

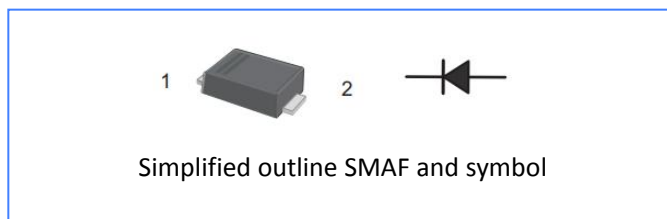
## RS3AF THRU RS3MF

### Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- 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       |

### Absolute Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

| Parameter                                                                                                  | Symbols                            | RS3AF      | RS3BF | RS3DF | RS3GF | RS3JF | RS3KF | RS3MF | 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 $T_c = 125^\circ\text{C}$                                     | $I_{F(AV)}$                        | 3          |       |       |       |       |       |       | A                         |    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                         | $I_{FSM}$                          | 80         |       |       |       |       |       |       | A                         |    |
| Maximum Forward Voltage at 1 A                                                                             | $V_F$                              | 1.3        |       |       |       |       |       |       | V                         |    |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$ | $I_R$                              | 5<br>100   |       |       |       |       |       |       | $\mu\text{A}$             |    |
| Typical Junction Capacitance at $V_R=4\text{V}$ $f=1\text{M}$                                              | $C_j$                              | 32         |       |       |       |       |       |       | pF                        |    |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                               | $t_{rr}$                           | 150        |       |       |       | 250   |       | 500   |                           | ns |
| Typical Thermal Resistance <sup>(2)</sup>                                                                  | $R_{\theta JA}$<br>$R_{\theta JC}$ | 50<br>16   |       |       |       |       |       |       | $^\circ\text{C}/\text{W}$ |    |
| Operating and Storage Temperature Range                                                                    | $T_j, T_{stg}$                     | -55 ~ +150 |       |       |       |       |       |       | $^\circ\text{C}$          |    |

(1) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$

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

Rating And Characteristic Curves

Fig.1 Maximum Average Forward Current Rating

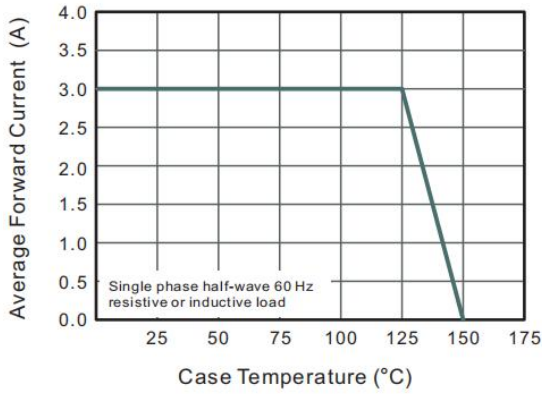


Fig.2 Typical Reverse Characteristics

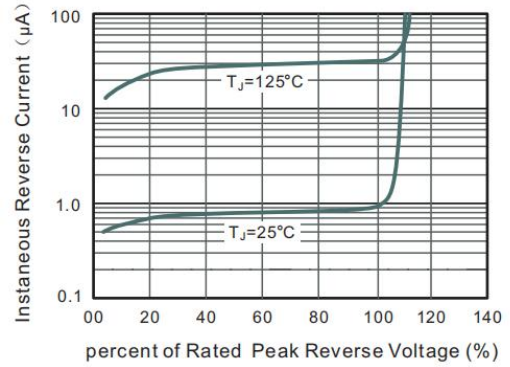


Fig.3 Typical Instantaneous Forward Characteristics

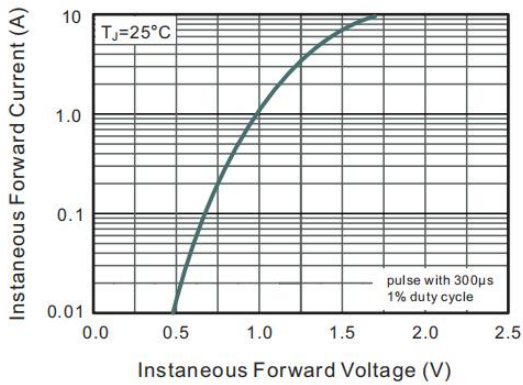


Fig.4 Typical Junction Capacitance

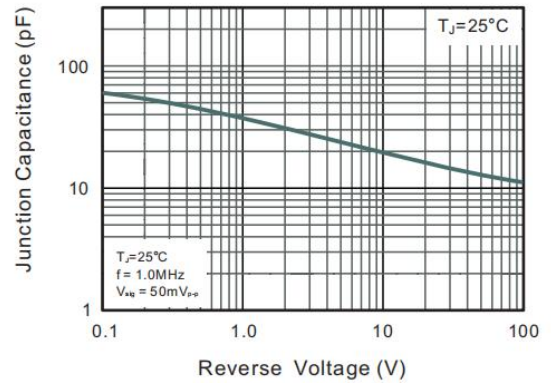
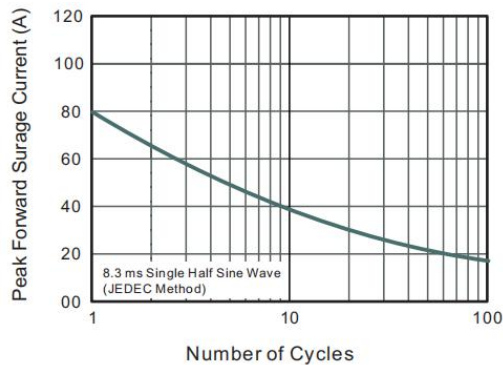


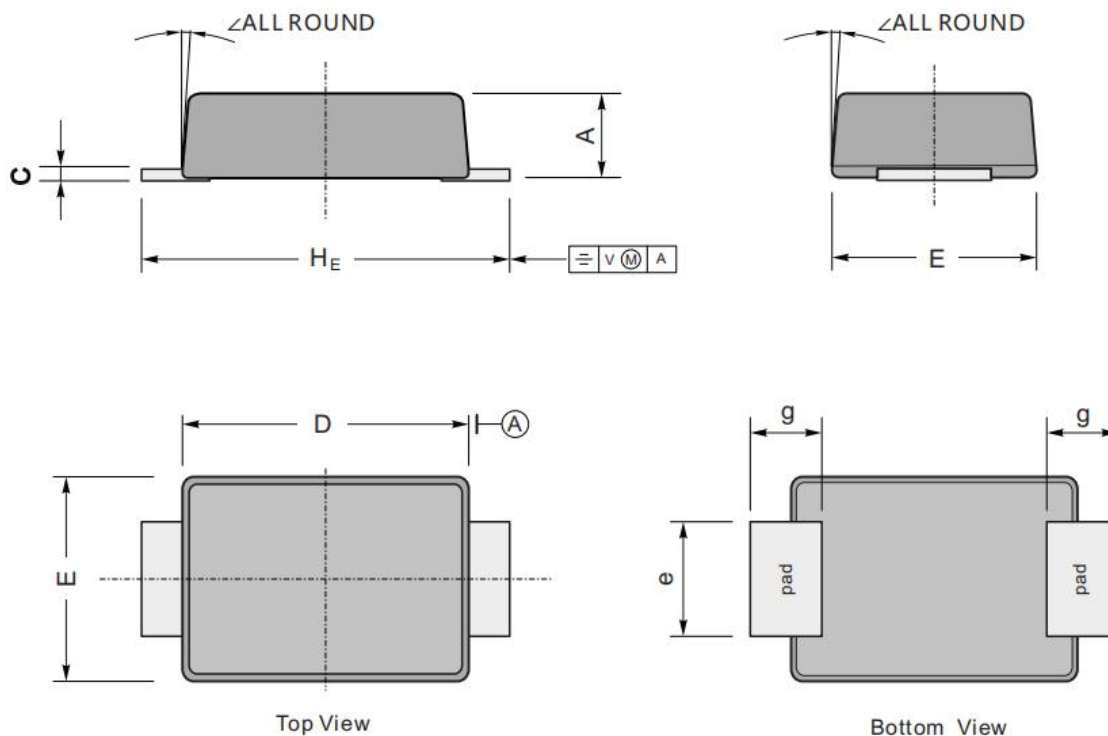
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

Plastic surface mounted package; 2 leads

SMAF



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | ∠  |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----|
| mm   | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9            | 7° |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4            |    |
| mil  | max | 47  | 7.9  | 146 | 106 | 63  | 47  | 193            |    |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |    |

The recommended mounting pad size

