

# Schottky Barrier Rectifiers

## SS52BF--SS545BF

### Features

- Metal silicon junction, majority carrier conduction
- High surge capability
- High temperature soldering guaranteed:  
260°C/10 seconds
- High current capability, low forward voltage drop
- Guarding for over voltage protection
- RoHS Compliant



### Mechanical Data

- Case: SMBF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes cathode end

### Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

Characteristic	Symbol	SS52BF	SS53BF	SS54BF	SS545BF	Units
Peak repetitive reverse voltage	V <sub>RRM</sub>	20	30	40	45	V
RMS reverse voltage	V <sub>RMS</sub>	14	21	28	31.5	V
DC blocking voltage	V <sub>DC</sub>	20	30	40	45	V
Maximum average forward output current	I <sub>F(AV)</sub>	5.0				A
Peak forward surge current, 8.3ms single half-sine-wave	I <sub>FSM</sub>	150				A

### Thermal Characteristics

Parameter	Symbol	SS52BF	SS53BF	SS54BF	SS545BF	Units
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	65				°C/W
	R <sub>θJC</sub>	16				
	R <sub>θJL</sub>	15				
Operating junction temperature range	T <sub>J</sub>	- 55 ---- + 125				°C
Storage temperature range	T <sub>STG</sub>	- 55 ---- + 150				°C

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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## Electrical Characteristics (@T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage(Note 1)	V <sub>F</sub>	I <sub>F</sub> =5.0A	@T <sub>A</sub> =25°C	--	0.55	V
Maximum Reverse current (Note 2)	I <sub>R</sub>	Rated V <sub>R</sub> ,	@T <sub>J</sub> =25°C	--	500	μ A
			@T <sub>J</sub> =100°C	--	20	m A

Note:

- 1.Pulse test: 300us pulse width, 1 % duty cycle
- 2.Pulse test: Pulse width 40ms

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### Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1-Forward Current Derating Curve

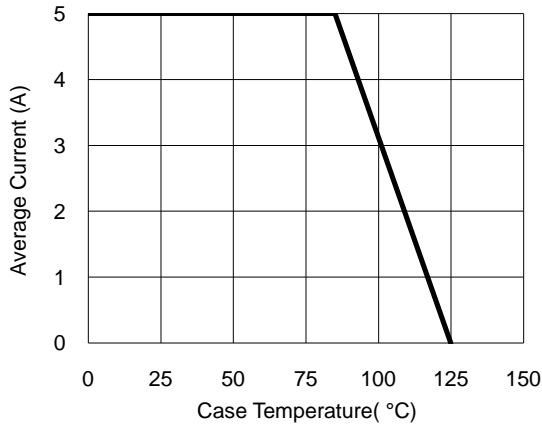


Fig.2- Surge Current Derating Curve

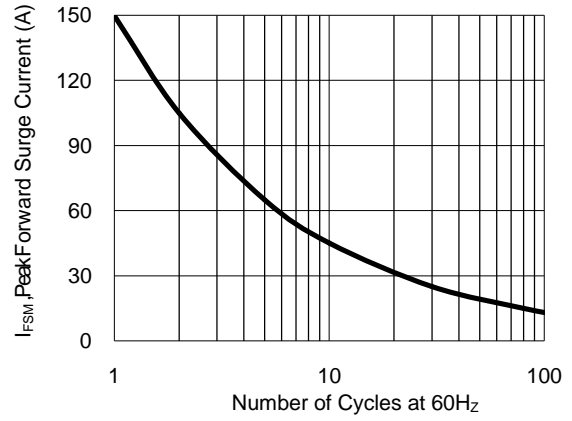


Fig.3- Typical Forward Voltage Characteristic

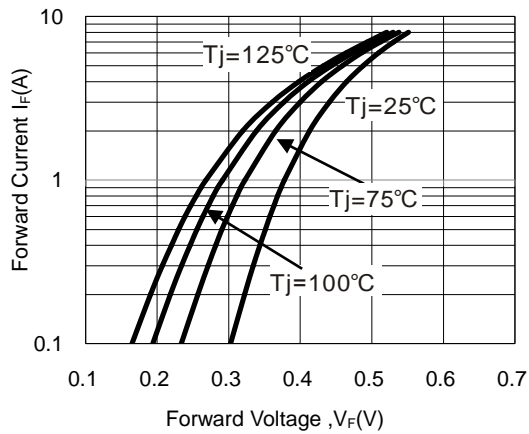
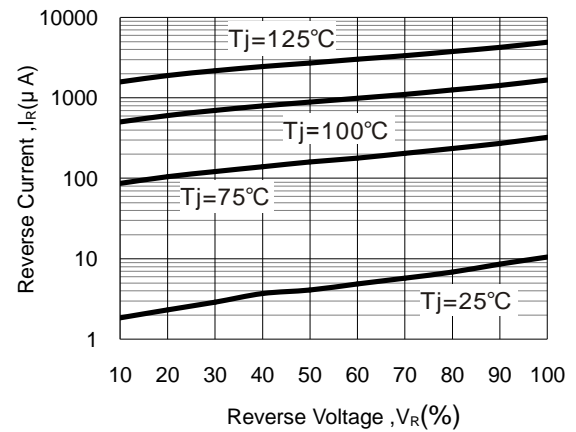


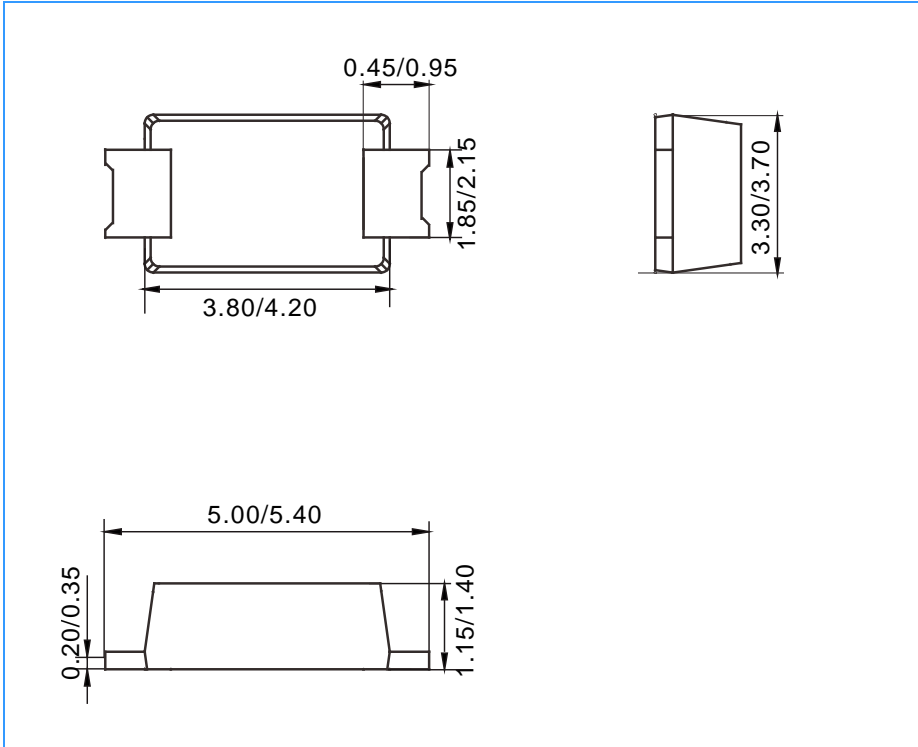
Fig.4- Typical Reverse Characteristic



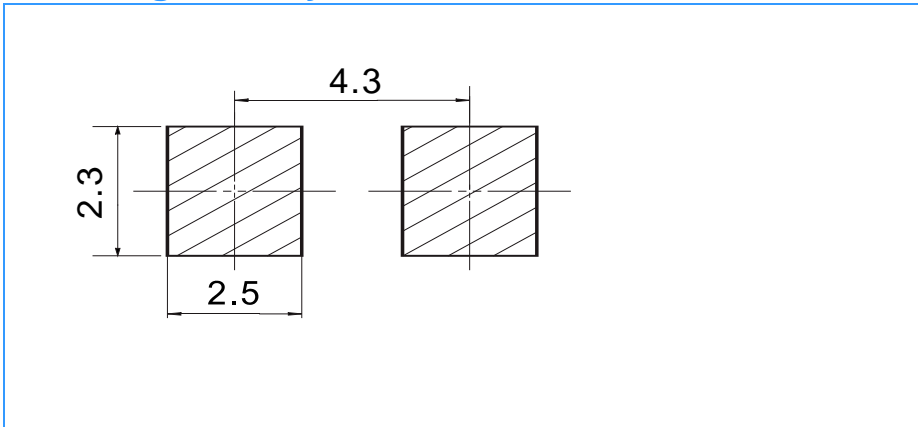
## Schottky Barrier Rectifiers

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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

Part No.	Marking	Package	Shipping
SS52BF	SS52BF	SMBF	4000/ Tape&Reel
SS53BF	SS53BF	SMBF	4000/ Tape&Reel
SS54BF	SS54BF	SMBF	4000/ Tape&Reel
SS545BF	SS545BF	SMBF	4000/ Tape&Reel