

## 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**

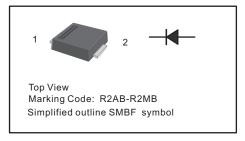
· Case: SMBF

• Terminals: Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 57mg / 0.002oz

#### **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                              | RS2ABF     | RS2BBF | RS2DBF | RS2GBF | RS2JBF | RS2KBF | RS2MBF | Units |
|---|--------------------------------------|------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$                            | 50         | 100    | 200    | 400    | 600    | 800    | 1000   | V     |
| Maximum RMS voltage   | V <sub>RMS</sub>                     | 35         | 70     | 140    | 280    | 420    | 560    | 700    | V     |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                      | 50         | 100    | 200    | 400    | 600    | 800    | 1000   | V     |
| Maximum Average Forward Rectified Current at Ta = 65 °C   | I <sub>F(AV)</sub>                   | 2          |        |        |        |        |        |        | А     |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine Wave Superimposed on Rated Load<br>(JEDEC Method) | I <sub>FSM</sub>                     | 50         |        |        |        |        |        | А      |       |
| Maximum Instantaneous Forward Voltage at 2 A  | V <sub>F</sub>                       | 1.3        |        |        |        |        |        | V      |       |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C                           | I <sub>R</sub>                       | 5<br>100   |        |        |        |        |        | μA     |       |
| Maximum Reverse Recovery Time 1)  | t <sub>rr</sub>                      | 150 250    |        |        | 500    |        | ns     |        |       |
| Typical Junction Capacitance <sup>2)</sup>  | C <sub>j</sub>                       | 28         |        |        |        |        |        | pF     |       |
| Typical Thermal Resistance 3)   | R <sub>θJA</sub><br>R <sub>θJC</sub> | 60<br>18   |        |        |        |        |        | °C/W   |       |
| Operating and Storage Temperature Range   | $T_{j},T_{stg}$                      | -55 ~ +150 |        |        |        |        |        |        | °C    |

- 1) Measured with I<sub>F</sub> =  $0.5 \, A$ , I<sub>R</sub> =  $1 \, A$ , I<sub>II</sub> =  $0.25 \, A$
- 2) Measured at 1MHz and applied reverse voltage of 4V D.C
- 3 ) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.





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### Characteristic Curves (T<sub>A</sub>=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

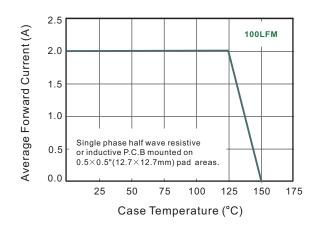


Fig.2 Typical Reverse Characteristics

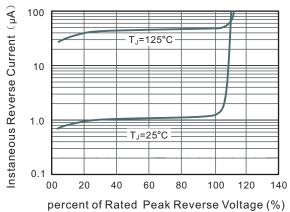


Fig.3 Typical Instaneous Forward Characteristics

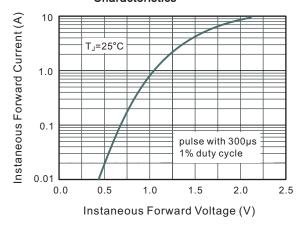


Fig.4 Typical Junction Capacitance

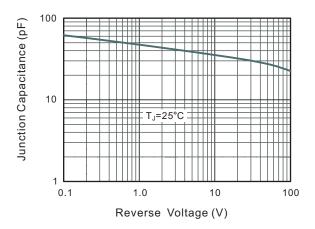
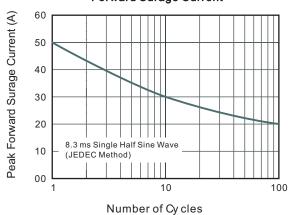


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



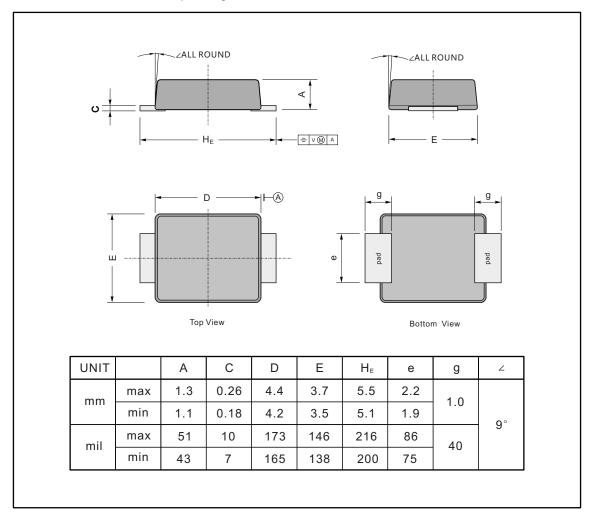


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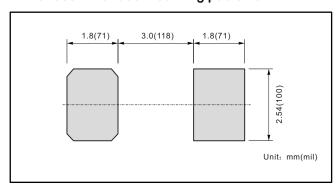
### PACKAGE OUTLINE

### Plastic surface mounted package; 2 leads

**SMBF** 



### The recommended mounting pad size



### Marking

| Type number | Marking code |  |  |  |  |
|-------------|--------------|--|--|--|--|
| RS2ABF      | R2AB         |  |  |  |  |
| RS2BBF      | R2BB         |  |  |  |  |
| RS2DBF      | R2DB         |  |  |  |  |
| RS2GBF      | R2GB         |  |  |  |  |
| RS2JBF      | R2JB         |  |  |  |  |
| RS2KBF      | R2KB         |  |  |  |  |
| RS2MBF      | R2MB         |  |  |  |  |

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