

## Features

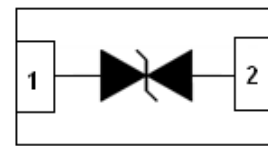
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 3.3V
- ✧ ROHS & REACH compliant



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) ±30kV (air), ±30kV (contact)
- ✧ IEC61000-4-5 (Lighting) 10A (8/20us)

## Mechanical Characteristics

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

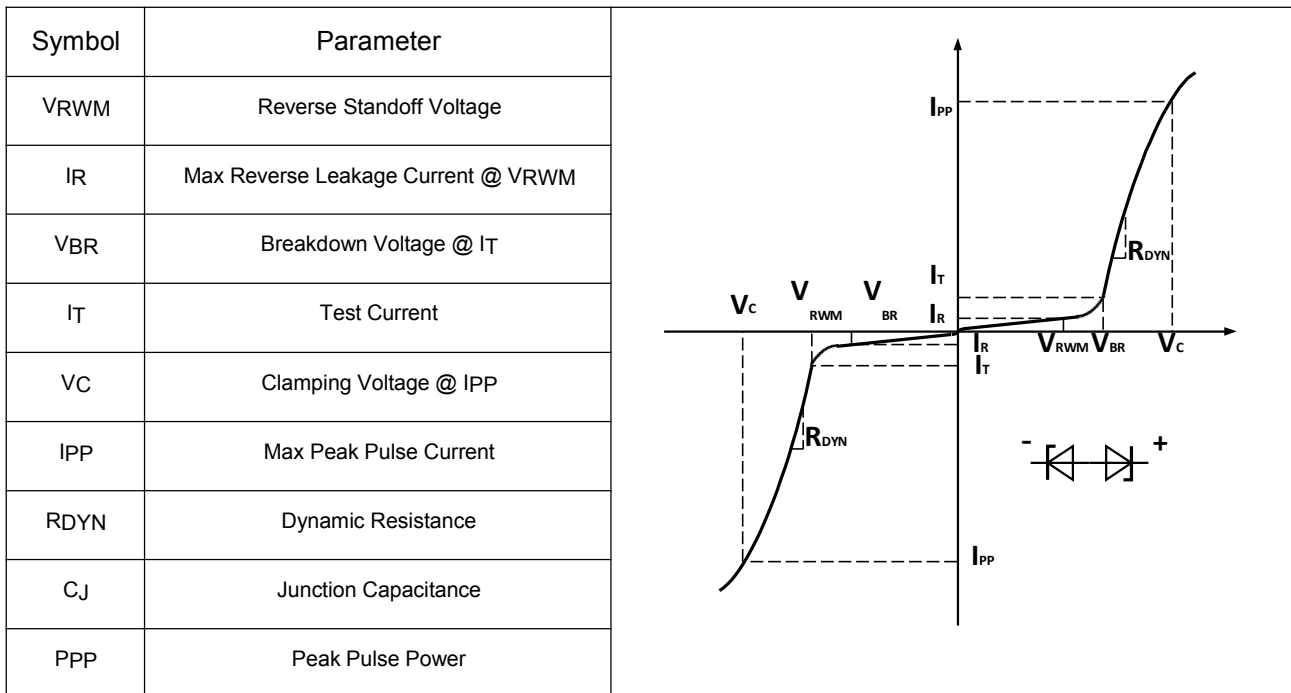
## Absolute Maximum Ratings (T<sub>A</sub>=25°C , unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T <sub>stg</sub>	-55 to +150	°C
Operating junction temperature range	T <sub>j</sub>	-55 to +125	°C
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Peak pulse power dissipation on 8/20 μs waveform	PPP	100	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	+/- 30 +/- 30	kV

## 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	3.7			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 3.3V			0.1	μA
Peak Pulse Current	I <sub>pp</sub>	t <sub>p</sub> = 8/20μs			10	A
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			6.5	V
		I <sub>PP</sub> = 10A, t <sub>p</sub> = 8/20μs			10	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz		15	25	pF

## Electrical Characteristics Curves



**Electrical Characteristics Curves** ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

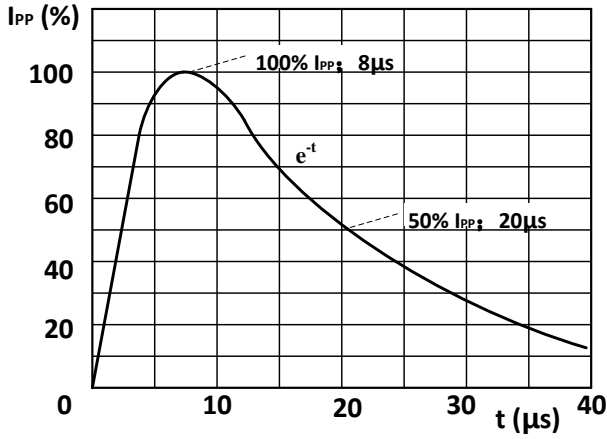


Fig. 1. 8/20  $\mu\text{s}$  pulse waveform according to IEC 61000-4-5 and IEC 61643-321

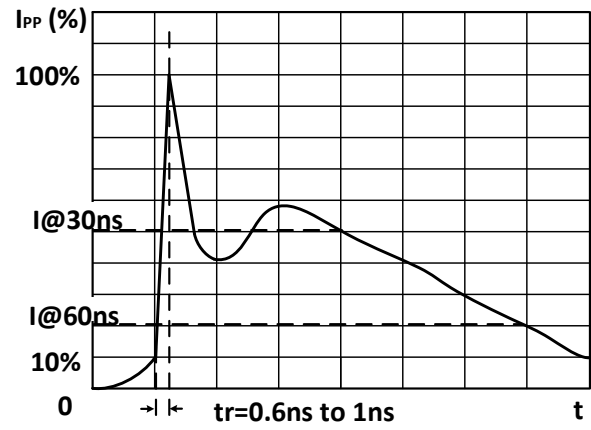


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

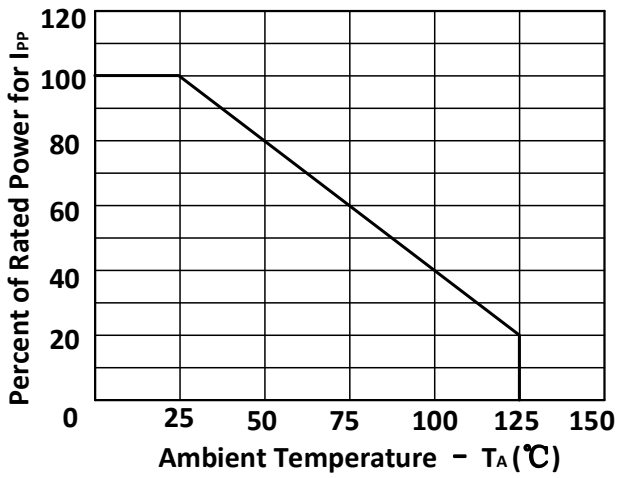


Fig. 3. Power Derating Curve

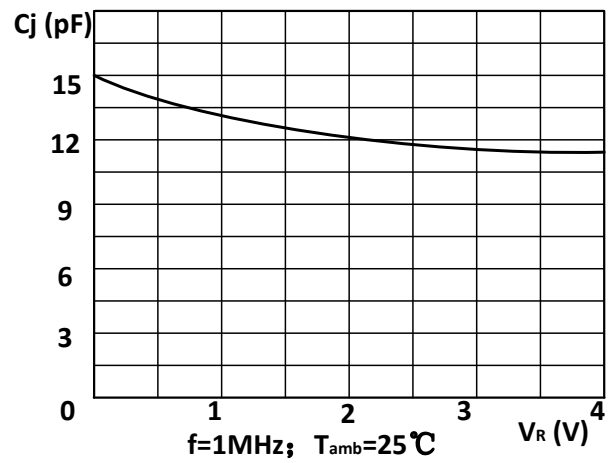
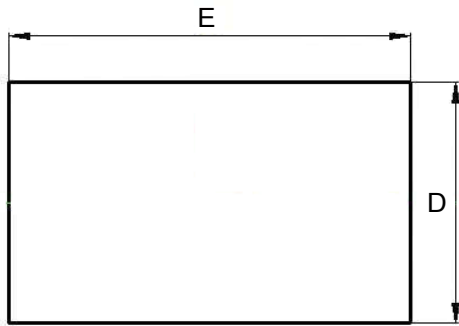
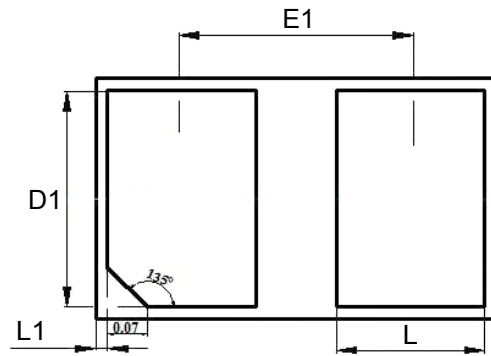


Fig. 4. Junction Capacitance vs  $V_R$

## Package Mechanical Data(DFN1006)



Top view



Bottom view



Side view

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

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