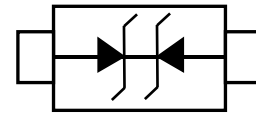


**Description**

The UMW PESDNC3D5VB 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**

- 350W peak pulse power per line (tP= 8/20µs)
- SOD-323 package
- Replacement for MLV(0805)
- Bidirectional configurations
- Protects one power or I/O port
- Low clamping voltage
- RoHS compliant

**Applications**

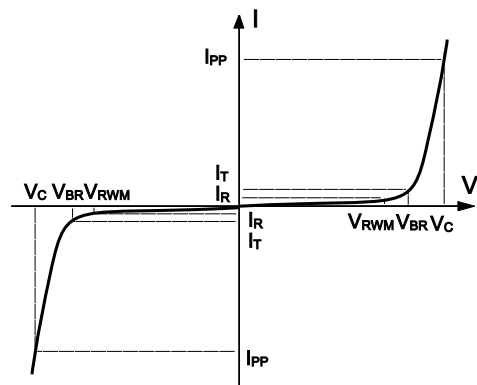
- Laptop computers
- Cellular phones
- Digital cameras
- PDAs

**Mechanical Characteristics**

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflowtemperature:260°C
- Pure tin plating: 7 ~ 17 um
- Pin flatness:≤3mil

**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 @ $I_F$



**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	$V_{BR}$	$I_t = 1mA$	6		8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V T=25^{\circ}C$			1.0	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A t_p = 8/20\mu s$			9.2	V
Clamping Voltage	$V_C$	$I_{PP}=5A t_p = 8/20\mu s$			11	V
Clamping Voltage	$V_C$	$I_{PP}=24A t_p = 8/20\mu s$			23	V
Junction Capacitance	$C_j$	$V_R=0V f = 1MHz$		85		pF

**Absolute maximum rating@25°C**

Rating	Symbol	Value	Units
Unidirectional Peak Pulse Power	$P_{pp}$	350	W
Operating Temperature	$T_J$	-55 to +150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

**Typical Characteristics**

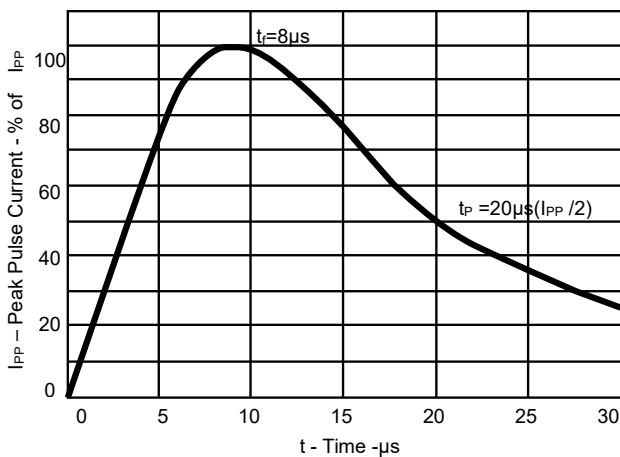


Fig 1.Pulse Waveform

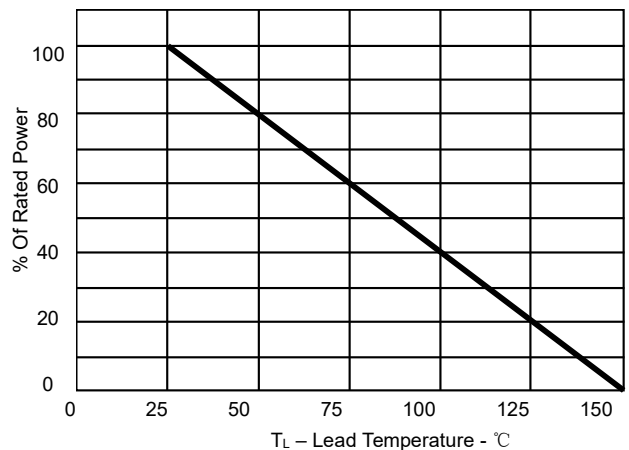


Fig 2.Power Derating Curve

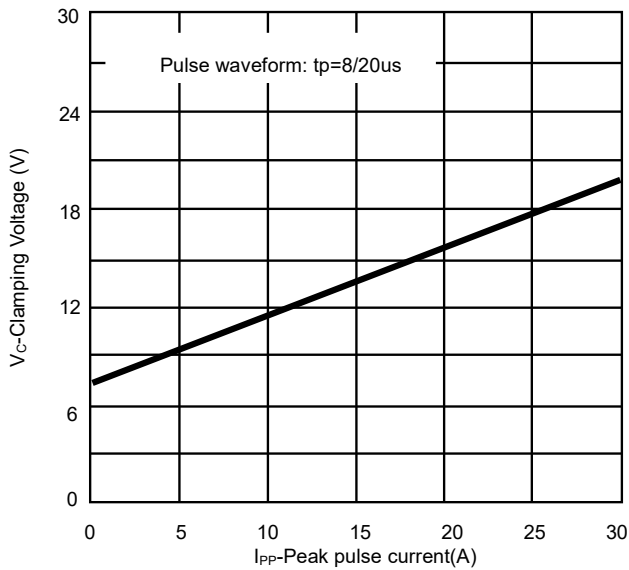


Fig 3. Clamping voltage vs. Peak pulse current

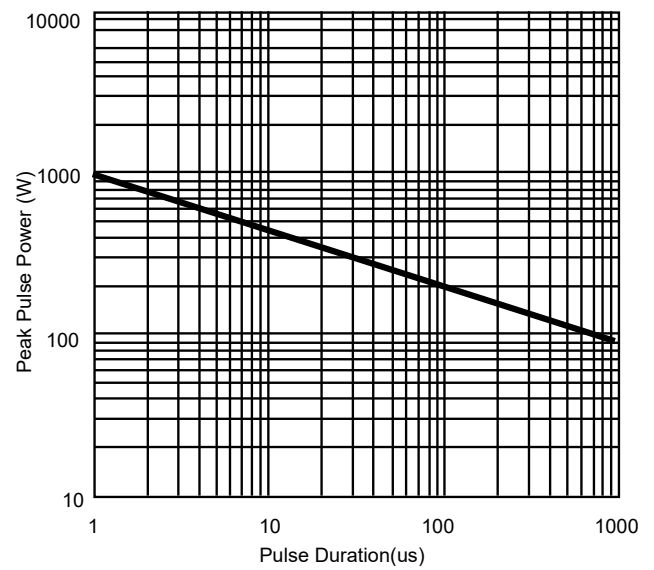
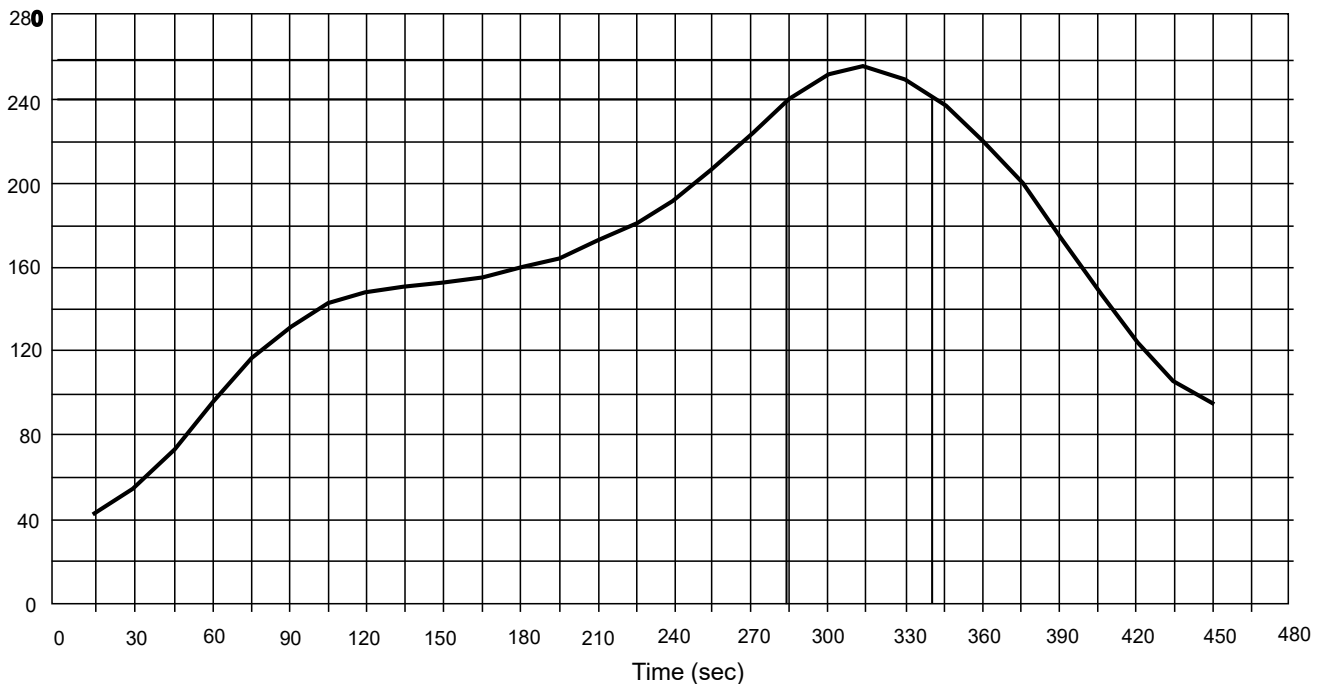


Fig 4. Non Repetitive Peak Pulse Power vs. Pulse time

### Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec

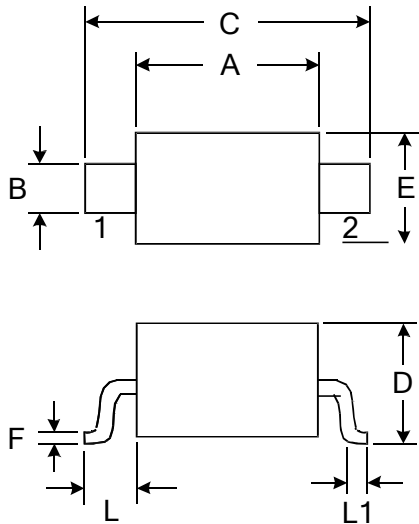


### PCB Design

For TVS diodes a low-ohmic and low-inductive path to chassis earth is absolutely mandatory in order to achieve good ESD protection. Novices in the area of ESD protection should take following suggestions to heart:

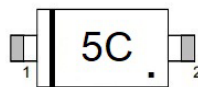
- Do not use stubs, but place the cathode of the TVS diode directly on the signal trace.
- Do not make false economies and save copper for the ground connection.
- Place via holes to ground as close as possible to the anode of the TVS diode.
- Use as many via holes as possible for the ground connection.
- Keep the length of via holes in mind! The longer the more inductance they will have.

### Outline Drawing – SOD-323



DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

### Marking



### Ordering information

Order code	Package	Baseqty	Deliverymode
UMW PESDNC3D5VB	SOD-323	3000	Tape and reel

单击下面可查看定价，库存，交付和生命周期等信息

[>>UMW\(友台半导体\)](#)