

Surface Mount Schottky Barrier Rectifiers

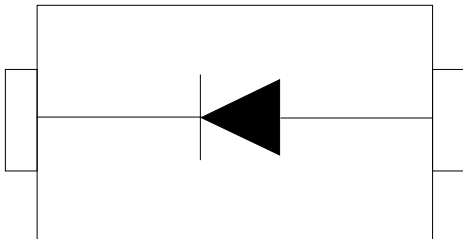
Description

General Application Schottky barrier rectifier, encapsulated in a SMAF Surface-Mounted Device (SMD) plastic package.

Features

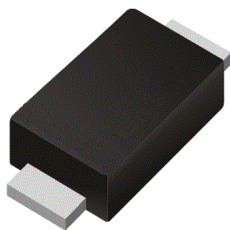
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260 °C/10 seconds at terminals

Dimensions and Pin Configuration



Graphic symbol

Package



SMAF (Top View)

Mechanical Characteristics

- Case: SMAF
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Device meets MSL 1, per J-STD-020
- Polarity: Polarity symbol marking on body
- Case Material: “Green” Molding Compound

Applications

- Switch Mode Power Supply (SMPS)
- For use in low voltage high frequency inverters, freewheeling
- DC/DC converters, and polarity protection applications

Ordering Information

Part Number	Marking	Shipping	Reel Size
SS52AF	SS52F	3000/Tape & Reel	7 inch
SS54AF	SS54F	3000/Tape & Reel	7 inch
SS56AF	SS56F	3000/Tape & Reel	7 inch
SS58AF	SS58F	3000/Tape & Reel	7 inch
SS510AF	SS510F	3000/Tape & Reel	7 inch
SS515AF	SS515F	3000/Tape & Reel	7 inch
SS520AF	SS520F	3000/Tape & Reel	7 inch

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Items	Symbol	SS52AF	SS54AF	SS56AF	SS58AF	SS510AF	SS515AF	SS520AF	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	120.0							A
Typical thermal resistance	R_{QJA}	70.0							$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	$-55 \sim +150$							$^{\circ}\text{C}$
Storage temperature range	T_{STG}	$-55 \sim +150$							$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Items	Test conditions	Symbol	SS52~54AF	SS56AF	SS58~510AF	SS515~520AF	UNIT
Maximum instantaneous forward voltage	I _F =5.0A	V _F	0.55	0.70	0.85	0.95	V
Maximum DC reverse current	T _A =25℃	I _R	0.2		0.05		mA
rated DC blocking voltage	T _A =100℃		20		5		

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

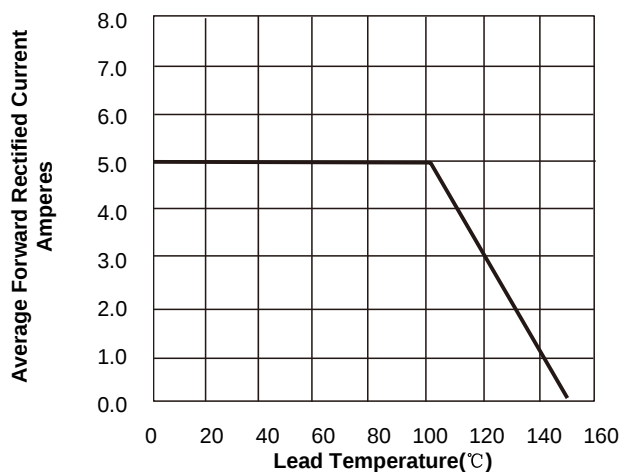


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

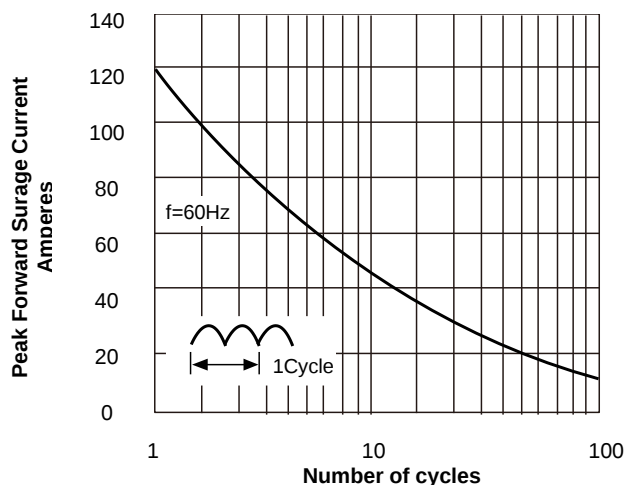


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

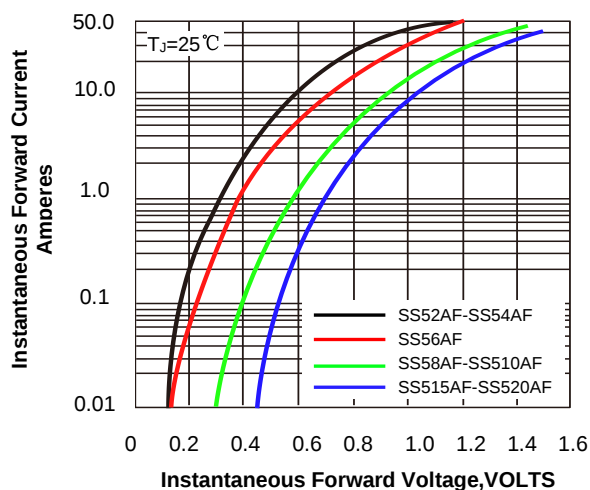
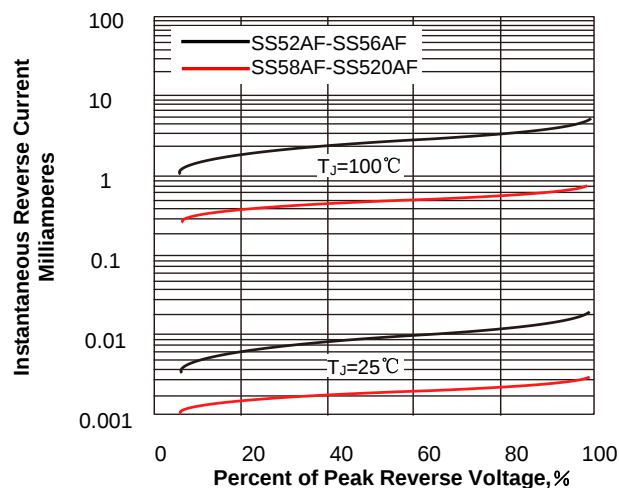
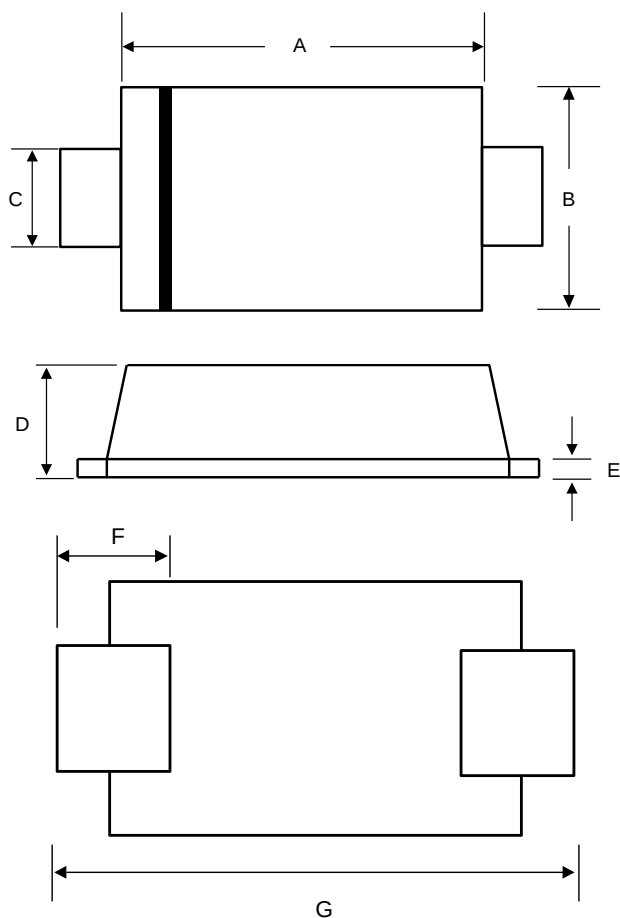


FIG.4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

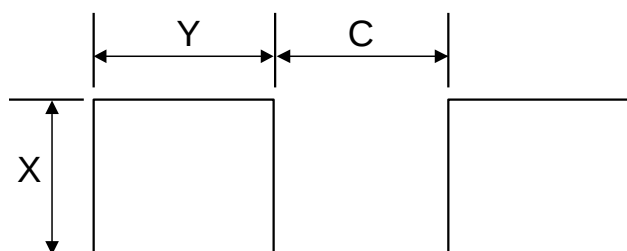


SMAF Package Outline Drawing



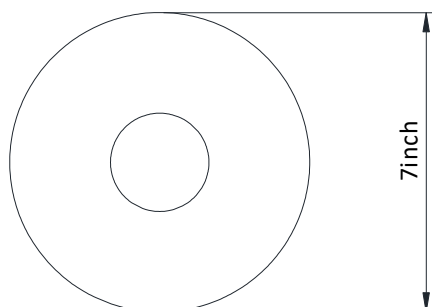
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.30	3.70	0.130	0.146
B	2.30	2.70	0.090	0.106
C	1.20	1.60	0.047	0.063
D	0.90	1.30	0.035	0.051
E	0.05	0.30	0.002	0.011
F	0.50		0.019	
G	4.30	4.90	0.169	0.193

Suggested Land Pattern

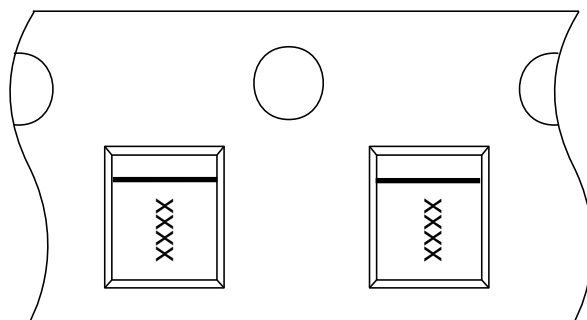


SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.68	0.066
Y	1.52	0.060
C	2.00	0.078

Reel Dimensions



Unit:mm



User Direction of Feed

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