

Features

- AEC-Q101 Qualified
- Low Channel Input Capacitance
- Ultra Low Leakage
- Low Clamping Voltage
- Protects One Data Line of the LIN
- 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 |
|-----------------|----------------|
| ESD1524D3BHE3 | 1524 |

| | | | |
|-----------------------------|------------------|-----------------|----|
| IEC61000-4-2(ESD) | Air Contact | ±20KV | |
| Human Body Model(HBM) | V _{ESD} | 10KV | |
| Peak Pulse Current (8/20µs) | Pin 1 to 2 | I _{PP} | 5A |
| | Pin 2 to 1 | | 3A |
| Peak Pulse Power (8/20µs) | P _{PK} | 160W | |

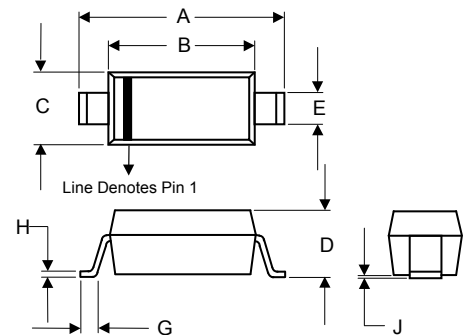
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Circuit and Pin Schematic



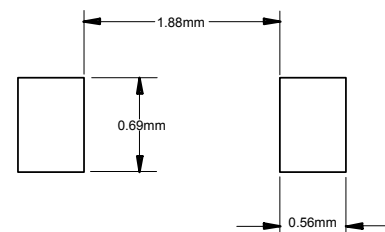
ESD Protection Device

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 @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---------------------------------|-----------|----------------------------|------|------|------|-------|
| Pin 1 to Pin 2 (15V TVS) | | | | | | |
| Reverse Working Voltage | V_{RWM} | | | | 15 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1mA$ | 17.1 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=15V$ | | | 50 | nA |
| Clamping Voltage | V_C | $I_{PP}=1A, t_p=8/20\mu s$ | | | 25 | V |
| Clamping Voltage | V_C | $I_{PP}=5A, t_p=8/20\mu s$ | | | 35 | V |
| Junction Capacitance | C_J | $V_R=0V, f=1MHz$ | | | 17 | pF |
| | | $V_R=15V, f=1MHz$ | | | 10 | pF |
| Pin 2 to Pin 1 (24V TVS) | | | | | | |
| Reverse Working Voltage | V_{RWM} | | | | 24 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1mA$ | 25.4 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=24V$ | | | 50 | nA |
| Clamping Voltage | V_C | $I_{PP}=1A, t_p=8/20\mu s$ | | | 40 | V |
| Clamping Voltage | V_C | $I_{PP}=3A, t_p=8/20\mu s$ | | | 50 | V |
| Junction Capacitance | C_J | $V_R=0V, f=1MHz$ | | | 17 | pF |
| | | $V_R=24V, f=1MHz$ | | | 8 | pF |

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

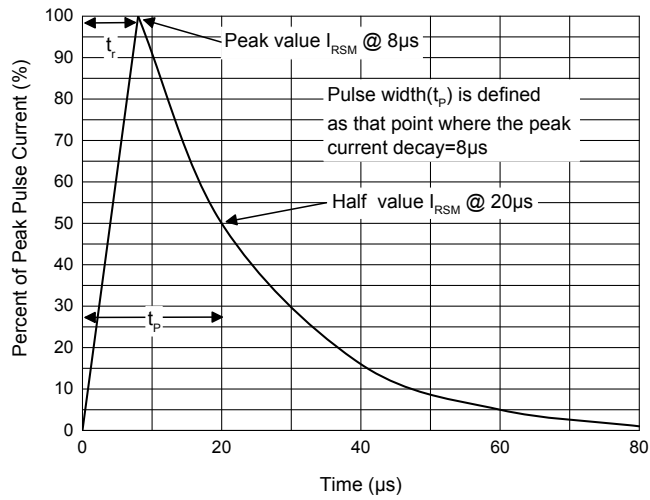


Fig. 2 - Non-Repetitive Peak Pulse Power

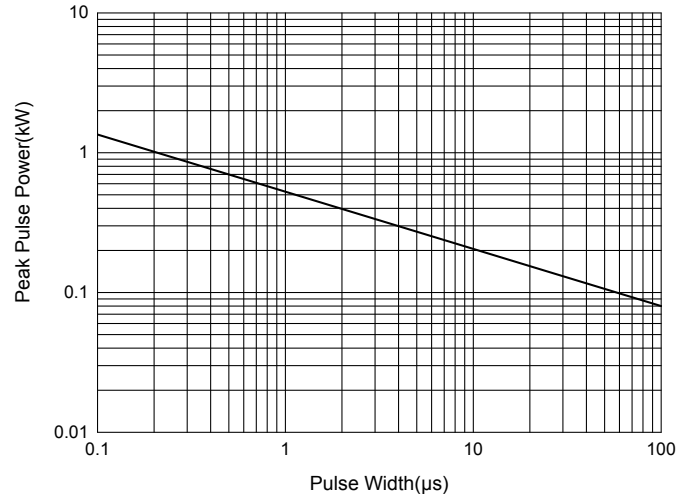


Fig. 3 - Pulse Derating Curve

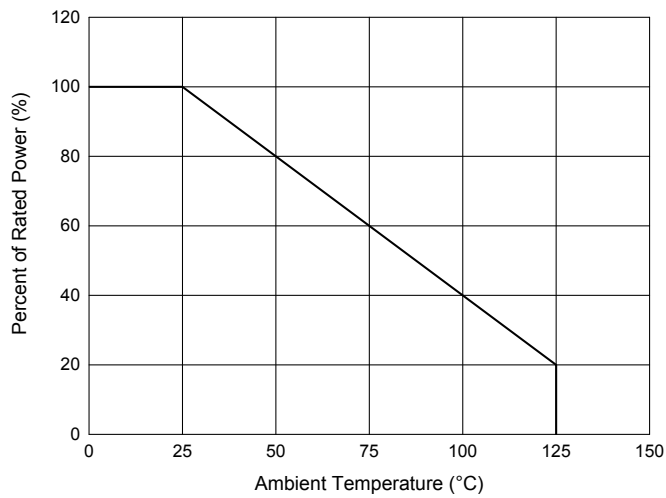


Fig. 4 - Capacitance Characteristics

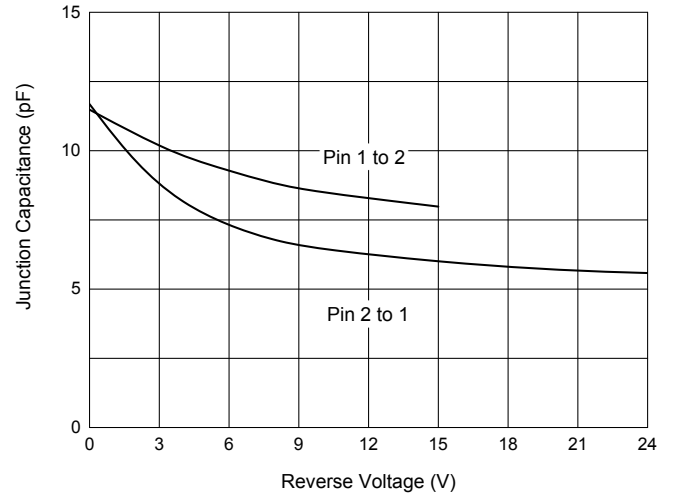
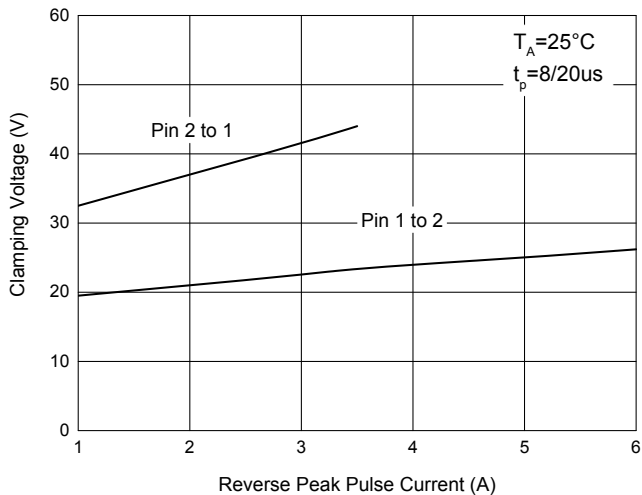


Fig. 5 - Clamping Voltage Characteristics



Ordering Information

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

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