

Small Package Bi-directional TVS for ESD Protection

**IEC Compliance**

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

**Application**

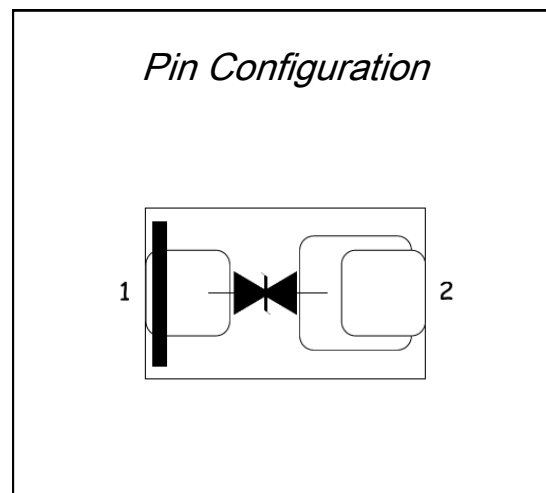
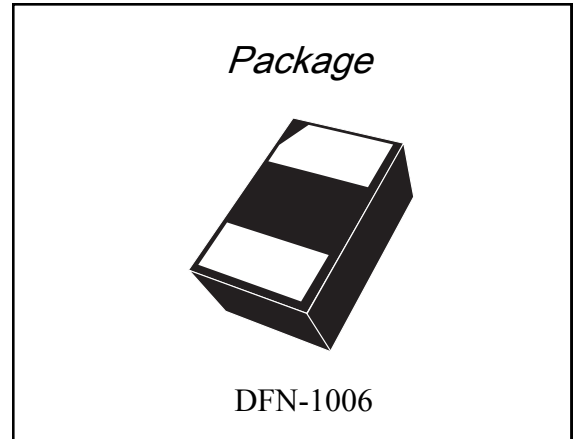
- ◆ USB3.0/HDMI
- ◆ Embedded System
- ◆ Handheld Device
- ◆ Computer

**Features**

- ◆ 90W Peak Pulse Power
- ◆ Low Clamping Voltage
- ◆ Low Leakage Current
- ◆ Single Line, Bi-Directional

**Mechanical Characteristics**

- ◆ DFN-1006 Package (0402)
- ◆ Weight 0.5 Milligram (Approximate)
- ◆ Flammability Rating UL94V-0
- ◆ Lead Free Plating
- ◆ Reel Size 7"
- ◆ 5,000 PCS Per Reel



**DEVICE CHARACTERISTICS**

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Pulse Power (tp=8/20us waveform)	P <sub>PP</sub>	90	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	Device Marking	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)
NLULC05CDN	H5	5	6	15	1	1	0.35

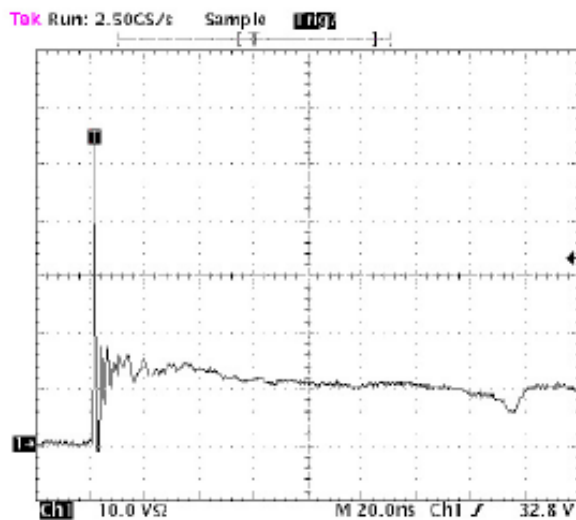


Figure1. Clamping waveform of positive 8KV ESD contact

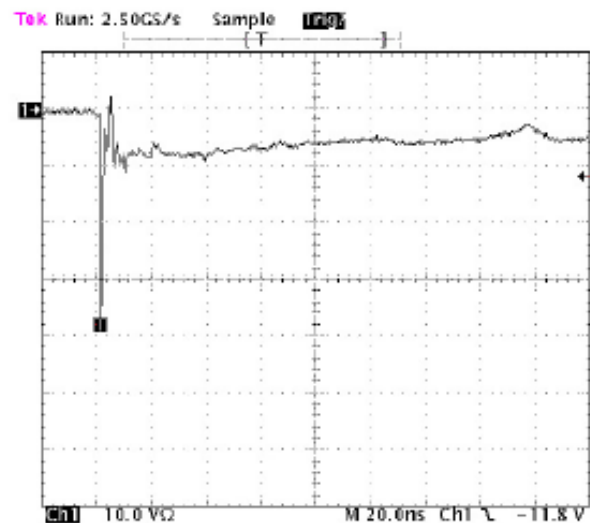
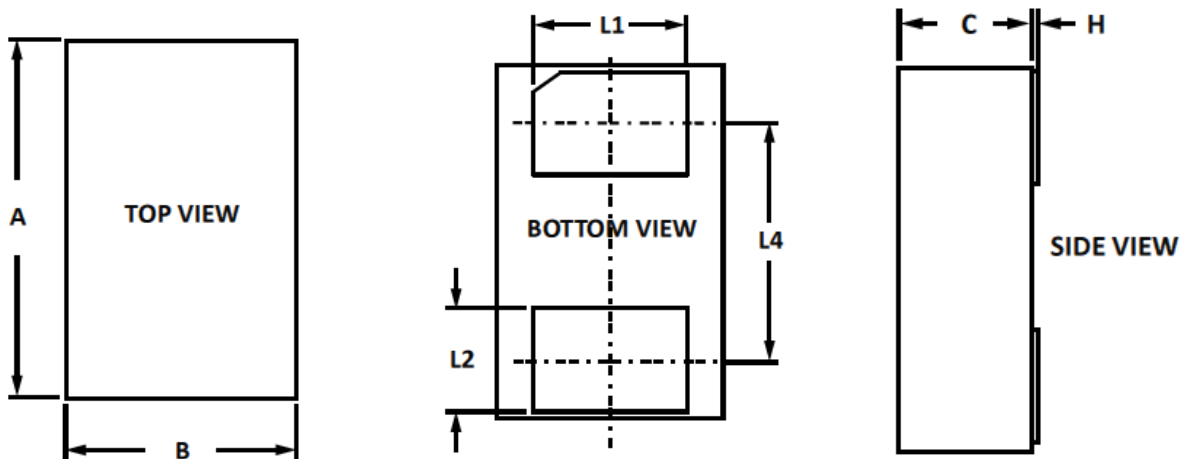


Figure2. Clamping waveform of negative 8KV ESD contact

**DEVICE OUTLINE**

Outline Dimension				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.95	1.05	0.037	0.041
B	0.55	0.65	0.022	0.026
C	0.42	0.58	0.016	0.022
H	0.01	0.07	0.000	0.003
L1	0.275	0.325	0.011	0.013
L2	0.275	0.325	0.011	0.013
L4	0.675	0.725	0.027	0.029

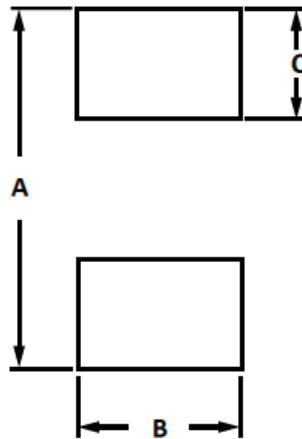


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**LAYOUT PAD DIMENSION**


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<b>Layout PAD Dimension</b>				
<b>Symbol</b>	<b>Millimeters</b>		<b>Inches</b>	
	Min	Max	Min	Max
A	1.3	1.5	0.051	0.059
B	0.5	0.6	0.02	0.024
C	0.43	0.53	0.017	0.021



<b>Revision History</b>	<b>Modification Description</b>
Rev.1.0	Initial Release
Rev.1.01	Edit Document Layout