

Surface Mount Schottky Barrier Rectifiers

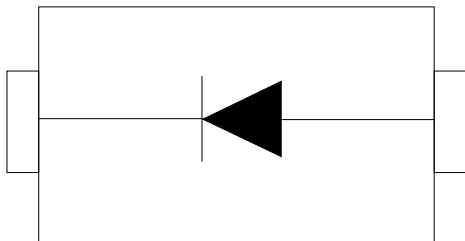
Description

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

Features

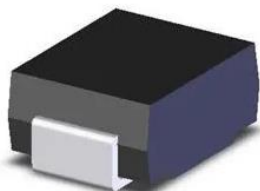
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250 °C/10 seconds at terminals

Dimensions and Pin Configuration



Graphic symbol

Package



SMC (Top View)

Mechanical Characteristics

- Case: JEDEC DO-214AB 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
SS52C	SS52	3000/Tape & Reel	13 inch
SS54C	SS54	3000/Tape & Reel	13 inch
SS56C	SS56	3000/Tape & Reel	13 inch
SS58C	SS58	3000/Tape & Reel	13 inch
SS510C	SS510	3000/Tape & Reel	13 inch
SS515C	SS515	3000/Tape & Reel	13 inch
SS520C	SS520	3000/Tape & Reel	13 inch

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

Items	Symbol	SS52C	SS54C	SS56C	SS58C	SS510C	SS515C	SS520C	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}	45.0							$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	-55 to + 150							$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 ~ +150							$^{\circ}\text{C}$

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

Items	Test conditions	Symbol	SS52C~SS54C	SS56C	SS58C~510C	SS515C~520C	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	0.15		0.05		mA
rated DC blocking voltage	T _A =100℃		50		10		

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

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

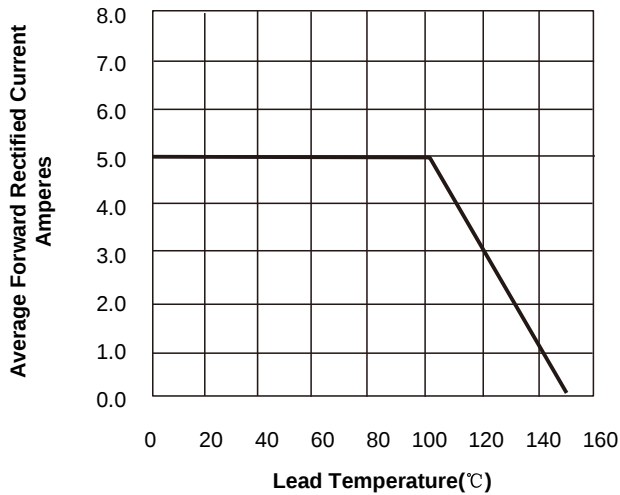


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD

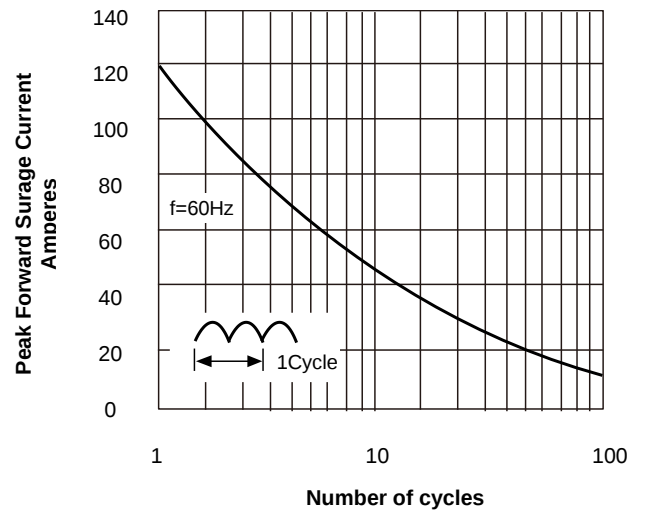


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

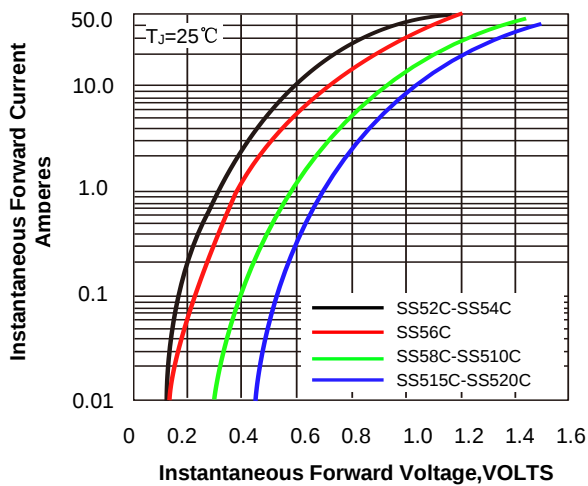
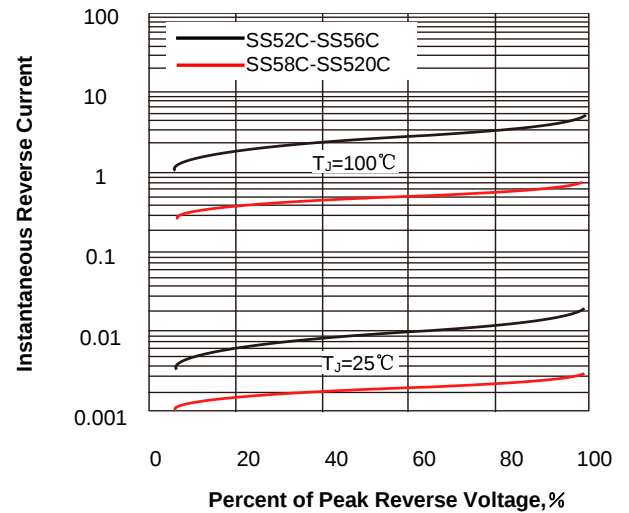
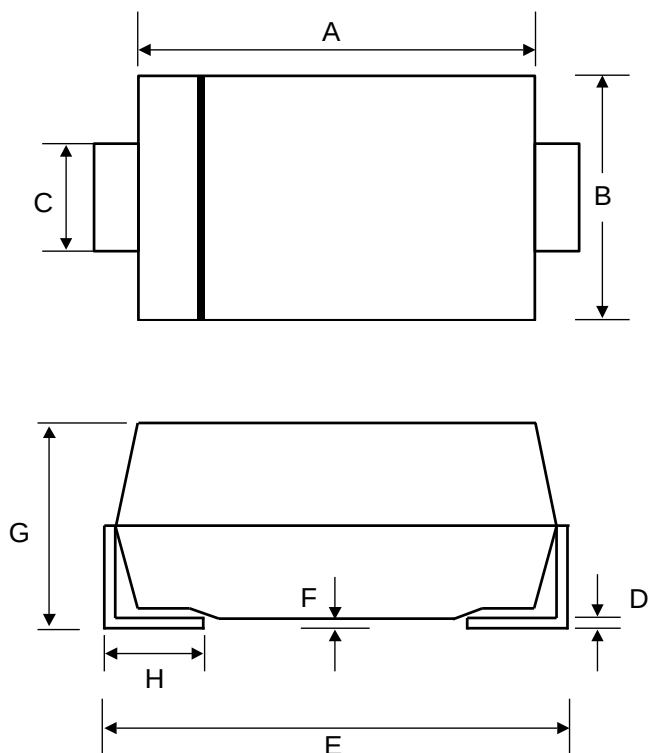


FIG.3-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

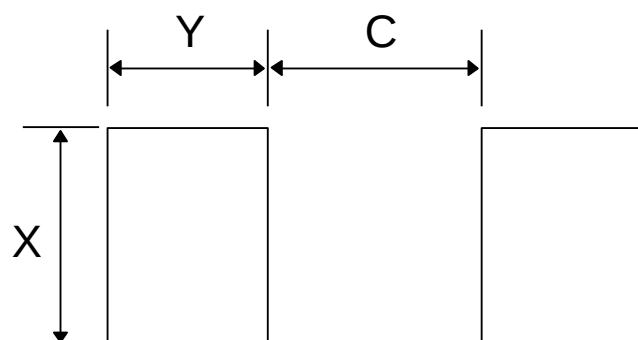


SMC Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	6.60	7.11	0.260	0.280
B	5.59	6.22	0.220	0.245
C	2.90	3.20	0.114	0.126
D	-	0.20	-	0.008
E	7.75	8.13	0.305	0.320
F	----	0.20	----	0.008
G	2.06	2.62	0.079	0.103
H	0.76	1.52	0.030	0.060

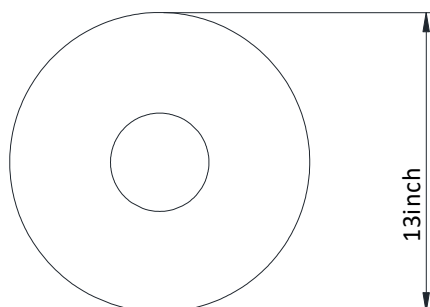
Suggested Land Pattern



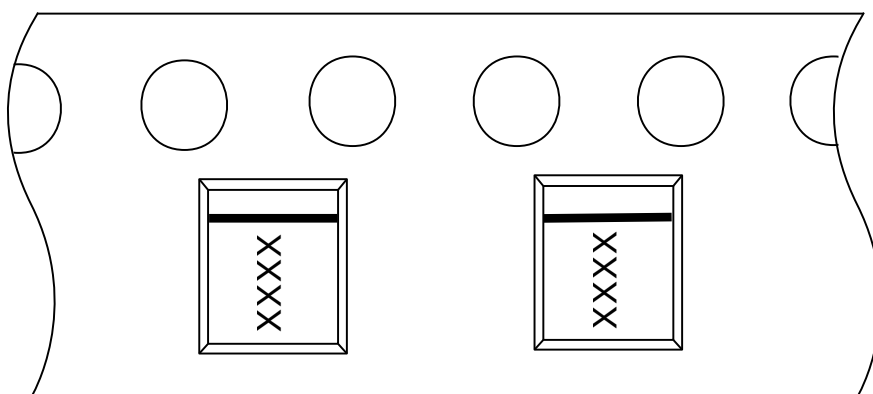
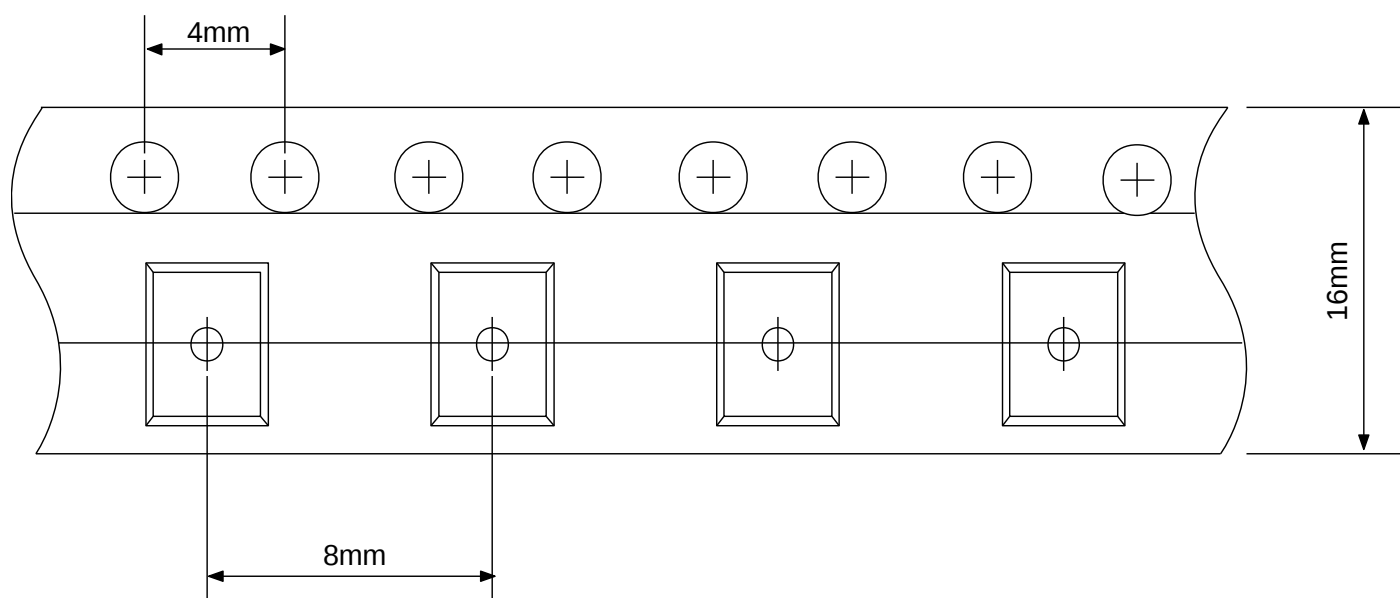
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	4.30	0.170
Y	4.10	0.161
C	3.80	0.150

TAPE AND REEL INFORMATION

Reel Dimensions



Tape Dimensions




User Direction of Feed

IMPORTANT NOTICE

The information given in this document is believed to be accurate and reliable but shall in no event be regarded as a guarantee of conditions or characteristics. PN-Silicon assumes no responsibility for any errors in this document, or for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of PN-Silicon.

The product listed in this document are designed to be used with ordinary electronic equipment or devices and are not authorized to used with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, automotive and other safety device.)

The  logo is a registered trademark of PN-Silicon co., ltd which reserves the right to make changes to the product or this document at any time without notice. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. PN-Silicon makes no warranty, representation or guarantee, express or implied, regarding the suitability of its products for any particular purpose. All rights reserved.