

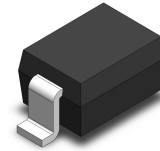
Transient Voltage Suppressors for ESD Protection

SE24D3S01GY

Features

- ◆ Protects one bi-directional I/O line
- ◆ Working voltage: 24V
- ◆ Low leakage current: 1 μ A @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

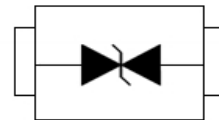
SOD-323



Applications

- ◆ Cell phone handsets and accessories
- ◆ Microprocessor based equipment
- ◆ Personal digital assistants (PDA's)
- ◆ Notebooks, desktops, and servers
- ◆ Portable instrumentation

Pin Configuration



Protection Solution to Meet

- ◆ IEC61000-4-2 (ESD) ± 30 kV (air), ± 30 kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (Lightning) 7A(8/20 μ s)

Mechanical Characteristics

- ◆ SOD-323 package
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Weight 5 milligrams (approximate)
- ◆ Quantity per reel: 3,000pcs
- ◆ Lead finish: lead free

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Symbol	Parameter	Value	Units
T_{LST}	Lead Soldering Temperature	260 (10sec)	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
T_{OPT}	Operating Temperature Range	-55 to +125	$^{\circ}\text{C}$
V_{ESD}	ESD per IEC 61000-4-2(Air)	± 30	KV
	ESD per IEC 61000-4-2 (Contact)	± 30	

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Electrical Characteristics (@T_A=25°C Unless Otherwise Specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V _{RWM}	--	--	--	24	V
I _R	V _{RWM} =24V, T=25°C	--	--	1	μA
V _{BR}	I _T = 1mA	26.7	--	--	V
V _C	I _{PP} =1A, t _p =8/20μs	--	33	--	V
V _C	I _{PP} =7A, t _p =8/20μs	--	46	--	V
C _J	V _R =0V, f=1MHz	--	18	--	pF

Ratings and V-I Characteristics Curves (T_A=25°C, unless otherwise noted)

Fig1. V-I Curve Characteristics (Bi-directional)

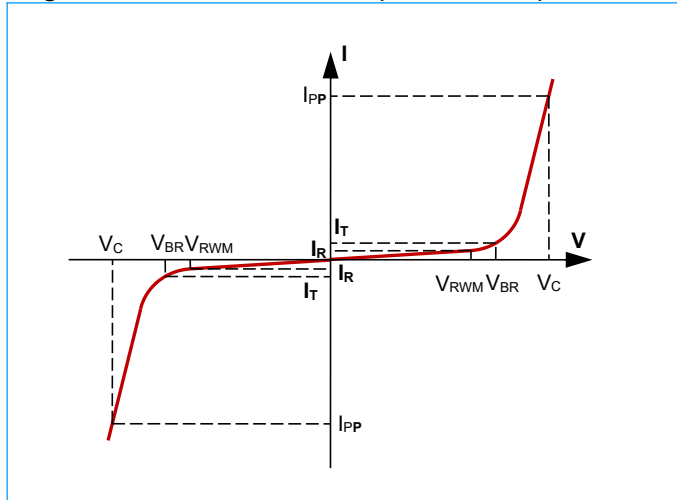


Fig2. Pulse Waveform (8/20μs)

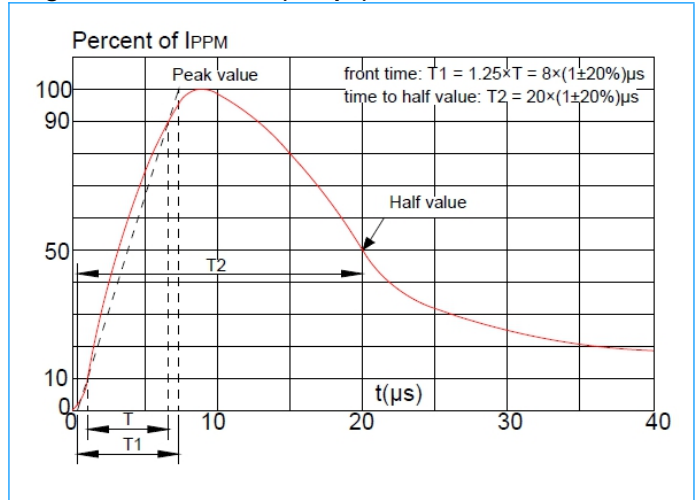


Fig3. Pulse Derating Curve

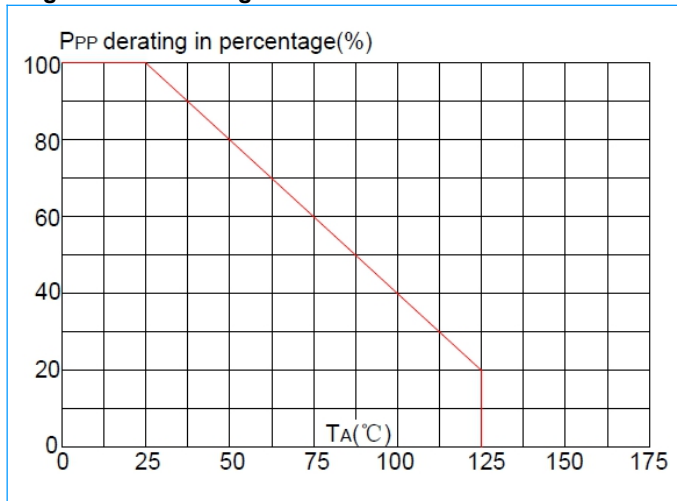
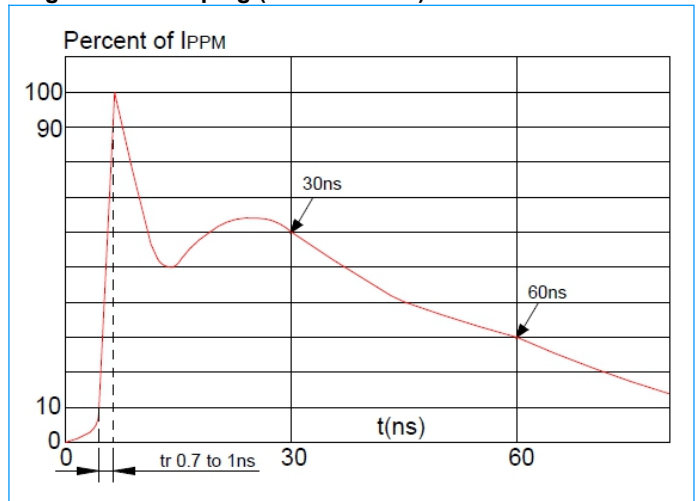


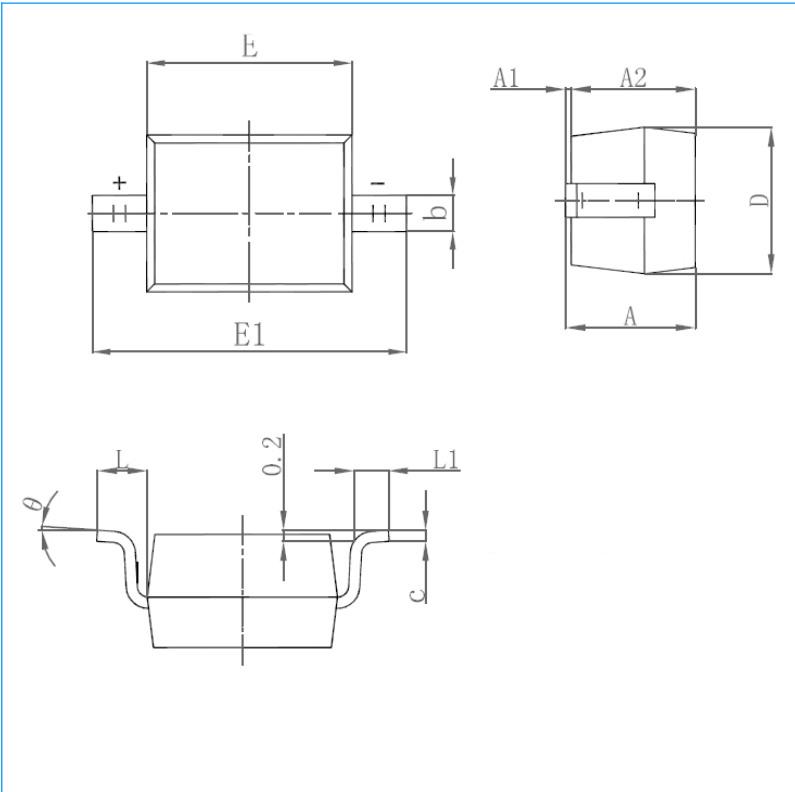
Fig4. ESD Clamping (30kV Contact)



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SOD-323 Package Outline Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	--	1.00	--	0.039
A1	0.00	0.10	0.000	0.004
A2	0.80	0.90	0.031	0.035
b	0.25	0.35	0.010	0.014
c	0.08	0.15	0.003	0.006
D	1.20	1.40	0.047	0.055
E	1.60	1.80	0.063	0.071
E1	2.55	2.75	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.25	0.40	0.010	0.016
θ	0°	8°	0°	8°

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