

UMW PESDUC5D5VB

1.Description

The PESDUC5D5VB protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. They feature large crosssectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, low operating voltage.

3.Features

- 100W peak pulse power per line (t_P=8/20µs)
- Bidirectional configurations
- Response time is typically < 1ns
- High ESD protection

4. Mechanical Characteristics

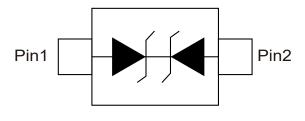
- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C

2.Applications

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

- Low clamping voltage
- Transient protection for data lines to IEC 61000-4-2(ESD) ±18kV(air), ±15kV(contact);
 IEC 61000-4-4(EFT) 5A (5/50ns)
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness: ≤3mil

5. Pinning information



SOD-523







6.Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Peak Pulse Power (t _p =8/20μs)	P_{PP}	100	W
Peak Pulse Current (t _p =8/20μs)	I _{PP}	5	А
Lead Soldering Temperature	T∟	260 (10 sec)	°C
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C
ESD Protection-Contact Discharge	V _{ESD}	±15	kV
ESD Protection-Air Discharge	V _{ESD}	±18	kV





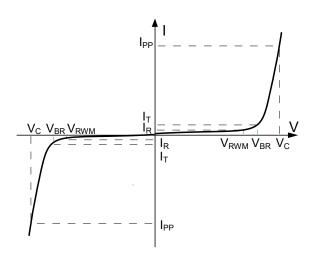
7. Electrical Characteristic (@25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Тур	Max	Units
Peak Reverse Working Voltage	V _{RWM}				5	V
Breakdown Voltage	V_{BR}	I _T =1mA	5.6		8.5	V
Reverse Leakage Current	I _R	V _{RWM} =5V, T=25°C			1	μΑ
Clamping Voltage ¹⁾		TLP=16A, t _p =100ns		28.1		V
Clamping Voltage ²⁾	V _c	I _{PP} =1A, t _p =8/20μs			12	V
Clamping Voltage		I _{PP} =5A, t _p =8/20μs			20	V
Junction Capacitance	C _J	V _R =0V, f=1MHz		0.4		pF

Notes:

- 1. TLP parameter: Z_0 =50 Ω , t_p =100ns, t_r =2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
- 2. Non-repetitive current pulse, according to IEC61000-4-5.

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



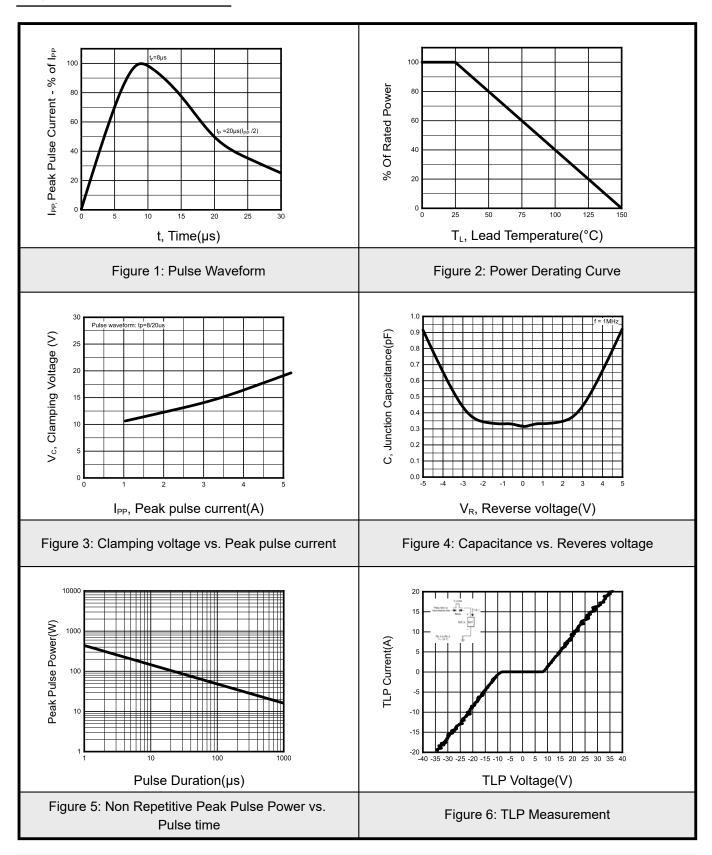
Symbol	Parameter				
V_{RWM}	Peak Reverse Working Voltage				
I _R	Reverse Leakage Current @ V _{RWM}				
V_{BR}	Breakdown Voltage @ I _⊤				
I _T	Test Current				
I _{PP}	Maximum Reverse Peak Pulse Current				
V _C	Clamping Voltage @ I _{PP}				
P _{PP}	Peak Pulse Power				
CJ	Junction Capacitance				
I _F	Forward Current				
V _F	Forward Voltage @ I _F				







9. Typical characteristic

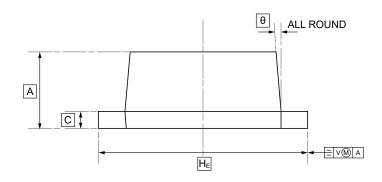


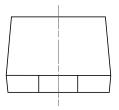


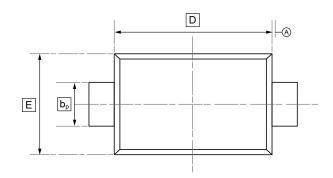




10.SOD-523 Package Outline Dimensions







DIMENSIONS (mm are the original dimensions)

Symbol	Α	b p	С	D	E	H _E	θ
Min	0.58	0.3	0.100	1.15	0.75	1.5	5°
Max	0.68	0.4	0.135	1.25	0.85	1.7	ວ







11.Ordering information



Order Code	Package	Base QTY	Delivery Mode		
UMW PESDUC5D5VB	SOD-523	3000	Tape and reel		

UMW PESDUC5D5VB







12.Disclaimer

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