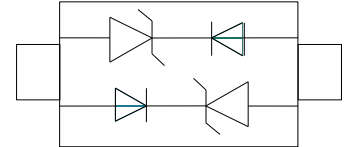


Bidirectional Ultralow Capacitance TVS ARRAY

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 8/20 μ s waveform.



Features

- 350 Watts Peak Pulse Power per Line (8 x 20 μ s Waveform)
- Replacement for MLV (0805)
- Protects One Power or I/O Port
- Low Clamping Voltage
- Available in Multiple Voltages: 3.3V, 5.0V, 8.0V, 12V, 15V, 24V
- Ultra Low Capacitance: 0.8pF (Typical)
- Response Time is < 1 ns

Protection solution to meet

- IEC61000-4-2 (ESD) ± 15 kV (air), ± 8 kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Surge) 25A (8/20 μ s)

Main applications

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

Maximum ratings (Tamb=25°C Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PPP}	350	Watts
ESD Rating per IEC61000-4-2:			
Contact		8	KV
Air		15	
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C

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.

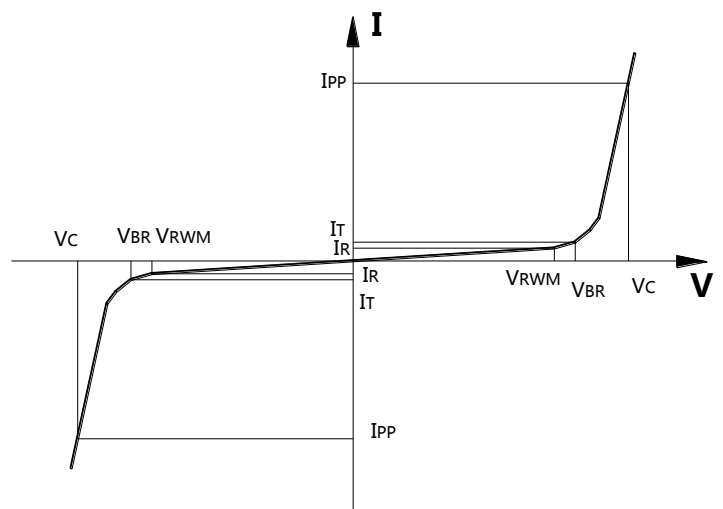
1. Non-repetitive current pulse, per Figure 1.

Electrical characteristics (Tamb=25°C Unless Otherwise Specified)

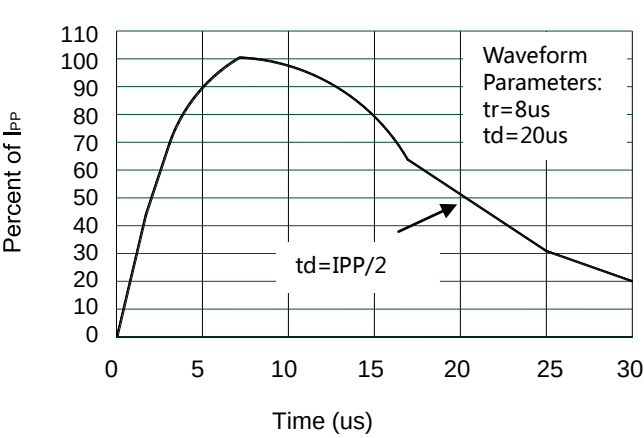
Device	V _{RWM}	I _R @ V _{RWM}	V _{BR} @ 1 mA	V _{C1}	I _{pp} @8/20us	Capacitance		P _{PK}
			(Volts)	@ 1 A	(Amps)	@ V _R = 0 V, 1 MHz (pF)		
	(V)	(uA)	Min	(V)	Max.	Typ	Max.	(W)
PE5V0D3ULA	5.00	1.0	6.00	9.80	17.0	0.8	1.5	350
PE8V0D3ULA	8.00	1.0	8.50	13.6	15.0	0.8	1.5	350
PE12VD3ULA	12.0	1.0	13.3	17.8	11.0	0.8	1.5	350

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

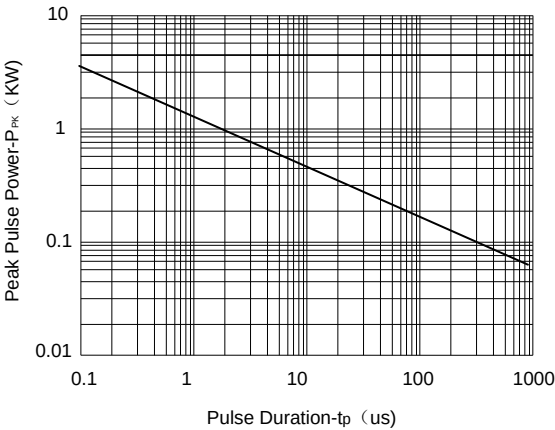
Symbol	Parameter
V _{RWM}	Working PeakReverse Voltage
V _{BR}	Breakdown Voltage @ I _T
V _C	Clamping Voltage @ I _{PP}
I _T	Test Current
I _{RM}	Leakage current at V _{RWM}
I _{PP}	Peak pulse current
C _O	Off-state Capacitance
C _J	Junction Capacitance



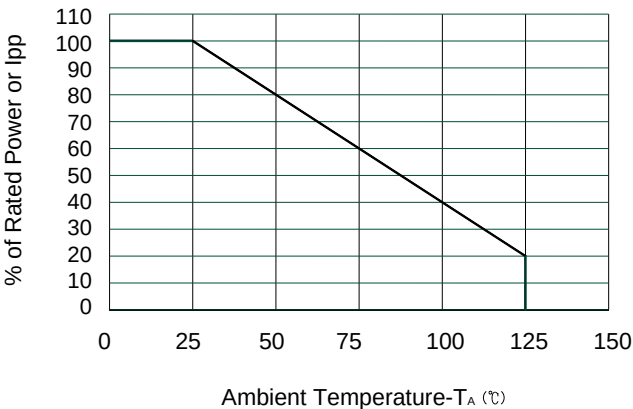
Typical electrical characterist applications



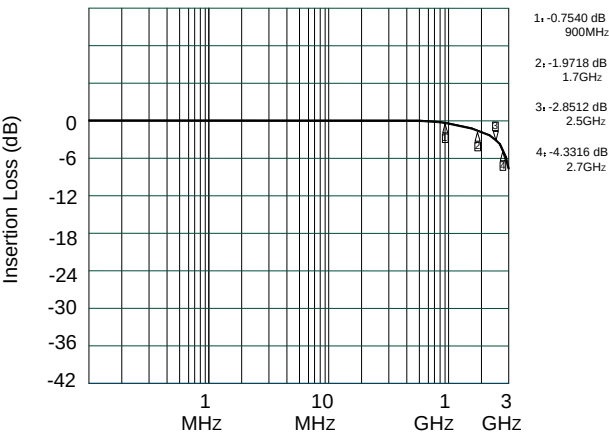
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

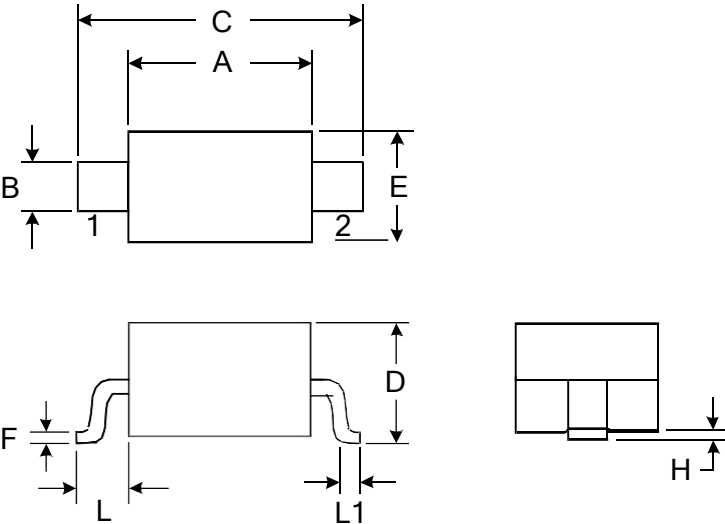


Power Derating Curve



Insertion Loss S21

Outline Drawing – SOD323



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

Ordering information

Order code	Package	Baseqty	Delivery mode	Marking
UMW PE5V0D3ULA	SOD-323	3000	Tape and reel	AC
UMW PE8V0D3ULA	SOD-323	3000	Tape and reel	BC
UMW PE12VD3ULA	SOD-323	3000	Tape and reel	DC