

Surface Mount Schottky Barrier Rectifiers

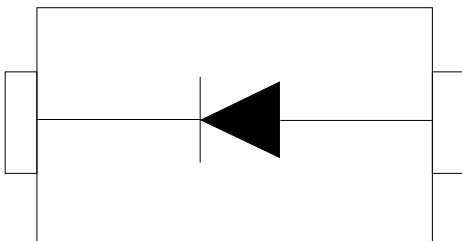
Description

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

Features

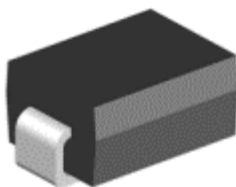
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals

Dimensions and Pin Configuration



Graphic symbol

Package



SMB (Top View)

Mechanical Characteristics

- Case: JEDEC DO-214AA 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
SS12B	SS12	3000/Tape & Reel	13 inch
SS14B	SS14	3000/Tape & Reel	13 inch
SS16B	SS16	3000/Tape & Reel	13 inch
SS18B	SS18	3000/Tape & Reel	13 inch
SS110B	SS110	3000/Tape & Reel	13 inch
SS115B	SS115	3000/Tape & Reel	13 inch
SS120B	SS120	3000/Tape & Reel	13 inch

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

Items	Symbol	SS12B	SS14B	SS16B	SS18B	SS110B	SS115B	SS120B	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 at T _L =100℃	I _{F(AV)}	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30.0							A
Typical thermal resistance	R _{QJA}	60.0							℃/W
Operating junction temperature range	T _J	-55 to + 125			-55 to + 150				℃
Storage temperature range	T _{STG}	-55 to +150							℃

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

Items	Test conditions	Symbol	SS12B~SS14	SS16B	SS18B~110B	SS115B~120B	UNIT
Maximum instantaneous forward voltage	I _F =1.0A	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

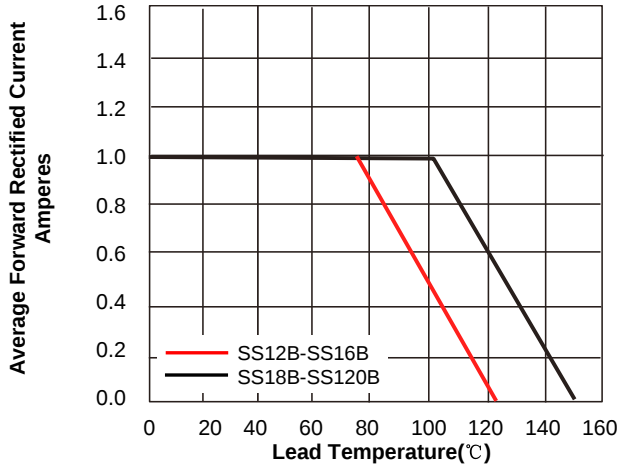


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

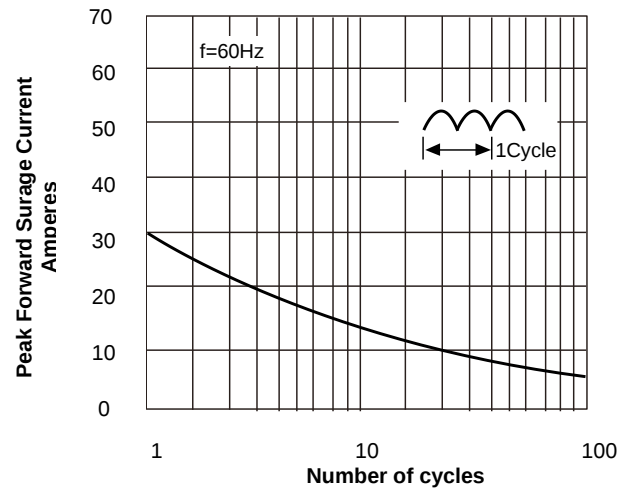


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

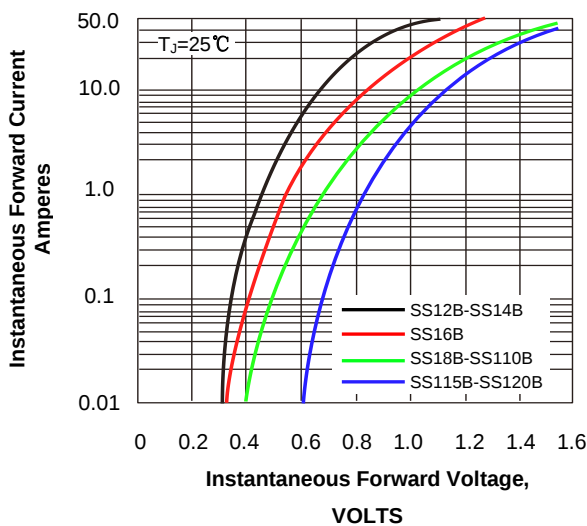
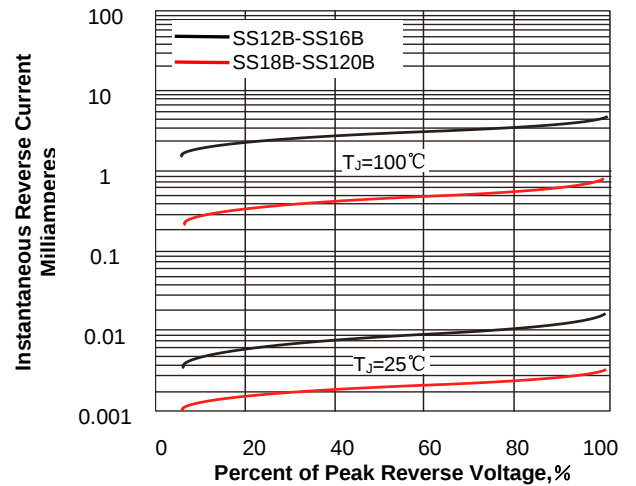
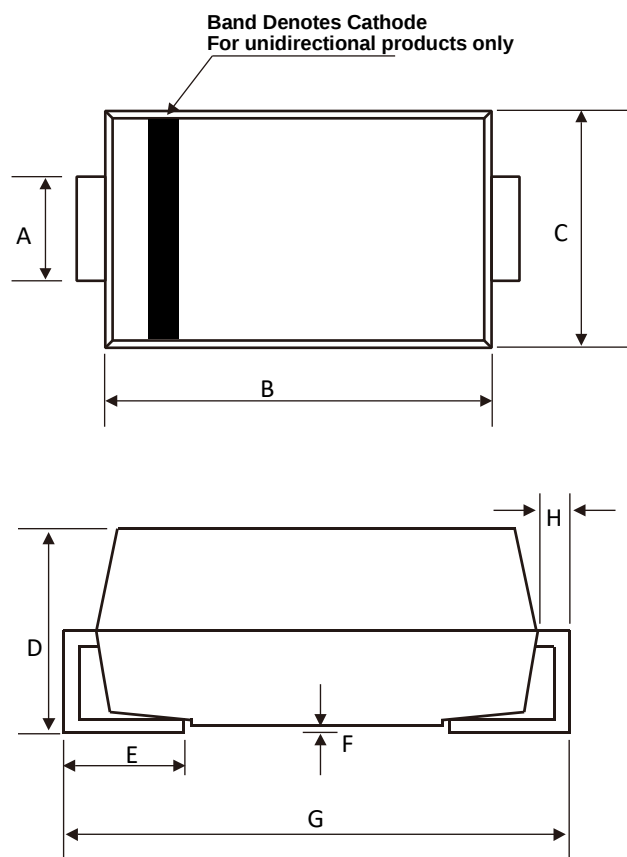


FIG.4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

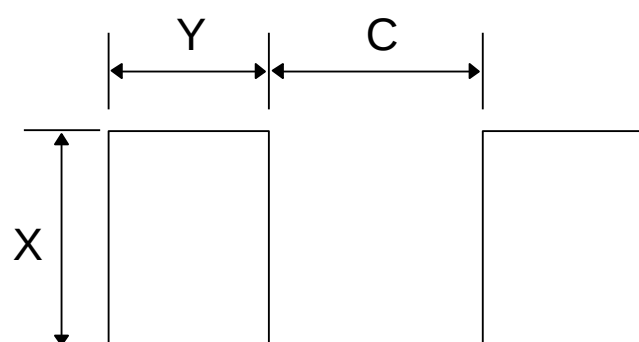


SMB Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.087
B	4.06	4.57	0.160	0.180
C	3.30	3.94	0.130	0.155
D	2.13	2.44	0.084	0.096
E	0.76	1.52	0.030	0.060
F	----	0.203	----	0.008
G	5.08	5.59	0.205	0.220
H	0.152	0.305	0.006	0.012

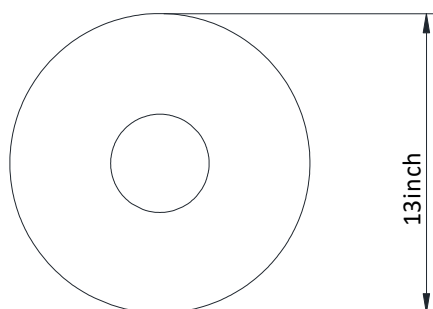
Suggested Land Pattern



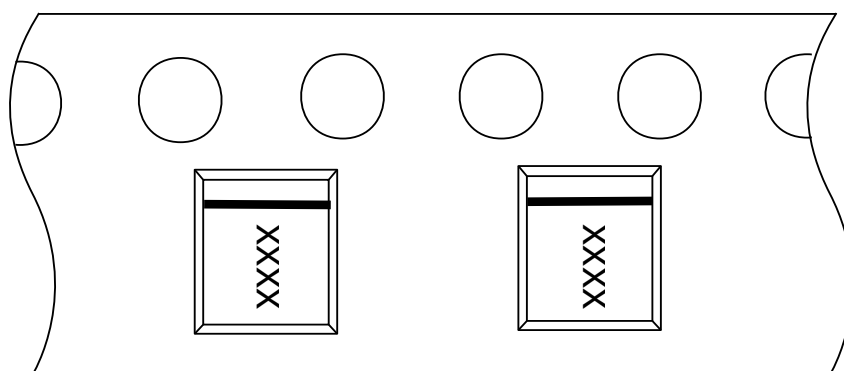
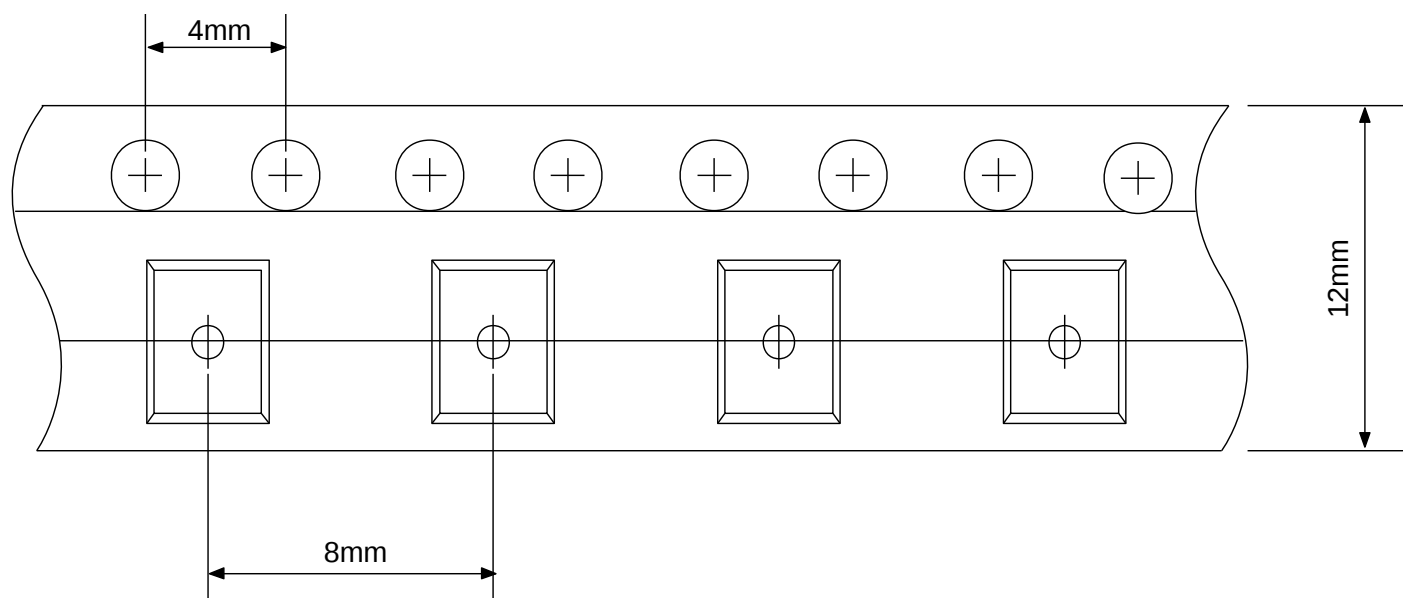
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	2.30	0.091
Y	2.00	0.078
C	2.10	0.083

TAPE AND REEL INFORMATION

Reel Dimensions



Tape Dimensions



User Direction of Feed

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