

## SMAF Surface Mount Schottky Barrier Rectifier

### 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

**Reverse Voltage**  
20-200 V

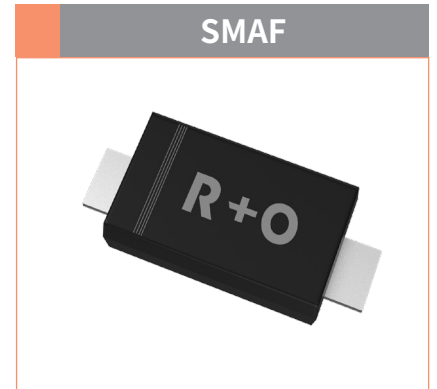
**Forward Current**  
5 Ampere

### Applications

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

### 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



### Function Diagram



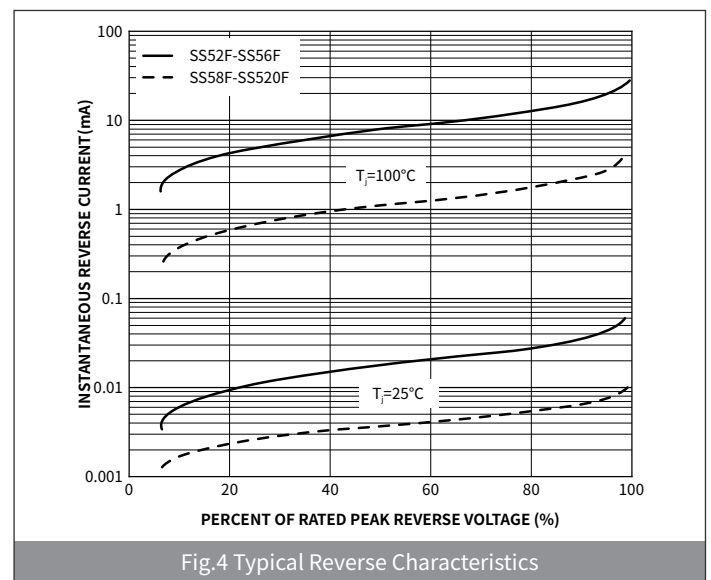
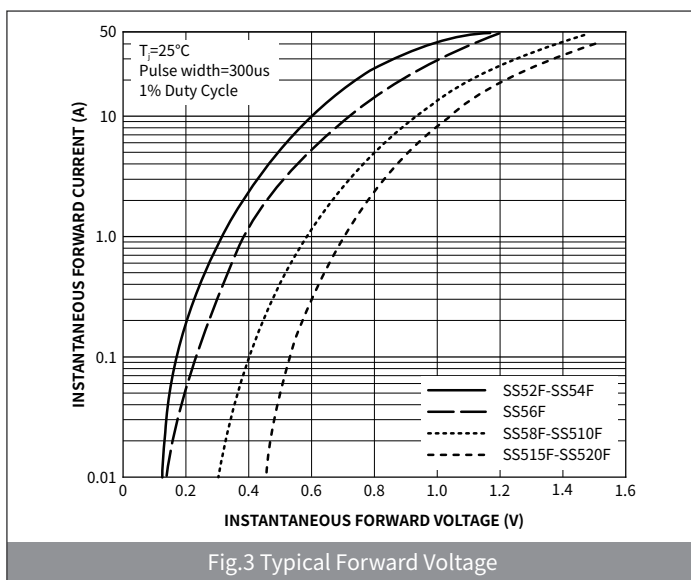
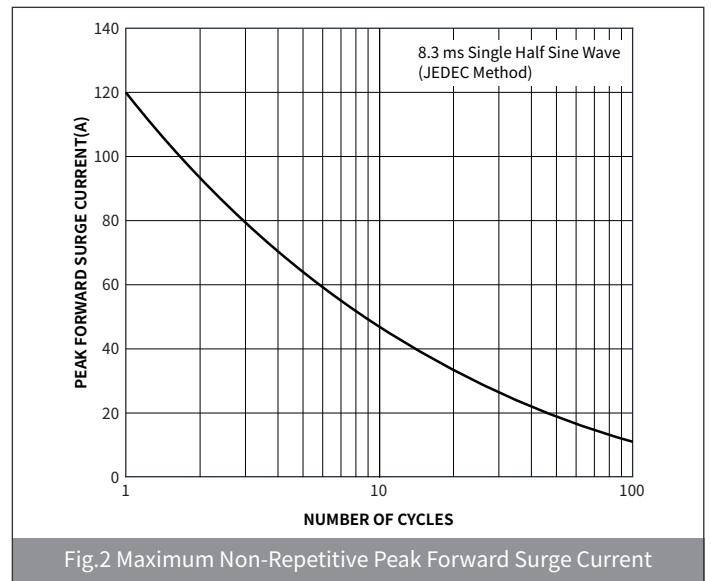
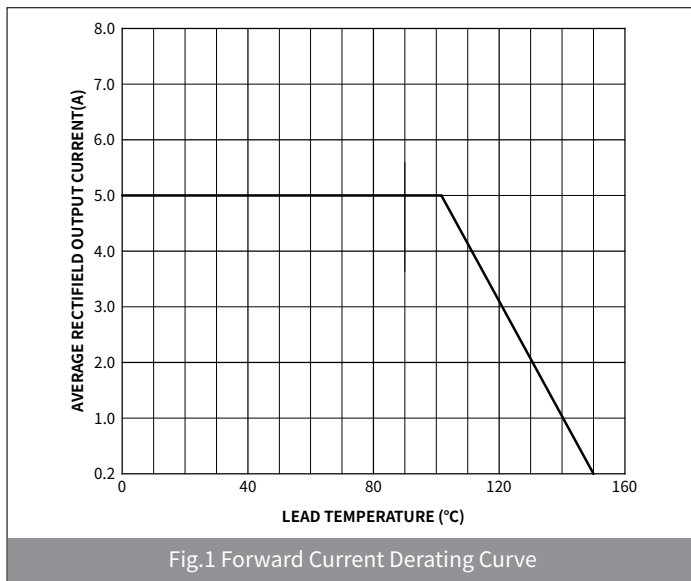
### Maximum Ratings (Ta=25°C Unless otherwise specified)

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			-55 ~ +150			
Typical Thermal Resistance	$R_{\theta J-A}$	°C/W	70						
	$R_{\theta J-L}$	°C/W	20						

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

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	$V_R=V_{DC}, T_A=25^\circ C$	$I_{R1}$	mA	0.5			0.05			
	$V_R=V_{DC}, T_A=100^\circ C$	$I_{R2}$		50			10			
Typical junction capacitance	4.0V DC, 1MHz	$C_J$	pF	500			300			

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

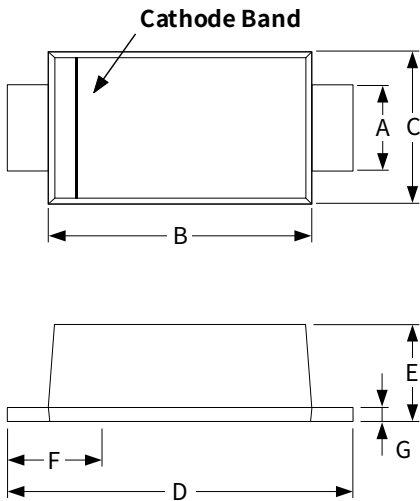


## ● Ordering Information

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	/	120000	13"

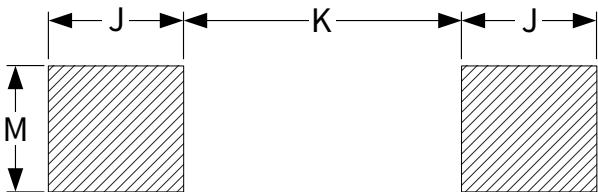
## ● Package Outline Dimensions (SMAF)

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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