

Working Voltage: 14 to 58 V
Peak Pulse Power: 200 W

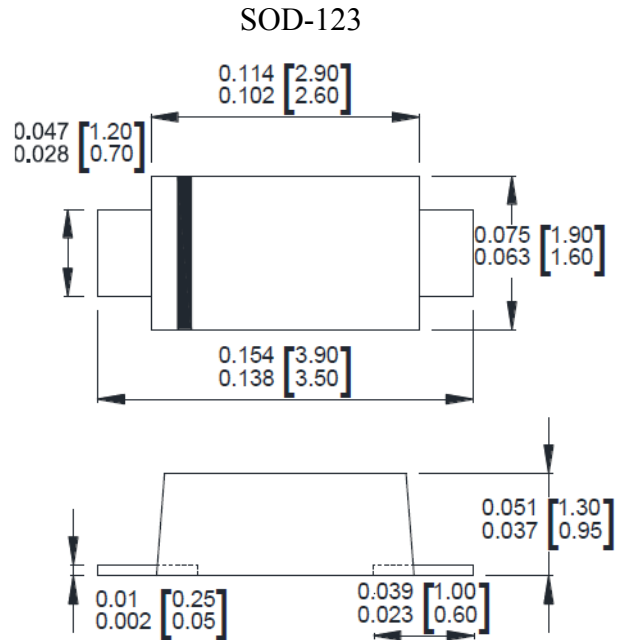
Surface Mount Transient Voltage Suppressors

Features

- Glass passivated chip
- 200 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni-directional unit
- High reliability application and automotive grade AEC Q101 qualified
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any



Dimensions : inch [mm]

Maximum Ratings($T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | UNIT |
|-----------------------------------------------------------------------|----------------|----------------|------------------|
| Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾ | P_{PP} | 200 | W |
| Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾ | I_{PP} | See Next Table | A |
| Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$ | P_D | 0.4 | W |
| Maximum instantaneous forward voltage at 25 A | V_F | 3.5 | V |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note:

(1)Non-repetitive current pulse per Fig.4 and derated above $T_A=25^\circ\text{C}$ per Fig.1



Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

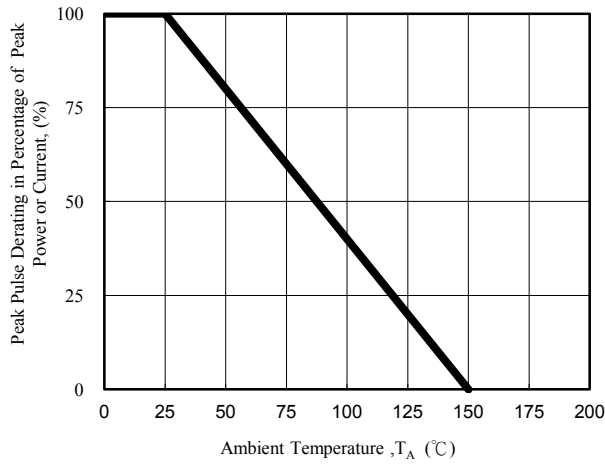


Fig. 1 - Pulse Derating Curve

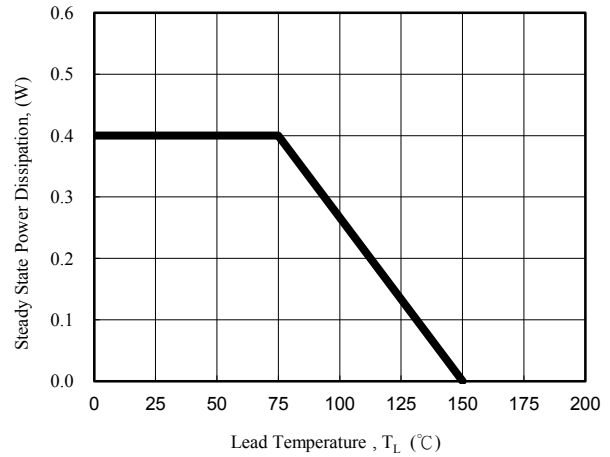


Fig. 2- Steady State Power Derating Curve

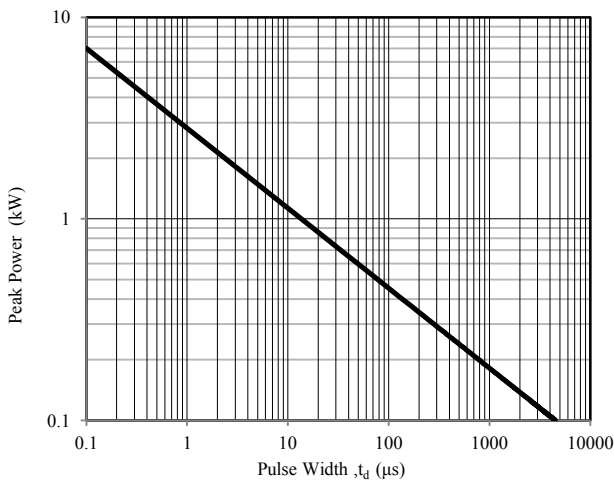


Fig. 3 - Peak Pulse Power Rating Curve

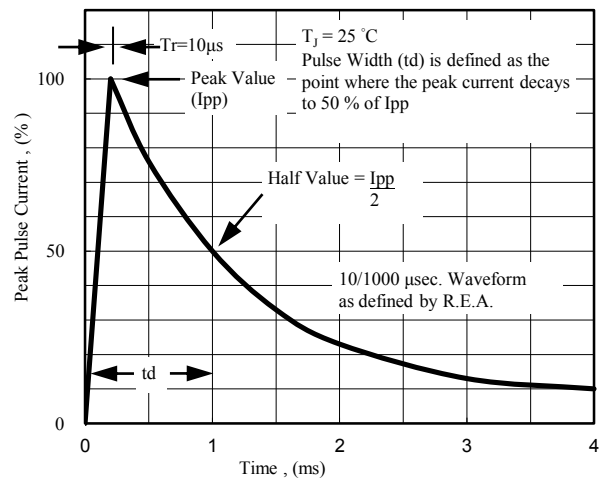


Fig. 4 - Pulse Waveform

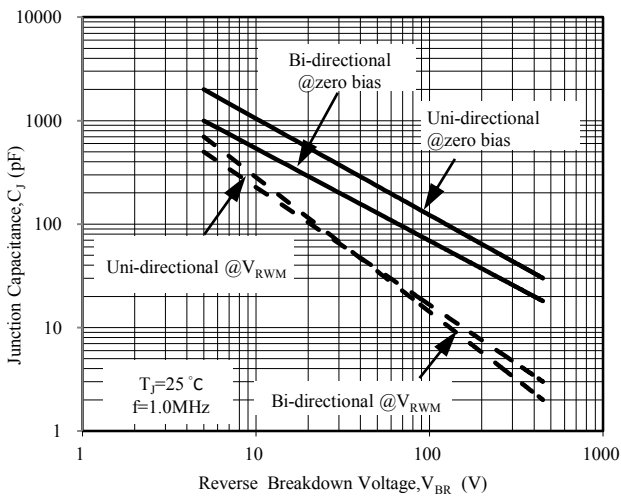


Fig. 5 - Typical Junction Capacitance

Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Part Number (Uni) | Device Marking Code | Breakdown Voltage V_{BR} @ I_T | | | Maximum Reverse Leakage I_R @ V_{RWM} (μA) | Working Peak Reverse Voltage V_{RWM} (V) | Maximum Reverse Surge Current I_{PP} (A) | Maximum Clamping Voltage V_C @ I_{PP} (V) |
|----------------------|---------------------------|------------------------------------|---------|------------|-------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|
| | | Min (V) | Max (V) | I_T (mA) | | | | |
| TPSMF14A | HKA | 15.60 | 17.20 | 1 | 1 | 14.0 | 8.62 | 23.2 |
| TPSMF15A | HMA | 16.70 | 18.50 | 1 | 1 | 15.0 | 8.20 | 24.4 |
| TPSMF16A | HPA | 17.80 | 19.70 | 1 | 1 | 16.0 | 7.69 | 26.0 |
| TPSMF17A | HRA | 18.90 | 20.90 | 1 | 1 | 17.0 | 7.25 | 27.6 |
| TPSMF18A | HTA | 20.00 | 22.10 | 1 | 1 | 18.0 | 6.85 | 29.2 |
| TPSMF19A | HBA | 21.10 | 23.30 | 1 | 1 | 19.0 | 6.54 | 30.6 |
| TPSMF20A | HVA | 22.20 | 24.50 | 1 | 1 | 20.0 | 6.17 | 32.4 |
| TPSMF22A | HXA | 24.40 | 26.90 | 1 | 1 | 22.0 | 5.63 | 35.5 |
| TPSMF24A | HZA | 26.70 | 29.50 | 1 | 1 | 24.0 | 5.14 | 38.9 |
| TPSMF26A | JEA | 28.90 | 31.90 | 1 | 1 | 26.0 | 4.75 | 42.1 |
| TPSMF28A | JGA | 31.10 | 34.40 | 1 | 1 | 28.0 | 4.41 | 45.4 |
| TPSMF30A | JKA | 33.30 | 36.80 | 1 | 1 | 30.0 | 4.13 | 48.4 |
| TPSMF33A | JMA | 36.70 | 40.60 | 1 | 1 | 33.0 | 3.75 | 53.3 |
| TPSMF36A | JPA | 40.00 | 44.20 | 1 | 1 | 36.0 | 3.44 | 58.1 |
| TPSMF40A | JRA | 44.40 | 49.10 | 1 | 1 | 40.0 | 3.10 | 64.5 |
| TPSMF43A | JTA | 47.80 | 52.80 | 1 | 1 | 43.0 | 2.88 | 69.4 |
| TPSMF45A | JVA | 50.00 | 55.30 | 1 | 1 | 45.0 | 2.75 | 72.7 |
| TPSMF48A | JXA | 53.30 | 58.90 | 1 | 1 | 48.0 | 2.58 | 77.4 |
| TPSMF51A | JZA | 56.70 | 62.70 | 1 | 1 | 51.0 | 2.43 | 82.4 |
| TPSMF54A | XEA | 60.00 | 66.30 | 1 | 1 | 54.0 | 2.30 | 87.1 |
| TPSMF58A | XGA | 64.40 | 71.20 | 1 | 1 | 58.0 | 2.14 | 93.6 |

Note:

- Suffix 'A' denotes 5% tolerance device.