

Surface Mount Schottky Barrier Rectifiers

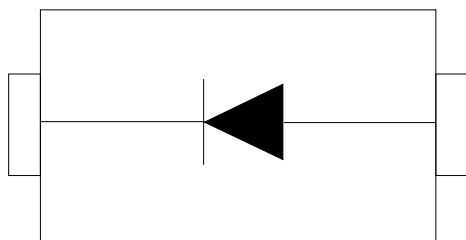
Description

General Application Schottky barrier rectifier, encapsulated in a SMBF Surface-Mounted Device (SMD) plastic package.

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260°C/10 seconds at terminals

Dimensions and Pin Configuration



Graphic symbol

Package



SMBF (Top View)

Mechanical Characteristics

- Case: SMBF
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbol marking on body
- Case Material: “Green” Molding Compound

Applications

- Switch Mode Power Supply (SMPS)
- For use in low voltage high frequency inverters, freewheeling
- DC/DC converters, and polarity protection applications

Ordering Information

Part Number	Shipping	Reel Size
SS52BF	3000/Tape & Reel	7 inch
SS54BF	3000/Tape & Reel	7 inch
SS545BF	3000/Tape & Reel	7 inch
SS56BF	3000/Tape & Reel	7 inch
SS58BF	3000/Tape & Reel	7 inch
SS510BF	3000/Tape & Reel	7 inch
SS515BF	3000/Tape & Reel	7 inch
SS520BF	3000/Tape & Reel	7 inch

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Items	Symbol	SS52BF	SS54BF	SS545BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	45	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	31.5	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	40	45	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	120.0								A
Typical thermal resistance	R_{QJA}	85.0								$^{\circ}\text{C}/\text{W}$
Operating junction temperature range	T_J	$-55 \sim +150$								$^{\circ}\text{C}$
Storage temperature range	T_{STG}	$-55 \sim +150$								$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Items	Test conditions	Symbol	SS52BF~SS545BF	SS56BF	SS58BF~510BF	SS515BF~520BF	UNIT
Maximum instantaneous forward voltage	I _F =5.0A	V _F	0.55	0.70	0.85	0.95	V
Maximum DC reverse current	T _A =25℃	I _R	0.2		0.05		mA
rated DC blocking voltage	T _A =100℃		10		5		

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

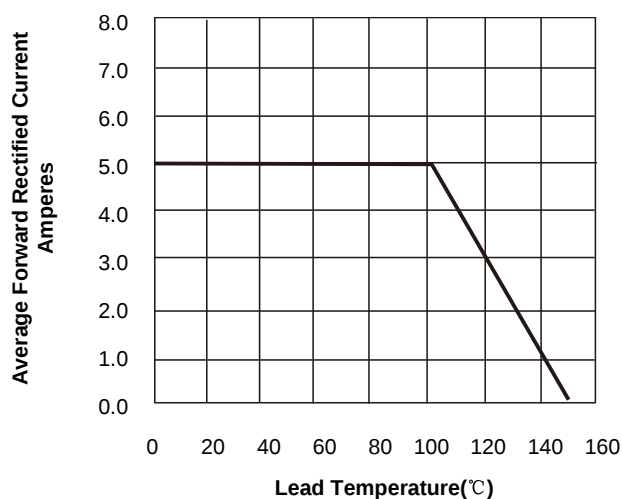


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD

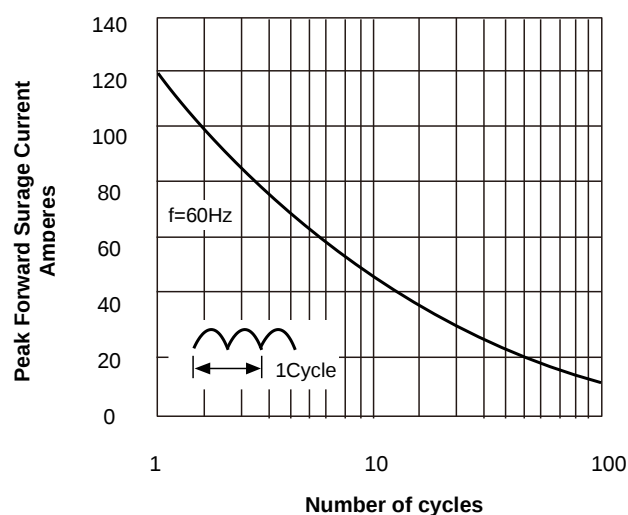


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

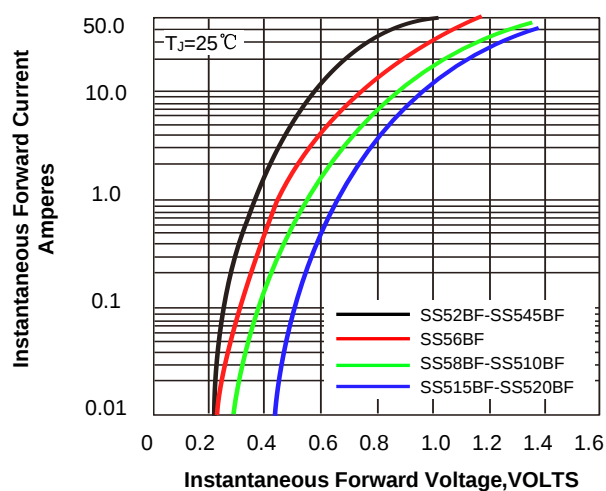
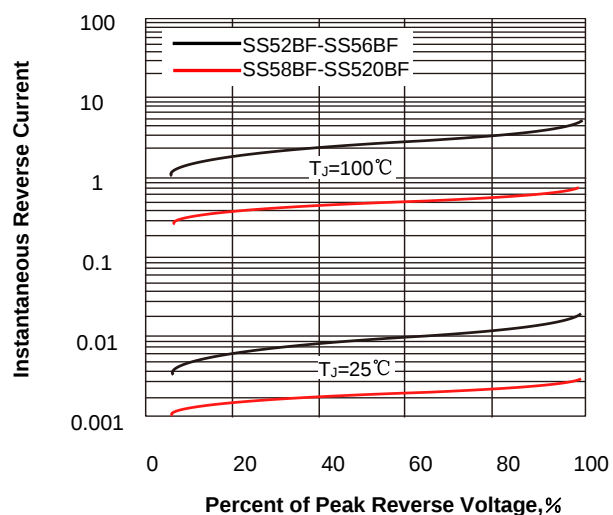
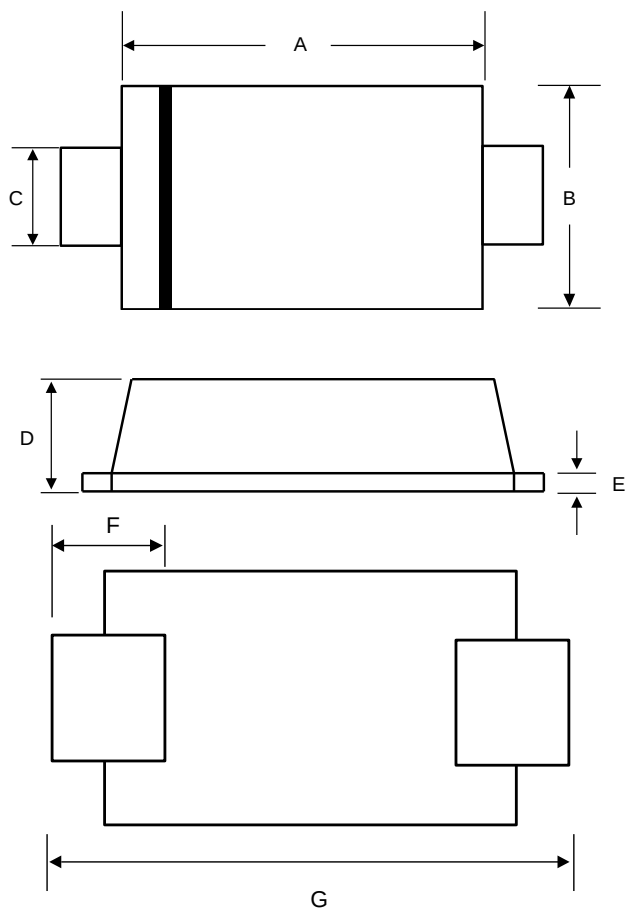


FIG.3-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

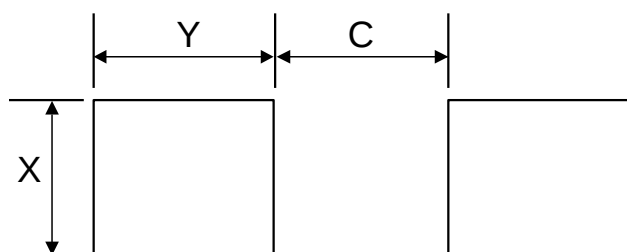


SMBF Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	4.15	4.45	0.163	0.175
B	3.45	3.75	0.135	0.147
C	1.90	2.10	0.074	0.083
D	1.05	1.55	0.041	0.061
E	0.15	0.25	0.006	0.010
F	0.70	1.35	0.028	0.053
G	5.10	5.50	0.200	0.217

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	2.30	0.091
Y	2.00	0.078
C	2.10	0.083

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