

# S3ABF<sub>THRU</sub> S3MBF

## 3.0 AMP SURFACE MOUNT SILICON RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

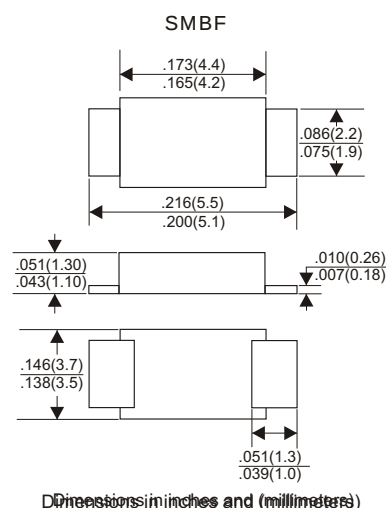
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

3.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER                                                                                        | S3ABF      | S3BBF | S3DBF | S3GBF | S3JBF | S3KBF | S3MBF | UNITS |
|----------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | 50         | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum RMS Voltage                                                                                | 35         | 70    | 140   | 280   | 420   | 560   | 700   | V     |
| Maximum DC Blocking Voltage                                                                        | 50         | 100   | 200   | 400   | 600   | 800   | 1000  | V     |
| Maximum Average Forward Rectified Current                                                          |            |       |       |       |       |       |       |       |
| At T <sub>L</sub> =75°C                                                                            | 3.0        |       |       |       |       |       |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 100        |       |       |       |       |       |       | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                      | 1.10       |       |       |       |       |       |       | V     |
| Maximum DC Reverse Current Ta=25°C                                                                 | 5.0        |       |       |       |       |       |       | μA    |
| at Rated DC Blocking Voltage Ta=125°C                                                              | 250        |       |       |       |       |       |       | μA    |
| Typical Junction Capacitance (Note1)                                                               | 60         |       |       |       |       |       |       | pF    |
| Typical Thermal Resistance R <sub>JL</sub> (Note 2)                                                | 13         |       |       |       |       |       |       | °C/W  |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>stg</sub>                          | -65 — +150 |       |       |       |       |       |       | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead.

## RATING AND CHARACTERISTIC CURVES (S3ABF THRU S3MBF)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

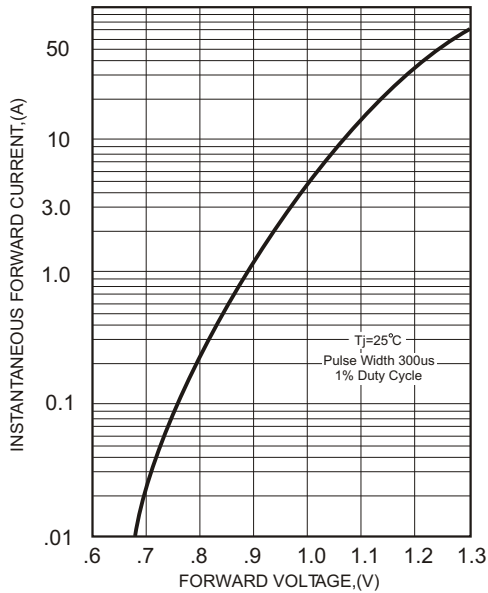


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

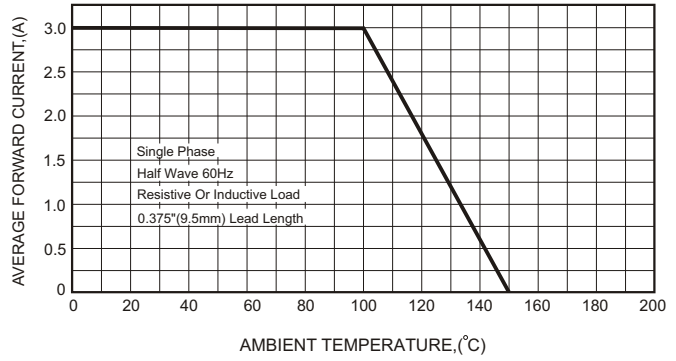


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

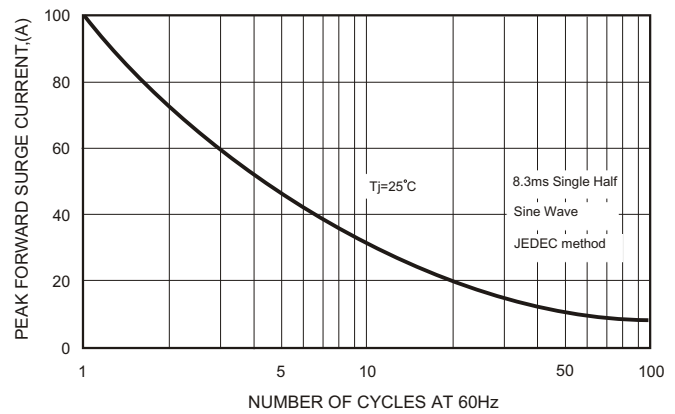


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

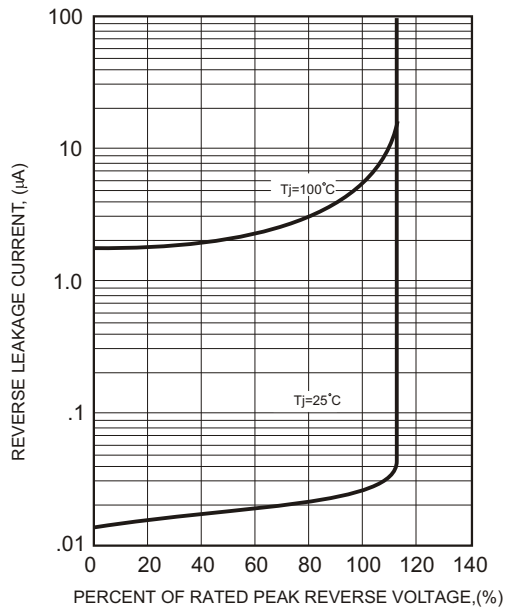


FIG.5-TYPICAL JUNCTION CAPACITANCE

