

Transient Voltage Suppressors for ESD Protection

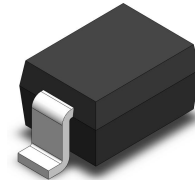
Low Capacitance

SE03D3D01GW

Feature

- ◆ IEC 61000-4-2 (ESD) $\pm 25\text{kV}$ (air), $\pm 25\text{kV}$ (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



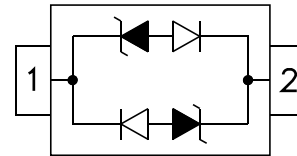
Applications

- ◆ 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
- ◆ Marking Code: CC

Pin Configuration



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 25 ± 25	KV
Operating Temperature Range	T_J	$-55 \sim +150$	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^{\circ}\text{C}$
Lead Solering Temperature	T_L	260	$^{\circ}\text{C}$

Transient Voltage Suppressors for ESD Protection

Low Capacitance

SE03D3D01GW

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

Part Number	V_{RWM} (V) (Max)	V_B (V) (Min)	I_r (mA)	$V_C @ 1A$ (V) (Max)	V_C (V)		I_R (μA) (Max)	C_J (pF) (Typ)
					(Max)	(@A)		
SE03D3D01GW	3.3	4.0	1	7.8	19.5	17	0.1	0.8

Electrical Characteristics Curves

Fig1. Pulse Waveform

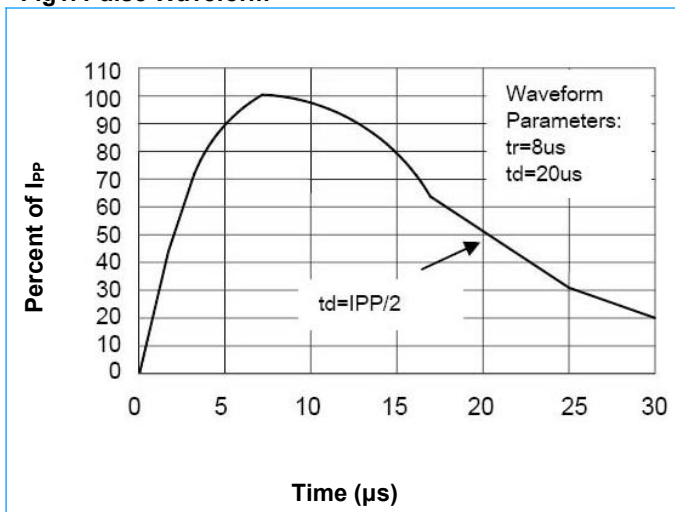


Fig2. Non-Repetitive Peak Pulse Power vs. Pulse Time

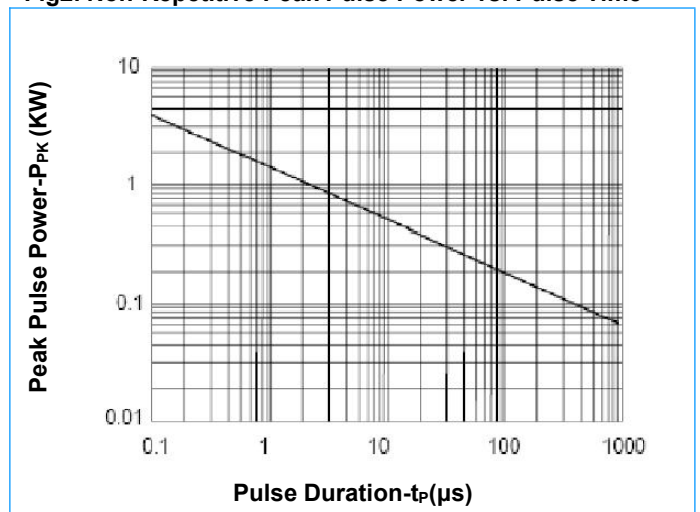


Fig3. Power Derating Curve

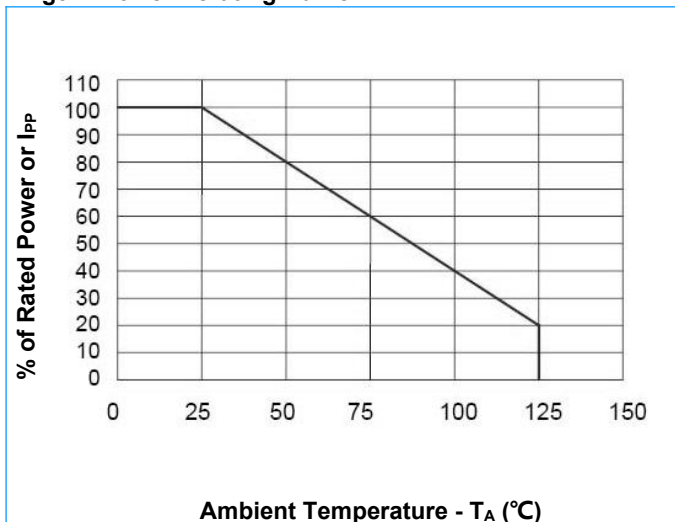
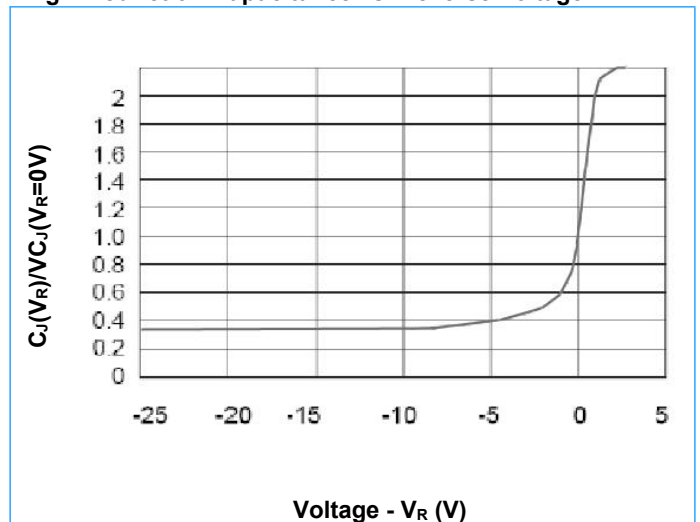


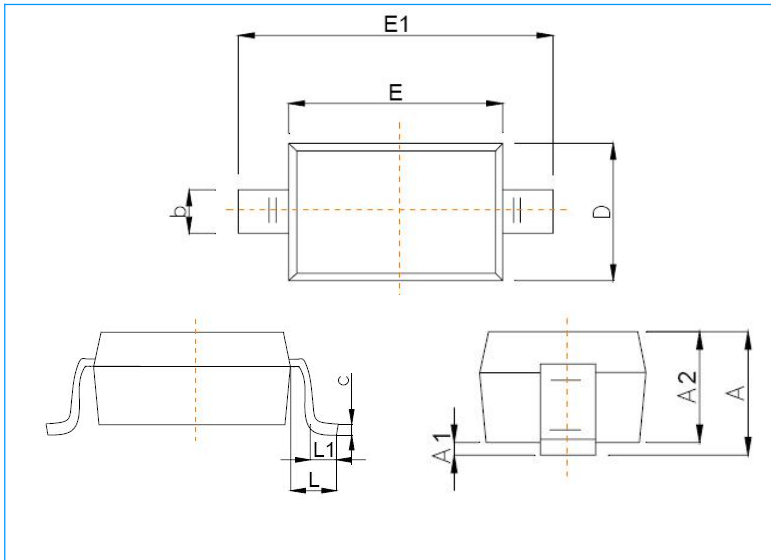
Fig4. Junction Capacitance vs. Reverse Voltage



Transient Voltage Suppressors for ESD Protection

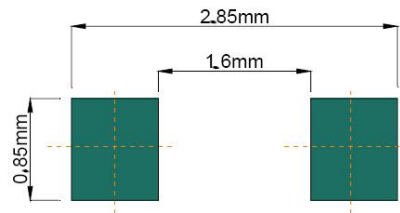
Low Capacitance
SE03D3D01GW

SOD-323 Package Outline & Dimensions



Symbol	Dimensions in Millimeters	
	Min.	Max.
A	--	1.00
A1	0.00	0.10
A2	0.80	0.90
b	0.25	0.35
c	0.08	0.15
D	1.20	1.40
E	1.60	1.80
E1	2.50	2.70
e	1.80	2.04
L	0.475 REF	
L1	0.25	0.40
θ	0°	8°

Recommended Pad Outline



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.