



## Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 0.3pF typical (I/O-I/O)
- Ultra low leakage: nA level
- Low operating voltage: 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:  $\pm 20\text{kV}$   
Contact discharge:  $\pm 20\text{kV}$
  - IEC61000-4-5 (Lightning) 4A (8/20 $\mu\text{s}$ )
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

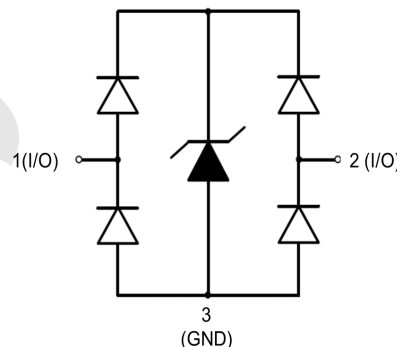
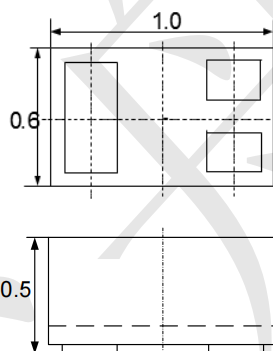
## Mechanical Characteristics

- 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



**Marking:52**



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	80	W
Peak Pulse Current (8/20µs)	IPP	4	A
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±20	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	Pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Breakdown Voltage	VBR	6.5			V	IT = 1mA, pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Reverse Leakage Current	IR			0.08	µA	VRWM = 5V, Pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Clamping Voltage	Vc			12	V	IPP = 1A (8 x 20µs pulse), pin 1 or pin 2 to pin 3
Clamping Voltage	Vc			15	V	IPP = 4A (8 x 20µs pulse), pin 1 or pin 2 to pin 3
Junction Capacitance	CJ		0.3		pF	VR = 0V, f = 1MHz, between pin 1 and pin 2
Junction Capacitance	CJ			0.6	pF	VR = 0V, f = 1MHz, pin 1 or pin 2 to pin 3



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

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

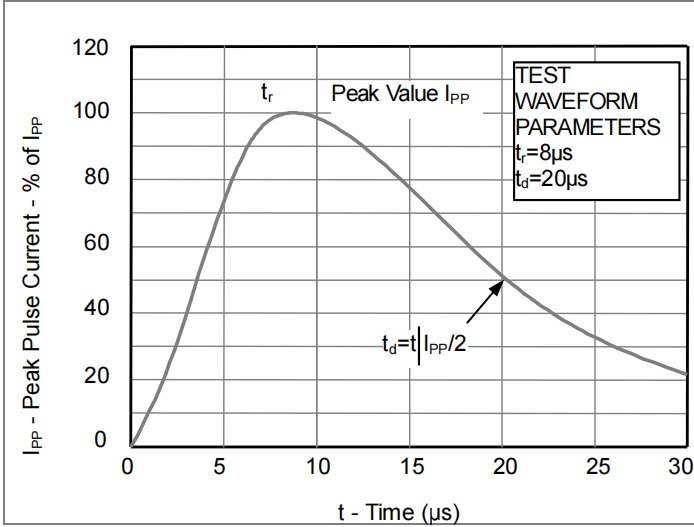


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

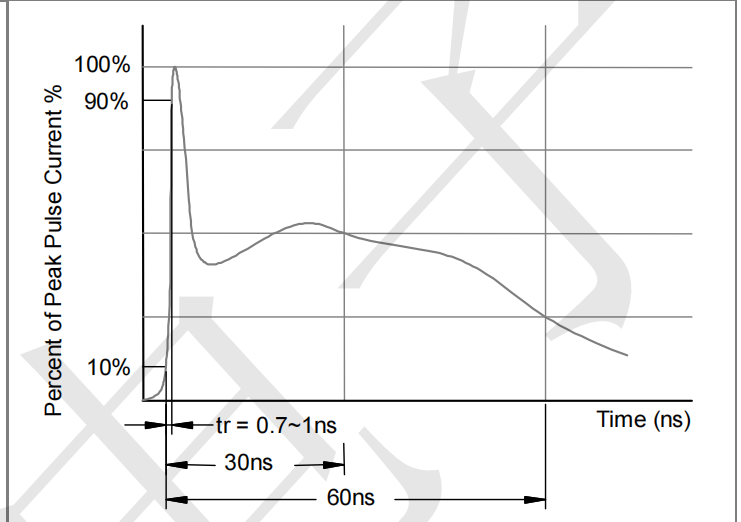
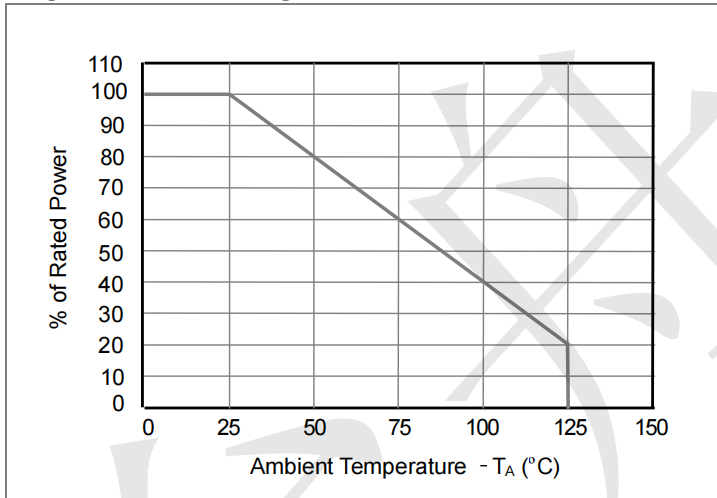
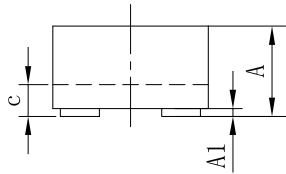
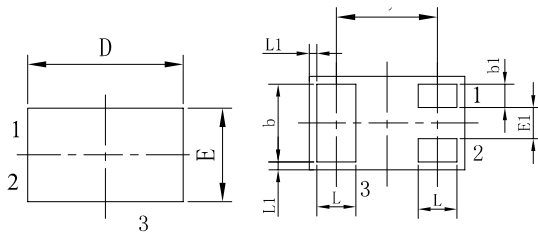


Fig3. Power Derating Curve



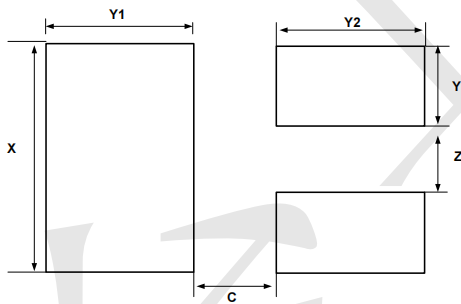


**Outline Drawing - DFN1006-3**



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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