

### 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, free wheeling, DC/DC converters, and polarity protection applications.

### Mechanical Data

- Case: SMAF  
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

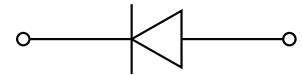
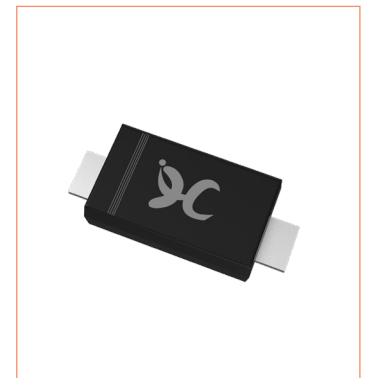
### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52F	SS54F	SS56F	SS58F	SS510F	SS515F	SS520F
Device marking code			SS52F	SS54F	SS56F	SS58F	SS510F	SS515F	SS520F
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	V	20	40	60	80	100	150	200
Maximum RMS Voltage	$V_{RMS}$	V	14	28	42	56	70	105	140
Maximum DC blocking Voltage	$V_{DC}$	V	20	40	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 ~ +125						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	70						
	$R_{\theta J-L}$	°C /W	20						

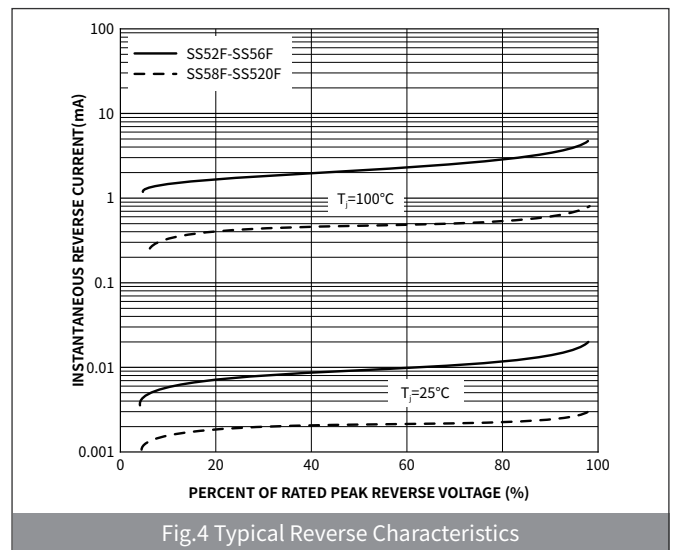
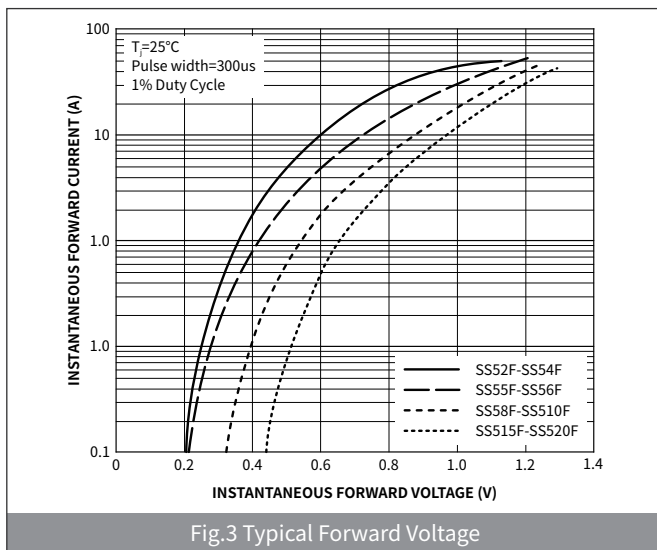
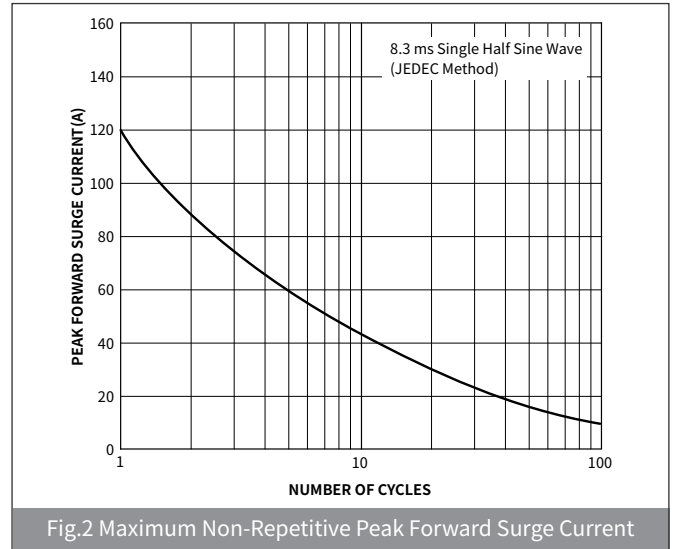
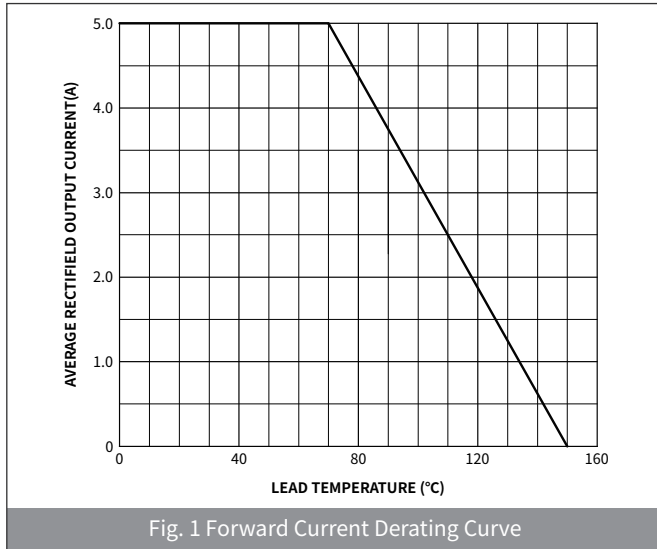
### Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS52F	SS54F	SS56F	SS58F	SS510F	SS515F	SS520F
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			
				20			5.0			
Typical junction capacitance	4.0V DC, 1MHz	$C_j$	pF	200						

### SMAF



### ► 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
SMAF	R1	0.034	3000	12000	120000	7"
SMAF	R2	0.034	7500	15000	120000	11"
SMAF	R3	0.034	7500	15000	120000	13"

### ▶ Package Outline Dimensions (SMAF)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.30	1.60	0.051	0.063
B	3.30	3.70	0.129	0.145
C	2.40	2.70	0.094	0.105
D	4.40	4.90	0.172	0.191
E	0.90	1.20	0.035	0.047
F	0.80	1.20	0.031	0.047
G	0.12	0.20	0.005	0.008

### ▶ Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	1.80	-	0.070	-
J	1.60	-	0.063	-
K	-	2.2	-	0.086

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