

## Features

- Small SOD-323 Package
- Bi-directional Configurations
- Peak Power Dissipation 100W @ 8 x 20 us Pulse
- Low Leakage
- Ultralow Capacitance 0.5pF
- Fast Response Time < 5 ns
- Protects One Power or I/O Port
- ESD Protection to IEC 61000-4-2 Level 4, 15KV(Air), 8KV(Contact)
- EFT Protection to IEC 61000-4-4 Level 4, 30A
- 16KV Human Body Model ESD Requirements
- RoHS Compliant in Lead-Free Versions



SOD-323

## Applications

- Cell Phone Handsets and Accessories
- Microprocessor Based Equipment
- Personal Digital Assistant (PDA)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- USB Interface



## Absolute Maximum Ratings

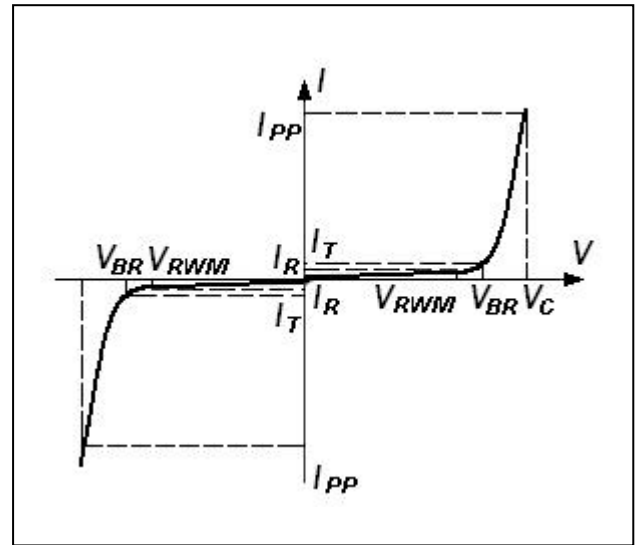
Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$	$P_{PK}$	200	W
Peak Pulse Current (Note 1.) @ $T_L = 25^\circ\text{C}$	$I_{PP}$	3	A
IEC 61000-4-2 (ESD)	Air	$\pm 15$	KV
	CONTACT	$\pm 8.0$	KV
IEC 61000-4-4 (EFT)		30	A
ESD Voltage Per Human Body Model	$V_{PP}$	16	KV
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Operating Junction Temperature Range	$T_J$	-55 to 150	$^\circ\text{C}$

1. 8 X 20 us, non-repetitive

**Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
I <sub>T</sub>	Test Current
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>

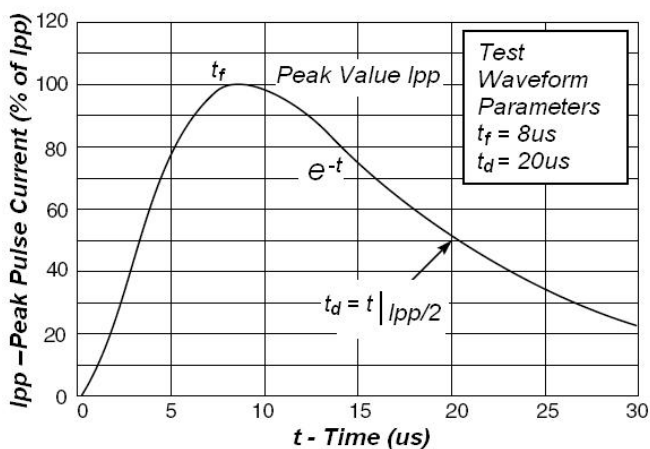


**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

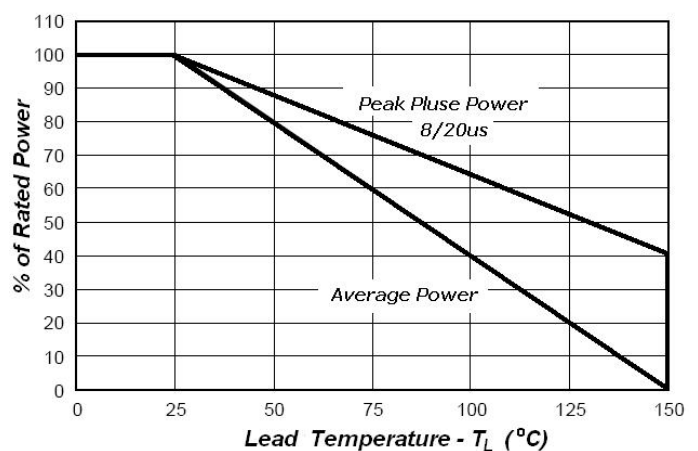
Parameter	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>			5	V
Breakdown Voltage @ I <sub>T</sub> =1mA	V <sub>BR</sub>	6			V
Reverse Leakage Current @ V <sub>RWM</sub> =5V	I <sub>R</sub>			0.5	uA
Clamping Voltage @ I <sub>pp</sub> =1A (8/20)	V <sub>C</sub>			15	V
Clamping Voltage @ I <sub>pp</sub> =3A (8/20)	V <sub>C</sub>			26	V
Junction Capacitance @ V <sub>R</sub> =0V f=1MHz	C <sub>J</sub>		0.35	0.5	pF

\*Surge current waveform per Figure 1.

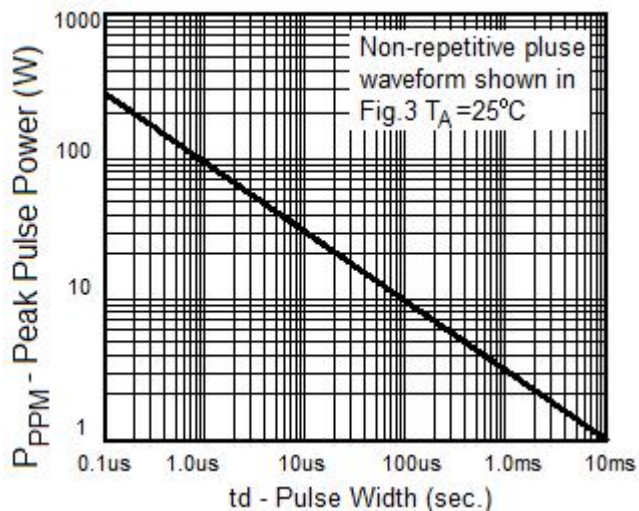
2. V<sub>BR</sub> is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C



**Fig1. Pulse Waveform**



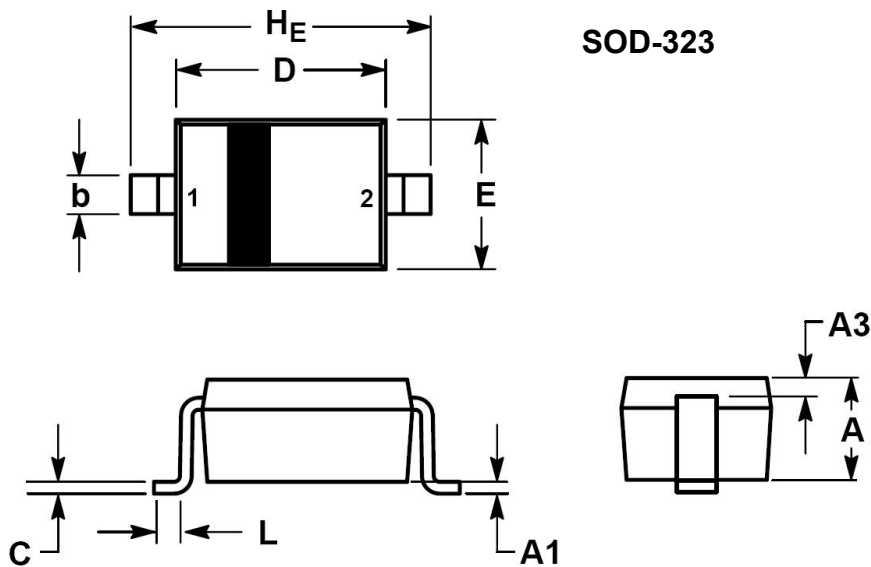
**Fig2. Power Derating**



**Fig3. Peak Pulse Power vs Pulse Time**

**Package Dimensions**

SOD-323



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.080	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.063	0.066	0.071
E	1.15	1.25	1.40	0.045	0.049	0.055
L	0.08			0.003		
HE	2.30	2.50	2.70	0.090	0.098	0.106

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