UMW PExxxD3ULA

1.Features

The PExxxD3ULA is ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in both unidirectional and bidirectional configurations and is rated at 350 Watts for an 8/20μs waveform.

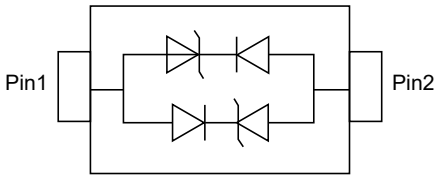
2.Applications

- Hand-Held Portable Applications
- USB Interface
- Automotive Electronics
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Networking and Telecom(Ethernet 10/100/1000 Base T)

3.Features

- 350 Watts Peak Pulse Power per Line (8 x 20 us Waveform)
- Replacement for MLV (0805)
- Protects One Power or I/O Port
- Low Clamping Voltage
- Available in Multiple Voltages: 5.0V, 8.0V,12V
- Ultra Low Capacitance: 0.8pF (Typical)
- Response Time is < 1 ns

4.Pinning information



SOD-323

5.Maximum ratings (T_{amb}=25°C Unless Otherwise Specified)

Parameter	Symbol	Maximum	Units
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	350	Watts
ESD Rating per IEC61000-4-2: Contact		8	kV
Air		15	kV
Lead Soldering Temperature	T_L	260 (10 sec.)	°C
Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	°C

Notes:

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

1. Non-repetitive current pulse, per Figure 1.

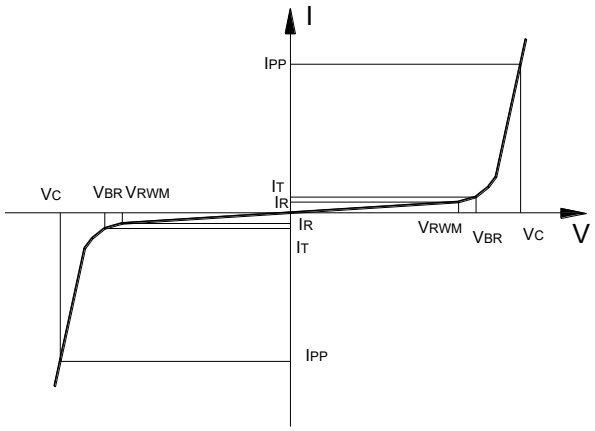
6.Electrical Characteristics

Device	V_{RWM}	I_R @ V_{RWM}	V_{BR}@1mA	V_{C1}	I_{PP}@8/20us	Capacitance		P_{PK}
			(Volts)	@ 1A	(Amps)	@ V_R=0V, 1MHz(pF)		
	(V)	(uA)	Min	(V)	Max.	Typ	Max.	(W)
PE5V0D3ULA	5	1	6	9.8	17	0.8	1.5	350
PE8V0D3ULA	8	1	8.5	13.6	15	0.8	1.5	350
PE12VD3ULA	12	1	13.3	17.8	11	0.8	1.5	350

Notes:

Junction capacitance is measured in VR=0V,F=1MHz.

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



Symbol	Symbol
V_{RWM}	Working PeakReverse Voltage
V_{BR}	Breakdown Voltage @ I_T
V_C	Clamping Voltage @ I_{PP}
I_T	Test Current
I_{RM}	Leakage current at V_{RWM}
I_{PP}	Peak pulse current
C_O	Off-state Capacitance
C_J	Junction Capacitance

8.Typical characteristic

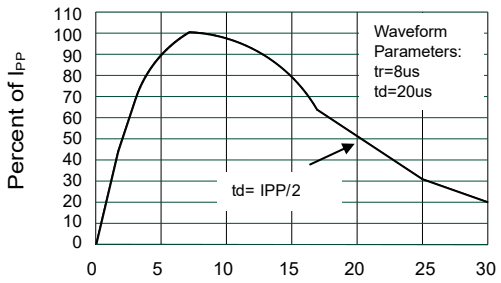


Figure 1: Pulse Waveform

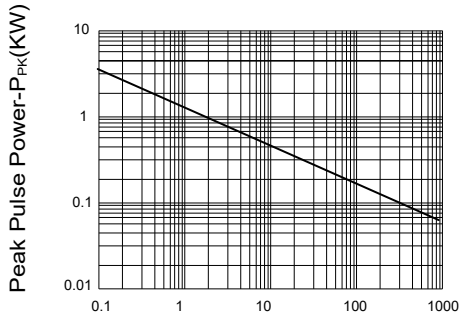


Figure 2: Non-Repetitive Peak Pulse Power vs. Pulse Time

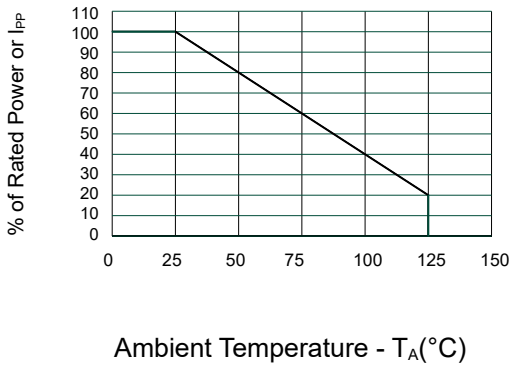


Figure 3: Power Derating Curve

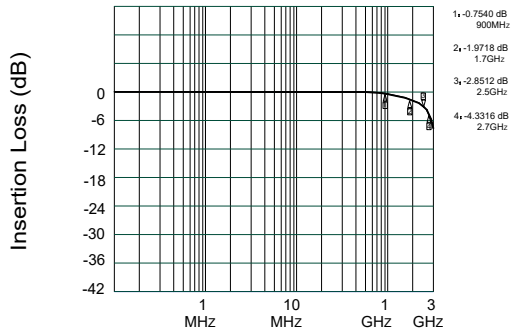
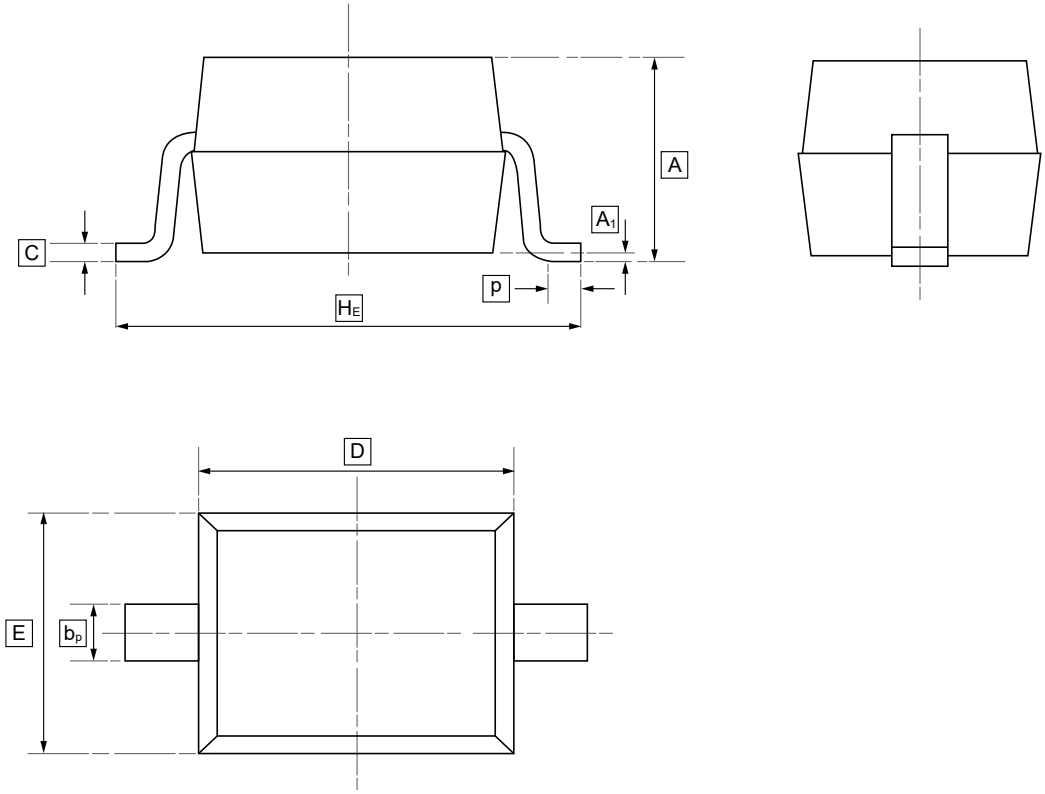


Figure 4: Insertion Loss S21

9.SOD-323 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	A_1	p
Min	0.80	0.25	0.10	1.50	1.15	2.30	0.01	0.20
Max	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50

10.Ordering information



ww: Batch Code

Order Code	Marking	Package	Base QTY	Delivery Mode
UMW PE5V0D3ULA	AC	SOD-323	3000	Tape and reel
UMW PE8V0D3ULA	BC	SOD-323	3000	Tape and reel
UMW PE12VD3ULA	DC	SOD-323	3000	Tape and reel

11.Disclaimer

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