

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

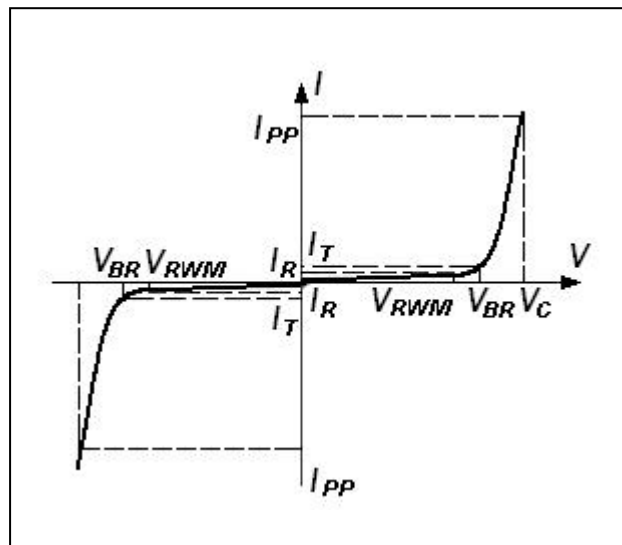
Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation (Note 1.) @T _L = 25°C	P _{PK}	200	W
Peak Pulse Current (Note 1.) @T _L = 25°C	I _{PP}	3	A
IEC 61000-4-2 (ESD)		± 15	KV
		± 8.0	KV
IEC 61000-4-4 (EFT)		30	A
ESD Voltage			
Per Human Body Model	V _{PP}	16	KV
Storage Temperature Range	T _{STG}	-55 to 150	°C
Operating Junction Temperature Range	T _J	-55 to 150	°C

1. 8 X 20 us, non-repetitive

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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



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

Parameter	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}			5	V
Breakdown Voltage @ $I_T = 1\text{mA}$	V_{BR}	6			V
Reverse Leakage Current @ $V_{RWM} = 5\text{V}$	I_R			0.5	μA
Clamping Voltage @ $I_{PP} = 1\text{A}$ (8/20)	V_C			15	V
Clamping Voltage @ $I_{PP} = 3\text{A}$ (8/20)	V_C			26	V
Junction Capacitance @ $V_R = 0\text{V}$ $f = 1\text{MHz}$	C_j		0.35	0.5	pF

*Surge current waveform per Figure 1.

2. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C

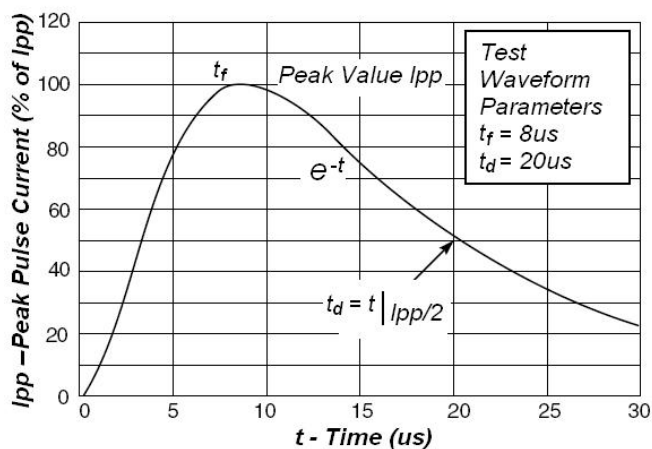


Fig1. Pulse Waveform

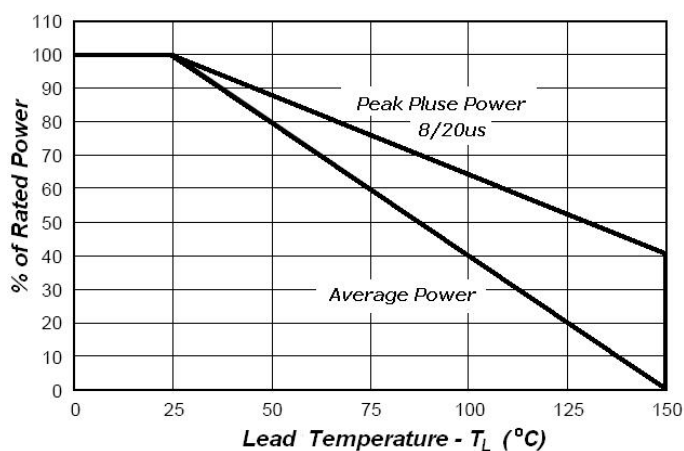


Fig2. Power Derating

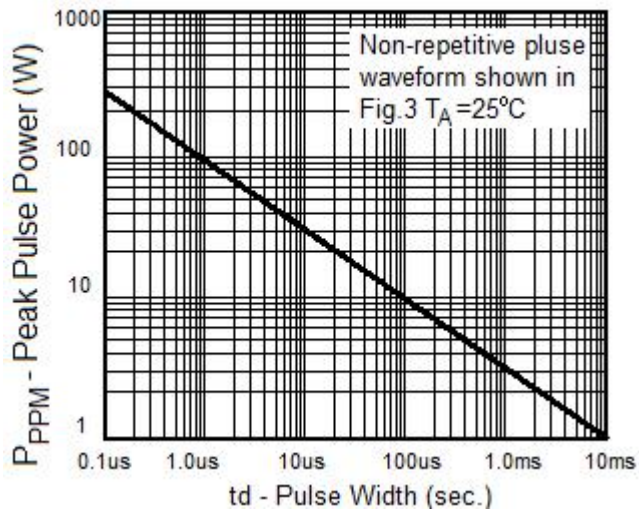
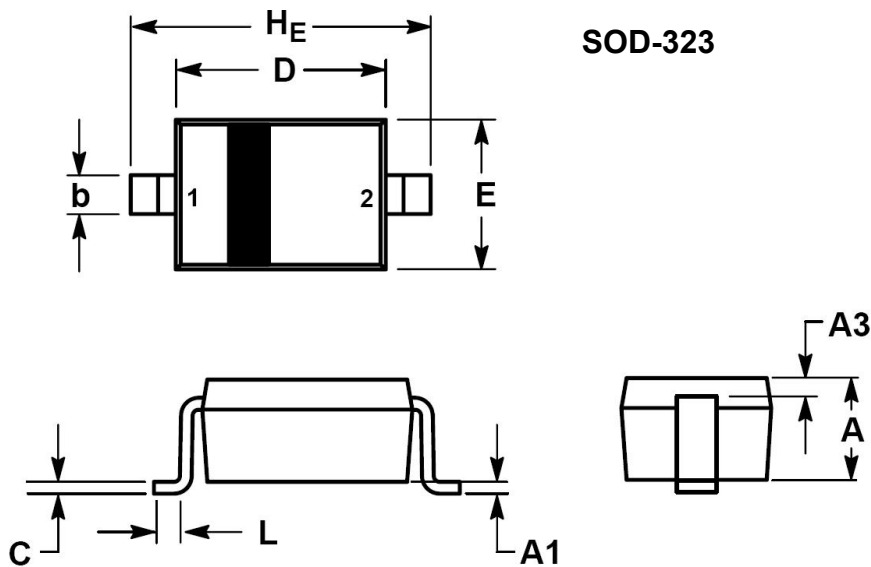


Fig3. Peak Pulse Power vs Pulse Time

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		
H _E	2.30	2.50	2.70	0.090	0.098	0.106