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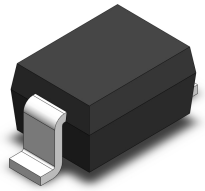
Bi-directional TVS Diode for ESD Protection

SE05D3S01GQ

Features

- Protects one I/O or Power Line
- Low Clamping Voltage
- Working Voltage: 5V
- Low Leakage Current
- Response Time is Typically < 1 ns

SOD-323



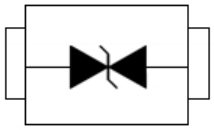
Main Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDA's)

Mechanical Characteristics

- JEDEC SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Quantity per reel: 3,000pcs
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Absolute Maximum Ratings

Rating	Symbol	Value	Units
Operating Temperature Range	T_J	-40 to +125	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±30 ±30	kV

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Electrical Characteristics (T_A= 25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	V_R	--	--	--	5	V
Reverse Breakdown Voltage	V_{BR}	I_T = 1 mA	5.6	--	8	V
Reverse Leakage Current	I_R	V_R = 5V	--	--	0.1	μA
Peak Pulse Current	I_{PP}	t_P = 8/20μs	--	--	8	A
Clamping Voltage	V_C	I_{PP} = 8A, tp = 8/20μs	--	10	--	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	--	15	--	pF

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

Fig.1. Pulse Waveform (8/20μs)

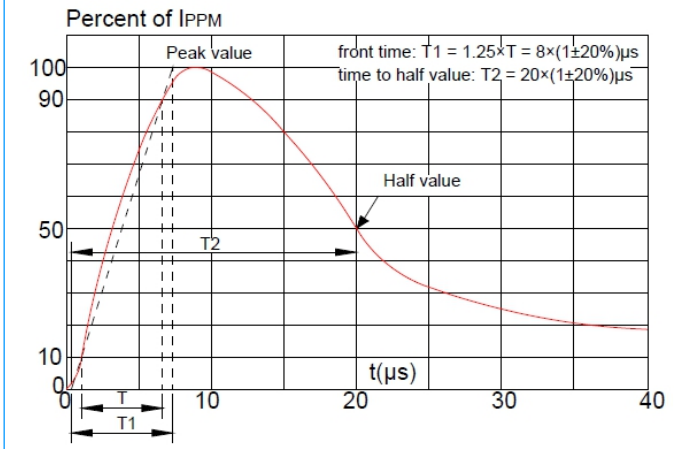


Fig.2. Pulse Derating Curve

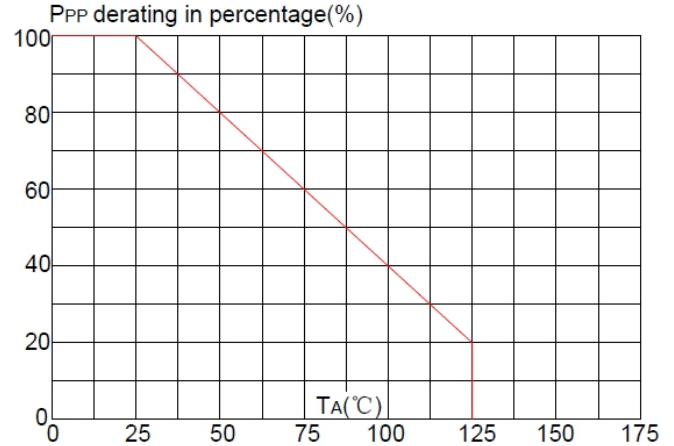
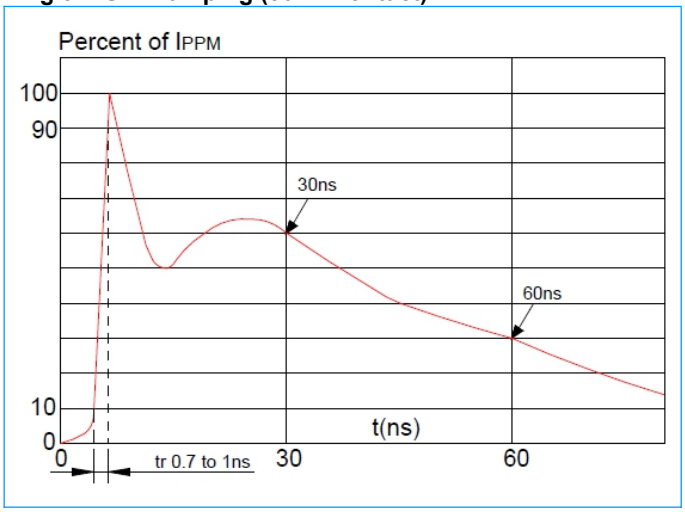


Fig.3. ESD Clamping (30kV Contact)

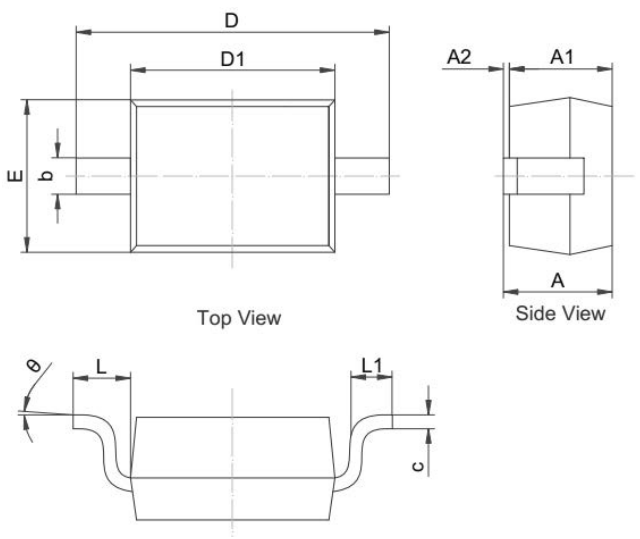


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SOD-323 Package Outline Dimensions



Symbol	Millimeters		
	Min.	Nom.	Max.
A	0.800	--	1.100
A1	0.800	--	0.900
A2	0.000	--	0.100
b	0.250	--	0.400
c	0.080	--	0.177
D1	1.600	1.700	1.800
D	2.300	--	2.800
E	1.150	--	1.400
L	0.475 REF		
L1	0.100	--	0.500
θ	0°	--	8°

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