

**Features**

- Low Clamping Voltage
- Protection One Power Line or I/O Port
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings**

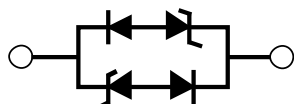
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

| MCC Part Number | Device Marking |
|-----------------|----------------|
| ESDSL3V3D3B     | CC             |

|   |                 |       |
|---|-----------------|-------|
| IEC61000-4-2(ESD)                                   | Contact         | ±30KV |
| IEC61000-4-5 (Lightning) Peak Pulse Current(8/20µs) | I <sub>PP</sub> | 20A   |
| Peak Pulse Power (8/20us)                           | P <sub>PK</sub> | 350W  |

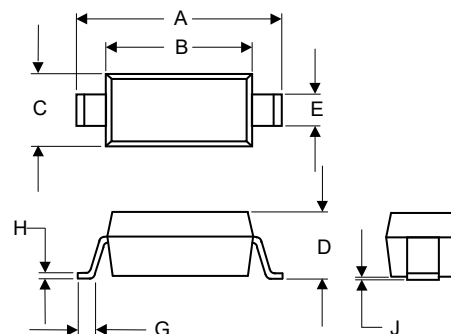
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



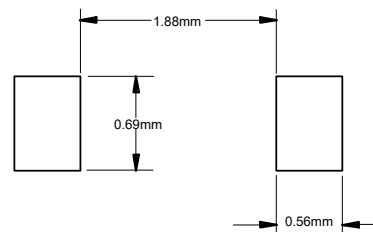
**ESD Protection Device**

**SOD-323**



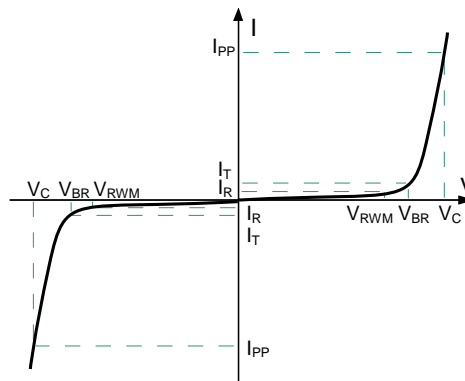
| DIM | DIMENSIONS |       |       |      | NOTE |
|-----|------------|-------|-------|------|------|
|     | INCHES     |       | MM    |      |      |
|     | MIN        | MAX   | MIN   | MAX  |      |
| A   | 0.090      | 0.107 | 2.30  | 2.70 |      |
| B   | 0.063      | 0.071 | 1.60  | 1.80 |      |
| C   | 0.045      | 0.053 | 1.15  | 1.35 |      |
| D   | 0.031      | 0.045 | 0.80  | 1.15 |      |
| E   | 0.010      | 0.016 | 0.25  | 0.40 |      |
| G   | 0.004      | 0.018 | 0.10  | 0.45 |      |
| H   | 0.004      | 0.010 | 0.10  | 0.25 |      |
| J   | -----      | 0.006 | ----- | 0.15 |      |

**Suggested Solder Pad Layout**



**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
| C         | Capacitance @ $V_R=0$ and $f=1\text{MHz}$   |



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

| Parameter                 | Symbol    | Conditions                                     | Min. | Typ. | Max. | Units         |
|---------------------------|-----------|--|------|------|------|---------------|
| Reverse Working Voltage   | $V_{RWM}$ |  |      |      | 3.3  | V             |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T = 1\text{mA}$                             | 4    |      |      | V             |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 3.3\text{V}$                        |      |      | 0.1  | $\mu\text{A}$ |
| Clamping Voltage          | $V_C$     | $I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$ |      |      | 8    | V             |
| Junction Capacitance      | $C_J$     | $V_R = 0\text{V}$ , $f = 1\text{MHz}$          |      | 0.8  | 1.5  | pF            |

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

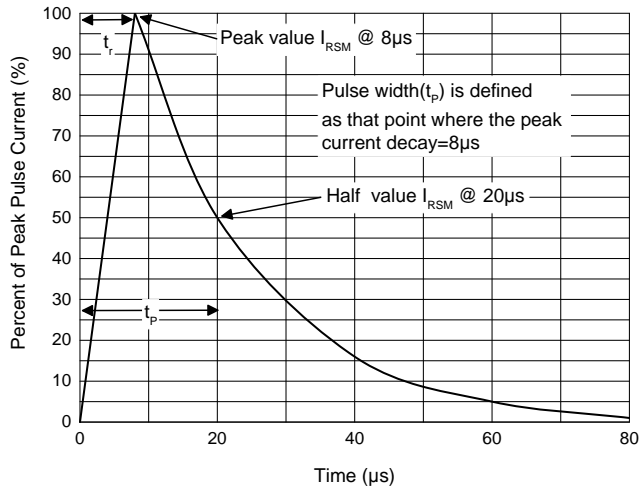


Fig. 2 - Pulse Derating Curve

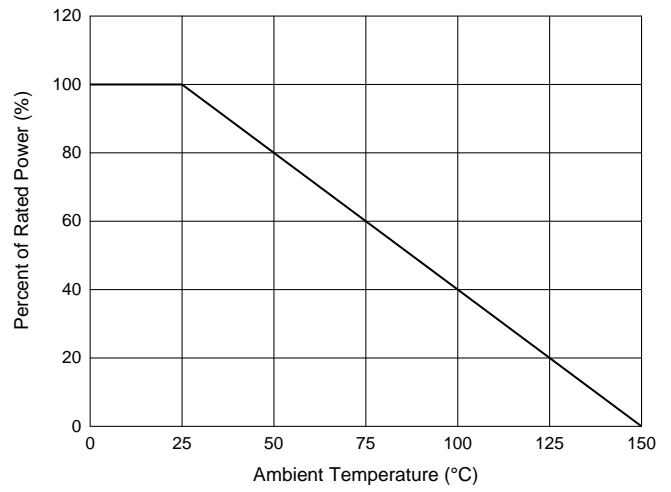


Fig. 3 - Clamping Voltage Characteristics

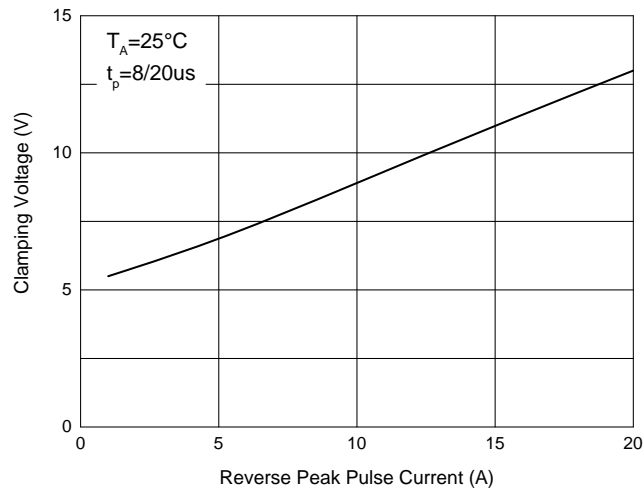
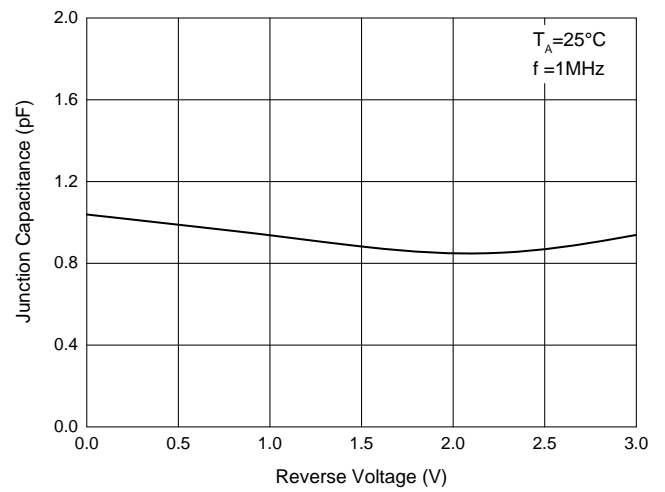


Fig. 4 - Capacitance Characteristics



## Ordering Information

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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