

| | |
|---|----------------|
|  | E480232 |
|---|----------------|

Features

- AEC-Q101 Qualified
- Meet ISO7637-2 5a Surge Specification
- Low Leakage
- Glass Passivated Junction
- Polarity: Heatsink is Anode
- Excellent Clamping Capability
- Uni-directional Polarity
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

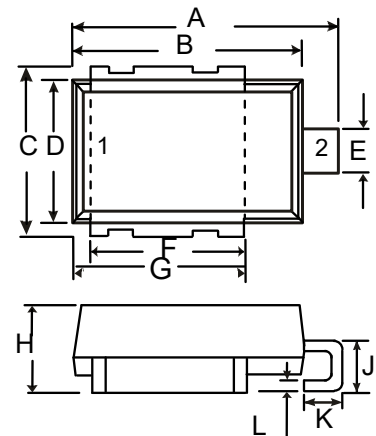
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

| | | | |
|--|-----------|---------------|------------------|
| Peak Pulse Power Surge Current with a 10/1000µs Waveform | I_{PPM} | See the Table | Note 2 |
| Peak Pulse Power Dissipation with a 10/1000µs Waveform | P_{PPM} | 6600W | Note 2 |
| Peak Pulse Power Dissipation with a 10/10000µs Waveform | P_{PPM} | 5200W | |
| Power Dissipation On Infinite Heatsink | P_D | 8.0W | $T_L=25^\circ C$ |
| Peak forward surge current | I_{FSM} | 700A | |

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.
2. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ C$ per Fig.4

**6600 Watt
TVS
10 to 43 Volts**

DO-218AB



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.590 | 0.630 | 15.00 | 16.00 | |
| B | 0.524 | 0.539 | 13.30 | 13.70 | |
| C | 0.374 | 0.413 | 9.50 | 10.50 | |
| D | 0.323 | 0.339 | 8.20 | 8.60 | |
| E | 0.091 | 0.114 | 2.30 | 2.90 | |
| F | 0.343 | 0.366 | 8.70 | 9.30 | |
| G | 0.382 | 0.406 | 9.70 | 10.30 | |
| H | 0.189 | 0.205 | 4.80 | 5.20 | |
| J | 0.098 | 0.138 | 2.50 | 3.50 | |
| K | 0.067 | 0.106 | 1.70 | 2.70 | |
| L | 0.020 | 0.028 | 0.50 | 0.70 | |

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number (Uni) | Breakdown Voltage V_{BR} @ I_T | | | Maximum Reverse Leakage I_R @ V_{RWM} (μA) | Maximum I_R @ V_{RWM} $T_J=175$ (μA) | Working Peak Reverse Voltage V_{RWM} (V) | Maximum Reverse Surge Current IPP (A) ⁽¹⁾ | Maximum Clamping Voltage V_C @ I_{PP} (V) |
|-----------------------------|------------------------------------|---------|------------|--|--|---|---|--|
| | Min (V) | Max (V) | I_T (mA) | | | | | |
| SM8S10A | 11.1 | 12.3 | 5.0 | 15 | 250 | 10 | 388 | 17.0 |
| SM8S11A | 12.2 | 13.5 | 5.0 | 10 | 150 | 11 | 363 | 18.2 |
| SM8S12A | 13.3 | 14.7 | 5.0 | 10 | 150 | 12 | 332 | 19.9 |
| SM8S13A | 14.4 | 15.9 | 5.0 | 10 | 150 | 13 | 307 | 21.5 |
| SM8S14A | 15.6 | 17.2 | 5.0 | 10 | 150 | 14 | 284 | 23.2 |
| SM8S15A | 16.7 | 18.5 | 5.0 | 10 | 150 | 15 | 270 | 24.4 |
| SM8S16A | 17.8 | 19.7 | 5.0 | 10 | 150 | 16 | 254 | 26.0 |
| SM8S17A | 18.9 | 20.9 | 5.0 | 10 | 150 | 17 | 239 | 27.6 |
| SM8S18A | 20.0 | 22.1 | 5.0 | 10 | 150 | 18 | 226 | 29.2 |
| SM8S20A | 22.2 | 24.5 | 5.0 | 10 | 150 | 20 | 204 | 32.4 |
| SM8S22A | 24.4 | 26.9 | 5.0 | 10 | 150 | 22 | 186 | 35.5 |
| SM8S24A | 26.7 | 29.5 | 5.0 | 10 | 150 | 24 | 170 | 38.9 |
| SM8S26A | 28.9 | 31.9 | 5.0 | 10 | 150 | 26 | 157 | 42.1 |
| SM8S28A | 31.1 | 34.4 | 5.0 | 10 | 150 | 28 | 145 | 45.4 |
| SM8S30A | 33.3 | 36.8 | 5.0 | 10 | 150 | 30 | 136 | 48.4 |
| SM8S33A | 36.7 | 40.6 | 5.0 | 10 | 150 | 33 | 124 | 53.3 |
| SM8S36A | 40.0 | 44.2 | 5.0 | 10 | 150 | 36 | 114 | 58.1 |
| SM8S40A | 44.4 | 49.1 | 5.0 | 10 | 150 | 40 | 102 | 64.5 |
| SM8S43A | 47.8 | 52.8 | 5.0 | 10 | 150 | 43 | 95.1 | 69.4 |

Note: 1. Surge current waveform is defined at 10/1000us waveform

 2. For all types maximum $V_F = 1.9V$ at $I_F = 100A$ measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

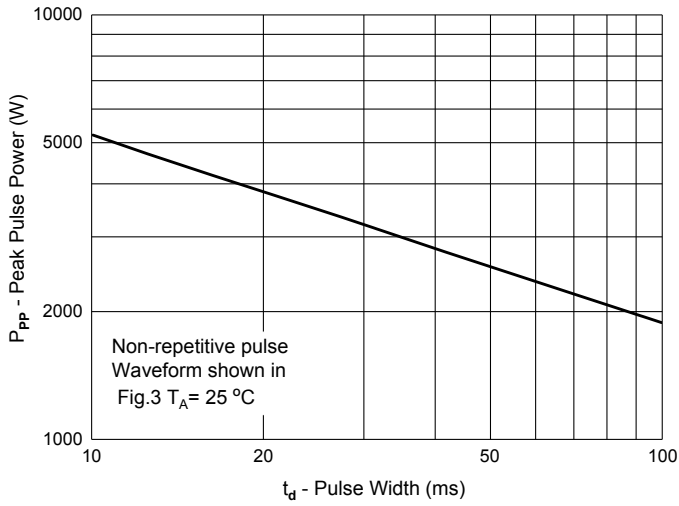


Fig. 2 - Typical Junction Capacitance

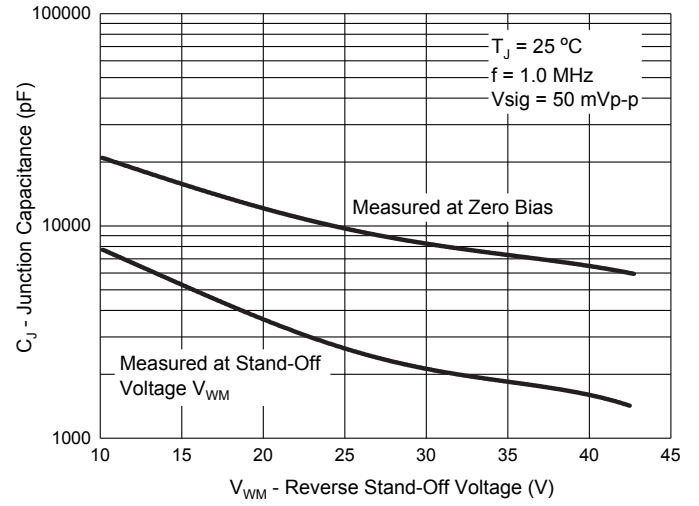


Fig. 3 - Pulse Waveform

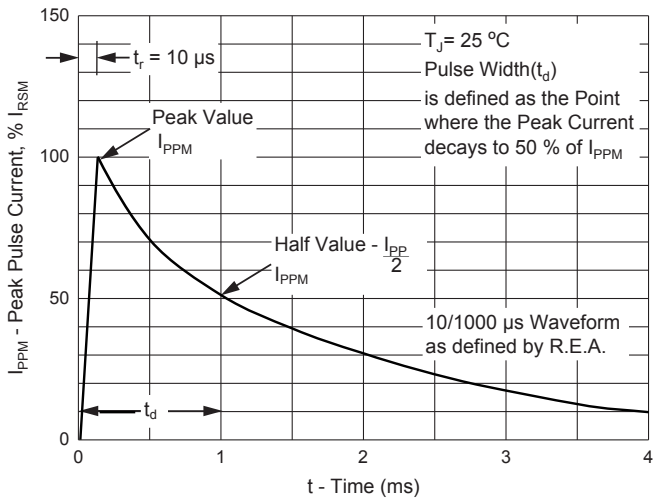


Fig. 4 - Pulse Derating Curve

