

Toneohm 850a



- Pinpoints PCB short circuits & bus faults
- Reduces scrap and minimizes rework
- Suitable for bare and loaded PCBs
- Ideal for MDA/ATE rework & field service

A significant percentage of PCB failures are caused by short circuits and bus faults.

Independent analysts place the figure as high as 40% for assembly faults, and 30% for in-service faults.

While shorts can be detected by ATE or conventional fault detection techniques, their physical location is not accurately diagnosed.

The problem is being compounded by the use of densely-packed surface-mount components and bus-structured circuits, which make test access difficult.

To quickly and accurately locate shorts with the minimum of rework, you need a dedicated PCB test tool. Scrapping today's high technology boards is simply not a viable option.

Polar's Toneohm 850A is an ideal tool for electronics production and field service. Able to quickly and accurately locate shorts on both bare and loaded PCBs, it offers a very cost-effective means of minimizing repair and rework of faulty PCBs that have been identified by pass/fail testing on an MDA or ATE system. By combining milliohm and microvolt measurement capabilities with sensitive, non-contact, current-tracing facilities, the 850A is also able to locate most types of PCB shorts that occur during in-service use. These include the type of low resistance faults - soft shorts - that are caused by failing decoupling capacitors and 'stuck-at' logic devices, which often pose considerable problems for field service. If your problem is mainly plane-to-plane shorts on multilayer PCBs, please ask for details of Polar's Toneohm 950.

Simplicity of operation

Designed for use by non-technical operators, the Toneohm 850A provides a non-destructive means of tracing short-circuits to their point of origin. The instrument offers three operating modes, which cover virtually all categories of hard and soft PCB shorts, including etch problems, solder bridges, stuck bus lines and faulty decoupling capacitors.

In addition to high-sensitivity Resistance and Voltage modes, the Toneohm 850A provides a completely non-invasive means of monitoring PCB track current - without requiring you to break or cut the circuit. Employing a non-contact current-sensing probe, the Current Trace mode facilitates easy location of Vcc-to-ground shorts, and of faults in bus-structured boards such as backplanes and memory banks. A liquid crystal display provides clear indication of relative signal strength, and an audio tone enables you to walk the probes along the shorted tracks without even looking at the instrument - the highest tone will indicate the short.

RESISTANCE

Ranges	High sensitivity ohm, 200mohm, 2 ohm, 200 ohm, 20k ohm
Accuracy	±4% in 200mohm, 2 ohm, 200 ohm, 20k ohm
	Approximately 40mohm full scale on high sens. ohm range
Probe voltage	60mV maximum
Probe protection	Momentary contact up to 100V

VOLTAGE

Ranges	2mV, 20mV, 2V, 20V
Accuracy	±4% ±15µV
Input resistance	120 ohm in 2mV, 20mV
	1M ohm in 2V, 20V

CURRENT TRACE

Sensitivity	Detects current flow with 200 ohm connected to Drive Source
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DRIVE SOURCE

Output voltage	0 to 550mV, adjustable
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**POWER
REQUIREMENTS**

200-250V or 100-130V @ 50/60Hz, 25VA

**ACCESSORIES
(STANDARD)**

Set of detachable probes

Operator manual (English) with User Guide in French,
German and Italian

APPROVALS

Conforms to applicable European Directives and is CE
marked Polar Instruments Ltd is certified to ISO 9001,
LRQA certificate number 932134.

**NATO STOCK
NUMBER**

Contact Polar Instruments