

1. 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.

3. Applications

- Cellular phones
- Portable devices

4. Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C

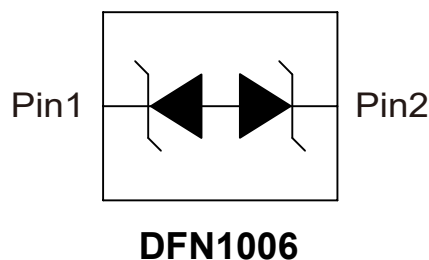
2. Features

- 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)

- Digital cameras
- Power supplies

- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 μm
- Pin flatness: $\leq 3mil$

5. Pinning information





6. Absolute Maximum Ratings

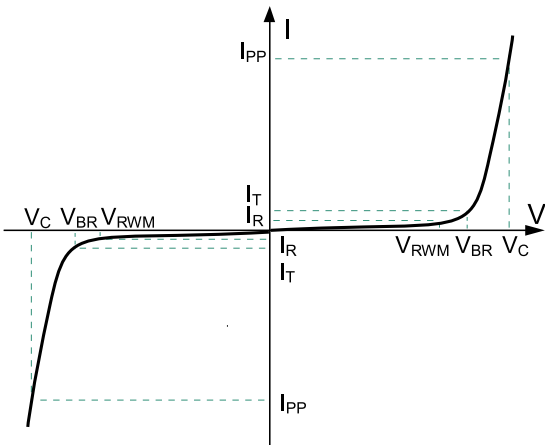
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	80	W
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

7. Electrical Characteristics

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



8.Electrical Parameters (T_A=25°C unless otherwise noted)



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



9.1 Typical characteristic

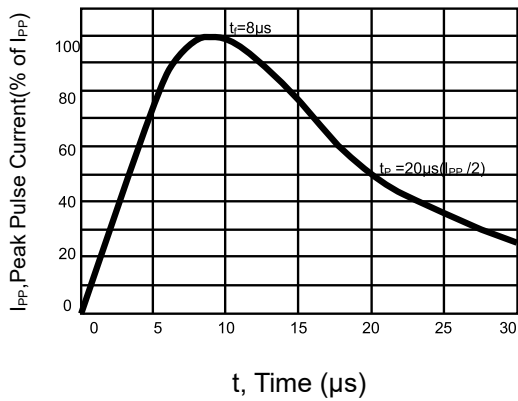


Figure 1: Pulse Waveform

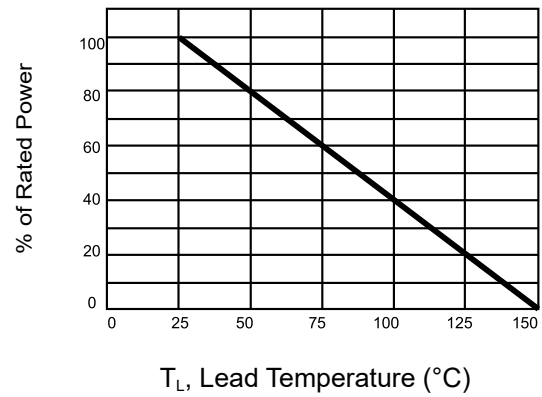


Figure 2: Power Derating Curve

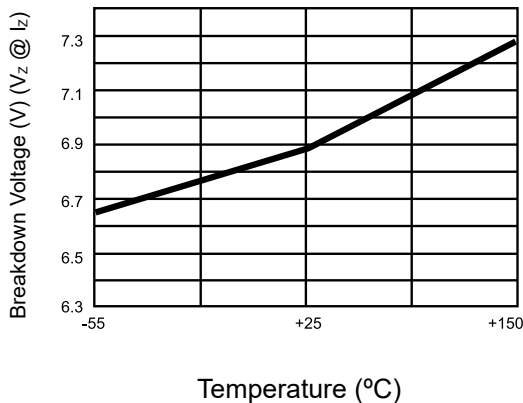


Figure 3: Typical Breakdown Voltage vs. Temperature

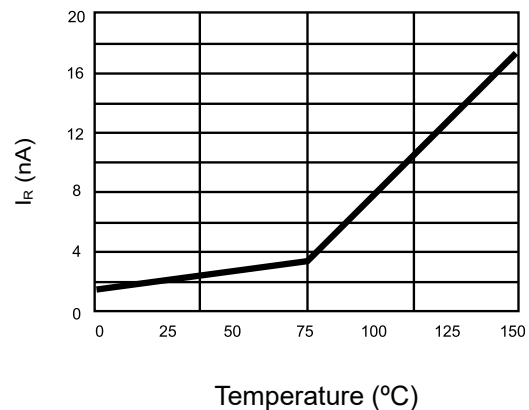


Figure 4: Typical Leakage Current vs. Temperature

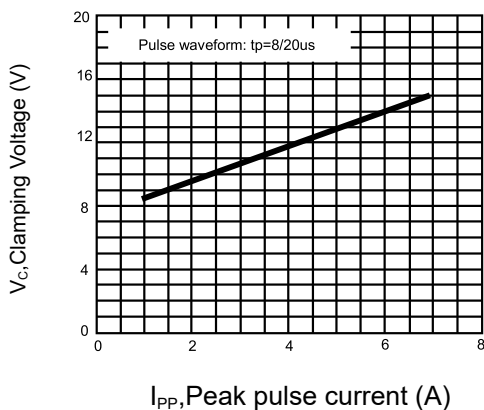


Figure 5: Clamping voltage vs. Peak pulse current

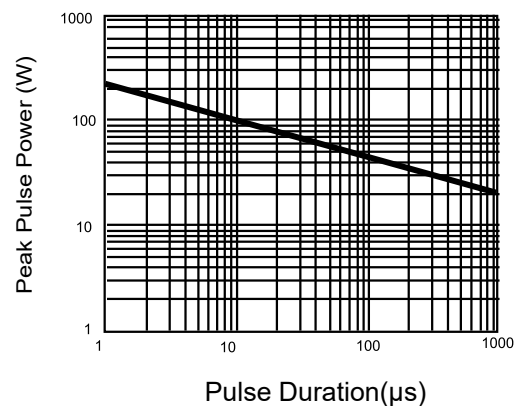


Figure 6: Non-Repetitive Peak Pulse Power vs. Pulse time



9.2 Typical characteristic

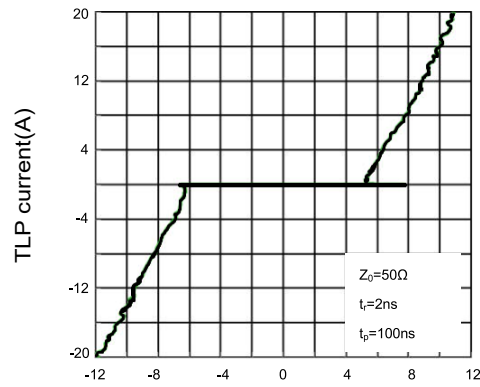
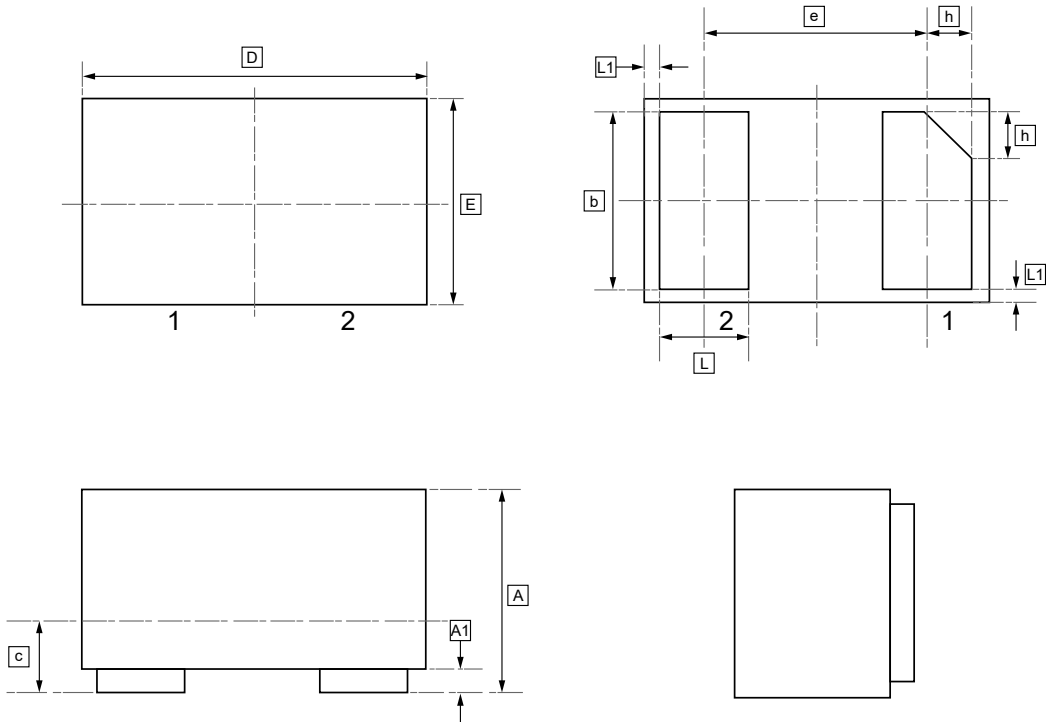


Figure 7: TLP Measuremen



10.DFN1006-2L Package Outline Dimensions

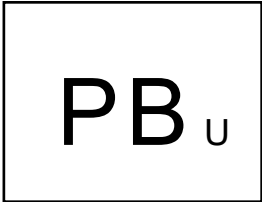


DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	b	c	D	e	E	L	L1	h
Min	0.45	0.00	0.45	0.12	0.95	0.65	0.55	0.20	0.05	0.07
Max	0.55	0.05	0.55	0.18	1.05	BSC	0.65	0.30	REF	0.17



11.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW PESDNC2FD5VB	DFN1006	10000	Tape and reel



12.Disclaimer

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