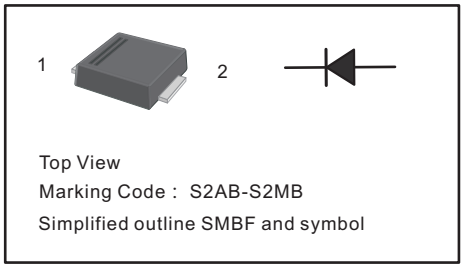
**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 2 A**

**PINNING**

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




Top View
Marking Code： S2AB-S2MB
Simplified outline SMBF and symbol

**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: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

**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 | S2ABF | S2BBF | S2DBF | S2GBF | S2JBF | S2KBF | S2MBF | 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 °C | $I_{F(AV)}$ | 2 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 2 A | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$ =125 °C | $I_R$ | 5<br>100 | | | | | | | μA |
| Typical Junction Capacitance (1) | $C_j$ | 25 | | | | | | | pF |
| Typical Thermal Resistance (2) | $R_{\theta JA}$<br>$R_{\theta JC}$ | 60<br>18 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | | °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**

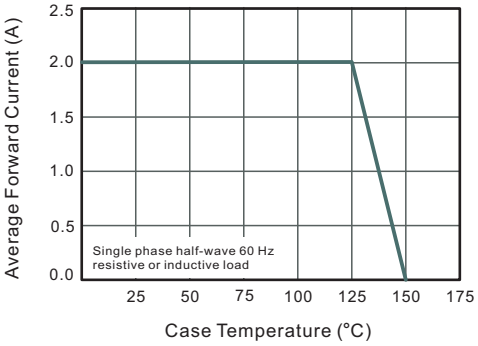



**Fig.2 Typical Reverse Characteristics**

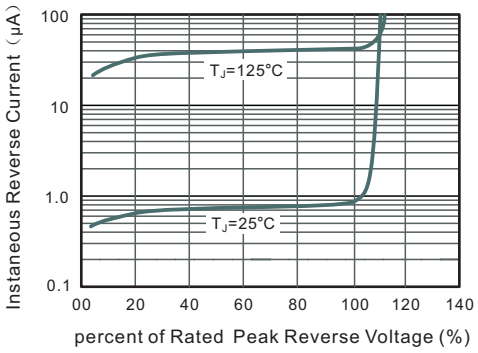



**Fig.3 Typical Forward Characteristic**

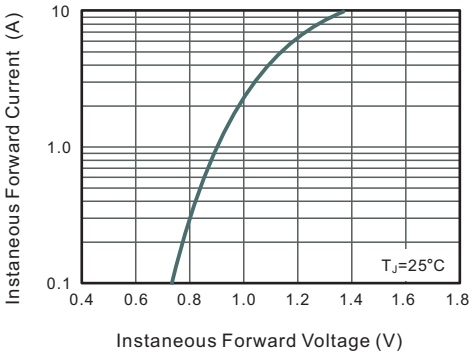



**Fig.4 Typical Junction Capacitance**

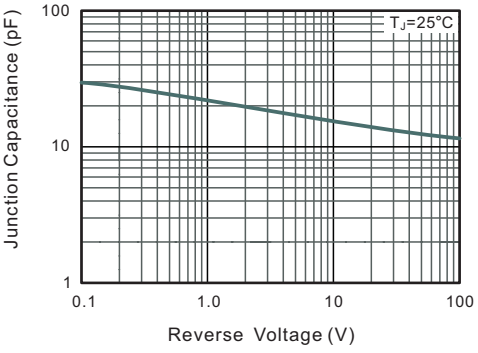
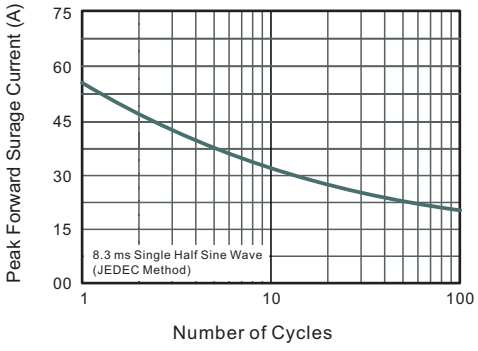
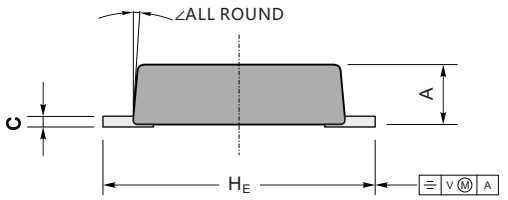


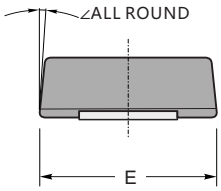

**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**

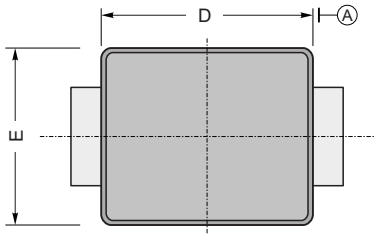


## PACKAGE OUTLINE

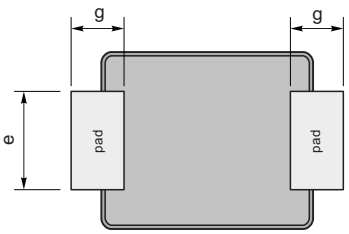
**Plastic surface mounted package; 2 leads** SMBF



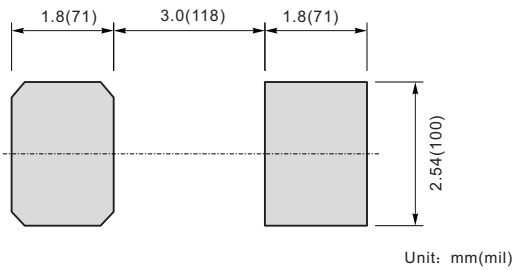

Top View




Bottom View

| UNIT | | A | C | D | E | $H_E$ | e | g | ∠ |
|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.3 | 0.26 | 4.4 | 3.7 | 5.5 | 2.2 | 1.0 | 9° |
| | min | 1.1 | 0.18 | 4.2 | 3.5 | 5.1 | 1.9 | | |
| mil | max | 51 | 10 | 173 | 146 | 216 | 86 | 40 | |
| | min | 43 | 7 | 165 | 138 | 200 | 75 | | |

### The recommended mounting pad size




### Marking

| Type number | Marking code |
|---|---|
| S2ABF | S2AB |
| S2BBF | S2BB |
| S2DBF | S2DB |
| S2GBF | S2GB |
| S2JBF | S2JB |
| S2KBF | S2KB |
| S2MBF | S2MB |