

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

FEATURES

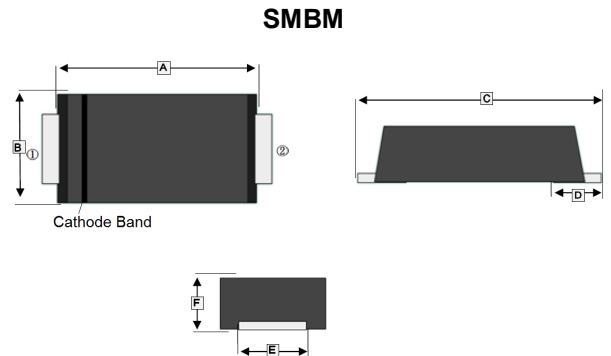
- For Surface Mounted Applications
- Low Profile Package
- Glass Passivated Chip Junction
- Easy to Pick and Place
- Fast Reverse Recovery Time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

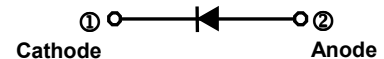
- Case: SMBM
- Terminals: Solderable per MIL-STD-750, Method 2026

MARKING

Part Number	Marking	Part Number	Marking
SMF301BM-C	R3AB	SMF305BM-C	R3JB
SMF302BM-C	R3BB	SMF306BM-C	R3KB
SMF303BM-C	R3DB	SMF307BM-C	R3MB
SMF304BM-C	R3GB		



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



PACKAGE INFORMATION

Package	MPQ	Leader Size
SMBM	5K	13 inch

ORDER INFORMATION

Part Number	Type
SMF301BM-C~SMF307BM-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS

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

Parameter	Symbol	Part Number							Unit
		SMF301 BM-C	SMF302 BM-C	SMF303 BM-C	SMF304 BM-C	SMF305 BM-C	SMF306 BM-C	SMF307 BM-C	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_C=125^\circ\text{C}$	I_F	3							A
Peak Forward Surge Current @8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	80							A
Maximum Instantaneous Forward Voltage @ $I_F=3\text{A}$	V_F	1.3							V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	5							μA
	$T_A=125^\circ\text{C}$	100							
Typical Junction Capacitance @ $V_R=4\text{V}$, $f=1\text{MHz}$	C_J	40							pF
Maximum Reverse Recovery Time ¹	t_{rr}	150			250	500		nS	
Typical Thermal Resistance from Junction-Ambient ²	$R_{\theta JA}$	45							$^\circ\text{C/W}$
Typical Thermal Resistance from Junction-Case ²	$R_{\theta JC}$	15							$^\circ\text{C/W}$
Operating & Storage Temperature	T_J, T_{STG}	-55~ 150							$^\circ\text{C}$

Notes:

1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Maximum Average Forward Current Rating

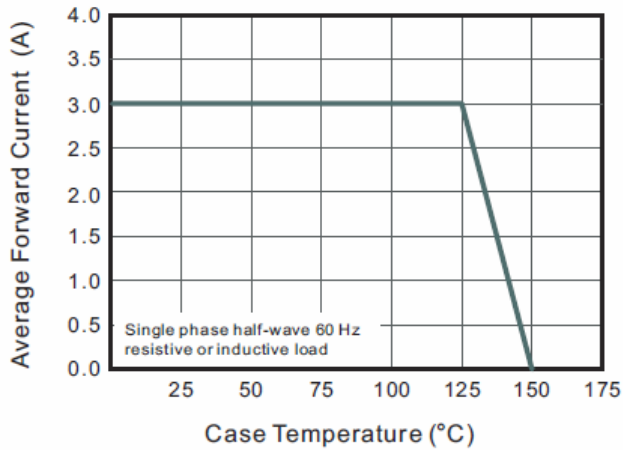


Fig.2 Typical Reverse Characteristics

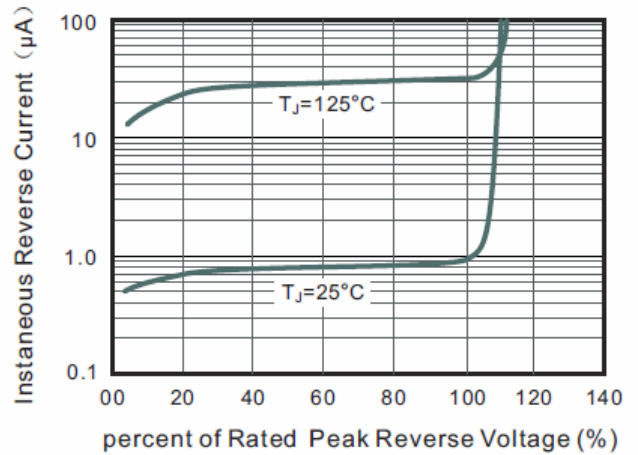


Fig.3 Typical Instantaneous Forward Characteristics

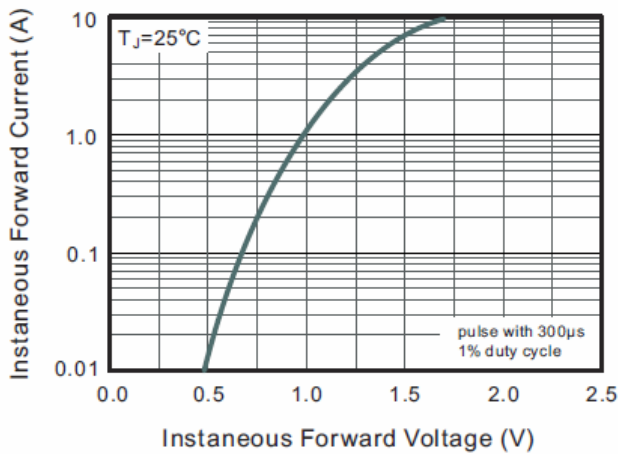


Fig.4 Typical Junction Capacitance

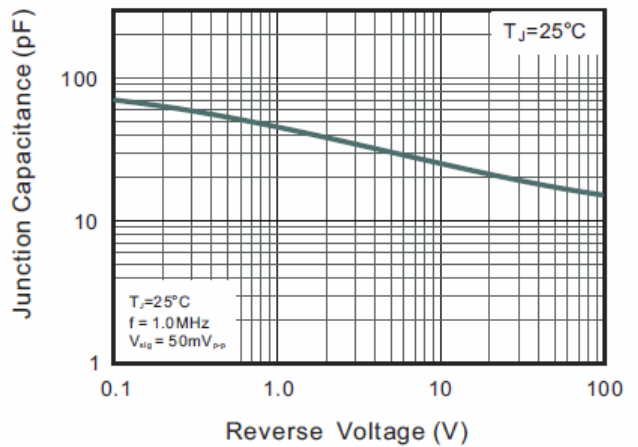


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

