

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

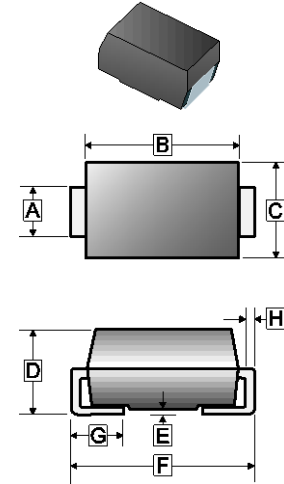
PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

ORDER INFORMATION

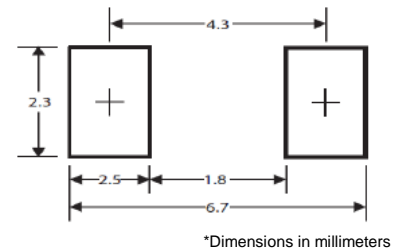
Part Number	Type
SM820B-C~SM8100B-C	Lead (Pb)-free and Halogen-free

SMB



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

Mounting Pad Layout



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
		SM820B-C	SM840B-C	SM860B-C	SM8100B-C	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	100	V
Working Peak Reverse Voltage	V_{RSM}	20	40	60	100	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	100	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		0.69	0.83	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	I_R	0.3		0.15	0.05	mA
	$T_A=25^{\circ}C$	45		22.5	7.5	
Typical Junction Capacitance ¹	C_J	250				pF
Thermal Resistance Junction-Case ²	$R_{\theta JC}$	35				°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. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

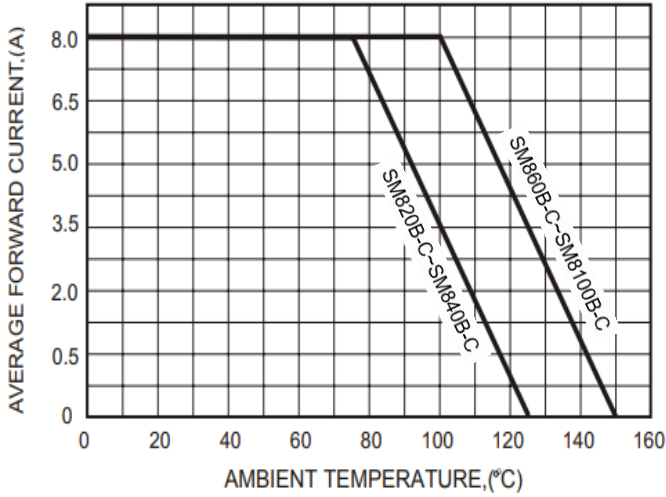


FIG.2-TYPICAL FORWARD CHARACTERISTICS

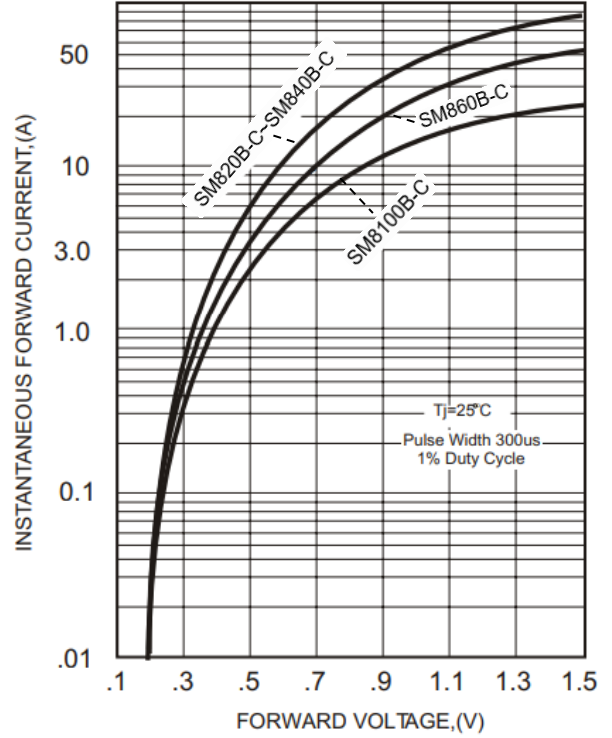


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

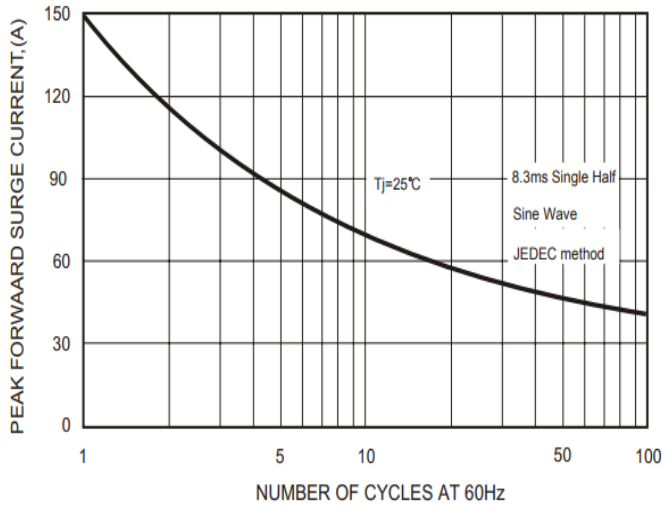


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

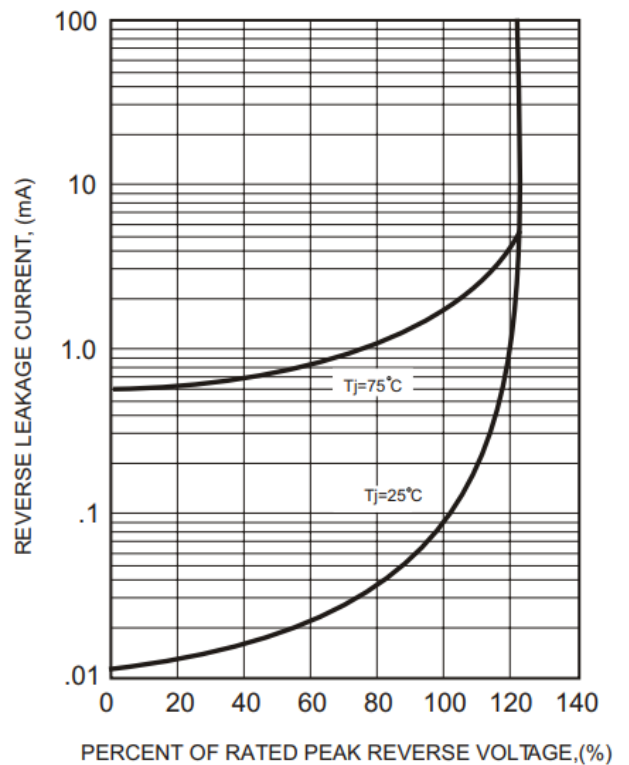


FIG.4-TYPICAL JUNCTION CAPACITANCE

