

Features

- Low Operating Voltage
- Low Clamping Voltage
- Protects One Data or Power Line.
- 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 +125°C
- Storage Temperature Range: -55°C to +150°C

| MCC Part Number | Device Marking |
|-----------------|----------------|
| ESD3V3D5B | 3Y |

| | | |
|----------------------------|-----------------|----------------|
| IEC61000-4-2(ESD) | Air Contact | ±30KV ±30KV |
| Peak Pulse Current(8/20µs) | I _{PP} | 8A |
| Peak Pulse Power (8/20us) | P _{PK} | 96W |

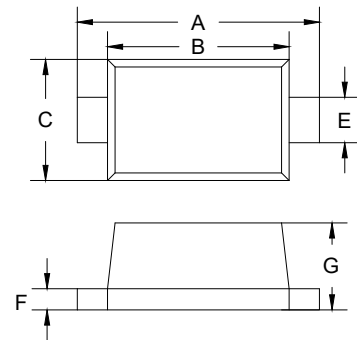
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure

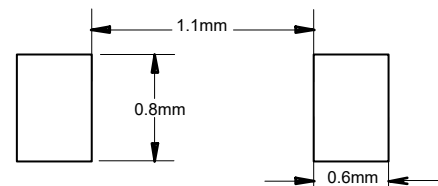


ESD Protection Device

SOD-523

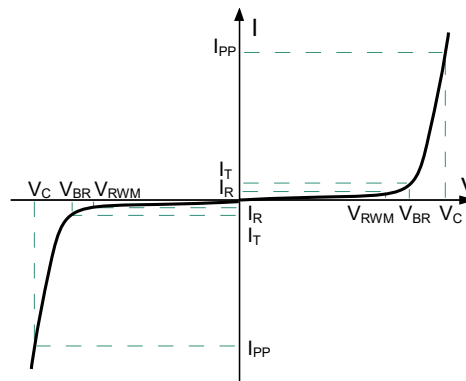


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.059 | 0.067 | 1.50 | 1.70 | |
| B | 0.043 | 0.051 | 1.10 | 1.30 | |
| C | 0.030 | 0.033 | 0.75 | 0.85 | |
| E | 0.010 | 0.014 | 0.25 | 0.35 | |
| F | 0.003 | 0.008 | 0.08 | 0.20 | |
| G | 0.020 | 0.026 | 0.50 | 0.65 | |



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} | $I_T = 1\text{mA}$ | 4.2 | | 6.5 | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 3.3\text{V}$ | | | 0.5 | μA |
| Clamping Voltage | V_C | $I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$ | | | 8 | V |
| Clamping Voltage | V_C | $I_{PP}=8\text{A}$, $t_p=8/20\mu\text{s}$ | | | 12 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$ | | 16 | | pF |

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

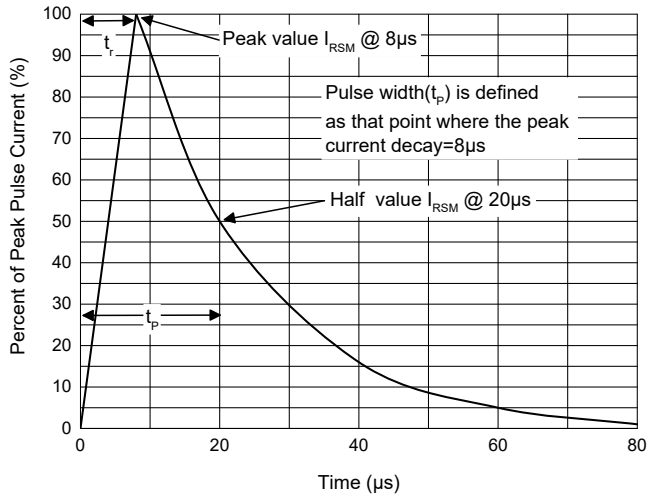


Fig. 2 - Pulse Derating Curve

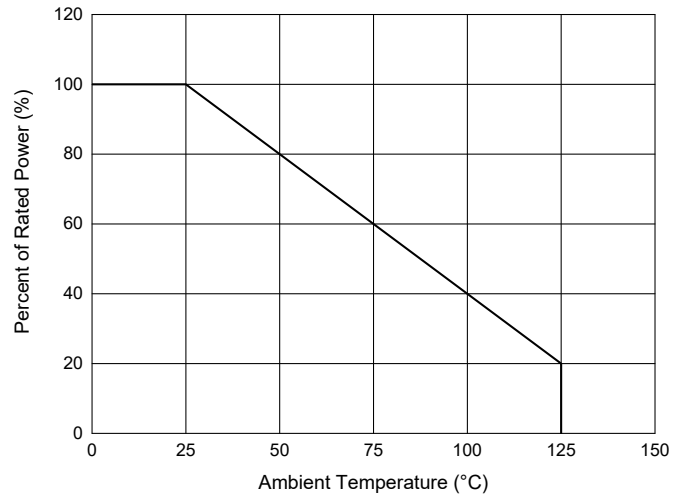


Fig. 3 - Capacitance Characteristics

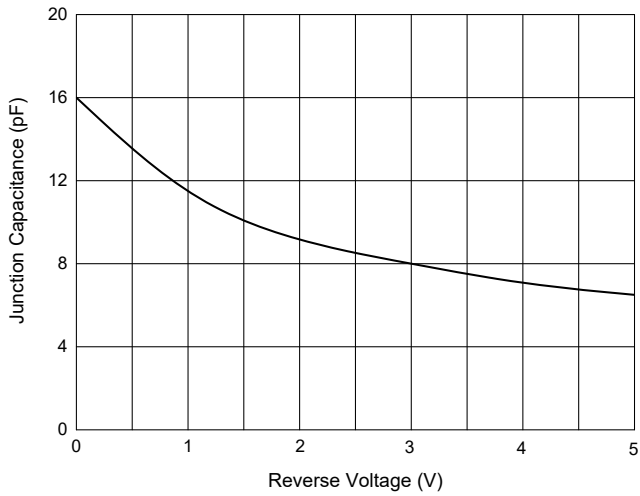
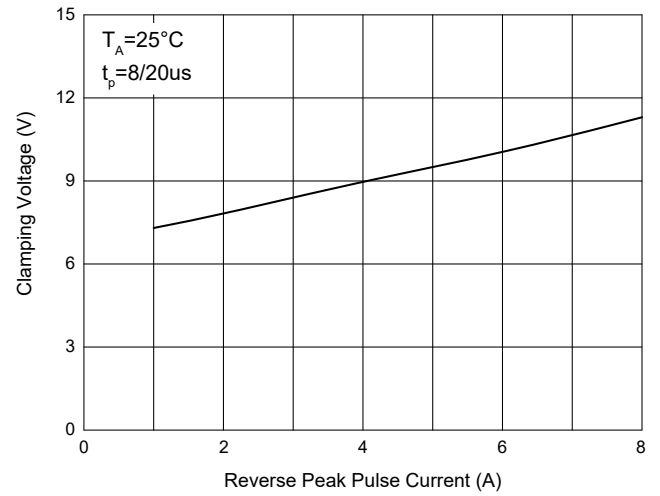


Fig. 4 - Clamping Voltage Characteristics



Ordering Information

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

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