

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.

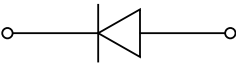
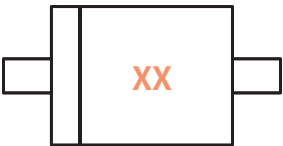
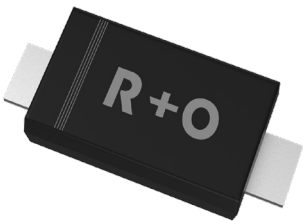
Mechanical Data

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

Function Diagram

Reverse Voltage
20-200 V
Forward Current
5 Ampere

SMAF



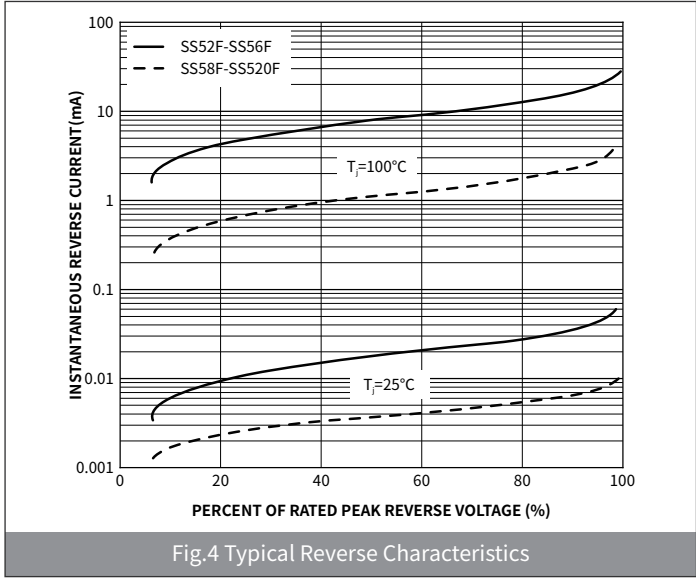
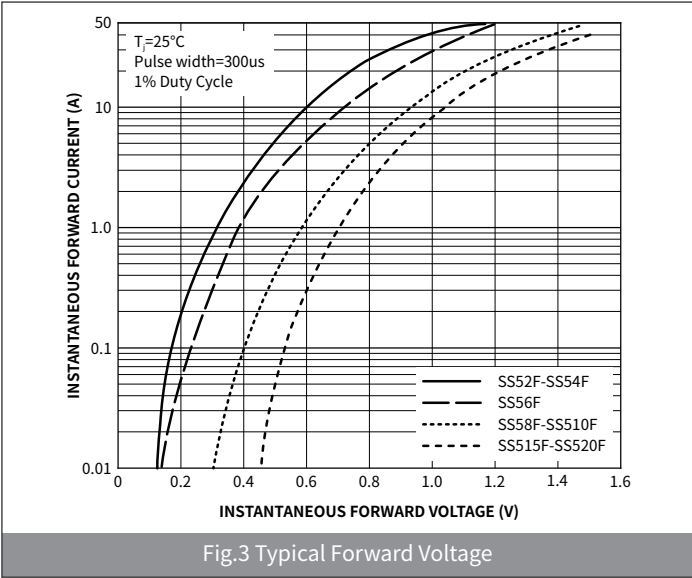
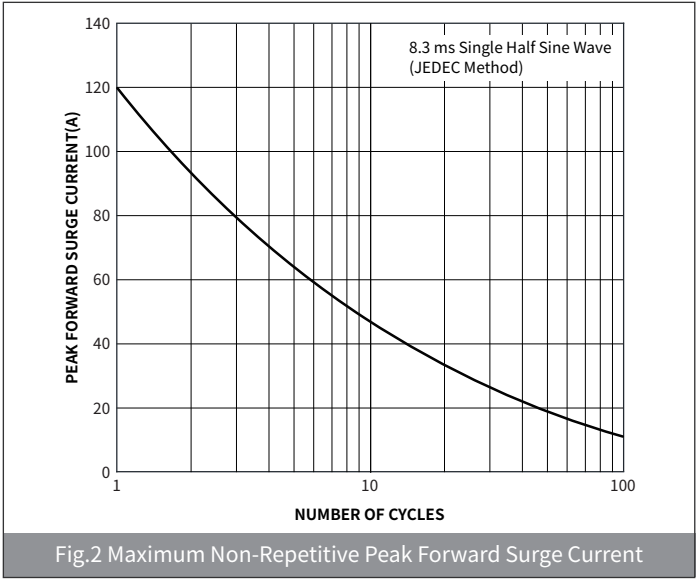
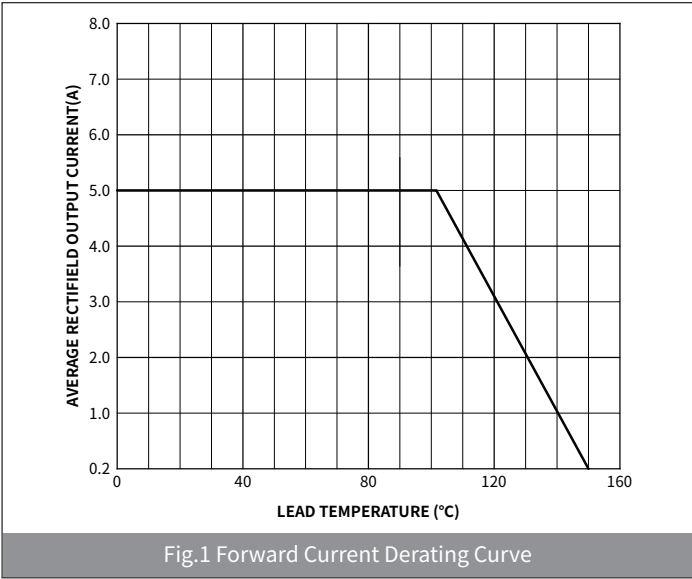
Maximum Ratings (Ta=25°C Unless otherwise specified)

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

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), DELIVERY MODE. It lists three package options (SMAF R1, R2, R3) with their respective weights, reel/box quantities, and delivery modes.

Package Outline Dimensions (SMAF)

Table containing a diagram of the SMAF package outline and a dimensions table. The diagram labels dimensions A through G. The table provides values for these dimensions in both millimeters and inches, with minimum and maximum values.

Suggested Pad Layout

Table containing a diagram of the suggested pad layout and a dimensions table. The diagram labels dimensions J, K, and M. The table provides values for these dimensions in both millimeters and inches, with minimum and maximum values.

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