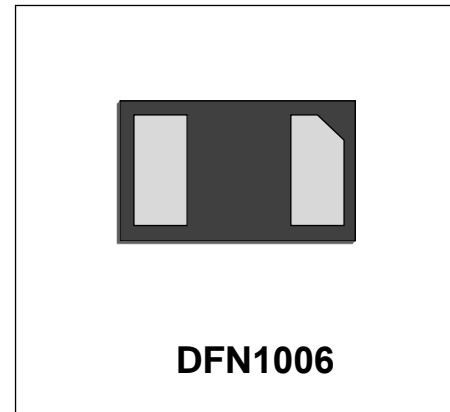


## Features

- 80Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN1006 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- IEC 61000-4-2  $\pm 25kV$  contact  $\pm 25kV$  air
- IEC 61000-4-5 (Lightning) 8A ( $8/20\mu s$ )



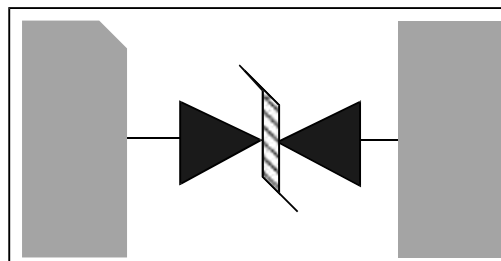
## Mechanical Characteristics

- 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 ( $t_p=8/20\mu s$ )	$P_{PP}$	80	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ ) (note1)	$I_{PP}$	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	25 25	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{stg}$	-55 to + 150	°C

## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.6	6.5	8.4	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^\circ C$			0.1	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			8	A
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		15	18	pF
Clamping Voltage <sup>2)</sup>	$V_C$	$I_{PP}=8A, t_p=8/20\mu s$			10	V

## Typical Characteristics

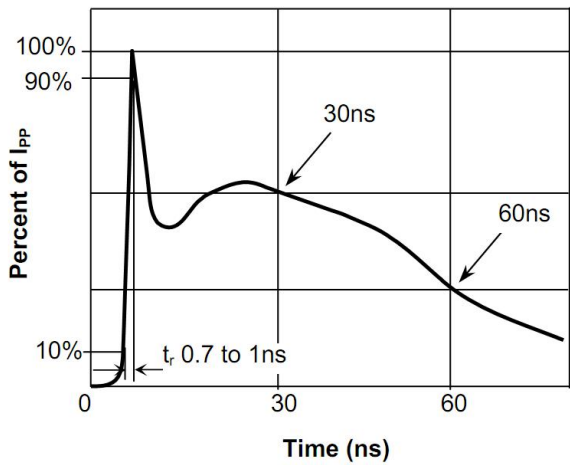


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

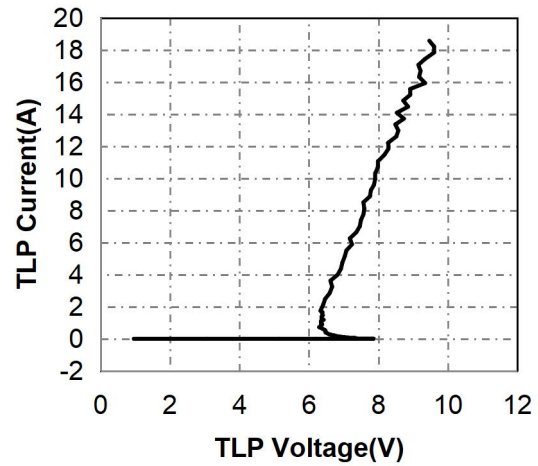


Fig.2 Transmission Line Pulse (TLP)

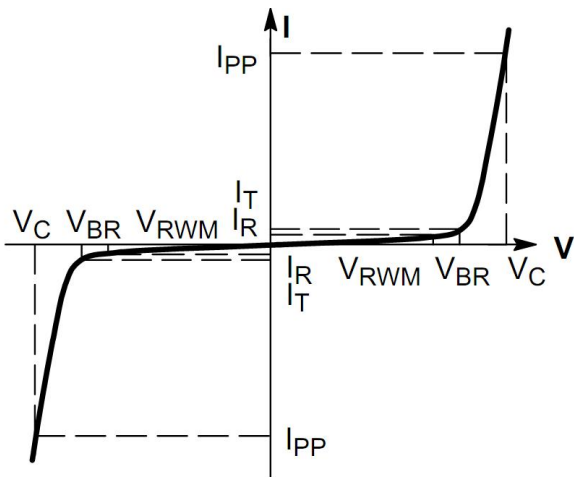


Fig.3 V-I Characteristics for Bidirectional Diode

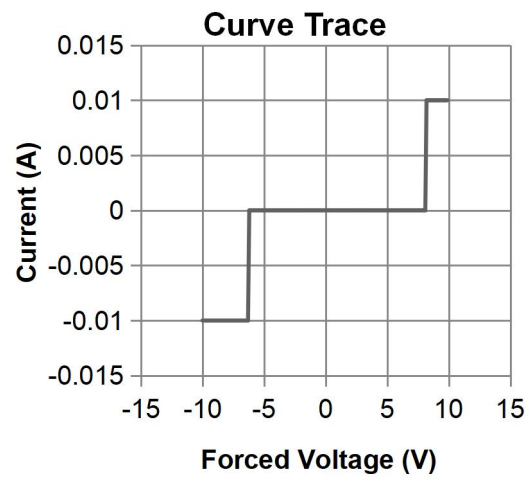


Fig.4 IV Curve

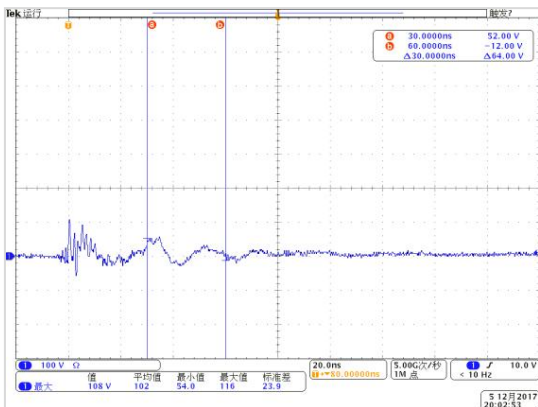


Fig.5 Clamping Voltage at IEC61000-4-2 +8kV Pulse Waveform

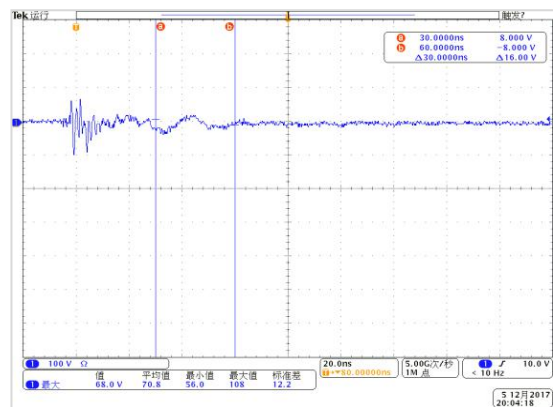
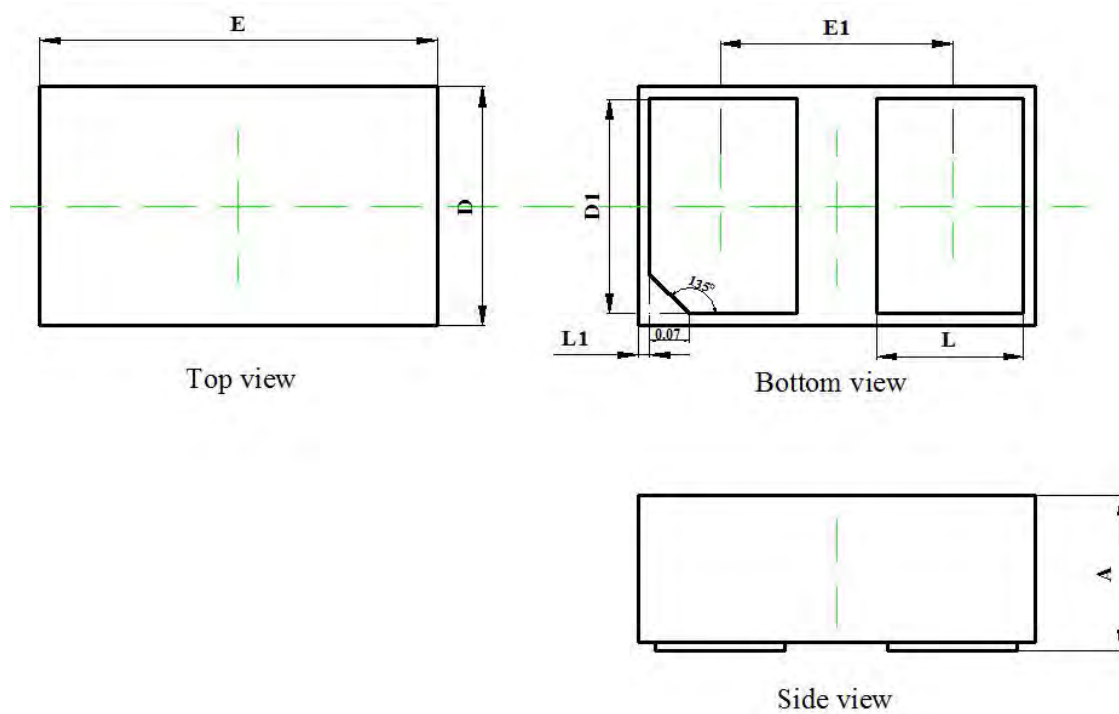


Fig.6 Clamping Voltage at IEC61000-4-2 -8kV Pulse Waveform

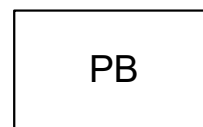
## Outline Drawing



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.320	0.420	0.013	0.017
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.450	0.550	0.018	0.022
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.280	0.380	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004

## Marking Codes

Part Number	MDFN2C051VZ1
Marking Code	PB



## Order Information

Order code	Package	Base qty	Delivery mode
MDFN2C051VZ1	DFN1006	10k	Tape and reel