

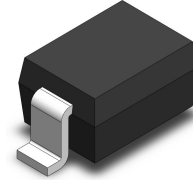
# Transient Voltage Suppressors for ESD Protection

## SE08D3D01GW

### Features

- ◆ IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Response Time is  $< 1\text{ns}$
- ◆ Protect one I/O line (bidirectional)
- ◆ Low clamping voltage
- ◆ Working voltage: 8V
- ◆ Low leakage current

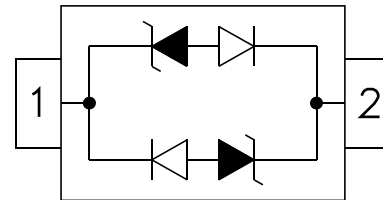
SOD-323



### 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)<br>ESD per IEC 61000-4-2 (Contact) | $V_{\text{ESD}}$ | $\pm 15$<br>$\pm 8$ | KV                 |
| Operating Temperature Range                                    | $T_{\text{OPT}}$ | $-55 \sim +150$     | $^{\circ}\text{C}$ |
| Storage Temperature Range                                      | $T_{\text{STG}}$ | $-55 \sim +150$     | $^{\circ}\text{C}$ |
| Lead Solering Temperature                                      | $T_{\text{L}}$   | 260 (10 sec.)       | $^{\circ}\text{C}$ |

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

| Part Number | $V_{RWM}$<br>(V)<br>(Max) | $V_B$<br>(V)<br>(Min) | $I_T$<br>(mA) | $V_C @ 1A$<br>(V)<br>(Typ) | $V_C$ (V) |      | $I_R$<br>( $\mu\text{A}$ )<br>(Max) | $C_T$<br>(pF)<br>(Typ) |
|-------------|---------------------------|-----------------------|---------------|----------------------------|-----------|------|-------------------------------------|------------------------|
|             |                           |                       |               |                            | (Typ)     | (@A) |                                     |                        |
| SE08D3D01GW | 8.0                       | 8.5                   | 1             | 11                         | 20        | 17.0 | 1                                   | 0.7                    |

### Electrical Characteristics Curves

Fig1. Pulse Waveform

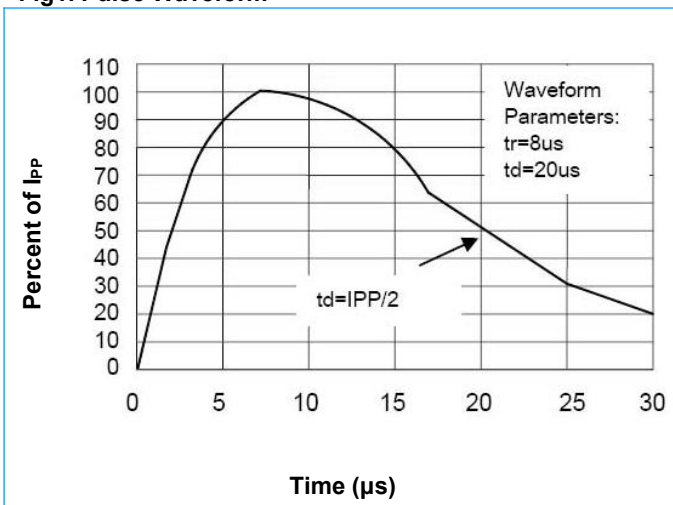


Fig2. Non-Repetitive Peak Pulse Power vs. Pulse Time

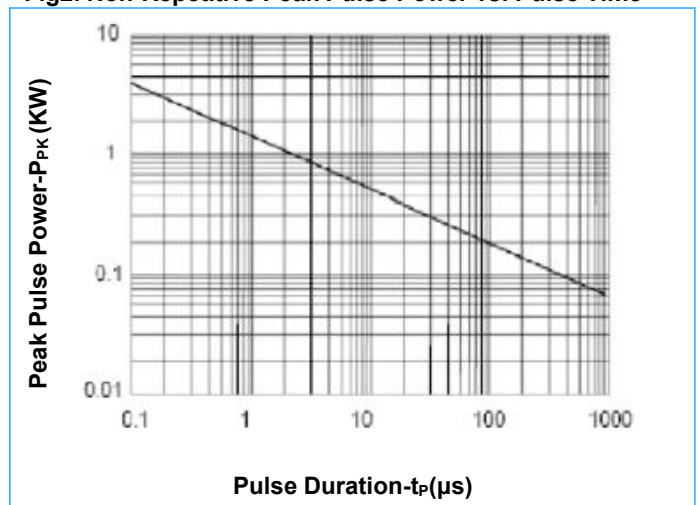


Fig3. Power Derating Curve

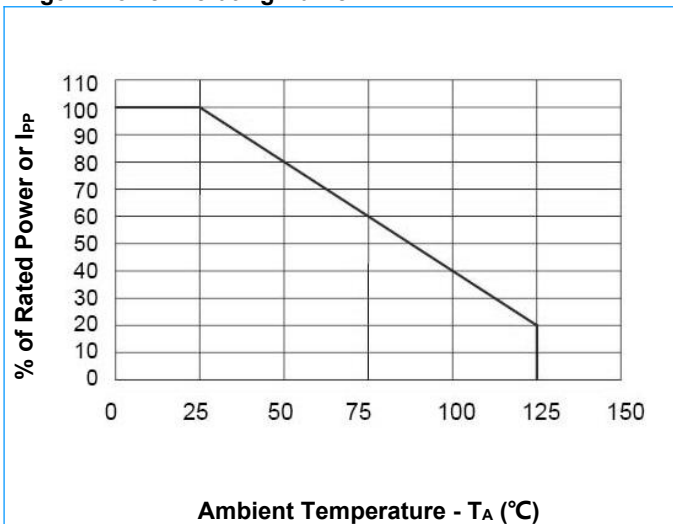
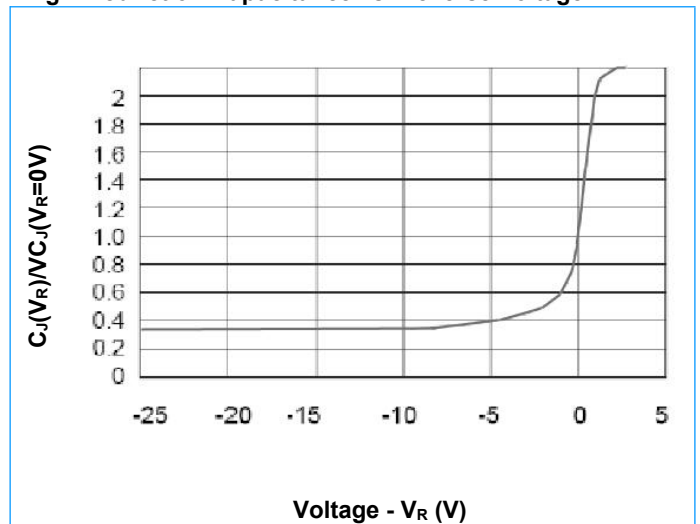


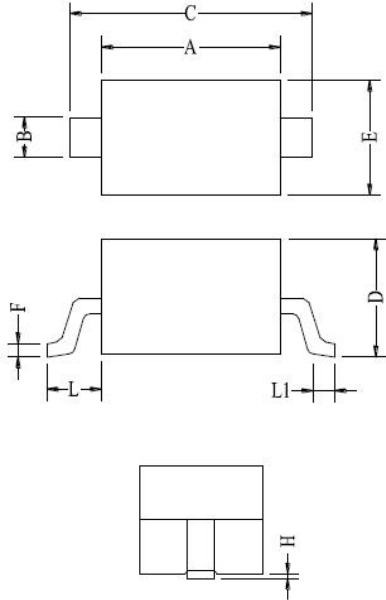
Fig4. Junction Capacitance vs. Reverse Voltage



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### SOD-323 Package Outline & Dimensions



| 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>  | --          | 0.10 | --       | 0.004 |