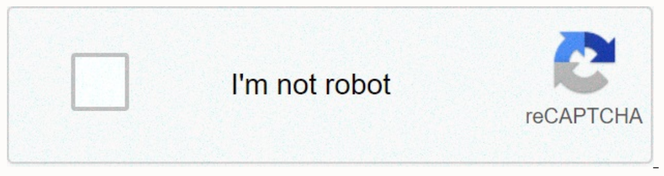


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# How do you test a triac

I'm testing Triaca with a multimeter. A multimeter may be used to test the health of the triak. First, place the multimeter selector switch in high resistance mode (e.g. 100K), then connect a positive multimeter guidance to the MT1 triaka terminal and negatively run to the MT2 triaka terminal (no problem if you turn the connection). The multimeter will show a high resistance reading (open circuit). Now place the selector switch in low resistance mode, connect the MT1 and the port to positive lead and MT2 to negative lead. The multimeter will now show a low resistance reading (indicating the ON switch). If the above tests are positive, then we can assume that triak is healthy. However, this test does not use triaki, which require high neck tension and current to trigger. Triak test circuit. This is another approach for triak testing. Almost all types of triaks can be tested using this circuit. This circuit is nothing more than a simple arrangement to demonstrate the elemental function of the triak. Connect the triac to the circuit as shown in the circuit diagram and turn on S2. The lamp must not be on. Now press the S1 key switch. The lamp must be on, indicating that the triak is switched on. When you release the push button, you can see how the lamp shuts down. If the above tests are positive, you can assume that the triak is healthy. How to Try Triac Reviewed Unknown at 15:00 PM Rating: 5 by ADMIN · Published December 26, 2015 · Updated December 31, 2017What to test TRIAC with Digital Multimeter OR with ohmometer? In this shot post we will discuss how to test Triac. Before further procedure, let us refresh ourselves on the basics of TRIAC. Introduction on triak: TRIAC = ALTER DOTS. TRIAC is 5 layers, 3 terminal semiconductor device. It has a pair of phase-controlled SCRs connected in an inverse parallel mode on the same chip. This is a two-way device, which means that the current can flow in both directions. Click here to know more about Triac. Step by step Procedure For testing Triac: Keep the digital multimeter in Ohmmeter mode. From the diode of the junction, determine which ommeter lead is positive and which negative. Ohmmeter will show continuity only when positive lead is associated with anode and negative lead is associated with cathode. Connect the positive lead ohmmetra to MT2 and negative lead to MT1. Let's not indicate continuity through the triak. Using the leap connect the Triac port to MT2. The multimeter must indicate the intersection for the diode forward. Reconnect Triac so that MT1 is connected to positive lead ohmmetra and MT2 is connected to negative lead. Multimeter should not show continuity through Triac.Using a lead jumper, reconnect the port to mt2. The Ohmmeter must indicate the intersection for the diode forward. Read for SCR testing with ohmometer? What is Power Electronics? Basic Power Electronics Interview Questions : Set-3 Thanks for reading about how to try triac with multimeter.... Please leave your comments below.... Your comments are highly appreciated... Tony van Roon's triak testing These two testing procedures are for use with a digital multimeter in the Ohm test area. The testing process was actually designed for testing inside microwaves (magnetrons), but there should be no difference in any other round. Try it in or outside the circle. Triac is an electronic switch or relay. Triaki come in many shapes, sizes and colors. Check the standard terminal markers in the image below, showing most of the types of triaks commonly used in the microwave, along with their standard terminal markers. The triak, located either outside or attached to the device or equipment, shall operate when receiving an electronic signal port from the control circuit. It then switches to a closed or on state, providing, for example, a voltage path to the primary winding of the H.V. transformer in the microwave to activate the cooking control. Is used in a laboratory water bath that should be stored at a certain temperature. The probe-sensor, which has intoned into the water, monitors the temperature and sends a door signal to the triak to either turn on the heating or cooling elements. Most of these probe sensors contain only one or more 1N4148 or 1N914 dioe types. Important safety information Working on a microwave oven is a very dangerous task. Therefore, before carrying out any tests, troubleshooting or repairs for your personal safety, I strongly urge you to read carefully, fully understand and be prepared to take very important precautions. If you are unsure or unsure about any of these security procedures or warnings; or if you feel uncertain about their importance or your ability to manage them, it would be in your best interest to leave the repair to a qualified professional. First and ALWAYS, make sure that the unit is not connected before attempting repairs. ALWAYS RELEASE THE HIGH VOLTAGE CAPACITOR BEFORE TOUCHING THE COMPONENTS OR BURNING IT! The high voltage capacitor will maintain a painful high voltage charge normally even after the oven is disconnected. Some capacitors use bleeding resistance (either outside or inside) allowing for slow bleeding (or runoff) after switching off the oven. Don't trust the bleeding resistance, it might be open. If you forget to release the capacitor, your fingers may ultimately provide a path of discharge. You make this mistake only a few times because, while the electric shock is painful, the real punishment comes when you reflexively drain your arm and leave behind layers of skin on the edges of razor blades that are there as never forget to release a high voltage capacitor again. How to omitter high voltage capacitor: The capacitor is emanated by creating a short circuit (direct connection) of two capacitor terminals and from each terminal to the chassis of the ground-floor metal surface. To do this, touch the blade with the insulated screw driver to one terminal, then push it towards another terminal until it comes into contact and holds it there for a few seconds. (This can cause quite too stupid a pop!) Repeat the process to create a short time between each terminal capacitor and the chassis floor. If the capacitor has three terminals, use the same procedure to create a short circuit between each terminal and then from each terminal to the ground. Older models made of Amman (generally those made before 1977) have red, round filter capacitors installed in the base of the magnetron tube, which can also hold a charge. Grind each magnetron terminal by creating a short circuit on the chassis floor with a screwdriver blade, as explained above. Triake with three terminals, as most of the below shown, can be tested by perform a series of resistance checks as described below. In contact: Release all capacitors or high voltage capacitors by shortening them with a piece of wire or an insulated screwdriver. Before you do, make sure it is UNPLUGGED! In case it's a HV capacitor, be warned that it can give quite a crack! Repeat the procedure a few times to make sure they are completely omitted. Here is the full testing process for TEST-1: 1) Turn off your device, equipment or whatever you are doing. 2) RELEASE OF HIGH VOLTAGE CAPACITOR 3) First specify the terminals. Three terminals are generally referred to as G (ports), T1 and T2 (rule of thumb: the smallest terminal is a port; the medium size is T1; the largest is T2). 4) Carefully remove any traces of toering. A soldered weldor or nubber can remain attached if it is in good condition. 5) Set and zero the ometer on a scale that is capable or reading about 40 Ohms. 6) Measure from door to T1, follow the reading and contact leads. 7) For each measurement, the usual reading would be in the range of 10 to 200 ohms, depending on the Triac model. 8) Then set the gauge to the highest resistance scale. Each of the following readings must give rise to normal reading of infinity: a. From T1 to T2. B. T1 to door. c. From each terminal to the chassis. These readings are approximate and may vary with the manufacturer, but in general, any results that are significantly different would indicate a defective Triaca. Test 2 The second method for testing the triak is to evaluate the capacity of the door off: 1) Turn off the oven. 2) OMIT THE HIGH VOLTAGE CAPACITOR. 3) Remove any traces of toss. Set the meter to a meter that is capable or read 50 ohms. 4) Seal the negative meter on T1 and a positive guide to T2. 5) Now use a screwdriver to create a short time between T2 and the port. This short-circuit should be switched on by triac on, thus producing a counter reading from about 15 to 50 Ohms. 6) Then disconnect one of the meter lines and reconnect it. The meter must return the infinity reading. 7) And finally, turn the hinge meter and repeat the tests. The results should be the same. 8) After numerous experiments with different multimeters and triaki, I must conclude that this method is not always enough. Abnormal tests indicate a corrupt Triak. Replacement triaks are generally available from your local distributor of appliance parts (such as Sears) or an electronics store. If you want, build this simple SCR tester. He will also test TRIACS with good results. Simply good/bad. Graphics and most text-based microtech electronics. If you have any questions, please ask the author of this test sequence: J. Carlton Gallawa or visit his website at Microtech Electronics to learn more about high voltage, microwave oven or how to become a poisoned microwave technician! Back to the Circuits page or widgets. \$\begingroup\$ I need to fix the electric water heater and would like to test the health of TRIAC BTA20. How would you test this health component with a digital multimeter - no additional components and ideally no removal from the circuit? thanks, \$\endgroup\$ \$\endgroup\$