

## Features

- Ultra small package: 1.0x0.6x0.5mm
- Very low capacitance: 0.35pF typical
- Ultra low leakage: nA level
- Low operating voltage:  $\pm 5V$
- Low clamping voltage
- 3-pin leadless package
- Up to 2-line protects
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 15kV$   
Contact discharge:  $\pm 8kV$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

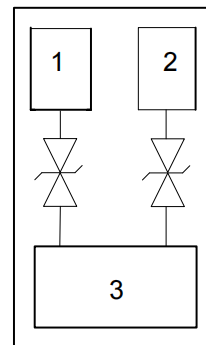
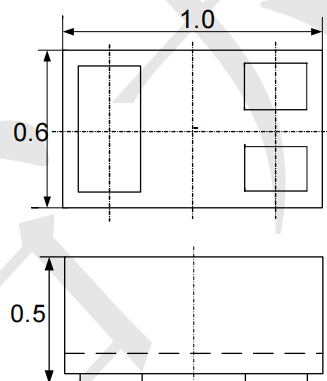
## Mechanical Characteristics

- Package: DFN1006-3 (1.0x0.6x0.5mm)
- Lead Finish: NiPdAu
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty : 10000pcs/7Inch Tape & Reel

## Applications

- Cellular Handsets & Accessories
- Digital Visual Interface (DVI)
- Display Port
- MDDI Ports
- USB Ports
- PCI Express
- Serial ATA

## Dimensions and Pin Configuration



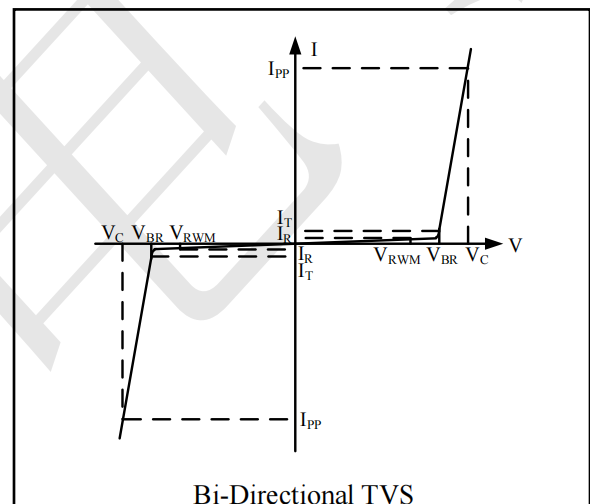
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**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±15	kV
ESD per IEC 61000-4-2 (Contact)		±8	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

**Electrical Characteristics** (TA=25°C unless otherwise specified)

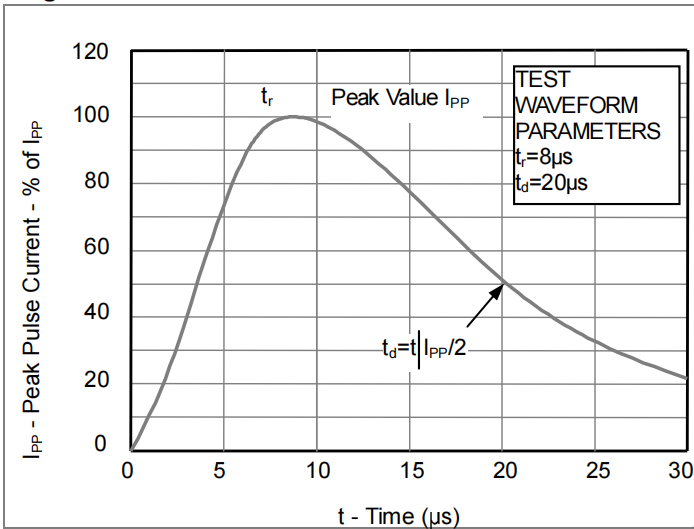
Symbol	Parameter
V <sub>RWM</sub>	Nominal Reverse Working Voltage
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Reverse Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current for Reverse Breakdown
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>PP</sub>	Maximum Peak Pulse Current
C <sub>ESD</sub>	Parasitic Capacitance
V <sub>R</sub>	Reverse Voltage
f	Small Signal Frequency



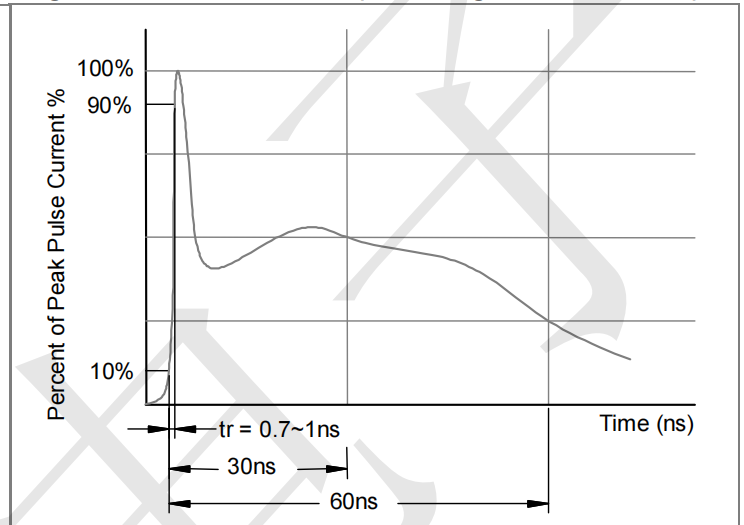
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	Pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Breakdown Voltage	V <sub>BR</sub>	6		9	V	I <sub>T</sub> = 1mA, pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Reverse Leakage Current	I <sub>R</sub>			0.06	μA	V <sub>RWM</sub> = 5V, pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Clamping Voltage	V <sub>C</sub>			10	V	I <sub>PP</sub> = 2A (8 x 20μs pulse), pin 1 to pin 3 or pin 2 to pin 3
Junction Capacitance	C <sub>J</sub>		0.6		pF	V <sub>R</sub> = 0V, f = 1MHz, pin 1 or pin 2 to pin 3
Junction Capacitance	C <sub>J</sub>		0.35		pF	V <sub>R</sub> = 0V, f = 1MHz, pin 1 to pin 2

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

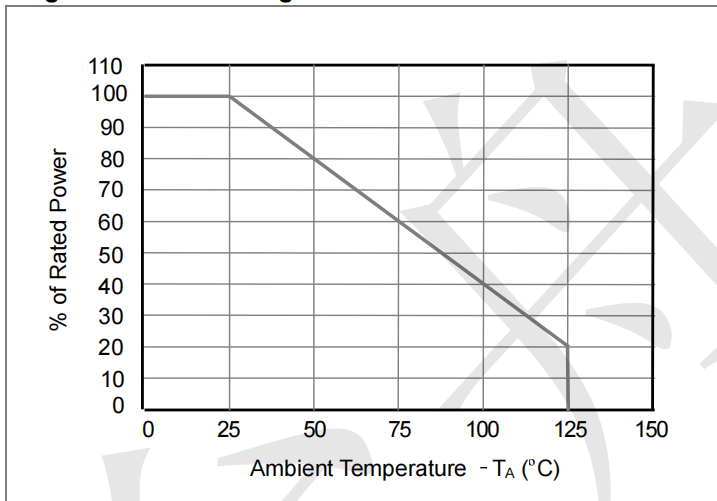
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



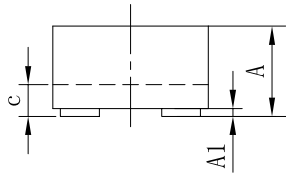
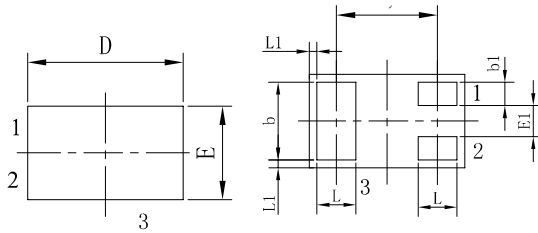
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

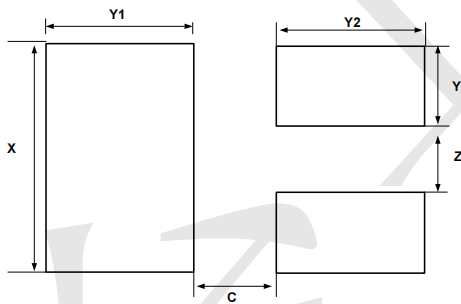


**Outline Drawing - DFN1006-3**



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
b1	0.10	0.15	0.20	0.004	0.006	0.008
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
E1	0.15	0.20	0.25	0.006	0.008	0.010
L	0.20	0.25	0.30	0.008	0.010	0.012
L1	0.05 REF			0.0002 REF		

**Land Pattern -DFN1006-3**



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	0.25	0.010
X	0.65	0.024
Y1	0.50	0.020
Y2	0.50	0.020
Y3	0.25	0.010
Z	0.20	0.008

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