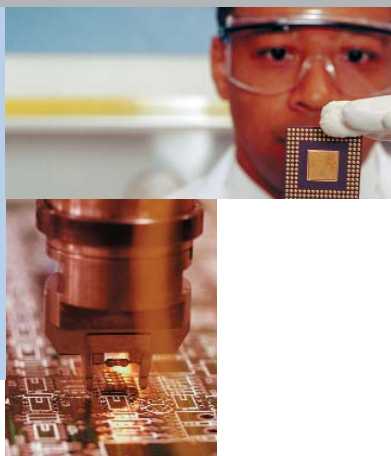


The Thermo Scientific MK.2 is a relay-based, exceptionally fast ESD & Latch-Up test system for the evaluation of advanced IC devices. It fully addresses today's JEDEC/ESDA standards, and can be configured to 128, 256, 384, or 768 pin test capabilities.

Thermo Scientific MK.2

ESD and Latch-Up test system



Features

- Waveform network: 8 site HBM pulse source
- Human Body Model (HBM) and Machine Model (MM) testing to most prevalent industry standards
- Latch-Up testing per current JEDEC's EIA/JESD 78 Method
- Preconditioning option allows DUT to be vectored with complex test and vector patterns for excellent control
- Highly repeatable, reproducible test data
- Enhanced data set features
- High voltage power supply chassis
- Power supply sequencing
- Event trigger output
- Comprehensive engineering vector debug
- Intuitive set-up and operation

Rapid, high throughput testing of complex IC devices – from design through post-production qualification

The Thermo Scientific MK.2 test system provides users with advanced capabilities to test high pin count devices to today's most prevalent Human Body Model (HBM) and Machine Model (MM) ESD standards. The system's pulse delivery design ensures recently identified waveform hazards in the standards, such as the trailing pulse and the pre-discharge voltage rise are addressed.

Trailing pulses were shown to cause non-ESD related failures by exposing the DUT to an electrical overstress after the main HBM event. Pre-discharge voltage can cause voltage-triggered protection structures to fail, as the pin under test may not be at zero volts when the HBM event occurs. A user-selectable 10K Shunt can be connected during the pulse to eliminate any voltage prior to the actual HBM event.

A combination test system, today's MK.2 also performs Latch-Up testing per JEDEC's EIA/JESD 78 Method.

Its enhanced data set features provide the flexibility to meet today's more demanding test needs of integrated system-on-chip designs.

Easy-to-use testing operations

Control by Windows®-based software is both intuitive and comprehensive. Tests are set-up quickly, and user training requirements are minimal.

A powerful embedded VME controller handles an enormous amount of test program and result data, and controls the system hardware. This eliminates unnecessary data transfer and saves considerable time.

Consistent, precise ESD waveforms

By locating multiple discharge networks close to the test fixture board, unwanted stray inductance and capacitance is kept to a minimum at every pin. This ensures excellent in-test waveform quality and easily reproducible test data.

Define, achieve and sustain your test objectives

The system's flexible modular design and options enable you to upgrade on-site when corporate or industry standards change. Options include additional pins, V/I supplies, high speed vectoring capabilities, and test features.

Experience the many benefits of working together with recognized experts in the field of component reliability ESD & Latch-Up testing.

Our goal is to support you with lifelong service – from applications support, calibration services and preventative maintenance scheduling to full technical field support.

We can help you reach the next level of success.

Thermo Scientific MK.2

Features	Benefits
Tests devices up to 768 pins; systems available configured as 128, 256, 384, 512 or 768 pins	Additional capability, faster throughput, multi-site testing
Relay-based operations	Enables test speeds 5 to 10 times faster than robotic-driven testers (test speed dictated by test protocols)
Waveform network: 8 site HBM pulse source with 100pF/1500Ω	Patented design ensures waveform compliance for technology generations to come
MK.2 Performance SE operating software	Advanced software algorithms ensure accurate switching of HV in support of pulse source technology
High voltage power supply chassis	Modular chassis with patented HV isolation enables excellent pulse source performance
Power supply sequencing	Additional flexibility to meet more demanding test needs of integrated system-on-chip designs
Event trigger output	Manage your setup analysis with customized scope trigger capabilities
Human Body Model (HBM) per ESDA STM5.1, JEDEC EIA/JESD22-A114 MIL-STD 883E, and AEC Q100-002 specs, 50V to 8kV	Test to multiple industry standards in one integrated system; no changing or alignment of pulse sources
Machine Model (MM) per ESDA STM5.2, JEDEC EIA/JESD22-A115, and AEC Q100-003, 50V to 2kV	Integrated pulse sources allow fast multi-site test execution
Latch-Up testing per JEDEC EIA/JESD 78 and AEC Q100-004	Includes preconditioning, state read-back and full control of each test pin
Pin drivers for use during Latch-up testing and parametric measurements	Vector input/export capability from standard tester platforms
64k vectors per pin with read-back	Full real-time bandwidth behind each of the matrix pins
Up to 10MHz vector rate programmable from an internal clock	Quickly and accurately set the device into the desired state for testing
Up to six separate V/I supplies	DUT power, curve tracing, and Latch-up stimulus with 4-wire sensing at the DUT board for high accuracy. System design also provides high current capability through the V/I matrix
Multiple self-test diagnostic routines	Ensures system integrity throughout the entire relay matrix, right up to the test socket
Test reports: pre-stress, pre-fail (ESD) and post-fail data, as well as full curve trace and specific data point measurements	Data can be exported for statistical evaluation and presentation
Individual pin parametrics	Allow the user to define V/I levels, compliance ranges, and curve trace parameters for each pin individually
Enhanced data set features	Report all data gathered for off-line reduction and analysis
Comprehensive engineering vector debug	Debug difficult part vectoring setups with flexibility
4 square ft. system footprint	Efficient use of space with convenient user access

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