

SMBF Surface Mount Schottky Barrier Rectifier

Features

- High efficiency operation
- Metal silicon junction,majority carrier conduction
- Ultra low forward voltage drop,low power losses
- High forward surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-200 V
Forward Current
5 Ampere

Applications

For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications.

Mechanical Data

- Case: SMBF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram



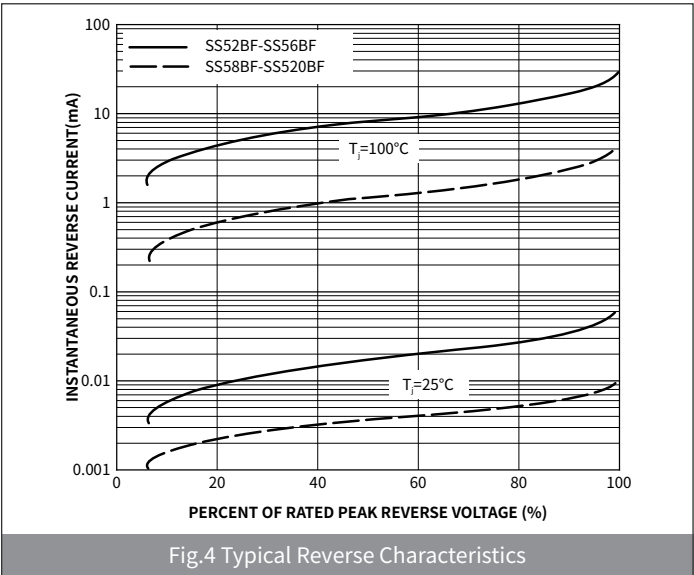
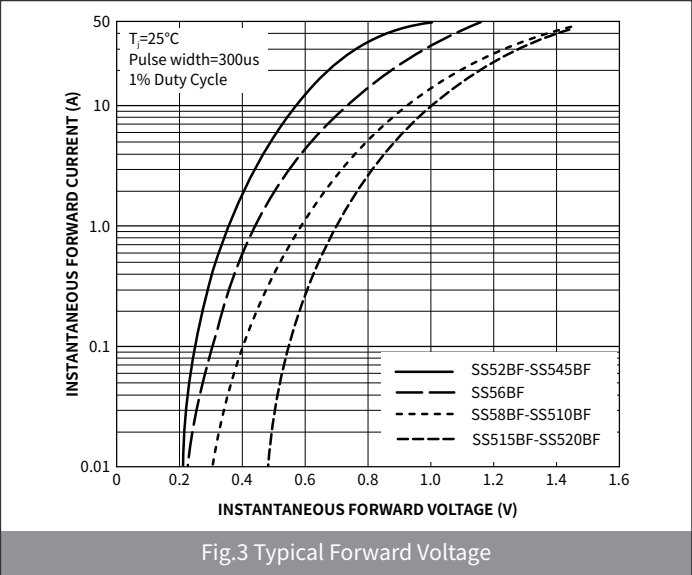
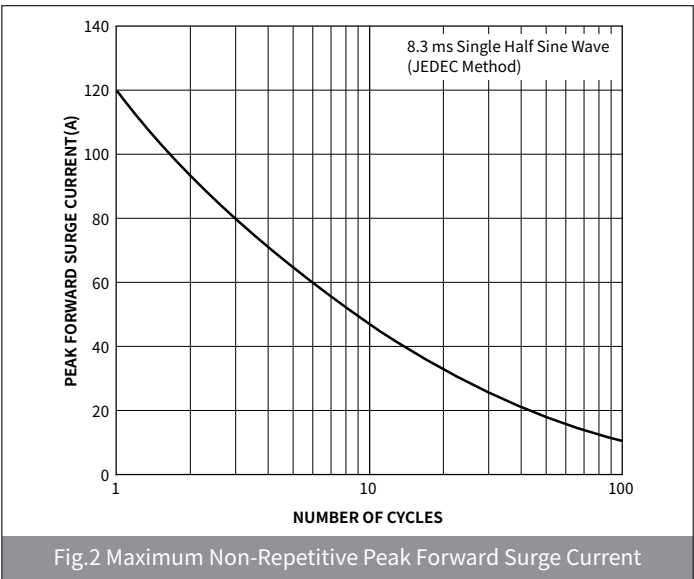
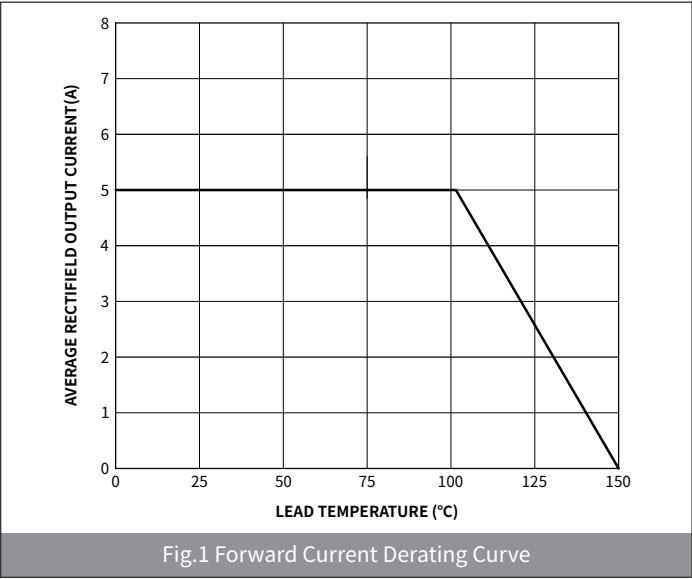
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52BF	SS54BF	SS545BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF
Device marking code			SS52BF	SS54BF	SS545BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	45	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	28	31.5	42	56	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	20	40	45	60	80	100	150	200
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	5.0							
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	120							
Storage temperature	T_{stg}	°C	-55 ~ +150							
Junction temperature	T_j	°C	-55 ~ +150							
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	78							
	$R_{\theta J-L}$	°C /W	20							

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS52BF	SS54BF	SS545BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF
Maximum instantaneous forward voltage	I _F =5.0A	V _F	V	0.55			0.70	0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	mA	0.5					0.05		
	V _R =V _{DC} , T _A =100°C	I _{R2}		50					10		
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	800			500				

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



SS52BF THRU SS520BF

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMBF	R2	0.065	3000	6000	48000	11"
SMBF	R3	0.065	5000	10000	80000	13"

● Package Outline Dimensions (SMBF)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.10	0.074	0.083
B	4.15	4.45	0.163	0.175
C	3.40	3.80	0.133	0.150
D	5.10	5.60	0.200	0.220
E	1.05	1.55	0.041	0.061
F	0.70	1.35	0.027	0.053
G	0.15	0.25	0.006	0.010

Cathode Band

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	2.20	-	0.086	-
J	1.90	-	0.075	-
K	-	2.40	-	0.094

J K J M

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