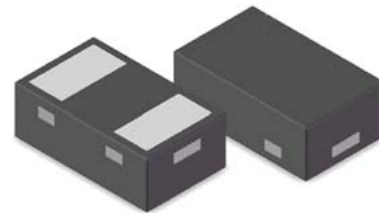


## Features

- 300Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data line



**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) 6A (8/20 $\mu s$ )

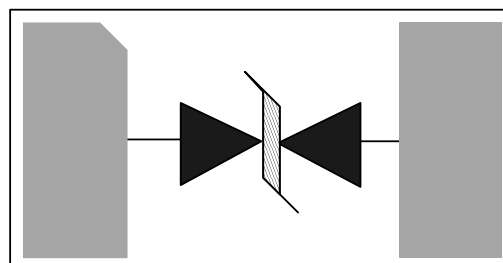
## Mechanical Characteristics

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

## Applications

- Microphone
- Portable Instrumentation

## Schematic & PIN Configuration



**DFN1006**

## Absolute Maximum Rating

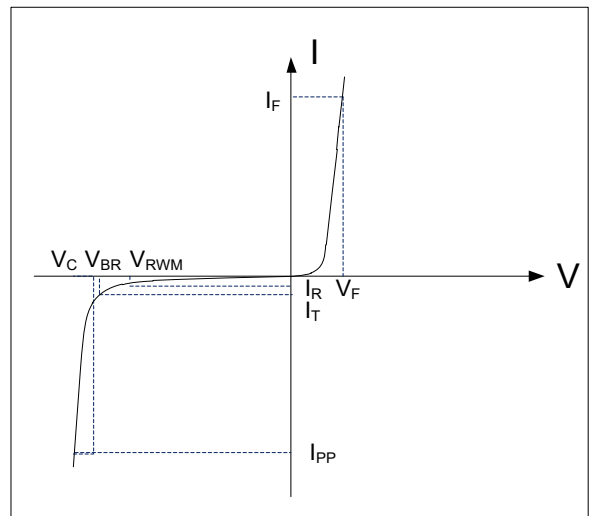
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	300	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	20 20	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-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	$V_{RWM}$				15.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	16.7			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 15V, T = 25^\circ C$		0.1	0.5	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			6	A
Clamping Voltage	$V_C$	$I_{PP} = 6A, t_p = 8/20\mu s$			30	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		25		pF

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

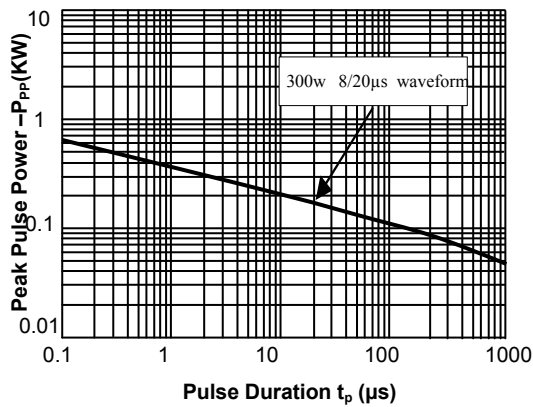
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



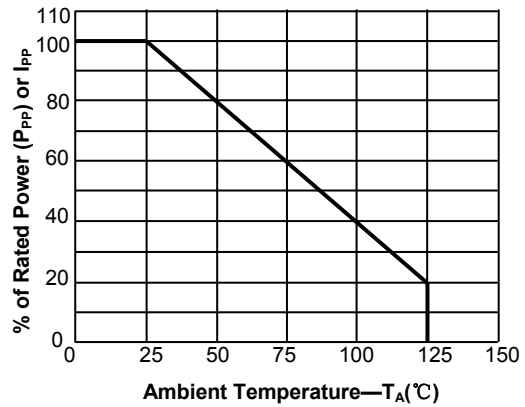
Note: 8/20 $\mu s$  pulse waveform.

## Typical Characteristics

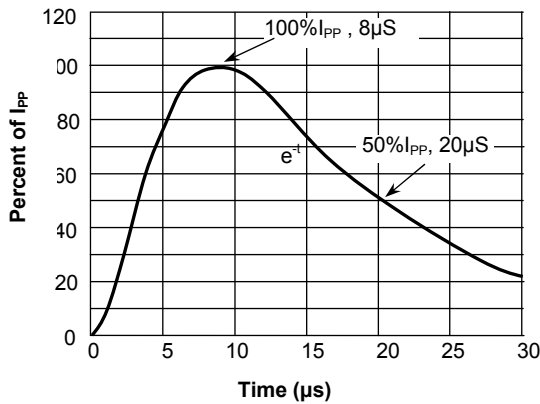
**Fig.1 Peak Pulse Power Rating Curve**



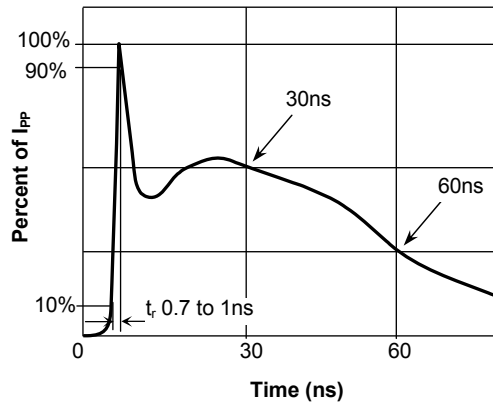
**Fig.2 Pulse Derating Curve**



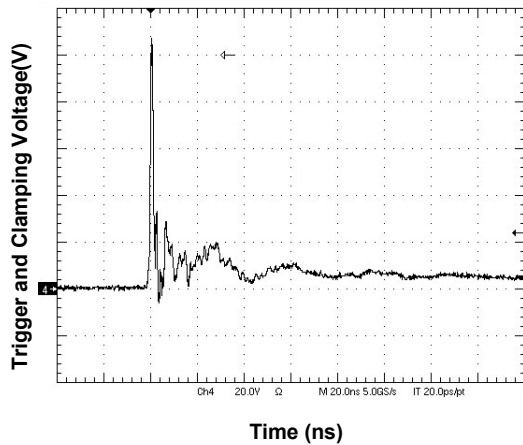
**Fig.3 Pulse Waveform-8/20μs**



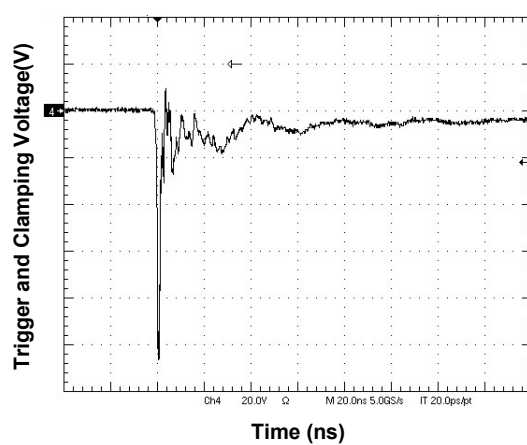
**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**



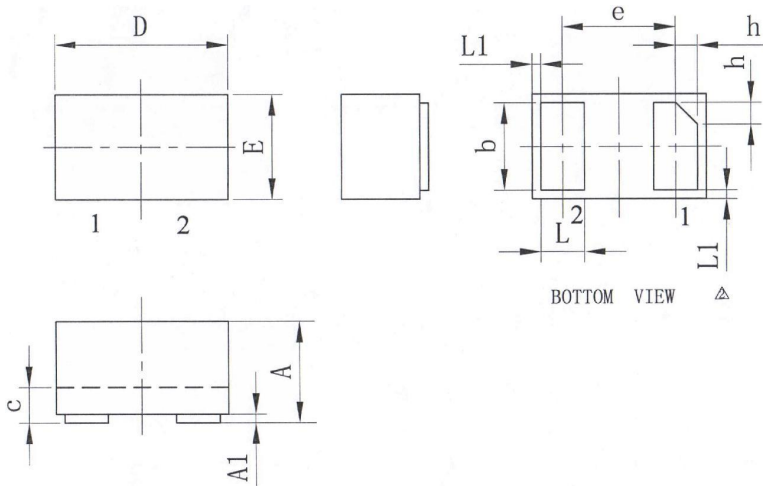
**Fig.5 IEC61000-4-2 +8kV Contact Discharge**



**Fig.6 IEC61000-4-2 -8kV Contact Discharge**

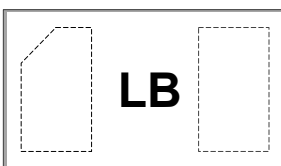


## Outline Drawing – DFN1006



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
PTN102G25M15B30	DFN1006	10k	Tape and reel