

OM SENI

SMAF Surface Mount Fast Recovery Rectifier RS1AF THRU RS1MF

Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Fast reverse recovery time
- Fast switching for high efficiency
- High forward surge capability

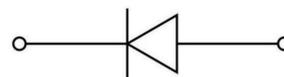
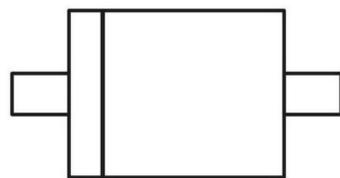
Applications

For use in fast switching rectification of power supplies, inverters, converters, and free wheeling diodes for consumer, and telecommunication.

Mechanical Data

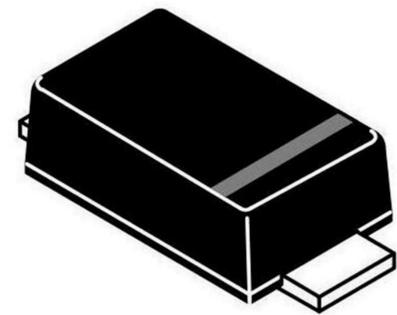
- Case: SMAF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram



Reverse Voltage
50-1000 V

Forward Current
1 Ampere



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

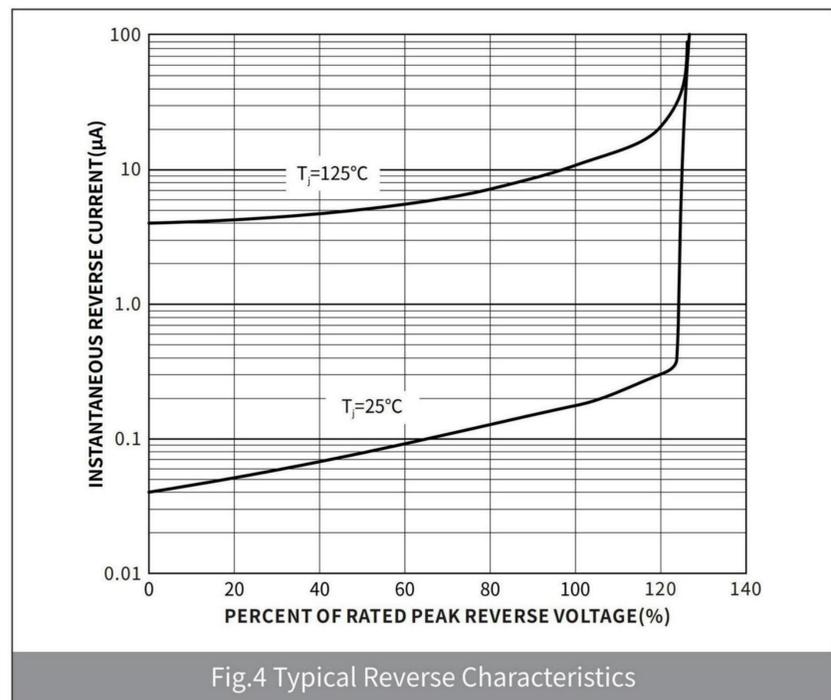
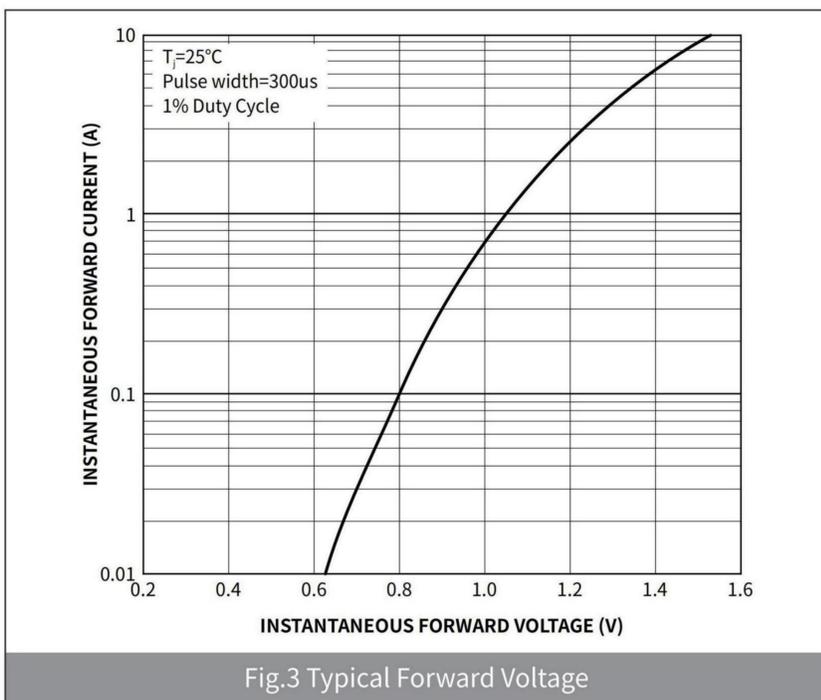
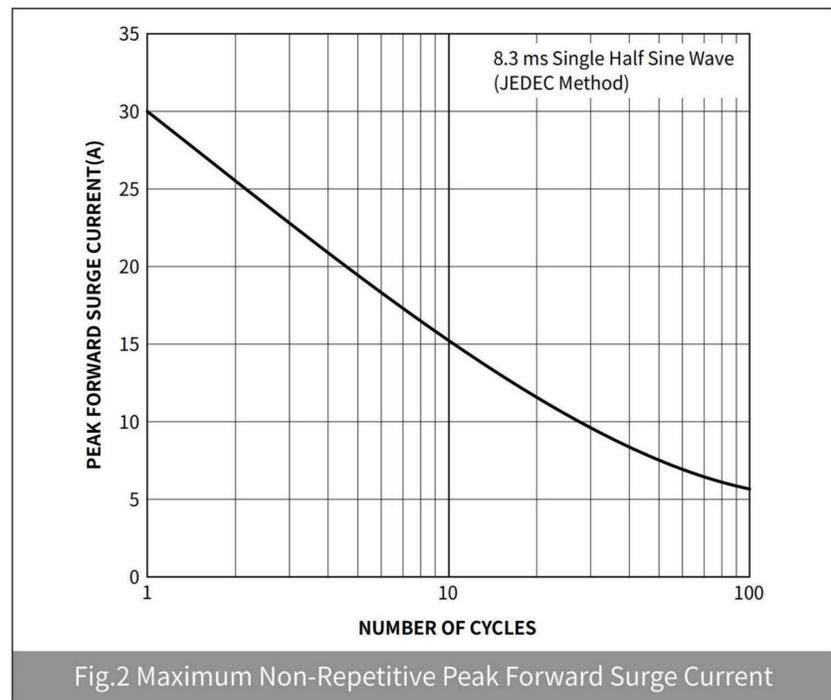
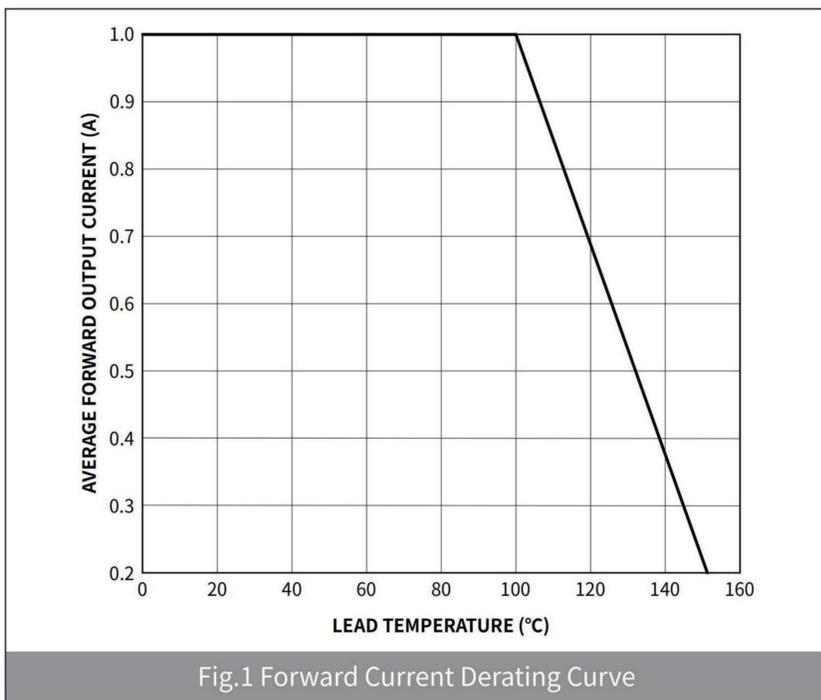
PARAMETER	SYMBOL	UNIT	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF
Device marking code			RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
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	30.0						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-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	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V	1.3						
Maximum reverse recovery time	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	T_{rr}	ns	150			250		500	
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	μA	5.0						
	$V_R=V_{DC}, T_A=125^\circ C$	I_{R2}		500						
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	10						

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



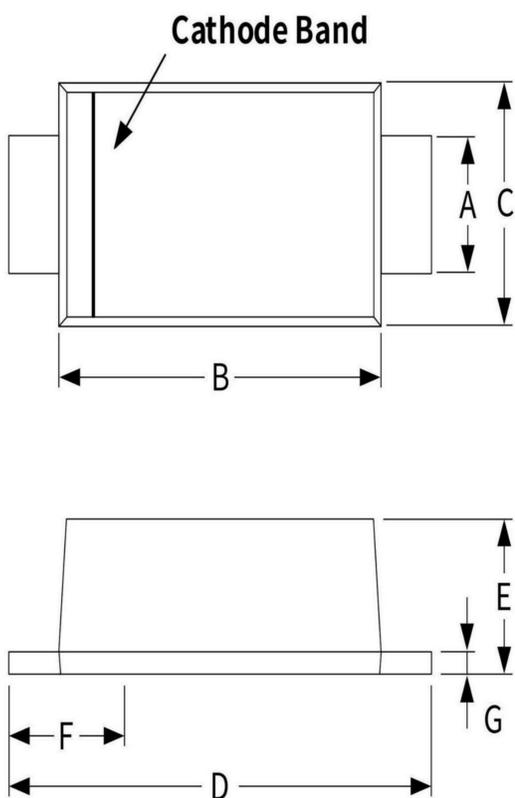
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Ordering Information

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

