

WTD3201-03B, WTD3201-05B, WTE3201-08B, WTD3201-12B, WTD3201-15B, WTD3201-24B

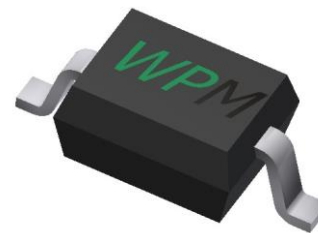
Bidirectional Ultralow Capacitance TVS ARRAY

The WTD3201-XXB 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 300 Watts for an 8/20 μ s waveform.

The WTD3201-XXB meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers an ultra low capacitance and low leakage current in a miniature SOD-323 package.

Features

- 300 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: 3.3V, 5.0V, 8.0V, 12V, 15V, 24V
- Ultra Low Capacitance: 1pF (Typical)
- Response Time is < 1 ns
- Meets MSL 1 Requirements
- Solid-state silicon avalanche technology
- ROHS compliant
- WeiPan technology



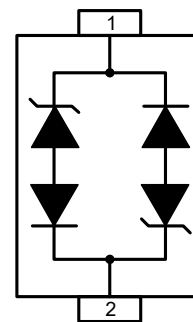
SOD-323

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

Protection solution to meet

- IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Surge) :Refer to next page



Circuit and Pin Schematic

Ordering Information

Device	Qty per Reel	Reel Size
WPExxxD3ULA	3000	7 Inch

"xxx" = Working Peak Reverse Voltage

WPExxxD3ULA Bidirectional Ultralow Capacitance TVS ARRAY

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	P _{PPP}	300	Watts
ESD Rating per IEC61000-4-2:	Contact	30	KV
	Air	30	
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.

*Other voltages may be available upon request.

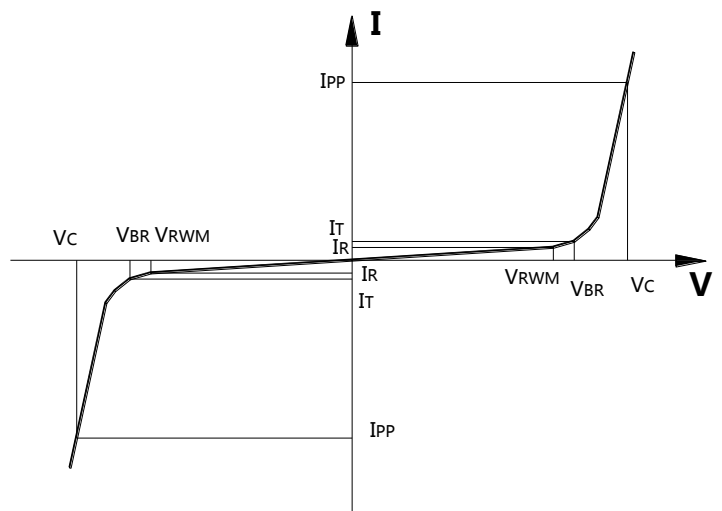
1. Non-repetitive current pulse, per Figure 1.

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

Device	V _{RWM} (V)	I _R @ V _{RWM} (µA)	V _{BR} @ 1 mA (Volts)	V _{C1} @ 1 A (V)	V _{C2} @ I _{pp} (Max) (V)	I _{pp} @8/20us (Amps) Max.	Capacitance @ V _R = 0 V, 1 MHz (pF)		PPK (W)
			Min	(V)	(V)	(Amps)	Typ	Max.	
			(Volts)	(V)	(V)	(Amps)	(pF)	(pF)	
WTD3201-03B	3.3	2	4	7	18	18	0.9	1.5	300
WTD3201-05B	5	1	6	9.8	19	16	0.9	1.5	300
WTD3201-08B	8	1	8.5	13	18	10	0.9	1.5	230
WTD3201-12B	12	1	13.3	18	27	8	0.9	1.5	230
WTD3201-15B	15	1	16.7	23	30	5	0.9	1.5	200
WTD3201-24B	24	1	26.7	35	48	3	0.9	1.5	180

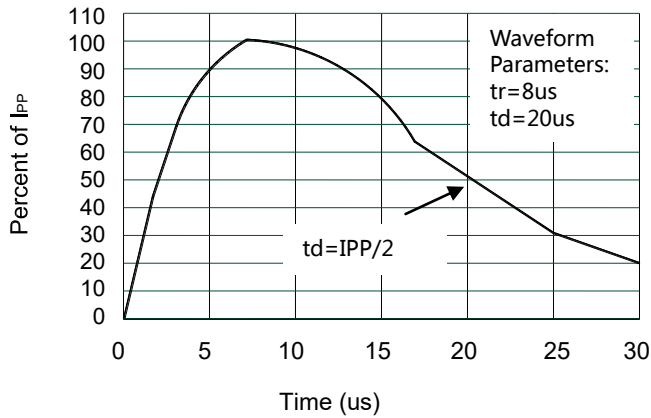
Junction capacitance is measured in VR=0V,F=1MHz

Symbol	Parameter
V _{RWM}	Working Peak Reverse 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

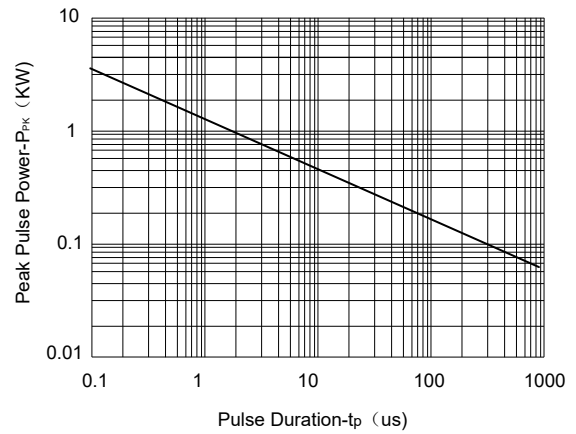


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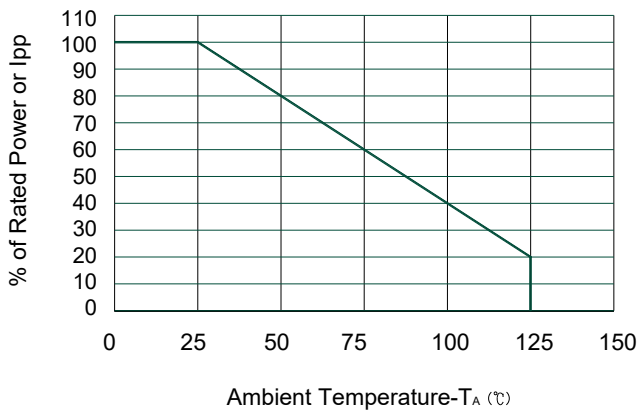
Typical electrical characterist applications



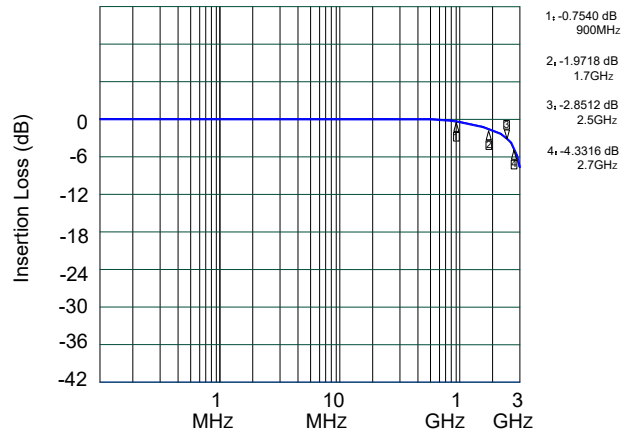
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

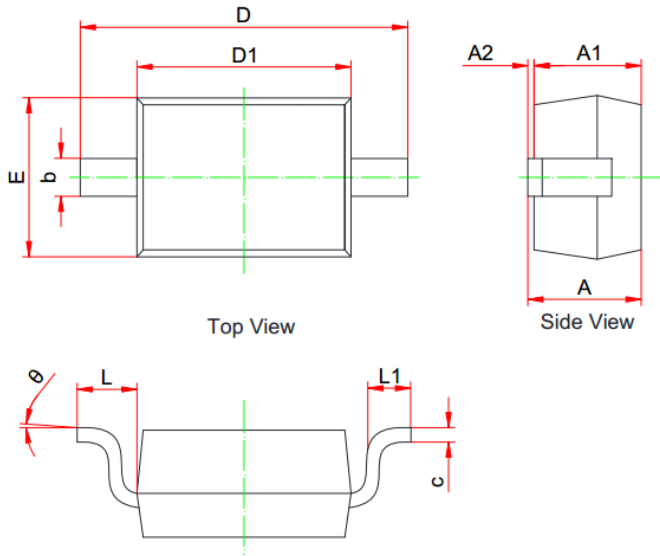


Insertion Loss S21

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Package Information

SOD-323 Package Outline Drawing



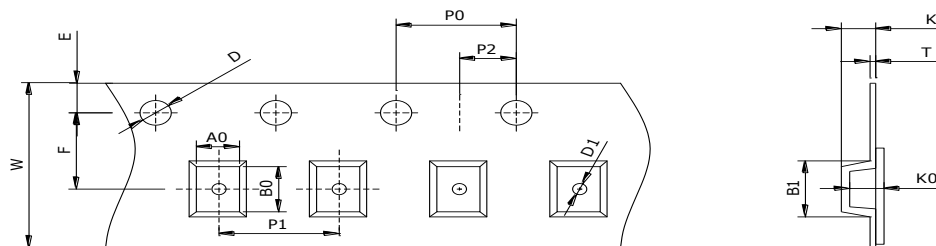
SYM	MILLIMETERS		
	MIN	NOM	MAX
A	0.800	--	1.100
A1	0.800	--	0.900
A2	0.000	--	0.100
b	0.250	--	0.400
c	0.080	--	0.177
D1	1.600	1.700	1.800
D	2.300	--	2.800
E	1.150	--	1.400
L	0.475REF		
L1	0.100	--	0.500
Θ	0°	--	8°

Suggested Land Pattern



Unit: mm

SOD-323 Reel Dim



Package	Chip Size	Pocket Size B0×A0×K0(mm)	Tape Width	Reel Diameter	Quantity Per Reel	P0	P1
SOD-323	2.60×1.40×1.05	3.30×1.50×1.25	8mm	178mm(7")	3000	4mm	4mm
D0	D1	E	F	K	T	W	
1.5mm	0.5mm	1.75mm	3.5mm	0.95mm	0.2mm	8mm	