

## PLASTIC SILICON RECTIFIERS

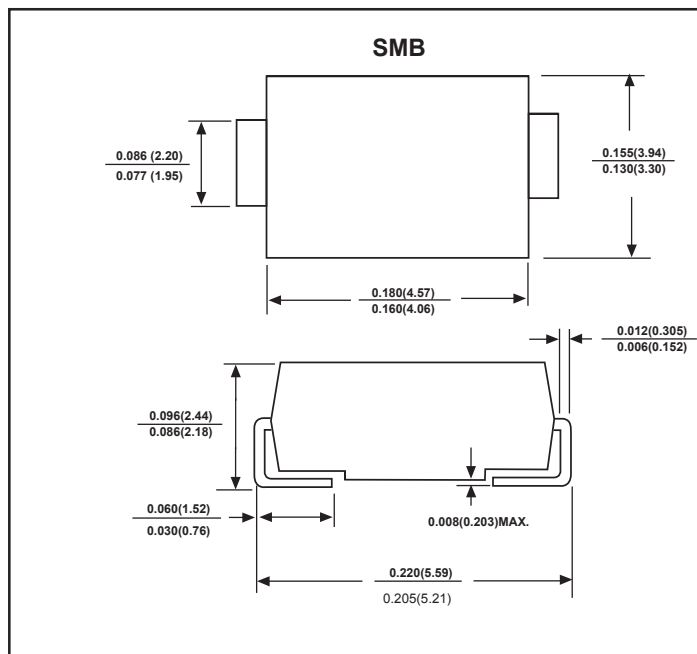
VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 3.0 A

### FEATURES

- Lead free finish/Rohs compliant (Note 1) ("P" suffix designates compliant. See ordering information)
- Low forward voltage drop and high current capability
- Glass passivated die construction
- Surge over load rating to 100A peak
- Ideally suited for automatic assembly
- Epoxy meets UL 94V-0 flammability rating
- Moisture sensitivity level 1

### MECHANICAL DATA

- Case: SMB molded plastic body
- Terminals: Solder Plated Terminal-Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band

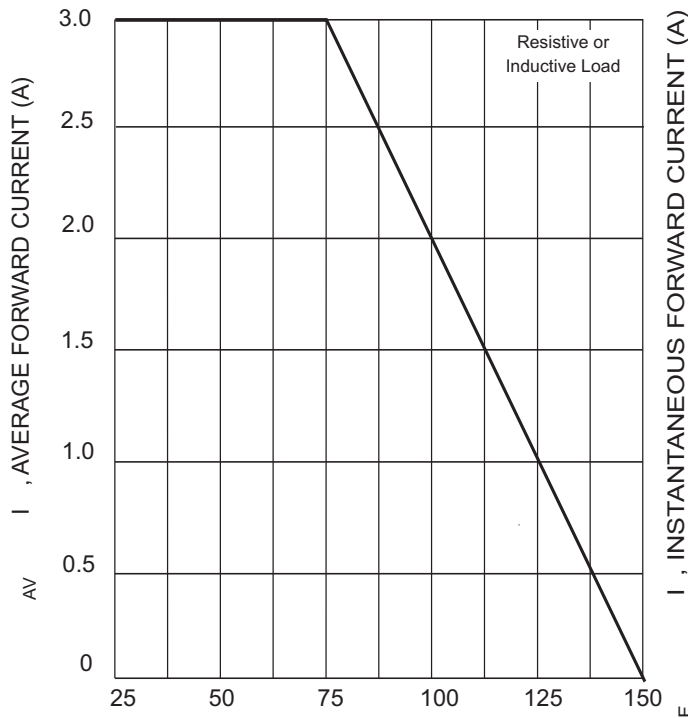


|                                                                                  |                       | SYMBOLS          | S3A  | S3B | S3D | S3G | S3J | S3K | S3M  | UNIT  |
|----------------------------------------------------------------------------------|-----------------------|------------------|------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                           |                       | V <sub>RRM</sub> | 50   | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage                                                              |                       | V <sub>RMS</sub> | 35   | 70  | 140 | 280 | 420 | 560 | 700  | Volts |
| Maximum DC Blocking Voltage                                                      |                       | V <sub>DC</sub>  | 50   | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Average Forward Current T <sub>J</sub> =75°C                                     |                       | I <sub>O</sub>   | 3.0  |     |     |     |     |     |      | Amps  |
| Peak Forward Surge Current 8.3ms, half sine                                      |                       | I <sub>FSM</sub> | 100  |     |     |     |     |     |      | Amps  |
| Maximum Instantaneous Forward Voltage I <sub>FM</sub> =3.0A T <sub>J</sub> =25°C |                       | V <sub>F</sub>   | 1.15 |     |     |     |     |     |      | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage                          | T <sub>J</sub> =25°C  | I <sub>R</sub>   | 10   |     |     |     |     |     |      | μA    |
|                                                                                  | T <sub>J</sub> =125°C |                  | 250  |     |     |     |     |     |      | μA    |
| Typical Junction Capacitance Measured at 1.0MHz, V <sub>R</sub> =4.0V            |                       | C <sub>J</sub>   | 40   |     |     |     |     |     |      | pF    |

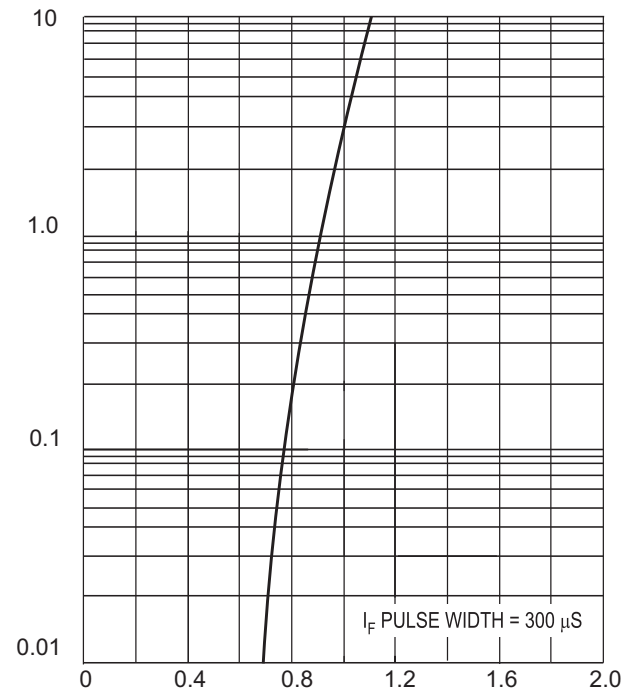
#### NOTES:

1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

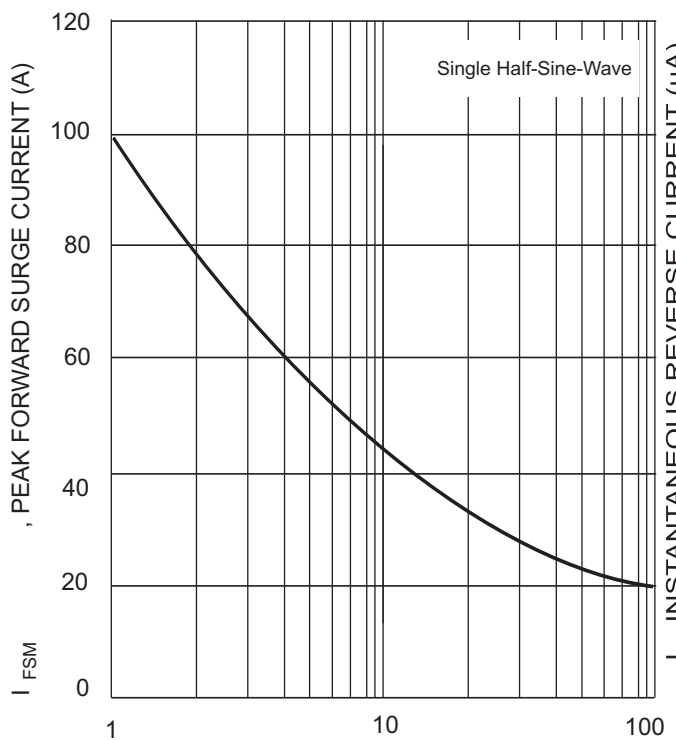
## RATINGS AND CHARACTERISTIC CURVES



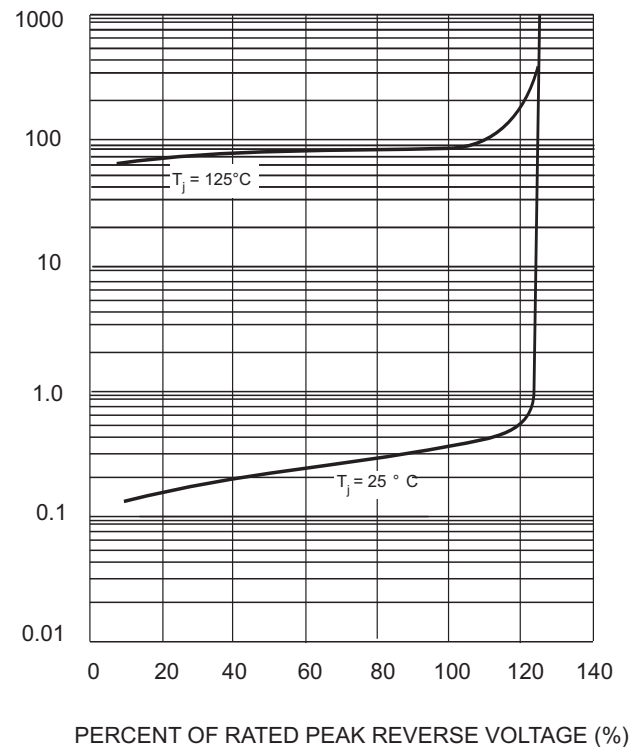
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 4 Typical Reverse Characteristics