

## Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 2 A

### FEATURES

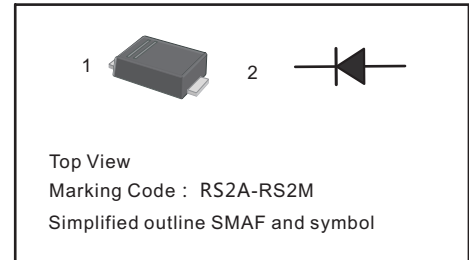
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0.00086oz

### PINNING

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



### Maximum Ratings and Electrical characteristics

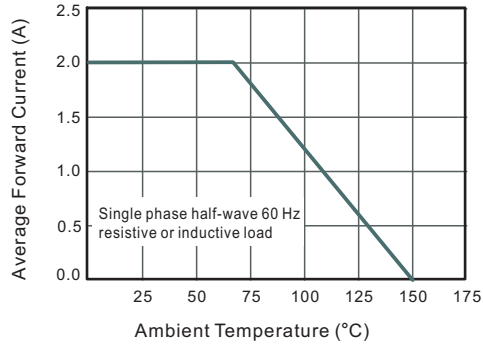
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load for capacitive load current derate by 20 %.

| Parameter  | Symbols        | RS2AF      | RS2BF | RS2DF | RS2GF | RS2JF | RS2KF | RS2MF | 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 $T_a = 65\text{ }^\circ\text{C}$  | $I_{F(AV)}$    | 2          |       |       |       |       |       |       | A                |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)                                | $I_{FSM}$      | 50         |       |       |       |       |       |       | A                |
| Maximum Instantaneous Forward Voltage at 2 A   | $V_F$          | 1.3        |       |       |       |       |       |       | 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>100   |       |       |       |       |       |       | $\mu\text{A}$    |
| Maximum Reverse Recovery Time <sup>1)</sup>  | $t_{rr}$       | 150        |       |       |       | 250   | 500   |       | ns               |
| Typical Junction Capacitance <sup>2)</sup>   | $C_j$          | 40         |       |       |       |       |       |       | pF               |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$ | -55 ~ +150 |       |       |       |       |       |       | $^\circ\text{C}$ |

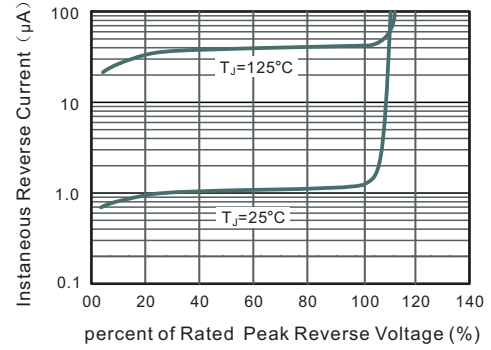
1 ) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$

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

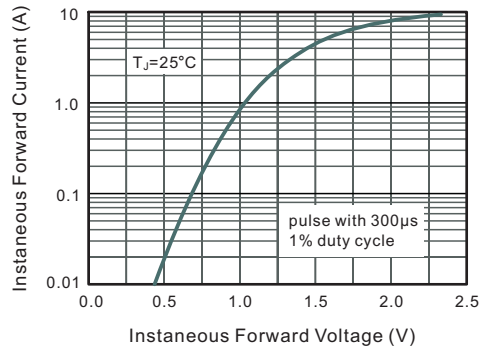
**Fig.1 Forward Current Derating Curve**



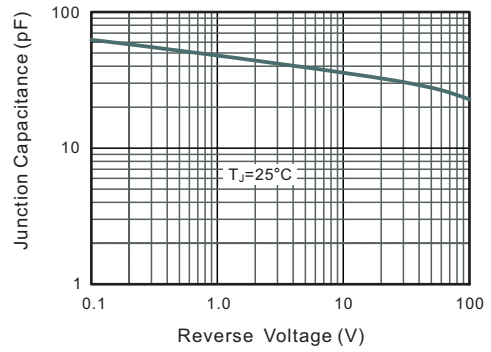
**Fig.2 Typical Reverse Characteristics**



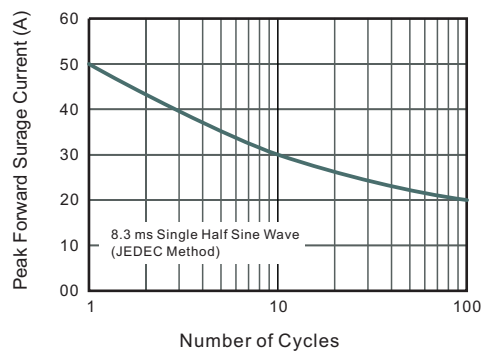
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



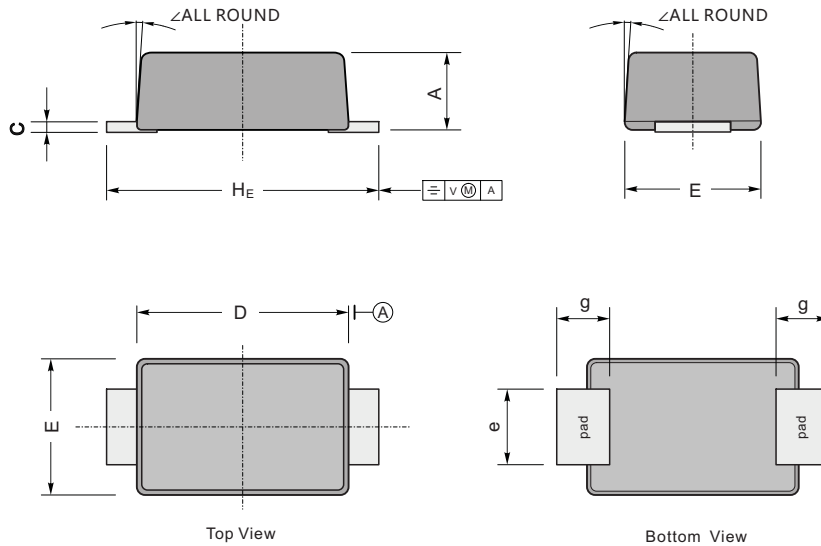
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE

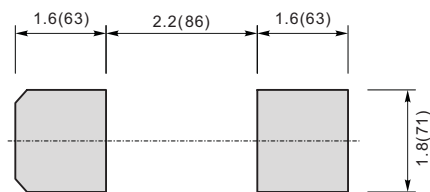
Plastic surface mounted package; 2 leads

SMAF



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | $\angle$ |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----------|
| mm   | max | 1.1 | 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 | 43  | 7.9  | 146 | 106 | 63  | 47  | 193            |          |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |          |

### The recommended mounting pad size



Unit: mm(mil)