

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

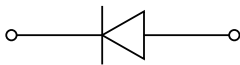
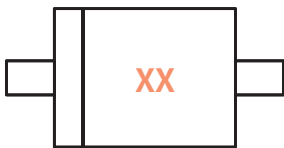
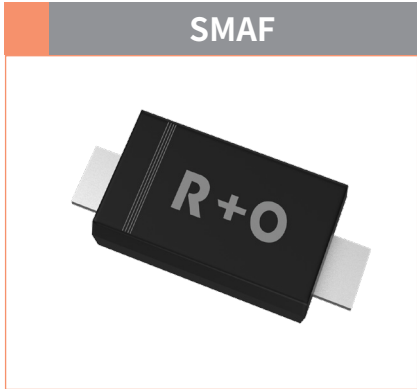
Applications

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



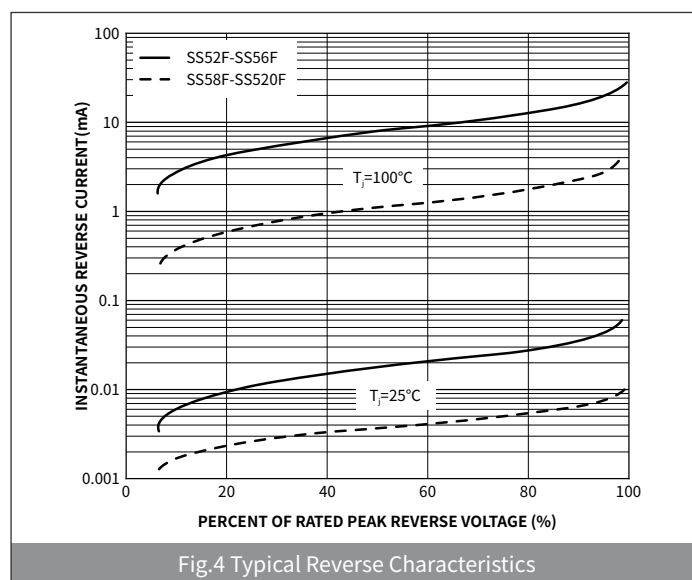
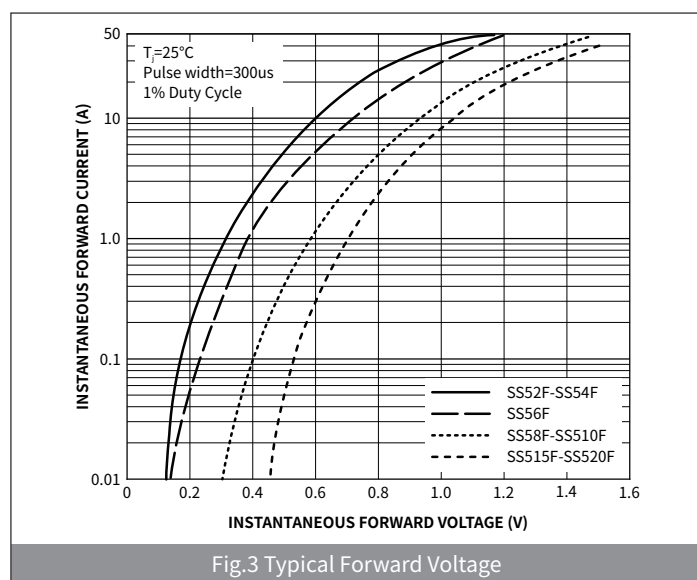
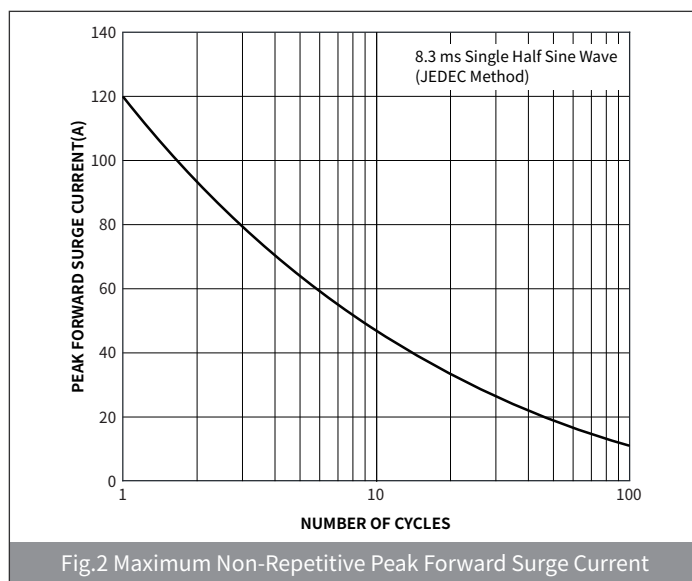
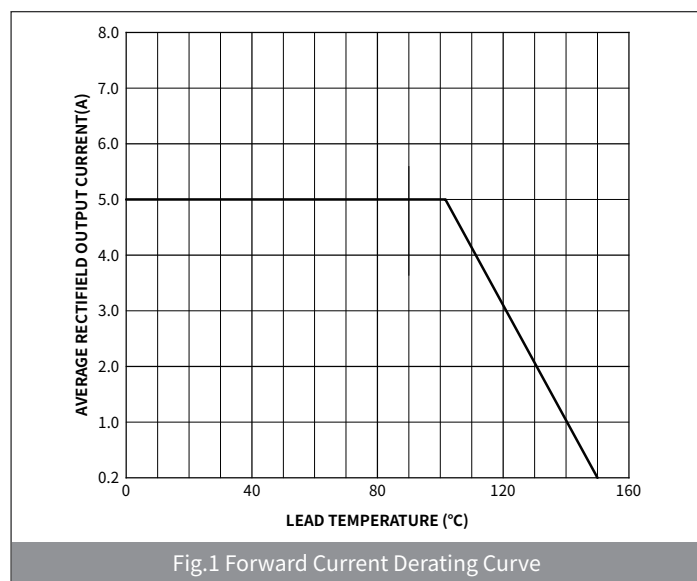
Maximum Ratings (Ta=25°C Unless otherwise specified)

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 _{θJ-A}	°C /W	70						
	R _{θJ-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