

**Features**

- For Sensitive ESD Protection
- Excellent Clamping Capability
- Low Leakage
- Fast Response, Response Time Less than 1ns.
- 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 |
|-----------------|----------------|
| ESDLC5V0D9B     | 1L             |

|                    |             |               |
|--------------------|-------------|---------------|
| IEC61000-4-2(ESD)  | Air Contact | ±15KV<br>±8KV |
| JESD22-A114-B(ESD) | Human Body  | 16KV          |

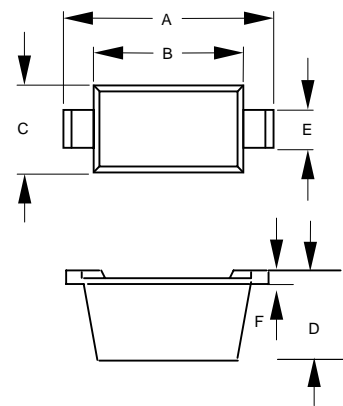
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



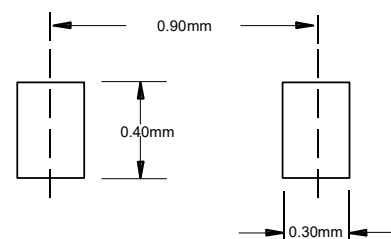
**ESD Protection Device**

**SOD-923**



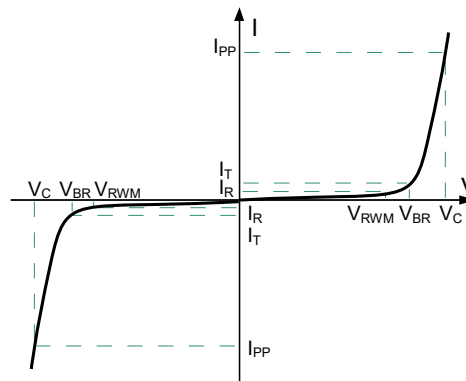
| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
|     | MIN        | MAX   | MIN  | MAX  |      |
| A   | 0.037      | 0.041 | 0.95 | 1.05 |      |
| B   | 0.030      | 0.033 | 0.75 | 0.85 |      |
| C   | 0.022      | 0.026 | 0.55 | 0.65 |      |
| D   | 0.014      | 0.017 | 0.36 | 0.43 |      |
| E   | 0.006      | 0.010 | 0.15 | 0.25 |      |
| F   | 0.003      | 0.007 | 0.07 | 0.17 |      |

**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   | $V_{RWM}$ |                                    |      |      | 5    | V             |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T = 1\text{mA}$                 | 5.6  | 6.7  | 7.8  | V             |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 5\text{V}$              |      |      | 1    | $\mu\text{A}$ |
| Junction Capacitance      | $C_J$     | $V_R = 0\text{V}, f = 1\text{MHz}$ |      | 2.1  |      | pF            |

## Curve Characteristics

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

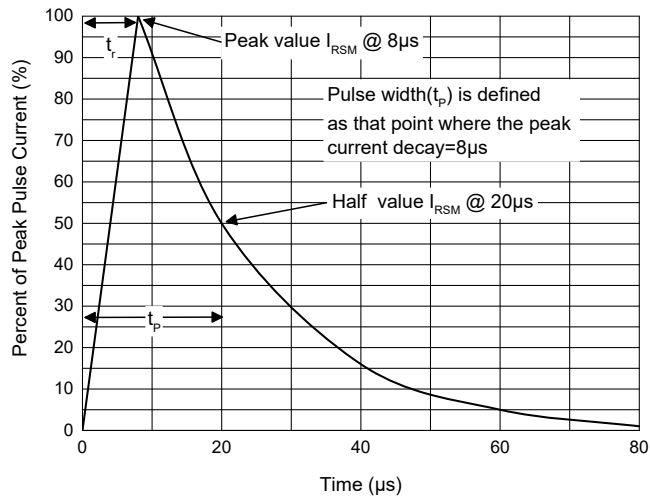
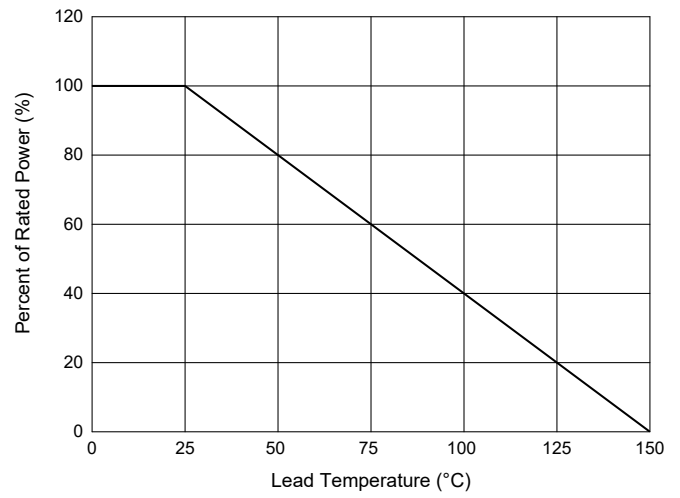


Fig. 2 - Pulse Derating Curve



## Ordering Information

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 8Kpcs/Reel |

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