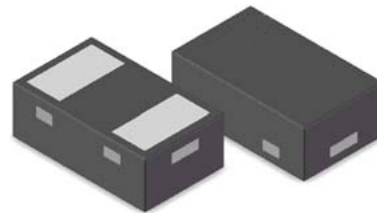


## Features

- 60Watts 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
- Low capacitance ( $C_j = 0.4pF$  typ. IO to IO)



**DFN1006**

## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2  $\pm 20kV$  contact  $\pm 20kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20 $\mu s$ )

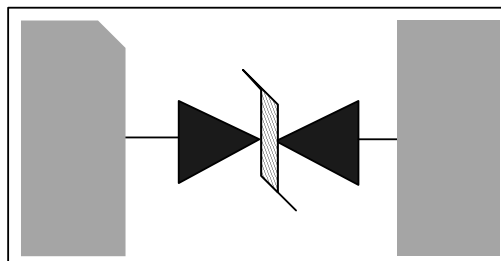
## Mechanical Characteristics

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

## Applications

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

## Schematic & PIN Configuration



**DFN1006**

### Absolute Maximum Rating

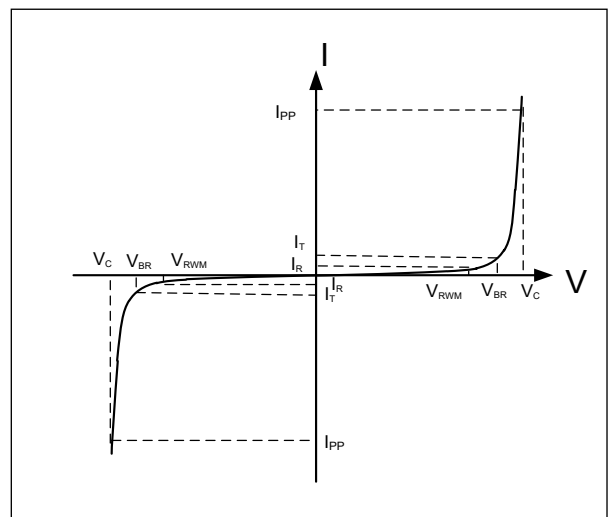
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	60	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	20 20	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6.0	8.0		V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^{\circ}C$		0.1	0.5	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			3.5	A
Clamping Voltage	$V_C$	$I_{PP} = 3.5A, t_p = 8/20\mu s$			15	V
Junction Capacitance	$C_j$	IO to IO $V_R = 0V, f = 1MHz$		0.4	0.5	pF

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

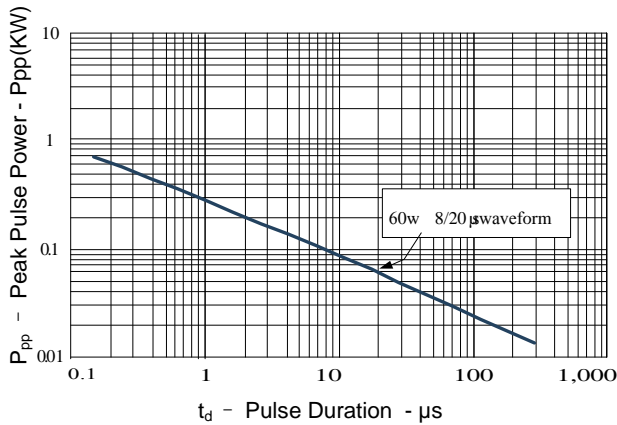
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



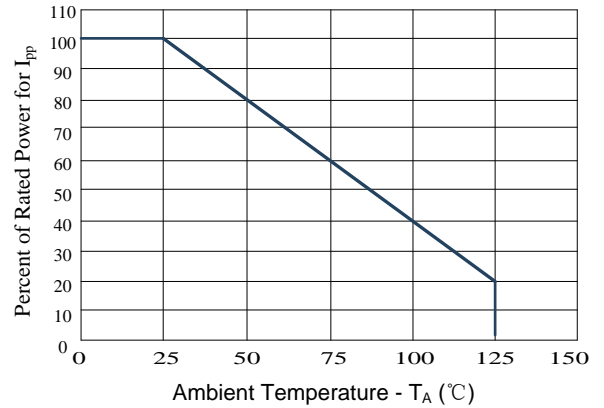
Note: 8/20 $\mu s$  pulse waveform.

## Typical Characteristics

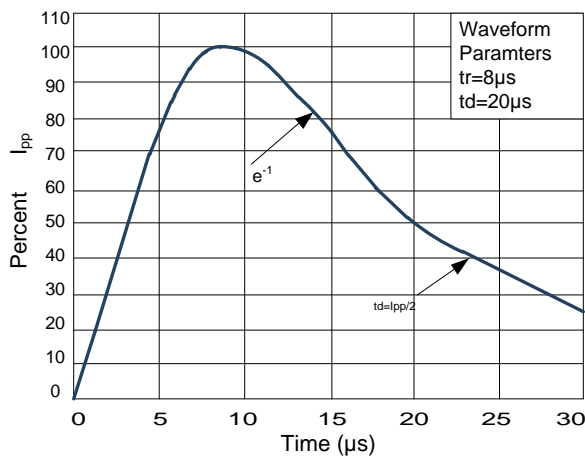
**Figure 1: Peak Pulse Power vs. Pulse Time**



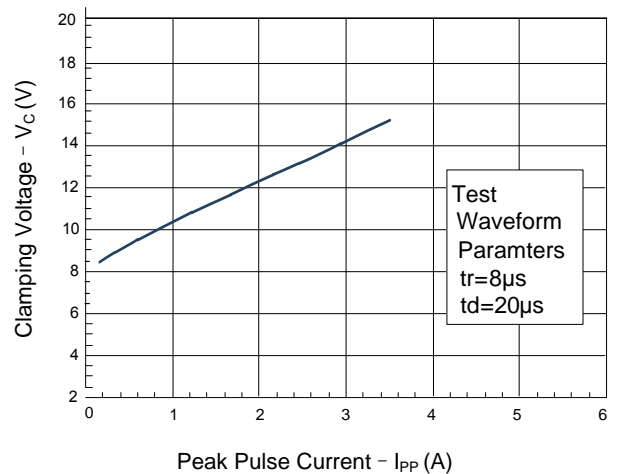
**Figure 2: Power Derating Curve**



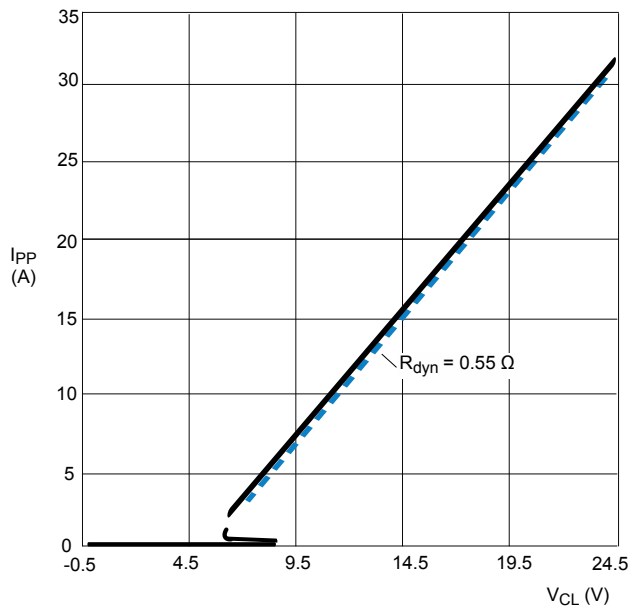
**Figure 3: Pulse Waveform**



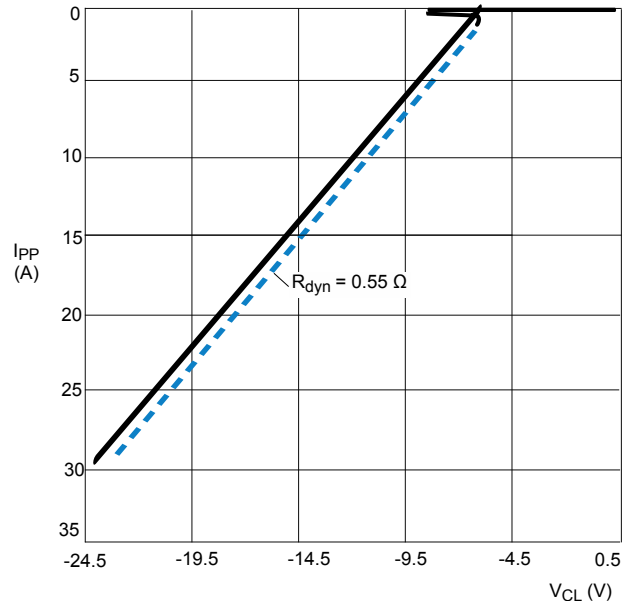
**Figure 4: Clamping Voltage vs. Ipp**



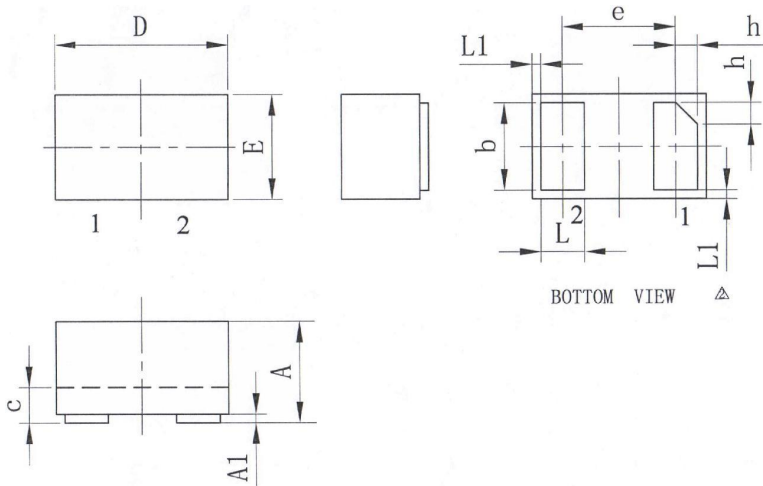
**Figure 5: Positive Clamping voltage (TLP)**



**Figure 5: Negative Clamping voltage (TLP)**

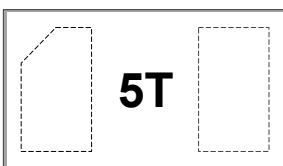


## Outline Drawing – DFN1006



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17

## Marking



## Ordering information

Order code	Package	Base qty	Delivery mode
PTN102U04M5B6	DFN1006	10k	Tape and reel