

RoHS Compliant Product  
A suffix of "-C" specifies halogen free

## FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case: SMBM
- Terminals: Solderable per MIL-STD-750, Method 2026

## MARKING

SL510B

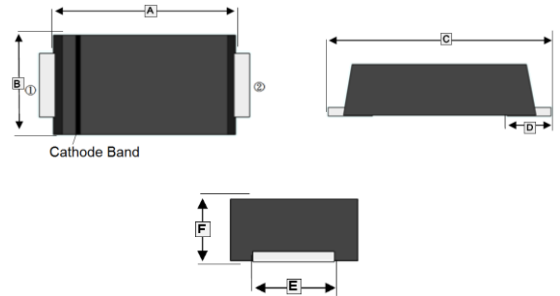
## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SMBM    | 5K  | 13 inch     |

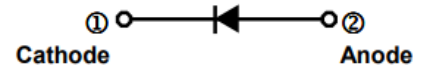
## ORDER INFORMATION

| Part Number | Type                            |
|-------------|---------------------------------|
| SK5100BM-C  | Lead (Pb)-free and Halogen-free |

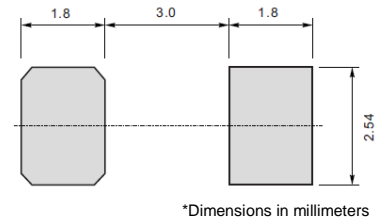
### SMBM



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 4.20       | 4.70 | E    | 1.80       | 2.20 |
| B    | 3.40       | 3.80 | F    | 1.10       | 1.45 |
| C    | 5.10       | 5.50 | G    | 0.18       | 0.26 |
| D    | 1.00 REF.  |      |      |            |      |



### Mounting Pad Layout



## 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, de-rate current by 20%.)

| Parameter   | Symbol          | Rating  | Unit |
|---|-----------------|---------|------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 100     | V    |
| Working Peak Reverse Voltage  | $V_{RSM}$       | 70      | V    |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 100     | V    |
| Maximum Average Forward Rectified Current   | $I_F$           | 5       | A    |
| Peak Forward Surge Current @8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 150     | A    |
| Typical Thermal Resistance from Junction-Ambient <sup>2</sup>                                     | $R_{\theta JA}$ | 60      | °C/W |
| Operating & Storage Temperature Range   | $T_J, T_{STG}$  | -55~150 | °C   |

## ELECTRICAL CHARACTERISTICS

| Parameter   | Symbol | Typ. | Max. | Unit | Test Condition           |
|---|--------|------|------|------|--------------------------|
| Maximum Forward Voltage                                 | $V_F$  | -    | 0.6  | V    | $I_F=5A, T_A=25^\circ C$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$  | -    | 0.1  | mA   | $T_A=25^\circ C$         |
| Typical Junction Capacitance <sup>1</sup>               | $C_J$  | 180  | -    | pF   |                          |

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. P.C.B. mounted with 2.0" x 2.0" (5x5 cm) copper pad areas.

**RATINGS AND CHARACTERISTIC CURVES**

Fig.1 Forward Current Derating Curve

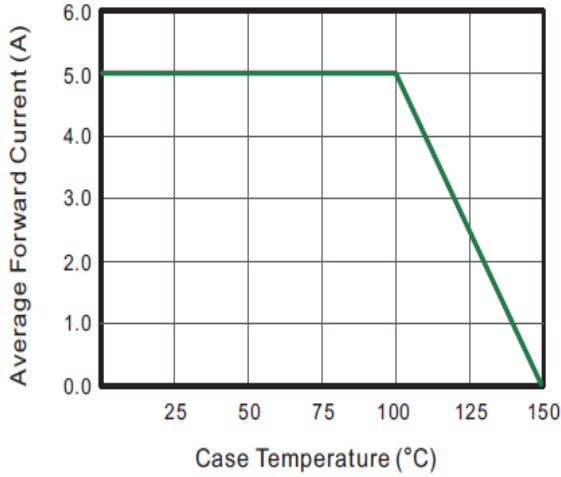


Fig.2 Typical Reverse Characteristics

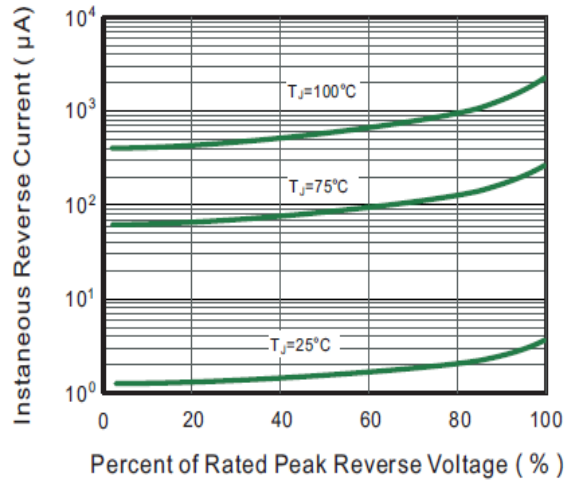


Fig.3 Typical Forward Characteristic

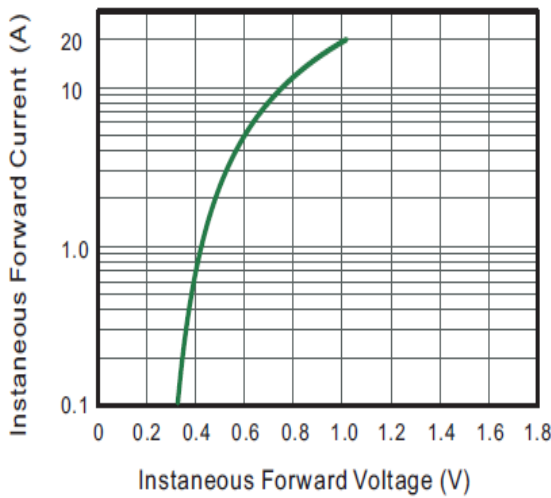


Fig.4 Typical Junction Capacitance

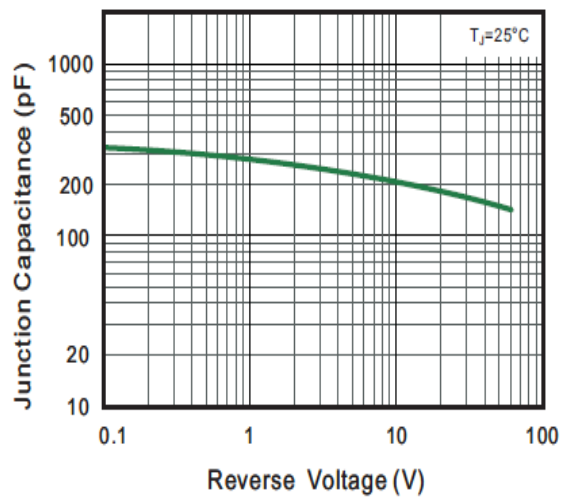


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

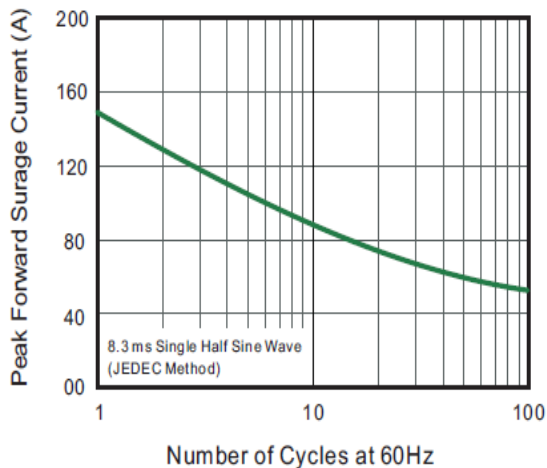


Fig.6 Typical Transient Thermal Impedance

