

Transient Voltage Suppressors for ESD Protection

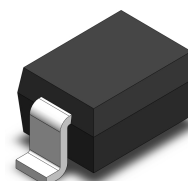
Low Capacitance

SE03D3D01GQ

Feature

- ◆ IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ Protect one I/O line (bidirectional)
- ◆ Low clamping voltage
- ◆ Working voltage: 3.3V
- ◆ Low leakage current
- ◆ Response time is $< 1\text{ns}$

SOD-323



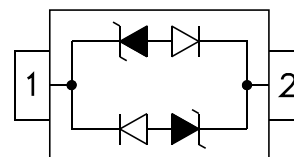
Applications

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

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
- ◆ Material: Halogen Free

Pin Configuration



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_J	$-40 \sim +125$	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^{\circ}\text{C}$
Lead Soldering Temperature	T_L	260	$^{\circ}\text{C}$

Transient Voltage Suppressors for ESD Protection

Low Capacitance

SE03D3D01GQ

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 (V)		I_R (μA) (Max)	C_J (pF) (Typ)
				(Typ)	(@A)		
SE03D3D01GQ	3.3	3.5	1	13	20	0.2	0.8

Electrical Characteristics Curves

Fig.1. Pulse Waveform

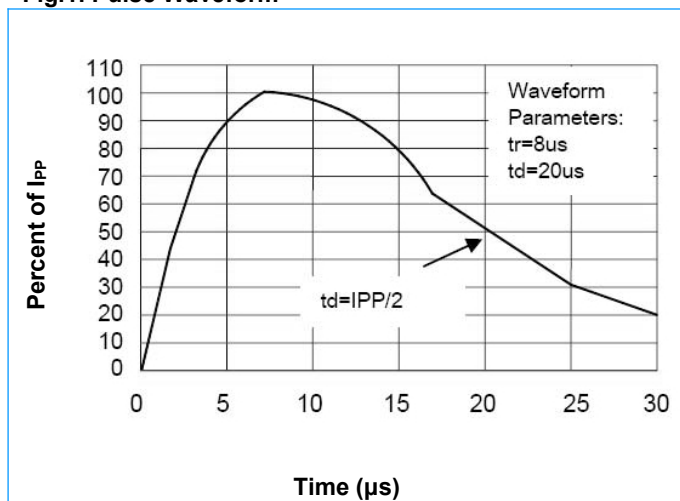
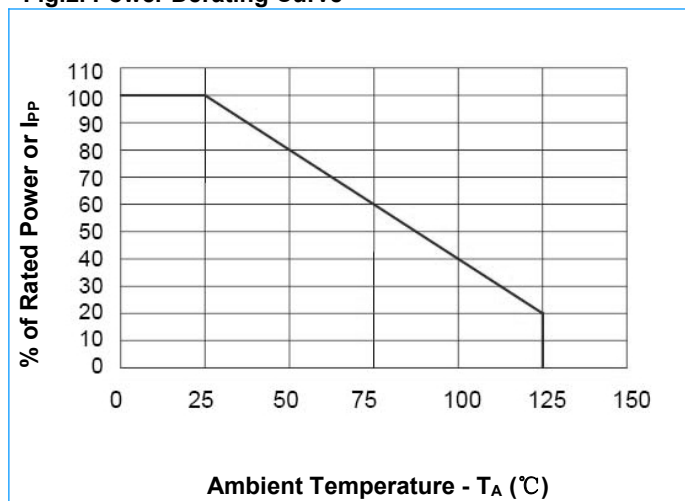
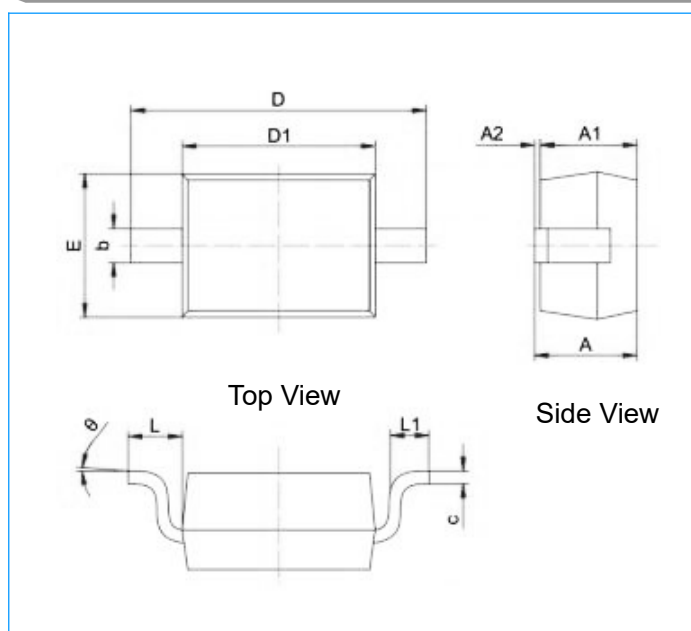


Fig.2. Power Derating Curve



SOD-323 Package Outline Drawing



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°

Transient Voltage Suppressors for ESD Protection

Low Capacitance

SE03D3D01GQ

Warning



- ◆ SOCAY owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property.
- ◆ SOCAY reserves the right to make changes without further notice to any products herein.
- ◆ SOCAY makes no warranties, representations or warranties as to the fitness of its products for any particular purpose, and disclaims any liability.
- ◆ The parameters provided in the SOCAY datasheet specification may vary from application to application, and the actual performance may vary over time. All operating parameters must be verified by the customer's technical expert before application.
- ◆ Any and all responsibilities and liabilities are disclaimed if any item under this notice of warning is not complied with.