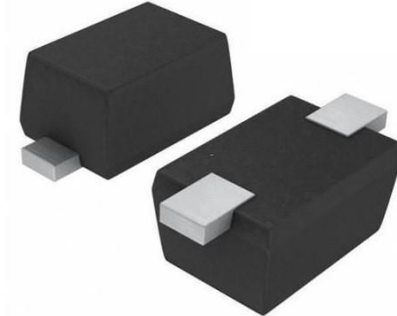


Features

- 120Watts 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 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 5A(8/20 μs)



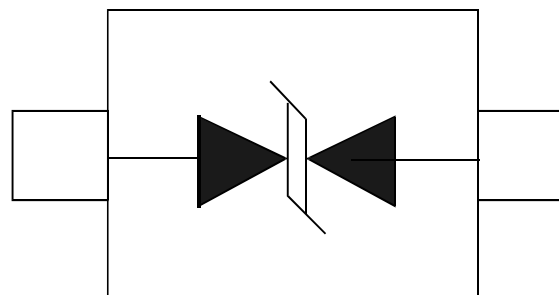
Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)

Mechanical Data

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

Schematic & PIN Configuration



SOD-523

Absolute Maximum Rating

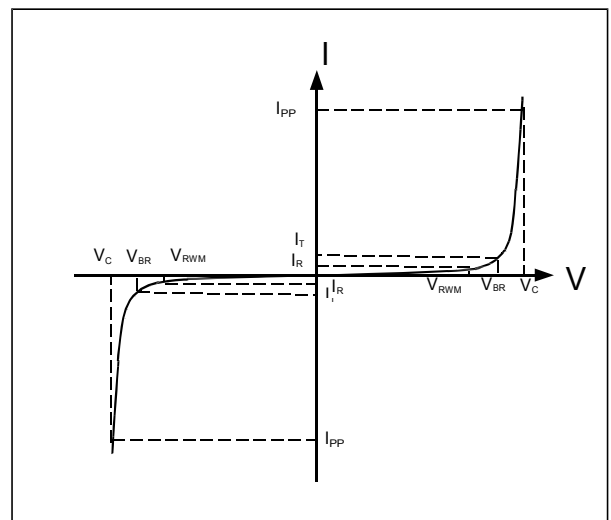
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	120	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{pp}	5	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 150	$^{\circ}C$

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	13.3			V
Reverse Leakage Current	I_R	$V_{RWM} = 12V, T = 25^{\circ}C$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 5A, t_p = 8/20\mu s$			24	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		10		pF

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

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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note: 8/20 μs pulse waveform.

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

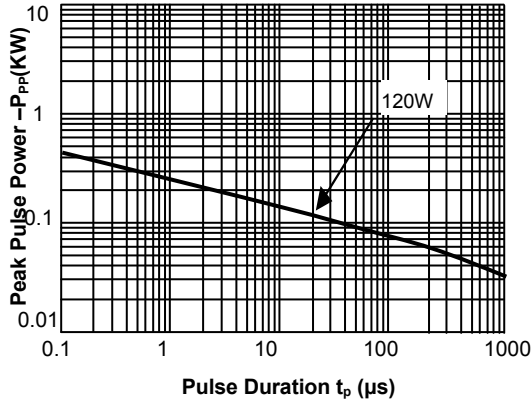


Fig.2 Pulse Derating Curve

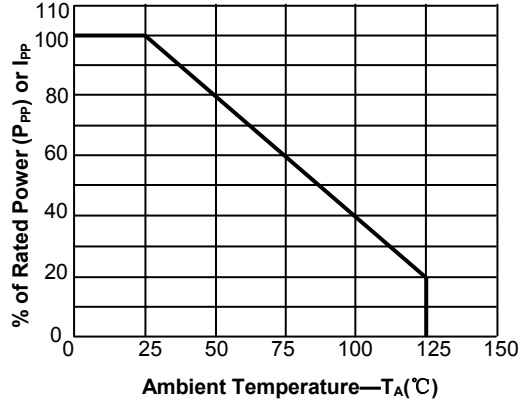


Fig.3 Pulse Waveform-8/20μs

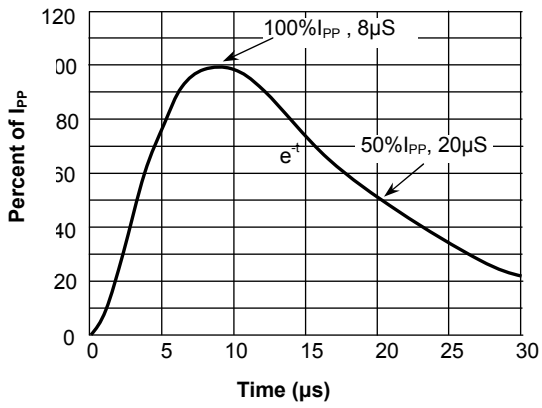
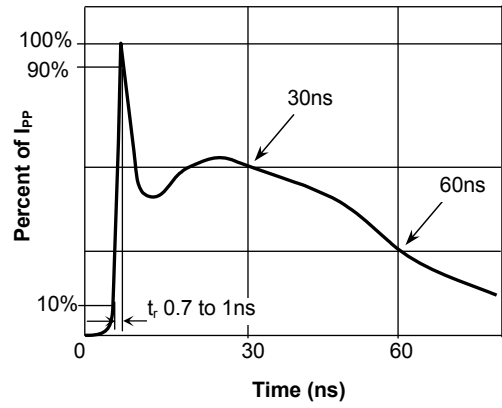
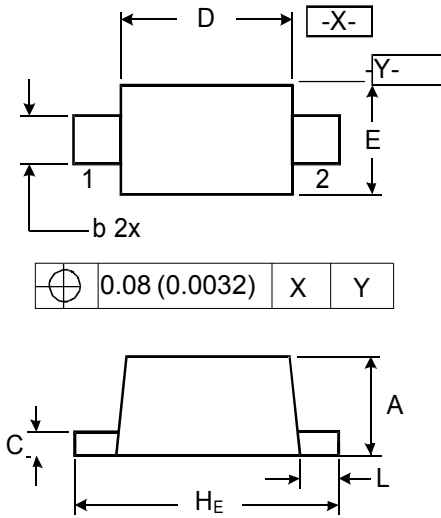


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Outline Drawing – SOD523



DIMENSIONS

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

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
MSD5C121V	SOD523	5000	Tape and reel