

S3ABF THRU S3MBF

Reverse Voltage – 50 to 1000 V
Forward Current – 3 A

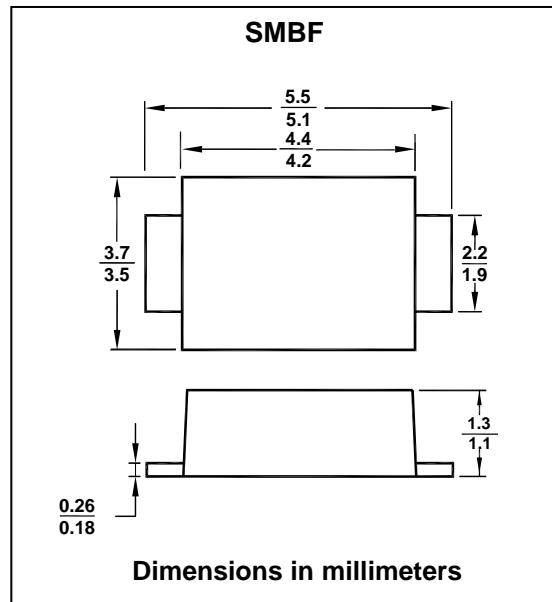
Features

- Glass Passivated Chip Junction
- For surface mount applications
- Low profile package
- Easy pick and place

Mechanical Data

- **Case:** SMBF
- **Terminals:** Solderable per MIL-STD-750, method 2026

SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIER



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 | S3ABF | S3BBF | S3DBF | S3GBF | S3JBF | S3KBF | S3MBF | Units |
|--|-----------------|---------------|-------|-------|-------|-------|-------|-------|--------------------|
| Marking | S3AB | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | - | |
| 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 $T_a = 65^\circ\text{C}$ | $I_{F(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 100 | | | | | | | A |
| Maximum Forward Voltage at 3 A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$ | I_R | 5 200 | | | | | | | μA |
| Typical Junction Capacitance ¹⁾ | C_J | 45 | | | | | | | pF |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 40 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | - 55 to + 150 | | | | | | | $^\circ\text{C}$ |

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

²⁾ P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

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Fig.1 Forward Current Derating Curve

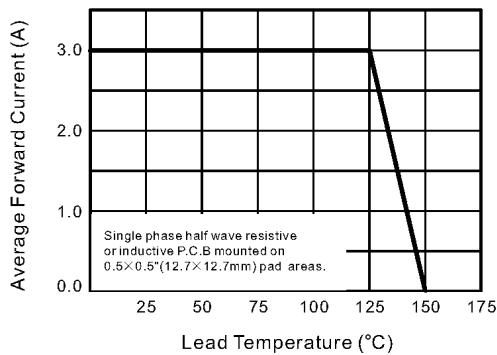


Fig.2 Typical Reverse Characteristics

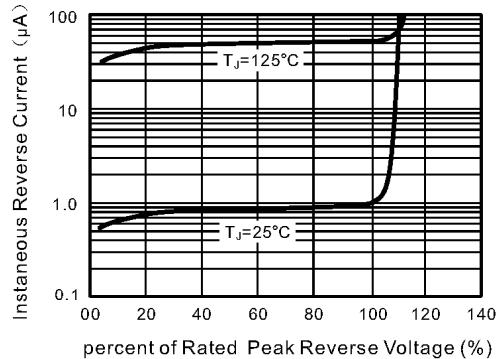


Fig.3 Typical Instantaneous Forward Characteristics

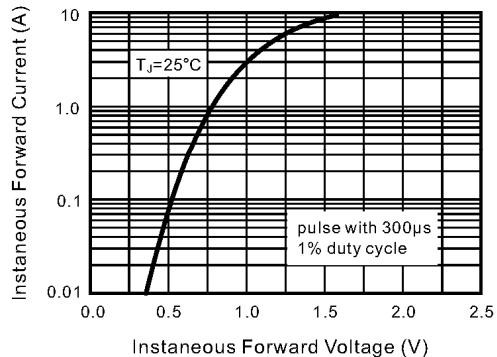


Fig.4 Typical Junction Capacitance

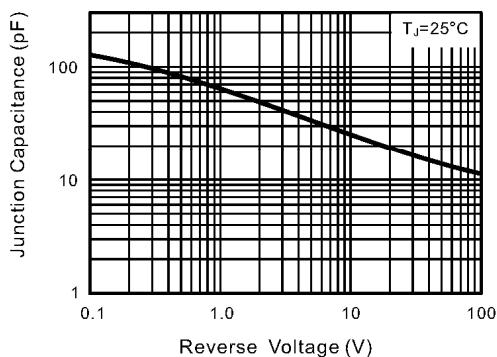


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

