

Transient Voltage Suppressors for ESD Protection

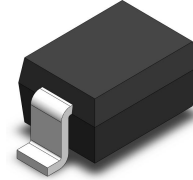
Low Capacitance

SE12D3D01GN

Features

- ◆ IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ◆ Response Time is $< 1\text{ns}$
- ◆ Protect one I/O line (bidirectional)
- ◆ Low clamping voltage
- ◆ Low leakage current

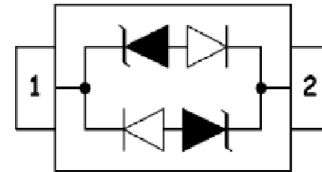
SOD-323



Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based Equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ USB Interface

Pin Configuration



Mechanical Characteristics

- ◆ SOD-323 Package
- ◆ Flammability Rating: UL 94V-0
- ◆ Packaging: 3000 PCS / Tape & Reel
- ◆ High Temperature Soldering Guaranteed: $260^{\circ}\text{C}/10\text{s}$
- ◆ Reel Size: 7 inch

Absolute Maximum Ratings (TA=25°C unless otherwise specified)

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

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

Part Number	V_{RWM} (V) (Max)	V_B (V) (Min)	I_T (mA)	$V_C @ 1A$ (V) (Typ)	V_C (V)		I_R (μA) (Max)	C_T (pF) (Typ)
					(Typ)	(@A)		
SE12D3D01GN	12.0	13.3	1	17.0	24.0	12.0	1	0.85

Electrical Characteristics Curves

Fig. 1. Pulse Waveform

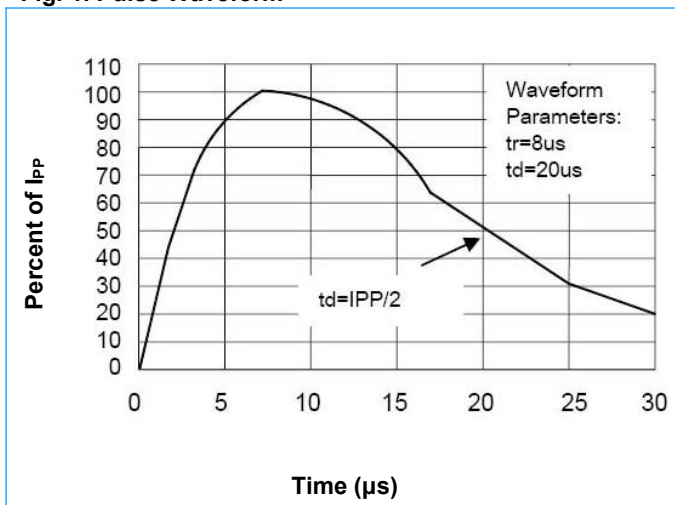


Fig. 2. Non-Repetitive Peak Pulse Power vs. Pulse Time

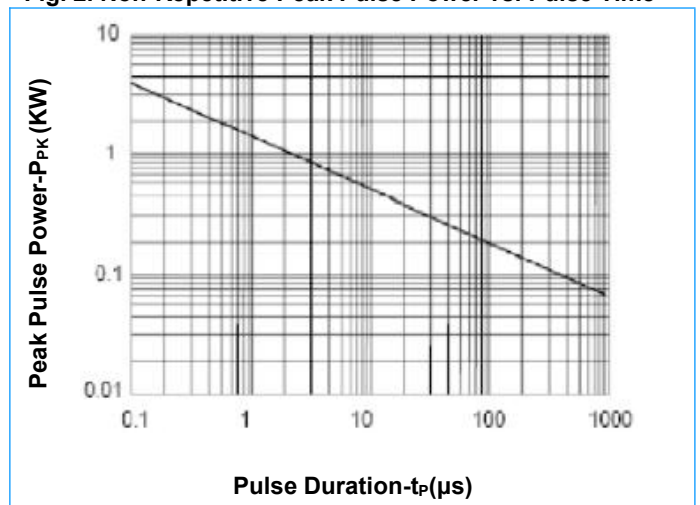
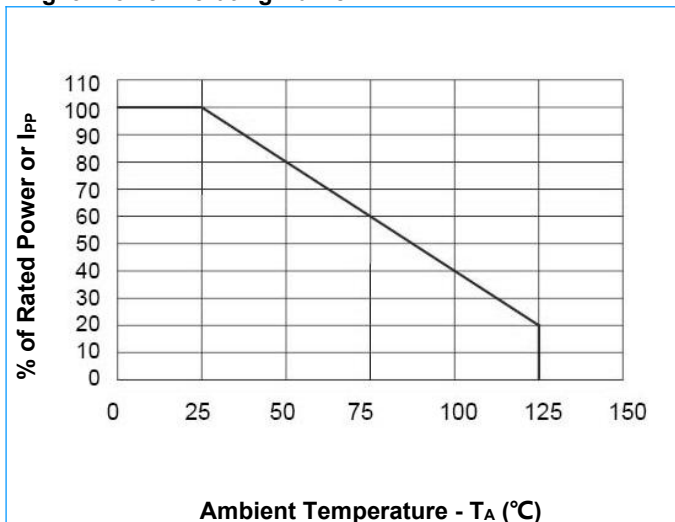
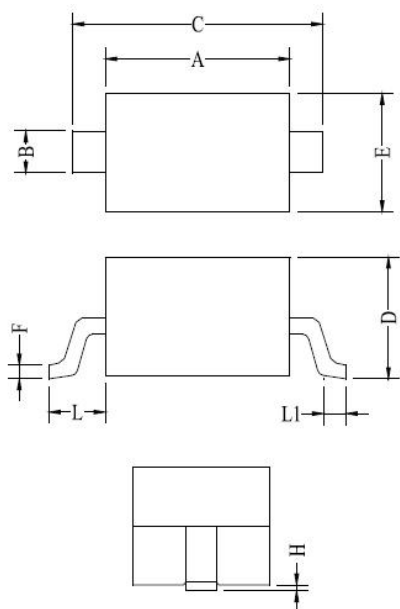


Fig. 3. Power Derating Curve



SOD-323 Package Outline & Dimensions


Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.60	1.70	1.80	0.063	0.067	0.071
B	0.25	0.32	0.40	0.010	0.013	0.016
C	2.30	2.60	2.80	0.091	0.102	0.110
D	0.80	0.95	1.10	0.031	0.037	0.043
E	1.20	1.30	1.40	0.047	0.051	0.055
F	0.08	0.13	0.18	0.003	0.005	0.007
L	0.475REF			0.019REF		
L1	0.25	0.33	0.40	0.010	0.013	0.016
H	0.00	0.06	0.14	0.000	0.002	0.006

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