

# Transient Voltage Suppressors for ESD Protection

Low Capacitance

## SE08D3D01GE

### Feature

- ◆ Protects one bi-directional I/O line
- ◆ Low clamping voltage
- ◆ Working voltages: 8V
- ◆ Low leakage current

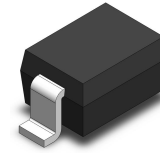
### Applications

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

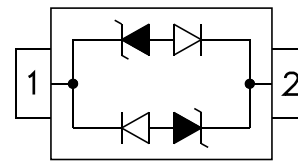
### Mechanical Characteristics

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 5.0 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs

SOD-323



### Functional Diagram

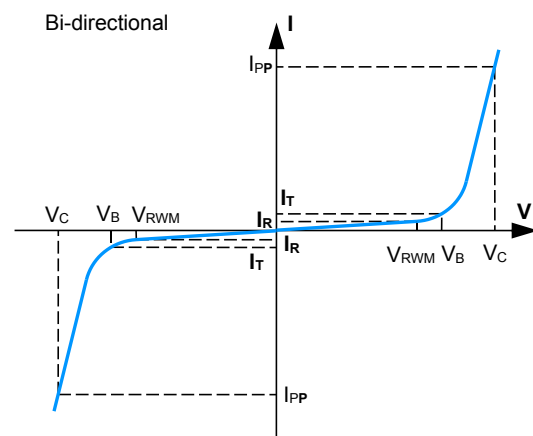


### Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ , $\text{RH}=45\%-75\%$ , unless otherwise noted)

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

### I-V Curve Characteristics

Symbol	Parameter
$I_{\text{PP}}$	Maximum Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{\text{PP}}$
$V_{\text{RWM}}$	Working Peak Reverse Voltage
$I_{\text{R}}$	Maximum Reverse Leakage Current @ $V_{\text{RWM}}$
$I_{\text{T}}$	Test Current
$I_{\text{h}}$	Holding Current @ $V_{\text{h}}$
$V_{\text{B}}$	Breakdown Voltage @ $I_{\text{T}}$



# Transient Voltage Suppressors for ESD Protection

Low Capacitance

## SE08D3D01GE

### Electrical Characteristics (T = 25°C)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
$V_{RWM}$	—	—	—	8	V
$V_{BR}$	$I_T=1mA$	8.5	—	—	V
$I_R$	$V_{RWM}=8V, T=25^\circ C$	—	—	0.1	$\mu A$
$V_C$	$I_{PP}=1A, t_p=8/20\mu s$	—	—	13	V
$V_C$	$I_{PP}=18A, t_p=8/20\mu s$	—	—	20	V
$C_J$	$V_R=0V, f=1MHz$	—	1	—	pF

### Ratings and V-I Curve Characteristics Curves (T<sub>A</sub>=25°C, unless otherwise noted)

Fig1. Pulse Waveform

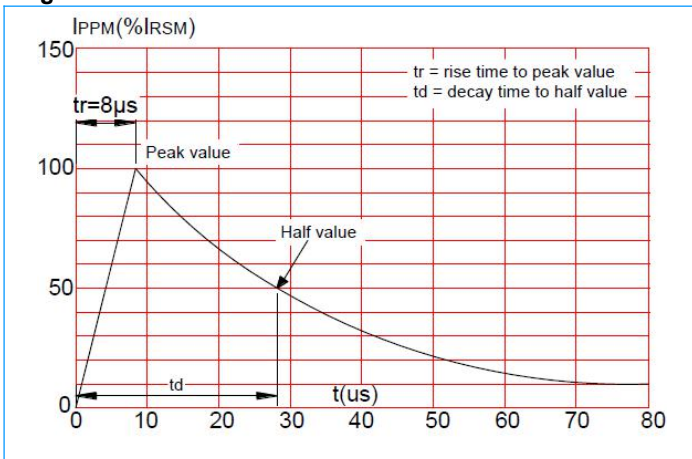


Fig2. Pulse Derating Curve

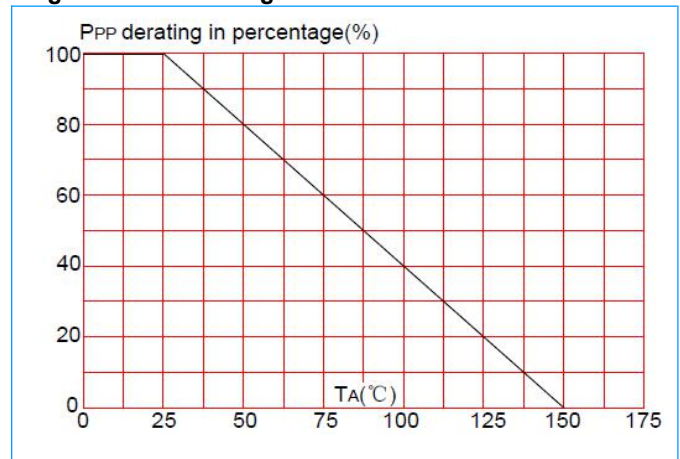
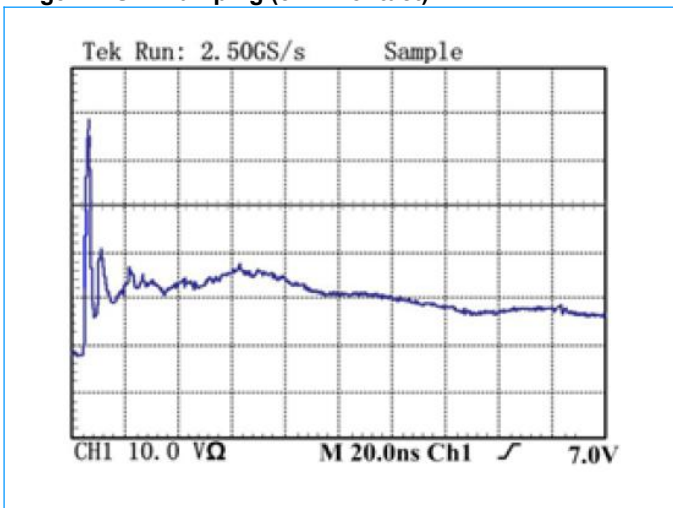
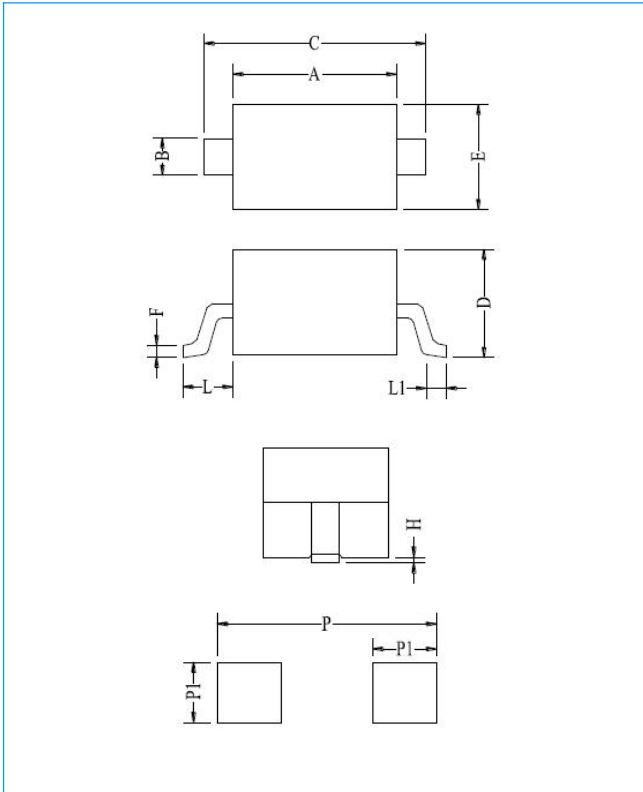


Fig3. ESD Clamping (8KV Contact)



**Transient Voltage Suppressors for ESD Protection**
**Low Capacitance**
**SE08D3D01GE**
**Package Mechanical Data**


Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
<b>A</b>	1.60	1.80	0.063	0.071
<b>B</b>	0.25	0.35	0.010	0.014
<b>C</b>	2.50	2.70	0.098	0.106
<b>D</b>	0.00	1.00	0.000	0.039
<b>E</b>	1.20	1.40	0.047	0.055
<b>F</b>	0.08	0.15	0.003	0.006
<b>L</b>	0.475REF		0.019REF	
<b>L1</b>	0.25	0.40	0.010	0.016
<b>H</b>	0.00	0.10	0.000	0.004
<b>P</b>	3.00		0.118	
<b>P1</b>	0.80		0.031	