

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

Applications

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

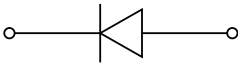
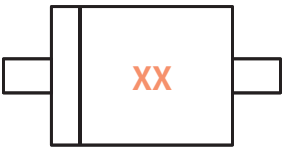
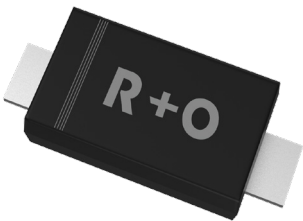
Mechanical Data

- Case: SMAF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 206
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
20-200 V
Forward Current
1 Ampere

SMAF



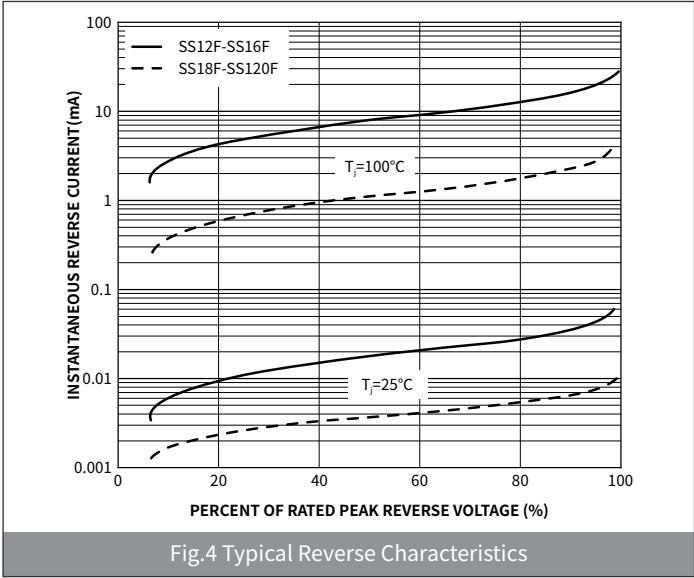
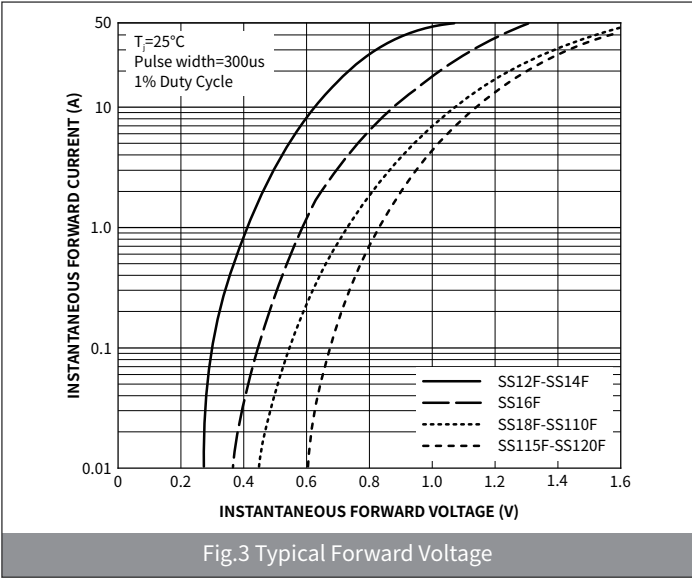
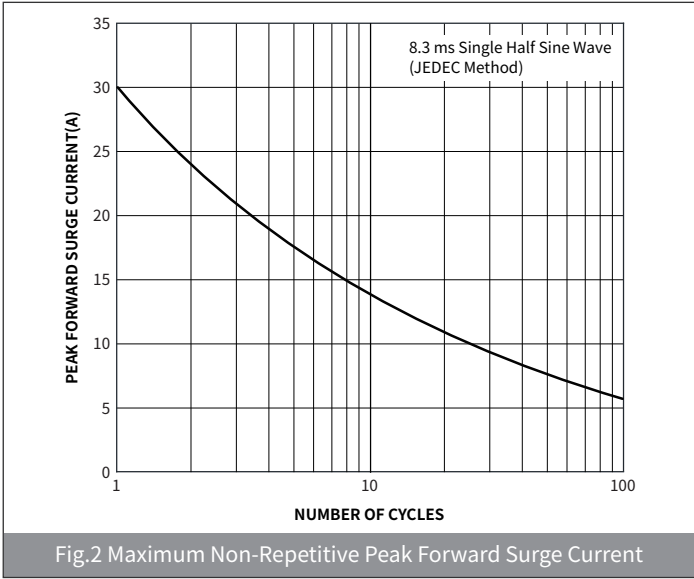
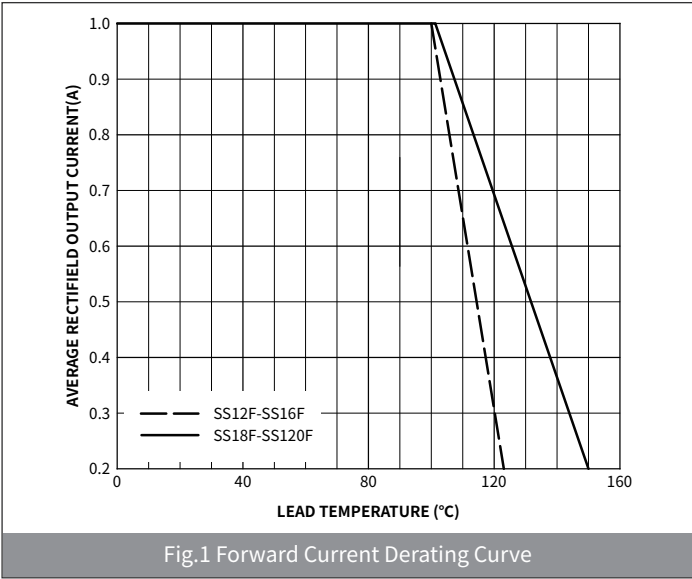
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS12F	SS14F	SS16F	SS18F	SS110F	SS115F	SS120F
Device marking code			SS12F	SS14F	SS16F	SS18F	SS110F	SS115F	SS120F
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	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I _{FSM}	A	30						
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	SS12F	SS14F	SS16F	SS18F	SS110F	SS115F	SS120F
Maximum instantaneous forward voltage	$I_F=1.0A$	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	110			80			

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