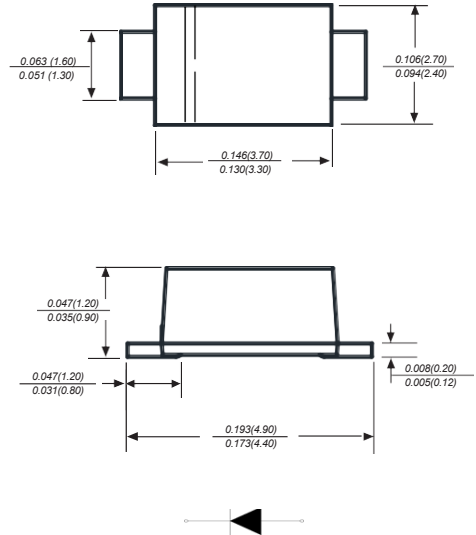


## SURFACE MOUNT GENERAL RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated junction
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed  
250°C/10 seconds at terminals

### SMAF



Dimensions in inches and (millimeters)

## Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

| Parameter                                                                                                 | SYMBOLS                            | S2AF         | S2BF | S2DF | S2GF | S2JF | S2KF | S2MF | UNITS                     |
|-----------------------------------------------------------------------------------------------------------|------------------------------------|--------------|------|------|------|------|------|------|---------------------------|
| Marking Code                                                                                              |                                    |              |      |      |      |      |      |      |                           |
| 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 $T_L=125^\circ\text{C}$                                      | $I_{(AV)}$                         | 2.0          |      |      |      |      |      |      | A                         |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method)    | $I_{FSM}$                          | 50           |      |      |      |      |      |      | A                         |
| Maximum instantaneous forward voltage at 2.0A                                                             | $V_F$                              | 1.10         |      |      |      |      |      |      | V                         |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=125^\circ\text{C}$ | $I_R$                              | 5.0<br>100   |      |      |      |      |      |      | $\mu\text{A}$             |
| Typical junction capacitance (NOTE 1)                                                                     | $C_J$                              | 22.0         |      |      |      |      |      |      | pF                        |
| Typical thermal resistance (NOTE 2)                                                                       | $R_{\theta JA}$<br>$R_{\theta JC}$ | 65.0<br>20.0 |      |      |      |      |      |      | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range                                                          | $T_J, T_{STG}$                     | -55 to +150  |      |      |      |      |      |      | $^\circ\text{C}$          |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 2.0"x2.0" (5.0x5.0cm) copper pad areas

## Typical Characteristics

Fig.1 Forward Current Derating Curve

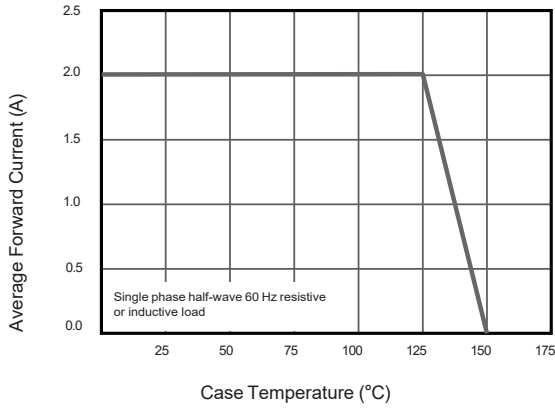


Fig.2 Typical Instantaneous Reverse Characteristics

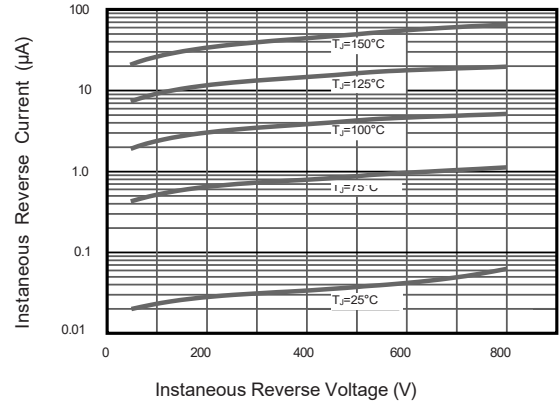


Fig.3 Typical Forward Characteristic

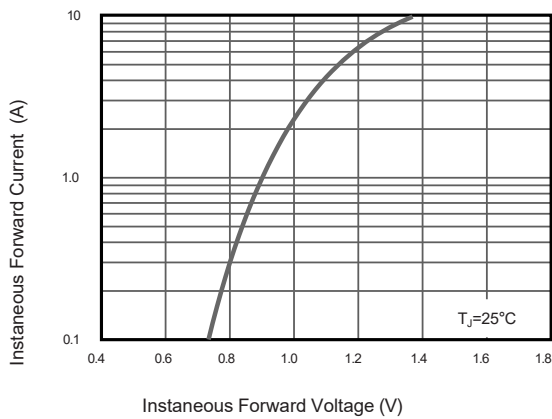


Fig.4 Typical Junction Capacitance

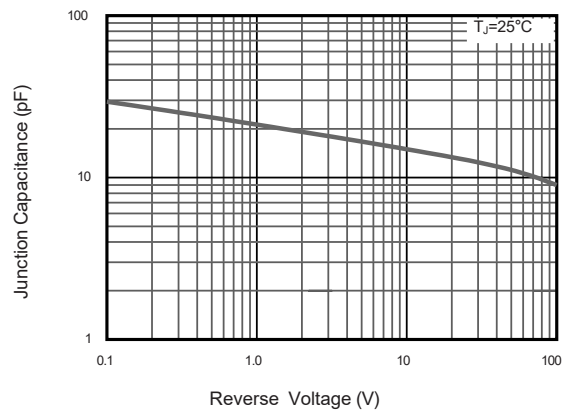
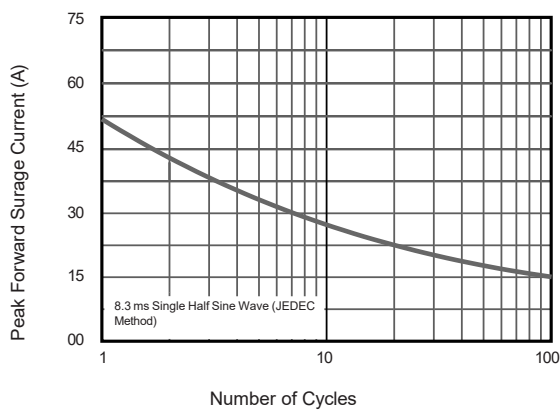


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.