

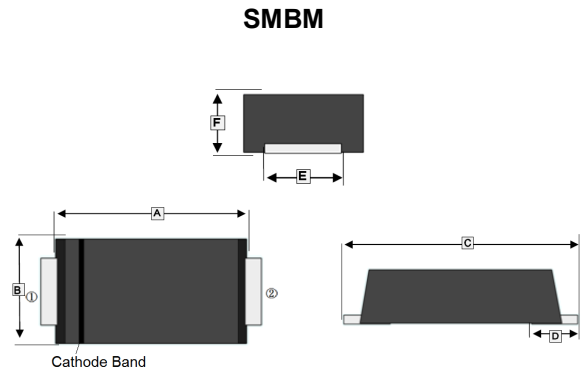
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Surface mounted applications
- Metal silicon junction, majority carrier conduction
- 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

Part Number	Marking Code	Part Number	Marking Code
SM520BM	S52B	SM5100BM	S510B
SM540BM	S54B	SM5150BM	S515B
SM560BM	S56B	SM5200BM	S520B

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.2	4.4	D	1.0 REF	
B	3.5	3.7	E	1.9	2.2
C	5.1	5.5	F	1.1	1.3

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMBM	5K	13 inch

ABSOLUTE MAXIMUM RATINGS

(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	Part Number						Unit
		SM 520BM	SM 540BM	SM 560BM	SM 5100BM	SM 5150BM	SM 5200BM	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	28	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	100	150	200	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
Maximum Instantaneous Forward Voltage @ $I_F=5A$	V_F	0.55		0.7		0.85		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ C$	1						mA
	$T_J=100^\circ C$	50						
Typical Junction Capacitance ¹	C_J	800		500				pF
Typical Thermal Resistance from Junction to Ambient ²	$R_{\theta JA}$	45						°C/W
Junction and Storage Temperature	T_J, T_{STG}	-55~ 150						°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 0.5 X 0.5"(12.7 X 12.7mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

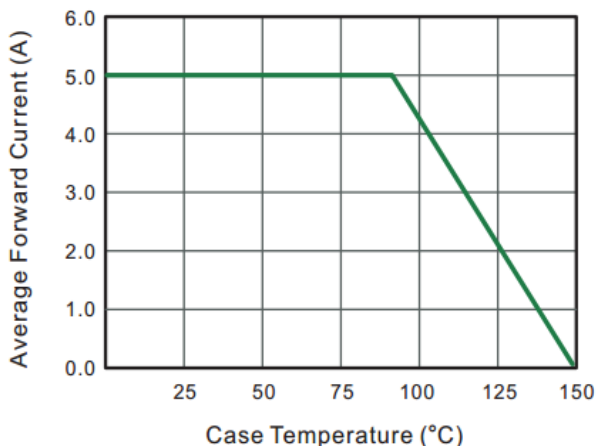


Fig.2 Typical Reverse Characteristics

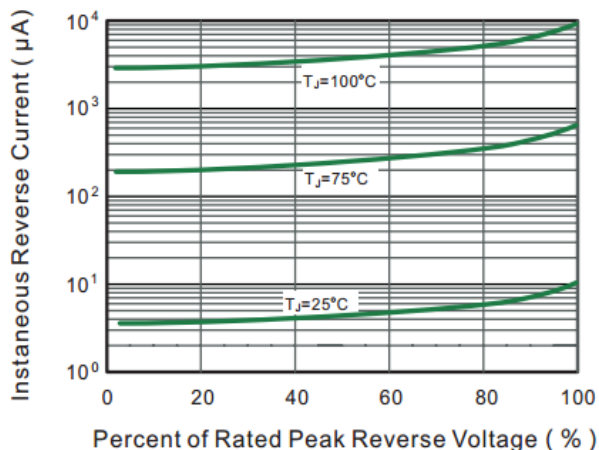


Fig.3 Typical Forward Characteristic

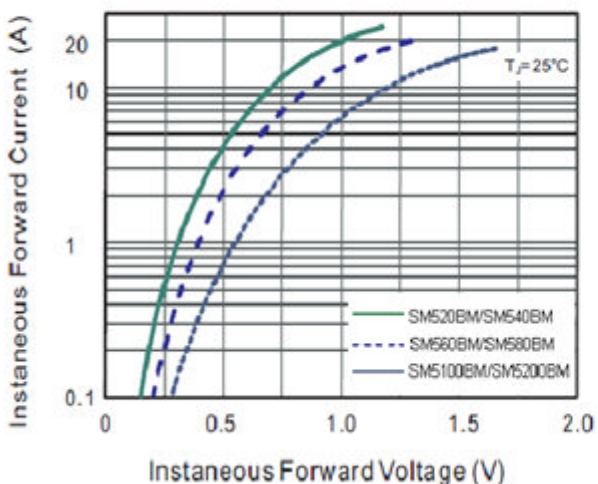


Fig.4 Typical Junction Capacitance

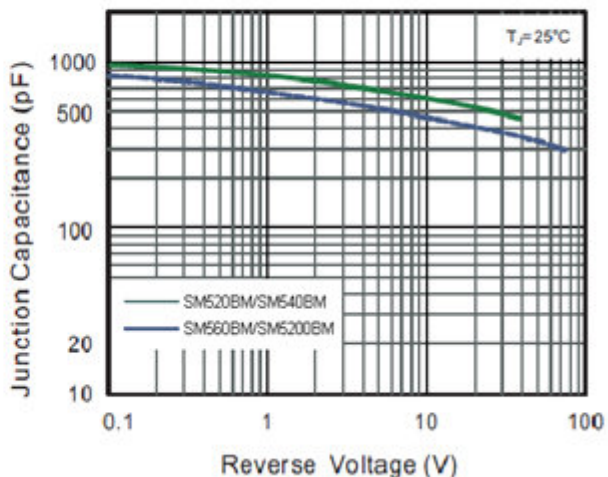


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

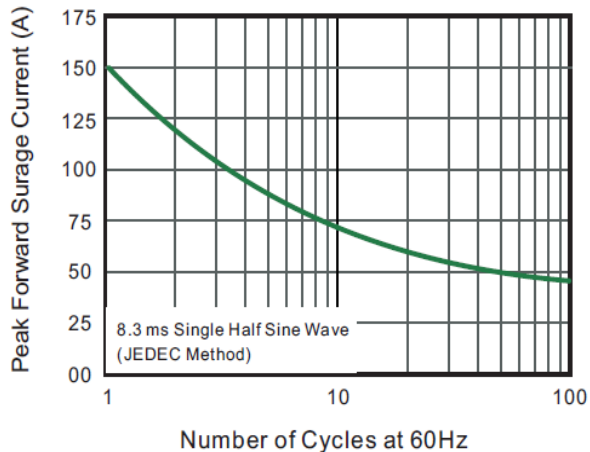


Fig.6- Typical Transient Thermal Impedance

