

### »Features

- 500Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN1006 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 40A (8/20 $\mu s$ )



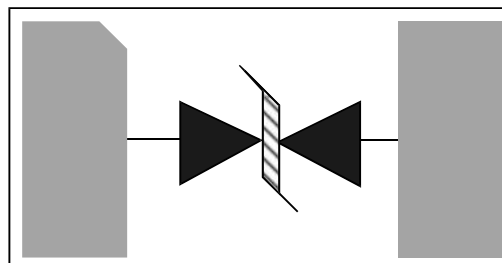
### »Applications

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

### »Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

### »Schematic & PIN Configuration



DFN1006

»Absolute Maximum Rating

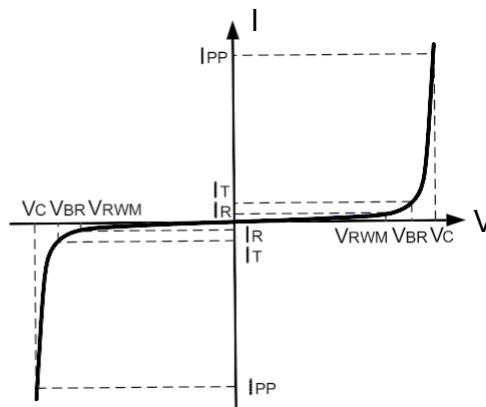
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	500	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ ) (note1)	$I_{PP}$	40	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	30 30	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{stg}$	-55 to + 125	°C

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				4.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	4.7			V
Reverse Leakage Current	$I_R$	$V_{RWM}=4.5V, T=25^\circ C$			0.1	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			40	A
Clamping Voltage <sup>2)</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$			5.5	V
Clamping Voltage <sup>2)</sup>		$I_{PP}=20A, t_p=8/20\mu s$			7.5	V
Clamping Voltage <sup>2)</sup>		$I_{PP}=40A, t_p=8/20\mu s$		13		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		90		pF

»Electrical Parameters (TA = 25°C unless otherwise noted)

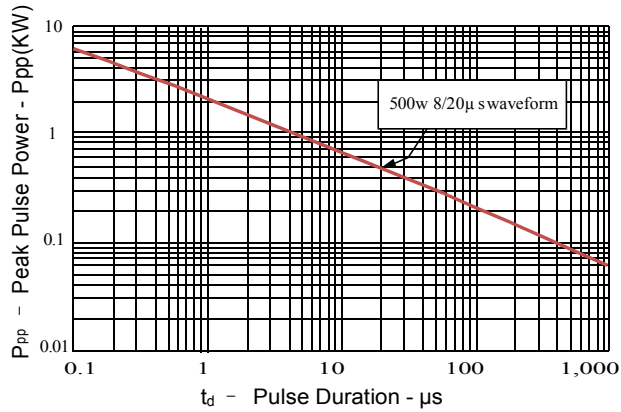
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



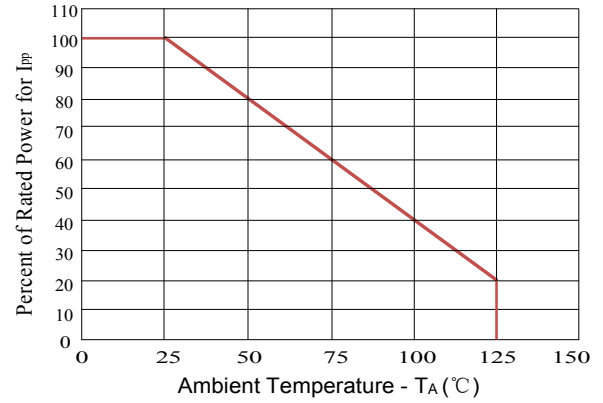
Note: 8/20 $\mu s$  pulse waveform.

»Typical Characteristics

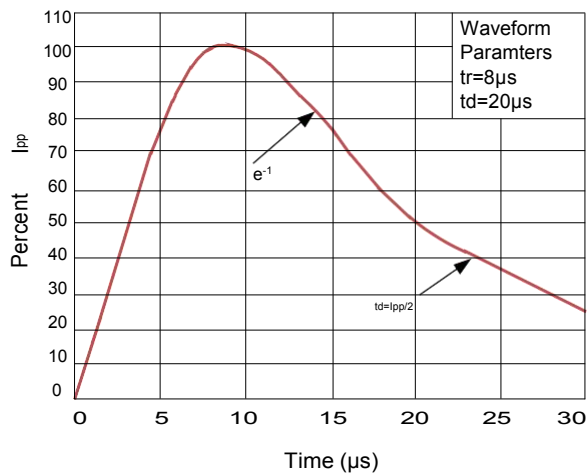
**Figure 1: Peak Pulse Power vs. Pulse Time**



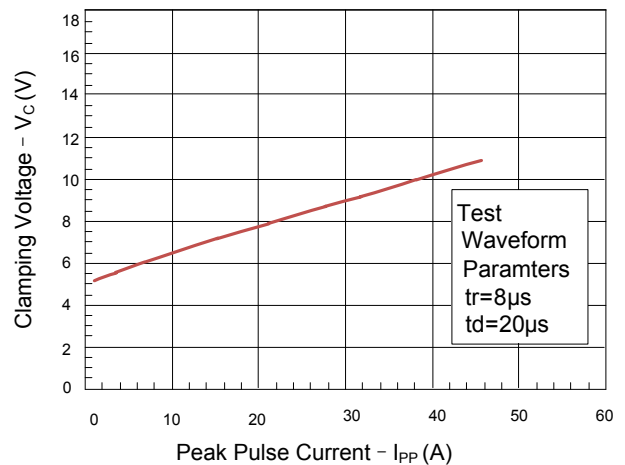
**Figure 2: Power Derating Curve**



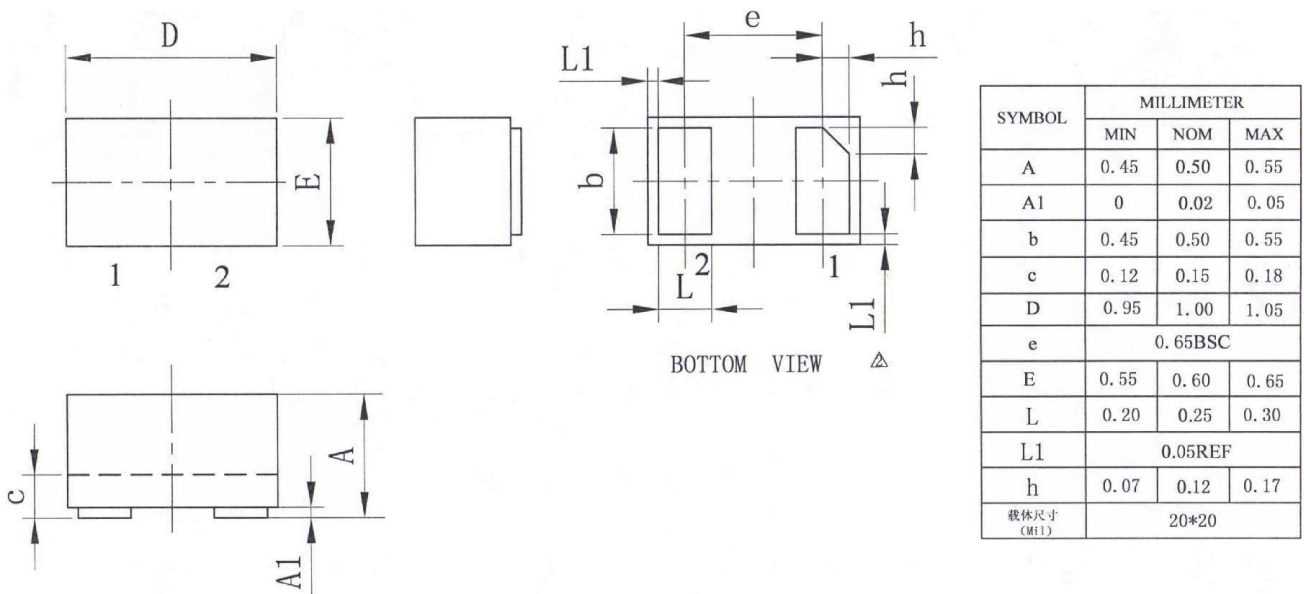
**Figure3: Pulse Waveform**



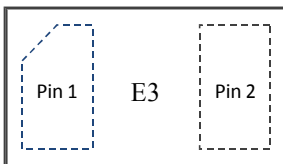
**Figure 4: Clamping Voltage vs. Ipp**



»Outline Drawing – DFN1006



»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
BNPTVS4V5D1BLYL	DFN1006	10k	Tape and reel

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[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)