IN-CIRCUIT TESTER

• Modular Upgradeable MDA, ICT and FCT System
• High Fault Coverage Test Solution
• Limited Access Solution with BScan Testing
• Friendly UI for Fast and Easy Program Development

TR5001E SERIES

IN-CIRCUIT TESTER
The Most Cost-Effective Test Strategy

Non-Multiplexing Pin Design, Driver/Receiver to Pin Ratio 1:1:
• Optimized nail placement with 1:1 ratio flexibility
• ECNs only require moving few existing wires compared with 2:8/2:9 driver/receiver per pin
• 1:1 driver/receiver per pin provide for the fastest test program development and debugging

The most flexible ICT+FCT solution in the market. TR5001E can integrate with external instruments for functional tests such as: PXI, Labview, ....etc.

TR5001E FEATURES

**Analog Test**
- R, L, C Measurement
- 6-Wire Measurement
- Auto-Guarding Feature
- AC Phase Measurement

TRI Enhanced TestJet
Detects open connections on ICs, connectors and other SMT devices.

**Transistor/Diode Measurement**

**Digital Test**
- Full digital in-circuit test (ICT)
- Friendly UI
- On-Board Programming
- Boundary Scan
  Auto-Generation of test programs

**TR5001E**

Waveform Display

Color Syntax Program Editor

Board View with Trace Display Capability

Flash Programming
**Limited Access Solution**

**Drive Through Test**
Greatly reduces test probes for passive analog components connected in series with JTAG and BScan capable devices and connectors.

**Boundary Scan Test**
Virtual nails tests for RAM, ROM, TTL and TREE devices, and IEEE1149.6 Test.

**TRI ToggleScan® Test**
A powerful vectorless test technology that significantly reduces number of test probes, ToggleScan utilizes BScan and vectorless probes to test non-Bscan devices.

**Dual-Stage Press Unit**
Reduces fixture costs with built-in dual-stage press unit for ICT Functional Test.

**Shop Floor System Support**
TR5001E can integrate with many shop floor systems to help centralize production line management and improve production quality using gathered testing data.

**Yield Management System**
- Inspection results and data integration
- Real time SPC and production yield management
- Quality reports and closed loop tracking
- Support defect component analysis and improvements
- Knowledge Management (KM)
- Productivity and Quality Management
**General**

Maximum Analog Test Points: 3200 or maximum digital test points: 1600

Operation System: Microsoft® Windows XP, Windows 7 - 10

Power Requirement: 200-240 VAC, single phase, 50/60 Hz, 2 kVA

Air Requirement: Dry air 4 - 8 kg/cm², air consumption: 28 liter/cycle

Fixtue Type: Press type

Testable PCB Size

<table>
<thead>
<tr>
<th>Standard</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>(W) 420 mm x (D) 300 mm x (H) 100 mm</td>
<td>(W) 500 mm x (D) 350 mm x (H) 130 mm</td>
</tr>
</tbody>
</table>

Large size PCB can be specially made

**Analog Hardware**

Measurement Switching Matrix: 6-wire measurement

Programmable Frequency:
- 100 Hz, 1 kHz, 10 kHz, 1 MHz
- 100 Hz, 1 kHz, 10 kHz, 1 MHz

Programmable DC Voltage Source:
- 0 - ±10 V, resolution: 6.1 mV
- 0 - ±10 V, resolution: 6.1 mV

Programmable DC Current Source:
- 0 - 100 mA, resolution: 0.2 mA
- 0 - 100 mA, resolution: 0.2 mA

Programmable High Voltage Current Source:
- 43 V max, 43 mA max
- 43 V max, 43 mA max

Component Measurement Capability

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance</td>
<td>0.1 ohm - 40 Mohm</td>
</tr>
<tr>
<td>Capacitance</td>
<td>10 pF - 40 mF</td>
</tr>
<tr>
<td>Inductance</td>
<td>10 μH - 60 H</td>
</tr>
</tbody>
</table>

**Digital Test**

Non-Multiplexing 1:1 Per Pin Architecture

Pin Drivers: Programmable levels 0.5 V to 3.8 V

Pin Receivers: Programmable levels 0 V to 5 V

Pull-up/Pull-down Resistor: 4.7 kohm

DUT Power Supplies/Voltage/Max current:
- 5V/3A, 3.3V/3A, 12V/3A, 18V/3A, -12V/1A, 24V/3A
- 25V/8A, 75V/2.5A

Programmable DUT Power Supplies/Max Voltage/Max current:
- 0 - 100 V, resolution: 2.5 mV - 50 mV
- 1 μA - 100 mA resolution: 30 nA - 30 μA
- 1 μA - 100 mA resolution: 30 nA - 30 μA

On-board Programming of Flash & EEPROM Memories

MAC Address Programming: Supports MAC address programming with MAC address being supplied from server

Boundary Scan: Include B-scan Chain Test, B-scan Cluster Test, B-Scan Virtual Nails Test and IEEE1149.6 Test facilities to meet demands of multiple tests

ToggleScan Test: Advanced test technology combining with BScan test function and vectorless test functions to detect the pin open and short defect

Tree Test Facilities with BGA Test: Pattern generator for detection of pin opens for BGA/VLSI chips

**Dimensions/Weight**

Unit: mm (in.) Weight: 200 kg (440.92 lbs)

**Powerful Software Environment**

Microsoft® Windows operating system software: User friendly interface

Automatic Test Program Generator

Automatic protection of specific points during debug

Auto-learning and test program generation for opens/shorts test, clamping diode test and TestJet test

Auto debug of passive components

Built-in self-diagnostic function

Board view instantly displays failed devices and pins

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