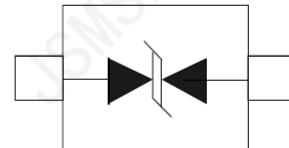
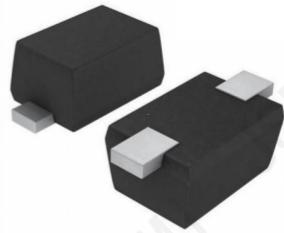


Features

- 90 Watts peak pulse power ($t_p = 8/20\mu s$)
- bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 25\text{kV}$ contact $\pm 25\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 8A (8/20 μs)



SOD-523

Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

Mechanical Data

- SOD523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Absolute Maximum Rating

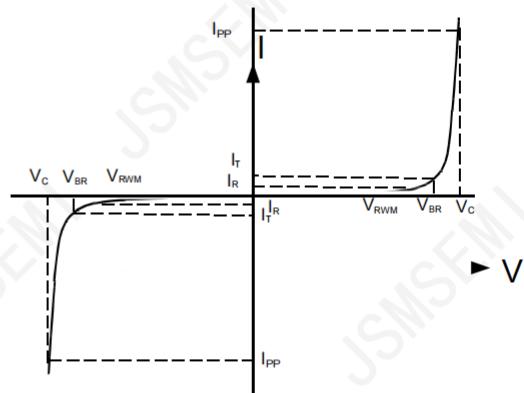
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	90	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{stg}	-55 to + 150	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$IT=1mA$	6.0			V
Reverse Leakage Current	IR	$VRWM=5V, T=25^{\circ}C$			0.2	uA
Clamping Voltage	VC	$IPP=8A, tp=8/20\mu s$		11	15	V
Junction Capacitance	Cj	$VR=0V, f=1MHz$		18	23	pF

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

Symbol	Parameter
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @IPP
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current



Note: 8/20μs pulsed waveform.

Typical Characteristics

Figure1:PeakPulsePowervs.PulseTime

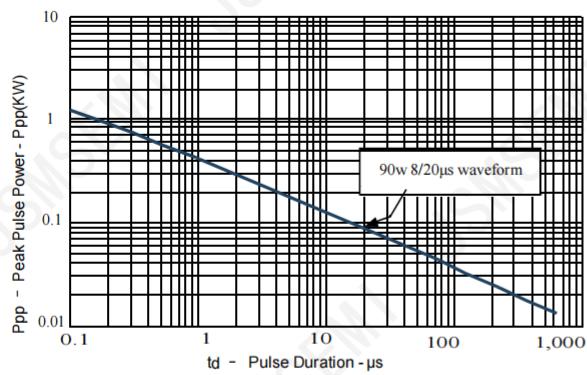


Figure2:PowerDeratingCurve

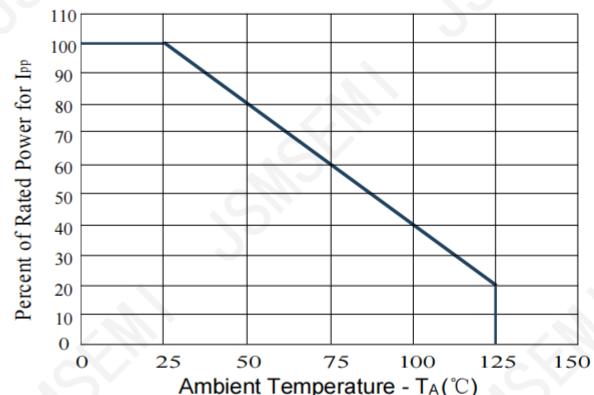


Figure3:PulseWaveform

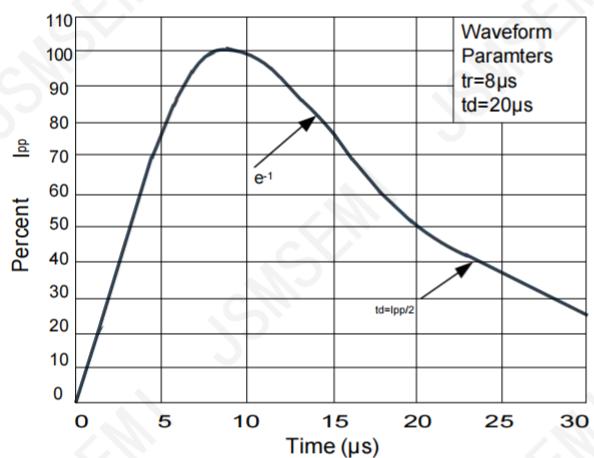
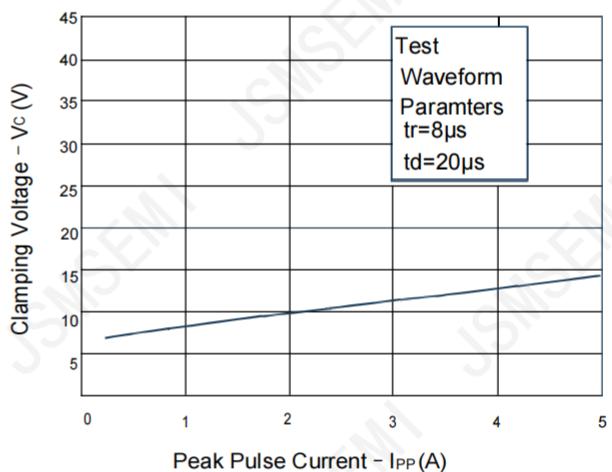
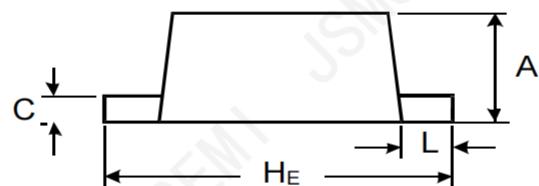
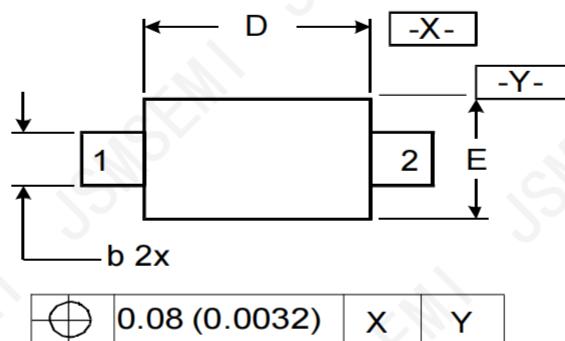


Figure4:ClampingVoltagevs.Ipp



Outline Drawing—SOD523



SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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