

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

## FEATURES

- High Current Capability
- High Reliability
- Low Forward Voltage Drop
- High Surge Current Capability
- Epitaxial Construction

## MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Metallurgically Bonded Construction
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

**SMBM**

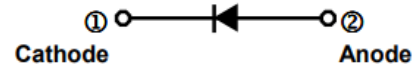


## MARKING

S84B

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMBM	5K	13 inch



## ORDER INFORMATION

Part Number	Type
SM840BM-C	Lead (Pb)-free and Halogen-free

## 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%.)

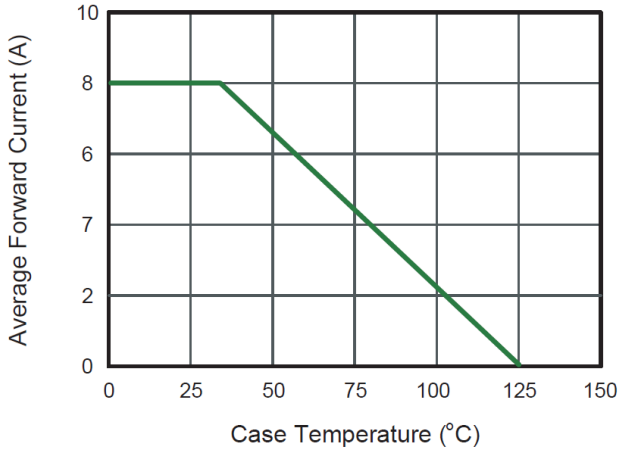
Parameter	Symbol	Part Number	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum RMS Voltage	$V_{RMS}$	28	V
Maximum DC Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Current, See Fig. 1	$I_F$	8	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150	
Maximum Instantaneous Forward Voltage @8A	$V_F$	0.55	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	1	mA
	$T_A=100^\circ\text{C}$	50	
Typical Junction Capacitance <sup>1</sup>	$C_J$	410	pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	42	°C/W
	$R_{\theta JC}$	10	
	$R_{\theta JL}$	15	
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~125, -55~150	°C

Notes:

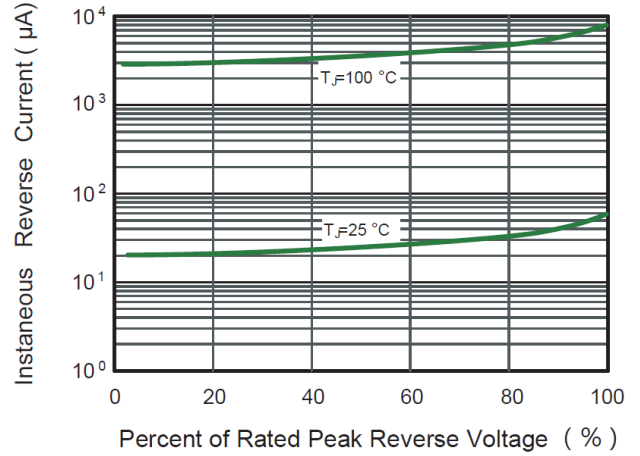
1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

**RATINGS AND CHARACTERISTIC CURVES**

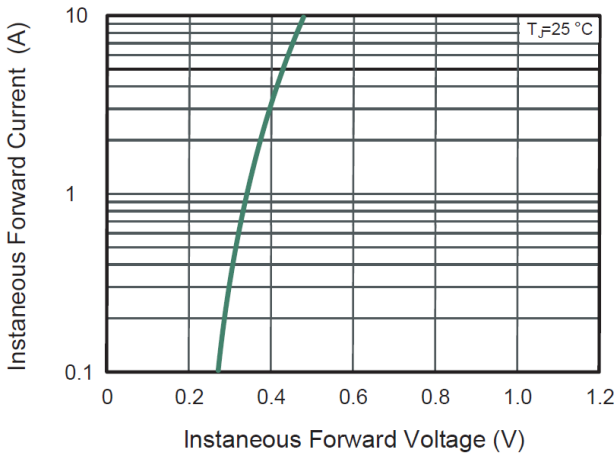
**Fig.1 Forward Current Derating Curve**



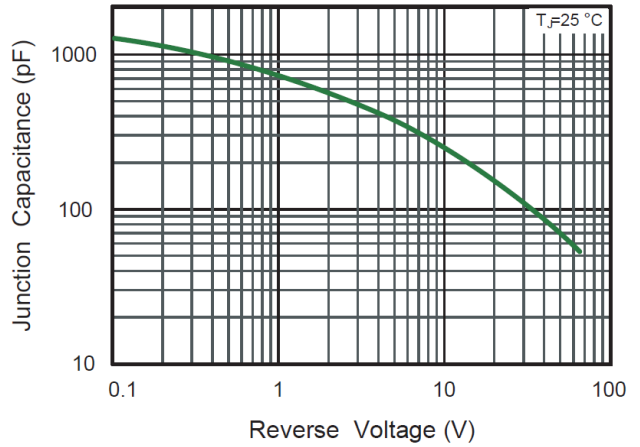
**Fig.2 Typical Reverse Characteristics**



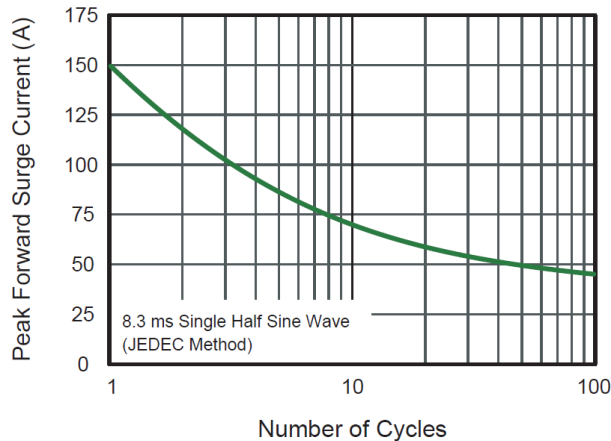
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

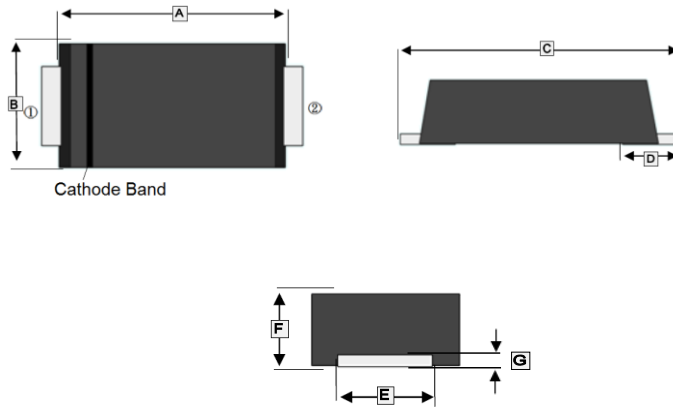


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**

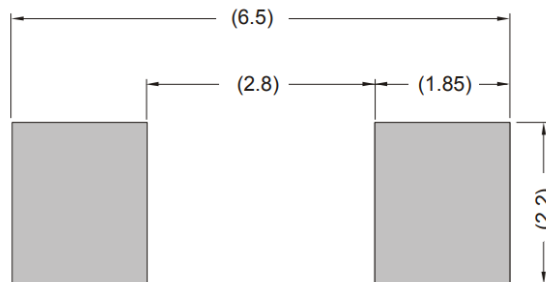
**SMBM**



REF.	Millimeter	
	Min.	Max.
A	4.20	4.70
B	3.40	3.80
C	5.10	5.50
D	1.00 REF.	
E	1.80	2.20
F	1.10	1.45
G	0.15	0.26

**MOUNTING PAD LAYOUT**

**SMBM**



\*Dimensions in millimeters