

ESD/Surge Protection Diode

Features

- Low leakage current
- SOD-523 package
- Excellent clamping voltage
- Fast response time, typically < 1 ns
- 400W peak pulse power ($t_p=8/20\mu s$)
- IEC 61000-4-2 $\pm 30kV$ (Air) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- IEC 61000-4-5 20A (8/20us) Surge protection
- IEC 61000-4-2 $\pm 30kV$ (Contact) ESD protection
- RoHS compliant



Marking: C5

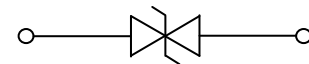
SOD-523



Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Schematic Diagram



Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (TP=8/20μS)	P _{PP}	400	W
Peak Pulse Current (TP=8/20μS)	I _{PP}	20	A
Operating temperature	T _J	-55 to 150	°C
Storage temperature	T _{STG}	-55 to 150	°C

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reversestand-off Voltage	V _{RWM}				5	V
ReverseBreakdown Voltage	V _{BR}	I _T =1mA	6		9	V
ReverseLeakage Current	I _R	V _R =5V			1	μA
Clamping Voltage	V _C	I _{PP} =20A, T _P =8/20μS			20	V
Junction Capacitance	C _J	V _R =0V, f=1MHz		35	40	pF

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power vs Pulse Time

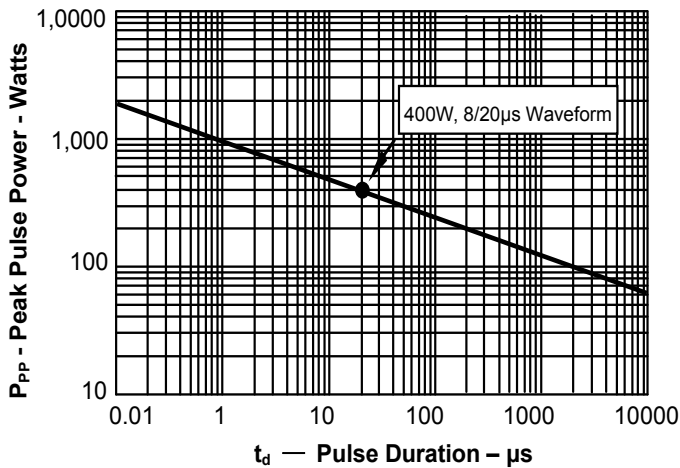


Fig.2 Pulse WaveForm-8/20μs

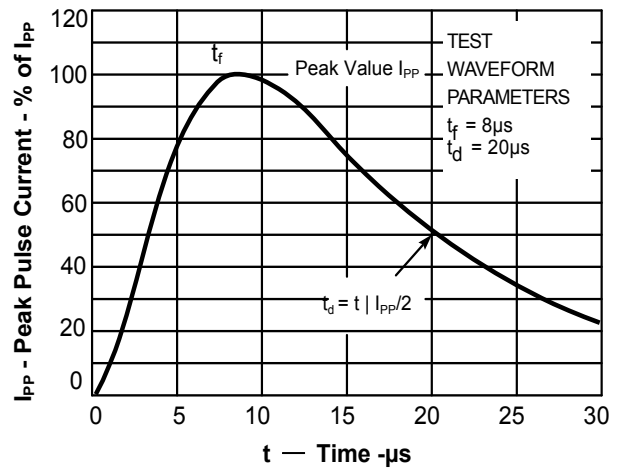


Fig.3 Power Derating Curve

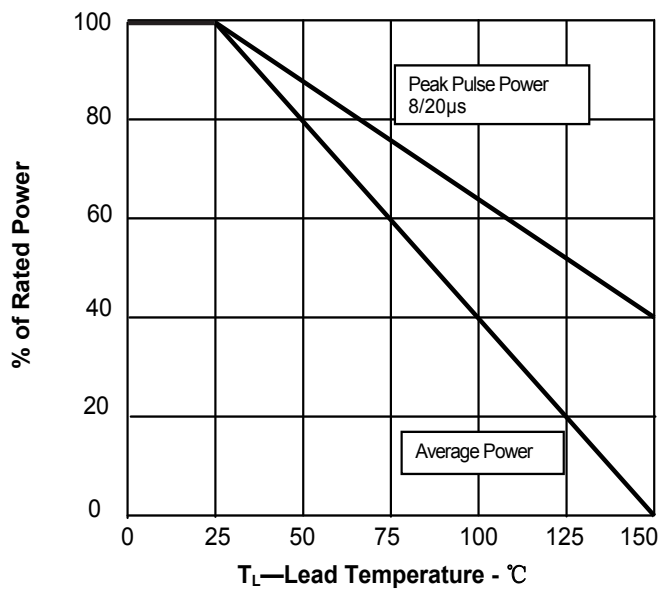
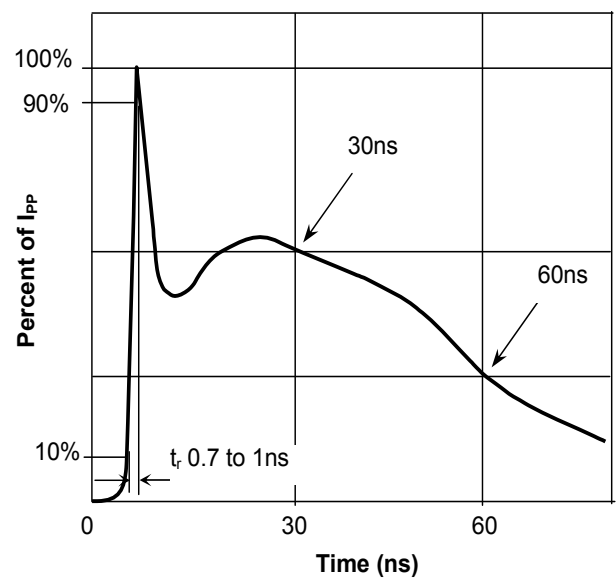
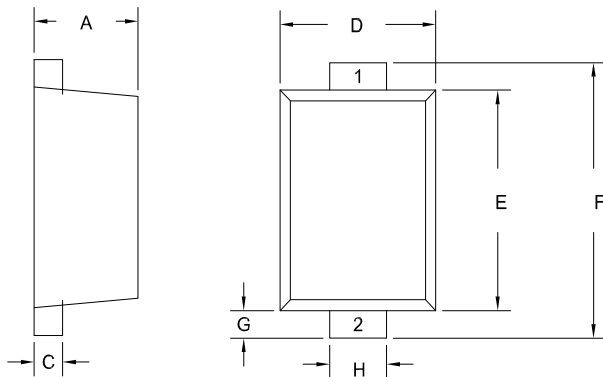


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



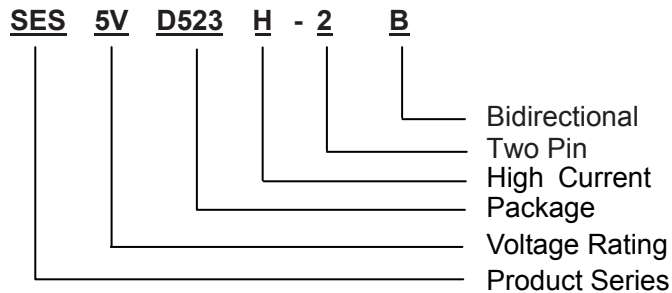
Package Outline Dimensions

millimeters



Dim	millimeters	
	min	max
A	0.50	0.70
C	0.07	0.20
D	0.70	0.90
E	1.10	1.30
F	1.50	1.70
G	0.15	0.25
H	0.25	0.35

Part Number System



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	First issue

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