

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

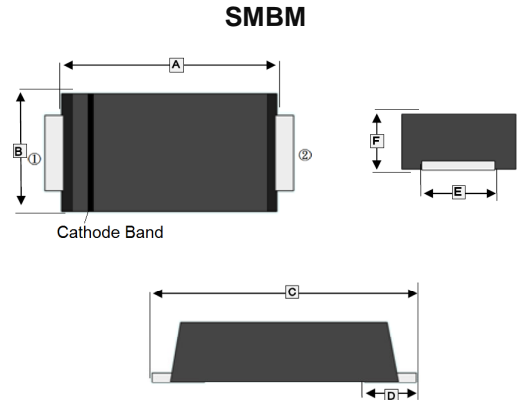
- Case: SMBM
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight 57 mg / 0.002oz

## MARKING

SL510B

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMBM	5K	13 inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.2	4.7	D	1.0 REF	
B	3.4	3.8	E	1.8	2.2
C	5.1	5.5	F	1.1	1.45



## 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@ 8.3 ms single half sine-wave Superimposed on rated load (JEDEC method)	$I_{FSM}$	150	A
Typical Thermal Resistance from Junction to Ambient <sup>2</sup>	$R_{\theta JA}$	60	°C / W
Operating and 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 4.0V 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

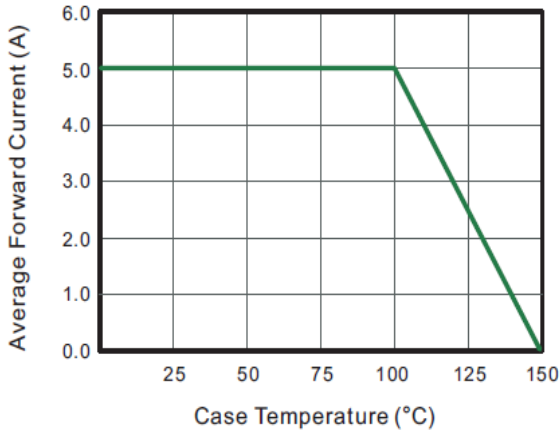


Fig.2 Typical Reverse Characteristics

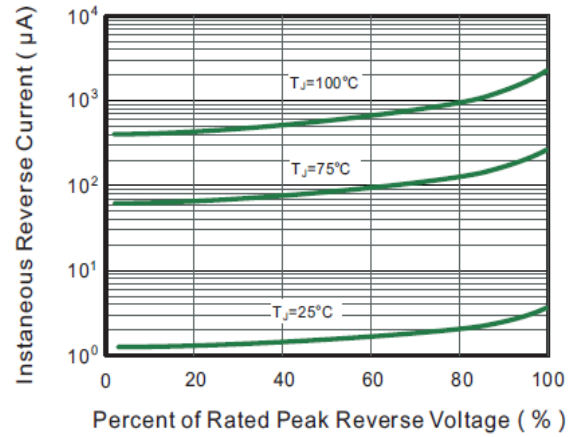


Fig.3 Typical Forward Characteristic

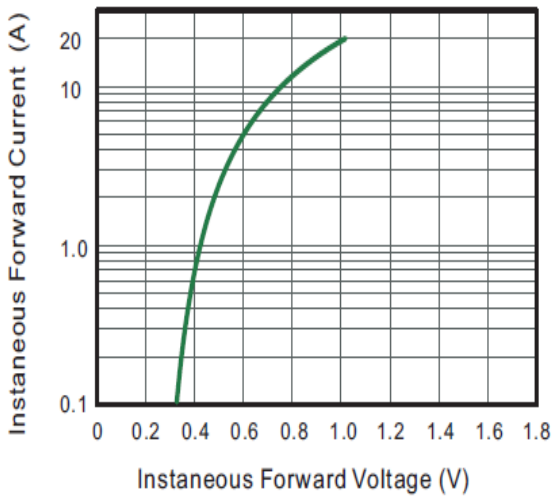


Fig.4 Typical Junction Capacitance

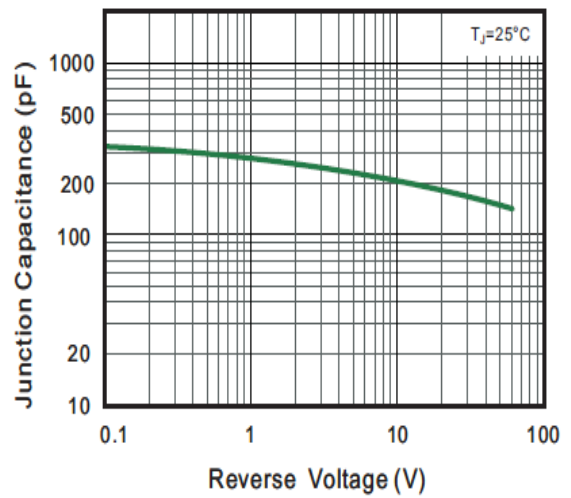


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

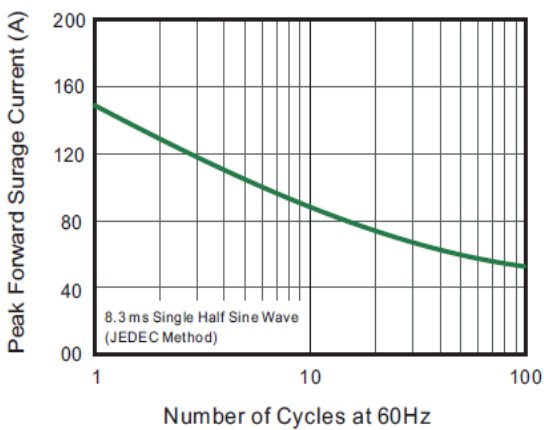


Fig.6- Typical Transient Thermal Impedance

