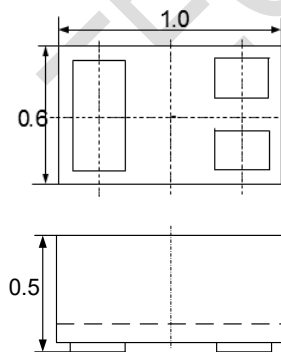


## Features

- 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:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 25\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- RoHS Compliant

## Ordering Information

Part Number	Qty per Reel	Reel Size
ESD5V0U3-DFN3	10000 Or 3000	7"

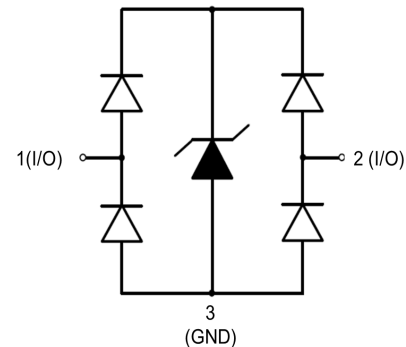


## Mechanical Characteristics

- Package: DFN1006-3 (1.0×0.6×0.5mm)
- 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

## Applications

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



**PROTECTION PRODUCTS**

Absolute Maximum Rating

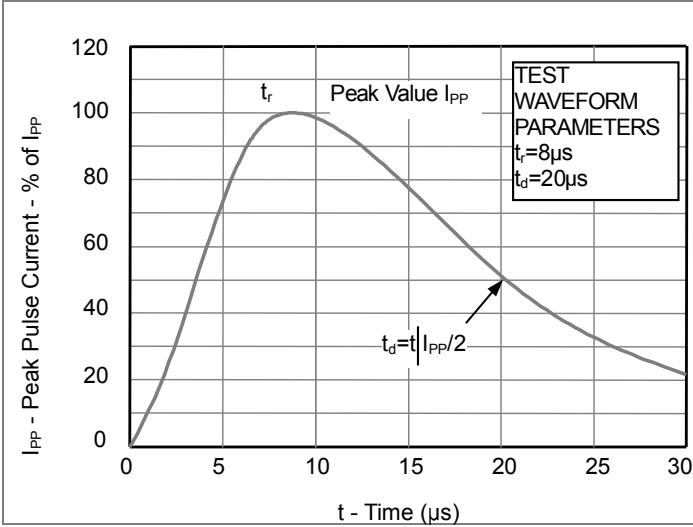
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu$ s)	Ppk	90	W
Peak Pulse Current (8/20 $\mu$ s)	I <sub>PP</sub>	5	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 25$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

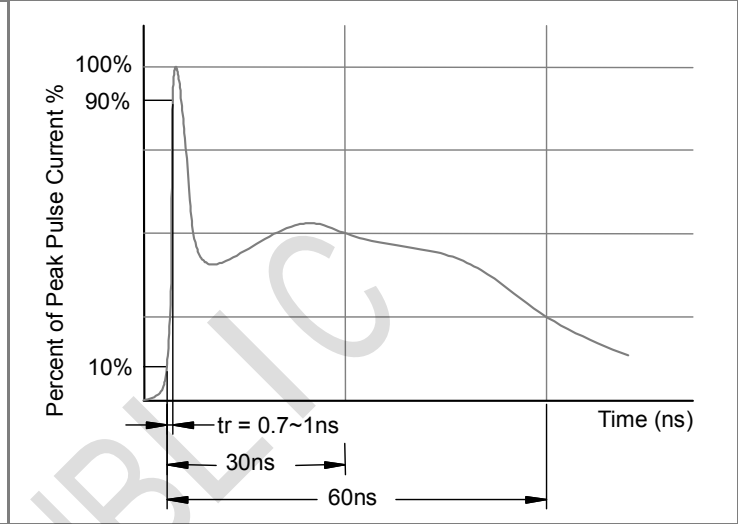
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	Pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Breakdown Voltage	V <sub>BR</sub>	6			V	I <sub>T</sub> = 1mA, pin 1 or pin 2 to pin 3 and between pin 1 and pin 2
Reverse Leakage Current	I <sub>R</sub>			0.5	$\mu$ A	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	12	V	I <sub>PP</sub> = 1A (8 x 20 $\mu$ s pulse), pin 1 or pin 2 to pin 3
Clamping Voltage	V <sub>C</sub>		13	15	V	I <sub>PP</sub> = 5A (8 x 20 $\mu$ s pulse), pin 1 or pin 2 to pin 3
Junction Capacitance	C <sub>J</sub>		0.3		pF	V <sub>R</sub> = 0V, f = 1MHz, between pin 1 and pin 2
Junction Capacitance	C <sub>J</sub>		0.6		pF	V <sub>R</sub> = 0V, f = 1MHz, pin 1 or pin 2 to pin 3

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

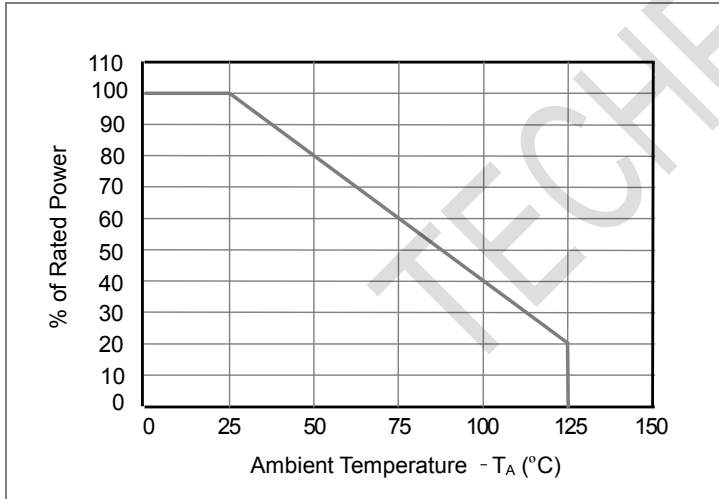
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



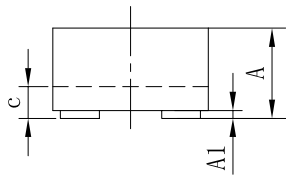
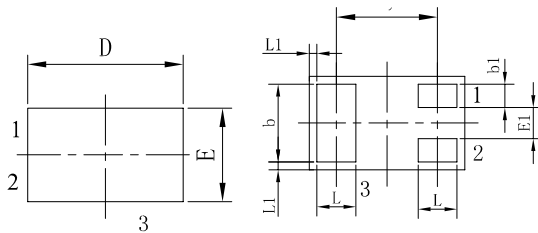
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

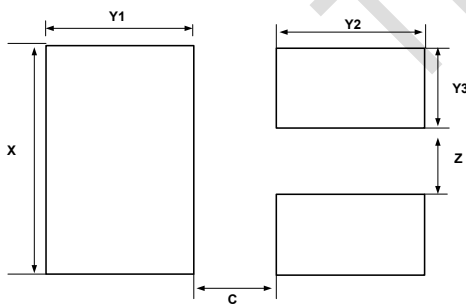


### Outline Drawing - DFN1006-3



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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [TECH PUBLIC](#) manufacturer:*

Other Similar products are found below :

[NTE4902](#) [P4SMAJ15A](#) [P4SMAJ26A](#) [SMAJ400CA-TP](#) [TGL34-47CA](#) [ESDAULC45-1BF4](#) [SM1605E3/TR13](#) [SMF20A-TP](#) [P4SMAJ12A](#)  
[CPDUR24V-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [MPLAD30KP45CAE3](#) [MMBZ27VCLQ-7-F](#) [MMAD1108/TR13](#) [MPLAD30KP24A](#)  
[ACPDQC5V0R-HF](#) [DFLT170A-7](#) [NTE4900](#) [NTE4926](#) [NTE4938](#) [SMF22A-TP](#) [SMF12A-TP](#) [SLVU2.8-TP](#) [SMLJ6.5CA-TP](#) [SMAJ6.5CA-](#)  
[TP](#) [MMAD1108E3/TR13](#) [D5V0M1U2LP3-7](#) [SMAJ400A-TP](#) [AOZ8811DT-03](#) [AOZ8831DI-05](#) [AOZ8831DT-03](#) [SMAJ188CA](#) [3SMC33CA](#)  
[BK](#) [CPDQC3V3C-HF](#) [CPDQC12VE-HF](#) [MPLAD30KP170CA](#) [82357120100](#) [5.0SMLJ15CA-TP](#) [5KP18A-TP](#) [P6KE8.2A-TP](#)  
[MPLAD30KP43CAE3](#) [SMAJ43A-TP](#) [D5V0F6U8LP33-7](#) [TVS5501V10MUT5G](#) [5.0SMLJ24CA-TP](#) [SMAJ110CA-TP](#) [MPLAD15KP75CAE3](#)  
[MMAD1103e3/TR13](#) [DFLT40AQ-7](#)