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General Purpose Uni-directional TVS

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**IEC Compliance**

- ◆ IEC 61000-4-2 (ESD)  
8KV - Contact Discharge  
15KV - Air Discharge  
30KV - Absolute Maximum
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)

**Application**

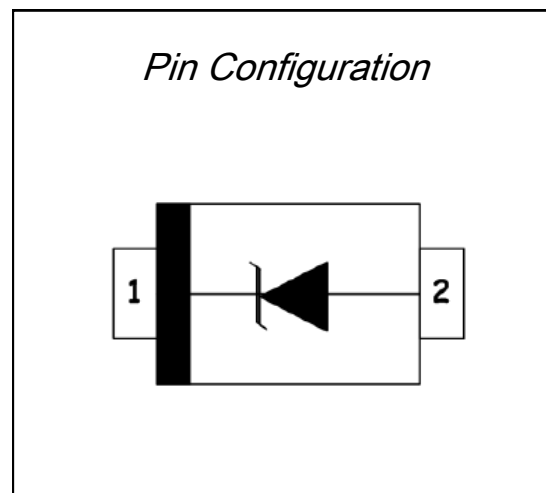
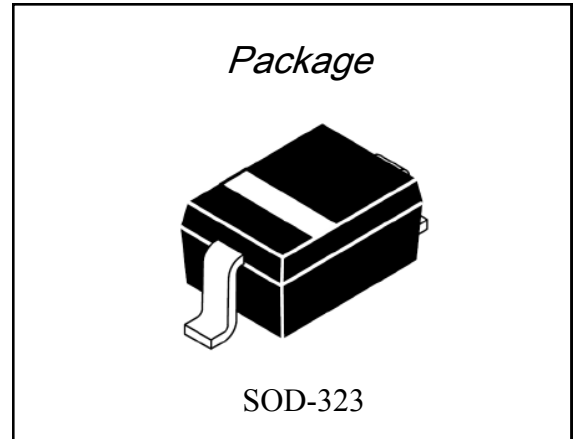
- ◆ DC Power Application
- ◆ Embedded System
- ◆ Handheld Device
- ◆ Computer

**Features**

- ◆ 450W Peak Pulse Power
- ◆ Low Clamping Voltage
- ◆ Low Leakage Current
- ◆ Single Line, Uni-Directional

**Mechanical Characteristics**

- ◆ SOD-323 Package
- ◆ Weight 5 Milligram (Approximate)
- ◆ Flammability Rating UL94V-0
- ◆ Lead Free Plating
- ◆ Reel Size 7"
- ◆ 3,000 PCS Per Reel



**DEVICE CHARACTERISTICS**

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Pulse Power (tp=8/20us waveform)	P <sub>PP</sub>	450	Watt
Lead Soldering Temperature	T <sub>L</sub>	260 (10s)	°C
Operating Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

Electrical Characteristics (@25 °C)						
Part Number	V <sub>RWM</sub> (Volt)	V <sub>B</sub> (Volt)	V <sub>C</sub> (Volt)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)	C <sub>J</sub> (pF)
NLSD05U	5	6	22	24	10	200

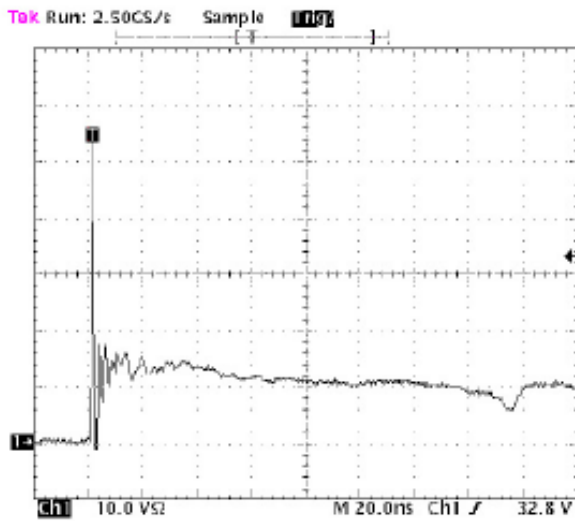


Figure1. Clamping waveform of positive 8KV ESD contact

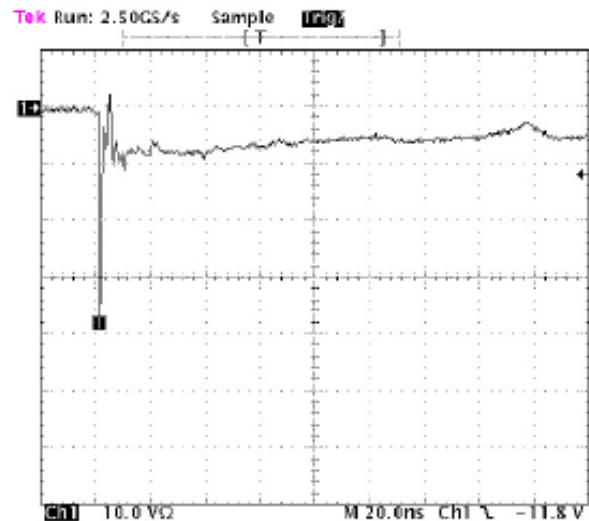
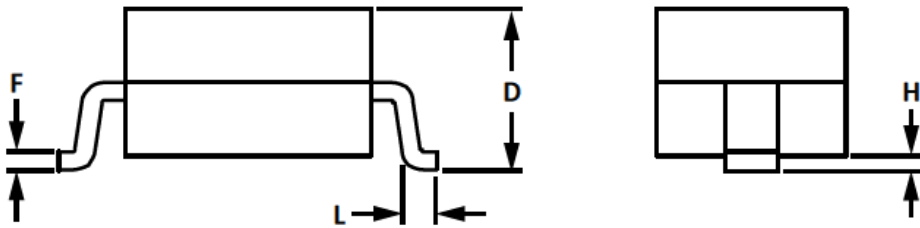
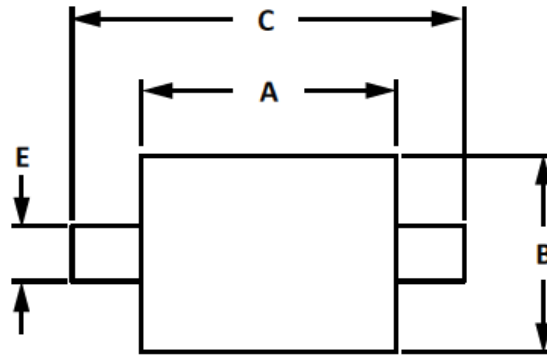


Figure2. Clamping waveform of negative 8KV ESD contact

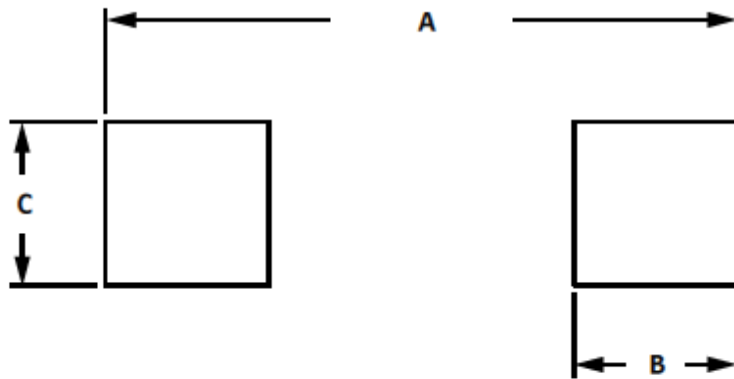
DEVICE OUTLINE

Outline Dimension				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.062	0.070
B	1.15	1.35	0.045	0.053
C	2.30	2.70	0.090	0.105
D	0.80	1.15	0.031	0.045
E	0.25	0.40	0.010	0.016
F	0.089	0.177	0.003	0.007
H	0.00	0.10	0.000	0.004
L	0.08TYP		0.003TYP	



**LAYOUT PAD DIMENSION**

<b>Layout PAD Dimension</b>				
<b>Symbol</b>	<b>Millimeters</b>		<b>Inches</b>	
	Min	Max	Min	Max
A	2.75	2.95	0.108	0.116
B	0.53	0.73	0.021	0.029
C	0.73	0.93	0.029	0.037



<b>Revision History</b>	<b>Modification Description</b>
Rev.1.0	Initial Release