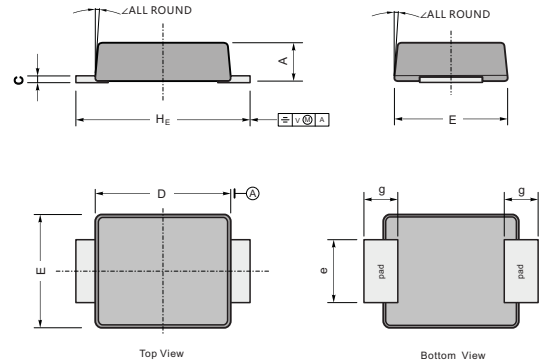




**REVERSE VOLTAGE: 20 --- 100 V**  
**CURRENT: 5.0 A**

### Features

- ✧ Plastic package has Underwriters Laborator Flammability Classification 94V-0
- ✧ For surface mounted applications
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Metal silicon junction, majority carrier conduction
- ✧ High surge capability
- ✧ High current capability, low forward voltage drop
- ✧ Low power loss, high efficiency
- ✧ For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals



### Mechanical Data

- ✧ Case: JEDEC SMBF, molded plastic over passivated chip
- ✧ Polarity: Color band denotes cathode end

UNIT		A	C	D	E	H <sub>e</sub>	e	g	∠
mm	max	1.3	0.26	4.6	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

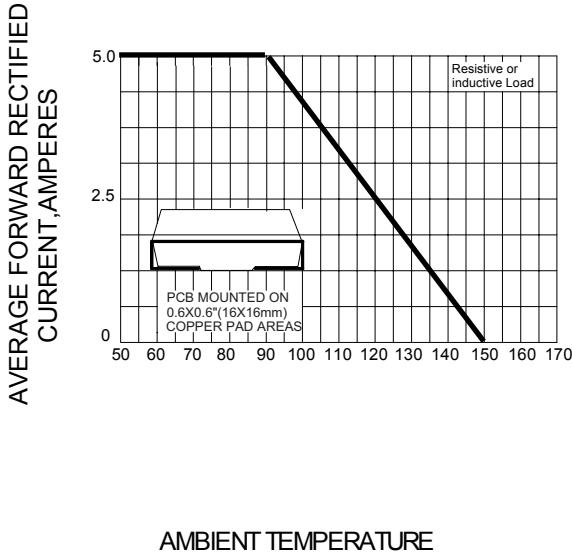
		SS 52BF	SS 53BF	SS 54BF	SS 55BF	SS 56BF	SS 58BF	SS 59BF	SS 510BF	SS 515BF	SS 520BF	UNITS
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	90	100	150	200	V
Maximum RMS voltage	V <sub>RWS</sub>	14	21	28	35	42	56	63	70	86	105	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	90	100	150	200	V
Maximum average forward rectified current at T <sub>L</sub> (SEE FIG.1) (NOTE 2)	I <sub>(AV)</sub>	5.0										A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	175										A
Maximum instantaneous forward voltage at 5.0A (NOTE 1)	V <sub>F</sub>	0.45	0.55		0.70		0.85					V
Maximum DC reverse current @T <sub>A</sub> =25°C at rated DC blocking voltage (NOTE 1) @T <sub>A</sub> =100°C	I <sub>R</sub>	0.5					20		10			mA
Typical thermal resistance (NOTE 2)	R <sub>JA</sub>	55										°C/W
	R <sub>JL</sub>	17										
Operating junction temperature range	T <sub>J</sub>	-55 --- +150										°C
Storage temperature range	T <sub>STG</sub>	-55 --- +150										°C

NOTE: 1. Pulse test: 300 μS pulse width, 1% duty cycle

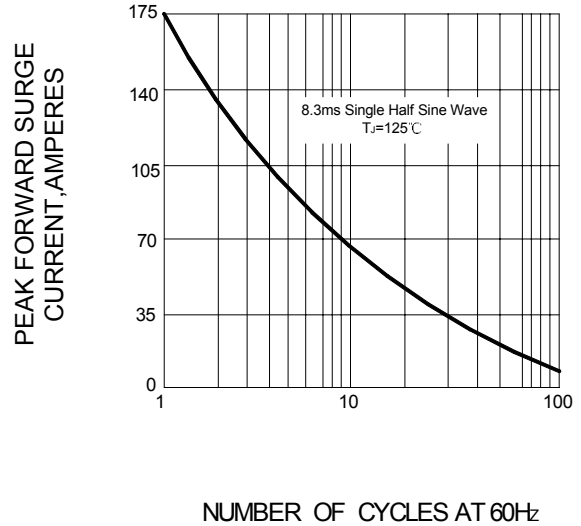
2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm<sup>2</sup>) copper pad areas

## Ratings AND Characteristic Curves

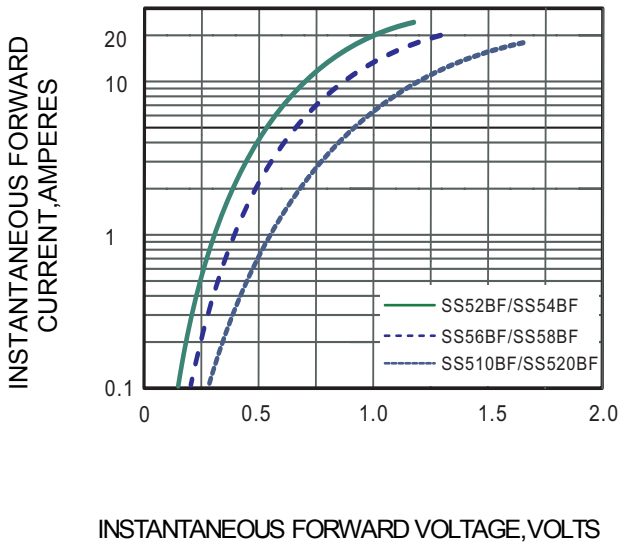
**FIG.1 – FORWARD DERATING CURVE**



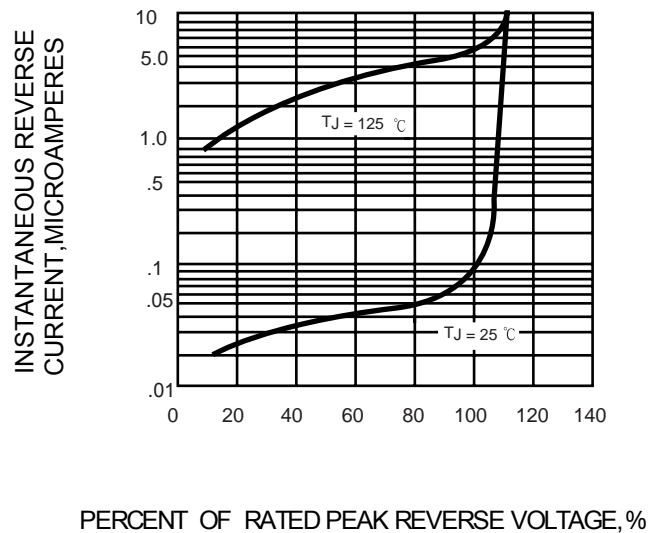
**FIG.2– PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMBF	5000/REEL	8000	36X35.8X36.5	12.00	11.00