

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

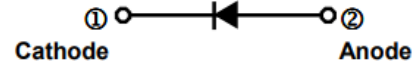
- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Metallurgically Bonded Construction
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

SMBM



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
Working Peak Reverse Voltage	V_{RSM}	40	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	0.58	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	0.3	mA
	$T_A=100^\circ\text{C}$	45	
Typical Junction Capacitance ¹	C_J	250	pF
Thermal Resistance Junction-Case ²	$R_{\theta JC}$	20	°C/W
Operating & Storage Temperature Range	T_J, T_{STG}	-50~150, -65~175	°C

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-TYPICAL FORWARD CURRENT DERATING CURVE

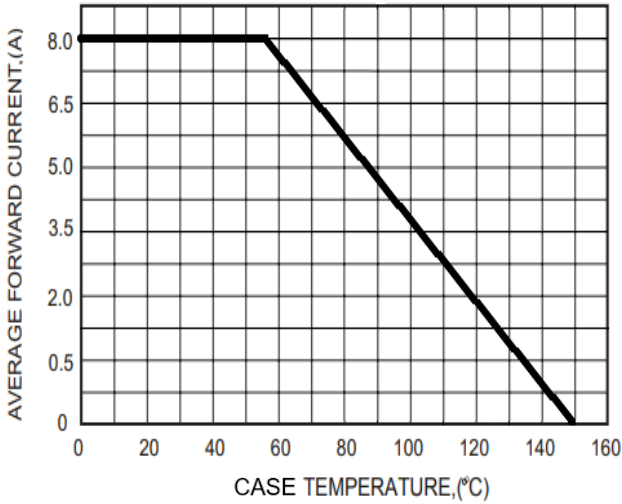


FIG.2-TYPICAL FORWARD CHARACTERISTICS

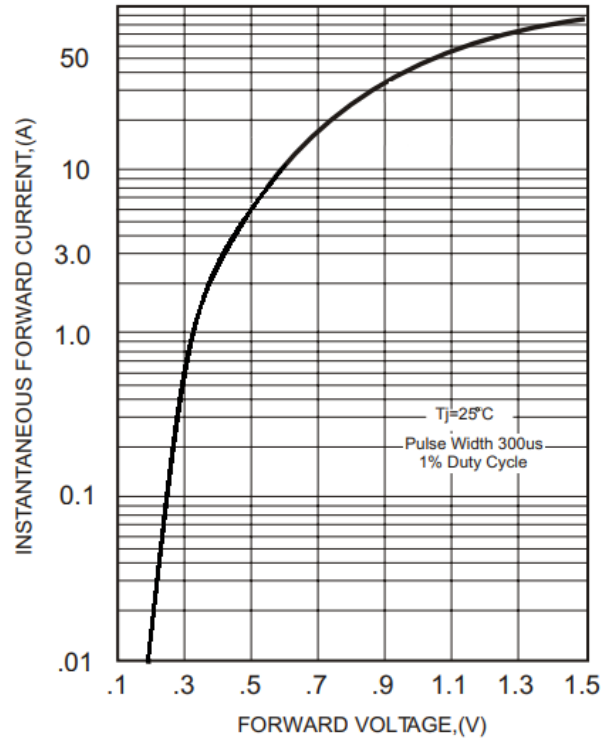


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

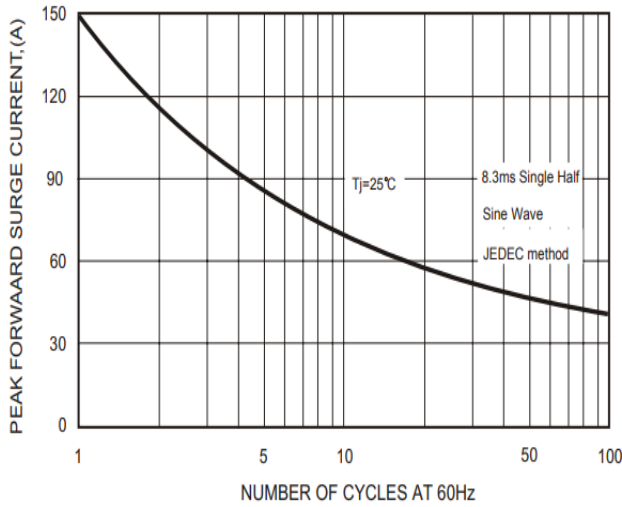


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

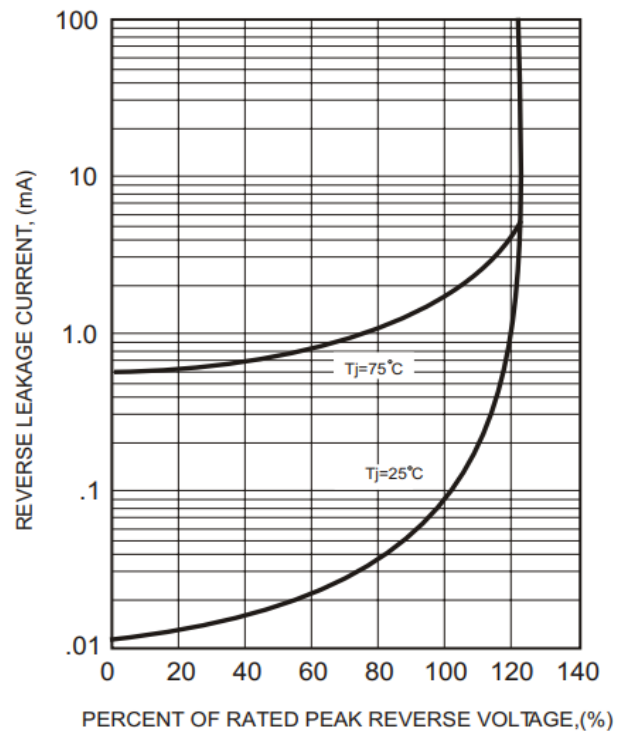
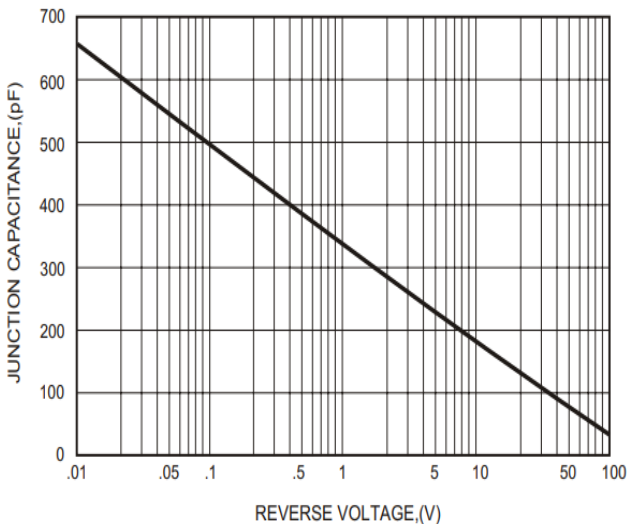
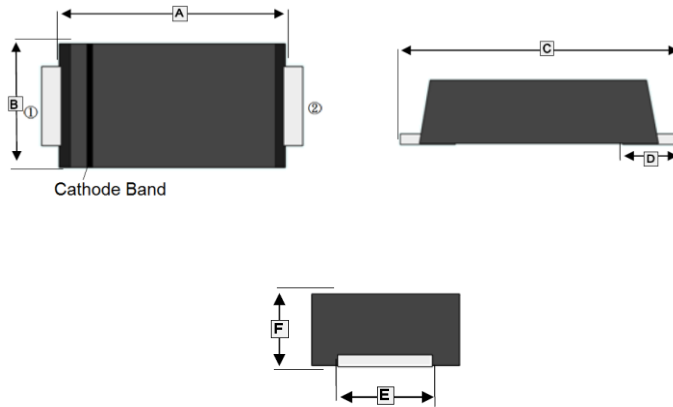


FIG.4-TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

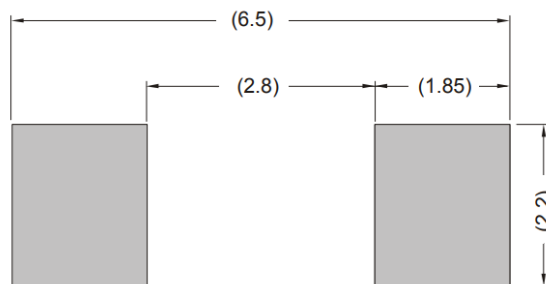
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REF.	Millimeter	
	Min.	Max.
A	4.20	4.70
B	3.40	3.80
C	5.10	5.50
D	1.00 REF.	
E	1.80	2.20
F	1.10	1.45
G	0.15	0.26

MOUNTING PAD LAYOUT

SMBM



*Dimensions in millimeters