

Transient Voltage Suppressors for ESD Protection

SE05D9S01HZ

Features

- ◆ Small body outline dimensions
- ◆ Low body height
- ◆ Low Leakage current
- ◆ Response time is typically < 1 ns

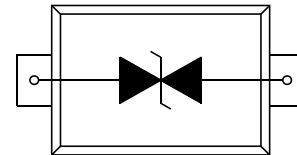
SOD-923



Applications

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

Pin Configuration



Mechanical Characteristics

- ◆ SOD-923 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 8,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
T _L	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _{OP}	Operating Temperature Range	-40 to +125	°C
V _{ESD}	ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	KV

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Electrical Characteristics (T_A=25 °C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	V _R	---	---	---	5.0	V
Reverse Breakdown Voltage	V _{BR}	I _T = 1 mA	5.6	---	---	V
Reverse Leakage Current	I _R	V _R = 5V	---	---	0.5	μA
Clamping Voltage	V _C	I _{PP} = 5A, t _p = 8/20μs	---	---	11.6	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz	---	---	15.0	pF

Characteristic Curves(T_A=25°C, unless otherwise noted)

Fig1. V- I Curve Characteristics

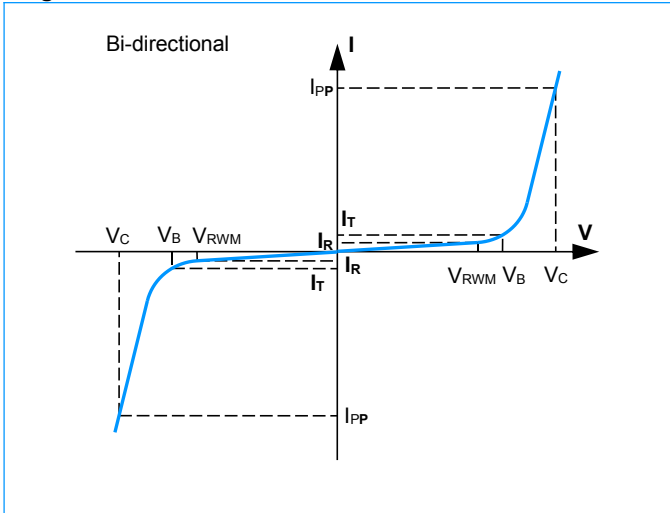


Fig2. 8/20μs Pulse Waveform

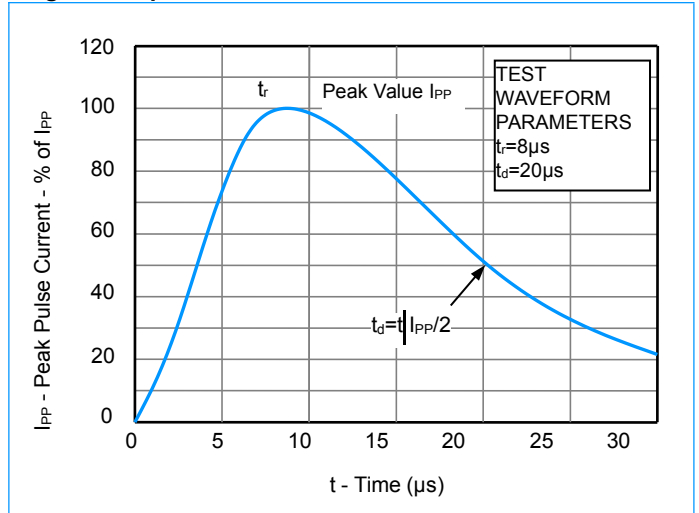


Fig3. ESD Pulse Waveform (according to IEC 61000-4-2)

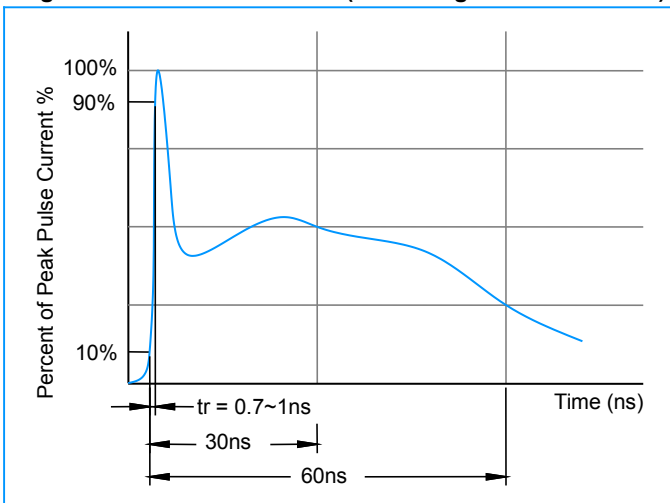
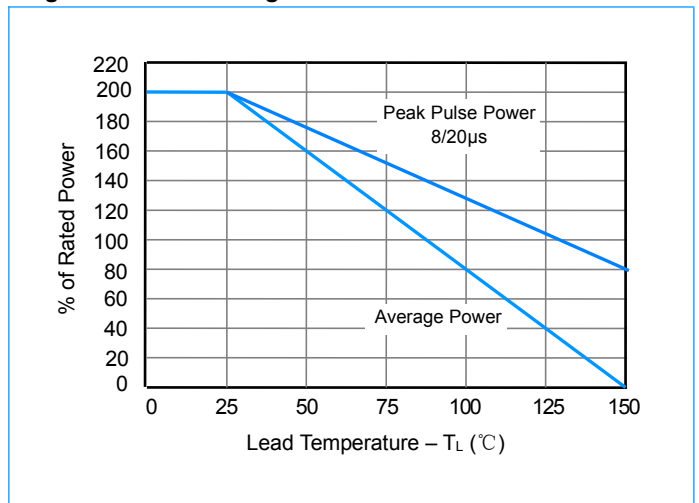


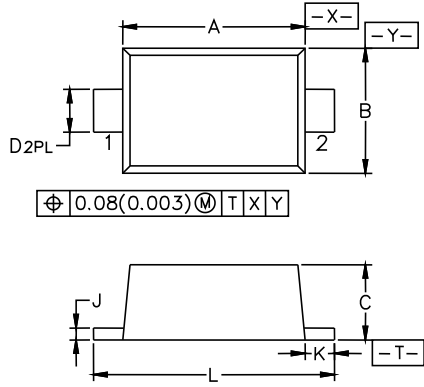
Fig4. Power Derating



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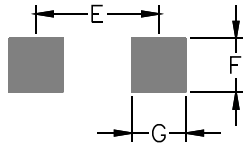
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SOD-923 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.75	0.80	0.85	0.030	0.031	0.033
B	0.55	0.60	0.65	0.022	0.024	0.026
C	0.34	0.37	0.40	0.013	0.015	0.016
D	0.15	0.20	0.25	0.006	0.008	0.010
J	0.07	0.12	0.17	0.0028	0.0047	0.0067
K	0.05	0.10	0.15	0.002	0.004	0.006
L	0.95	1.00	1.05	0.037	0.040	0.041

Soldering Footprint



Symbol	Millimeters	Inches
E	0.90	0.0354
F	0.40	0.0157
G	0.30	0.0118