

Model ES62X-LVS Low Voltage Surge System



1. Description

The Model ES62X-LVS Low Voltage Surge System, outputting lightning characteristic waveforms described in the IEC 61000-4-5, GR-1089-CORE and C62.45-2002 standards, is designed for testing the surge immunity of devices at both wafer and package levels. Determination of ESD failure thresholds is made easy using one of the available ESD waveforms and curve tracing capabilities.

The pulse source design and pulse source delivery method ensure waveform performance directly at the device under test, not at the generator output. Current waveforms can be captured and analyzed for each ESD event. In addition, voltage waveforms can be captured and used to determine the turn-on level of protection structures. They can also be used as a means of failure determination, as the voltage waveforms show changes after pulse events.

2. Features

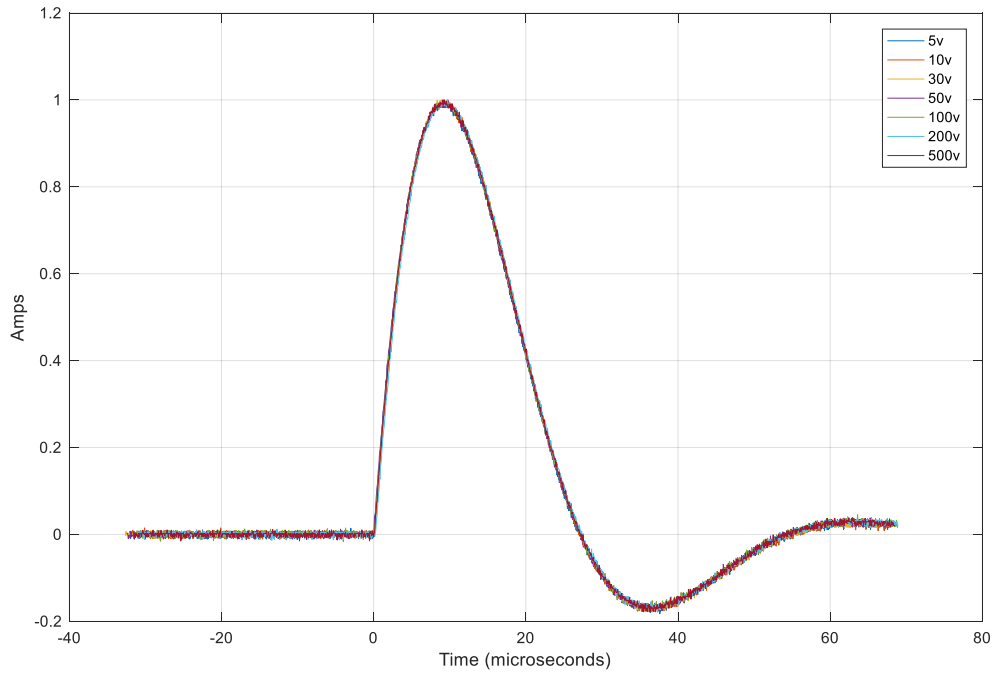
- Waveform clean and linear from 1V to 500 V
- Fully isolated surge pulsing circuit
- Optional software controlled automatic measurement
- Optional automatic failure detection includes DC spot check and static IV

3. Applications

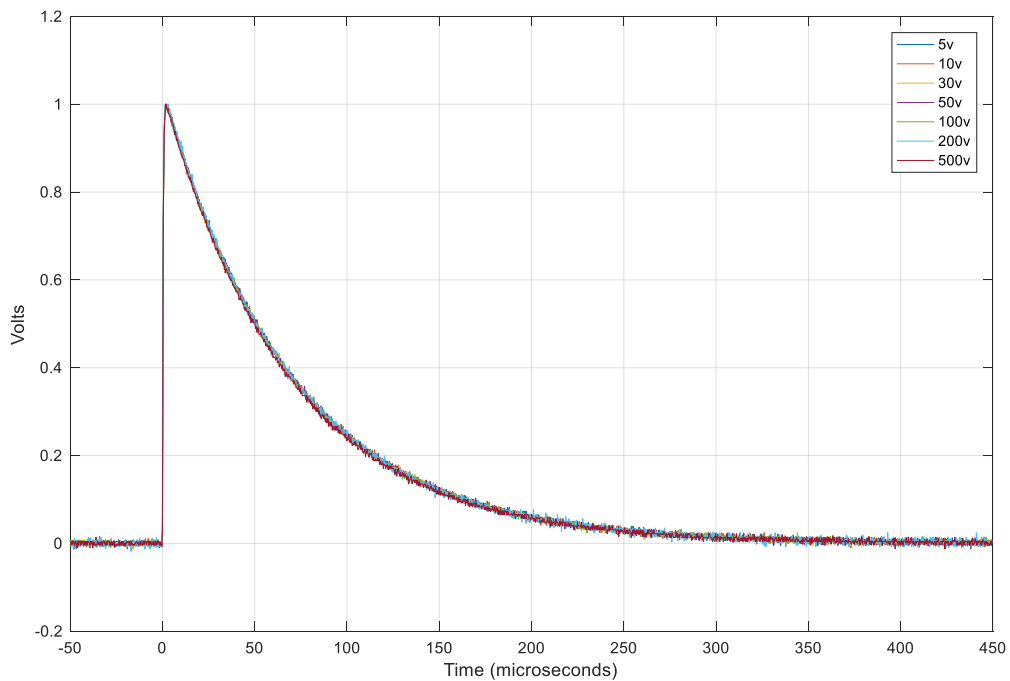
- Pulsed IV-Curve and Failure Characterization of the surge pulse immunity for packaged and wafer level devices
- Test the surge pulse immunity for, packaged and PCB surge/EOS immunity
- 8/20 μ s option meets IEC 61000-4-5
- 10/1000 μ s LVS Option meets GR-1089-CORE and C62.45-2002 IEEE standard

4. Specifications

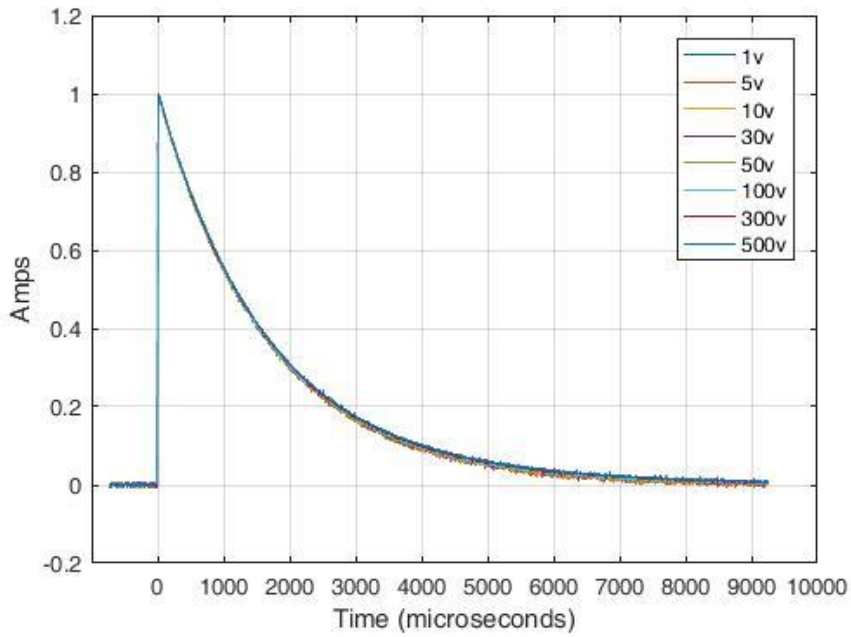
Parameters	LVS-500-8/20 Option	LVS-500-10/1000 Option	Unit
Output Voltage (Open Load)	1 – 500	1 - 500	V
Output Current (Short Load)	0.5 – 250	0.12 - 55	A
Output Precision	$\pm 5 \%$	$\pm 5 \%$	%
Output Resistance	$2 \pm 10\%$	$9 \pm 10\%$	Ω
Short Circuit Current Front Time	$8 \pm 20 \%$	10 - 40 %	μ s
Short Circuit Current Time-to-Half	$20 \pm 20 \%$	1000 +20 %	μ s
Open Circuit Voltage Front Time	$1.2 \pm 30 \%$	10 - 40 %	μ s
Open Circuit Voltage Time-to-Half	$50 \pm 20 \%$	1000 +50 %	μ s
Dimensions	347 X 300 X 145		mm
Weight	12		kg
Voltage Probe	Passive voltage divider probe, 101:1		
Current Probe	Passive current probe, 0.1 V/A		



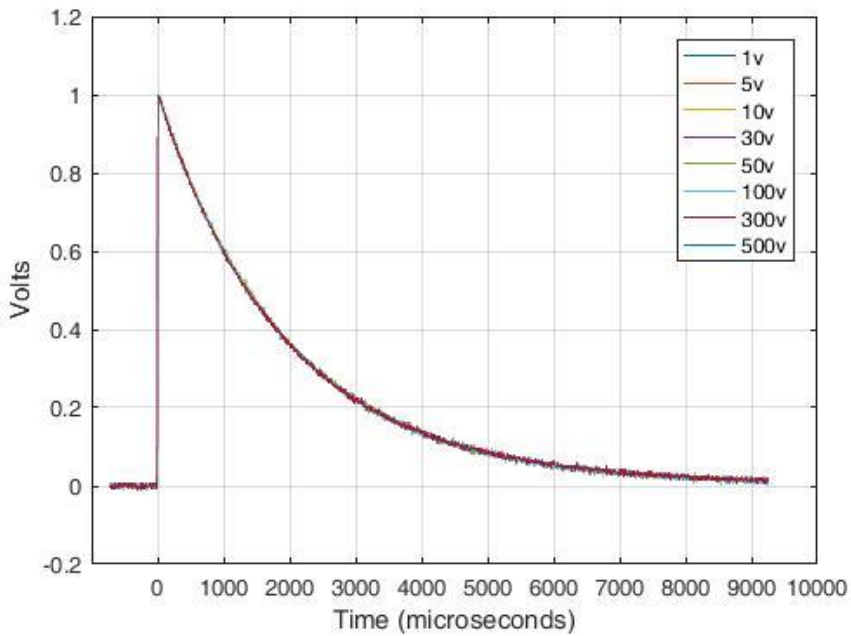
Normalized Short Circuit Current (8/20µs)



Normalized Open Circuit Voltage (1.2/50µs)



Normalized Short Circuit Current (10/1000µs)



Normalized Open Circuit Voltage (10/1000µs)

5. Ordering Information

Line	Part # or Option #	Description
Low Voltage Surge IV-Curve System		
1.0	ES62X-LVS	Model ES62X-LVS Low Voltage Surge System
1.1	LVS-500-8/20	Low Voltage Surge 8/20 Module, Max 500V
1.2	LVS-500-10/1000	Low Voltage Surge 10/1000 us Module, Max 500V
Additional Options		
2.1	KSMU2400	SMU, 200V, 1A, 20W, Single Channel (For device DC automation failure check))
2.2	ES62X-CMPS	Compact Manual Probe Station
2.3	ES62X-XYZM-TIM	XYZ Micropositioner – Inline model, XYZ travel 500 mils with 0.01mm per step
2.4	ES62X-XYZM-PAA	PCB Probe Arm Assembly with Voltage Measurement (Type C X1, Type B X2)
2.5	ES62X-XYZM-GAA	GND Probe Arm Assembly
2.6	ES62X-XYZM-PP048	048 Pogopin Probing Tip
2.7	ES62X-XYZM-PP075	075 Pogopin Probing Tip
2.8	ES62X-XYZM-TN1	Tungsten Needles – 5 mils Probing Tip