

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

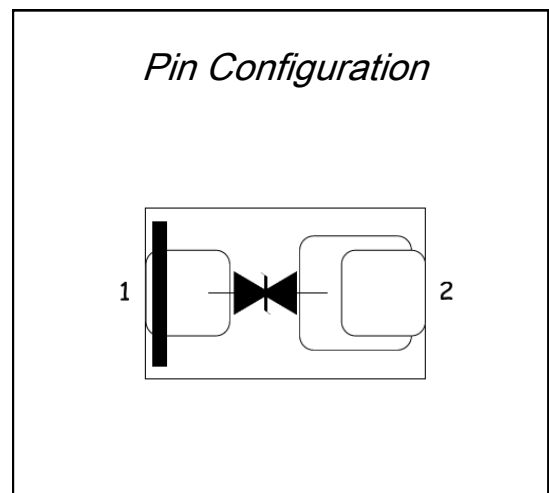
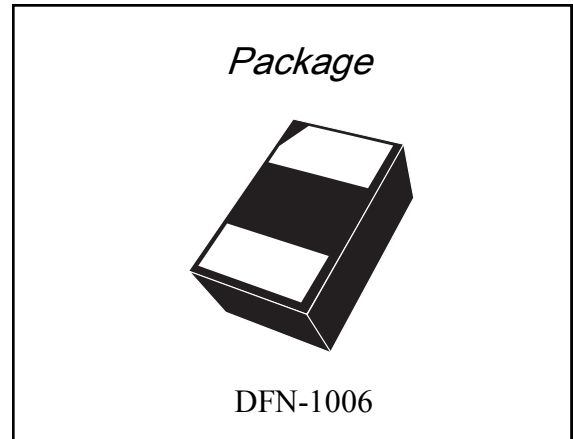
- ◆ LED Lighting
- ◆ Embedded System
- ◆ Handheld Device
- ◆ Computer

Features

- ◆ 250W 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 _{PP}	250	Watt
Lead Soldering Temperature	T _L	260 (10s)	°C
Operating Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

Electrical Characteristics (@25 °C)							
Part Number	Device Marking	V _{RWM} (Volt)	V _B (Volt)	V _C (Volt)	I _{PP} (A)	I _R (uA)	C _J (pF)
NLSDA33CDN	D3	3.3	3.5	12	15	1	20
NLSDA05CDN	D5	5	6	18	14	1	60
NLSDA08CDN	D8	8	8.5	22	10	1	45
NLSDA12CDN	DD	12	13.3	30	7	1	27
NLSDA15CDN	DE	15	16.7	37	6	1	25
NLSDA18CDN	DF	18	19.5	47	4	1	45
NLSDA24CDN	DH	24	26.7	55	3	1	24

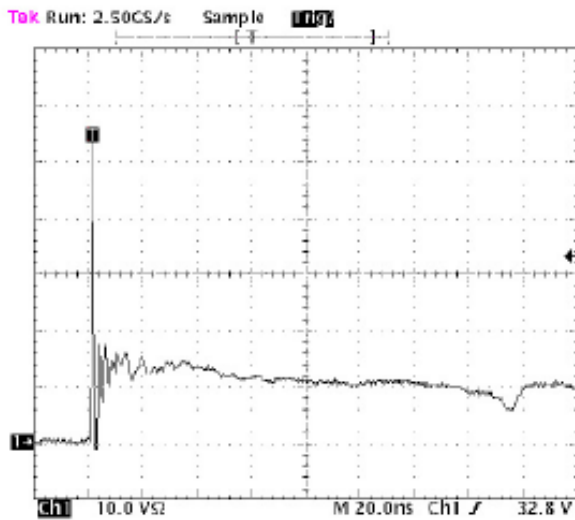


Figure1. Clamping waveform of positive 8KV ESD contact

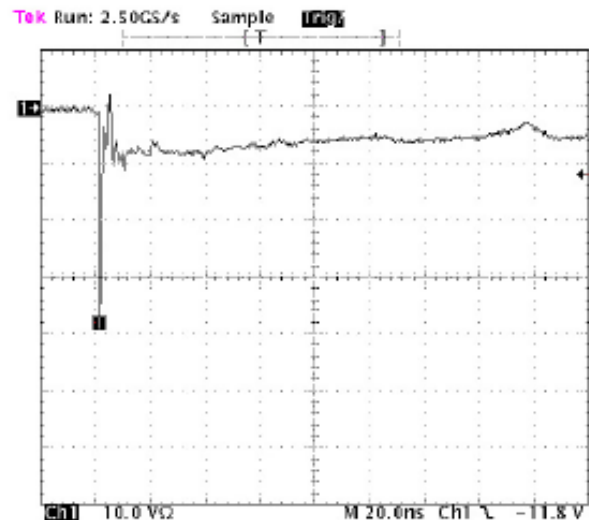
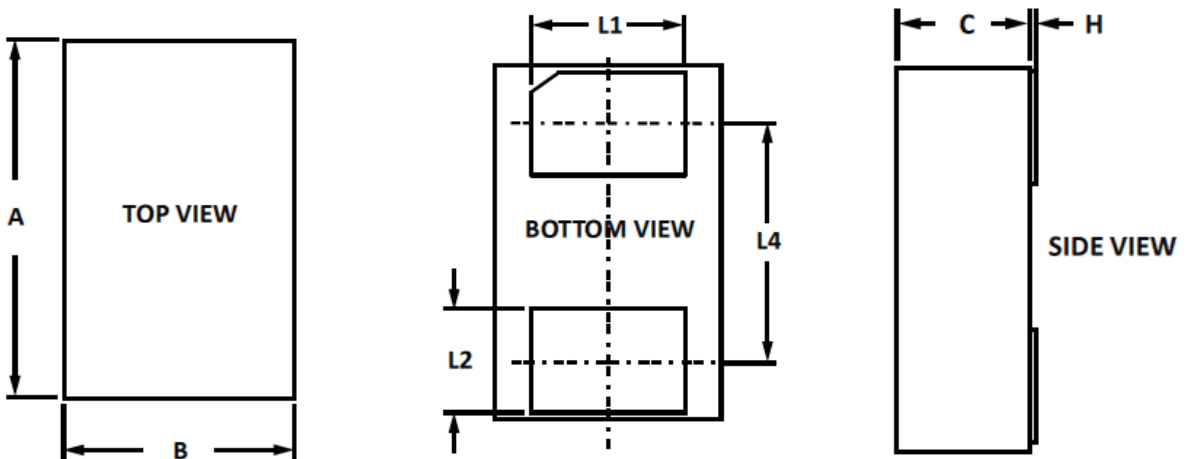


Figure2. Clamping waveform of negative 8KV ESD contact

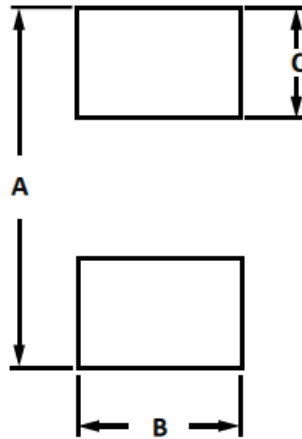
DEVICE OUTLINE

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



LAYOUT PAD DIMENSION

Layout PAD Dimension				
Symbol	Millimeters		Inches	
	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



Revision History	Modification Description
Rev.1.0	Initial Release
Rev.1.01	Edit Document Layout