Variable Frequency Drive Analyzer (VFDA) Quick Tutorial

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WARNING

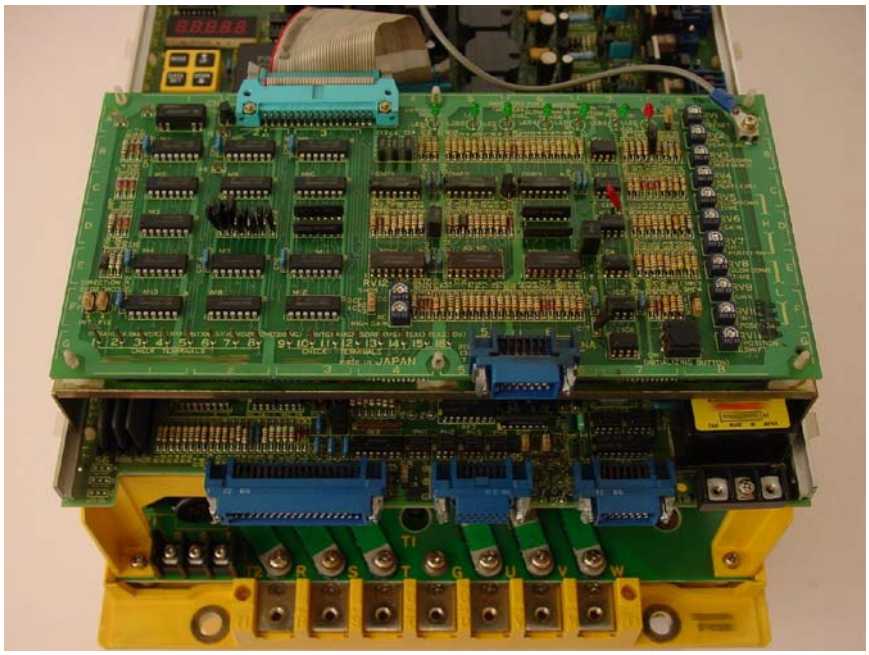
Proceed no further with this manual or attempt connecting the VFD Analyzer to an actual electronic device unless you are sufficiently trained and familiar with all practical safety standards regarding high voltage electronic circuits.

Deadly voltages exist in these devices and you must be aware of the presence of these hazardous potentials and how to monitor, measure, and neutralize them before operating the equipment.

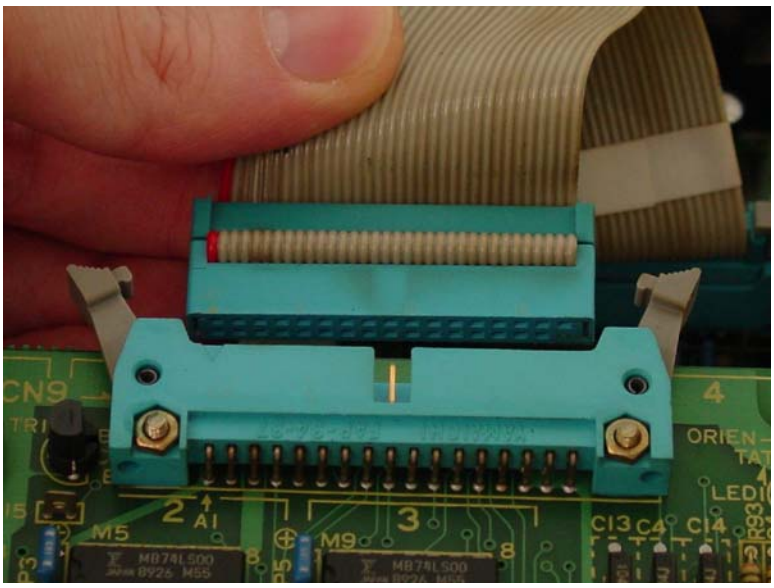
The manufacturer makes no representation to direct, inform or instruct the safe operation of the VFD Analyzer in regards to a specific piece of High Voltage electronic equipment. The manufacturer will not be held liable for equipment damage or personal injury as a result of following the directions suggested within this document. The suggestions contained herein are by no means the only or sole suggestions that represent completely safe and damage free use or operation of the equipment. It is up to the user to determine what methods and practices are most suitable for their particular scenario.

Wear protective head gear including safety glasses, shields and body protection as well as hearing protection when troubleshooting VF Drives and other types of conversion equipment. High Power devices including solid state modules and capacitors can explode causing fragments and hot gases to escape the confines of the equipment.

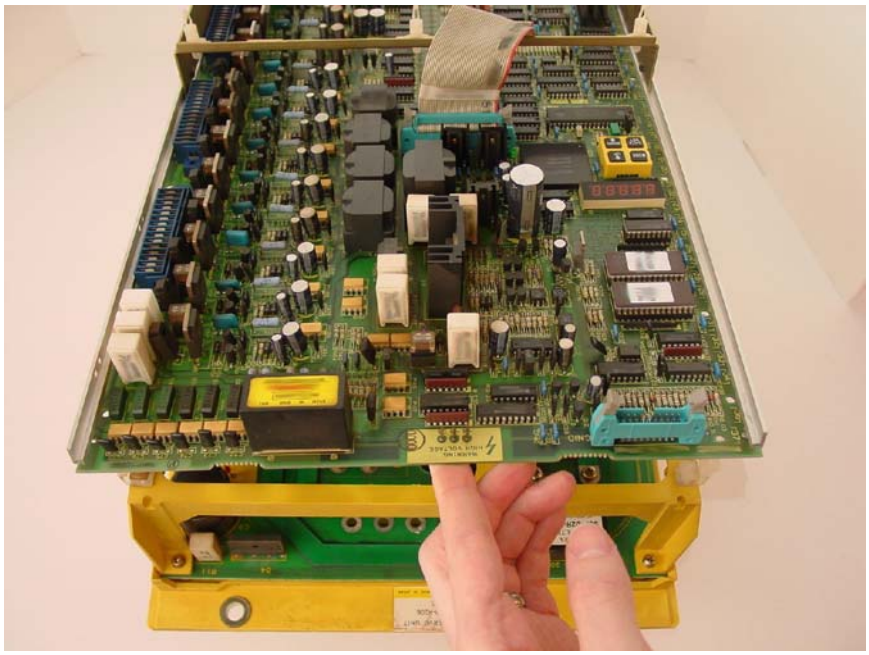
1) Remove Supervisory Printed Circuit Board (PCB) to Access Power Components



a) Disconnect Connectors

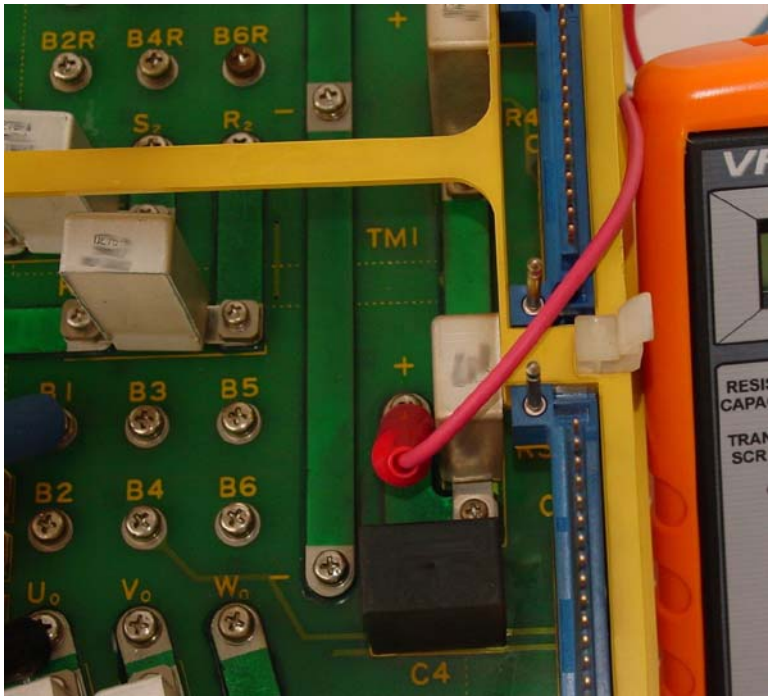


b) Lift PCB away from VFD base.

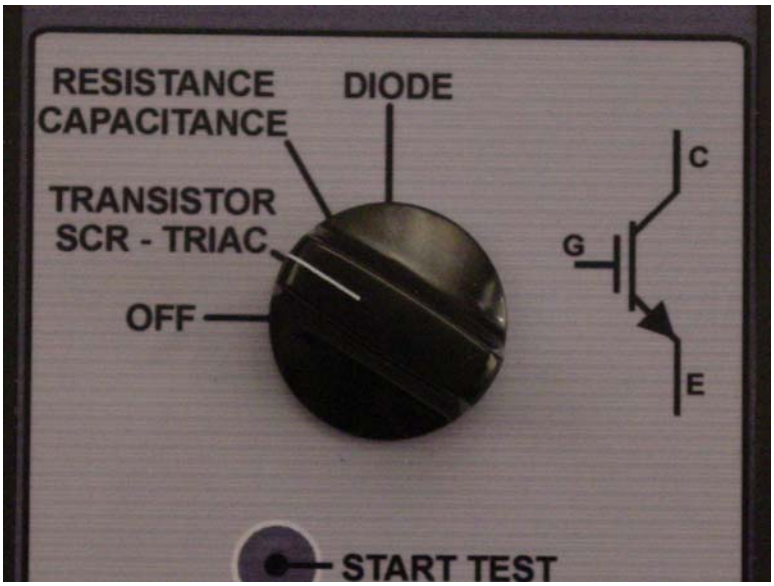


2) Test Transistor Module

a) Connect probes to first transistor of module.

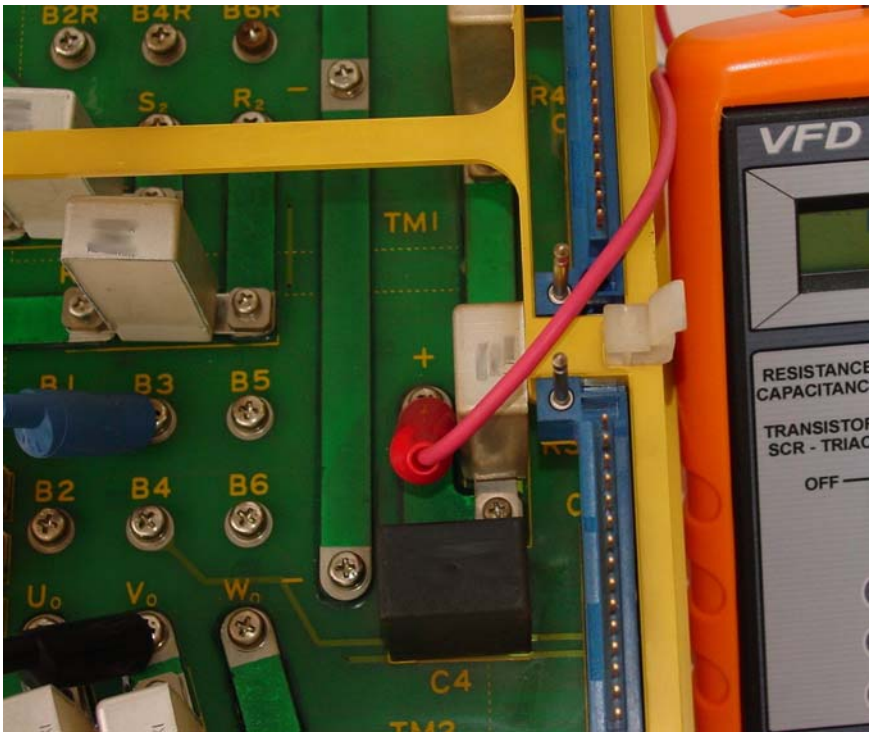


b) Turn on VFDA to TRANSISTOR Test



c) Results of the test are displayed.

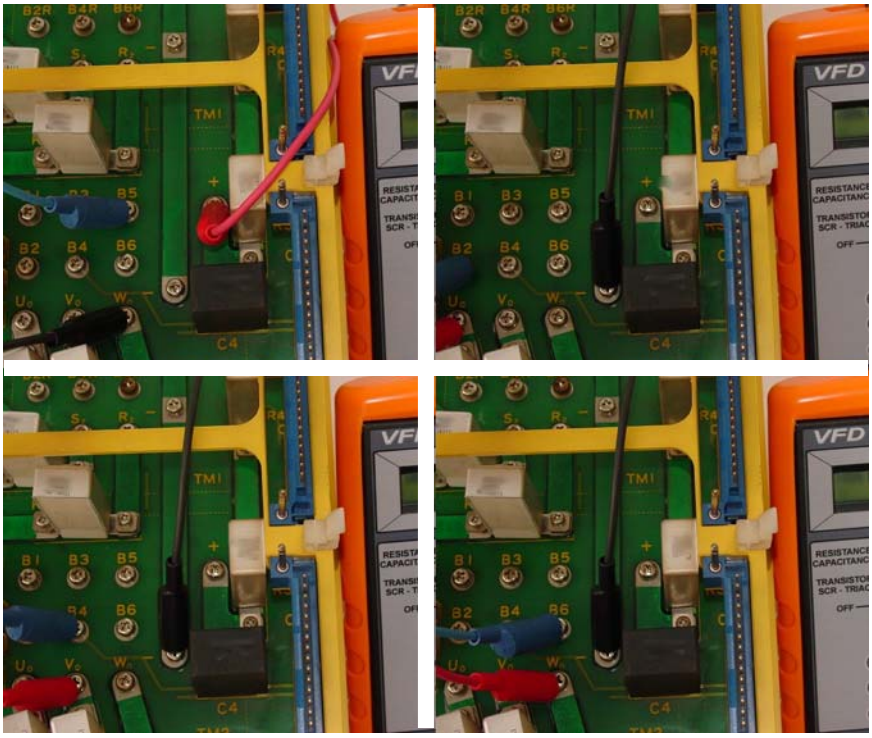
d) Connect probes to second transistor of module.



e) Press the START TEST button.

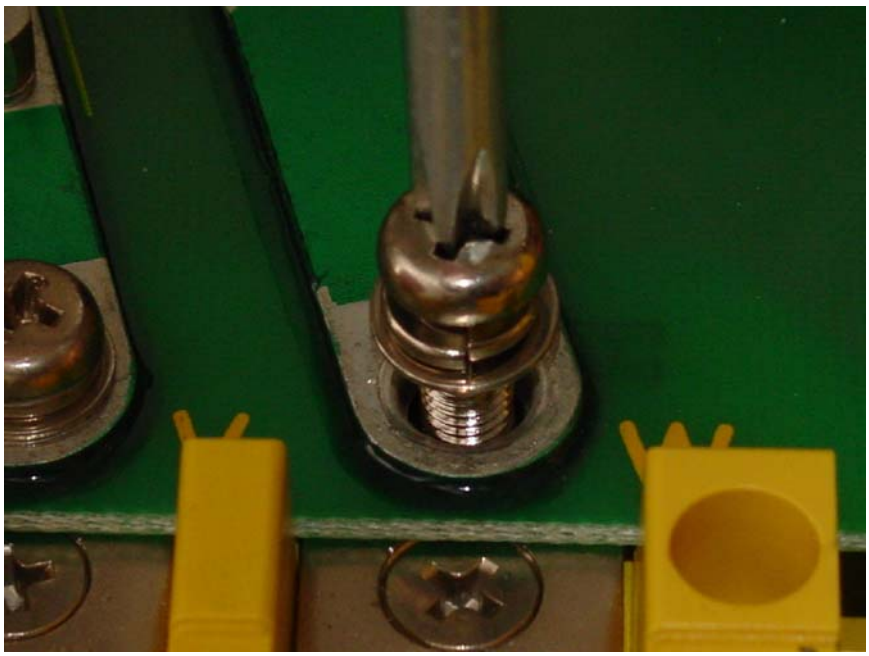
f) "Open" or "Short" confirms transistor module bad.

g) Repeat steps d and e for each transistor's results.

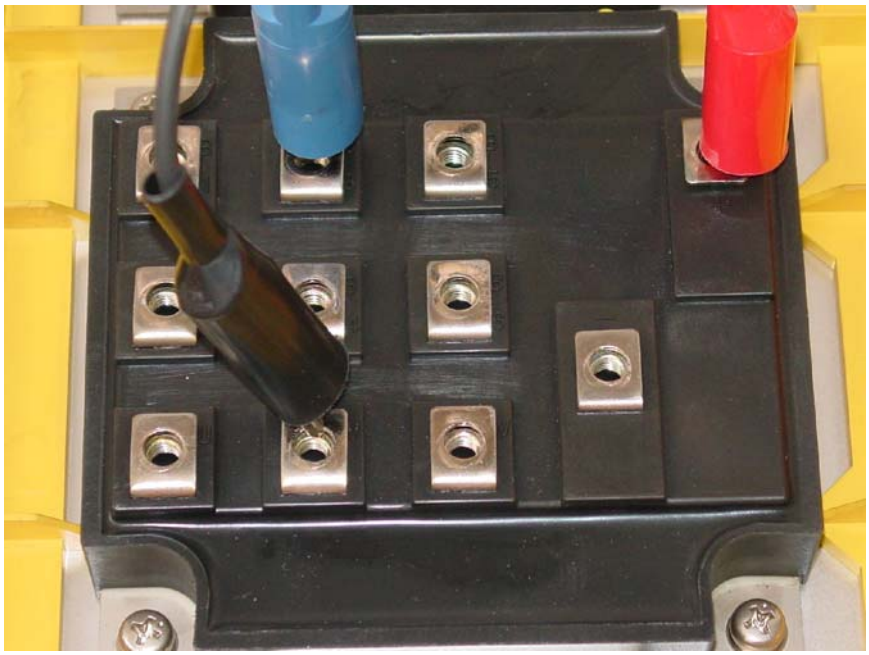


3) Confirm Transistor Module bad out of circuit.

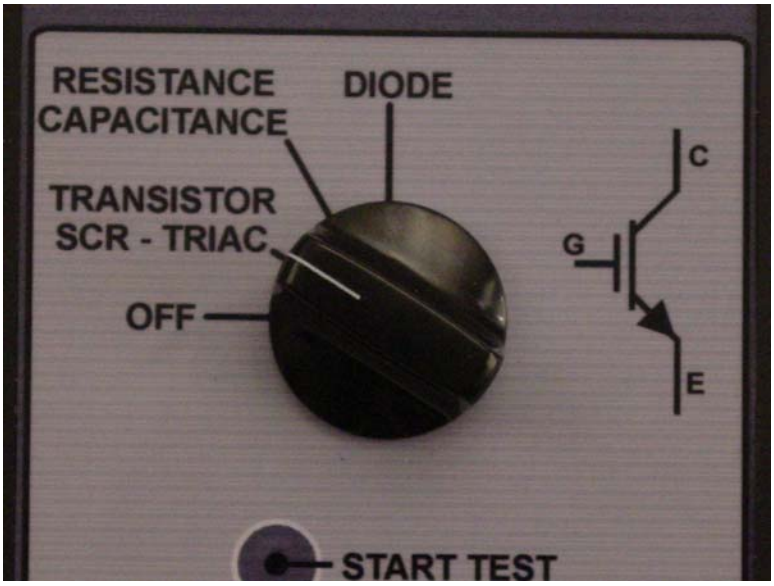
a) Remove screws and lift main PCB out.



b) Connect probes to bad transistor of module.



c) Turn on VFDA to TRANSISTOR Test

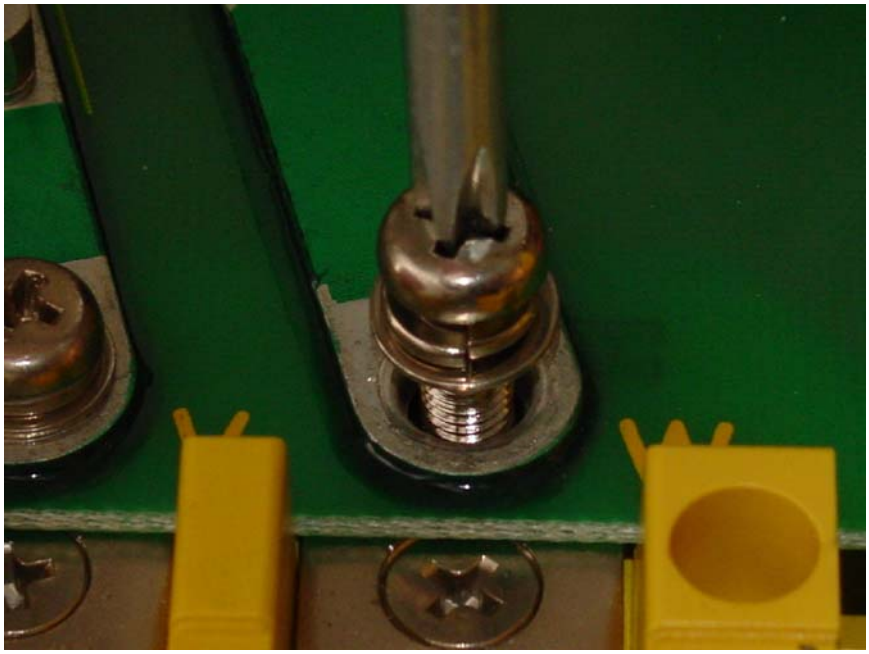


d) "Open" or "Short" confirms transistor module bad.

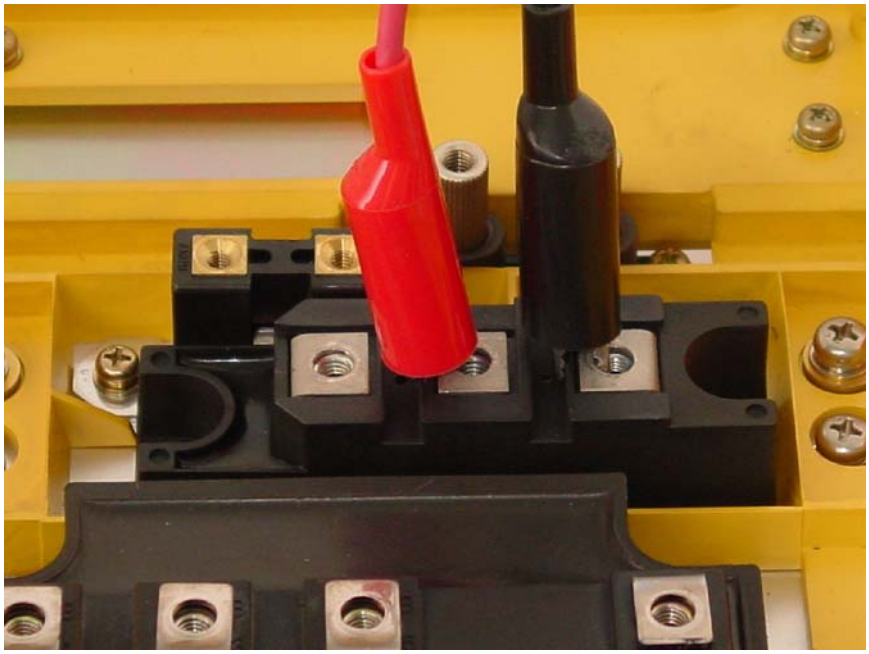
4) Test Diode: Connect Probes, Select DIODE Mode

5) Confirm Diode bad out of circuit.

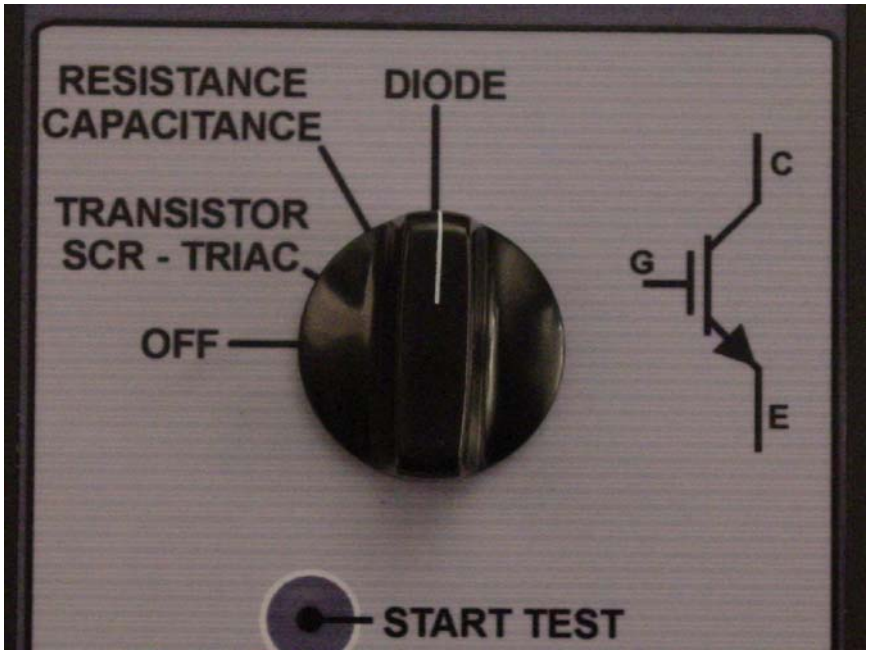
a) Remove screws and lift main PCB out.



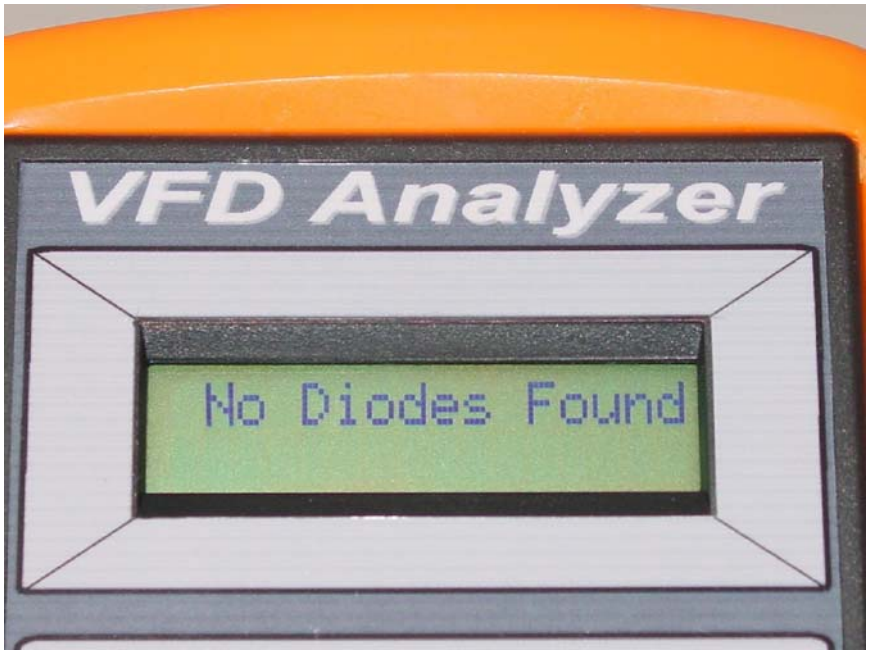
b) Connect probes to bad diode.



c) Turn on VFDA to DIODE Test

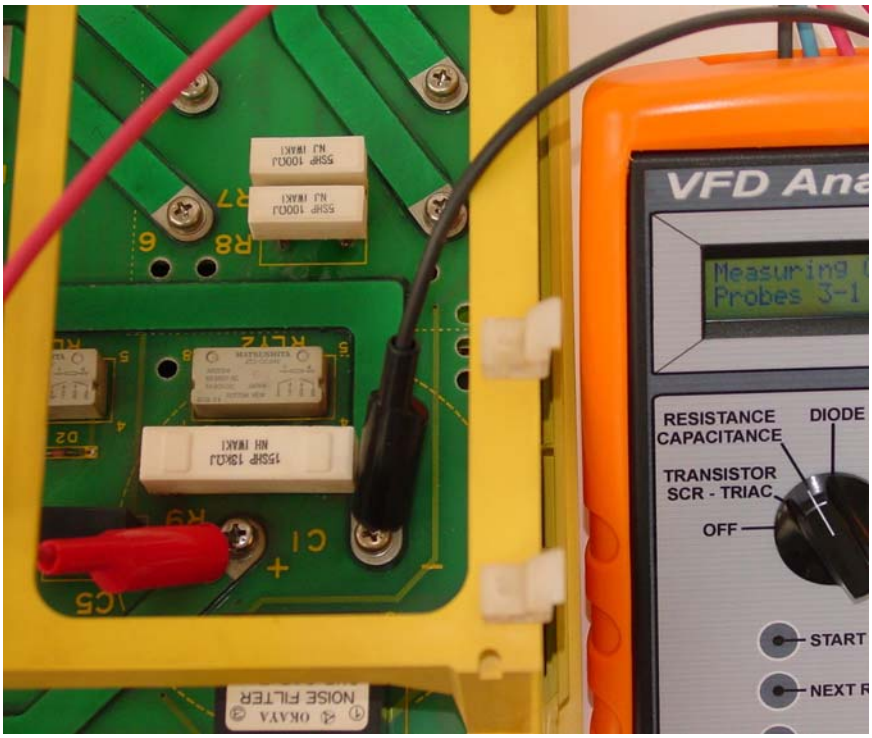


d) Results of the test are displayed.

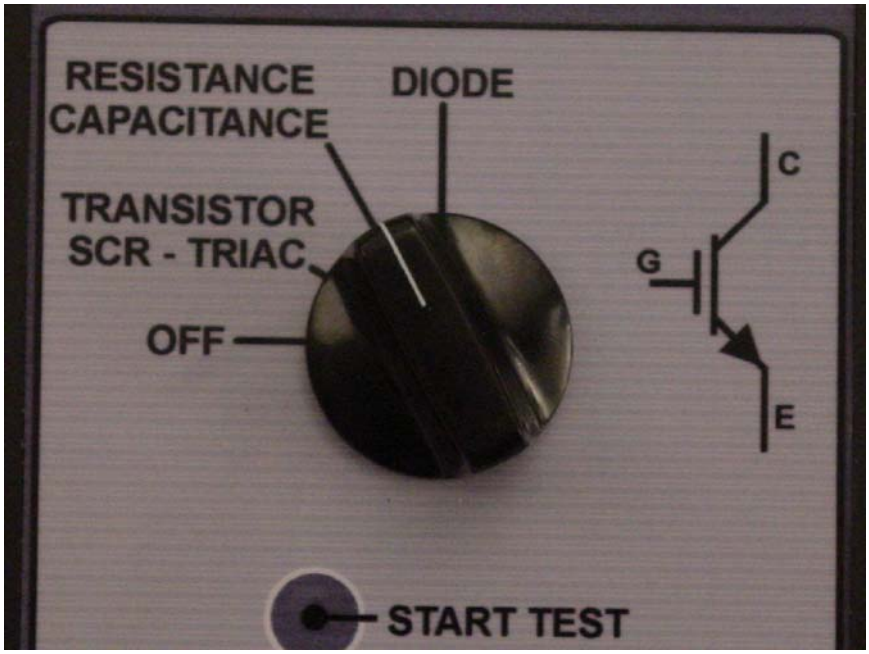


6) Test Capacitor and Resistor

a) Connect probes to Capacitor or Resistor terminals.



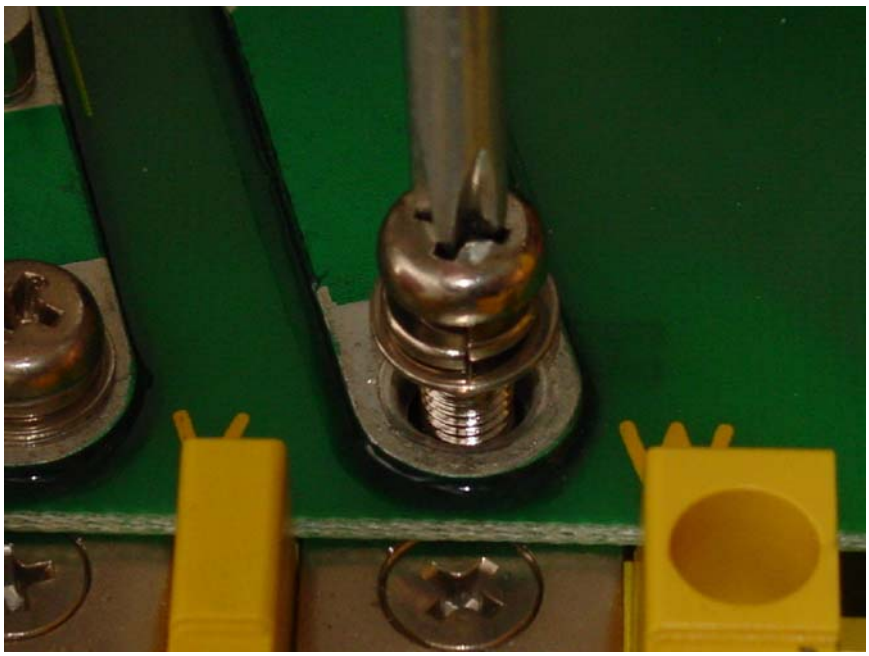
b) Turn on VFDA to RESISTANCE/CAPACITANCE Test



c) Results of the test are displayed.

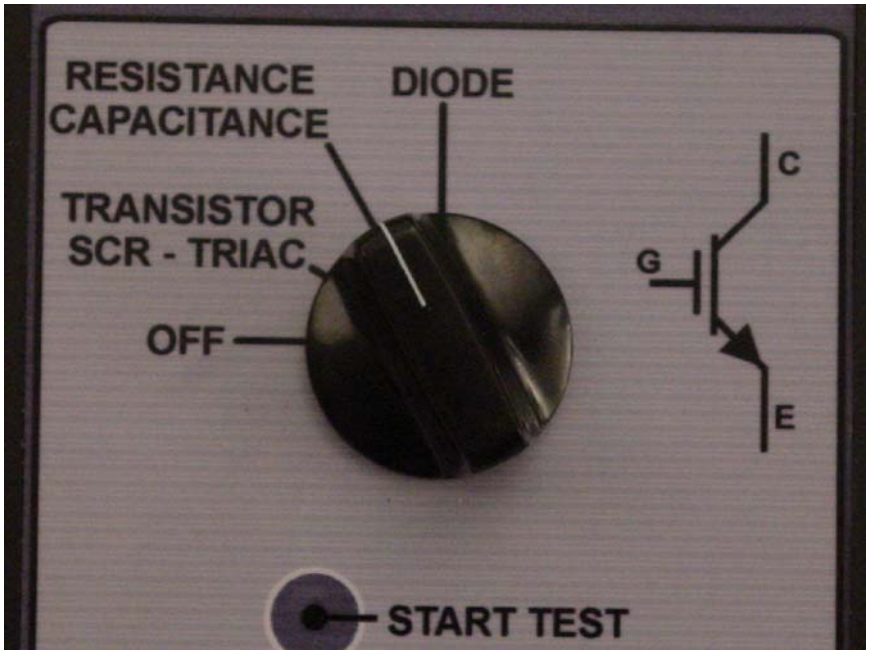
7) Confirm Capacitor or Resistor bad out of circuit.

a) Remove screws and lift main PCB out.



b) Connect probes to bad Capacitor or Resistor.

c) Turn on VFDA to RESISTANCE/CAPACITANCE Test



d) Results of the test are displayed.