

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

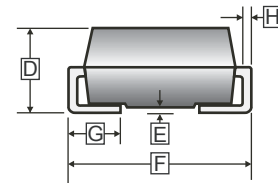
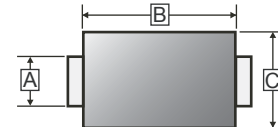
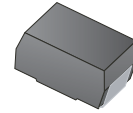
## FEATURES

- 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
- Weight: 0.102 grams

### SMB



## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.91	2.20	E	-	0.203
B	4.06	4.70	F	5.08	5.59
C	3.30	3.94	G	0.76	1.52
D	2.13	2.44	H	0.15	0.305

## 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	SM540B	SM560B	
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 @ 8.3 ms 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 At Rated DC Blocking Voltage	$T_J=25^\circ C$	0.2		0.1	mA
	$T_J=100^\circ C$	30		15	
Typical Junction Capacitance <sup>1</sup>	$C_J$	380			pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	45			°C / W
Typical Thermal Resistance <sup>3</sup>	$R_{\theta JC}$	15			°C / W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 ~ 150, -65 ~ 175			°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0 V D.C.
2. Thermal Resistance Junction to Ambient.
3. Thermal Resistance Junction to Case.

**RATINGS AND CHARACTERISTIC CURVES**

Typical Forward Current Derating Curve

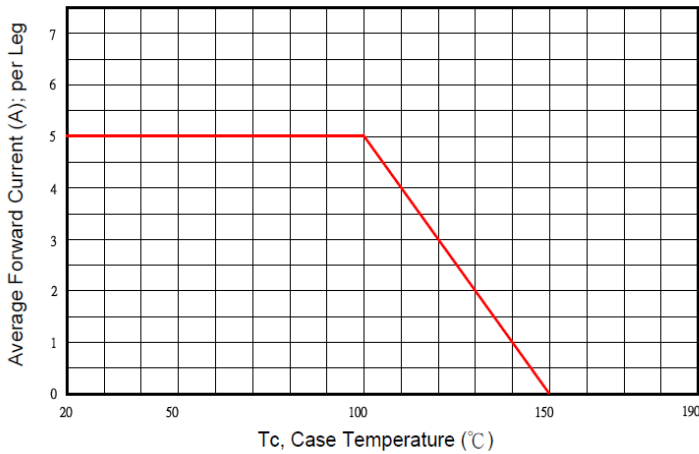


FIG .3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

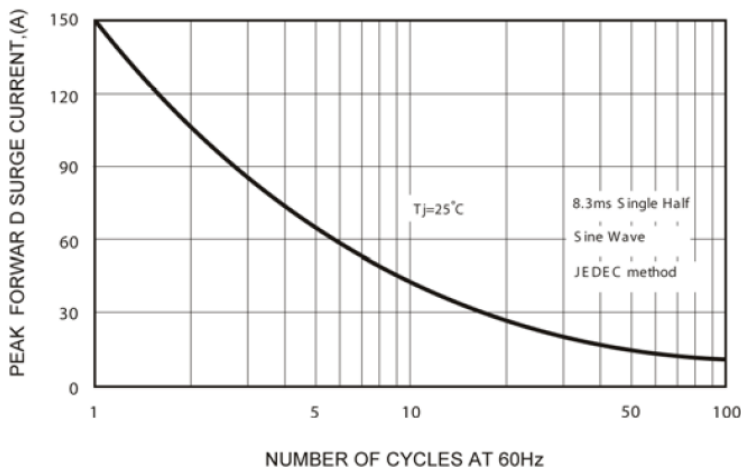


FIG .4-TYPICAL JUNCTION CAPACITANCE

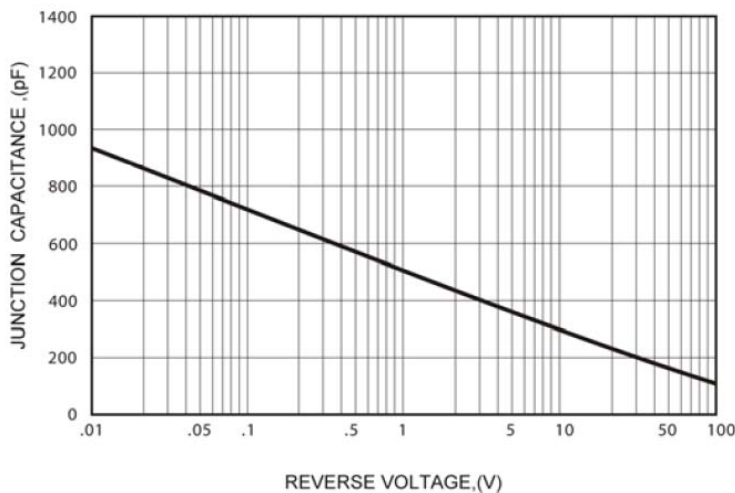


FIG .2-TYPICAL FORWARD CHARACTERISTICS

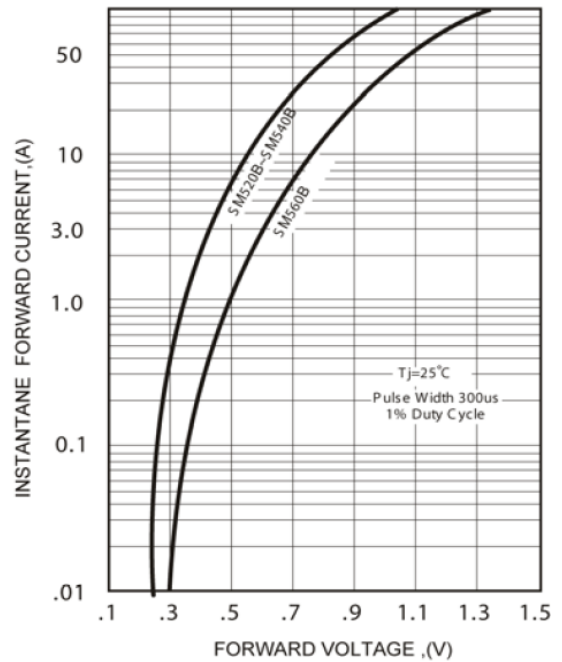


FIG .5 - TYPICAL REVERSE CHARACTERISTICS

