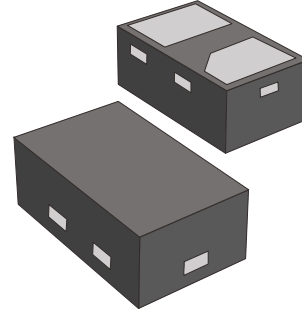


### Features

- Protects one data line
- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Ultra low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30\text{kV}$
    - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-5 (Lightning) 10A (8/20 $\mu\text{s}$ )
- RoHS Compliant

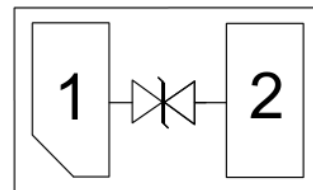
### Dimensions DFN1006



### Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

### Pin Configuration



### Mechanical Characteristics

- Package: DFN1006
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 10,000 pcs
- Reel Size: 7 inch
- Device Marking: 3E

### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	P <sub>pp</sub>	100	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$				3.3	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	3.8			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3\text{V}$			0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}$ (8 x 20 $\mu\text{s}$ pulse)			5.5	V
Clamping Voltage	$V_C$	$I_{PP} = 10\text{A}$ (8 x 20 $\mu\text{s}$ pulse)		8	10	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		17	23	pF

## Electrical Parameters (TA=25°C unless otherwise specified)

$V_{RWM}$  ..... Reverse Working Voltage Max.

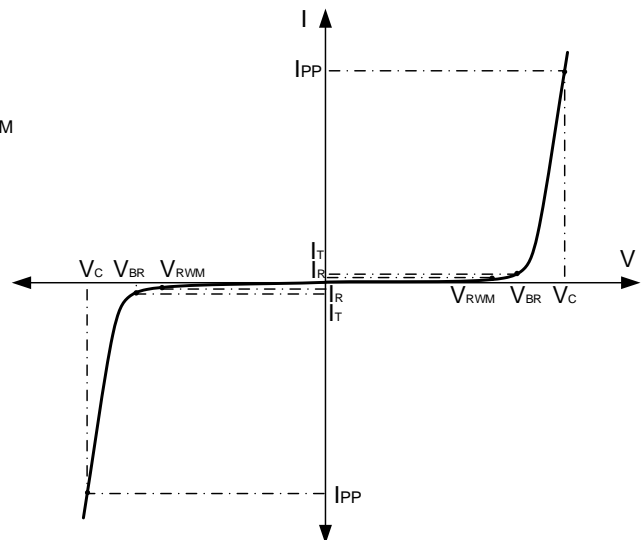
$I_R$  ..... Maximum Reverse Leakage Current @  $V_{RWM}$

$I_T$  ..... Test Current

$V_{BR}$  ..... Reverse Breakdown Voltage

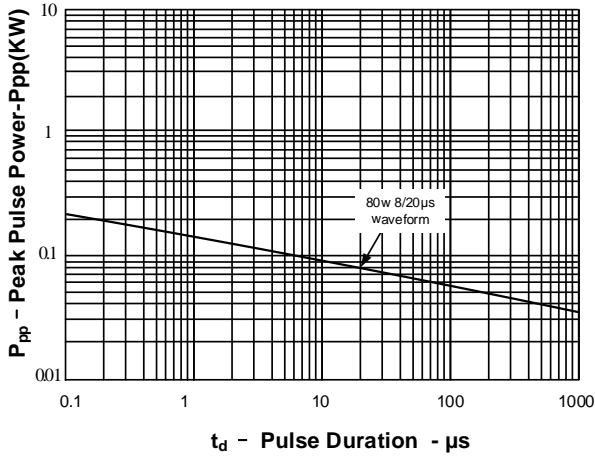
$I_{PP}$  ..... Maximum Reverse Peak Pulse Current

$V_C$  ..... Clamping Voltage @  $I_{PP}$

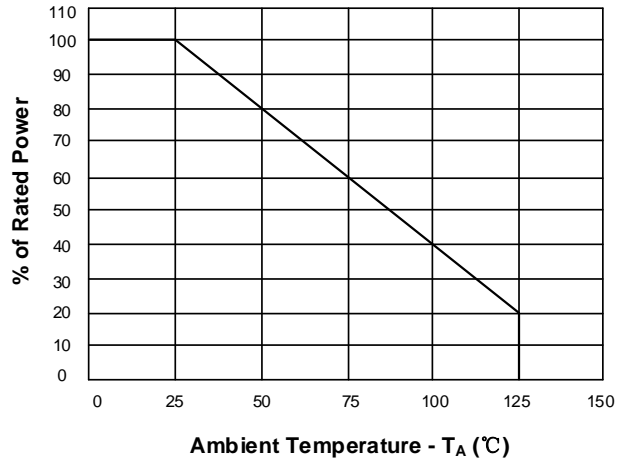


## Typical Performance Characteristics (TA=25°C unless otherwise specified)

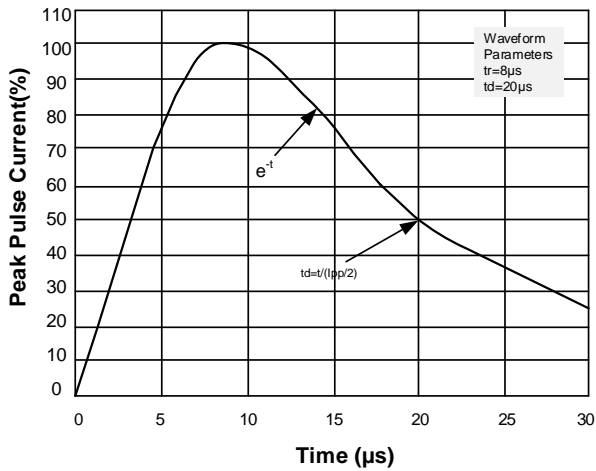
**Figure 1: Peak Pulse Power vs. Pulse Time**



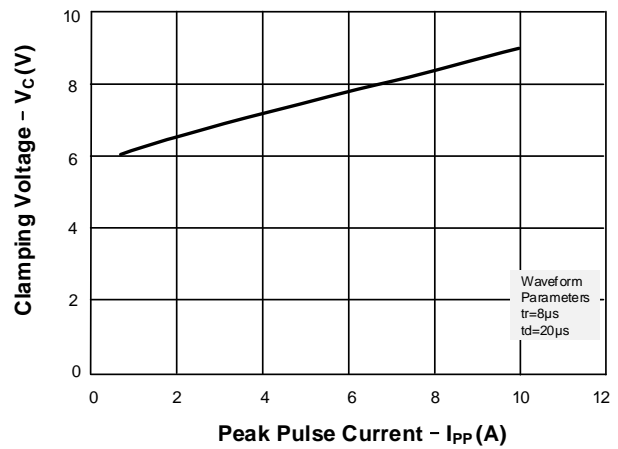
**Figure 2: Power Derating Curve**



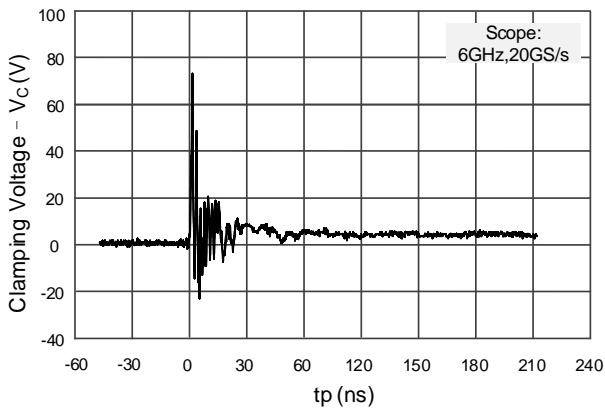
**Figure 3: Pulse Waveform**



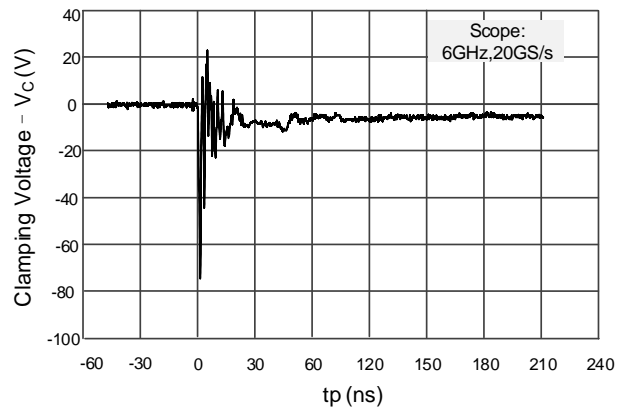
**Figure 4: Clamping Voltage vs. Ipp**



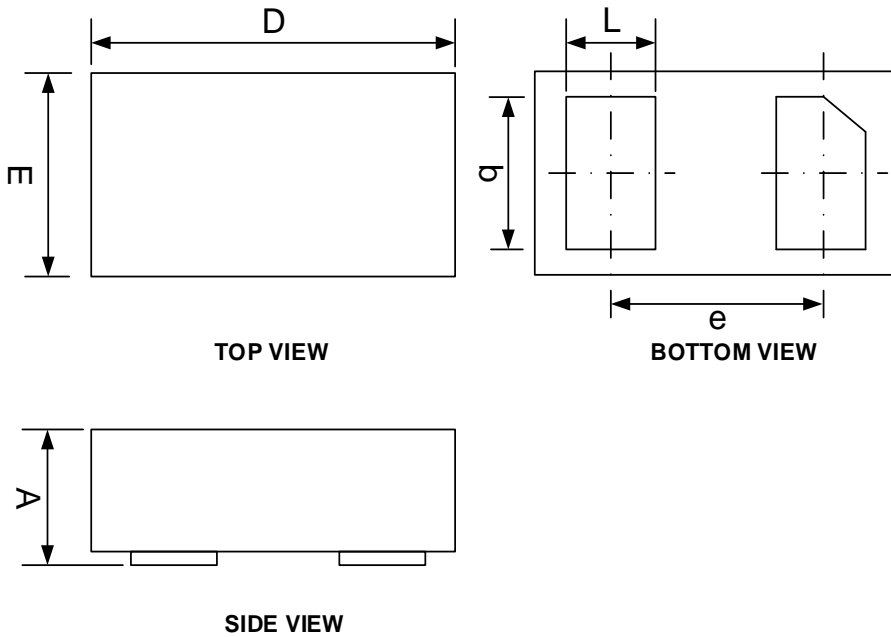
**Figure 5: IEC61000-4-2 +8 kV Contact ESD Clamping Voltage**



**Figure 6: IEC61000-4-2 -8 kV Contact ESD Clamping Voltage**

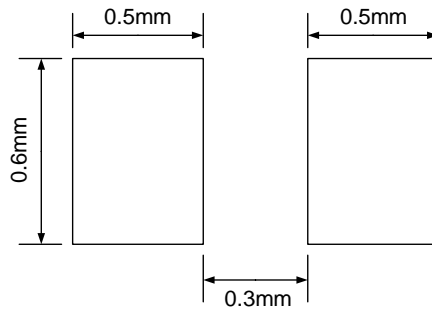


## DFN1006 Package Outline Drawing



COMMON DIMENSION (mm)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX.
A	0.40		0.55
b	0.45	0.50	0.55
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30

## Suggested Land Pattern



\* This land pattern is for reference purposes only

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