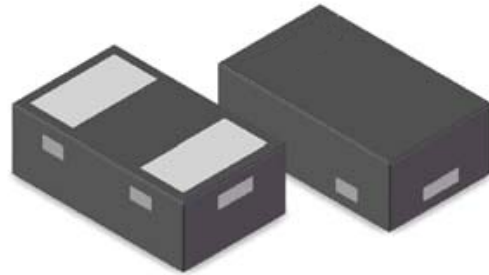


## Features

- 80Watts 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  $\pm 15kV$  contact  $\pm 25kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20 $\mu s$ )



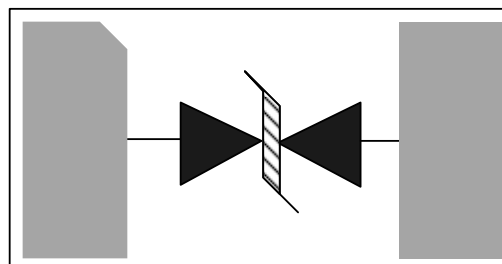
## Applications

- 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

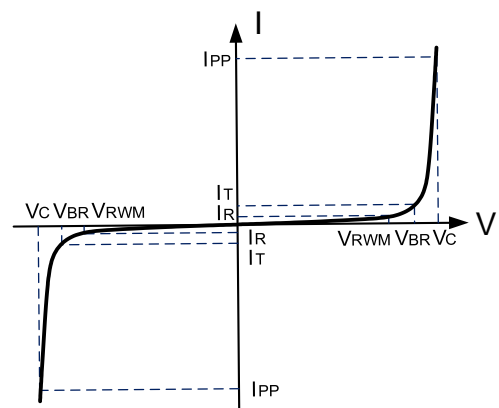
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	80	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{PP}$	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	25 15	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-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	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	3.8			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3V, T = 25^\circ C$		0.1	0.2	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			10	A
Clamping Voltage <sup>1)</sup>	$V_{CL}$	$I_{PP} = 16A, t_p = 100ns$		8		V
Clamping Voltage <sup>2)</sup>	$V_C$	$I_{PP} = 5A, t_p = 8/20\mu s$			6	V
Clamping Voltage <sup>2)</sup>		$I_{PP} = 10A, t_p = 8/20\mu s$			8	V
Dynamic resistance <sup>1)</sup>	$R_{DYN}$			0.2		$\Omega$
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		12	15	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

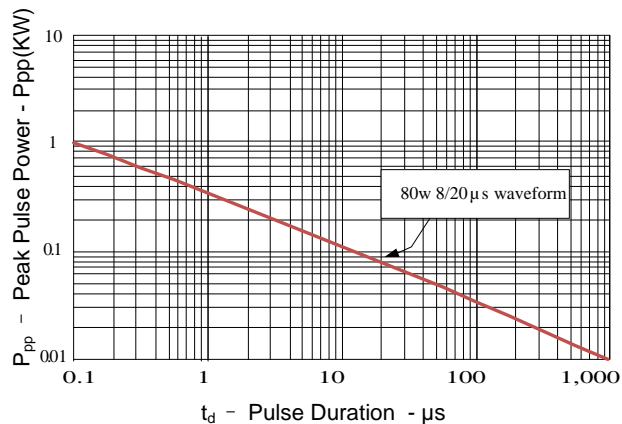


Figure 2: Power Derating Curve

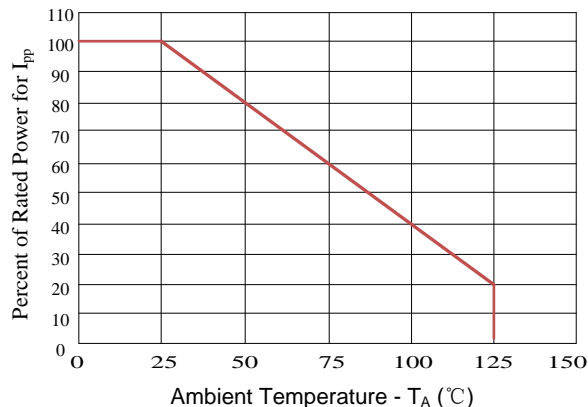


Figure 3: Pulse Waveform

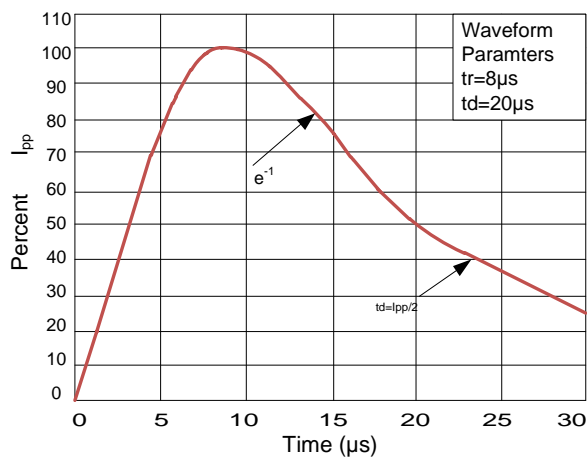
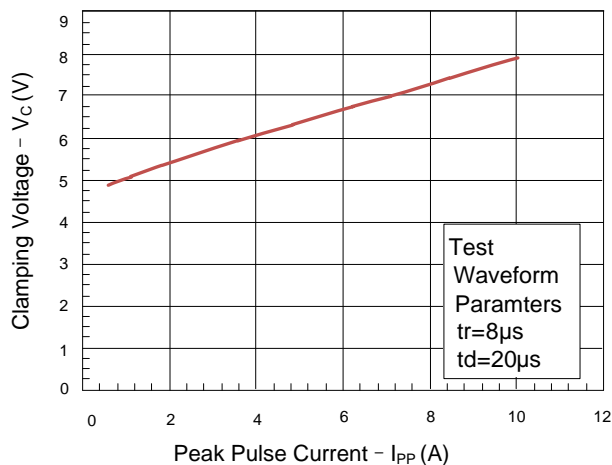
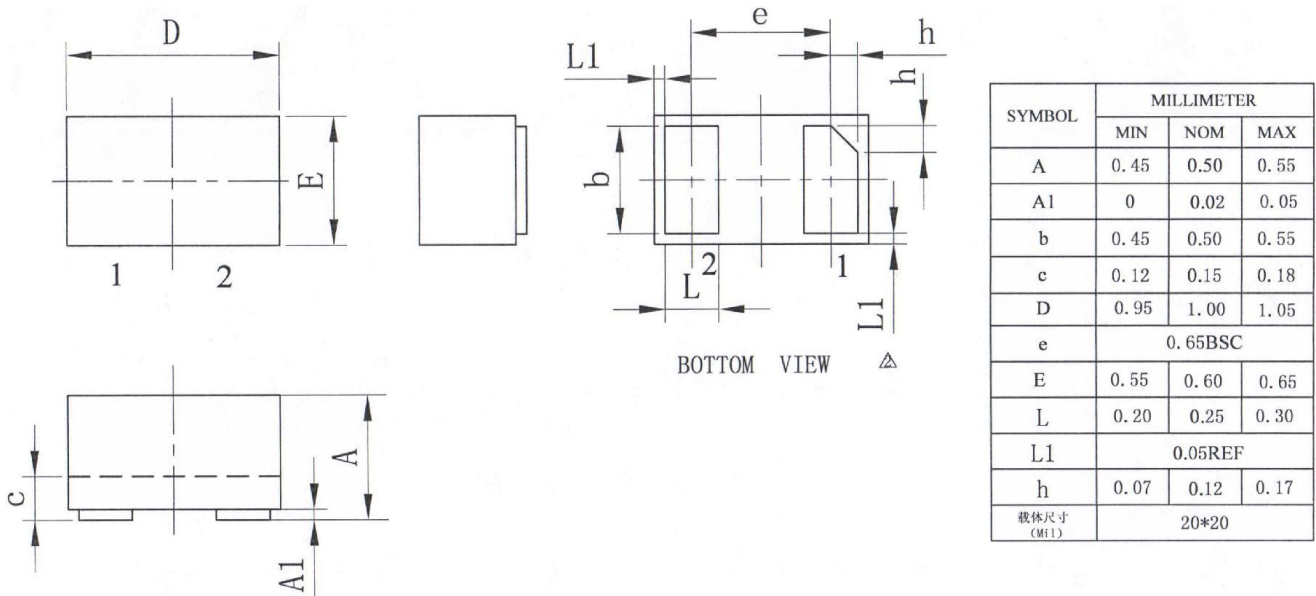


Figure 4: Clamping Voltage vs. Ipp

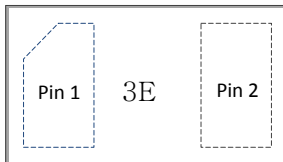




### Outline Drawing – DFN1006



### Marking



### Ordering information

Order code	Package	Base qty	Delivery mode
RHTVSBC0321N-S	DFN1006	10k	Tape and reel