





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.







Data Sheet

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 Cur- rent IR (A)	
125	0.075 - 0.092	27/4	2.0 - 10	N/A	130 - 170	15% of Ips	
(optional)	.082	N/A	5.0		153.7		
250	0.15 - 0.18	N/A	2.0 - 10	N/A	130 - 170	15% of Ips	
	.169		4.5		149.7		
500	0.30 - 0.37	N/A	2.0 - 10	N/A	130 - 170	15% of Ips	
	.307		5.0		159.4		
1000	0.60 - 0.73	0.37 - 0.55	2.0 - 10	5.0 - 25	130 - 170	15% of Ips	
	.654	0.435	4.5	10.0	151.3		
2000	1.20 - 1.47	N/A	2.0 - 10	N/A	130 - 170	15% of Ips	
	1.302		4.5		151.0		
4000	2.40 - 2.93	1.5 - 2.2	2.0 - 10	5.0 - 25	130 - 170	15% of Ips	
	2.72	1.728	4.0	10.0	143.3		

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.

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 $^{^1}$ 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.