

OM SENI

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

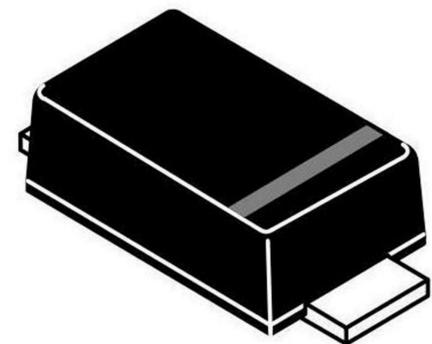
1 Ampere

Applications

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

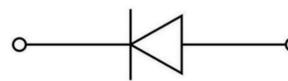
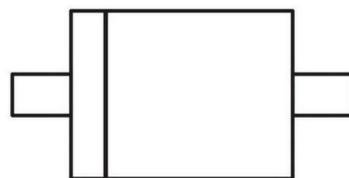
Mechanical Data

- 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



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Function Diagram



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

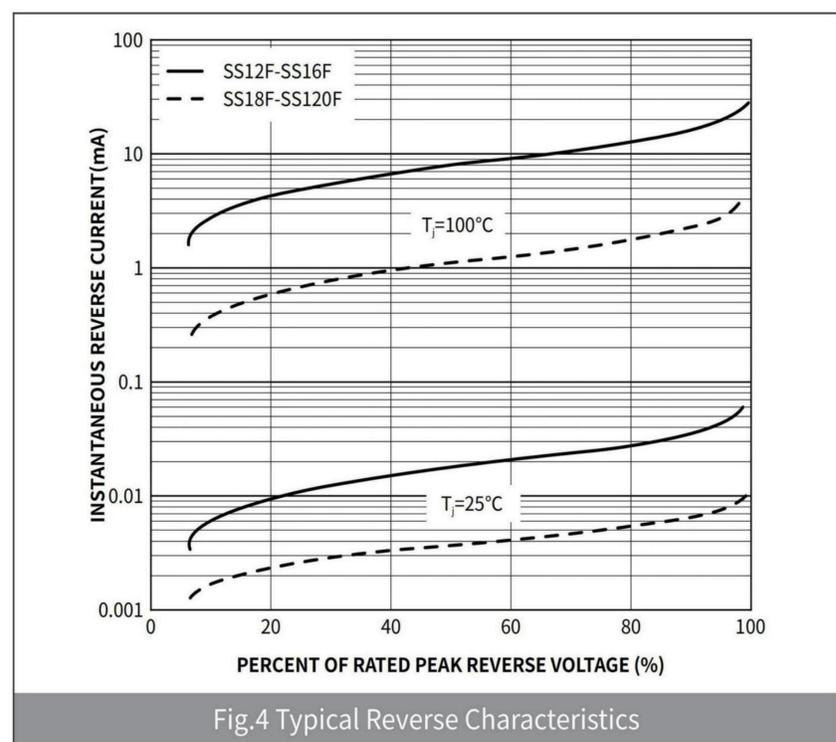
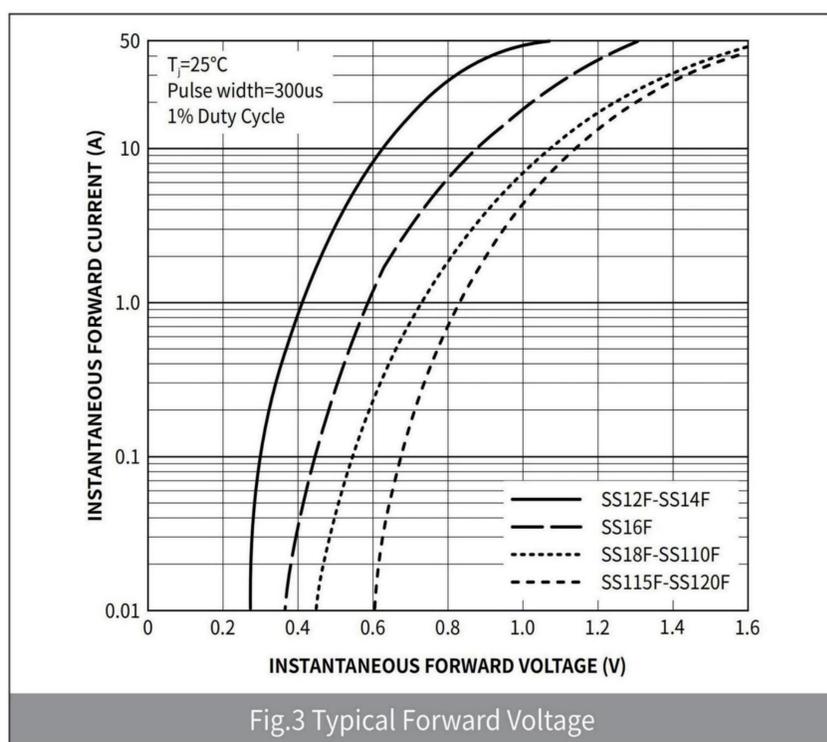
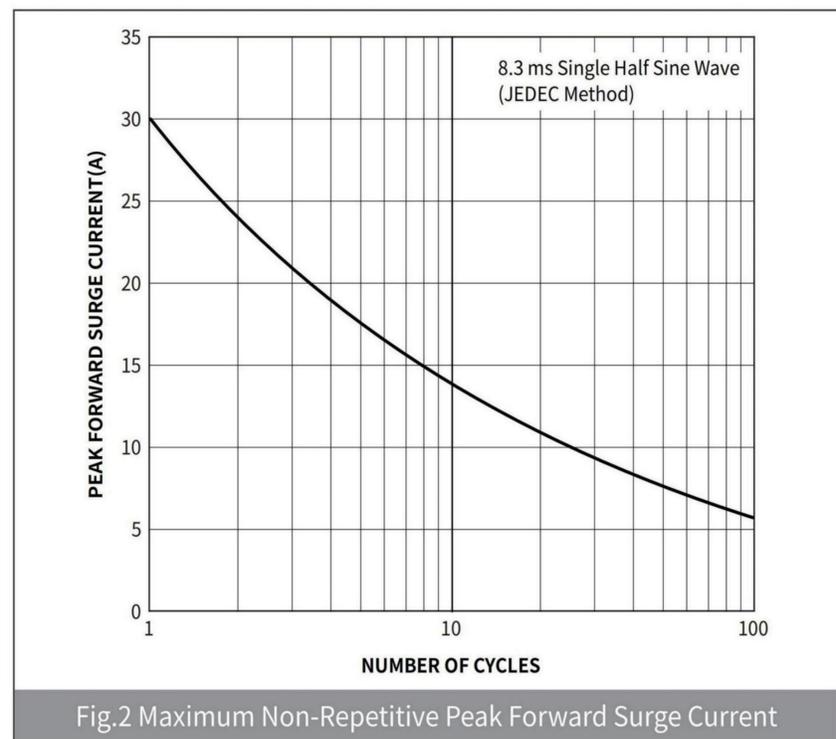
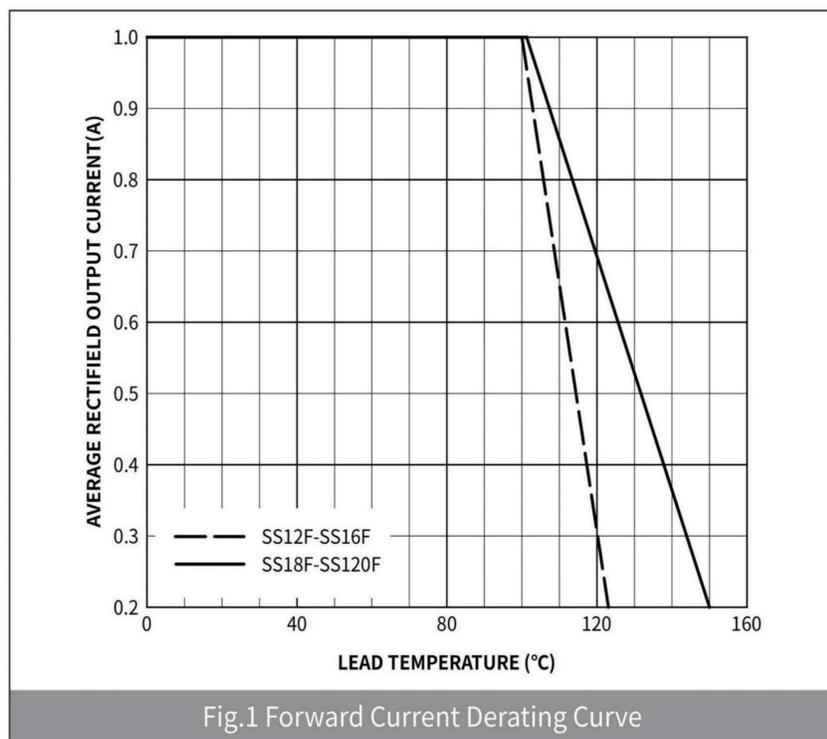
PARAMETER	SYMBOL	UNIT	SS12F	SS14F	SS16F	SS18F	SS110F	SS115F	SS120F
Device marking code			SS12F	SS14F	SS16F	SS18F	SS110F	SS115F	SS120F
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	28	42	56	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	20	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	$R_{\theta J-A}$	°C /W	70						
	$R_{\theta J-L}$	°C /W	20						

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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)



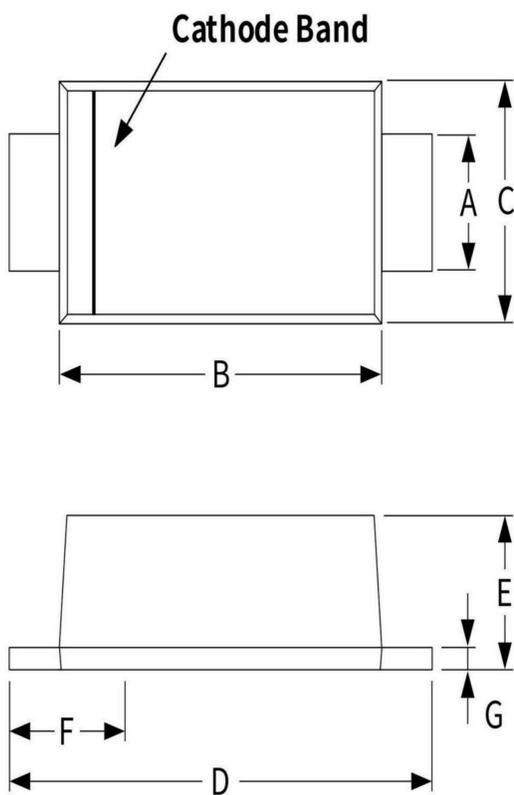
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Ordering Information

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	75000	11"
SMAF	R3	0.034	7500	15000	75000	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

