Manual Latch-up Tester Model 8600

Pulse and ESD Technology

Features

- Small, inexpensive bench-top unit
- Easy selection of test condition
- Logical input level definable
- Non-destructive and accurate tests can be repeated
- ESD Pulse source for trigger available (Optional)
- Vp pulse source for trigger available (optional)
- JEDEC over voltage method available (Optional)
- Optional IEEE 488 interface allows the automated Latch-up test system

General Description

The Model 8600 is a manually operated latch-up tester. The trigger source of the latch-up can be selected from current pulse, voltage pulse, ESD pulse, programmable DC power supply, programmable over-voltage power supply or V_{DD} pulse. Test conditions are manually programmed via thumb-wheel switches and slide switches, or remotely programmed via IEEE 488 interface. Connections between a DUT and one of the trigger sources, V_{DD1} and V_{DD2} are made by the leads supplied as standard accessories.
Because the auxiliary power supply, V_{DD2} has also current measurement function, it can be used to measure I_{OH} or I_{OL} or as the latch-up trigger source for DC Latch-up test.
Each DUT pin can be connected to V_{DD} or GND (V_{SS}) through serial resistor or stays open by the slide switch on the DUT board. Switch box allows input pins at any desired logic levels so that sequential logic can be tested easily. Because the switch box includes level conversion capability, complicated digital patterns may be applied by connecting an external pattern generator or IC tester. ESD pulse triggered latch-up is allowed if ESD pulse generator options are specified. Model 8600 can be used in the fully automated latch-up test system by combining with a relay matrix and controlled by the host computer.
Power supply over-voltage test option superimposes the over-voltage pulse above the VDD and allows the test meeting the JEDEC standard. (Refer to the timing diagram next page) .

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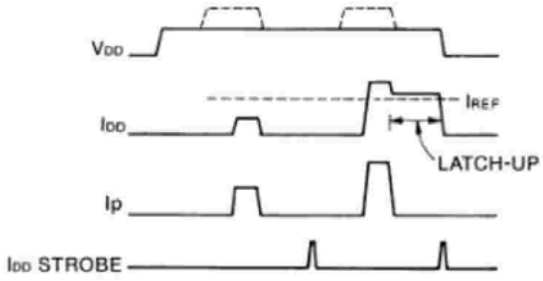
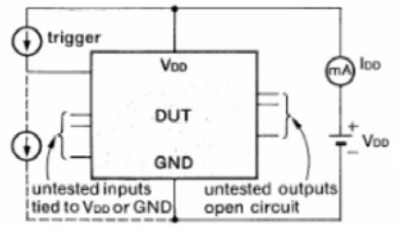


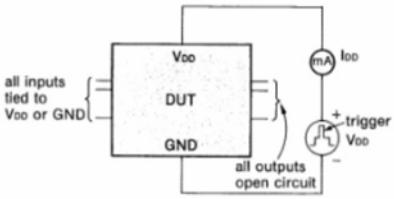
Timing: Current Pulse (IP) method

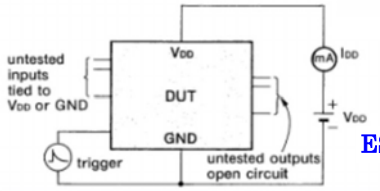
IDD is measured at the specified strobe time, by gradually increasing amplitude of current pulse, IP. Latch-up is detected if IDD>IREF, then VDD supply is shut off right away.



Current Pulse Latch-up Test

Supply Over-voltage Test





ESD Latch-up Test

Standard Specifications

Current Pulse

Output	Floating
Amplitude (IP)	1 to 999mA/1mA Res.
Width (tP)	0.1 to 99.9ms/0.1ms Res.
Clamp Voltage(VCLP)	5,7,10,20 or 50V

Strobe

IDD Strobe (tSTB)	-(tP-1ms) to (tOFF-1ms)
VCLP Strobe	At the end of tP

Programmable PS 1 (VDD1)

Output	Floating
Voltage Range	1~50V/0.1V Res.
Current Range	0~999mA/1mA Res.

Programmable PS 2 (VDD2)

Output	Floating
Voltage Range	1~50V/0.1V Res.
Current Range	0~99.9mA/0.1mA Res.

Latch-up Reference Current (IREF)

5,10,20,50,100,200,300 or 500mA

Pin Count	64 pins (Built-in)
Test Mode	Current Latch-up
* Optional	DC Latch-up
	Pulse VDDLatch-up
	Supply Over-voltage*
	ESD Latch-up*
AC Input	AC100V, 50/60Hz
	300VA
Size, Weight	About 180H, 499W, 508D(mm)
	About 25kg

Options

Simplified Pattern Generator : Opt.8601

Clock	6 channels
Data	8Channels
Amplitude	Up to VDD1

VP Pulse Generator : Opt.8630

Used by Supply Over-voltage Test

ESD Pulse Generator: Opt.8602(HBM), Opt.8612(MM)

Max. Voltage: 1kV

ESD Pulse Generator: Opt.8620 (HBM, MM)

Current Limiter: Opt.8603

50, 200, 500, 1000mA

256 Pin Test Head: Opt.8615

64 pin DUT Board Kit : Opt.8608-1

256pin DUT Board Kit: Opt.8608-2

GP-IB Interface: Opt.8604

(Note)

Opt. 8601、8603、8604 should be ordered with the main body.

(Specifications subject to change without notice.)

Contact to: