

## PLASTIC SILICON RECTIFIERS

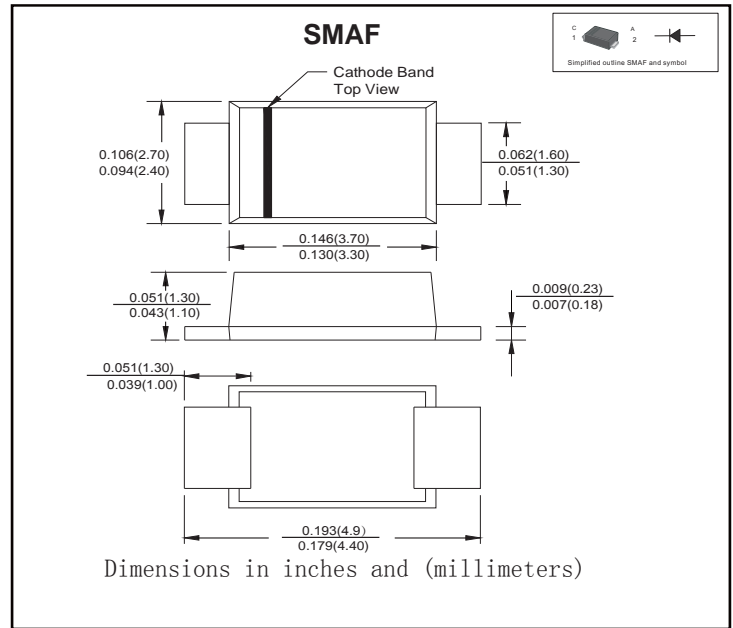
VOLTAGE RANGE: 50 --- 1000 V  
FORWARD CURRENT: 1.0 A

### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter  | Symbols         | S1A        | S1B | S1D | S1G | S1J | S1K | S1M  | Units              |
|--|-----------------|------------|-----|-----|-----|-----|-----|------|--------------------|
| 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 at $T_a = 65\text{ }^\circ\text{C}$  | $I_{F(AV)}$     | 1          |     |     |     |     |     |      | A                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)                                | $I_{FSM}$       | 30         |     |     |     |     |     |      | A                  |
| Maximum Instantaneous Forward Voltage at 1 A   | $V_F$           | 1.1        |     |     |     |     |     |      | V                  |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>$T_a = 25\text{ }^\circ\text{C}$<br>$T_a = 125\text{ }^\circ\text{C}$ | $I_R$           | 5<br>50    |     |     |     |     |     |      | $\mu\text{A}$      |
| Typical Junction Capacitance <sup>1)</sup>   | $C_j$           | 4          |     |     |     |     |     |      | pF                 |
| Typical Thermal Resistance <sup>2)</sup>   | $R_{\theta JA}$ | 180        |     |     |     |     |     |      | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$  | -55 ~ +150 |     |     |     |     |     |      | $^\circ\text{C}$   |

1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

2) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

### Marking

|              |     |     |     |     |     |     |     |  |
|--------------|-----|-----|-----|-----|-----|-----|-----|--|
| Type number  | S1A | S1B | S1D | S1G | S1J | S1K | S1M |  |
| Marking code | S1A | S1B | S1D | S1G | S1J | S1K | S1M |  |

# RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

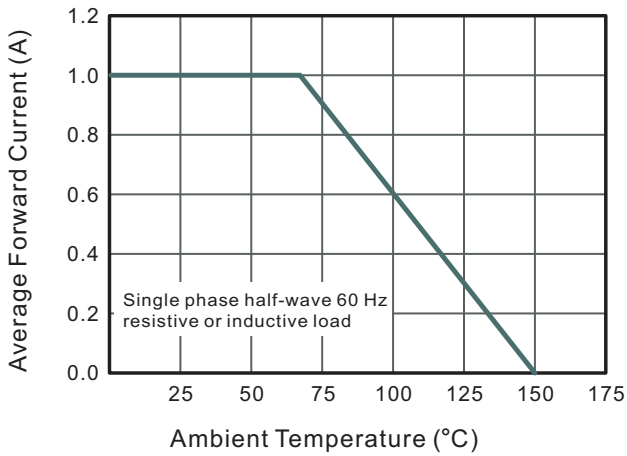


Fig.2 Typical Instantaneous Reverse Characteristics

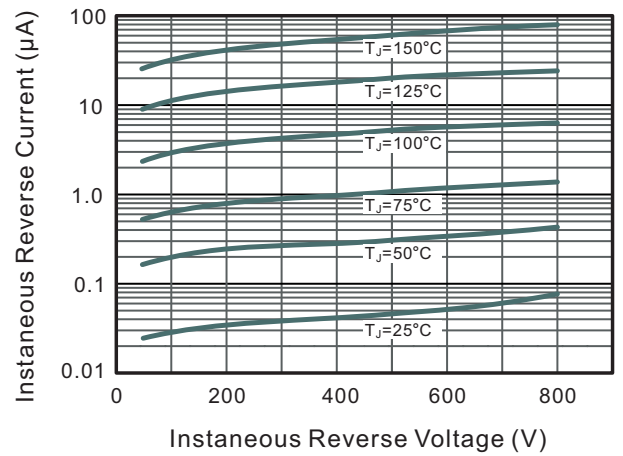


Fig.3 Typical Forward Characteristic

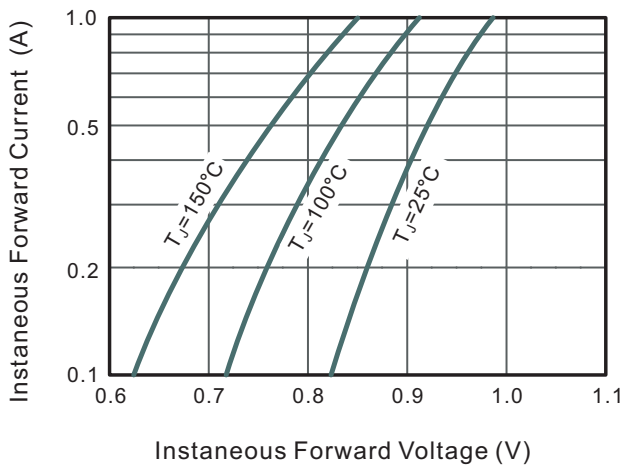


Fig.4 Typical Junction Capacitance

