

2-Line Bi-directional TVS Diode Array

Features

- 200W peak pulse power(8/20 μ s)
- Protects two bi-directional lines
- Ultra low leakage: nA level
- Operating voltage: 24V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 25 kV
 - Contact discharge: ± 20 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 3A (8/20 μ s)
- RoHS Compliant

Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch
- Device Marking: 24ML

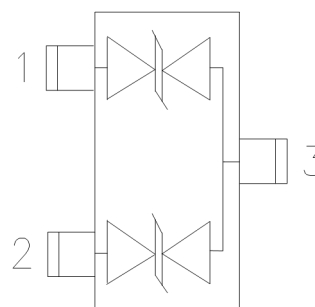
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μ s)	Ppk	200	W
ESD per IEC 61000-4-2 (Air)	VESD	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Dimensions SOT-23



Pin Configuration

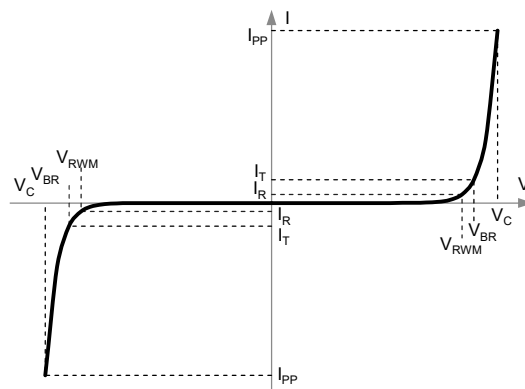


Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				24	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	27			V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}$			0.2	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)		33	36	V
Clamping Voltage	V_C	$I_{PP} = 3\text{A}$ (8 x 20 μs pulse)		41	50	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin 1 to Pin 3 or Pin 2 to Pin 3		4		pF
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin 1 to Pin 2		9		pF

Electrical Parameters (TA=25°C unless otherwise specified)

Symbol	Definition
I_{PP}	Peak Pulse Current
V_C	Clamping Voltage
V_{RWM}	Reverse Working Voltage
I_R	Reverse Leakage Current
V_{BR}	Breakdown Voltage
I_T	Test Current



Typical Performance Characteristics (TA=25°C unless otherwise specified)

Fig.1 - Peak Pulse Power Rating

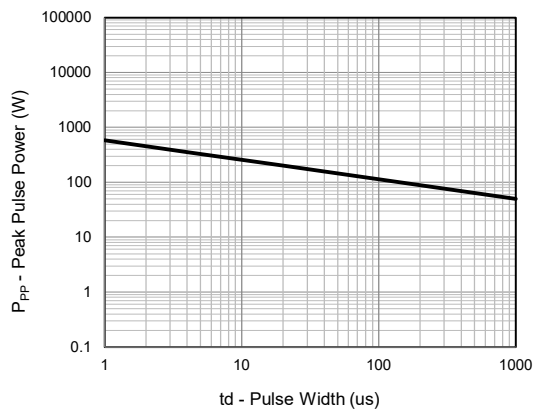


Fig.2 - Pulse Derating Curve

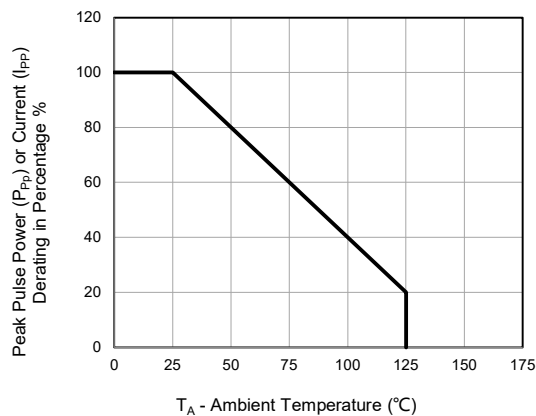


Fig.3 - 8/20us Pulse Waveform

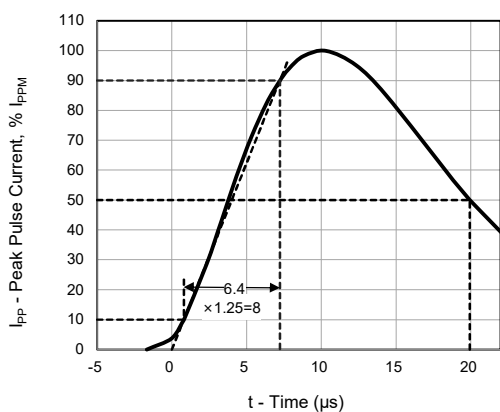


Fig.4 - Typical Clamping Voltage

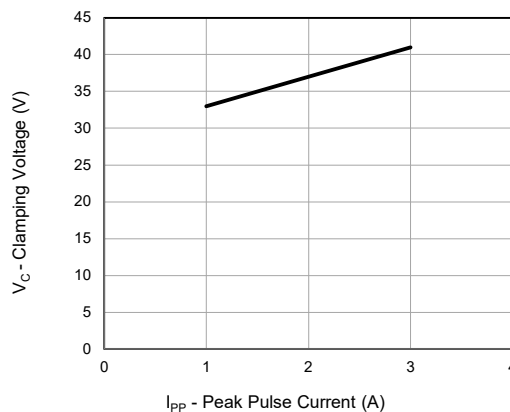


Fig.5 - ESD Pulse Waveform (IEC61000-4-2)

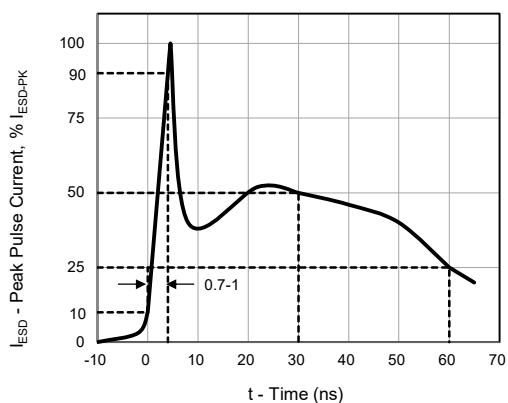
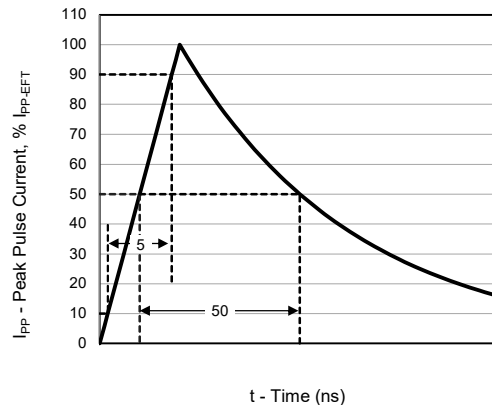
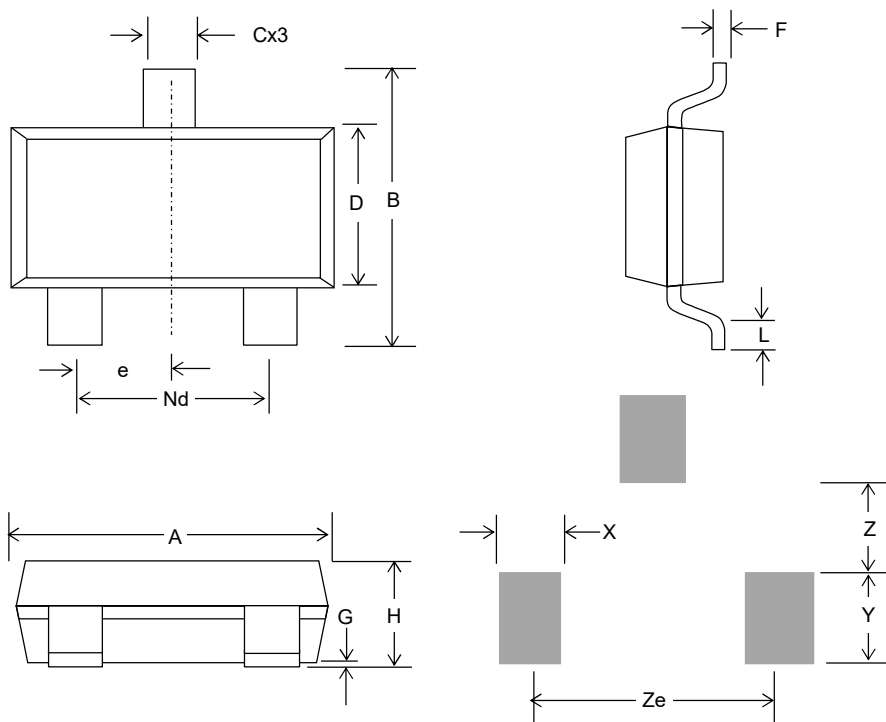


Fig.6 - 5/50ns EFT Waveform (IEC61000-4-4)



SOT-23 Package Outline & Dimensions



SOT-23			
SYMBOL	Millimeters		
	MIN	NOM	MAX
A	2.8	2.92	3.04
B	2.1	2.37	2.64
C	0.3		0.51
D	1.2		1.4
F	0.08		0.18
G	0.01		0.1
H	0.89	1	1.12
L	0.4	0.5	0.6
e		0.95	
Nd		1.9	
X		1	
Y		1.4	
Z		0.8	
Ze		1.9	