

Schottky Barrier Rectifiers

SH52BF--SH545BF

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
- RoHS Compliant



Mechanical Data

- Case: SMBF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

Maximum Ratings (@T_A = 25°C unless otherwise specified)

Characteristic	Symbol	SH52BF	SH53BF	SH54BF	SH545BF	Units
Peak repetitive reverse voltage	V _{RRM}	20	30	40	45	V
RMS reverse voltage	V _{RMS}	14	21	28	31.5	V
DC blocking voltage	V _{DC}	20	30	40	45	V
Maximum average forward output current	I _{F(AV)}	5.0				A
Peak forward surge current, 8.3ms single half-sine-wave	I _{FSM}	150				A

Thermal Characteristics

Parameter	Symbol	SH52BF	SH53BF	SH54BF	SH545BF	Units
Typical thermal resistance (Note 1)	R _{ΘJA}	65				°C /W
	R _{ΘJC}	16				
	R _{ΘJL}	15				
Operating junction temperature range	T _J	- 55 ---- + 150				°C
Storage temperature range	T _{STG}	- 55 ---- + 150				°C

Note:

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

Schottky Barrier Rectifiers**SH52BF--SH545BF****Electrical Characteristics** (@ $T_A = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage(Note 1)	V_F	$I_F=5.0\text{A}$	@ $T_A=25^{\circ}\text{C}$	--	0.55	V
Maximum Reverse current (Note 2)	I_R	Rated V_R ,	@ $T_J=25^{\circ}\text{C}$	--	250	μA
			@ $T_J=100^{\circ}\text{C}$	--	15	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

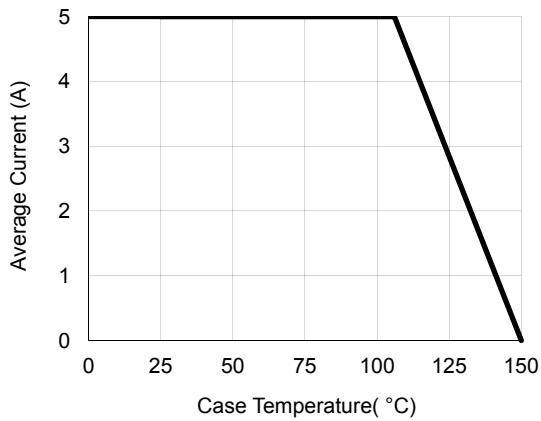


Fig.2- Surge Current Derating Curve

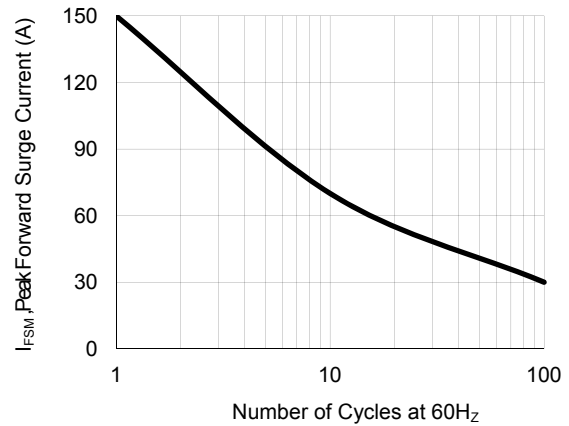


Fig.3- Typical Forward Voltage Characteristic

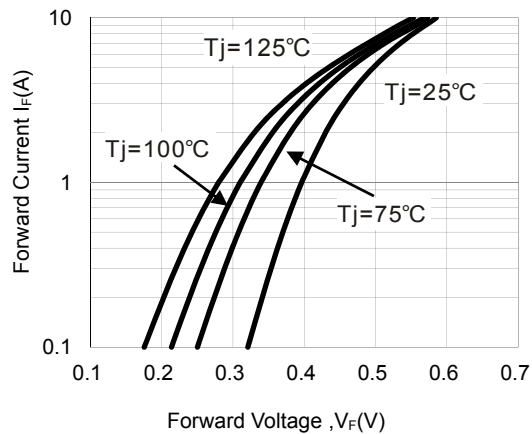
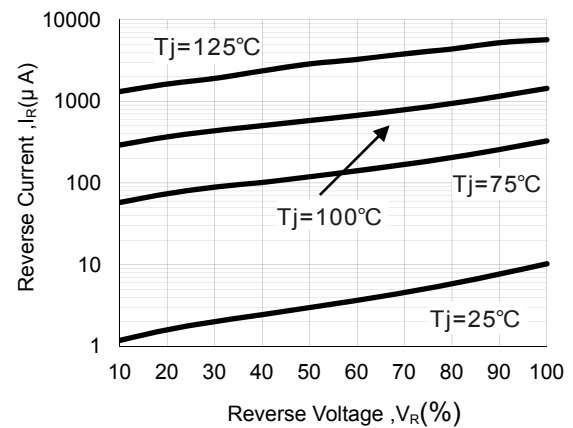


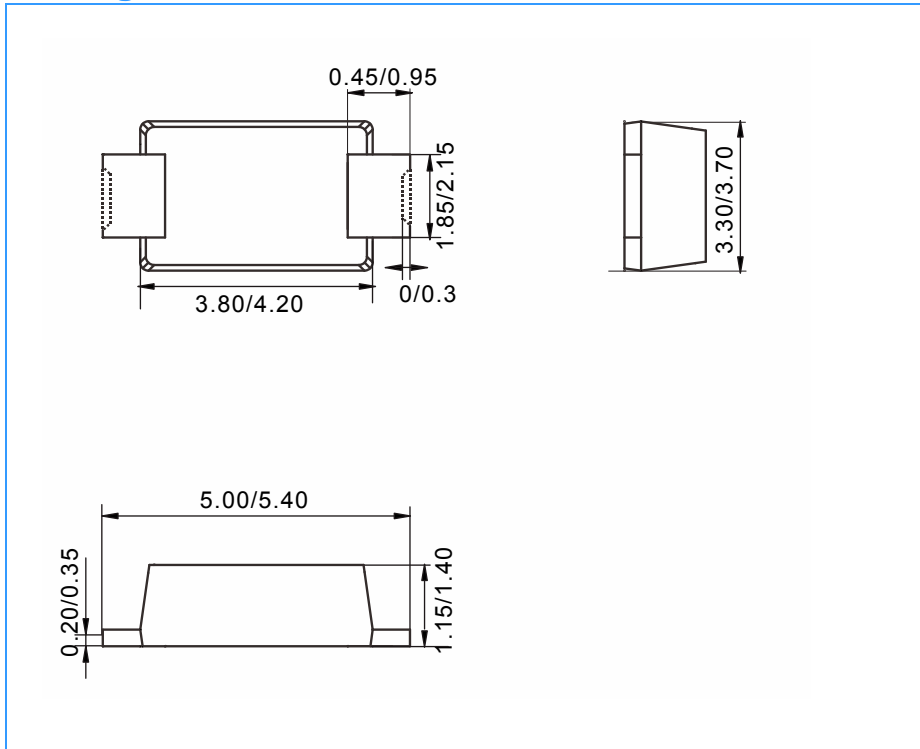
Fig.4- Typical Reverse Characteristic



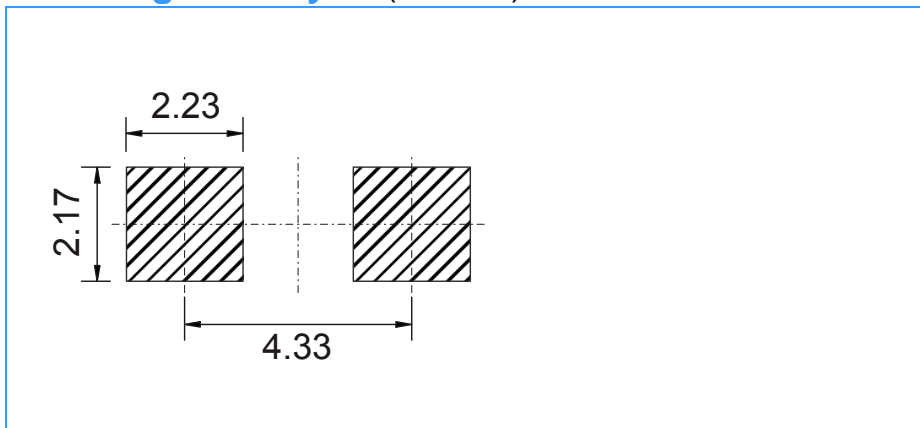
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
SH52BF	SH52BF	SMBF	4000/ Tape&Reel
SH53BF	SH53BF	SMBF	4000/ Tape&Reel
SH54BF	SH54BF	SMBF	4000/ Tape&Reel
SH545BF	SH545BF	SMBF	4000/ Tape&Reel