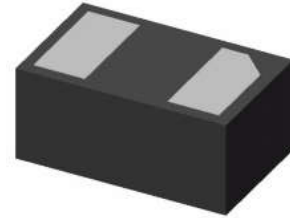


### FEATURES:

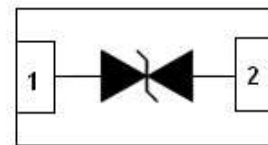
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 3.3V
- ✧ ROHS compliant



DFN1006

### MAIN APPLICATIONS

- ✧ Cell Phone Handsets and Accessories
- ✧ Personal Digital Assistants (PDA's)
- ✧ Notebooks, Desktops, and Servers
- ✧ Portable Instrumentation
- ✧ Pagers
- ✧ Microprocessor based equipment



PIN Configuration

### PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD)  $\pm 20\text{kV}$  (air),  $\pm 20\text{kV}$  (contact)
- ✧ IEC61000-4-5 (Lighting) 4.0A (8/20us)

### MECHANICAL CHARACTERISTICS

- ✧ Package DFN1006
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Quantity Per Reel : 10,000pcs
- ✧ Lead Finish : Lead Free
- ✧ Marking code: 3Z

### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , RH=45%-75%, unless otherwise noted)

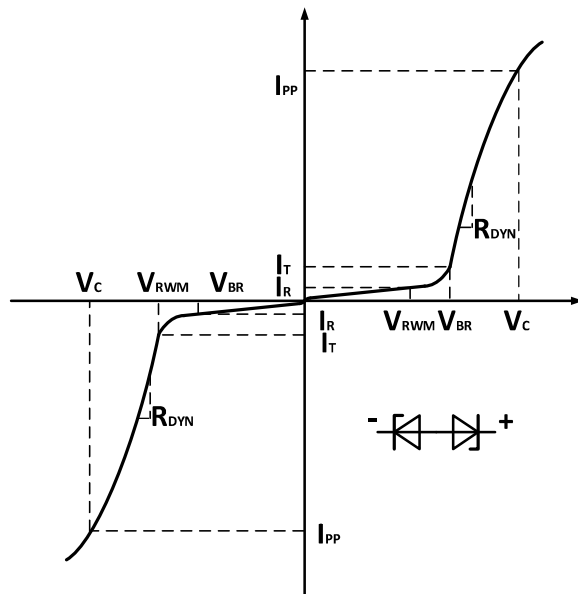
Parameter	Symbol	Value	Unit
Storage temperature range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Operating junction temperature range	$T_j$	-55 to +125	$^\circ\text{C}$
Lead Soldering Temperature	$T_L$	260 (10 sec.)	$^\circ\text{C}$
Peak pulse power dissipation on 8/20 $\mu\text{s}$ waveform	$P_{PP}$	88	W
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	+/- 20	kV
ESD per IEC 61000-4-2 (Contact)		+/- 20	

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V <sub>R</sub>				3.3	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> = 1mA	4.2			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 3.3V			1.0	μA
Peak Pulse Current	I <sub>pp</sub>	t <sub>p</sub> = 8/20μs			4.0	A
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1.0A, t <sub>p</sub> = 8/20μs			13	V
		I <sub>PP</sub> = 4.0A, t <sub>p</sub> = 8/20μs			22	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz		0.22	0.35	pF

## RATINGS AND V-I CHARACTERISTICS CURVES

Symbol	Parameter
V <sub>RWM</sub>	Reverse Standoff Voltage
I <sub>R</sub>	Max Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>PP</sub>	Max Peak Pulse Current
R <sub>DYN</sub>	Dynamic Resistance
C <sub>J</sub>	Junction Capacitance
P <sub>PP</sub>	Peak Pulse Power



**RATINGS AND V-I CHARACTERISTICS CURVES** ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

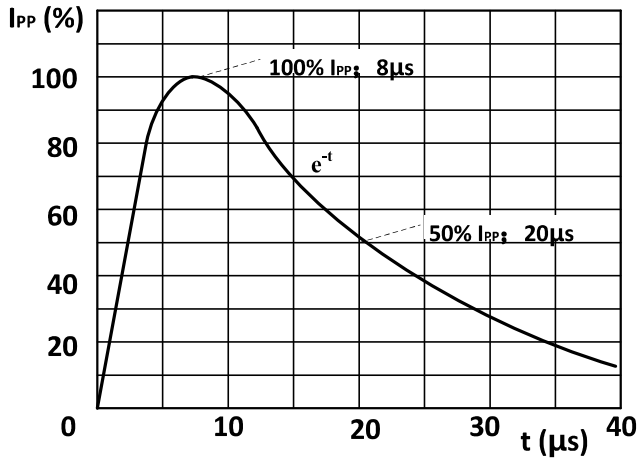


Fig. 1. 8/20  $\mu\text{s}$  pulse waveform according to IEC 61000-4-5 and IEC 61643-321

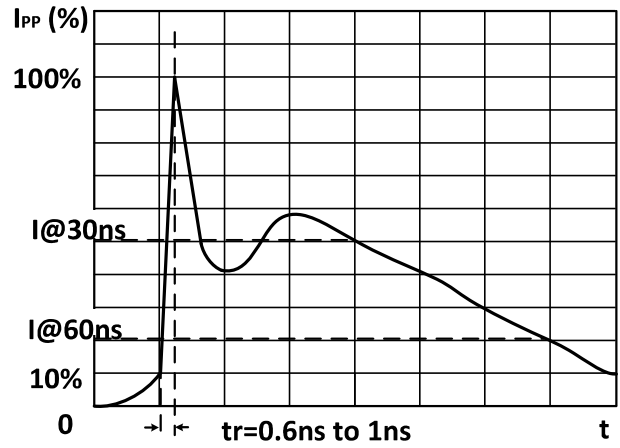


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

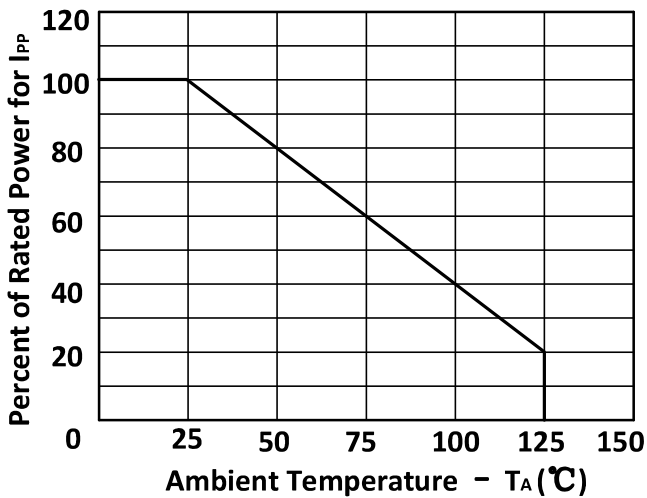


Fig. 3. Power Derating Curve

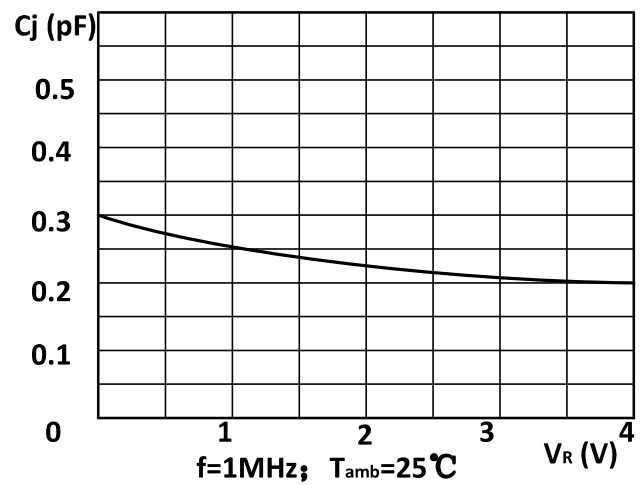
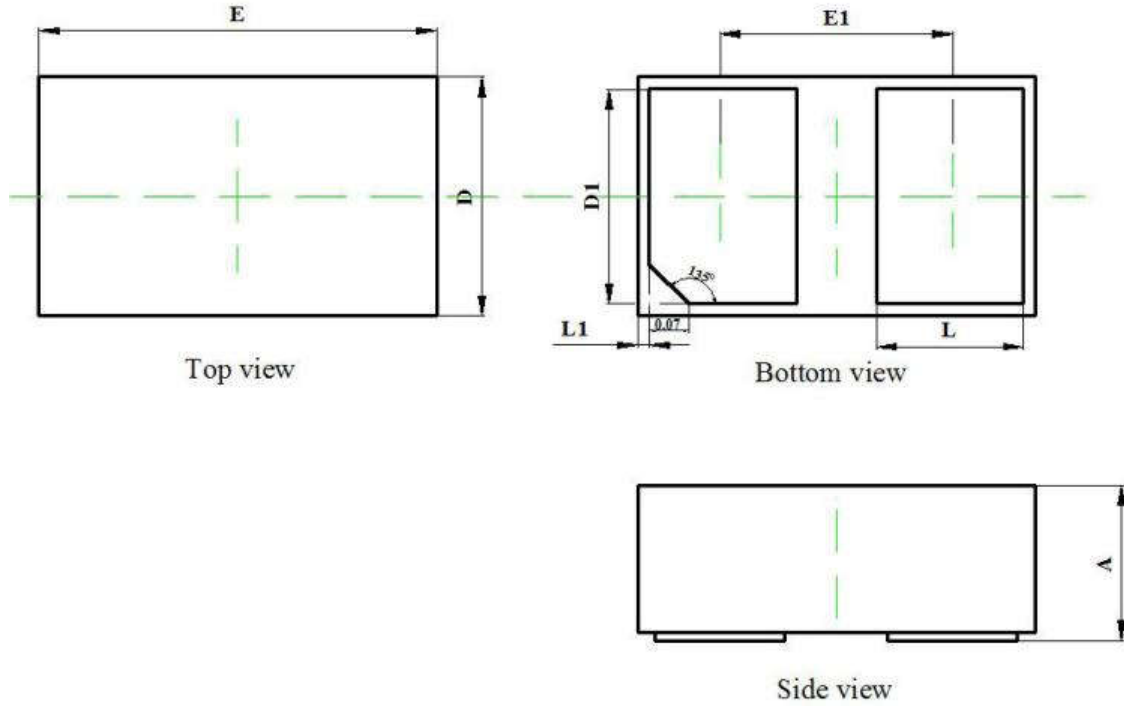


Fig. 4. Junction Capacitance vs  $V_R$

## PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.350	0.450	0.014	0.018
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.420	0.520	0.017	0.020
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.270	0.370	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004

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