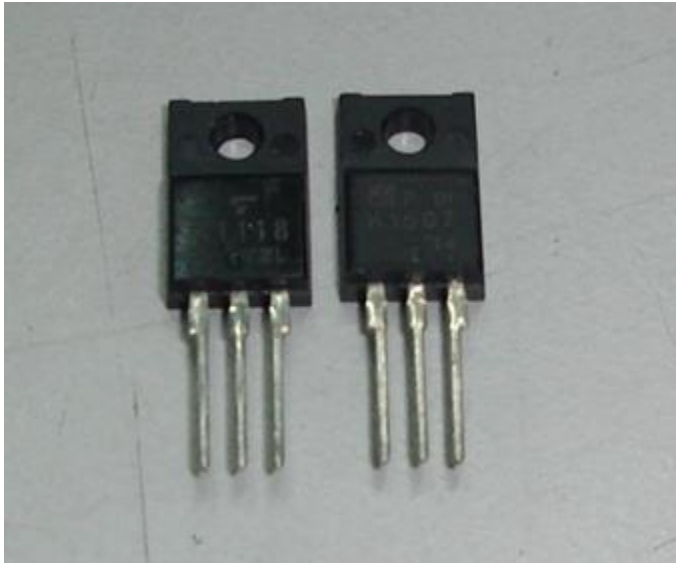


Mosfet Testing Tips-Test Fet with Analog Multimeter



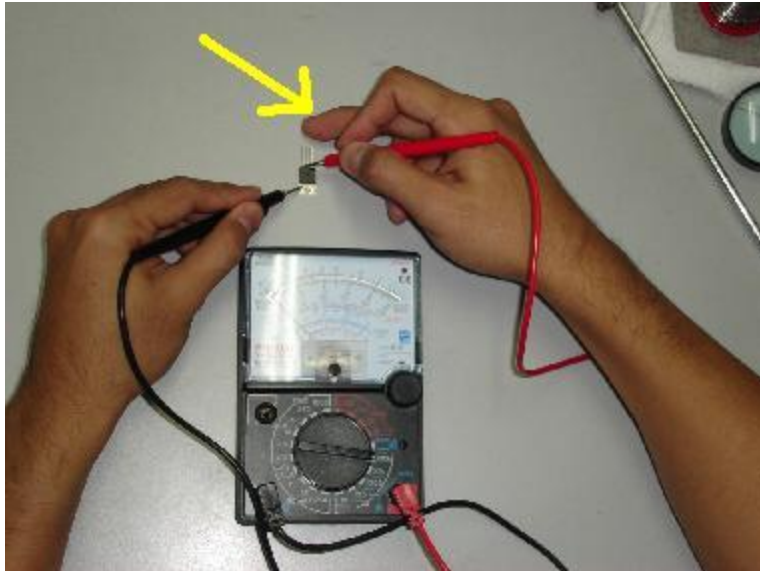
The right way of testing mosfet transistor is to use an analog multimeter. Mosfet stand for Metal oxide semiconductor field effect transistor or we just called it fet. Switch mode power supply and many other circuits uses fet transistors as part of a circuit. Mosfet failure and leakage are quite high in a circuit and you need to know how to accurately test it.

Measuring component's that have two leads such as the resistors, capacitors and diodes are much easier than measuring transistor and fet which have three legs. Many electronic repairers have difficulty especially checking the three leads

components. First, find out the gate, drain and source pinout from semiconductor replacement book or search its datasheet from search engine.

Once you have the cross reference or diagram for each pin of the mosfet, then use your analogue multimeter set to times 10K ohm range to check it. Assuming you are testing the n channel mosfet then put the black probe to the drain pin.

Touch the gate pin with the red probe to discharge any internal capacitance in the mosfet. Now move the red probe to source pin while the black probe still touching the drain pin. Use your right finger and touch the gate and drain pin together and you will notice the analogue multimeter pointer will move forward to center range of the meter's scale.



Use your finger to touch on the gate and drain pin.

Lifting the red probe from the source pin and putting it back again to the source pin, the pointer will still remain at the middle of the meter's scale. To discharge it you have to lift the red probe and touch just one time on the gate pin. This will eventually discharge the internal capacitance again.

At this time, use the red probe to touch on the source pin again, the pointer would not kick at all because you have already discharge it by touching the gate pin. These are the good mosfet characteristic. You need to practice more by taking some fet from your bench or from your component's compartment. Once you know the secrets, testing other mosfet is as simple as testing diode.

If you notice that all the result that you measured kicked towards zero ohms and will not discharge, then the fet is considered shorted and need replacement. Testing the P channel fet field effect transistor is just the same way as when you check N channel fet. What you do is to switch the probe polarity when checking the P channel. Some analog multimeter have the times 100k Ohm range, this type of meter can't really test fet due to the absent of 9 Volt battery inside the multimeter. This type of meter will not have enough power to trigger the mosfet. Make sure you use a meter that have the times 10k ohm range selector.

Typical N channel mosfet part numbers are 2SK791, K1118, IRF634, IRF 740 and P channel fet transistor part number are J307, J516, IRF 9620 and etc. You can also get a mosfet tester from the market and one of the famous brand is the sencore tf46 portable super cricket transistor and fet tester. You can bid one from Ebay.