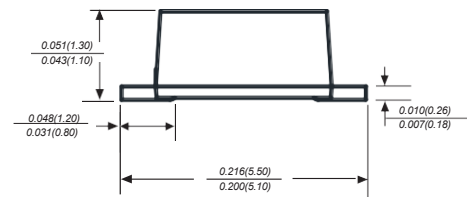
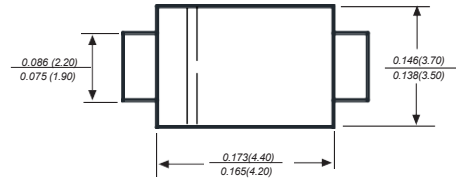


## SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIER

### 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

### SMBF



Dimensions in inches and (millimeters)

## Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

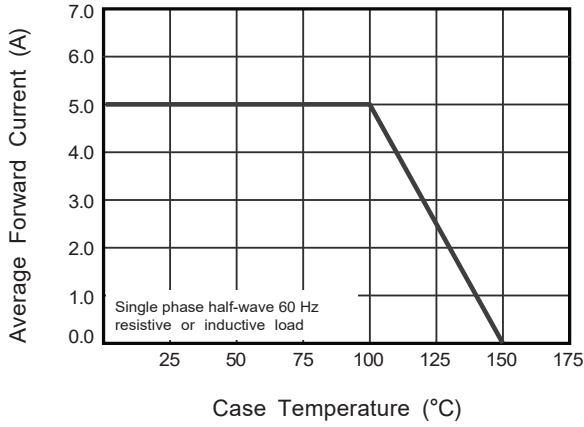
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                 | SYMBOLS         | S5ABF        | S5BBF | S5DBF | S5GBF | S5JBF | S5KBF | S5MBF | UNITS              |
|-----------------------------------------------------------------------------------------------------------|-----------------|--------------|-------|-------|-------|-------|-------|-------|--------------------|
| Marking Code                                                                                              |                 | S5AB         | S5BB  | S5DB  | S5GB  | S5JB  | S5KB  | S5MB  |                    |
| 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 $T_L=65^\circ\text{C}$                                       | $I_{(AV)}$      | 5.0          |       |       |       |       |       |       | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method)    | $I_{FSM}$       | 125          |       |       |       |       |       |       | A                  |
| Maximum instantaneous forward voltage at 5.0A                                                             | $V_F$           | 1.10         |       |       |       |       |       |       | V                  |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=125^\circ\text{C}$ | $I_R$           | 5.0<br>150.0 |       |       |       |       |       |       | $\mu\text{A}$      |
| Typical junction capacitance (NOTE 1)                                                                     | $C_J$           | 45.0         |       |       |       |       |       |       | pF                 |
| Typical thermal resistance (NOTE 2)                                                                       | $R_{\theta JA}$ | 40.0         |       |       |       |       |       |       | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range                                                          | $T_J, T_{STG}$  | -55 to +150  |       |       |       |       |       |       | $^\circ\text{C}$   |

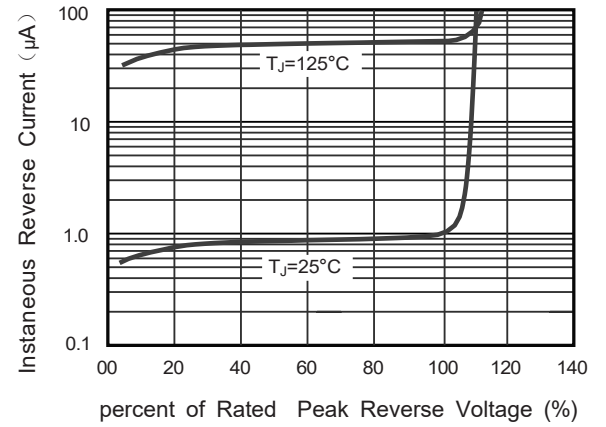
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. P.C.B. mounted with 0.5x0.5" (12.7x12.7mm) copper pad areas

## Typical Characteristics

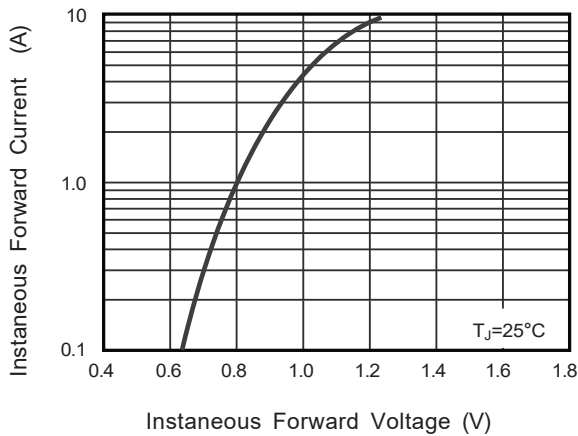
**Fig.1 Forward Current Derating Curve**



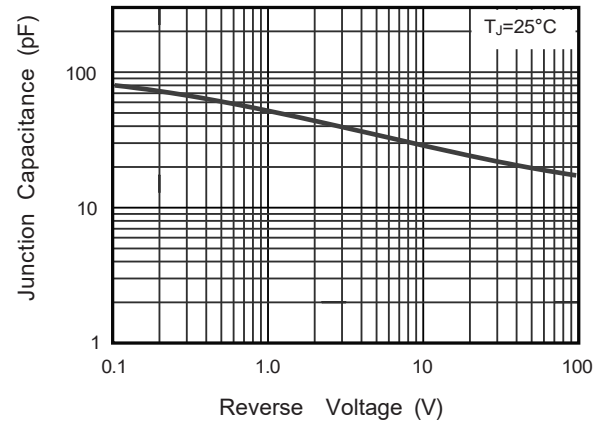
**Fig.2 Typical Reverse Characteristics**



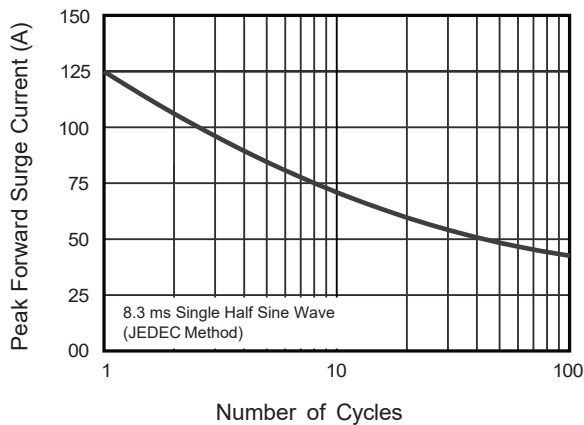
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**



The curve above is for reference only.