

Features

- 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: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 22A (8/20 μs)
- RoHS Compliant

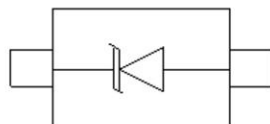
Mechanical Characteristics

- Package: SOD-523
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals

Dimensions and Pin Configuration



SOD-523 (Top View)

Marking: 5D

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	300	W
Peak Pulse Current (8/20 μs)	Ipp	22	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
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			V	IT = 1mA
Reverse Leakage Current	IR			0.5	μA	VRWM = 5V
Forward Voltage	VF		1.0	1.2	V	IF = 10mA
Clamping Voltage	VC			8	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	VC			14	V	I _{PP} = 22A (8 x 20 μs pulse)
Junction Capacitance	CJ		160		pF	VR = 0V, f = 1MHz

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

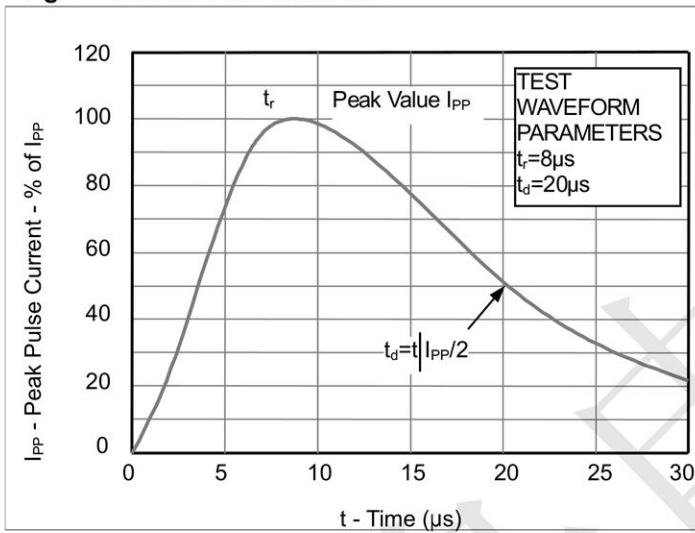


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

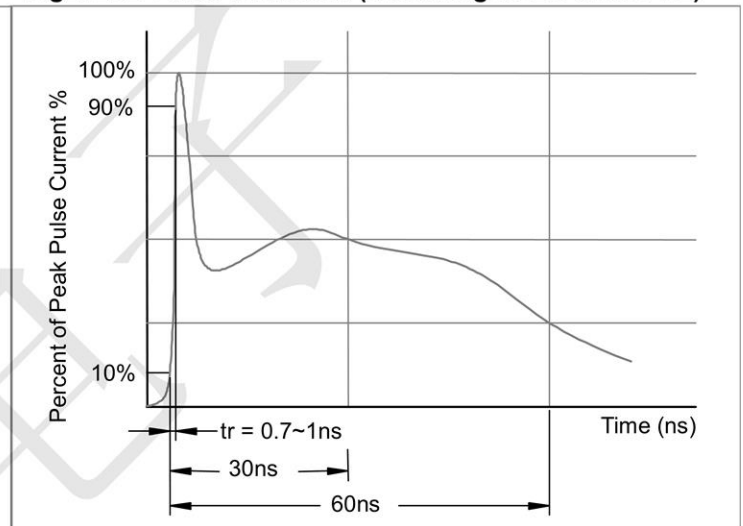
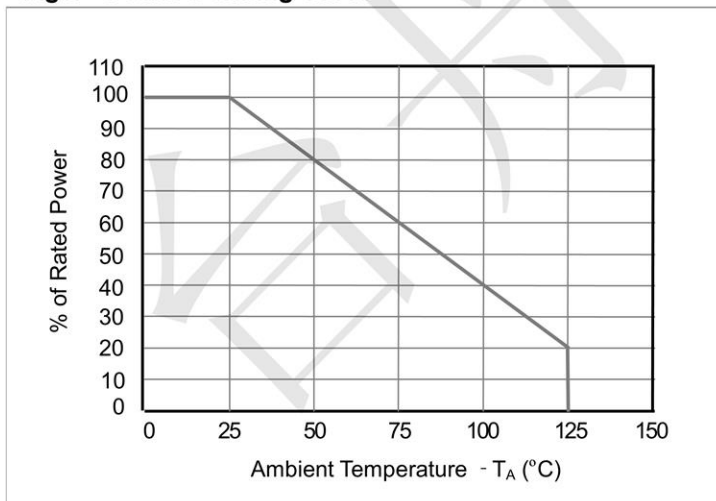
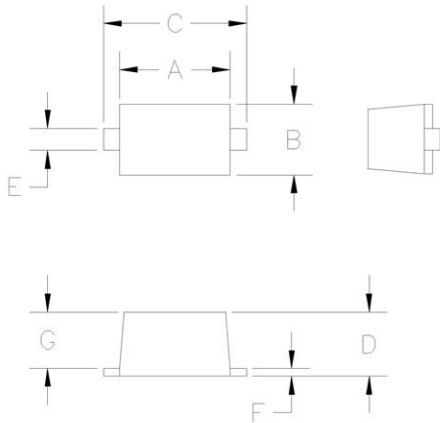


Fig3. Power Derating Curve





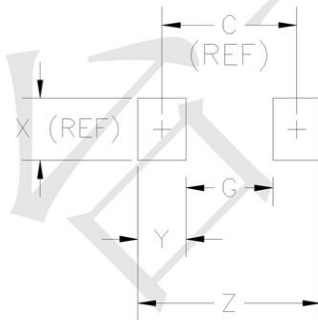
SOD-523 Package Outline Drawing



DIM ^N	DIMENSIONS				NOTE
	INCHES		MM [1]		
A	.043	.051	1.10	1.30	-
B	.028	.035	0.70	0.90	-
C	.059	.067	1.50	1.70	-
D	.020	.028	0.50	0.70	-
E	.010	.014	0.25	0.35	-
F	.004	.008	0.10	0.20	-
G	.020	.028	0.50	0.70	-

[1] CONTROLLING DIMENSION: MILLIMETERS

Suggested Land Pattern



DIM ^N	DIMENSIONS				NOTE
	INCHES		MM [1]		
C	-	.067	-	1.70	REF
G	-	.043	-	1.10	-
X	-	.031	-	0.80	REF
Y	-	.024	-	0.60	-
Z	-	.091	-	2.30	-

[1] CONTROLLING DIMENSION: MILLIMETERS