

### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

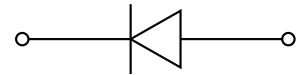
### Applications

For use in low voltage high frequency inverters, freewheeling, 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

### SMBF



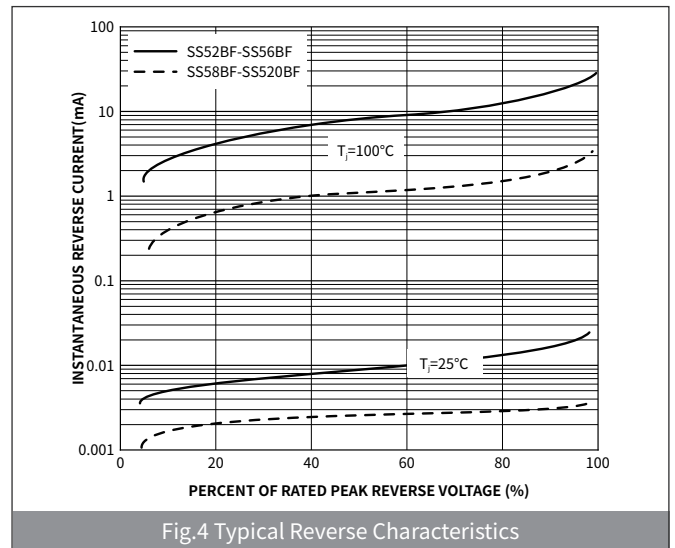
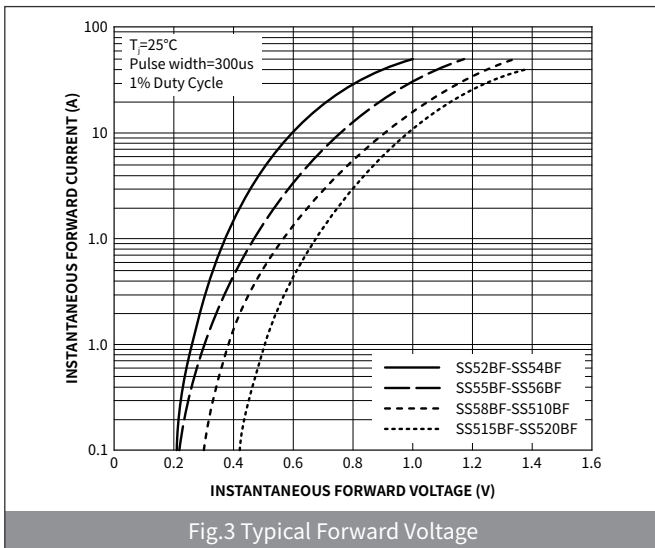
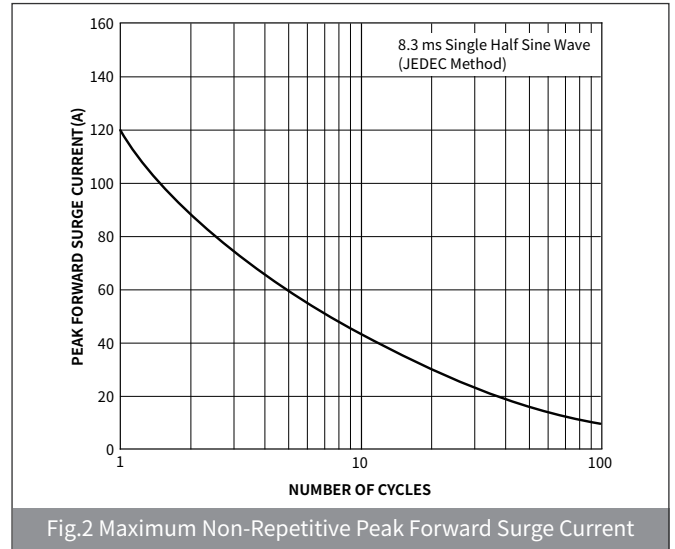
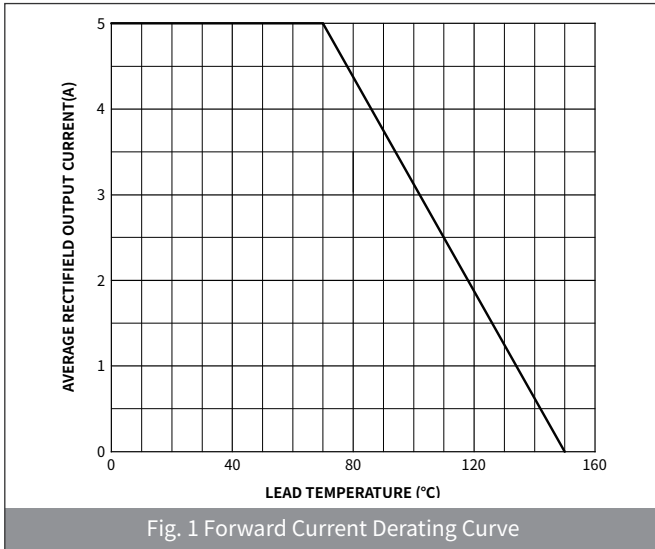
### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52BF	SS53BF	SS54BF	SS55BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF
Device marking code			SS52BF	SS53BF	SS54BF	SS55BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	V	20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	$V_{RMS}$	V	14	21	28	35	42	56	70	105	140
Maximum DC blocking Voltage	$V_{DC}$	V	20	30	40	50	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	85								
	$R_{\theta J-L}$	°C /W	27								

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS52BF	SS53BF	SS54BF	SS55BF	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	$V_{RM}=V_{DC}$	$I_R$	mA	0.2				0.05				
				10				5				
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	R1	0.065	3000	12000	120000	7"
SMBF	R2	0.065	7500	15000	120000	11"
SMBF	R3	0.065	7500	15000	120000	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

### ▶ 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

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