



# THE DATASHEET OF SK3B



## 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
- Halogen-free according to IEC 61249-2-21 definition



Package: DO-214AB (SMC)

## 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	SK37	SK38	SK39	SK3B	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 (8.3ms Single Half Sine-Wave Superimposed on Rated Load)	I <sub>FSM</sub>	100				A
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150				°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150				

## 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	4.0V, 1MHz	C <sub>J</sub>	100	pF

## Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance <sup>1</sup>	R <sub>θJA</sub>	65	°C/W
	R <sub>θJC</sub>	10	
	R <sub>θJL</sub>	15	

Note:

1. 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)

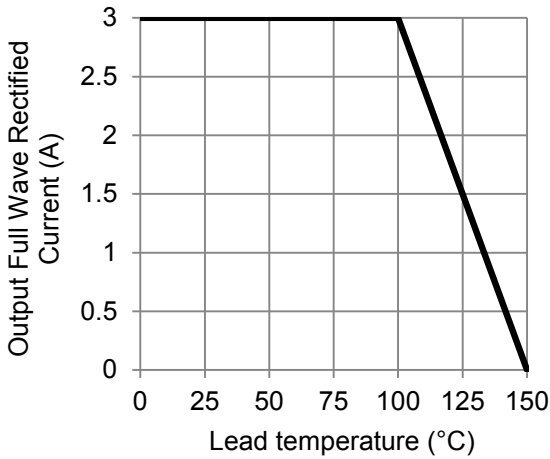


Figure 1. Forward Current Derating Curve

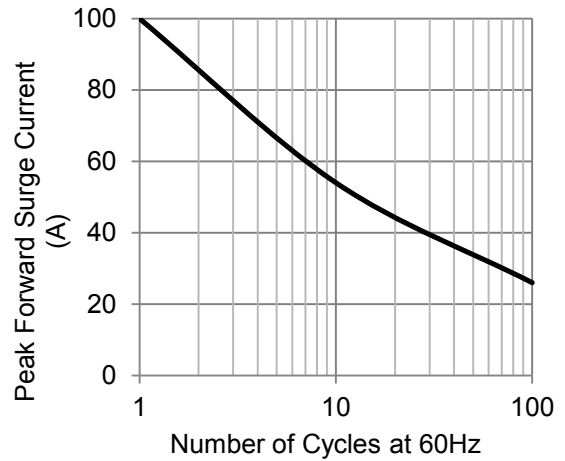


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

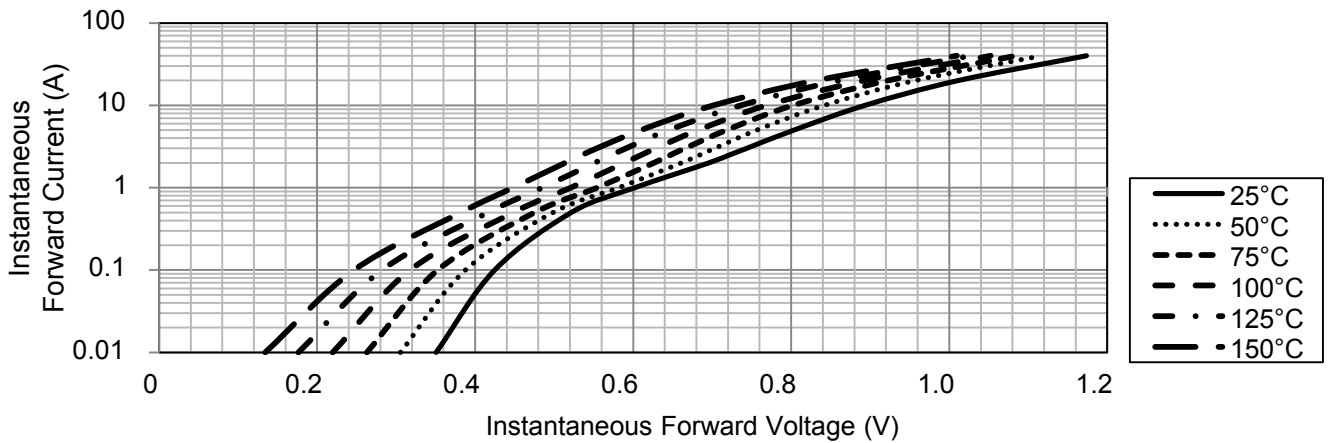


Figure 3. Typical Instantaneous Forward Characteristics

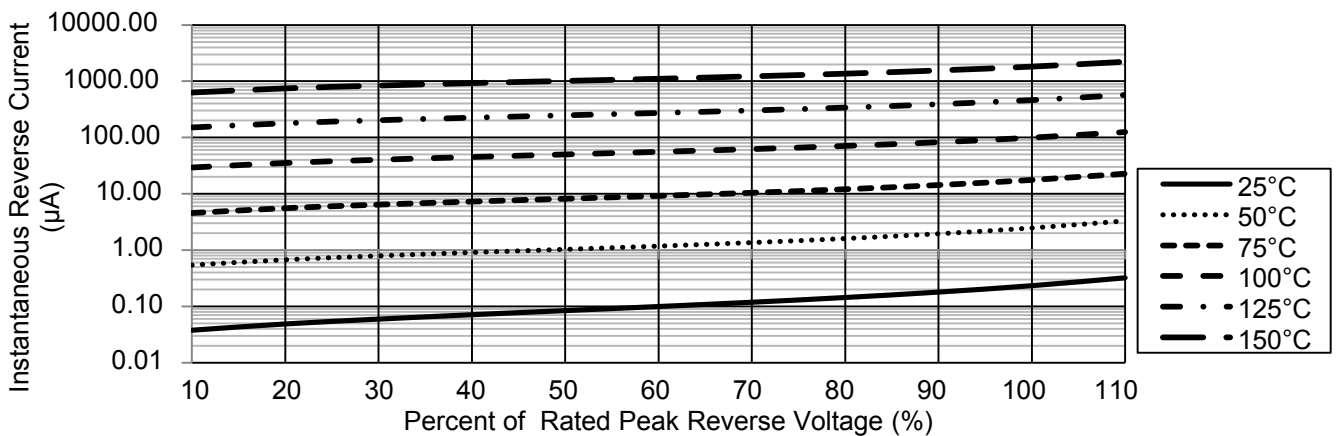
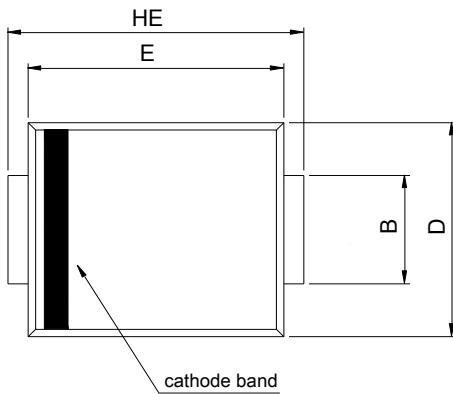


Figure 4. Typical Reverse Characteristics

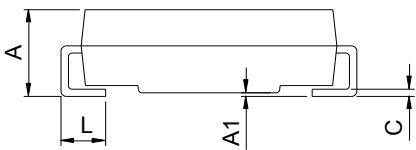
# SK37 thru SK3B

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

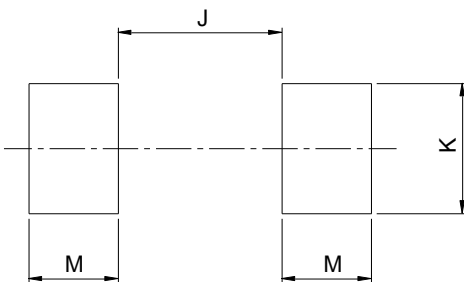
## Package Outline Dimensions DO-214AB (SMC)



SMC (DO-214AB)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.90	3.20	0.114	0.126
C	0.15	0.31	0.006	0.012
D	5.58	6.22	0.220	0.245
E	6.60	7.15	0.260	0.281
HE	7.75	8.15	0.305	0.321
L	0.76	1.60	0.030	0.063

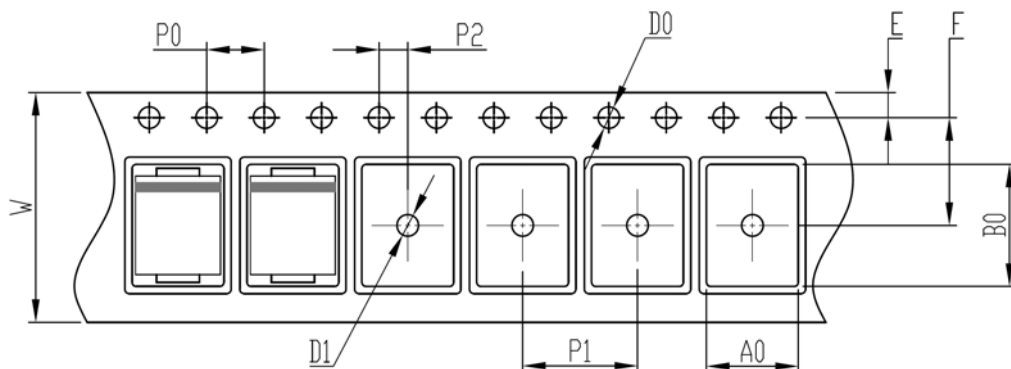


## Recommended Pad Layout



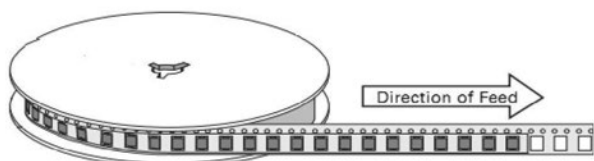
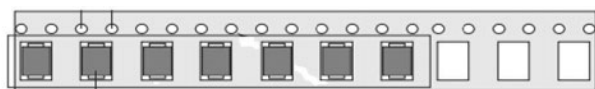
SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-

## SMC Carrier Tape



Symbol	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1

## SMC Taping Orientation









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