	1	PCS
C810	67C 305470 7T	47UF +-20% 50V	1	PCS
C811	64C700J3330AT	0.033UF 63V +-5%	1	PCS
C813	65C 44210113T	100PF +-5% NPO 50V	1	PCS
C817	65C 44215013T	15PF 5% AUTO INSERT	1	PCS
C818	65C 44215013T	15PF 5% AUTO INSERT	1	PCS
C819	65C 44215013T	15PF 5% AUTO INSERT	1	PCS
C821	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C823	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C824	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C826	67C 309470 7T	47UF +-20% 50V	1	PCS
C830	65C 1K101 5T6921	100PF/1KV Y5P+-10%	1	PCS
C831	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C832	67C 309109 9T	1UF +-20% 100V	1	PCS
C833	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C834	65C251K104 2T	0.1UF 250V	1	PCS
C835	65C 444152 5T	1500PF 10% Y5P 50V	1	PCS
C836	65C 44212013T	12PF J NPO 50V	1	PCS
C837	65C 44212013T	12PF J NPO 50V	1	PCS
C838	65C 44212013T	12PF J NPO 50V	1	PCS
C840	67C 70109 9T	1UF +-20% 100V	1	PCS
C841	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C842	65C 450104 3T	0.1UF 50V Y5V	1	PCS
C848	65C 1K101 5T6921	100PF/1KV Y5P+-10%	1	PCS
C853	67C 70109 9T	1UF +-20% 100V	1	PCS
C854	67C 70109 9T	1UF +-20% 100V	1	PCS
C855	67C 70109 9T	1UF +-20% 100V	1	PCS
C856	65C251K104 2T	0.1UF 250V	1	PCS
C857	65C251K104 2T	0.1UF 250V	1	PCS
C858	65C251K104 2T	0.1UF 250V	1	PCS

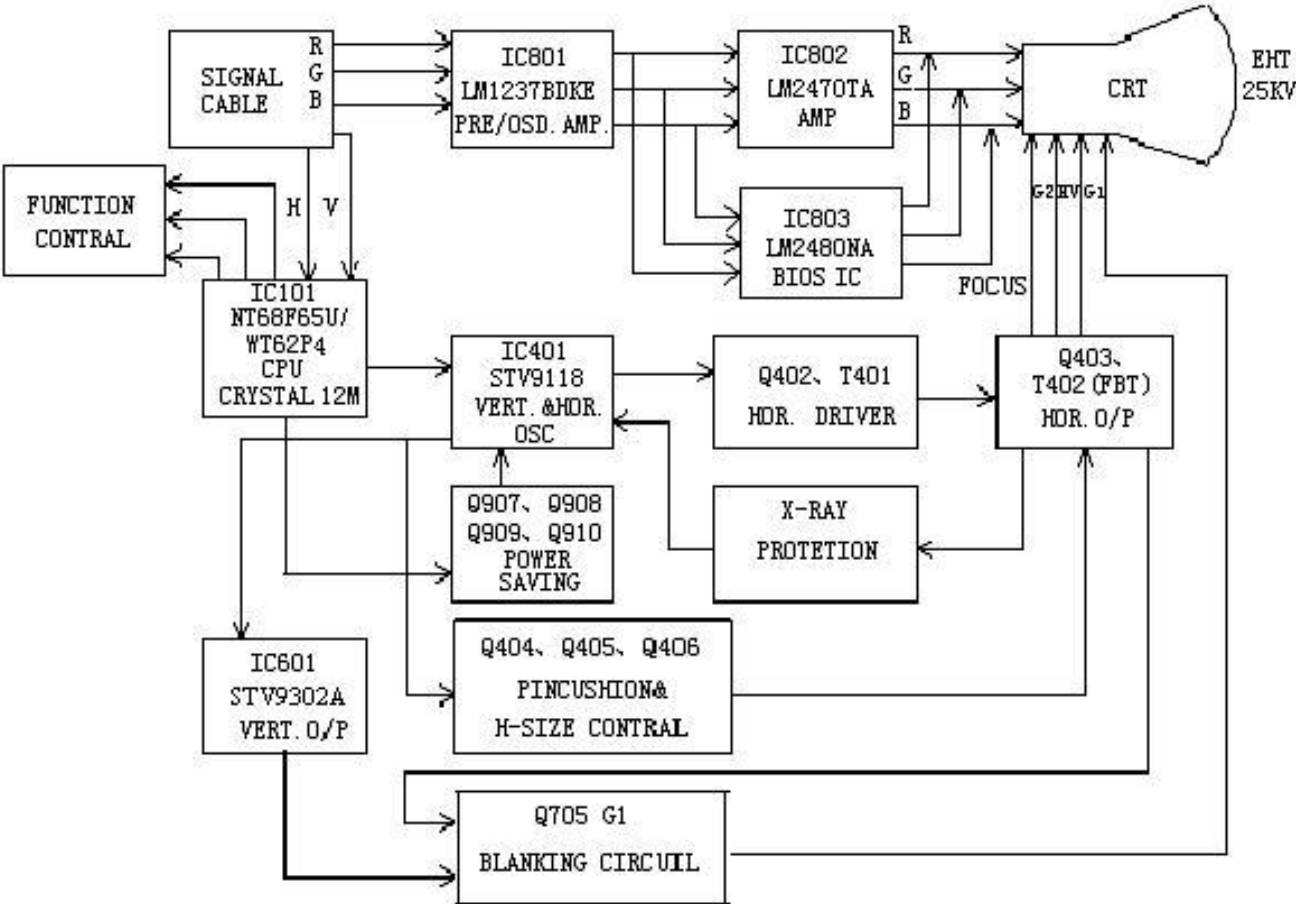
C860	65C251K104 2T	0.1UF 250V	1	PCS
C864	67C 70109 9T	1UF +-20% 100V	1	PCS
C867	67C 70109 9T	1UF +-20% 100V	1	PCS
C870	67C 309220 9T	22UF +-20% 100V	1	PCS
C871	67C 309101 3T	100UF +-20% 16V	1	PCS
C873	65C517K102 2T6921	1000PF 10% Z5P 500V	1	PCS
C875	65C 450104 7T	0.1UF +80-20% 50V Y5V	1	PCS
C876	65C 44210113T	100PF +-5% NPO 50V	1	PCS
C879	65C 1K102 5T6921	1NF/1KV Y5P+-10%	1	PCS
D801	93C 64 1152T	IN4148	1	PCS
D802	93C 64 1152T	IN4148	1	PCS
D803	93C 64 1152T	IN4148	1	PCS
D804	93C 64 1152T	IN4148	1	PCS
D805	93C 64 1152T	IN4148	1	PCS
D806	93C 64 1152T	IN4148	1	PCS
D850	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D851	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D852	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D853	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D854	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D855	93C 6450152T	SWITCHING DIODE BAV21	1	PCS
D856	93C 6431P52T	BAV20	1	PCS
D857	93C 6431P52T	BAV20	1	PCS
D858	93C 6431P52T	BAV20	1	PCS
D863	93C 6021P52T	PS156R	1	PCS
FB801	71C 55 9 T C	CORE RF BEAD RH 3.5X6X0	1	PCS
FB805	61C 17222152T	CFR 220OHM+-5% 1/4W	1	PCS
FB850	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
FB852	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
L801	61C 17268052T	CFR 68 OHM +-5% 1/4W	1	PCS
L802	61C 17268052T	CFR 68 OHM +-5% 1/4W	1	PCS
L803	61C 17268052T	CFR 68 OHM +-5% 1/4W	1	PCS
L804	71C 55 19 T	FERRITE BEAD 9X3.5X0.8	1	PCS
L850	73C 5433810T	0.33uH +-10%	1	PCS
L851	73C 5433810T	0.33uH +-10%	1	PCS
L852	73C 5433810T	0.33uH +-10%	1	PCS
R801	61C 60275052T	CFR 75 OHM+-5% 1/6W	1	PCS
R802	61C 60275052T	CFR 75 OHM+-5% 1/6W	1	PCS
R803	61C 60275052T	CFR 75 OHM+-5% 1/6W	1	PCS
R804	61C 60233052T	CFR 33 OHM +-5% 1/6W	1	PCS
R805	61C 60233052T	CFR 33 OHM +-5% 1/6W	1	PCS
R806	61C 60233052T	CFR 33 OHM +-5% 1/6W	1	PCS
R814	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R815	61C 60210152T	CFR 100 OHM+-5% 1/6W	1	PCS
R818	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R820	61C 60262252T	CFR 6.2K OHM +-5% 1/6W	1	PCS
R821	61C 60222252T	CFR 2.2K OHM +-5% 1/6W	1	PCS
R823	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R824	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R825	61C 60210252T	CFR 1K OHM+-5% 1/6W	1	PCS
R826	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R827	61C 60247252T	CFR 4.7K OHM+-5% 1/6W	1	PCS
R830	61C 60239252T	CFR 3.9K OHM+-5% 1/6W	1	PCS

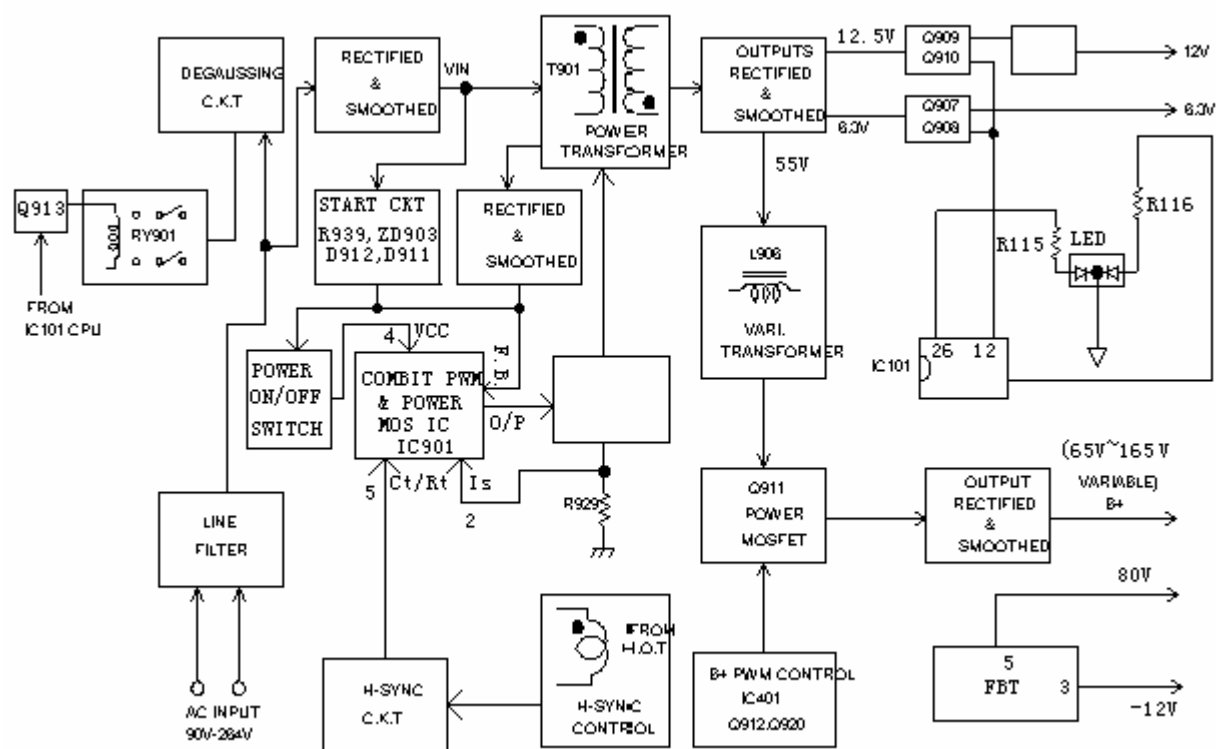


R835	61C 60210352T	CFR 10K OHM+-5% 1/6W	1	PCS
R854	61C 17251052T	CFR 51OHM +-5% 1/4W	1	PCS
R855	61C 17251052T	CFR 51OHM +-5% 1/4W	1	PCS
R856	61C 17251052T	CFR 51OHM +-5% 1/4W	1	PCS
R857	61C 17210552T	CFR 1MOHM +-5% 1/4W	1	PCS
R858	61C 17210552T	CFR 1MOHM +-5% 1/4W	1	PCS
R859	61C 17210552T	CFR 1MOHM +-5% 1/4W	1	PCS
R872	61C175L56052T	CFR 56 OHM +-5% 1/2W	1	PCS
R873	61C175L56052T	CFR 56 OHM +-5% 1/2W	1	PCS
R874	61C175L56052T	CFR 56 OHM +-5% 1/2W	1	PCS
R880	61A212Y56452T	560K OHM 1/2W	1	PCS
	2C6003 1	SCREW NUT	1	PCS
	90C6026 11	HEAT SINK	1	PCS
	M1C1730 7128	SCREW	1	PCS
IC802	56C 551524	LM2470TA/NOPB	1	PCS
IC101	56C1125577 A1	6148-KC421A0-175C	1	PCS
IC102	56C1133 13	24LC08B/PG	1	PCS
	90C 339509 PA	HEAT SINK	1	PCS
	M1C1730 101286175	SCREW M3X10	1	PCS
IC901	56C 379504	STR-G5643D	1	PCS
	2C6003 1	SCREW NUT	1	PCS
	32C3028 8	MICA	1	PCS
	90C6209 2	HEAT SINK	1	PCS
	M1C1730 10128	SCREW M3x10	1	PCS
Q911	57C 600512	STP8NS25-E	1	PCS
	5C 71 1	TRANSISTOR HOUSING	2	PCS
	32C3028504	MICA	2	PCS
	90C6069509	HEAT SINK	1	PCS
	M1C1130 8128	SCREW 3.0X8	2	PCS
	M1C1730 8128	SCREW M3x8	1	PCS
	M1C1730 10128	SCREW M3x10	1	PCS
	M1C1730 12128	SCREW	2	PCS
D408	93C 220512 E	DMV1500MFD	1	PCS
HV1	95C205T 30062	UL1015#18BLK.TOPCOAT	1	PCS
IC601	56C 574501	E-STV9302A	1	PCS
Q403	57C 706505	2SC5929	1	PCS
Q406	57C 415 1 A	TR.NPN TIP122/FAIRCHILD	1	PCS
	9C 203 9	PIN	1	PCS
NR901	61C 58 8T L	NTCR 15OHM+-15%2.5A THI	1	PCS
	84C 33 10	FUSE CLIP	2	PCS
F901	84C 7H400 SL	FUSE 4A 250V LF-618 004	1	PCS
	87C 501 6 6425	AC SOCKET	1	PCS
CN901	95C 800 2 2	WIRE	1	PCS
	61C175L15952T	CFR 1.5 OHM +-5% 1/2W	1	PCS
	93C106050652T	SBYV26C	1	PCS
	96C 29 4	PLASTIC TUBEL	2	CM
	90C6118 1	HEAT SINK	1	PCS
D919	93C 6073A	F R D 3A/400V 31DF4/I.R	1	PCS
DF919	71C 55 2 A A	FERRITE BEAD 3*5*1.5	1	PCS
	11C6030 1	PCB SUPPORT	1	PCS
	95C 205 30032	WIRE	1	PCS
	750C5W51 2G	CPT 17" CV PI+ TCO CRT	1	PCS
C425	63C210J2743CC	0.27UF +-5% 400V	1	PCS

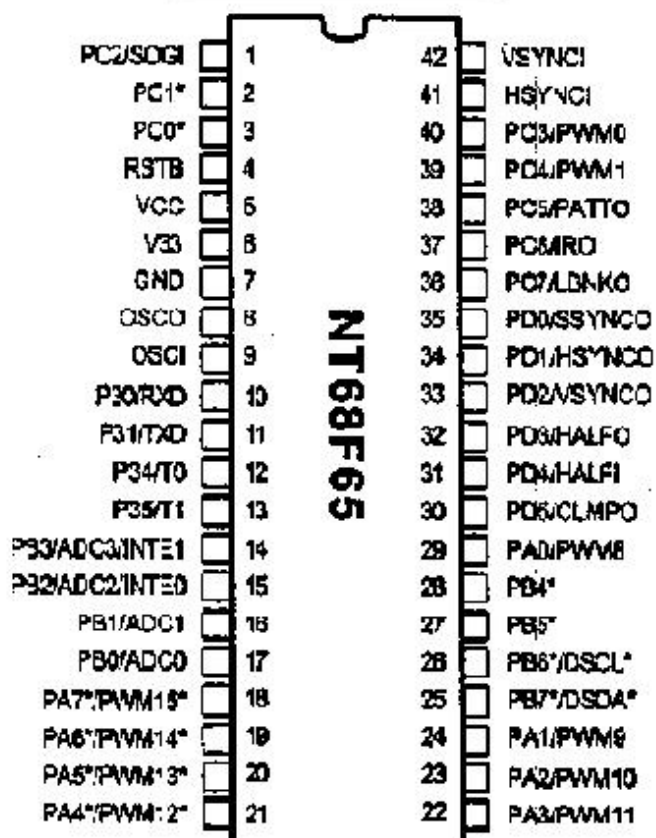
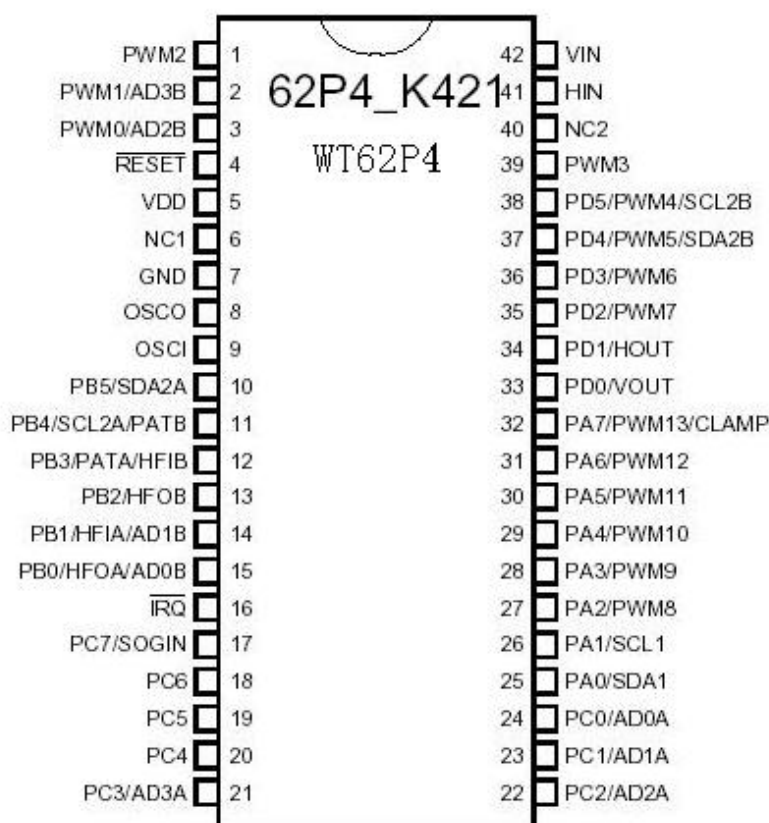
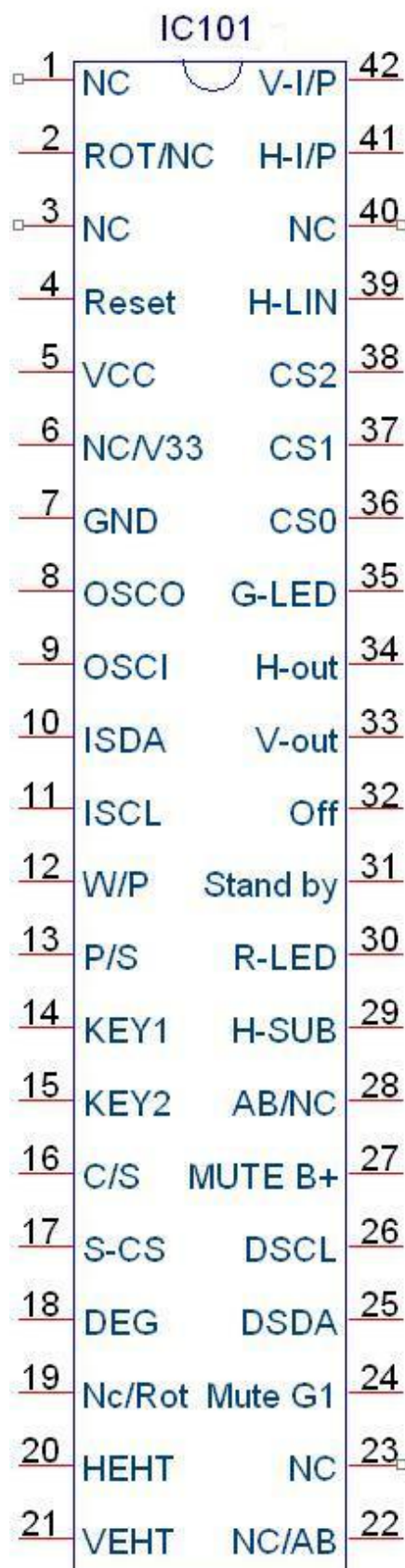
C450	95C 90 23	JUMPER	1	PCS
R607	61C 208109 64	MOFR 1 OHM +-5% 1W	1	PCS
	750C5W522AV	CPT 17" CV PI+TCO CRT	1	PCS
C425	63C210J2743CC	0.27UF +-5% 400V	1	PCS
C450	65C 1K151 5T6052	150PF/1KV	1	PCS
R607	61C 208109 64	MOFR 1 OHM +-5% 1W	1	PCS
	750C5W522AV	CPT 17" CV PI+TCO CRT	1	PCS
C425	63C210J2743CC	0.27UF +-5% 400V	1	PCS
C450	95C 90 23	JUMPER	1	PCS
R607	61C 208109 64	MOFR 1 OHM +-5% 1W	1	PCS
C425	63C210J2443CU	0.24uF 400V	1	PCS
C450	65C 1K221 1T6052	220PF/1KV	1	PCS
E750A	750C58625AV	LPD 17" 0.27 TCO CV+ CR	1	PCS
R607	61C 208918 64	MOFR 0.91OHM +-5% 1W	1	PCS
C425	63C210J2443CU	0.24uF 400V	1	PCS
C450	95C 90 23	JUMPER	1	PCS
E750A	750C58625AV	LPD 17" 0.27 TCO CV+ CR	1	PCS
R607	61C 208918 64	MOFR 0.91OHM +-5% 1W	1	PCS

9. Block Diagram



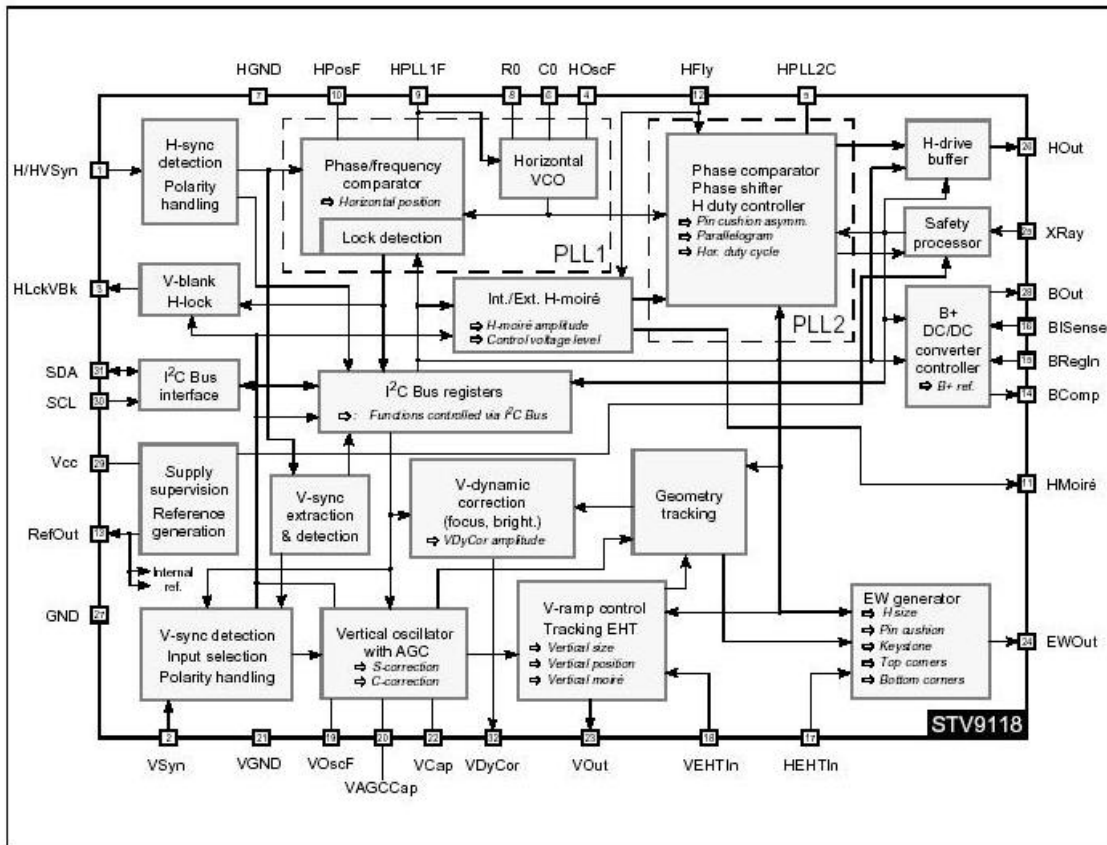


## 10. IC Block Diagram



# IC401 STV9118

646



STV9118

## IC803 LM2480NA

### Block Diagrams

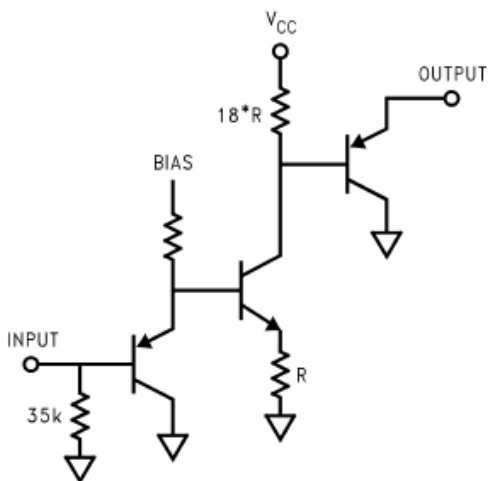


FIGURE 1. Simplified Schematic (One Channel)

### Package Pinout

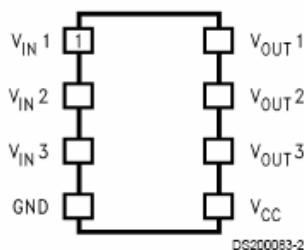
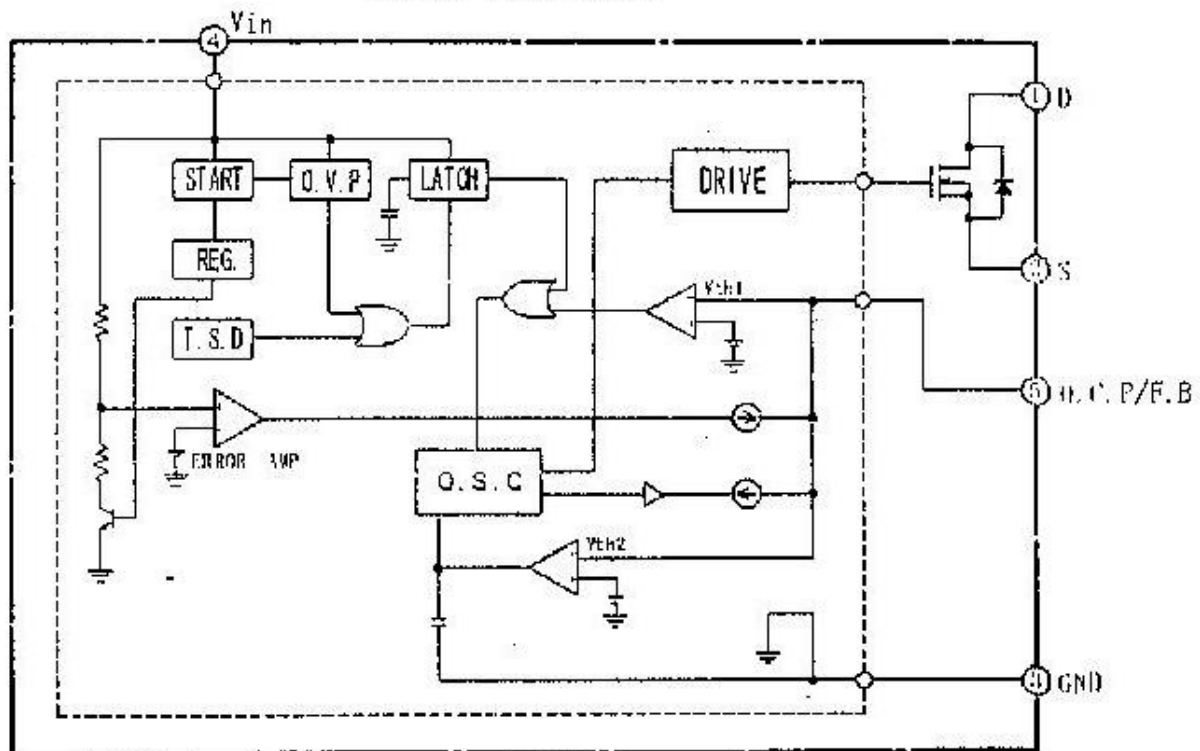
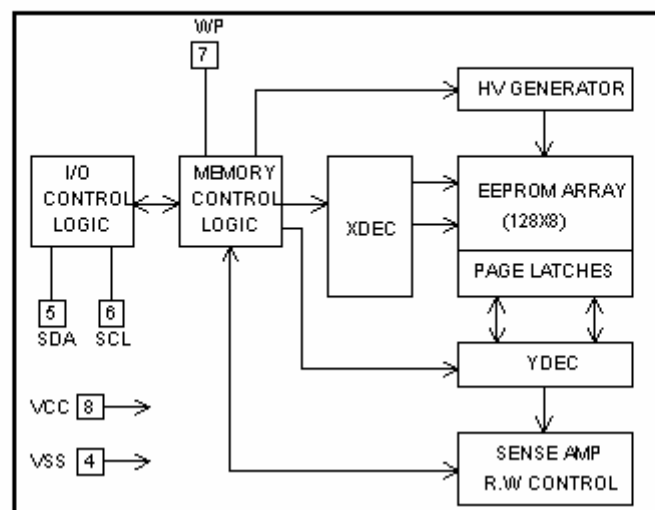


FIGURE 2. LM2480 Package Pinout  
Order Number LM2480NA  
NS Package Number: N08E

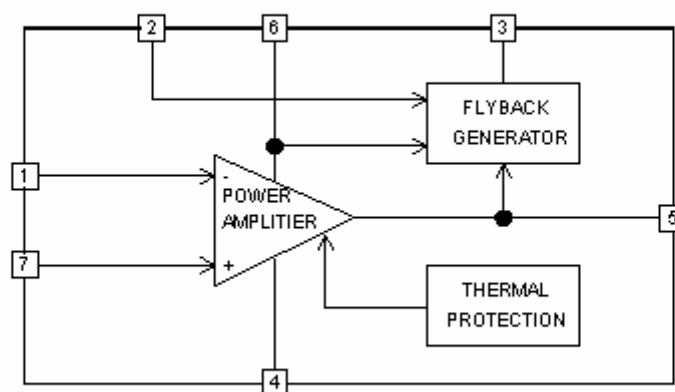
IC901 STR-5643



IC102 M24C08



IC601 STV9302A



IC801 LM1237BDKE

Block and Connection Diagram

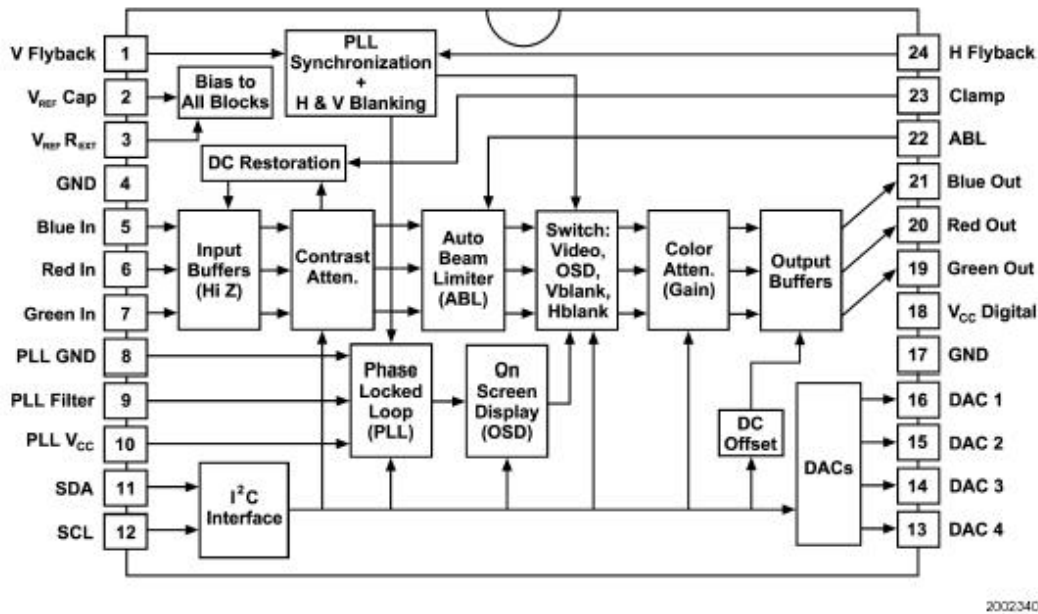


FIGURE 1. Order Number LM1237AAE/NA  
See NS Package Number N24D

IC802 LM2470TA

Schematic Diagram

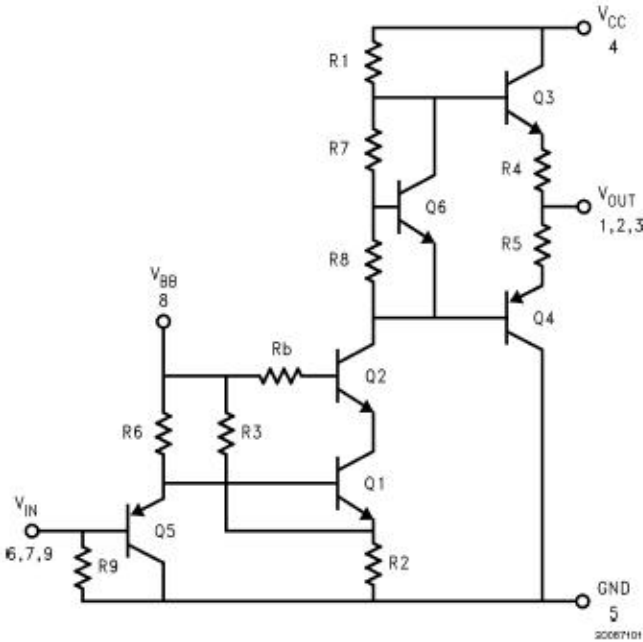
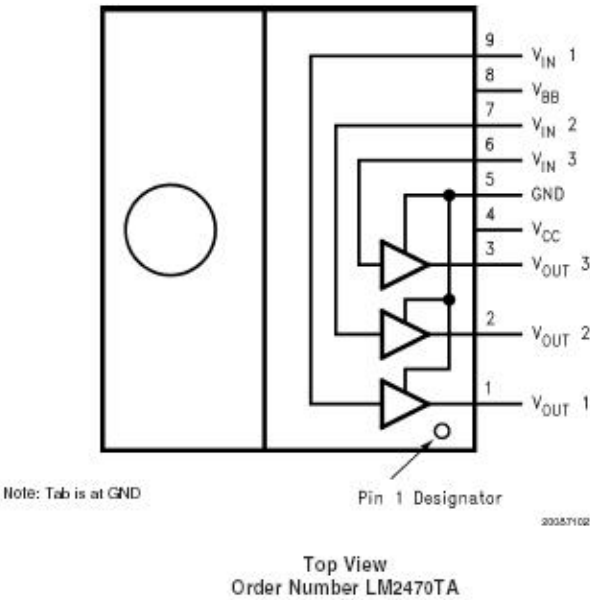


FIGURE 1. Simplified Schematic Diagram  
(One Channel)

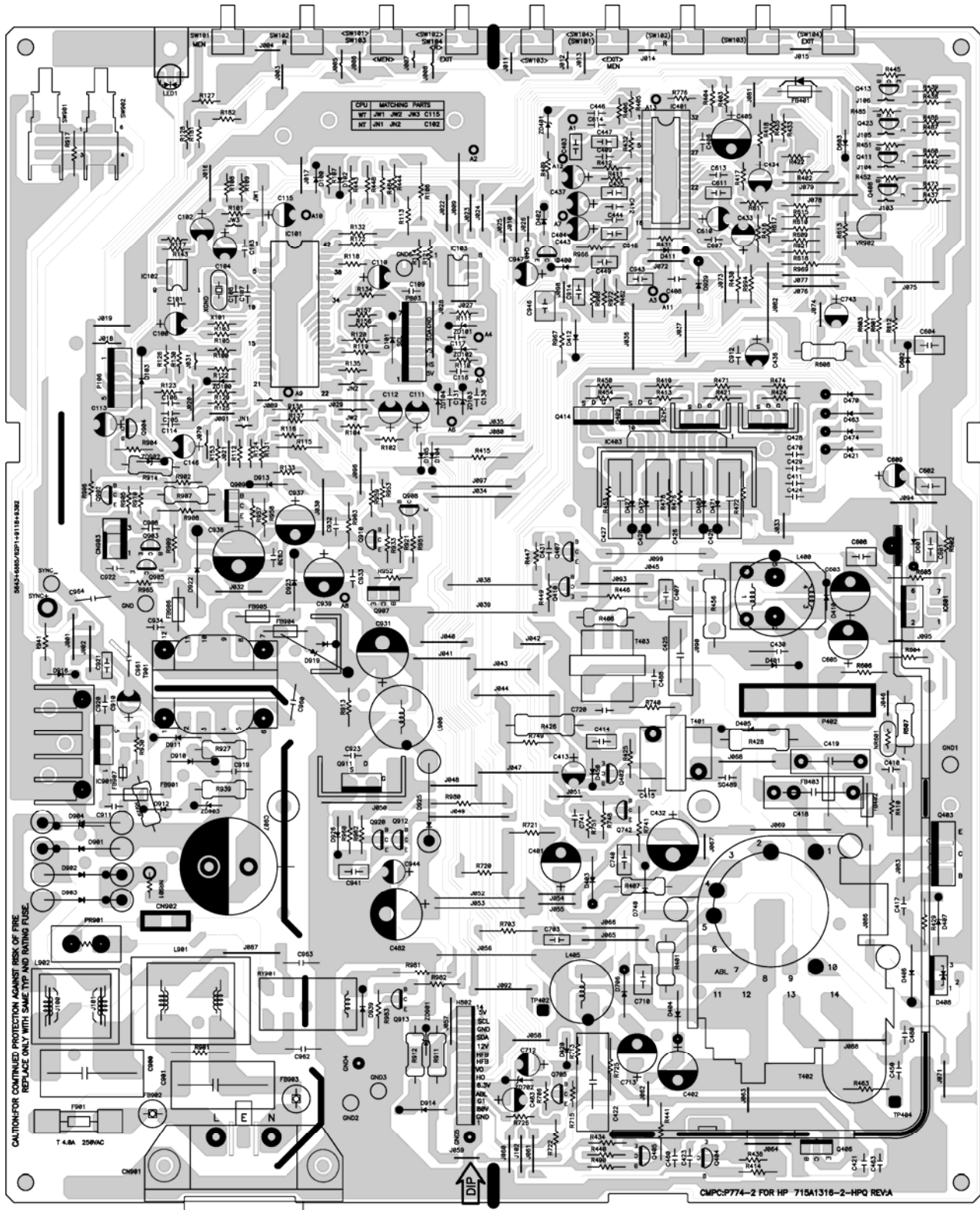
Connection Diagram

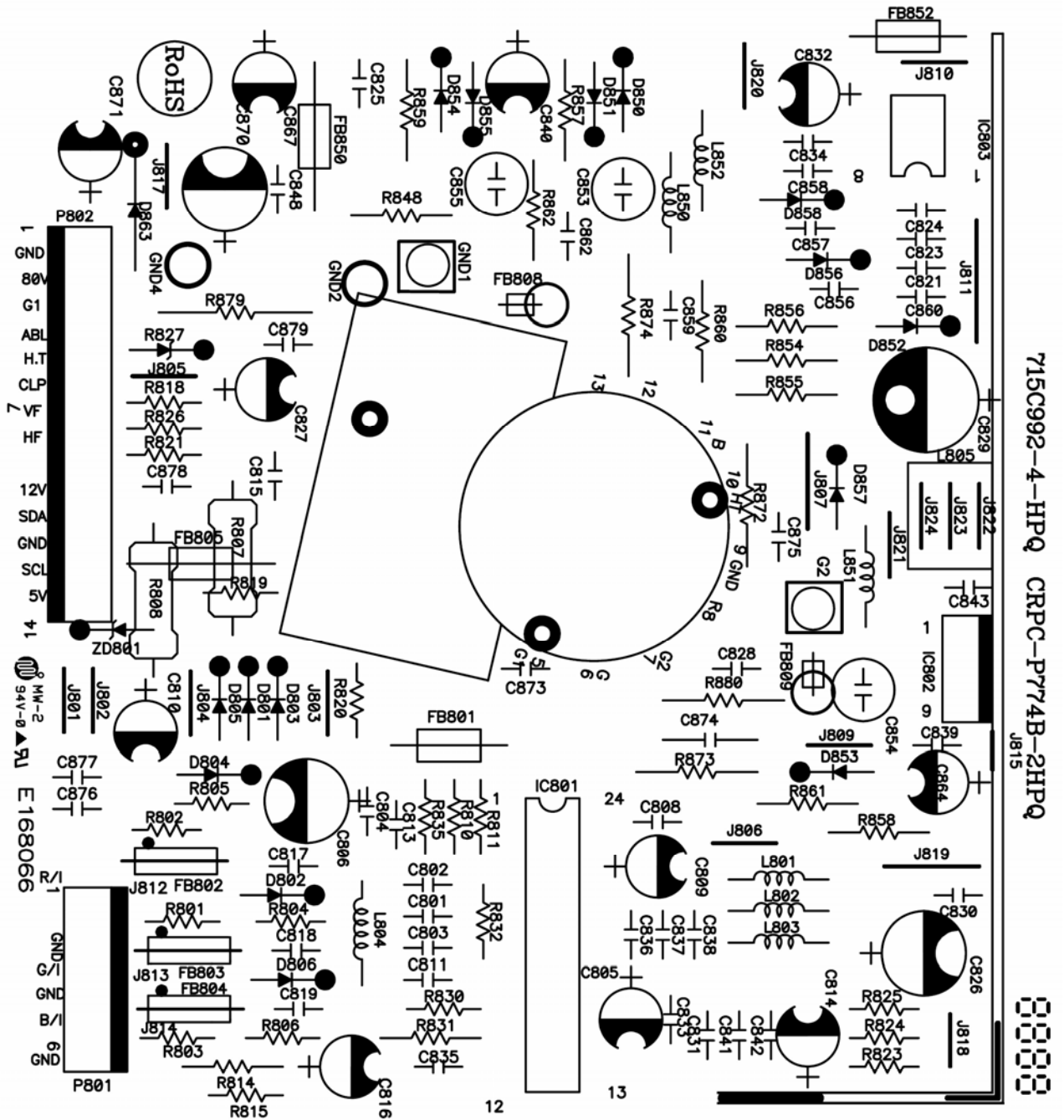


Top View  
Order Number LM2470TA



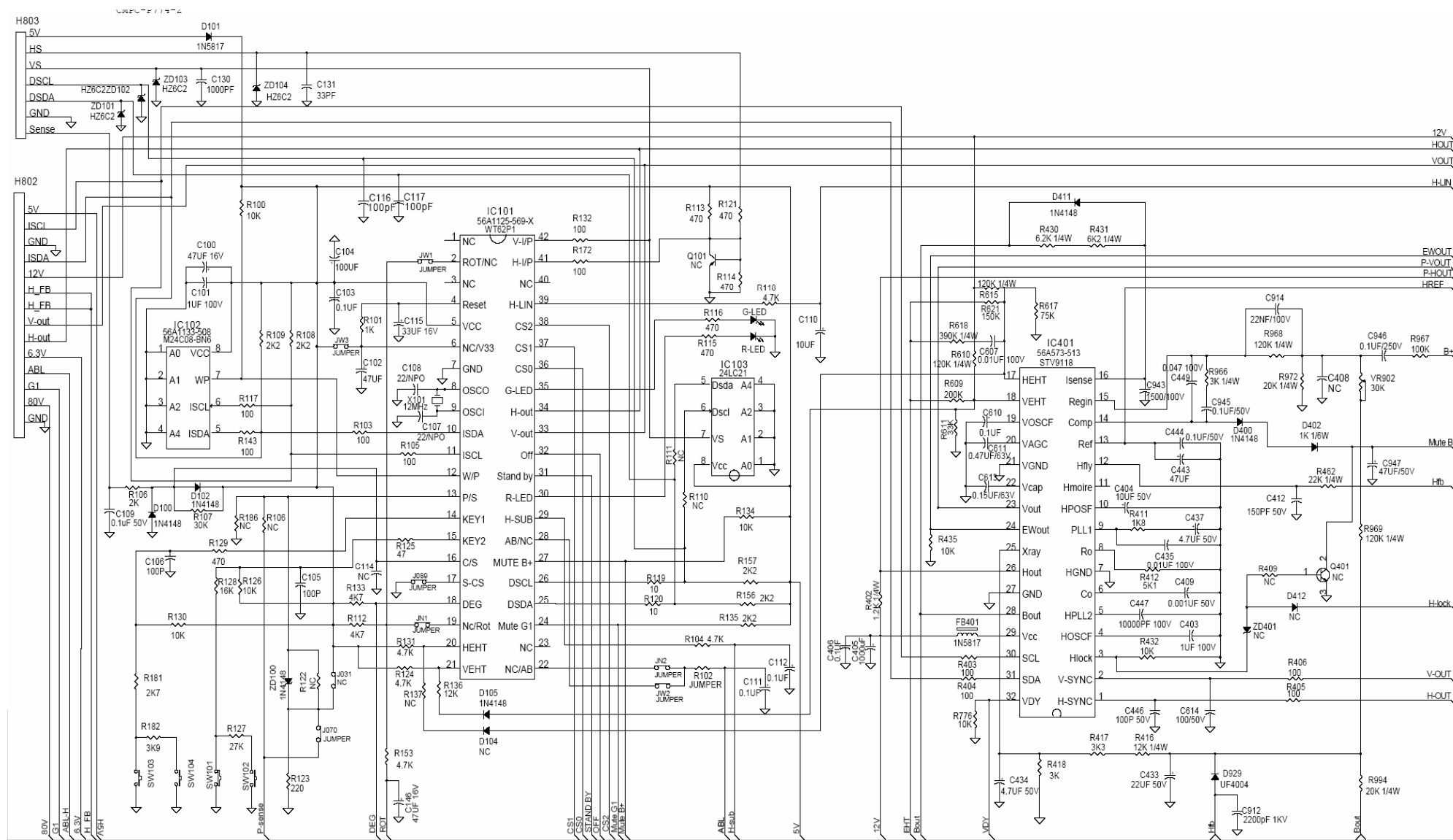
## 11. PCB Layout

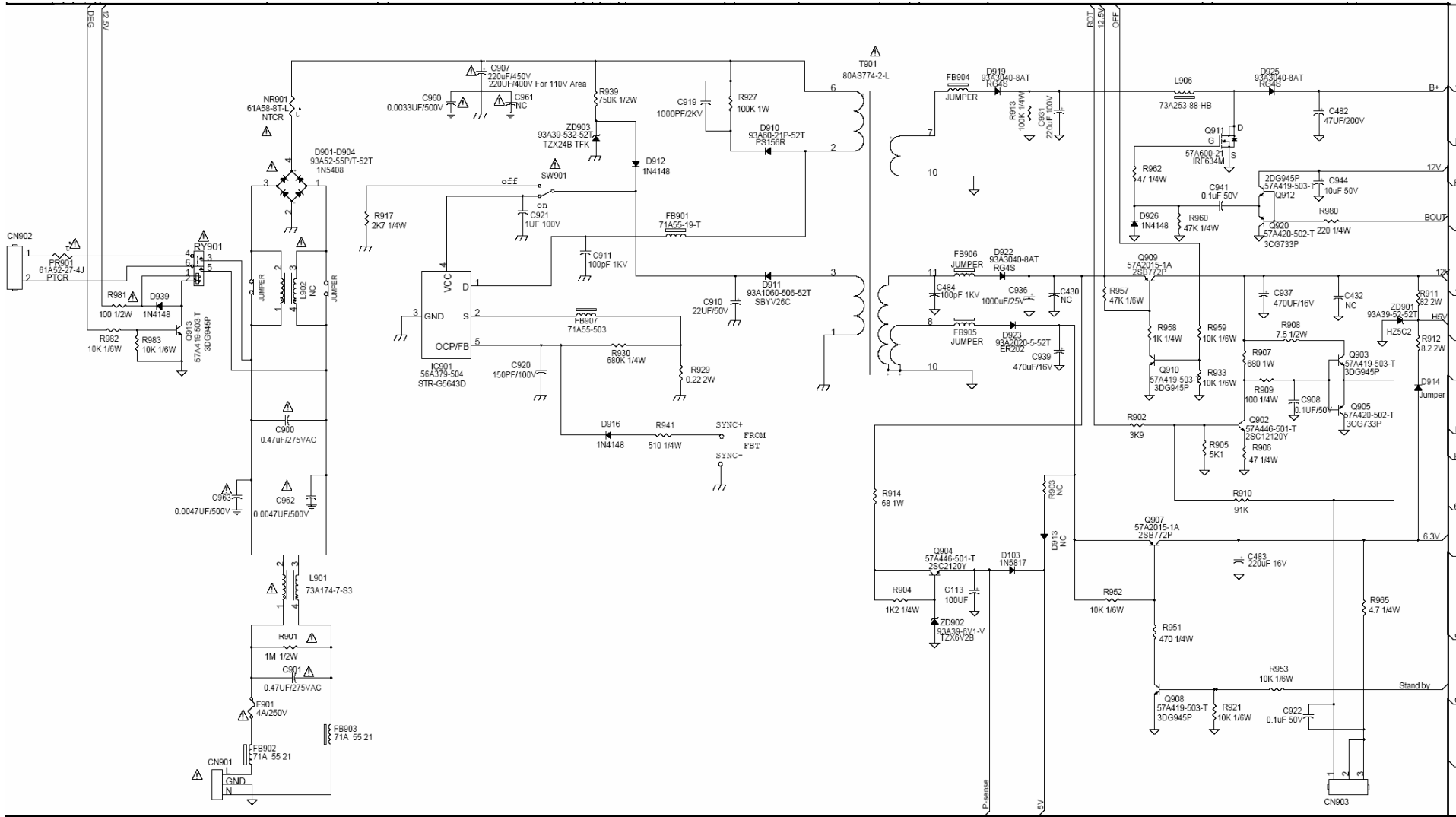




715C992-4-HPQ

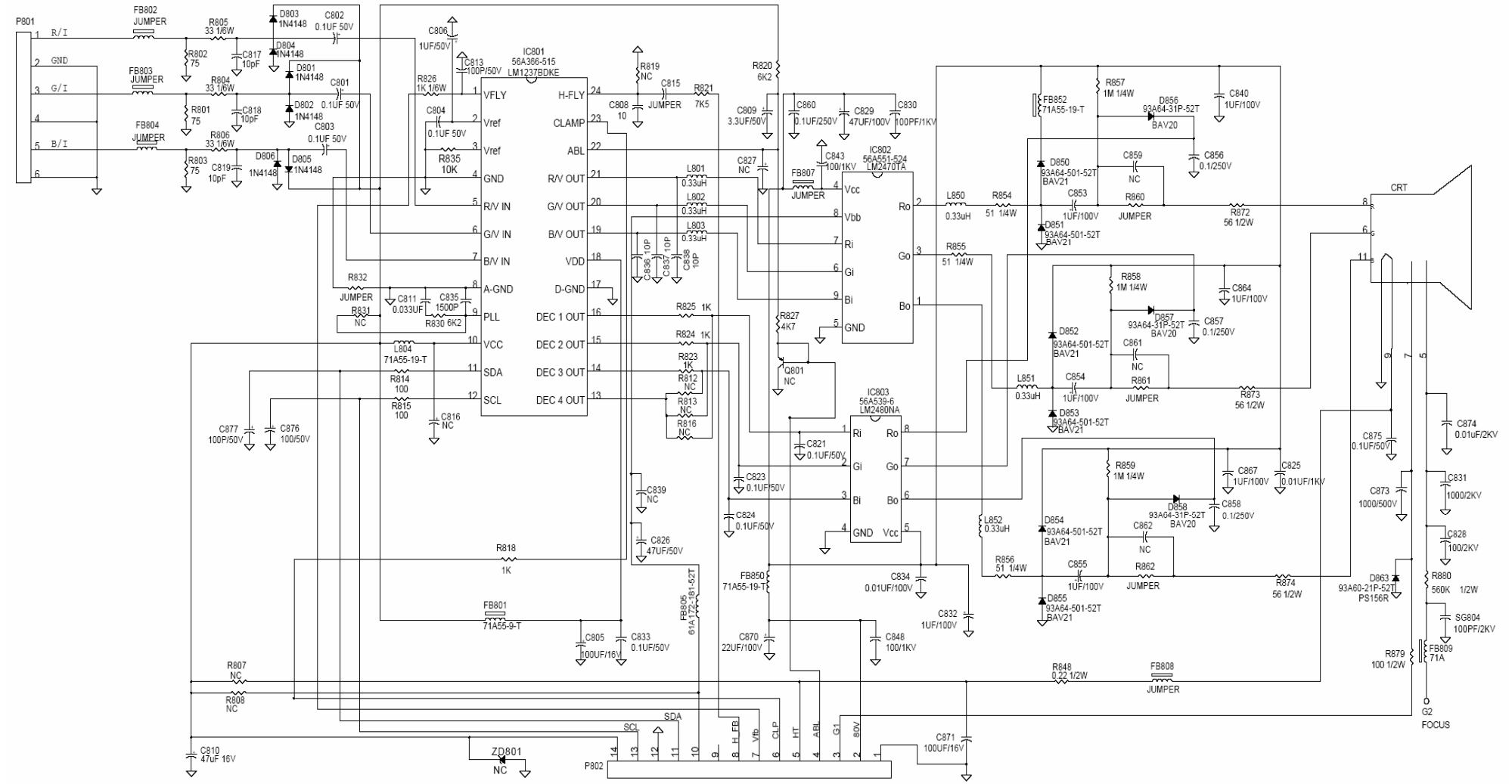


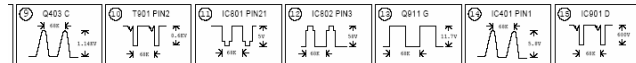
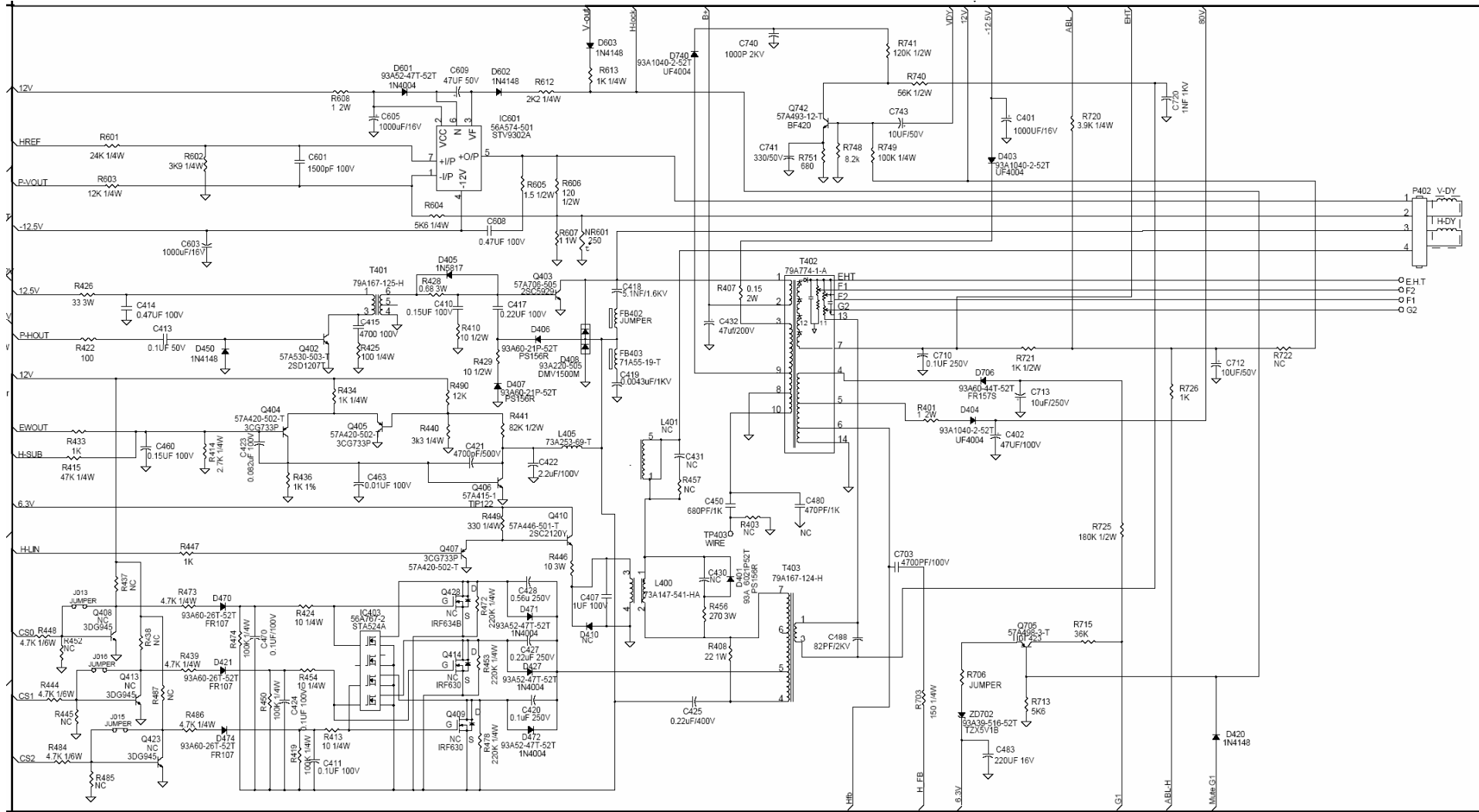




NOTES:  
This schematic, We cannot guarantee the accuracy of this information,  
after the date of publication and disclaims liability for changes,  
errors or omissions.

CPU PIN 41	CPU PIN 42	IC401 PIN23	IC401 PIN26	Q402 G	IC401 PIN 4	IC401 PIN5	Q403 B
CPU Pin Remark	CPU Pin Remark	Pin 17	CRT	L400	C425	C427	C428
56A1125-569-X NT QTP CPU	56A1125-577 NT MASK CPU	CS out select	750A5702-3AV OPT CRT	73A147-541-HA	63A210J2443CC	63A210J2042CC	63A210J6842CC
56A1125-166-X NT QTP CPU	56A1125- NT MASK CPU	CS out select	750A5745-6AV LFD CRT	73A147-541-HA	63A210J2243CC	63A210J1842CC	63A210J6842CC





R621	R618	C607	R751
61A 17215452T	NC	NC	61A 60262152T
61A 17218452T	61A172-394-52T	64A178J-104-0T	61A 60268152T

AOC 冠捷电子(福建)有限公司		DRAWER BY	BILL.HC2
MODEL:	P/N:	EE CHECKER	
P774-2HPQ	P774-2HPQ-01-A	SAFTYCHECKER	
Date:	Monday, August 16, 2004	APPROVED BY	