

# DARRAH'S

## Portable Power Semiconductor Tester



**DARRAH ELECTRIC COMPANY** offers a Portable Power Semiconductor Tester that accurately tests **Silicon Diodes, SCR and GTO Thyristors, Transistors and IGBT's**.

**Darrah's Model AL3300 Tester** applies actual line voltages and gate fires turn on devices. The tester comes complete with built in disc or puck compression clamp and two sets of test leads.

- Marginal components are easily identified during scheduled service, translating into less unscheduled down-time.
- Tests semiconductors before they are being installed to ensure that they are functional, and establish base line for future reference.
- Perform receiving inspection to confirm components meet specifications.

**The AL3300 performs three very important operational tests:**

- Adjustable zero to 3300 Volt A.C. for testing **Forward Blocking**. An LED Ammeter indicates leakage current (IDRM) at semiconductor voltage rating.
- Adjustable zero to 3300 Volt A.C. for testing **Reverse Blocking**. An LED Ammeter indicates leakage current (IRRM) at semiconductor voltage rating
- Adjustable voltage for **Gating or Firing** devices. LED DC Voltmeter indicates actual gate trigger voltage (VGT). An LED D.C. Ammeter indicates actual gate current (IGT).



## FEATURES

- Components are tested for forward and reverse leakage current at voltages up to 3300V.
- Gate Voltage and Current to trigger is tested and displayed on the panel meters.
- Short Circuit Current is limited to 20mA for operator safety.
- Oscilloscope jack provides the ability to observe the Voltage/Current curve on a X-Y oscilloscope.
- Tests components according to JEDEC JC-22 and EIA RS397 test standards.
- 36 inch testing leads are provided to test semiconductors removed from the heatsink and used with the tester's built in compression clamp.
- 6 foot testing leads are provided to test semiconductors still located and mounted in the heatsink of equipment.
- Easy to follow operating instructions for tests on all semi conductors in discrete or module packages.



## SPECIFICATIONS

Electrical specifications apply for an operating temperature range of 15 to 120 degrees F, (-10 to 50 degrees C), relative humidity up to 80%.

### Input Voltage

110/115 Volts, 1 Phase, 50/60 Hertz, 1 Amp  
 - or -  
 220 Volts, 1 Phase, 50/60 Hertz, 1 Amp  
*Please specify when ordering.*

### High Voltage Mode (PRV/PFV)

Peak Reverse and Forward Voltage	0 - 3300 VAC
Peak Leakage Current @ 3m ohm	1 mA
Short Curcuit Current	20 mA
Test Duration	Max 30 seconds

### Gate Mode

Gate Voltage	0-5 VDC, 10 ohm source impedance
Anode Voltage	18 V, 10 ohm, 1/2 sine wave

### Dimensions

8" H x 14" W x 20" L  
 Weight: 20 lbs

### Panel Meters

#### PRV/PFV Mode

Peak Anode Voltage	0 - 3300 VAC
Peak Leakage Current	0 - 19.99 mA

#### Gate Mode

Gate Voltage	0 - 19.99 V
Gate Current	0 - 1999 mA

### Oscilloscope Input

#### PRV/PFV Mode

X-axis (voltage) sensitivity	2.0 V/div=1000 V/div
Y-axis (current) sensitivity	2.0 V/div=10 mA/div

#### Gate Mode (Anode Voltage/Current Curve)

X-axis (voltage) sensitivity	2.0 V/div=10 V/div
Y-axis (current) sensitivity	2.0 V/div=1 A/div



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