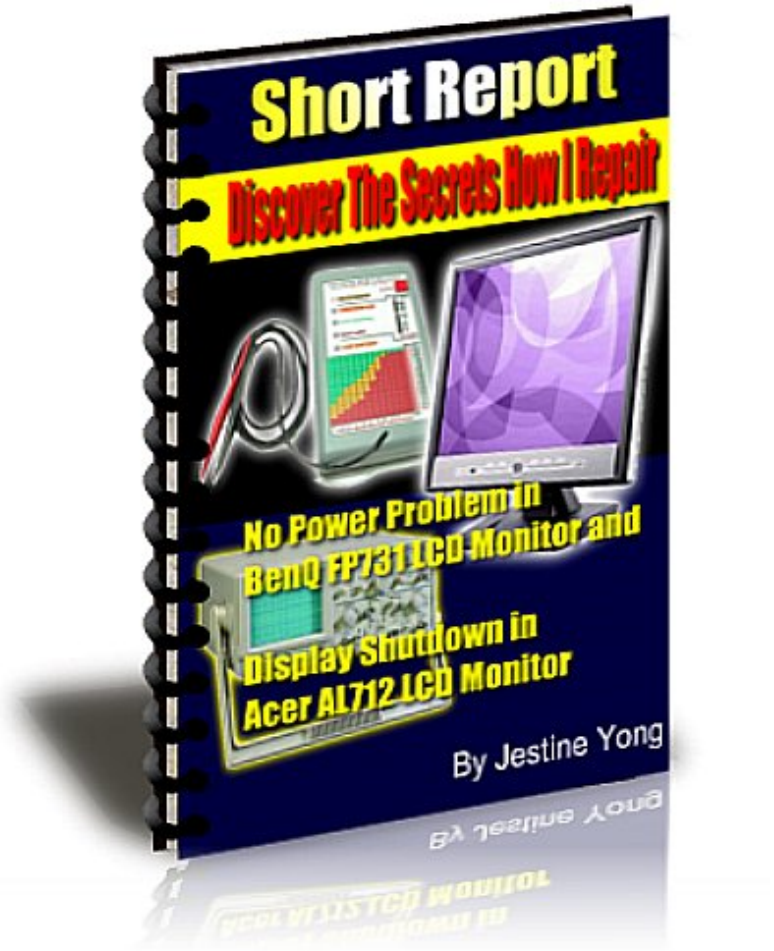
Free Report



Brought to you by Jestine Yong

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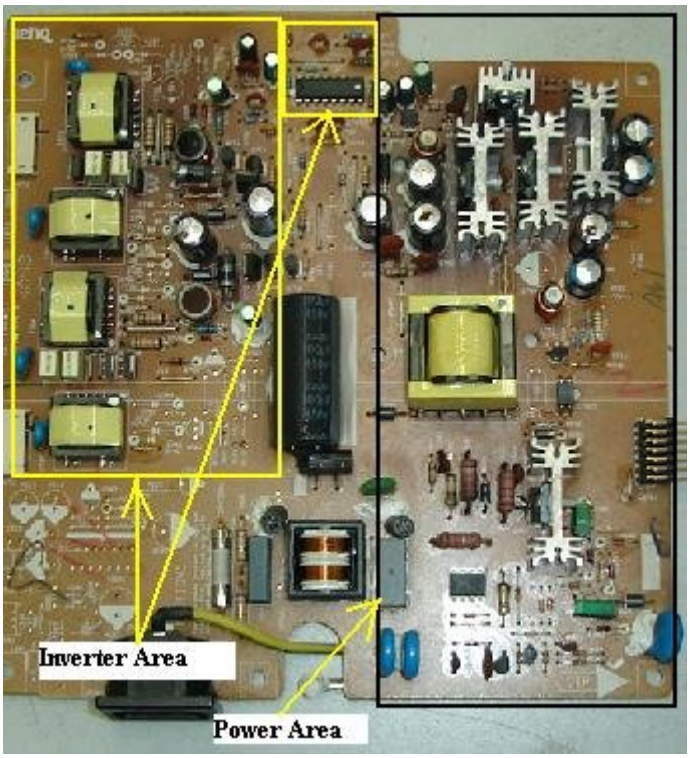
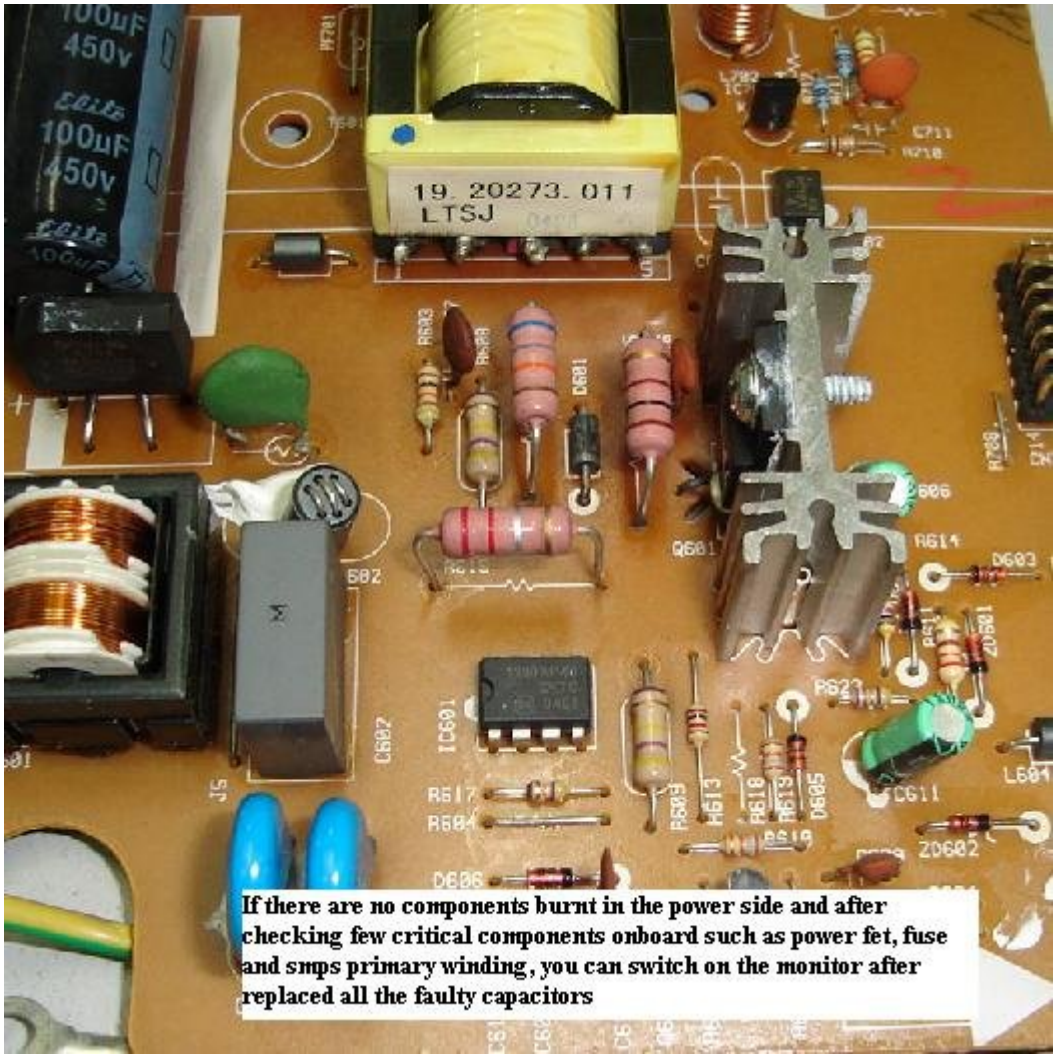
How to Repair BENQ Fp731 17" LCD Monitor With No Power Symptom.

The BenQ FP731 17” LCD Monitor came in with no power symptom. Normally I would not immediately use all my testing gear to check the whole power and inverter board instead I would use my eyes to scan all the components first before starting to use my digital multimeter to check on the fuse and other components first.

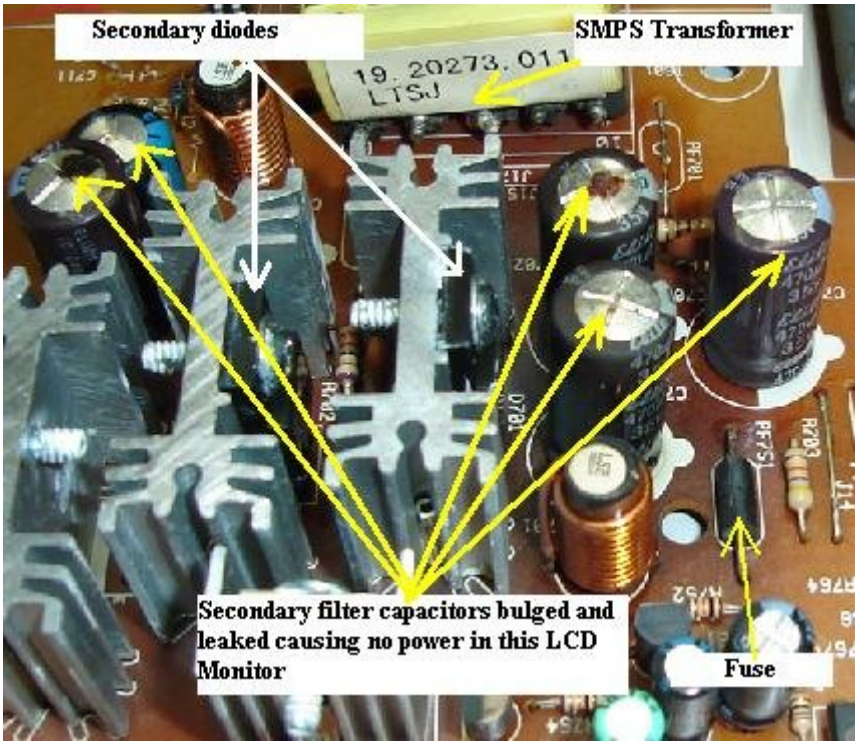


I saw about 8 filter capacitors that had bulged and leaked on top of its capacitor casing. We have the first clue and if my assumption is right, it will only be the capacitors that caused no power symptoms. However in order to be in the safe side we have to check other components as well.



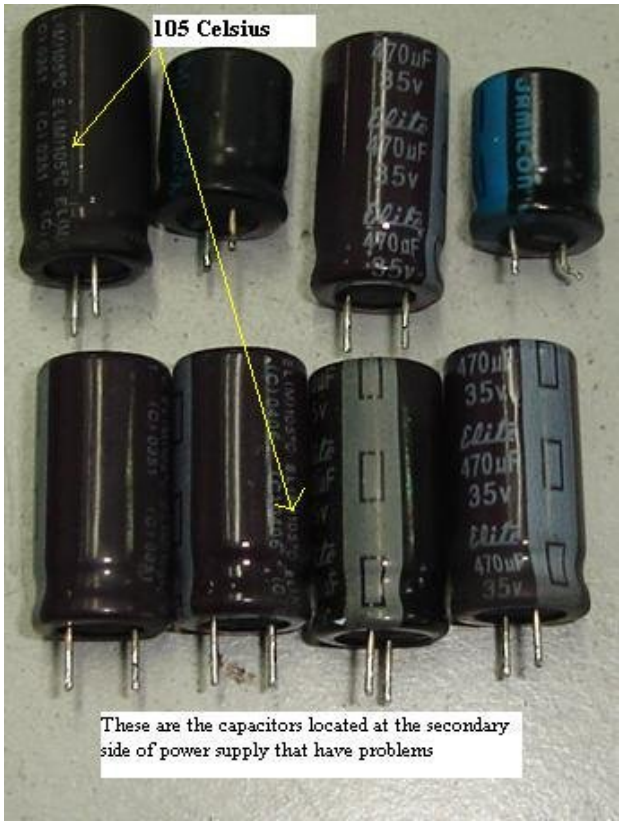
Looking at the power primary side didn't reveal any burnt or cracked components in the board. It is not good enough just by looking at the board, we must check few of the critical components first in order to confirm that it is safe to switch on the power after the replacement of the 8 faulty capacitors.

The critical components that I referred to was the fuse, power or chopper FET (mosfet), switch mode power supply primary winding and secondary diodes. If you have the experienced, you can check all of the components on board without removing it but of course the SMPS primary winding you have to use a flyback tester to test it.

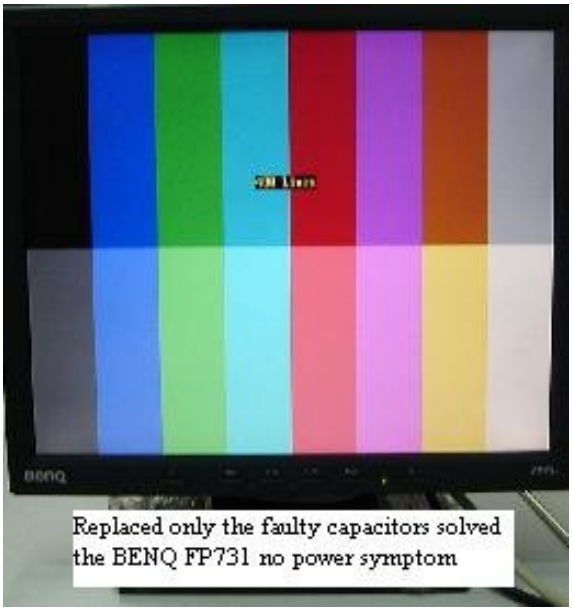


After all the critical components tested okay, I would presume that after the replacement of the defective capacitors, I could immediately switch on the LCD Monitor without connecting a light bulb first. There is no necessary to connect the light bulb because the power side components were tested okay besides the fuse didn't blow in the first place.

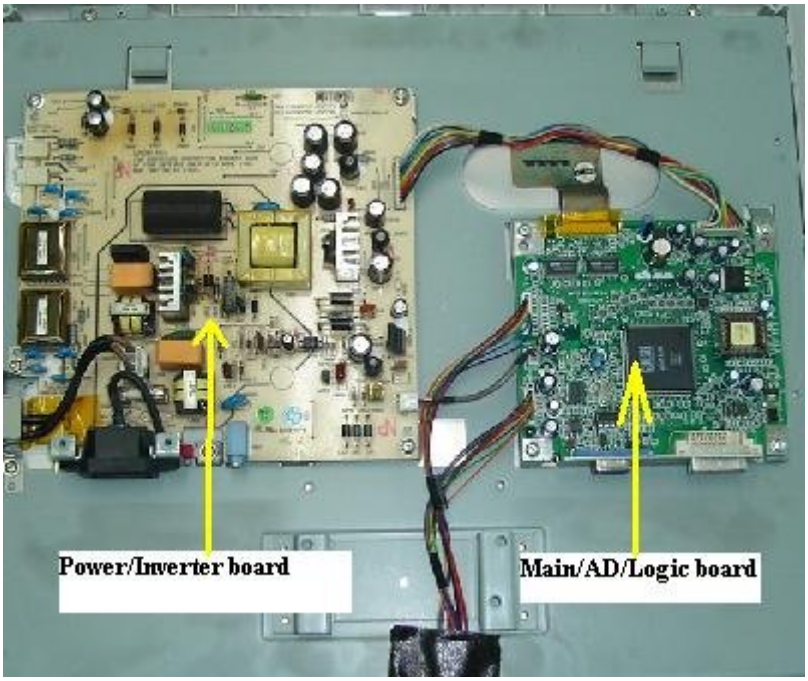
For your information, most of the capacitors used in the LCD power supply were from the 105 degree Celsius in order to last longer and stand the heat produce by the power supply itself. If you replace with an 85 Celsius capacitor, it would not last long and may come back with capacitor problems again.

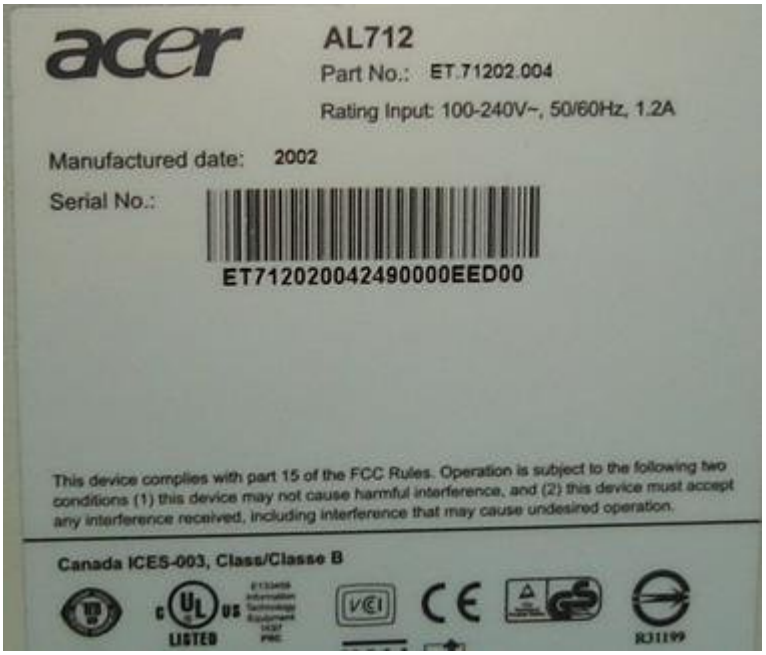


The Benq FP731 LCD Monitor was restored to normal operation after the 8 filter capacitors was replaced. Capacitors breakdown was very common in the LCD Monitor because of it compact design where the heat has difficulty to transfer out due to the power supply board was covered by an aluminium shielding. Sometimes after few hours of operation, you could feel the extreme heat at the aluminium shielding and surrounding area. This is good news to us as an electronic repairer because more and more LCD Monitor sends in for repair because of capacitors faults only.



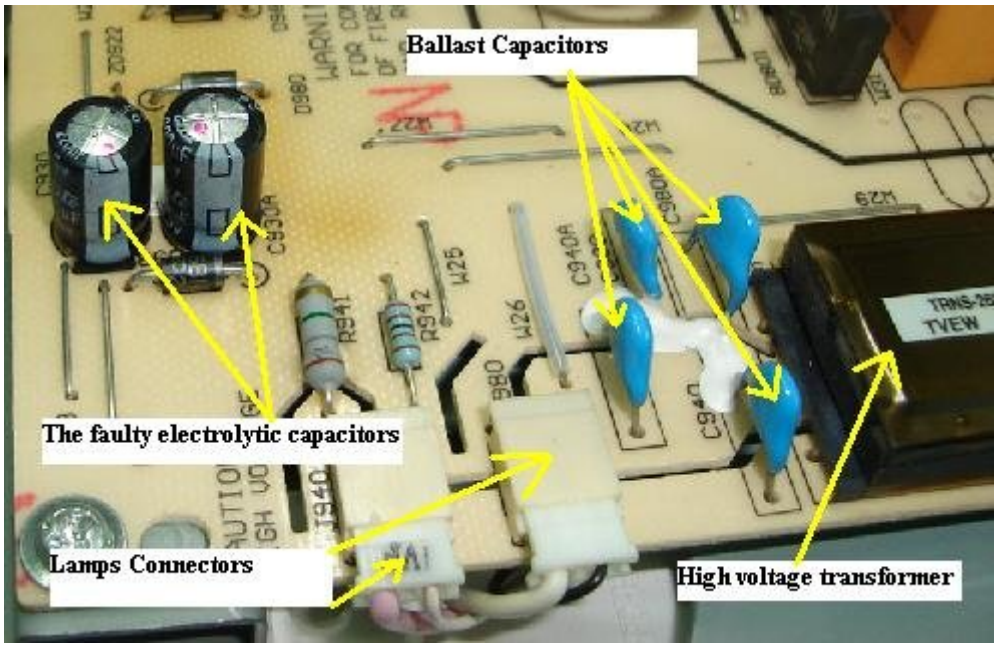
How to Repair ACER AL712 LCD Monitor with Display Shutdown Problem





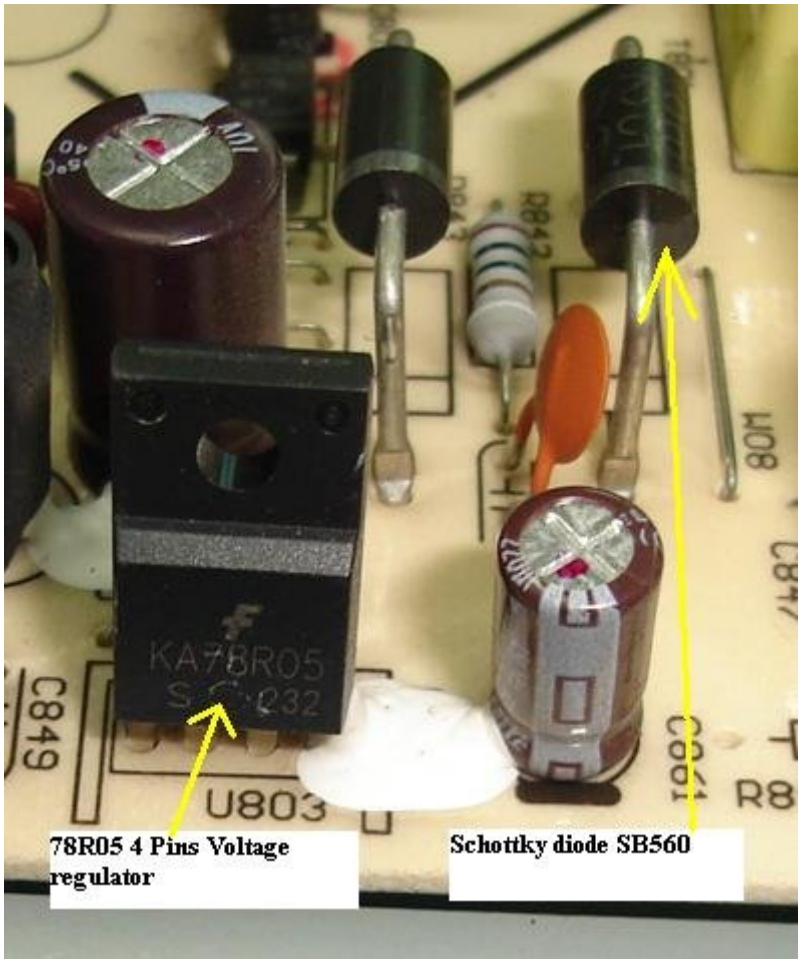
This ACER AL712 LCD Monitor came in with the complaint of **display shutdown in less than few seconds.** Well, I love to repair this kind of problem. Whenever LCD Monitor display shutdown, it can be cause by few reasons, a defective lamp, dry joints in inverter area, bad electrolytic capacitors in the filter lines, capacitance value out in the tuning capacitor,

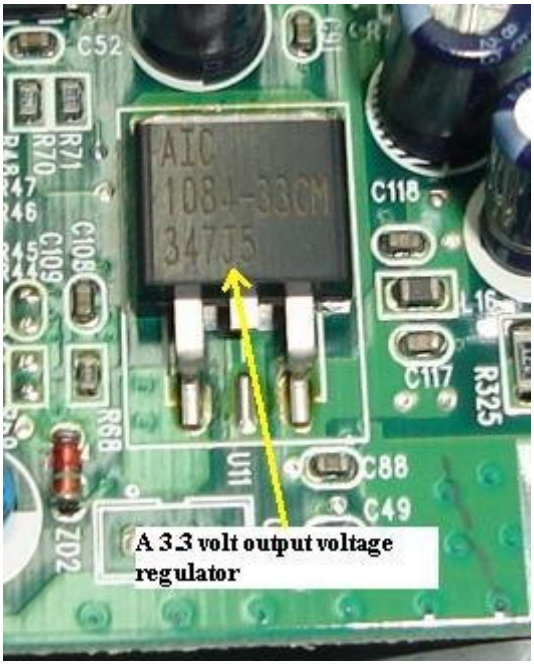
faulty ballast capacitor, defective inverter IC, bad components surrounding the inverter IC area, faulty start circuit, a missing “ON” signal from the main board/AD/logic board or even a defect in one of the push pull pair transistor (bipolar or FET transistor).



After the cover and the internal metal were removed I saw two electrolytic capacitors located nearby the high voltage transformer area had become budged. The capacitor location was C930 and C930A and both was 220 microfarad with 25 working voltage. Turning the power board and looking at the behind circuit, I saw couples of dry joints especially the step up high voltage transformer area.

There were dry joints too at the connector area between the main board and the power/inverter board. Applying fresh solder and replacing the two electrolytic capacitors solved the display shutdown problem in ACER AL712 LCD Monitor.

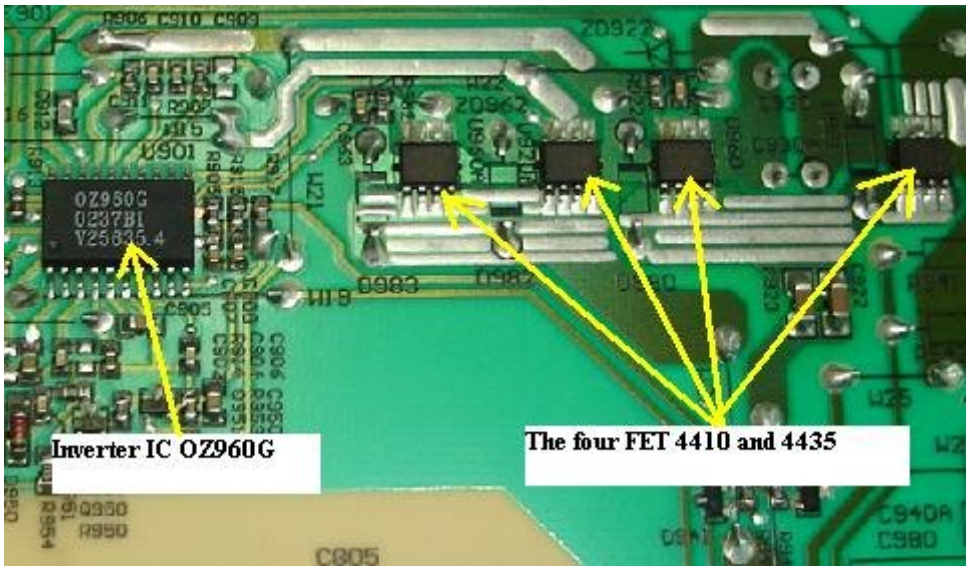




For your information this LCD Monitor uses power FET K3115 and power IC 203X6 (8 pins SMD) to drive the switch mode power

transformer. At the secondary output side you could see 3 output diodes and one of them was the main Schottky diode with the part number of ER1002F. At the secondary side of power supply you could also see a 4 pins voltage regulator with the part number of 78R05. This type of voltage regulator is different from the normal one like the 7805 IC.

The 78R05 have an additional pin and the function of the extra pin is to control the output 5 volts from the main board CPU. That's mean if there is no control signal (ON signal) present at the control pin of the 78R05 IC, the voltage regulator won't output 5 volt dc even though there is 12 volt VCC supply to the input pin of the 78R05 IC.



For this model the designer preferred to use the OZ960G inverter IC. I've seen other LCD Monitor used 0Z962 and even the OZ965 inverter IC. **Remember, even if there is a slight flicker from either one of the lamps** (faulty lamps), it will send a feedback to the inverter IC and shutdown the high voltage transformer.

Some older designs do not have feedback and even if you took out the lamp the display is still there except it is a bit dark at the area where the lamp have problem (not lit). The inverter high voltage transformer were driven by the direct drive FET's which were in the SMD IC package-8 pins. The part numbers for the FET are 4410 and 4435. Finally the ballast capacitors values are 10 and 27 Pico farad with working voltage of 3 kilovolts.

Did you find this short report useful?

I hope you found this report useful. Feel free to pass it on to a friend or colleague.
I've put a lot of time and effort into writing this free report.

Thanks and have a nice day!

Jestine Yong,

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