



**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 1 A**

**FEATURES**

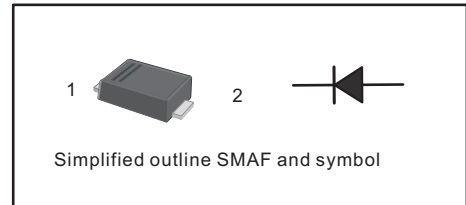
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg / 0.00095oz

**PINNING**

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



**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 %.

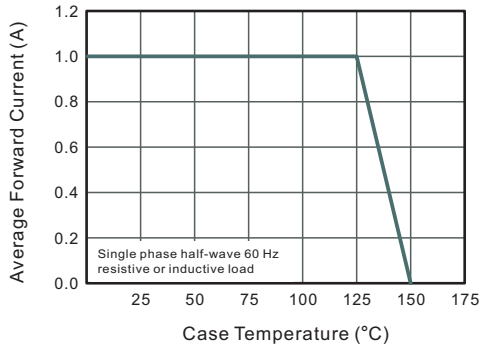
| Parameter   | Symbols         | M1F        | M2 F | M3F | M4F | M5F | M6F | M7F  | Units              |
|---|-----------------|------------|------|-----|-----|-----|-----|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 50         | 100  | 200 | 400 | 600 | 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 $T_c = 125\text{ }^\circ\text{C}$  | $I_{F(AV)}$     | 1          |      |     |     |     |     |      | A                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load  | $I_{FSM}$       | 30         |      |     |     |     |     |      | A                  |
| Maximum Instantaneous Forward Voltage at 1 A  | $V_F$           | 1.1        |      |     |     |     |     |      | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$ | $I_R$           | 5<br>50    |      |     |     |     |     |      | $\mu\text{A}$      |
| Typical Junction Capacitance <sup>(1)</sup>   | $C_j$           | 15         |      |     |     |     |     |      | pF                 |
| Typical Thermal Resistance <sup>(2)</sup>   | $R_{\theta JA}$ | 80         |      |     |     |     |     |      | $^\circ\text{C/W}$ |
| 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

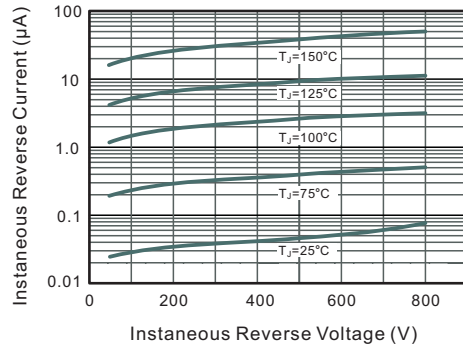
( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



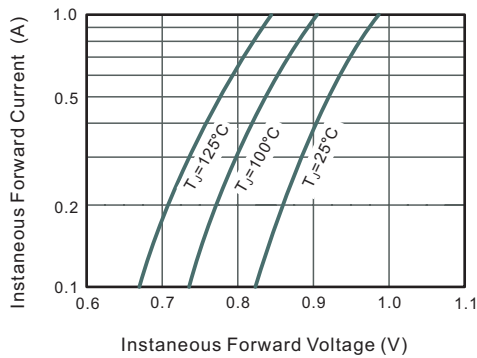
**Fig.1 Forward Current Derating Curve**



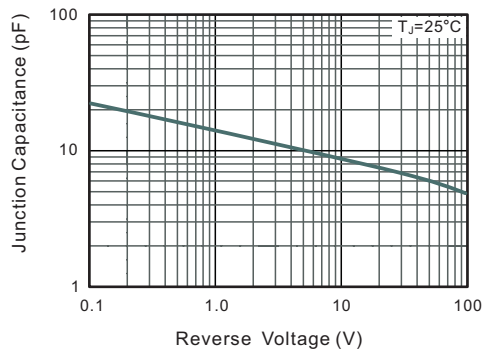
**Fig.2 Typical Instantaneous Reverse Characteristics**



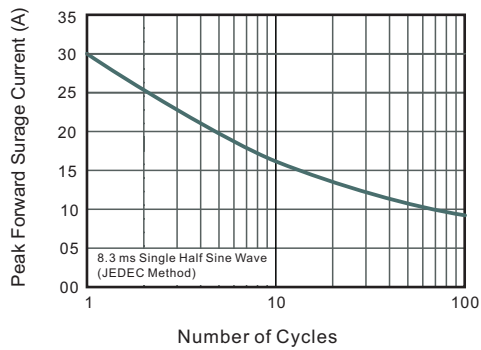
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

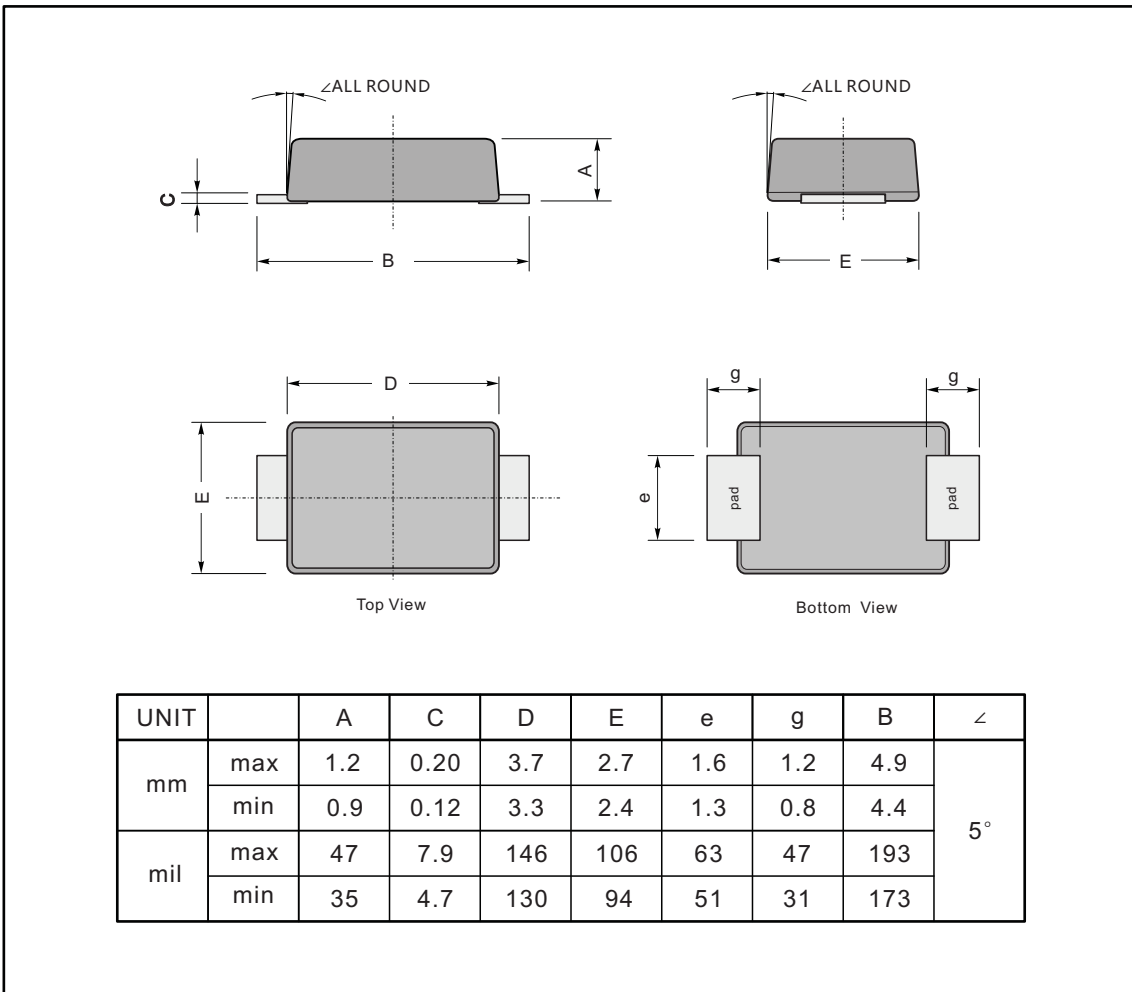




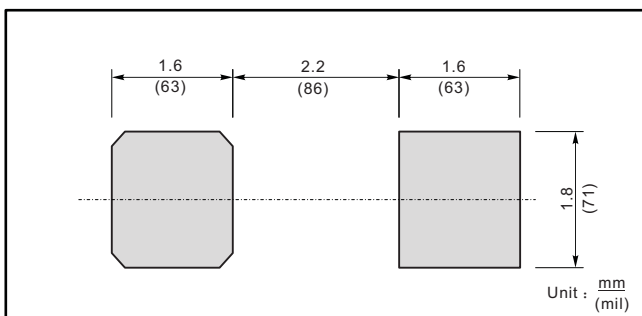
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

**SMAF**



**The recommended mounting pad size**



**Marking**

| Type number | Marking code |
|-------------|--------------|
| M1F         | M1           |
| M2F         | M2           |
| M3F         | M3           |
| M4F         | M4           |
| M5F         | M5           |
| M6F         | M6           |
| M7F         | M7           |