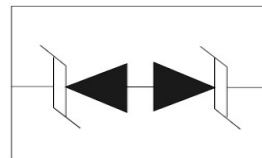


### Description

The PESDNC2FD5VB protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, low operating voltage. It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



### Feature

- 80W peak pulse power per line ( $t_p = 8/20\mu s$ )
- DFN1006 package
- Replacement for MLV(0402)
- Bidirectional configurations
- Response time is typically < 1ns
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC61000-4-2(ESD)  $\pm 30KV$ (air),  $\pm 30KV$ (contact); IEC61000-4-4 (EFT) 40A (5/50ns)

### Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

### Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness:≤3mil

### Absolute maximum rating@25°C

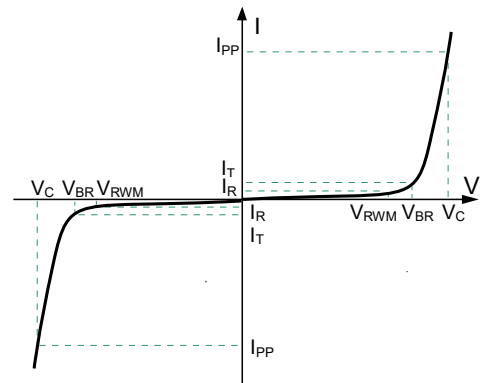
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{pp}$	80	W
Operating Temperature	$T_J$	-55 to +150	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

**Electrical characteristics per line@25°C (unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	5.6	6.7	7.8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V } T=25^\circ\text{C}$			1.0	$\mu\text{A}$
Maximum Reverse Peak Pulse Current	$I_{PP}$			5.5		A
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$			10	V
Clamping Voltage	$V_C$	$I_{PP}=3\text{A}$			13	V
Clamping Voltage	$V_C$	$I_{PP}=5\text{A}$			15	V
Junction Capacitance	$C_J$	$V_R=0\text{V } f = 1\text{MHz}$		15	20	pF

**Electronics Parameter**

Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C_J$	Junction Capacitance
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



**Typical Characteristics**

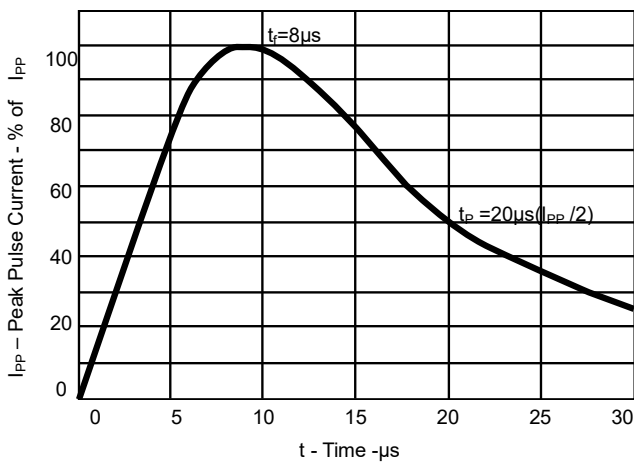


Fig 1.Pulse Waveform

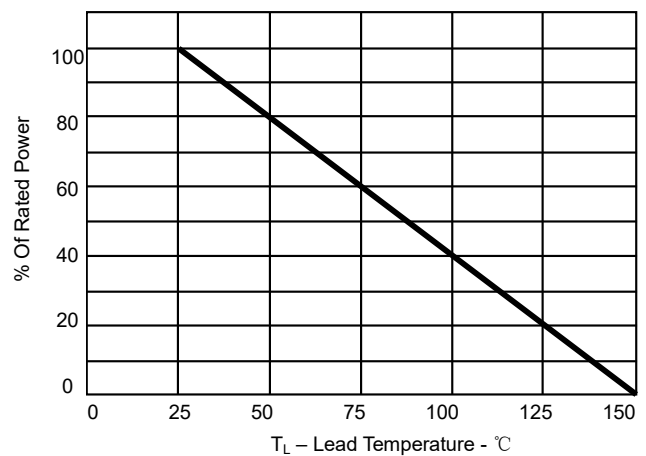


Fig 2.Power Derating Curve

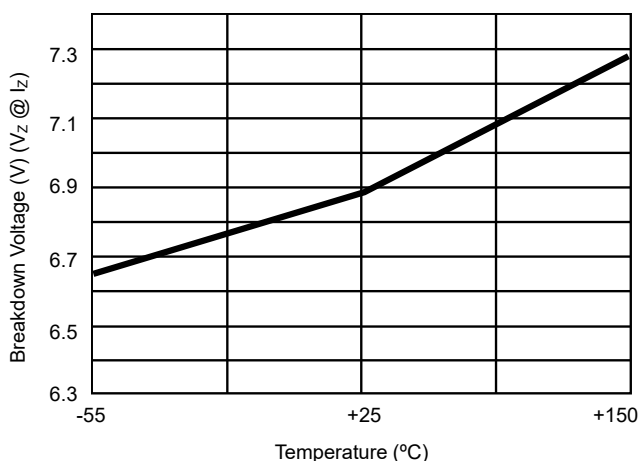


Fig 3. Typical Breakdown Voltage vs. Temperature

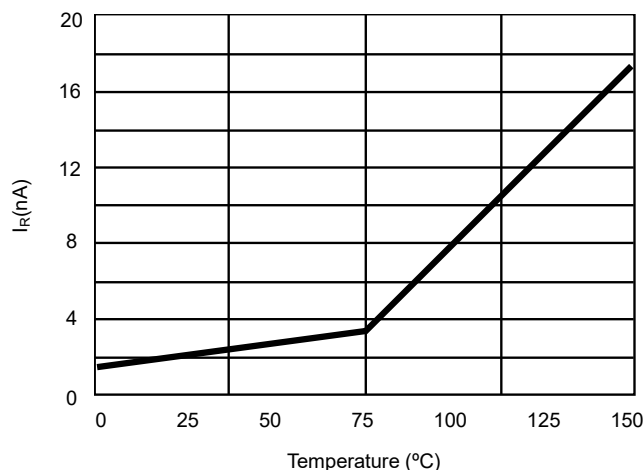


Fig 4. Typical Leakage Current vs. Temperature

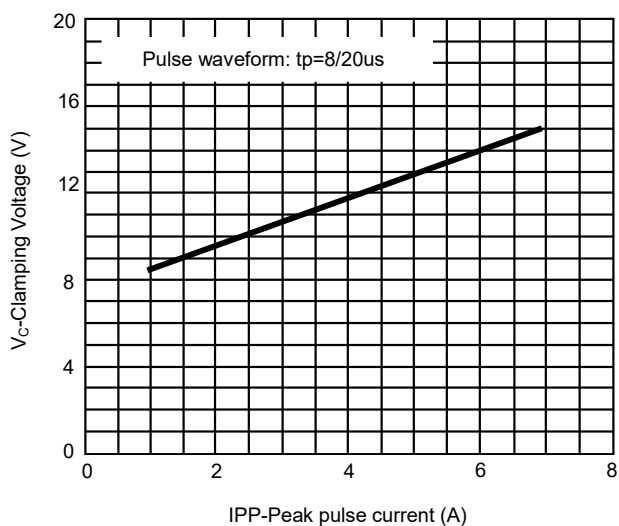


Fig 5. Clamping voltage vs. Peak pulse current

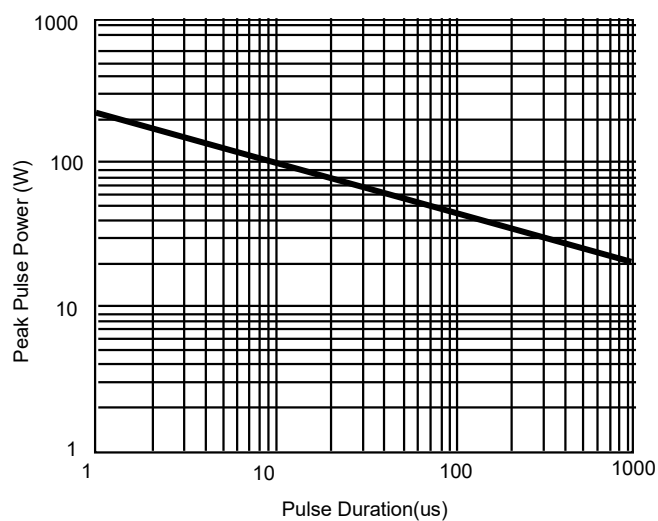


Fig 6. Non-Repetitive Peak Pulse Power vs. Pulse time

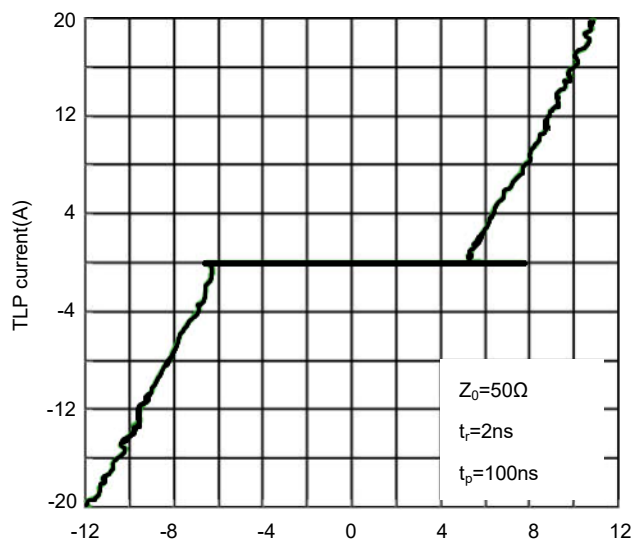
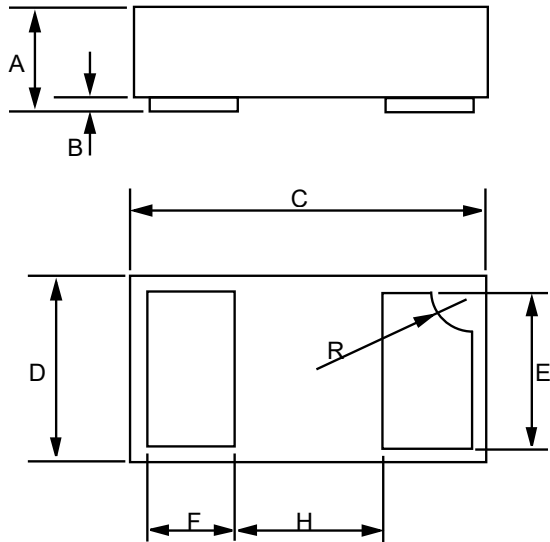


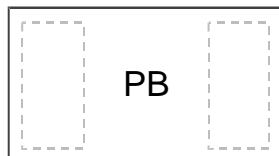
Fig 7 TLP Measurement

**DFN1006 PACKAGE OUTLINE DIMENSIONS**



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.013	0.020	0.34	0.50
B	0.000	0.002	0.00	0.05
C	0.037	0.042	0.95	1.075
D	0.021	0.026	0.55	0.675
E	0.017	0.021	0.45	0.55
F	0.007	0.011	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15

**Marking**



**Ordering information**

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