

Surface Mount Schottky Barrier Rectifiers

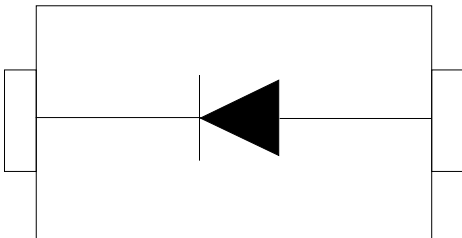
Description

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

Features

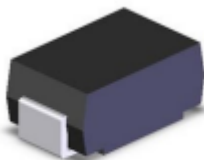
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals

Dimensions and Pin Configuration



Graphic symbol

Package



SMA (Top View)

Mechanical Characteristics

- Case: JEDEC DO-214AC molded plastic
- 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
SS52A	SS52	5000/Tape & Reel	11 inch
SS54A	SS54	5000/Tape & Reel	11 inch
SS56A	SS56	5000/Tape & Reel	11 inch
SS58A	SS58	5000/Tape & Reel	11 inch
SS510A	SS510	5000/Tape & Reel	11 inch
SS515A	SS515	5000/Tape & Reel	11 inch
SS520A	SS520	5000/Tape & Reel	11 inch

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

Items	Symbol	SS52A	SS54A	SS56A	SS58A	SS510A	SS515A	SS520A	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}	80.0							$^{\circ}\text{C/W}$
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	SS52A~SS54A	SS56A	SS58A~510A	SS515A~520A	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℃		10		5		

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

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

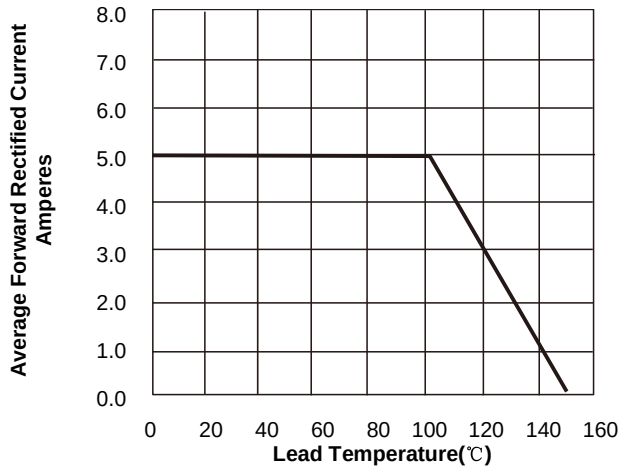


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

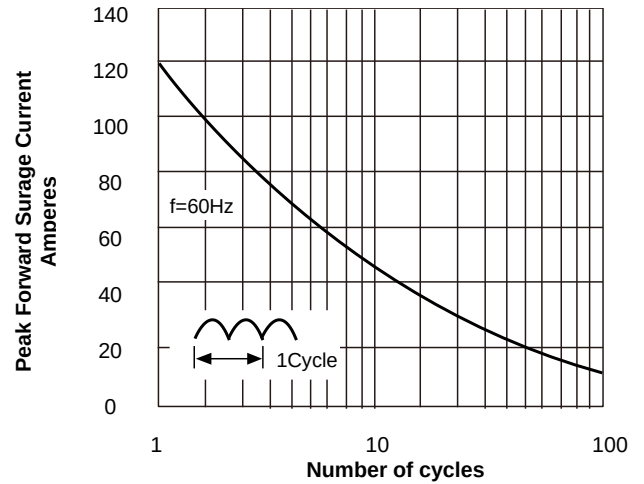


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

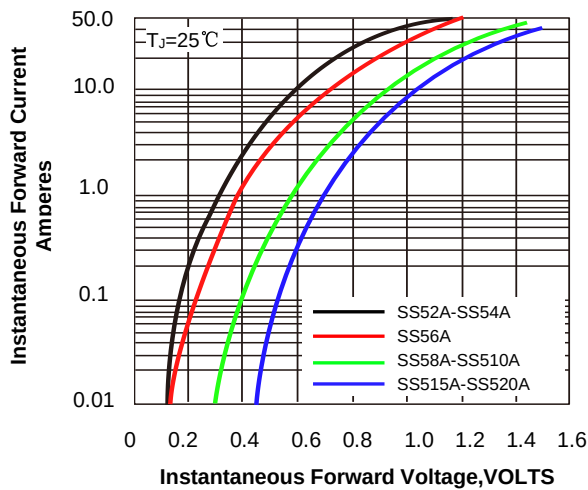
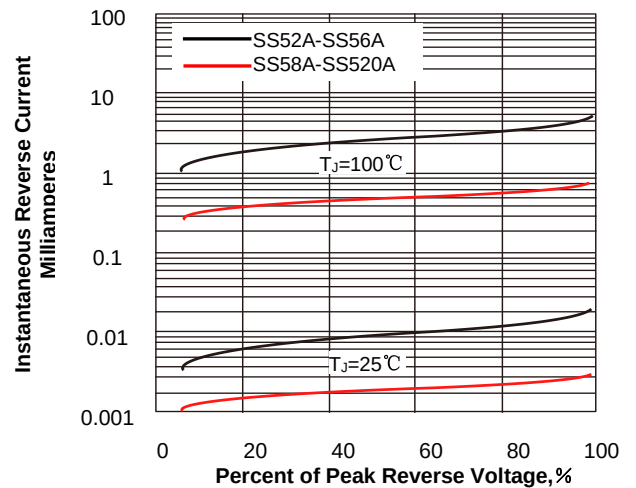
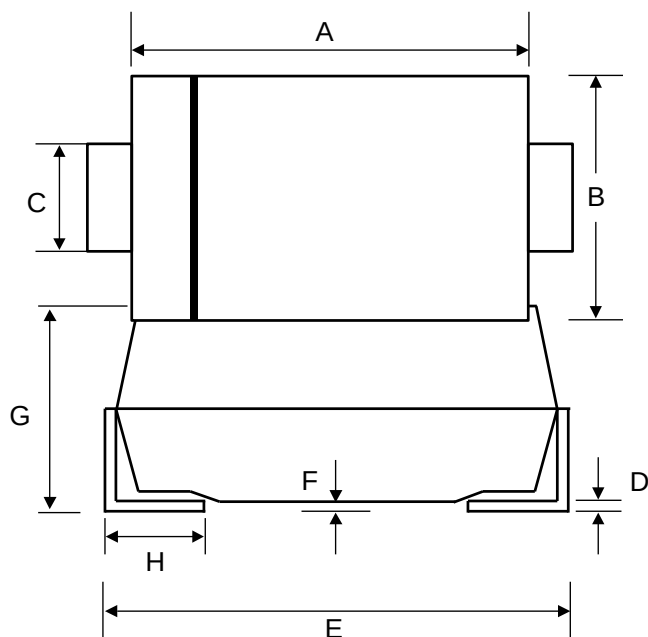


FIG.3-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

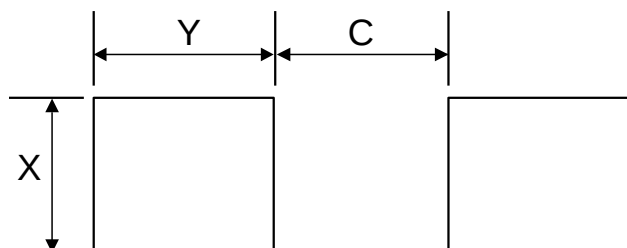


SMA Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.90	4.50	0.153	0.177
B	2.40	2.80	0.094	0.110
C	1.30	1.70	0.051	0.067
D	0.152	0.305	0.006	0.012
E	4.80	5.30	0.188	0.208
F	----	0.203	----	0.008
G	2.00	2.50	0.078	0.098
H	0.76	1.52	0.030	0.060

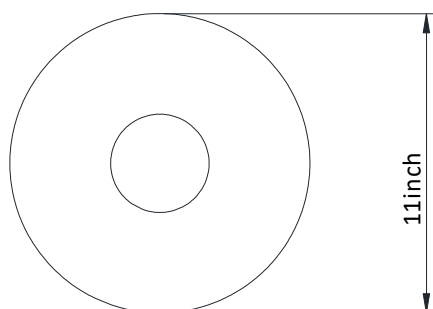
Suggested Land Pattern



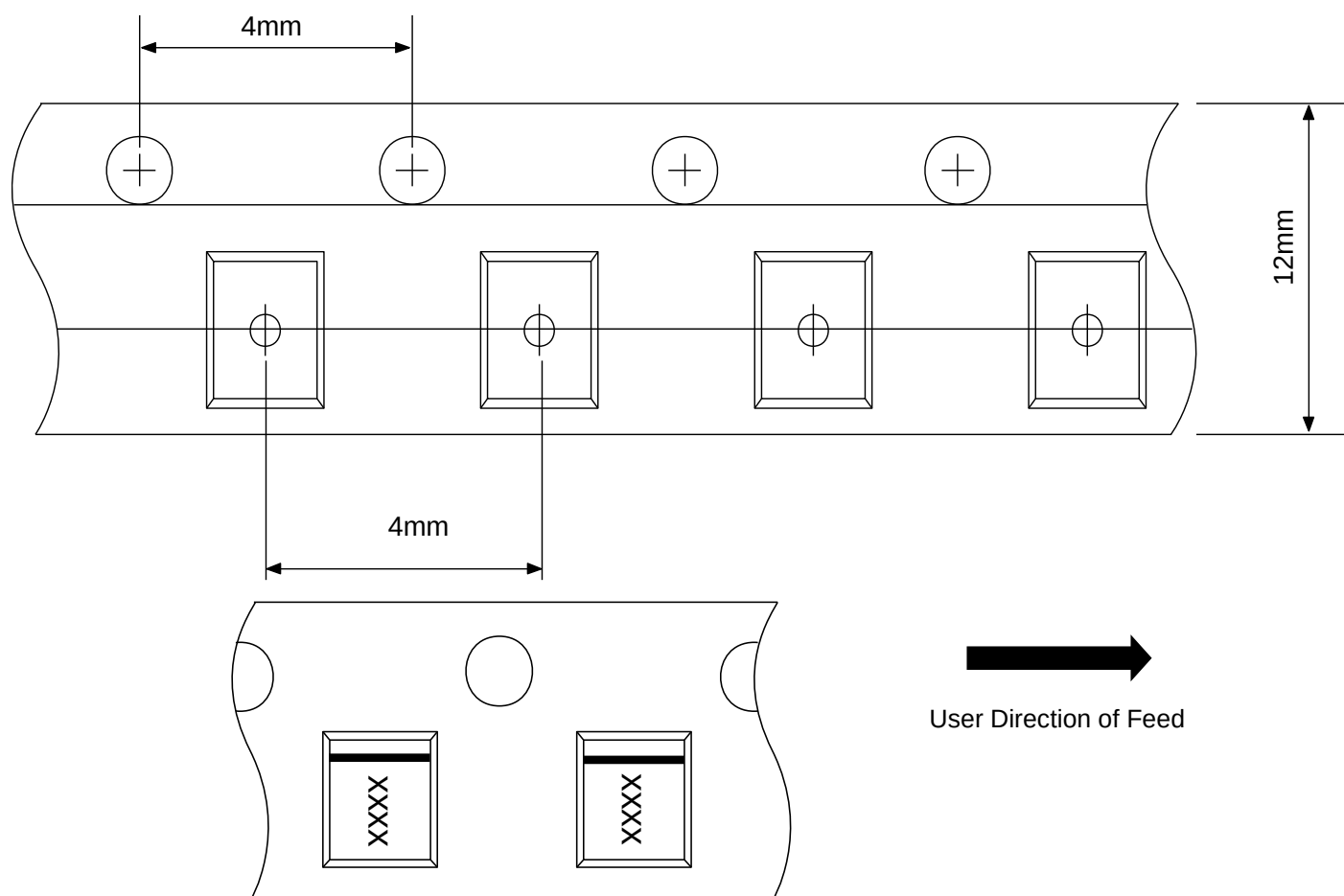
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.68	0.066
Y	1.52	0.060
C	2.41	0.095

TAPE AND REEL INFORMATION

Reel Dimensions



Tape Dimensions



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