

**Transient Voltage Suppressor**

**Features**

- ◆Protects one I/O or Power Line
- ◆Low Clamping Voltage
- ◆Working Voltage: 5V
- ◆Low Leakage Current

**Application**

- ◆Cellular Handsets & Accessories
- ◆Personal Digital Assistants (PDAs)
- ◆Notebooks & Handhelds
- ◆Portable Instrumentation
- ◆Digital Cameras
- ◆MP3 Players

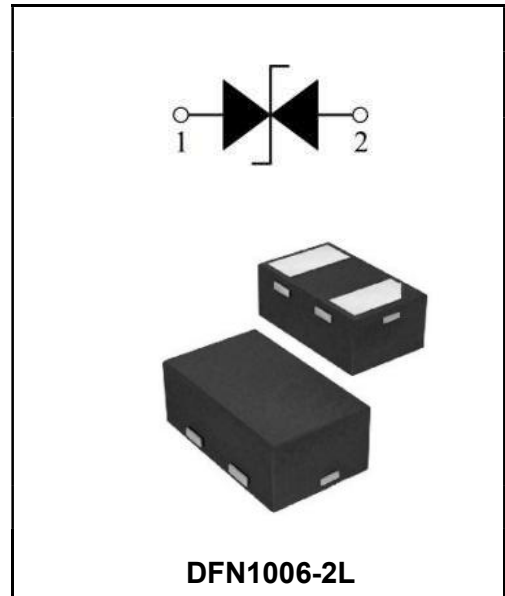
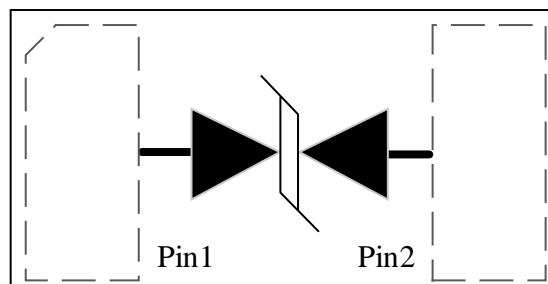
**IEC COMPATIBILITY (EN61000-4)**

- ◆IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ◆IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆IEC 61000-4-5 (Lightning) 25A (8/20μs)

**Mechanical Characteristics**

- ◆DFN1006 package
- ◆Molding compound flammability rating:  
UL 94V-0
- ◆RoHS Compliant

**Schematic & PIN Configuration**



**Marking Code**

ESD1006B5V0F

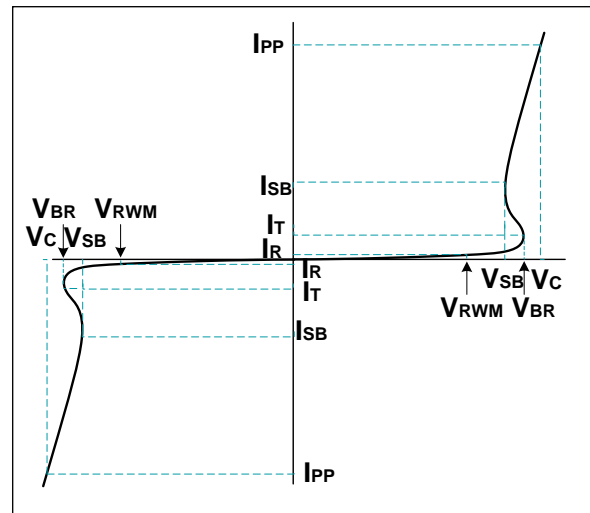
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### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	250	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )(note1)	$I_{PP}$	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	30 30	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

### Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

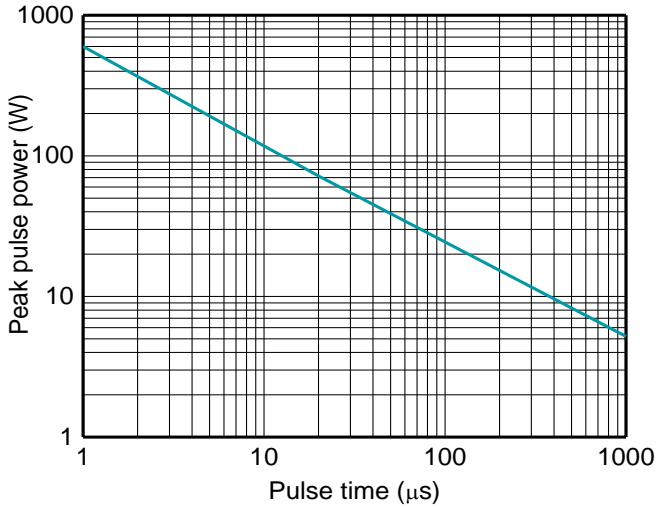
Symbol	Parameter
$I_{PP}$	Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Reverse Stand-Off Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$V_{SB}$	Snap-Back Voltage @ $I_{SB}$
$I_{SB}$	Snap-Back Current



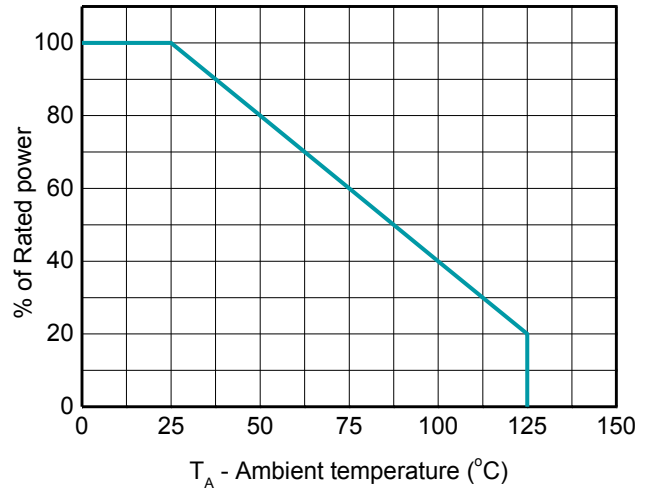
### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6		8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^{\circ}C$			0.1	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$		25		A
Clamping Voltage	$V_C$	$I_{PP} = 25A, t_p = 8/20\mu s$		11		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		90		pF

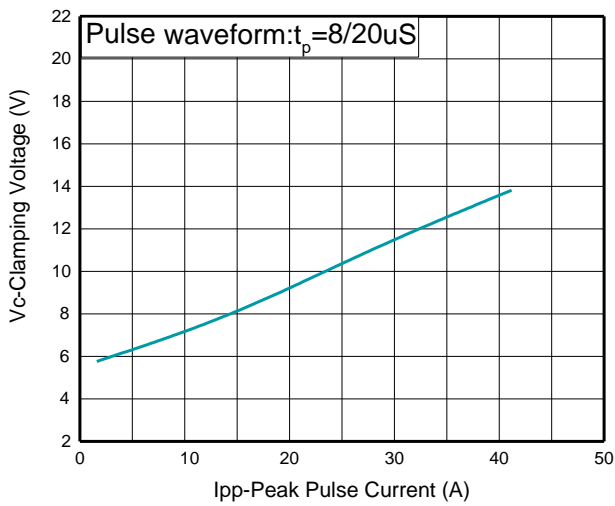
**Typical Characteristics**



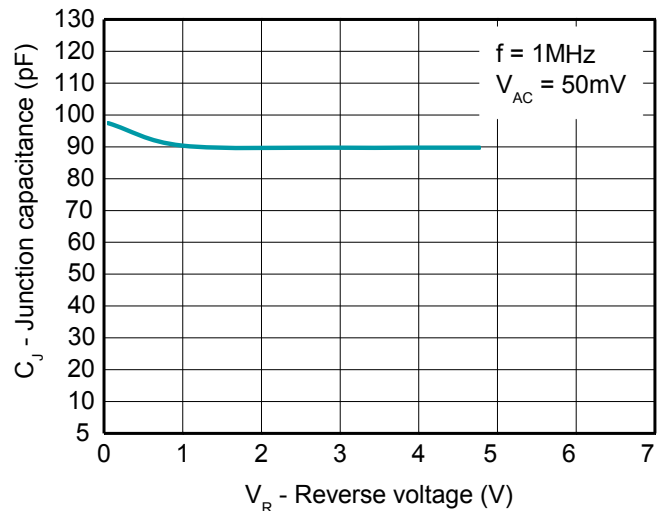
**Non-repetitive peak pulse power vs. Pulse time**



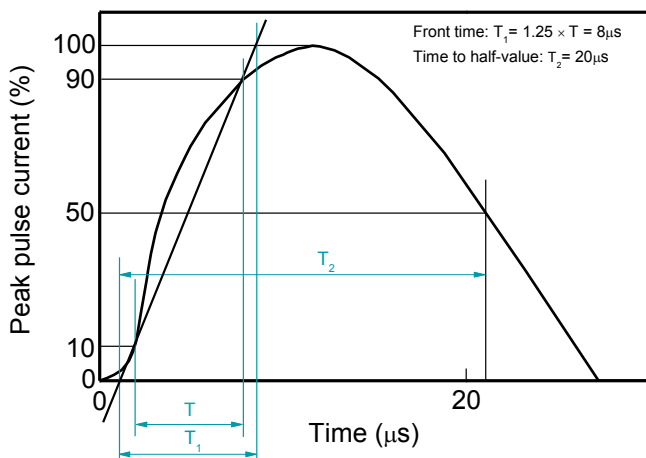
**Power derating vs. Ambient temperature**



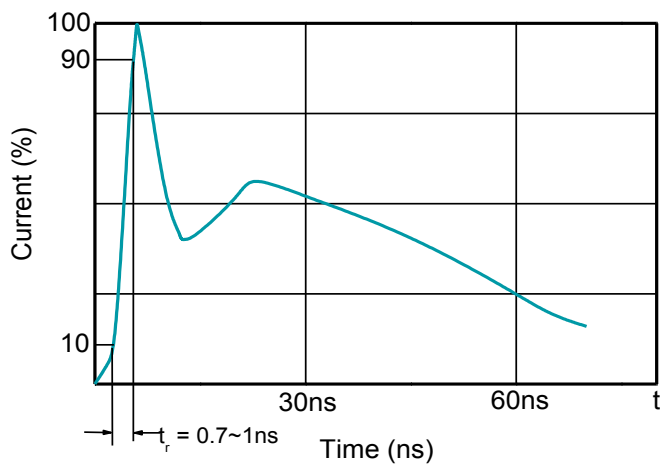
**Clamping voltage vs. Peak pulse current**



**Capacitance vs. Reverse voltage**



**8/20μs waveform per IEC61000-4-5**



**Contact discharge current waveform per IEC61000-4-2**

**Ordering information**

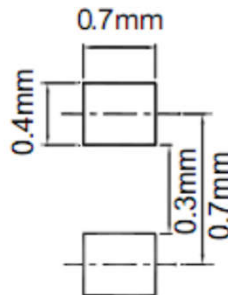
Package	Packing Description	Packing Quantity
DFN1006-2L	Tape/Reel,7"reel	10000PCS/Reel 400000PCS/Carton

**Package Dimensions**

**DFN1006-2L**

Dim.	Millimeter(mm)		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	-	0.100	-	0.004

**The recommended mounting pad size**



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