

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
- 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,DC/DC converters, 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



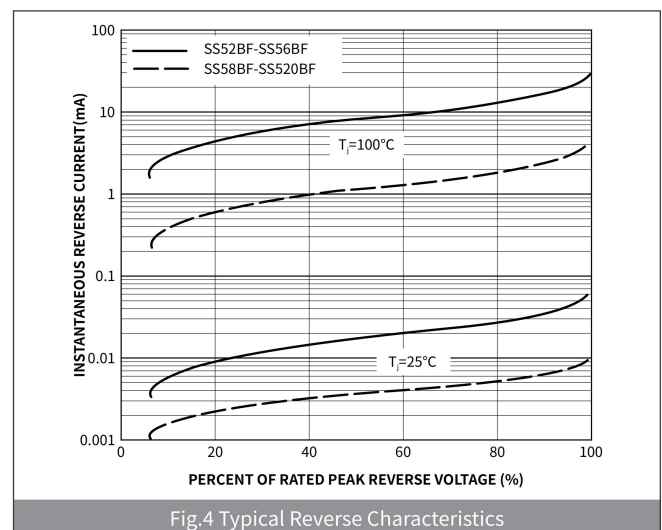
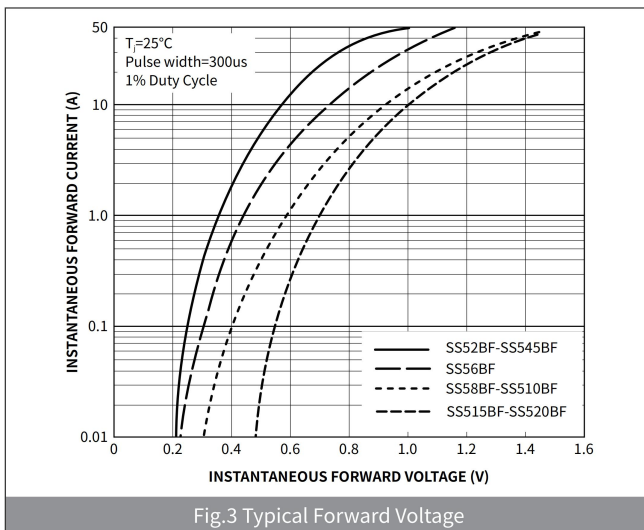
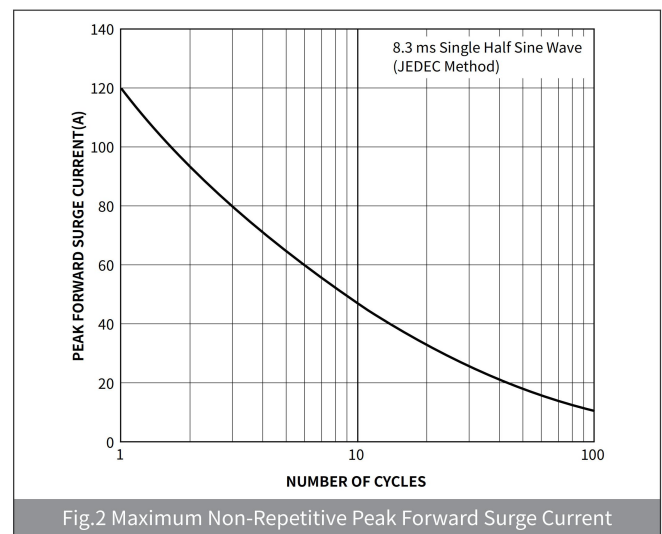
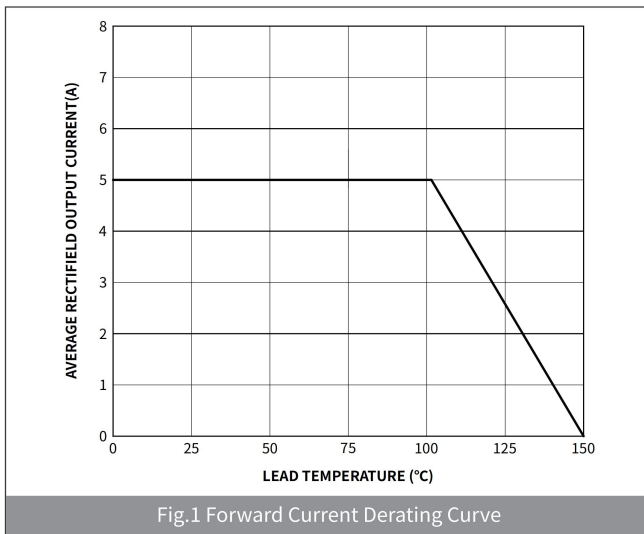
Maximum Ratings (Ta=25°C Unless otherwise specified)

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 _{θJ-A}	°C /W	78							
	R _{θJ-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 currentat 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)

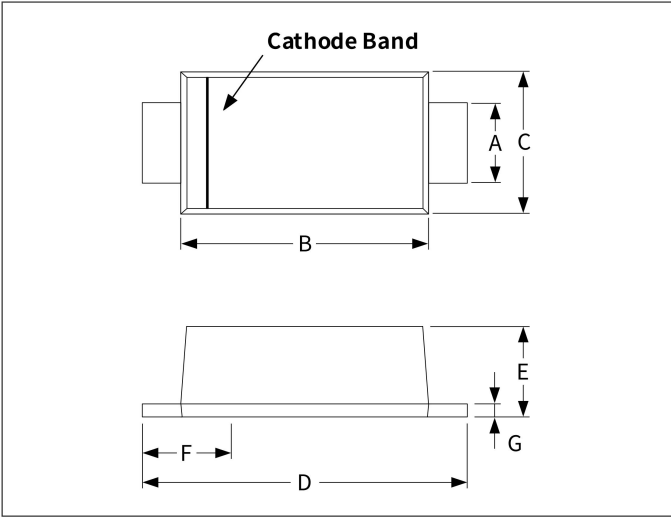


Ordering Information

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)

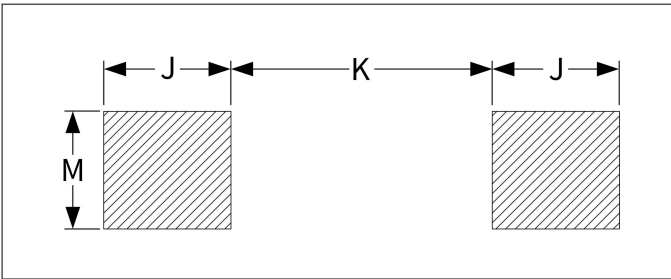
Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.10	0.074	0.083
B	4.15	4.45	0.163	0.175
C	3.40	3.80	0.133	0.150
D	5.10	5.60	0.200	0.220
E	1.05	1.55	0.041	0.061
F	0.70	1.35	0.027	0.053
G	0.15	0.25	0.006	0.010



The diagram shows two views of the SMBF package. The top view is a rectangle with dimensions A (height of the cathode band), B (width), and C (total height). A label 'Cathode Band' points to the top edge. The bottom view is a side profile showing dimensions D (total width), E (height of the package body), F (width of the package body), and G (height of the 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



The diagram shows a suggested pad layout for the SMBF package. It consists of two shaded rectangular pads. The width of each pad is labeled J, the height is labeled M, and the distance between the pads is labeled K.