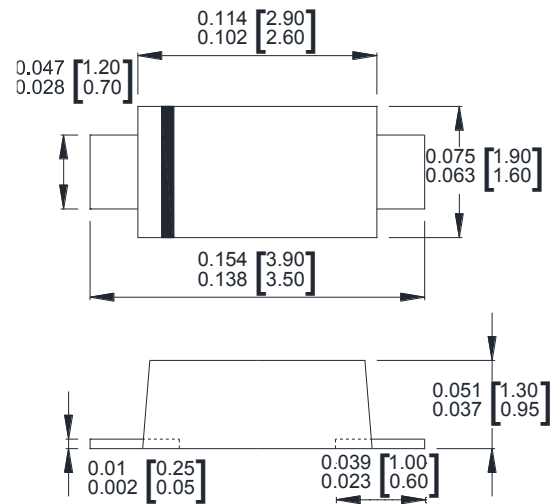


Working Voltage: 5.0 to 85V
Peak Pulse Power: 400 W
Features

- Glass passivated chip
- Maximum 400 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni polar unit
- 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

**Surface Mount
Transient Voltage Suppressors**
SOD-123


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⁾⁽³⁾ | P_{PP} | 400 | 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 | 1.0 | W |
| Peak forward surge current, 8.3 ms single half sine-wave unidirectional ⁽²⁾ | I_{FSM} | 30 | A |
| Maximum instantaneous forward voltage at 25 A for unidirectional only | 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.3 and derated above $T_A=25^{\circ}\text{C}$ per Fig.1.

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

 (3)SMF4L5.0A~SMF4L9.0A Peak Pulse Power Dissipation is 370W min, 400W typical @10/1000 μ s

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

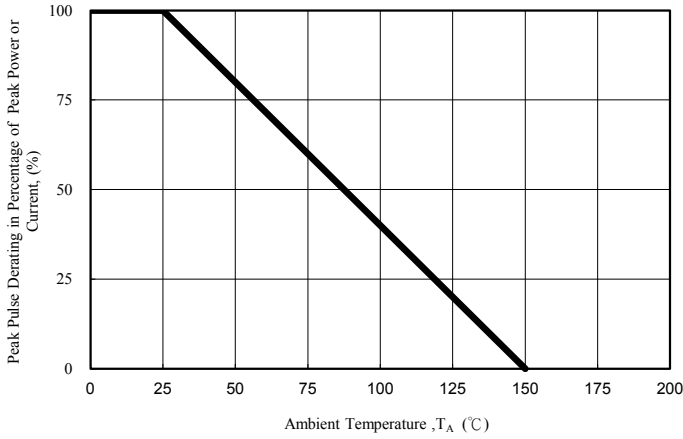


Fig. 1 - Pulse Derating Curve

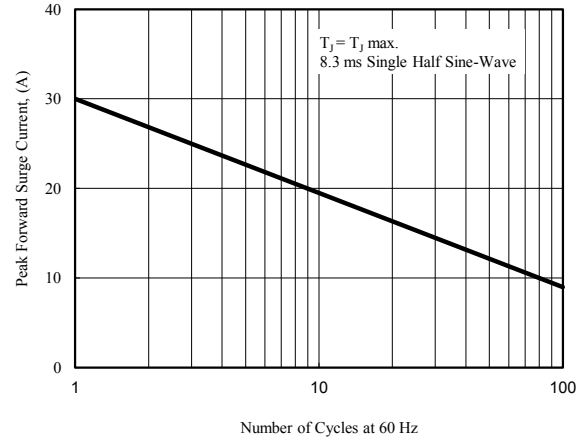


Fig. 2 - Maximum Non-Repetitive

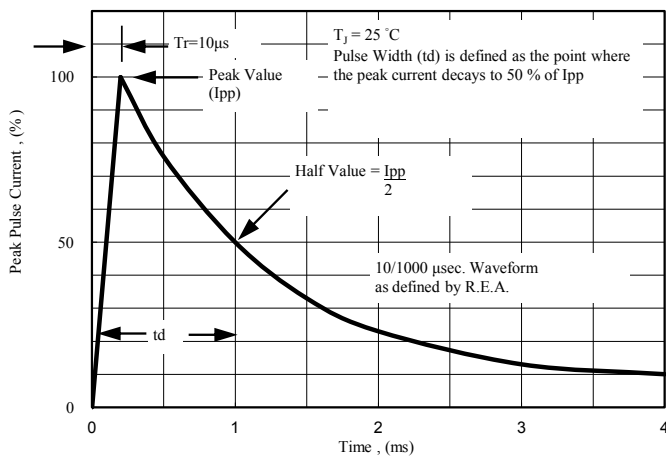


Fig. 3 - Pulse Waveform

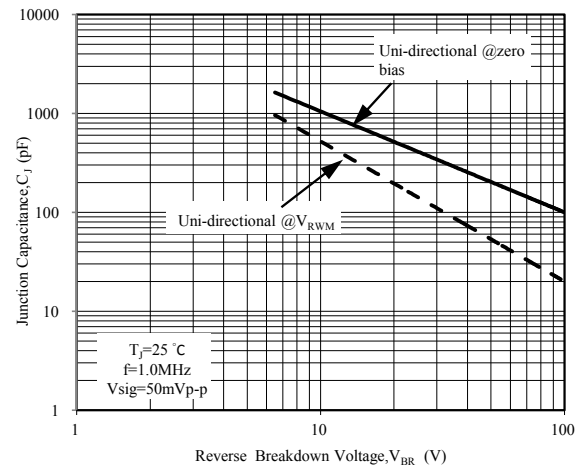


Fig. 4 - Typical Junction Capacitance

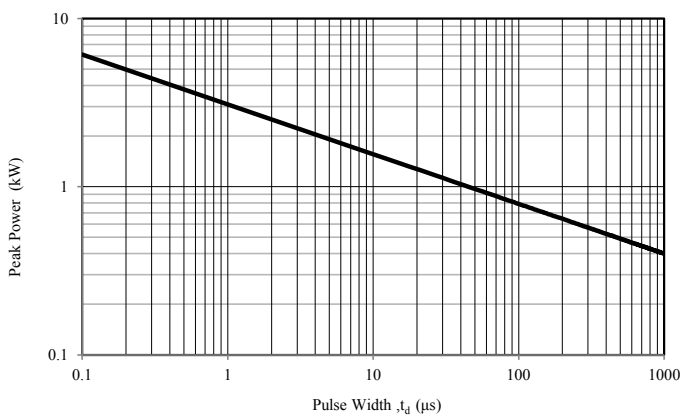


Fig. 5 - Steady State Power Derating Curve

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) |
|----------------------|---------------------------|------------------------------------|---------|------------|---|---|--|--|
| | Uni | Min (V) | Max (V) | I_T (mA) | | | | |
| SMF4L5.0A | KE | 6.40 | 7.00 | 10 | 800 | 5.0 | 40.1 | 9.2 |
| SMF4L6.0A | KG | 6.67 | 7.37 | 10 | 800 | 6.0 | 35.9 | 10.3 |
| SMF4L6.5A | KK | 7.22 | 7.98 | 10 | 500 | 6.5 | 33.1 | 11.2 |
| SMF4L7.0A | KM | 7.78 | 8.60 | 10 | 200 | 7.0 | 30.9 | 12.0 |
| SMF4L7.5A | KP | 8.33 | 9.21 | 1 | 100 | 7.5 | 28.7 | 12.9 |
| SMF4L8.0A | KR | 8.89 | 9.83 | 1 | 50 | 8.0 | 27.2 | 13.6 |
| SMF4L8.5A | KT | 9.44 | 10.40 | 1 | 20 | 8.5 | 25.7 | 14.4 |
| SMF4L9.0A | KV | 10.00 | 11.10 | 1 | 10 | 9.0 | 24.1 | 15.4 |
| SMF4L10A | KX | 11.10 | 12.30 | 1 | 5 | 10.0 | 23.5 | 17.0 |
| SMF4L11A | KZ | 12.20 | 13.50 | 1 | 1 | 11.0 | 22.0 | 18.2 |
| SMF4L12A | LE | 13.30 | 14.70 | 1 | 1 | 12.0 | 20.1 | 19.9 |
| SMF4L13A | LG | 14.40 | 15.90 | 1 | 1 | 13.0 | 18.6 | 21.5 |
| SMF4L14A | LK | 15.60 | 17.20 | 1 | 1 | 14.0 | 17.2 | 23.2 |
| SMF4L15A | LM | 16.70 | 18.50 | 1 | 1 | 15.0 | 16.4 | 24.4 |
| SMF4L16A | LP | 17.80 | 19.70 | 1 | 1 | 16.0 | 15.4 | 26.0 |
| SMF4L17A | LR | 18.90 | 20.90 | 1 | 1 | 17.0 | 14.5 | 27.6 |
| SMF4L18A | LT | 20.00 | 22.10 | 1 | 1 | 18.0 | 13.7 | 29.2 |
| SMF4L20A | LV | 22.20 | 24.50 | 1 | 1 | 20.0 | 12.3 | 32.4 |
| SMF4L22A | LX | 24.40 | 26.90 | 1 | 1 | 22.0 | 11.3 | 35.5 |
| SMF4L24A | LZ | 26.70 | 29.50 | 1 | 1 | 24.0 | 10.3 | 38.9 |
| SMF4L26A | ME | 28.90 | 31.90 | 1 | 1 | 26.0 | 9.5 | 42.1 |
| SMF4L28A | MG | 31.10 | 34.40 | 1 | 1 | 28.0 | 8.8 | 45.4 |
| SMF4L30A | MK | 33.30 | 36.80 | 1 | 1 | 30.0 | 8.3 | 48.4 |
| SMF4L33A | MM | 36.70 | 40.60 | 1 | 1 | 33.0 | 7.5 | 53.3 |
| SMF4L36A | MP | 40.00 | 44.20 | 1 | 1 | 36.0 | 6.9 | 58.1 |
| SMF4L40A | MR | 44.40 | 49.10 | 1 | 1 | 40.0 | 6.2 | 64.5 |
| SMF4L43A | MT | 47.80 | 52.80 | 1 | 1 | 43.0 | 5.8 | 69.4 |
| SMF4L45A | MV | 50.00 | 55.30 | 1 | 1 | 45.0 | 5.5 | 72.7 |
| SMF4L48A | MX | 53.30 | 58.90 | 1 | 1 | 48.0 | 5.2 | 77.4 |
| SMF4L51A | MZ | 56.70 | 62.70 | 1 | 1 | 51.0 | 4.9 | 82.4 |
| SMF4L54A | NE | 60.00 | 66.30 | 1 | 1 | 54.0 | 4.6 | 87.1 |
| SMF4L58A | NG | 64.40 | 71.20 | 1 | 1 | 58.0 | 4.3 | 93.6 |
| SMF4L60A | NK | 66.70 | 73.70 | 1 | 1 | 60.0 | 4.1 | 96.8 |
| SMF4L64A | NM | 71.10 | 78.60 | 1 | 1 | 64.0 | 3.9 | 103.0 |
| SMF4L70A | NP | 77.80 | 86.00 | 1 | 1 | 70.0 | 3.5 | 113.0 |
| SMF4L75A | NR | 83.30 | 92.10 | 1 | 1 | 75.0 | 3.3 | 121.0 |
| SMF4L78A | NT | 86.70 | 95.80 | 1 | 1 | 78.0 | 3.2 | 126.0 |
| SMF4L85A | NV | 94.40 | 104.00 | 1 | 1 | 85.0 | 2.9 | 137.0 |