

Features

- ◆ 170W peak pulse power (8/20 μ s)
- ◆ Protects one data or power line
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 5V
- ◆ Ultra low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 25 kV
Contact discharge: ± 25 kV
 - IEC61000-4-5 (Lightning) 13A (8/20 μ s)
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ RoHS Compliant

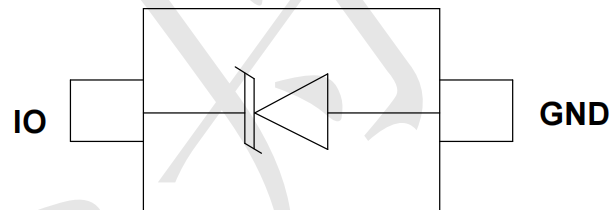
Mechanical Characteristics

- ◆ Package: SOD123
- ◆ Lead Finish: Matte Tin
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Pb-Free, Halogen Free, RoHS/WEEE Compliant
- ◆ Shipping Qty : 3000pcs/7Inch Tape & Reel

Applications

- ◆ Computers and peripherals
- ◆ Audio and video equipment
- ◆ Cellular handsets and accessories
- ◆ Portable electronics

Dimensions and Pin Configuration



Marking



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20 μs)	Ppk	170	W
ESD per IEC 61000-4-2 (Air)	VESD	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 25	
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6.2			V	IT = 1mA
Reverse Leakage Current	IR		0.01	0.1	μA	VRWM = 5 V
Clamping Voltage	VC			10	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	VC			13	V	I _{PP} = 10A (8 x 20 μs pulse)
Peak Pulse Current	I _{PP}			13	A	t _p =8/20 μs
Junction Capacitance	CJ			100	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3

Fig1. 8/20 μ s Pulse Waveform

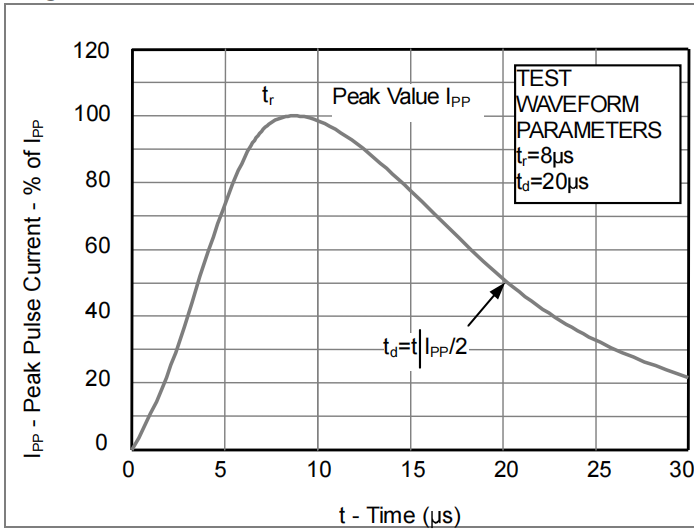


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

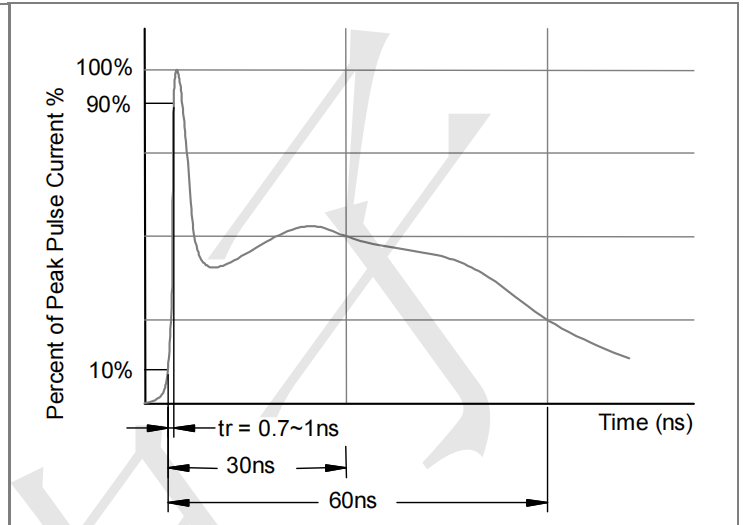
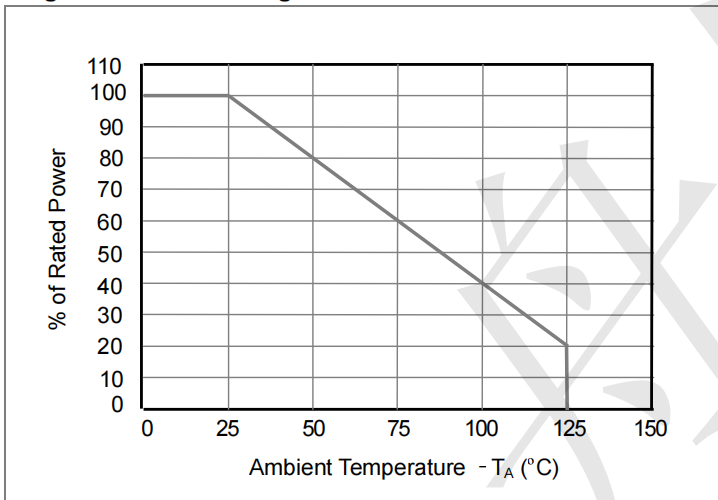
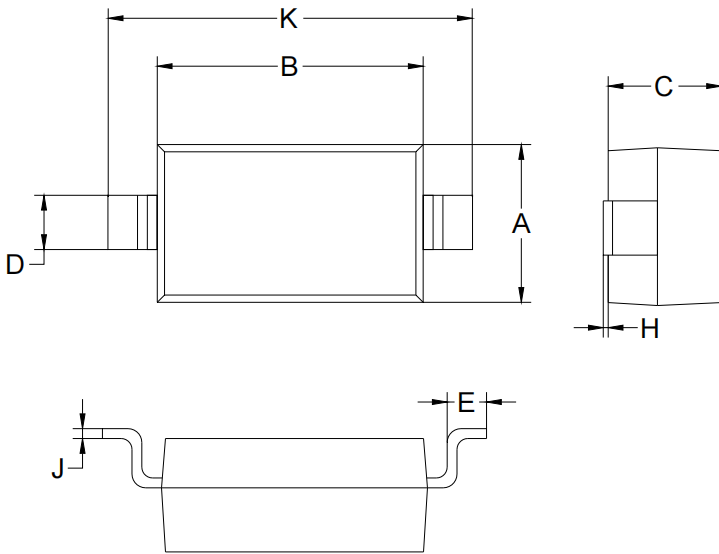


Fig3. Power Derating Curve





Outline Drawing - SOD123 (unit: mm)



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Mounting Pad Layout-SOD123 (unit: mm)

