

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 ±8KV |
| JESD22-A114-B(ESD) | Human Body | 16KV |

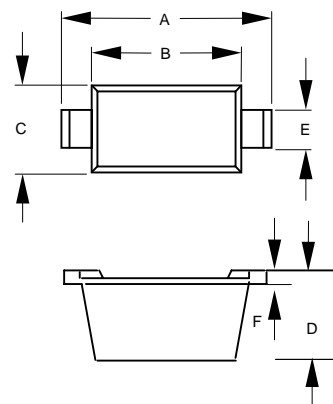
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



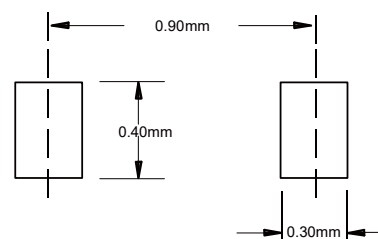
ESD Protection Device

SOD-923



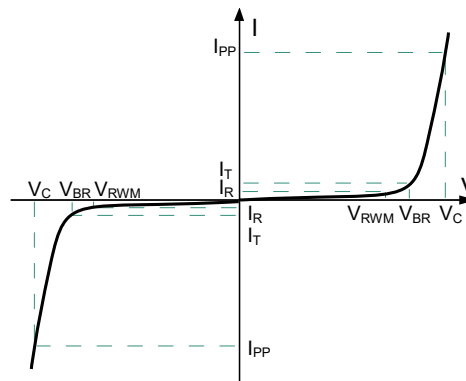
| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.037 | 0.041 | 0.95 | 1.05 | |
| B | 0.030 | 0.033 | 0.75 | 0.85 | |
| C | 0.022 | 0.026 | 0.55 | 0.65 | |
| D | 0.014 | 0.017 | 0.36 | 0.43 | |
| E | 0.006 | 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 | μA |
| Clamping Voltage | V_C | $I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$ | | | 10 | V |
| Clamping Voltage | V_C | $I_{PP}=1.5\text{A}$, $t_p=8/20\mu\text{s}$ | | | 12 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$ | | 2.1 | | pF |

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

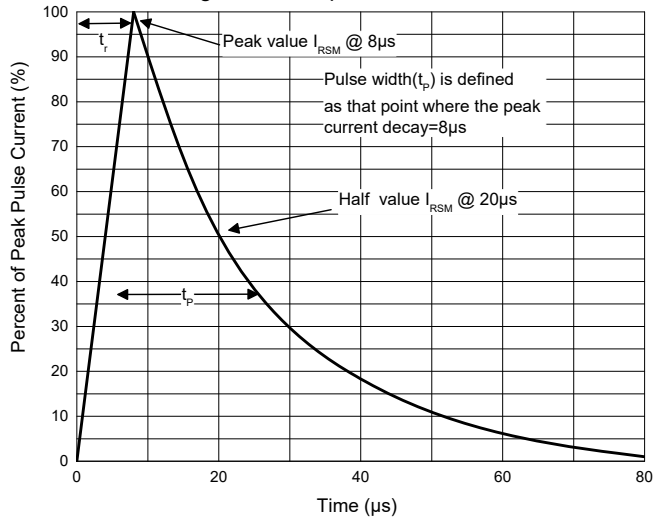


Fig. 6 - Pulse Derating Curve

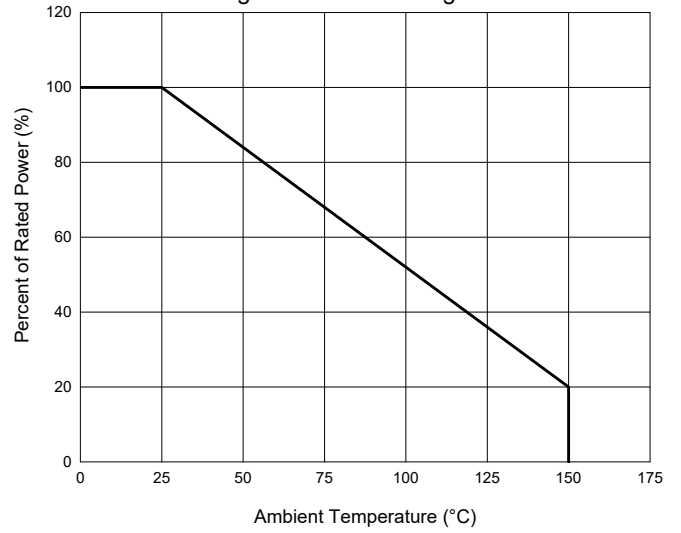


Fig. 3 - Capacitance Characteristics

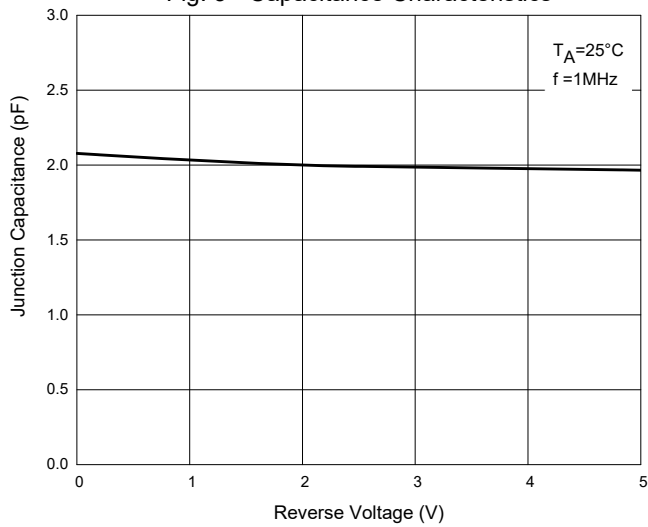
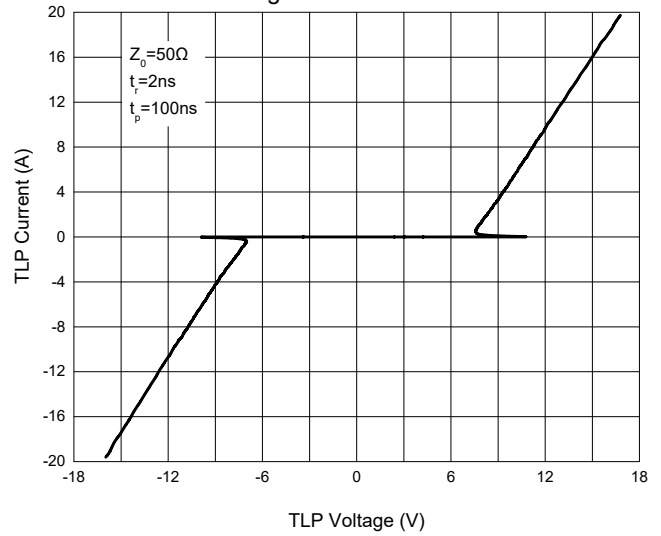


Fig. 5 - TLP Curve



Ordering Information

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

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