



Thermal Transient Test

Design Consultants TTT System is a desktop thermal transient test instrument for engineering, quality control and low volume production applications. Available with or without a protective test chamber and with 4-wire (Kelvin) connector fixtures specific to the part to be tested. A computer is required for operation. The software application maintains a database of test parameters and archives the test data in a variety of formats. For increased production rates, an optional multimeter may be added to the system.

During thermal transient analysis a constant current is applied to the ignition wire (bridgewire) of the initiator. As the ignition wire temperature increases a change in resistance occurs. The Design Consultants Thermal transient Test System uses time-synchronous methods to acquire both current and voltage. These techniques, combined with a near-ideal current source give state of the art accuracy, resolution, and stability. User selectable test currents to 1000 milliamperes and pulse durations to 800 milliseconds are configurable for individual part numbers.

The host software displays zoomable graphs of current, voltage and resistance and may be used offline to view previously saved test data along with testing parameters.

Features

- State-of-the art accuracy and stability
- Test certification fixture for in-field accuracy verification
- Critical test parameters are easily managed in a text-based file
- Adjustable pulse width for each type of part tested
- Adjustable constant current for each type of part tested
- Time-synchronous acquisition of each voltage and current sample
- Automatic calibration of internal analog to digital converters
- Pass/fail analysis based on multiple point voltage differences and slope calculations

Specifications

Test Current	.010 Amp to 1.000 Amp
Pulse Width	1 millisecond to 800 milliseconds
Voltage Resolution	10 microvolts
Current Noise	±75 microamps peak to peak
Compliance Voltage	7 volts
Internal impedance	3 Ohms
Acquisition Interval	<15 microseconds
Data Interface	Serial RS-232/Parallel