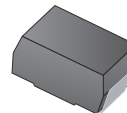


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- 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

SMB



MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Molarity: Color Band Denotes Cathode End
- Mounting Position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

ORDER INFORMATION

Part Number	Type
SM820BJ-C~SM8200BJ-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
		SM820 BJ-C	SM840 BJ-C	SB860 BJ-C	SM8100 BJ-C	SM8150 BJ-C	SM8200 BJ-C	
Marking		S82B	S84B	S86B	S810B	S815B	S820B	
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	
Maximum DC Blocking Voltage	V_{DC}	20	40	60	100	150	200	
Maximum Average Forward Current	I_F	8						A
Peak Forward Surge Current, 8.3ms sing half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150						
Maximum Instantaneous Forward Voltage @ $I_F=8A$	V_F	0.45	0.55	0.7	0.85			V
Maximum DC Reverse Current @ Rated DC Blocking Voltage	$T_A=25^\circ C$	1						mA
	$T_A=100^\circ C$	50						
Typical Junction Capacitance ¹	C_J	900			700			pF
Typical Thermal Resistance ²	$R_{\theta JA}$	50						°C/W
Operating Junction Temperature Range	T_J	-55~150						°C
Storage Temperature Range	T_{STG}	-55~150						

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

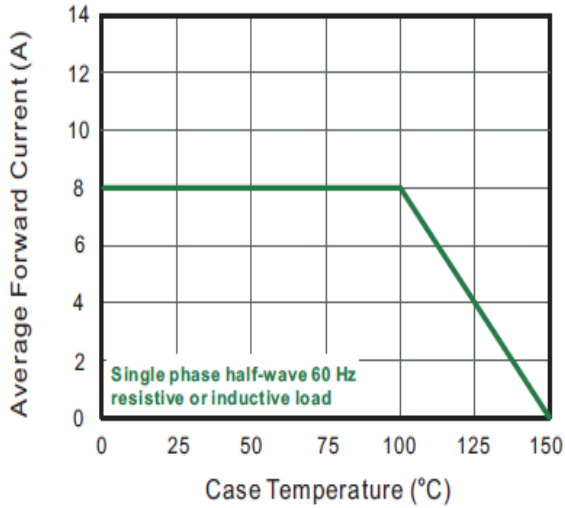


Fig.2 Typical Reverse Characteristics

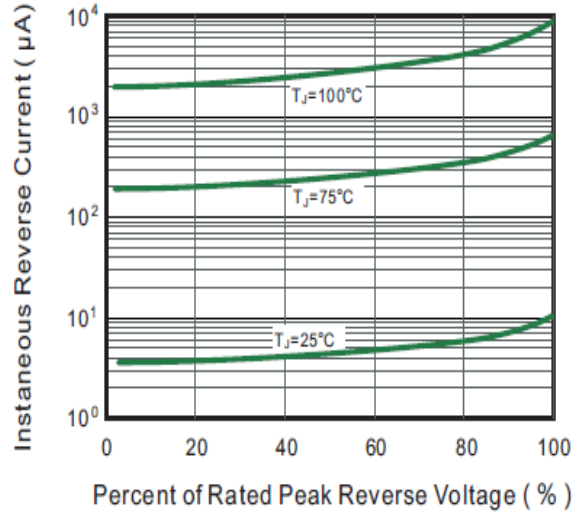


Fig.3 Typical Forward Characteristic

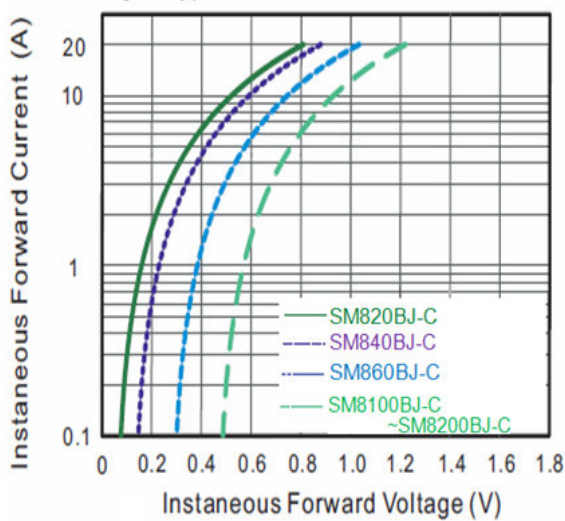


Fig.4 Typical Junction Capacitance

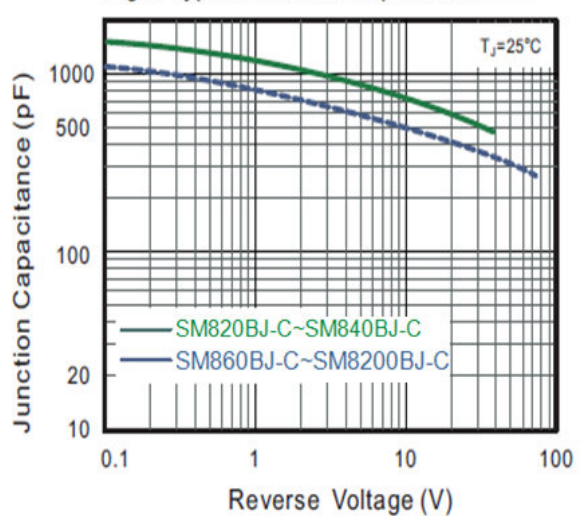


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

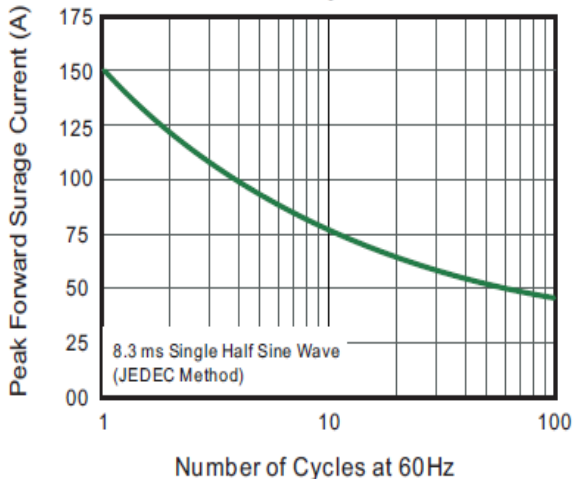
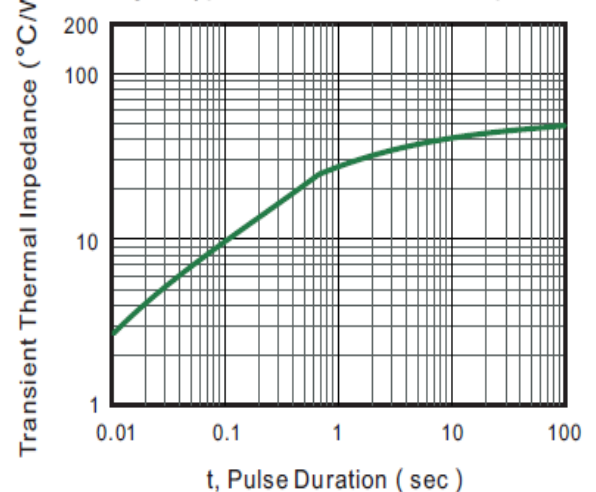
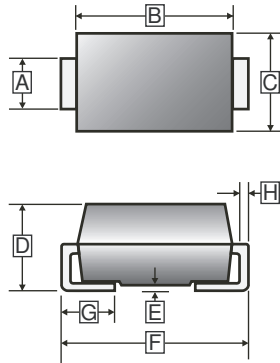


Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS

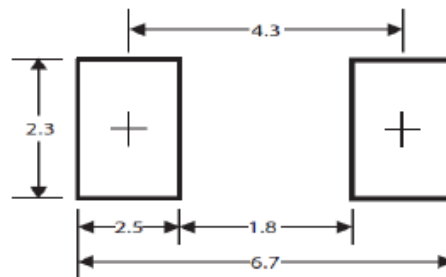
SMB



REF.	Millimeter	
	Min.	Max.
A	1.85	2.20
B	4.00	4.85
C	3.25	3.94
D	1.90	2.61
E	-	0.25
F	5.05	5.59
G	0.75	1.55
H	0.15	0.31

MOUNTING PAD LAYOUT

SMB



*Dimensions in millimeters