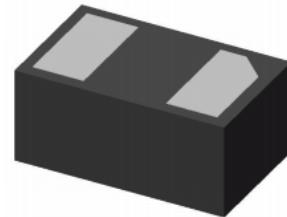


## FEATURES:

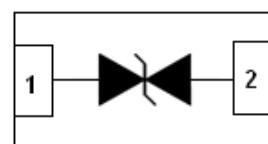
- ❖ Protects one bi-directional I/O line
- ❖ Low clamping voltage
- ❖ Low operating voltage: 5V
- ❖ ROHS compliant



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)  $\pm 30\text{kV}$  (air),  $\pm 30\text{kV}$  (contact)
- ❖ IEC61000-4-5 (Lightning) 5.5A (8/20us)

## MECHANICAL CHARACTERISTICS

- ❖ Package DFN1006
- ❖ Molding Compound Flammability Rating : UL 94V-O
- ❖ Quantity Per Reel : 10,000pcs
- ❖ Lead Finish : Lead Free
- ❖ Marking code: 5W

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

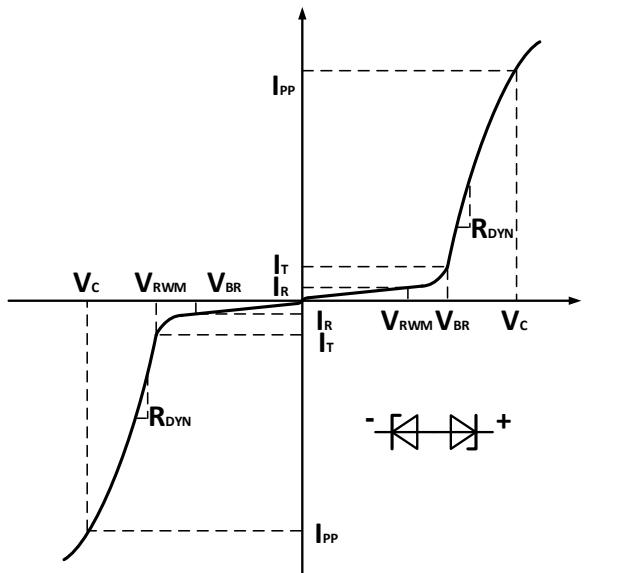
Parameter	Symbol	Value	Unit
Storage temperature range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Operating junction temperature range	$T_j$	-55 to +125	$^\circ\text{C}$
Lead Soldering Temperature	$T_L$	260 (10 sec.)	$^\circ\text{C}$
Peak pulse power dissipation on 8/20 $\mu\text{s}$ waveform	$P_{PP}$	55	W
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	+/- 30	kV
ESD per IEC 61000-4-2 (Contact)		+/- 30	

**ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ )**

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	$V_R$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	5.6		8.0	V
Reverse Leakage Current	$I_R$	$V_R = 5\text{V}$			1.0	$\mu\text{A}$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu\text{s}$			5.5	A
Clamping Voltage	$V_C$	$I_{PP} = 5.5\text{A}, t_p = 8/20\mu\text{s}$			10	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$		12		pF

**RATINGS AND V-I CHARACTERISTICS CURVES**

Symbol	Parameter
$V_{RWM}$	Reverse Standoff Voltage
$I_R$	Max Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$V_C$	Clamping Voltage @ $I_{PP}$
$I_{PP}$	Max Peak Pulse Current
$R_{DYN}$	Dynamic Resistance
$C_J$	Junction Capacitance
$P_{PP}$	Peak Pulse Power



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

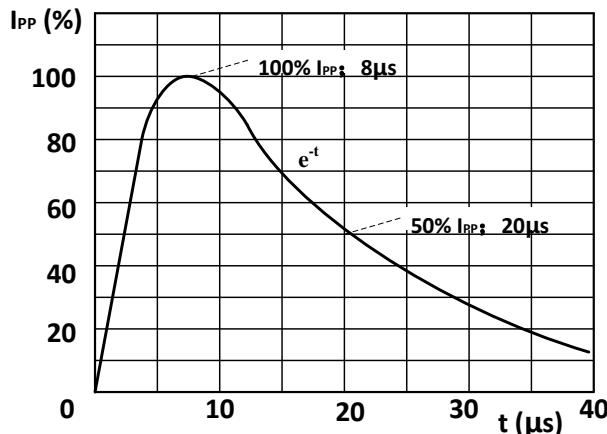


Fig. 1. 8/20  $\mu\text{s}$  pulse waveform according to  
IEC 61000-4-5 and IEC 61643-321

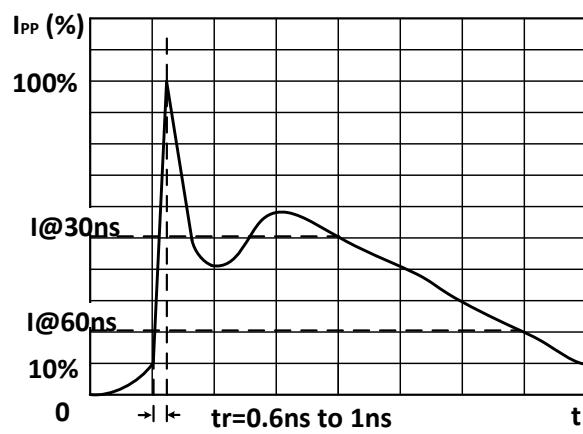


Fig. 2. ESD pulse waveform according to  
IEC 61000-4-2

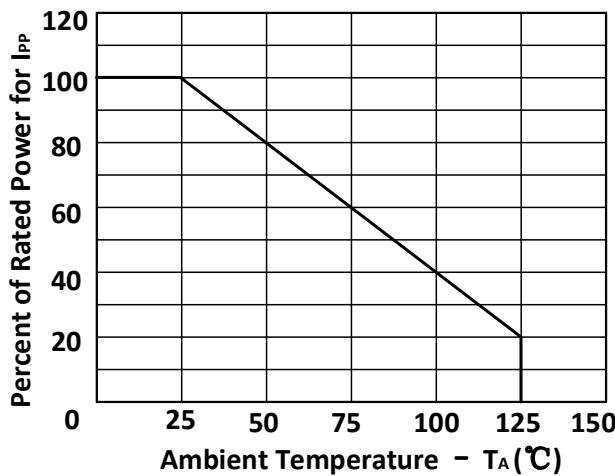


Fig. 3. Power Derating Curve

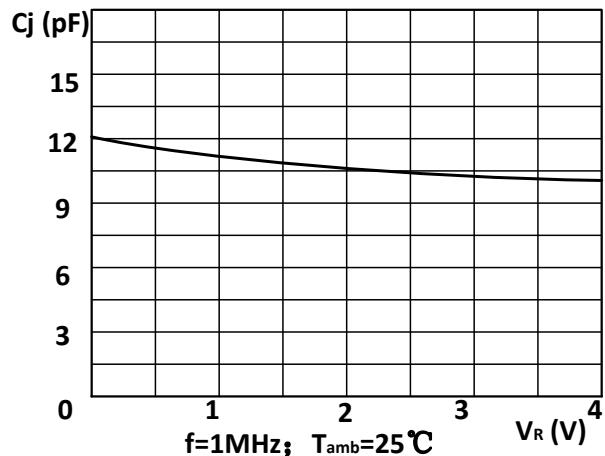


Fig. 4. Junction Capacitance vs VR

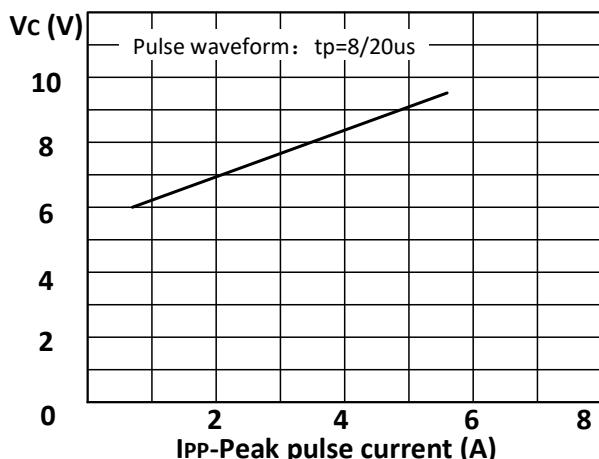
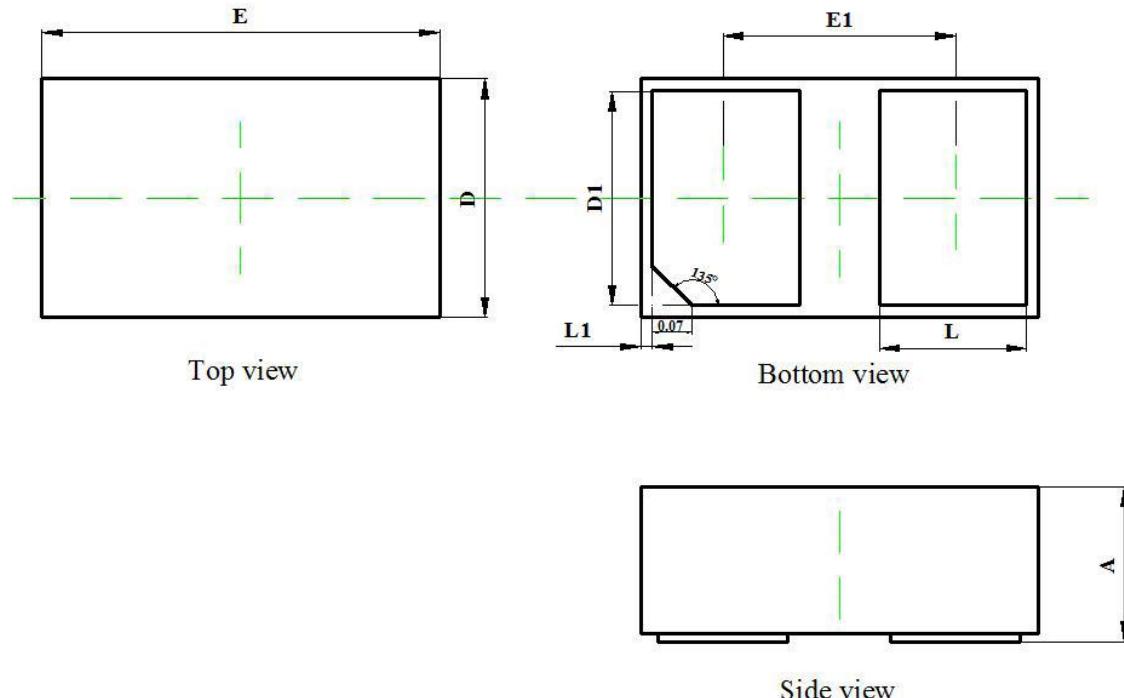


Fig. 5. Clamping voltage vs. Peak pulse current

## PACKAGE MECHANICAL DATA



<b>Symbol</b>	<b>Dimensions In Millimeters</b>		<b>Dimensions In Inches</b>	
	<b>Min</b>	<b>Max</b>	<b>Min</b>	<b>Max</b>
<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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