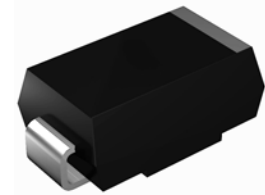


## Features

- 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



DO-214AB (SMC)

## Applications

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

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	105	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	150	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	5.0	A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed on Rated Load)	I <sub>FSM</sub>	120	A
Typical Thermal Resistance <sup>1</sup>	R <sub>θJA</sub>	62	°C/W
	R <sub>θJC</sub>	22	
	R <sub>θJL</sub>	15	
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	Symbol	Test Conditions	Value	Unit
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =5A	0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>A</sub> =25°C	30	μA
		T <sub>A</sub> =125°C	1000	
Typical Junction Capacitance	C <sub>J</sub>	4.0V, 1MHz	96	pF

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)

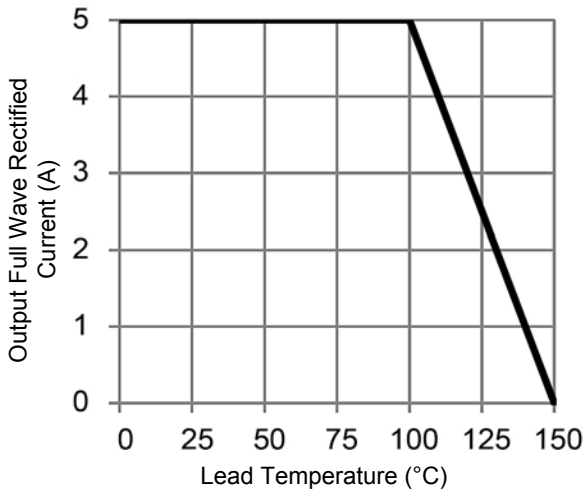


Figure 1. Forward Current Derating Curve

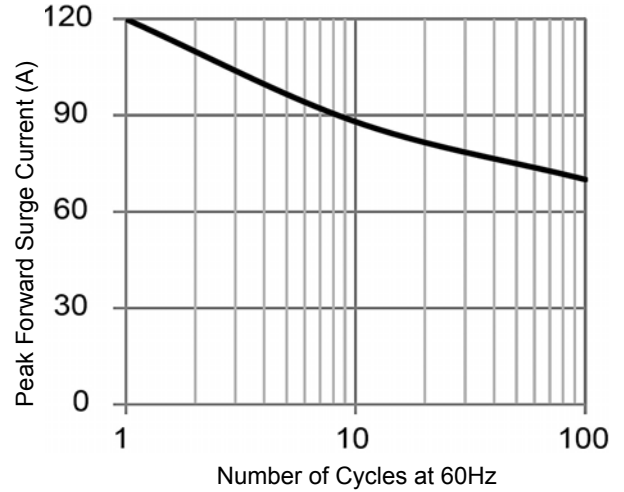


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

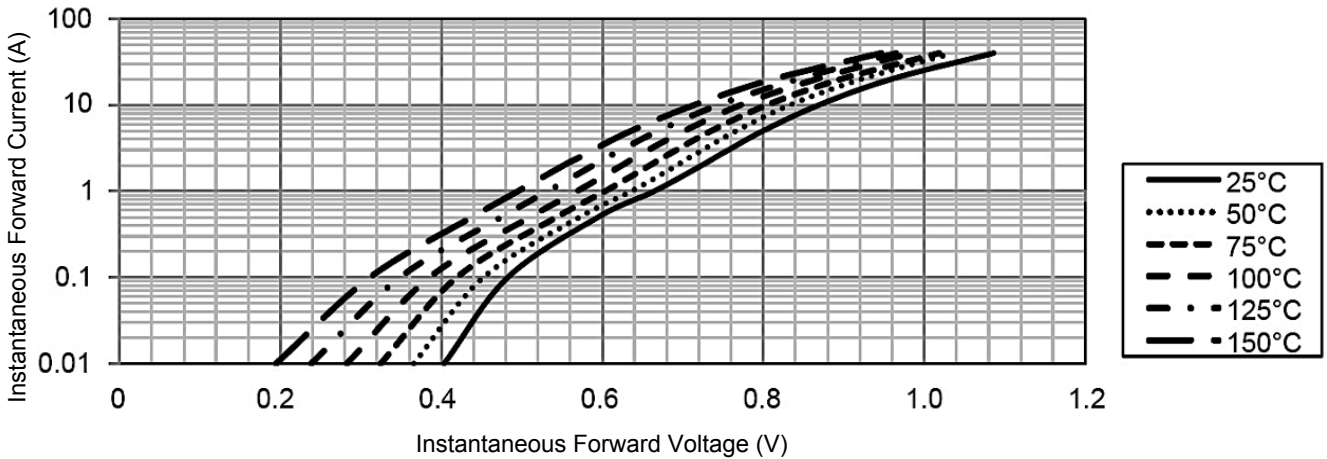


Figure 3. Typical Instantaneous Forward Characteristics

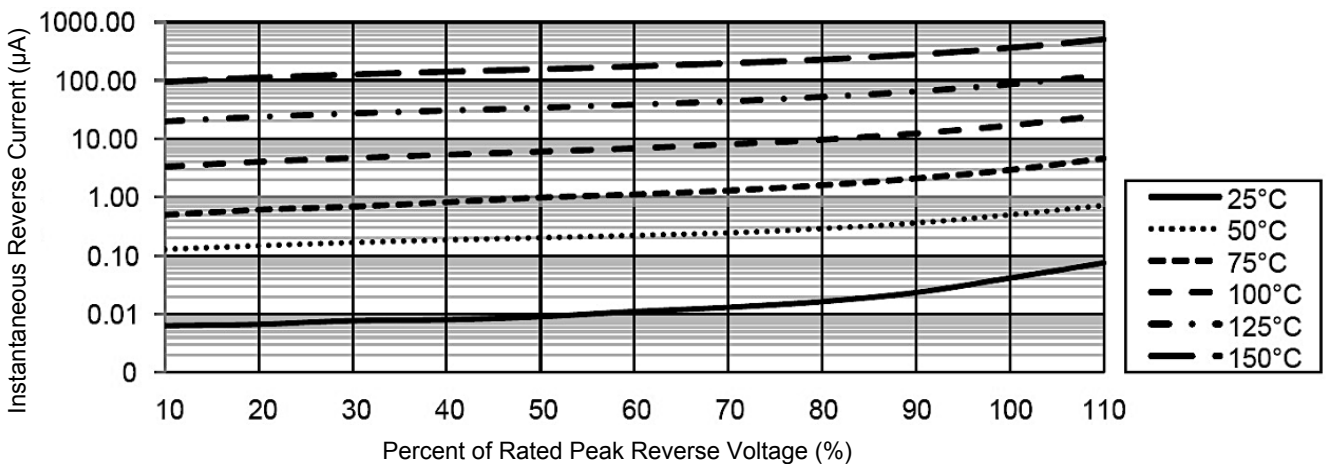
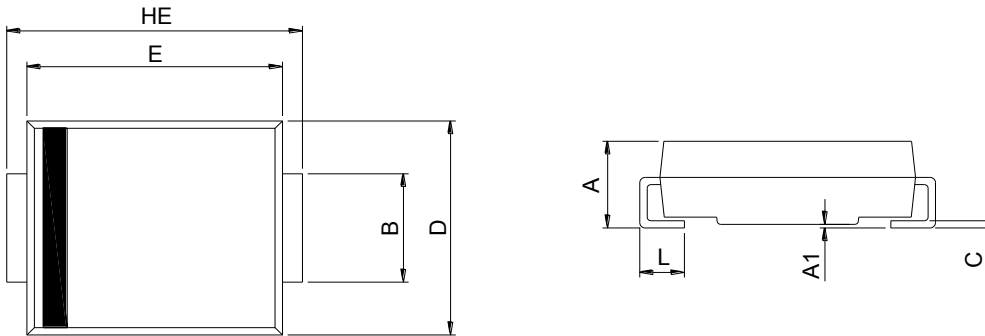


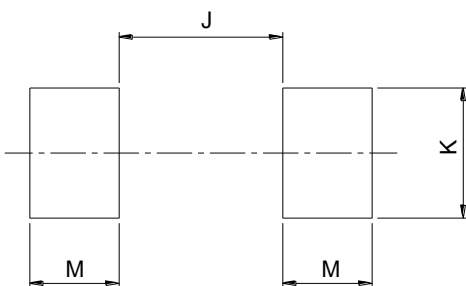
Figure 4. Typical Reverse Characteristics

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



Symbol	Dimensions In Millimeters		Dimensions In 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	-

## Order Information

Device	Package	Marking	Carrier	Quantity
GSK5B5C	DO-214AB (SMC)	SK5B5C	Tape & Reel	3,000 Pcs / Reel