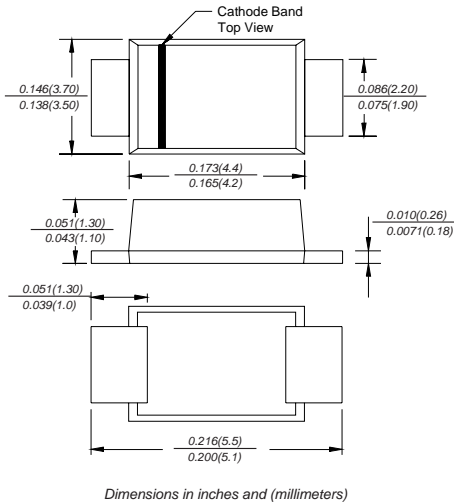


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts    Forward Current -5.0 Ampere

### SMBF



### Features

- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### Mechanical Data

**Case:** JEDEC SMBF molded plastic body  
**Terminals:** leads solderable per MIL-STD-750, Method 2026  
**Mounting Position:** Any  
**Weight:** 57mg/0.002oz

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

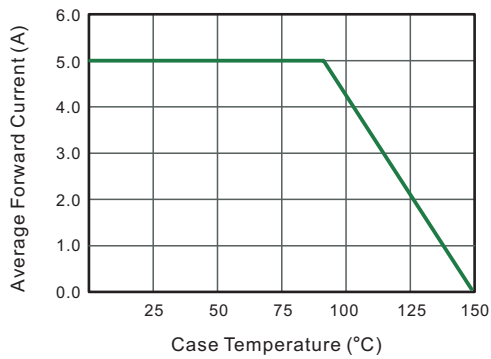
Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	SS52BF	SS54BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF	UNITS
Marking code		S52B	S54B	S56B	S58F	S510B	S515B	S520B	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	40	60	80	100	150	200	VOLTS
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	105	140	VOLTS
Maximum DC blocking voltage	$V_{DC}$	20	40	60	80	100	150	200	VOLTS
Maximum average forward rectified current at $T_L$ (see fig. 1)	$I_{(AV)}$	5.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0							Amps
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.55		0.70		0.85		0.95	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	1.0 50							mA
Typical junction capacitance (NOTE 1)	$C_J$	800			500				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	40.0							$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-50 to +125							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-50 to +150							$^\circ\text{C}$

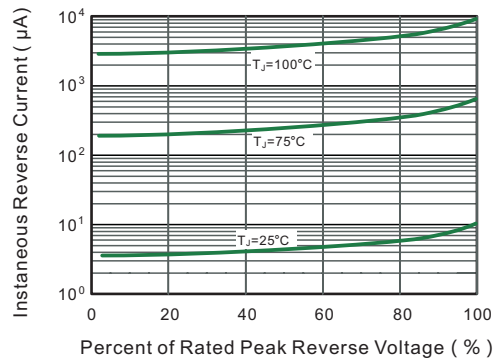
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

**RATINGS AND CHARACTERISTIC CURVES SS52BF THRU SS520BF**

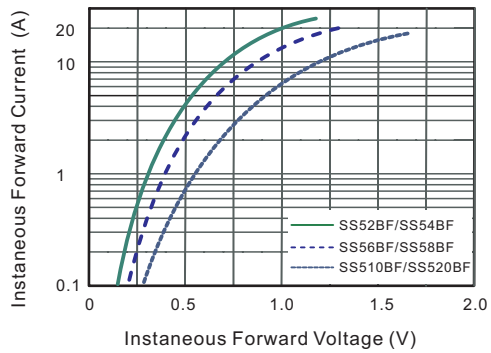
**Fig.1 Forward Current Derating Curve**



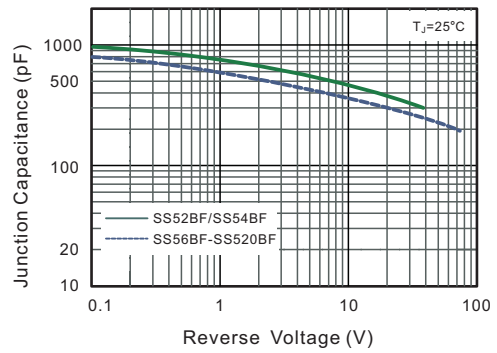
**Fig.2 Typical Reverse Characteristics**



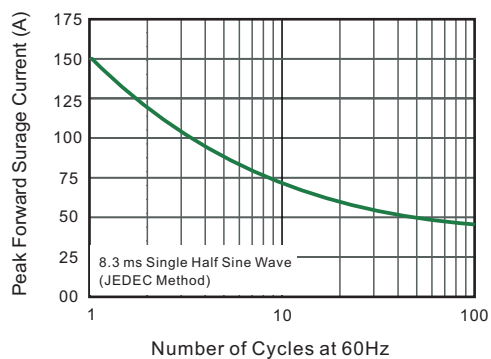
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**

