

## Surface Mount Glass Passivated Rectifiers

**Reverse Voltage - 50 to 1000Volts**  
**Forward Current - 1.0 Amperes**

### Features

- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High surge capacity
- Meet UL flammability classification 94V-0

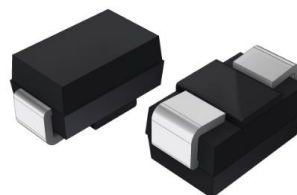
### Mechanical Data

- Case: JEDEC SMA molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

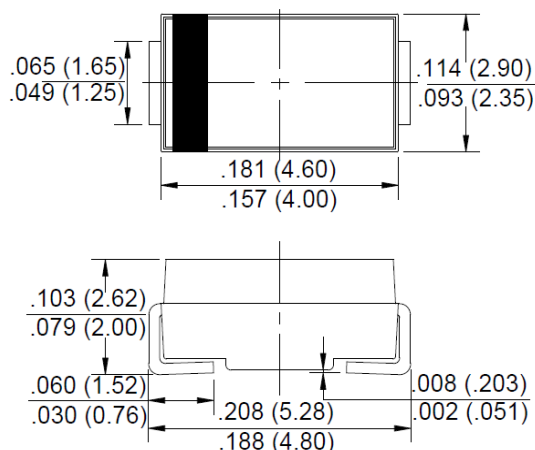
### Applications

- For use in low voltage, high frequency inverters, polarity protection applications

### SMA



**RoHS**  
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics                                                                                               | Symbol          | S1A         | S1B | S1D | S1G | S1J | S1K | S1M  | Unit                 |
|---------------------------------------------------------------------------------------------------------------|-----------------|-------------|-----|-----|-----|-----|-----|------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                       | $V_{RRM}$       | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V                    |
| Maximum RMS Voltage                                                                                           | $V_{RMS}$       | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V                    |
| Maximum DC Blocking Voltage                                                                                   | $V_{DC}$        | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V                    |
| Maximum Average Forward Rectified Current @ $T_L=100^\circ\text{C}$                                           | $I_{(AV)}$      | 1.0         |     |     |     |     |     |      | A                    |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)            | $I_{FSM}$       | 30          |     |     |     |     |     |      | A                    |
| $I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )                                                               | $I^2t$          | 3.7         |     |     |     |     |     |      | $\text{A}^2\text{s}$ |
| Peak Forward Voltage at 1.0A DC (Note1)                                                                       | $V_F$           | 1.1         |     |     |     |     |     |      | V                    |
| Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$<br>at Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$ | $I_R$           | 5.0<br>100  |     |     |     |     |     |      | $\mu\text{A}$        |
| Typical Junction Capacitance (Note 2)                                                                         | $C_J$           | 10          |     |     |     |     |     |      | pF                   |
| Typical Thermal Resistance Junction to Case                                                                   | $R_{\theta JC}$ | 30          |     |     |     |     |     |      | $^\circ\text{C/W}$   |
| Operating Junction Temperature Range                                                                          | $T_J$           | -55 to +150 |     |     |     |     |     |      | $^\circ\text{C}$     |
| Storage Temperature Range                                                                                     | $T_{STG}$       | -55 to +150 |     |     |     |     |     |      | $^\circ\text{C}$     |

Notes: 1. 300uS pulse width, 2%duty cycle.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3. The typical data above is for reference only .

S1\*-7/13-00/99-00/01

Rev. 9, 22-Apr-2019

Fig. 1 - Forward Current Derating Curve

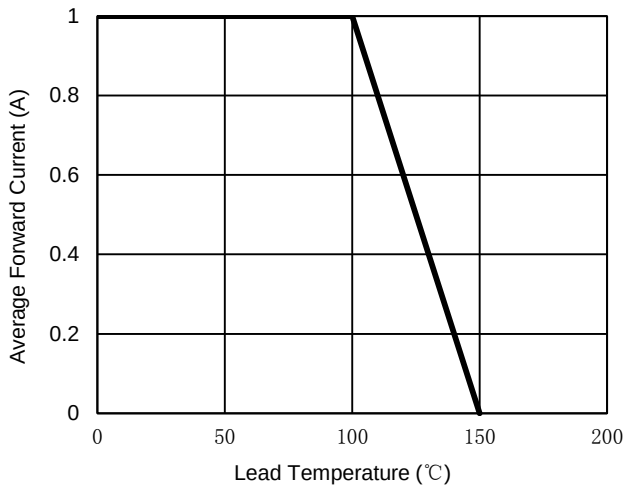


Fig. 2 - Maximum Non-Repetitive Surge Current

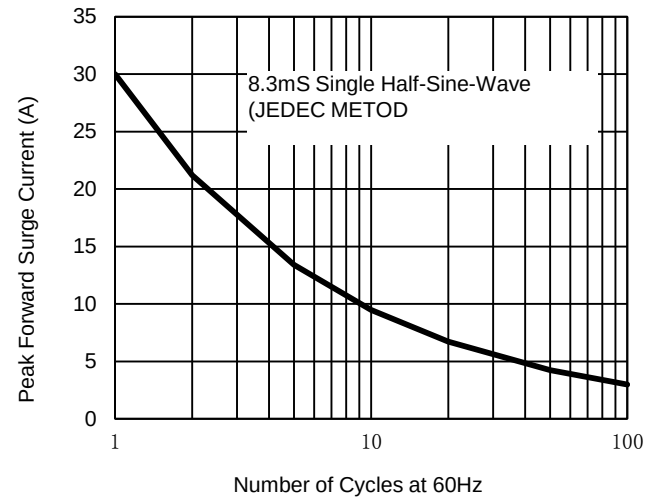


Fig. 3 - Typical Reverse Characteristics

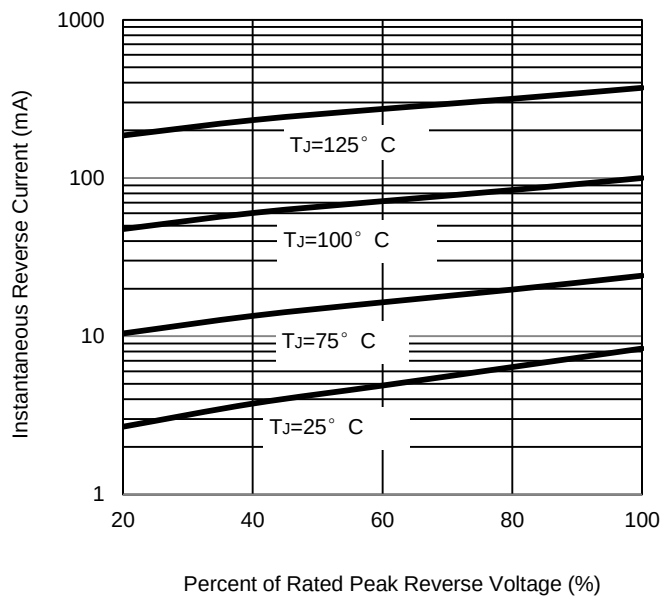


Fig. 4 - Typical Forward Characteristics

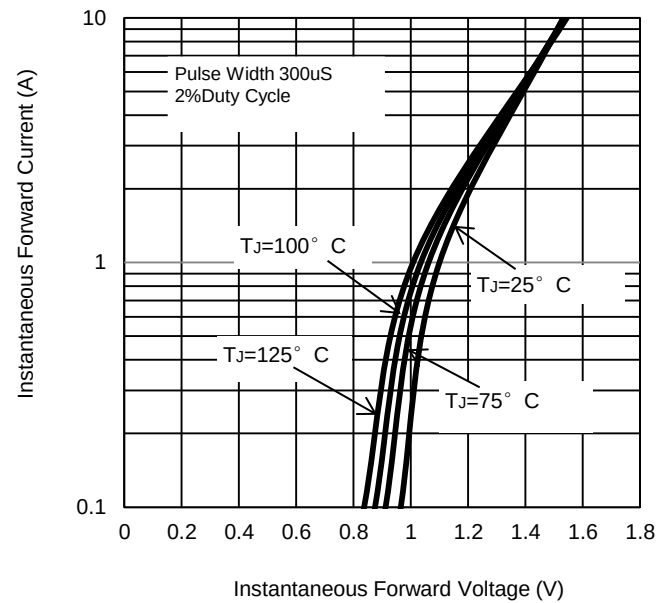
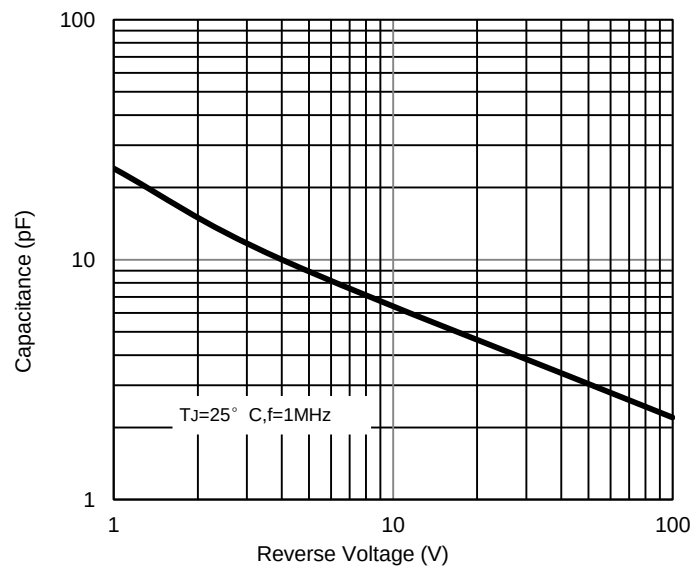


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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