

# SK37B thru SK3BB

Surface Mount Schottky Rectifier  
 Reverse Voltage 70-100V Forward Current 3A

## Features

- Low forward voltage drop
- High junction temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters laboratory flammability classification 94V-0
- Add suffix 'E' for halogen-free
- Halogen-free according to IEC 61249-2-21 definition
- AEC-Q101 qualified



Package: DO-214AA (SMB)

## Applications

For use in low voltage, high frequency inverters, free wheeling and polarity protection applications.

## Maximum Ratings (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	SK37B	SK38B	SK39B	SK3BB	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	70	80	90	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	42	56	63	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	70	80	90	100	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	3.0				A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	100				A
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150				°C

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =3A	V <sub>F</sub>	0.79	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	30	μA
	T <sub>A</sub> =125°C		2000	
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	100	pF

## Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance <sup>(1)</sup>	R <sub>θJA</sub>	70	°C/W
	R <sub>θJC</sub>	28	
	R <sub>θJL</sub>	15	

Note1: Thermal resistance from junction to lead, mounted on PCB with 8.0×8.0mm copper pads.

## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

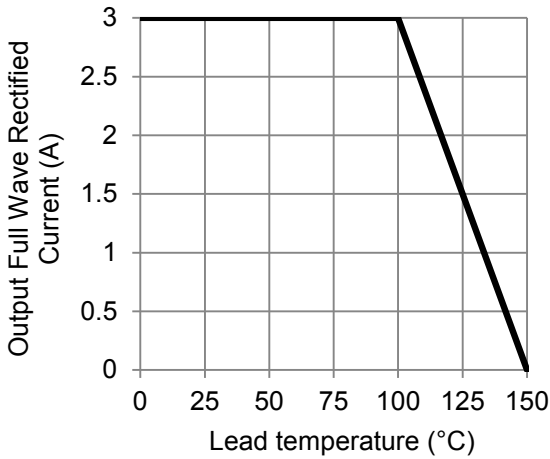


Figure 1. Forward Current Derating Curve

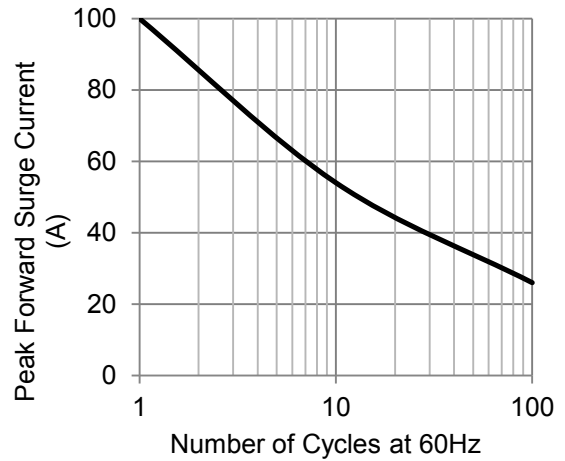


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

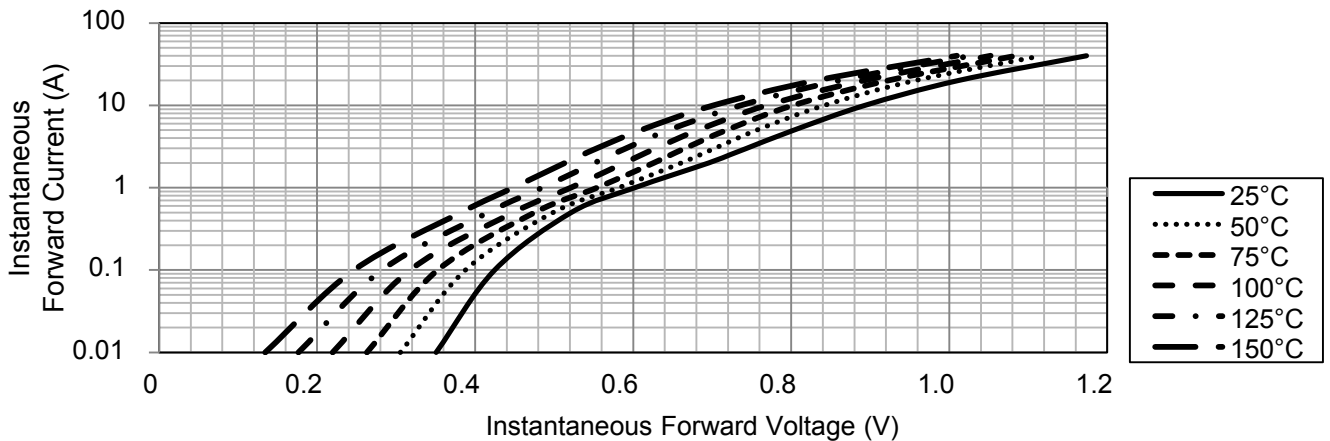


Figure 3. Typical Instantaneous Forward Characteristics

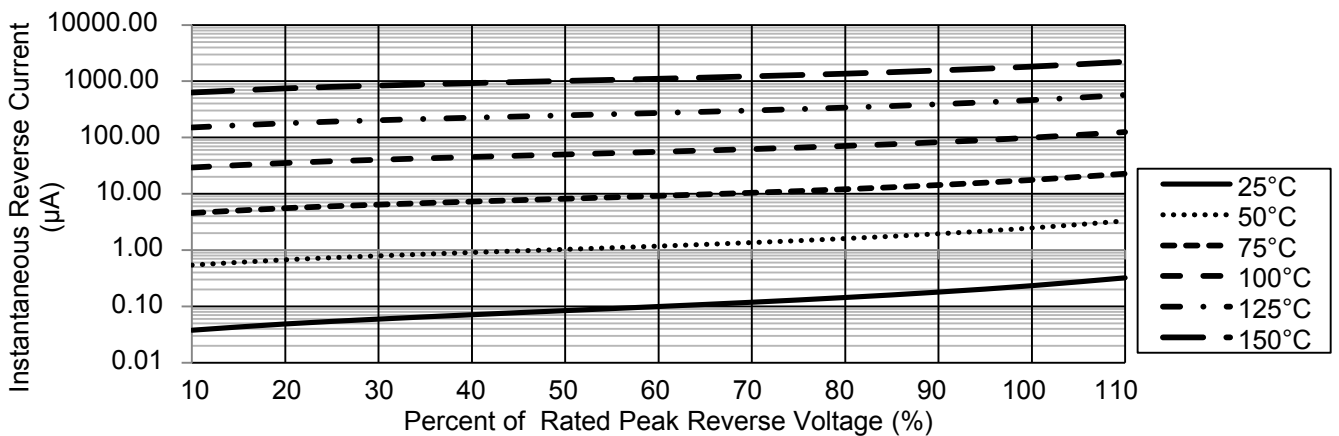
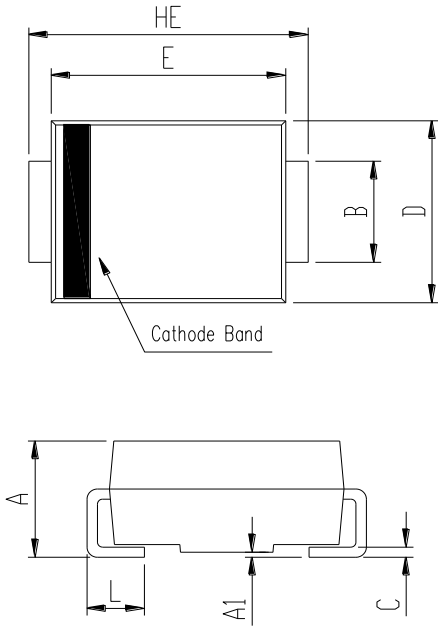


Figure 4. Typical Reverse Characteristics

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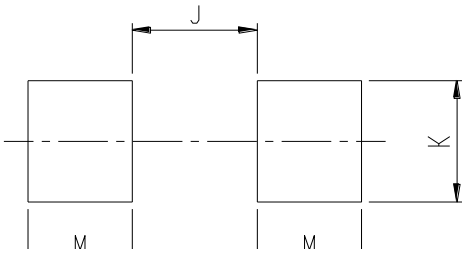
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## Package Outline Dimensions (DO-214AA (SMB))



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.99	2.61	0.078	0.103
A1	0.00	0.30	0.000	0.012
B	1.70	2.30	0.067	0.091
C	0.15	0.31	0.006	0.012
D	3.30	3.94	0.130	0.155
E	4.06	4.75	0.160	0.187
HE	4.70	5.70	0.185	0.224
L	0.76	1.52	0.030	0.060

## Recommended Pad Layout



SMB Recommended Pad Layout (Reference Only)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-