

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

FEATURES

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering: 250°C for 10 Seconds at Terminals
- Low Reverse Current

MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Lead: Axial Leads, Solderable per MIL-STD-202 method 208 Guaranteed
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

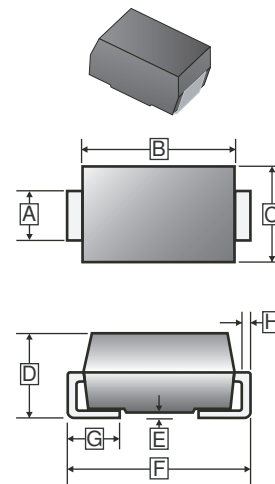
PACKAGE INFORMATION

Package	MPQ	Lead Size
SMB	3K	13 inch

ORDER INFORMATION

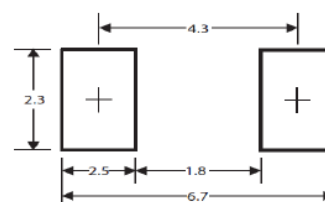
Part Number	Type
SM520B-C~SM560B-C	Lead (Pb)-free and Halogen-free

SMB



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.85	2.20	E	-	0.203
B	4.00	4.75	F	5.08	5.59
C	3.25	3.94	G	0.75	1.52
D	1.99	2.61	H	0.15	0.31

Mounting Pad Layout



*Dimensions in millimeters

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
			SM520B-C	SM540B-C	SM560B-C	
Peak Repetitive Peak Reverse Voltage		V_{RRM}	20	40	60	V
Working Peak Reverse Voltage		V_{RWM}	20	40	60	V
Maximum DC Blocking Voltage		V_R	20	40	60	V
Maximum Average Forward Rectified Current, See Fig.1		$I_{F(AV)}$	5			A
Peak Forward Current @8.3ms Half Sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	125			A
Maximum Instantaneous Forward Voltage @ $I_F=5A$, $T_A=25^\circ C$		V_F	0.55		0.65	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_J=25^\circ C$	I_R	0.2		0.1	mA
	$T_J=100^\circ C$		30		15	
Typical Junction Capacitance ¹		C_J	380			pF
Thermal Resistance Junction-Ambient		$R_{\theta JA}$	45			°C/W
Thermal Resistance Junction-Case		$R_{\theta JC}$	15			°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-50~150, -65~175			°C

Note:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.

RATINGS AND CHARACTERISTIC CURVES

Typical Forward Current Derating Curve

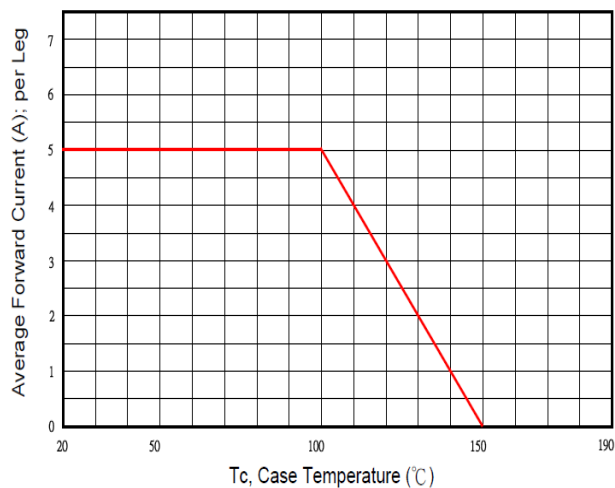


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

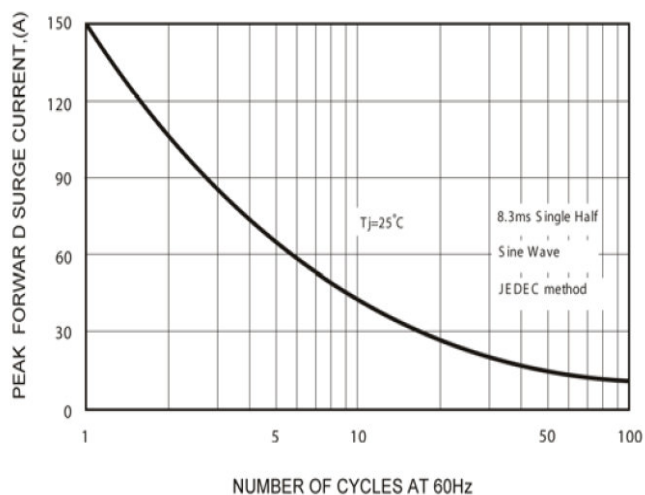


FIG. 4-TYPICAL JUNCTION CAPACITANCE

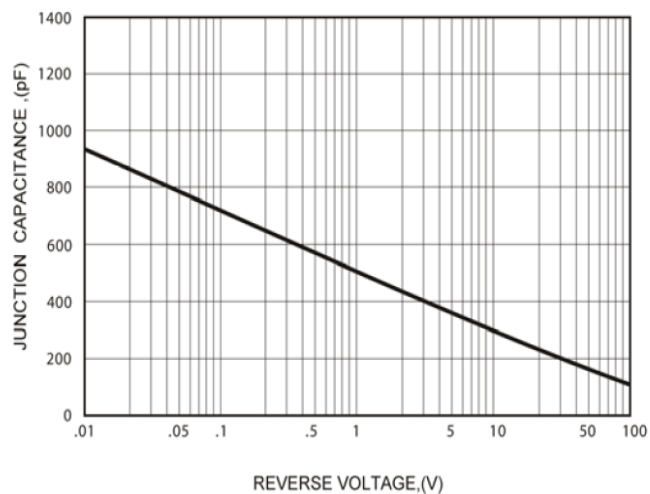


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

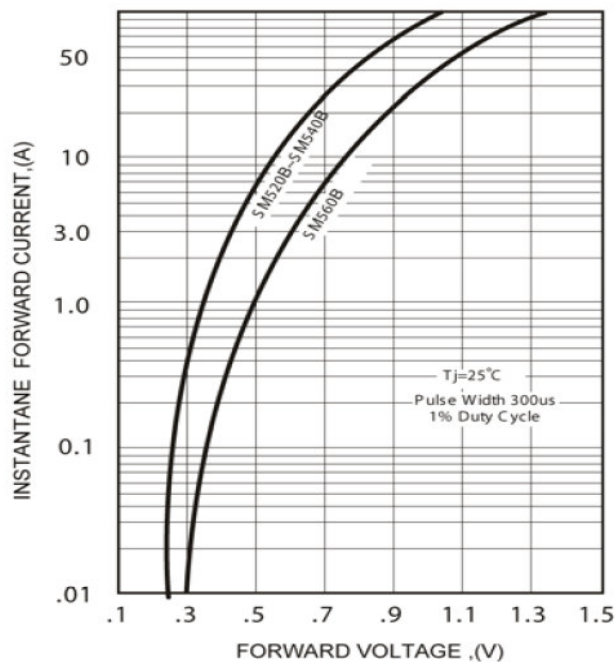


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

