

TRC50, Curve Tracer



The curve displayed on the screen shows component performances

The Curve Tracer is an essential tool for troubleshooting circuits and testing components

The TRC500 is very useful in the early stages of failure analysis. It can identify electrical failures that exhibit abnormal voltage-current relationships at the output pins.



Applications

Easy of use, the TRC50 can be the best companion for multiple applications:

- Component or complex circuitry characteristic trace
- Component signature analysis to facilitate troubleshooting
- Voltage and Current reading based upon polarization or nominal voltage
- Protection threshold diode analysis, thermistor polarization limit ...
- Voltage reference and conduction threshold measurement
- Thyristor and associated protection circuitry leakage analysis

Field of Application

- Research laboratory
- Production facility
- Maintenance laboratory
- Quality control department
- College & University electronic teaching

The TRC50 will make easy and fast the performance verification of your DUT

The TRC50 is designed to control component or circuitry with two nodes

The TRC50 is built of three complementary block functions

- Polarization voltage generator**
- Voltage and current measurement circuitry**
- Signature Circuitry display**

Specifications

DUT voltage polarization

The generator delivers a fixed voltage of security, always available at the output?
The generator works in AC or DC positive mode
Two current ranges are available with internal impedance limitation

The TRC50 accept without damage permanent short-circuit and 60 volts voltage re-injection between the two nodes.

Component characteristic measurement

Two calibrated amplifiers measure synchronously Current and Voltage
Multiple measurement ranges are available for measurement optimization

A compensation circuitry cancelled the phase between current and voltage amplifier to reduce the Lissajoux curves.
A front panel knob generate an inverted signal to reduce the trace

Trace visualization

The TRC50 combine voltage and current measurement and display the electrical characteristics, also define as the signature

Voltage, Horizontal axe and Current, Vertical axe

The measurement reading is based on reading with the display graticule

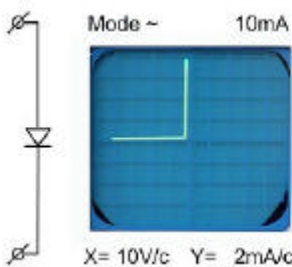
Result interpretation is immediate
A front panel test pin allows verifying the calibration parameters

| | | |
|---|------------|----------------------------------|
| DC Mode: +50V Peak | | ± % of AC power variation |
| AC Mode: ±50V Peak | | |
| Current: | Range 2mA | I _{max} : Short circuit |
| | Range 10mA | |
| AC Power 230V 50Hz 25VA Fuse: 0.5 AT/ 250V Size 5x20 | | |

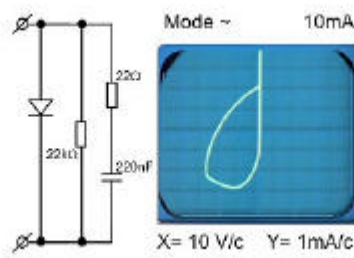
| | |
|---|-----|
| X Voltage/div: 1V, 2V, 5V, 10V, 20V | ±4% |
| Y Current/div: 50µA, 100µA, 200µA, 500µA, 1mA, 2mA, 5mA | ±4% |
| Lissajoux Trace compensation: 50 µA | |

| |
|---|
| Setting: Pos X, Pos Y, Intensity, Focus |
| Graticule: X 10 div, Y 8 div Size: 60 x 48 mm |
| Physical dimension High: 85 mm Width: 215 mm Depth: 278 mm Weight: 3 Kg |

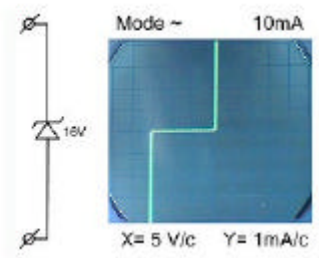
Examples



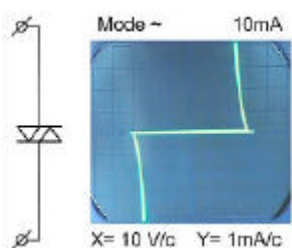
Diode



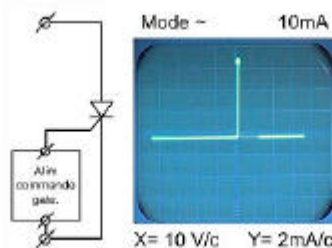
Passive network with diode



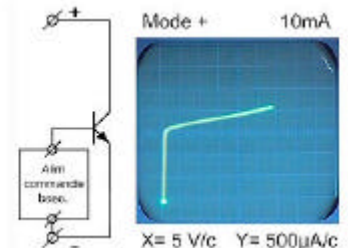
Zener



Negative DIAC Resistance



Thyristor ignition threshold triggered by an external power supply



NPN Transistor gain driven by an external power supply

Ordering info

TRC50 Curve Tracer



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