

HBM Discharge Simulator PDS-510

Data Sheet

HBM Simulator used to test devices in compliance with ANSI/ESDA/JEDEC JS-001

The PDS-510 is a manual two pin tester which means that only two pins at a time can be tested. The user must design a way to connect the PDS-510 to the pins under test. In addition, they must have a way to check for damage to the device either by using a curve tracer or functional tester. HBM data collected using the PDS-510 can be used for data sheet reporting.



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The ESD & Cleanroom Specialist

📍 No. 2, Bukit Batok Street 23, #08-05 Bukit Batok Connection, Singapore 659554.

✉ sales@pro-pack.com.sg

☎ (65) 6354 1511

Specifications for the PDS-510 HBM Discharge Simulator

PDS-510 HBM Discharge Simulator	
Discharge Output	Adjustable up to 4kV
Power Supply Output	Adjustable up to 4kV
Power Supply Accuracy	±2%
Discharge Waveform ANSI/ESD STM11.31	Rise time @ 0Ω: <10 nsec @ 500Ω: <20 nsec Fall time @ 0Ω: 150±15 nsec @ 500Ω: 200±20 nsec Ringing: <15%
Power	Batteries: 4 each AA 2600 mAh low self-discharge, Rechargeable, Nickel-Metal Hydride Battery Power Supply: From 90VAC to 264VAC, 47Hz to 63Hz. UL and TUV 60950-1 approved.
Battery Life	> 100 hours (with average of 50 discharges in 8 hours)
Dimensions	7.5”L x 4.5”W x 2.5”H (19.05cm x 11.43cm x 6.35cm)
Weight	2.0 lbs (907g)

ANSI/ESDA/Jedec JS-001-2014						
Voltage Level (V)	Ipeak for Short, Ips (A)	Ipeak for 500 Ω Ipr (A)	Rise Time for Short, tr (ns)	Rise Time for 500 Ω trr (ns)	Decay Time for Short, Td (ns)	Maximum Ringing Current IR (A)
125 (optional)	0.075 - 0.092 .082	N/A	2.0 - 10 5.0	N/A	130 - 170 153.7	15% of Ips
250	0.15 - 0.18 .169	N/A	2.0 - 10 4.5	N/A	130 - 170 149.7	15% of Ips
500	0.30 - 0.37 .307	N/A	2.0 - 10 5.0	N/A	130 - 170 159.4	15% of Ips
1000	0.60 - 0.73 .654	0.37 - 0.55 0.435	2.0 - 10 4.5	5.0 - 25 10.0	130 - 170 151.3	15% of Ips
2000	1.20 - 1.47 1.302	N/A	2.0 - 10 4.5	N/A	130 - 170 151.0	15% of Ips
4000	2.40 - 2.93 2.72	1.5 - 2.2 1.728	2.0 - 10 4.0	5.0 - 25 10.0	130 - 170 143.3	15% of Ips

The PDS-510 HBM Discharge Simulator meets ANSI/ESDA/Jedec JS-001-2014 Standard. The numbers in red are results from the PDS-510 with a PicoScope® and the Pico software¹.

¹ Data Graphs available upon request. No 8000 volt discharge available on the PDS-510. PicoScope and Pico Technology are registered trademarks of Pico Technology Ltd.

Phone +1 (630) 238-8883 Fax +1 (630) 238-9717 www.prostatcorp.com

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