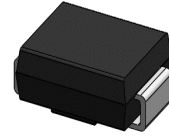


## 5A,150V Schottky Barrier Rectifier

### Features

- Low leakage current
- Schottky barrier diode
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



SMB (DO-214AA)

### Applications

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

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	SK5B5B	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	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	120	A
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	85	°C /W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	15	°C /W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	20	°C /W

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

Parameter	Symbol	Test Conditions	SK5B5B	Unit
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =5A	0.85	V
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	30	uA
		T <sub>J</sub> =125°C	1000	
Typical junction capacitance	C <sub>J</sub>	4.0 V 1 MHz	96	pF

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

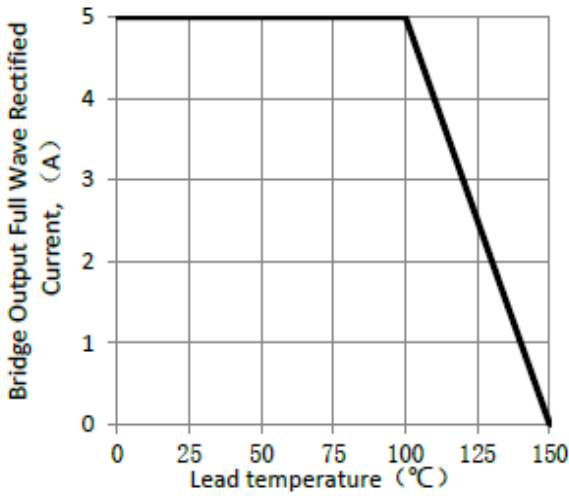


Figure 1. Forward Current Derating Curve

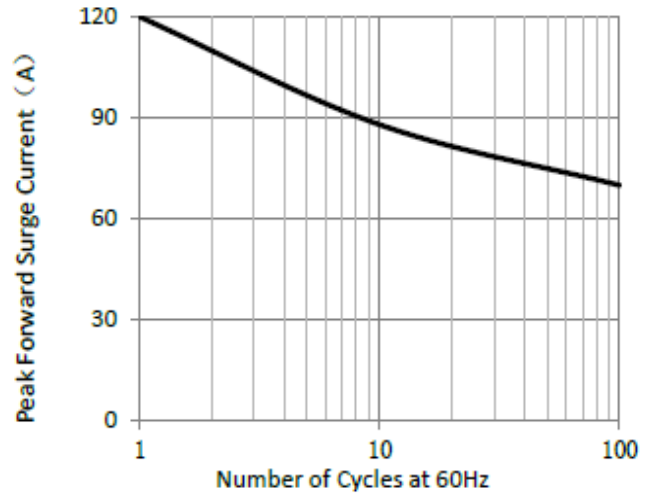


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

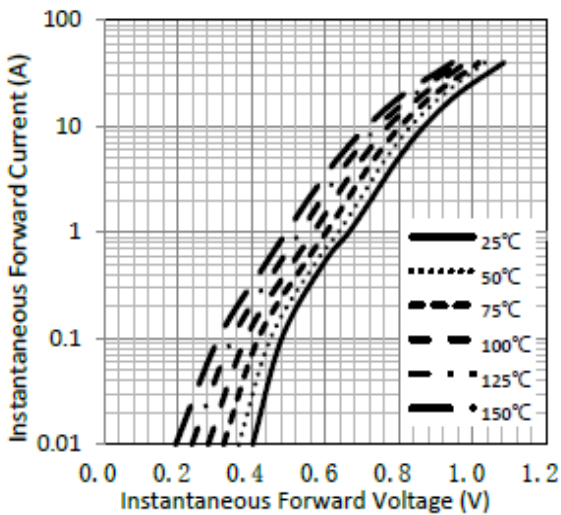


Figure 3. Typical Instantaneous Forward Characteristics

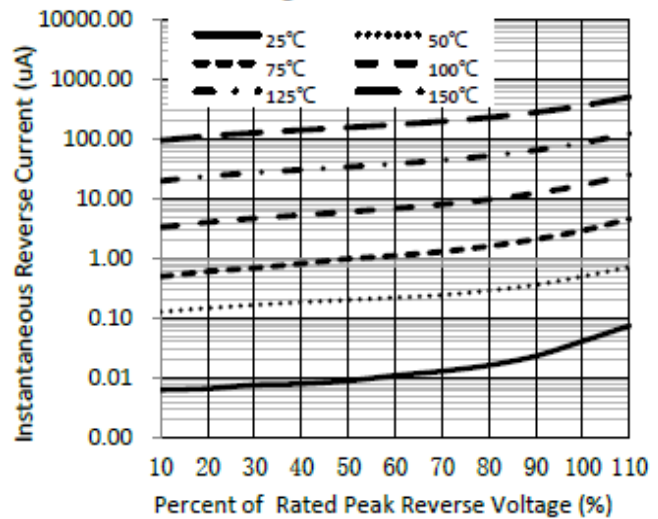
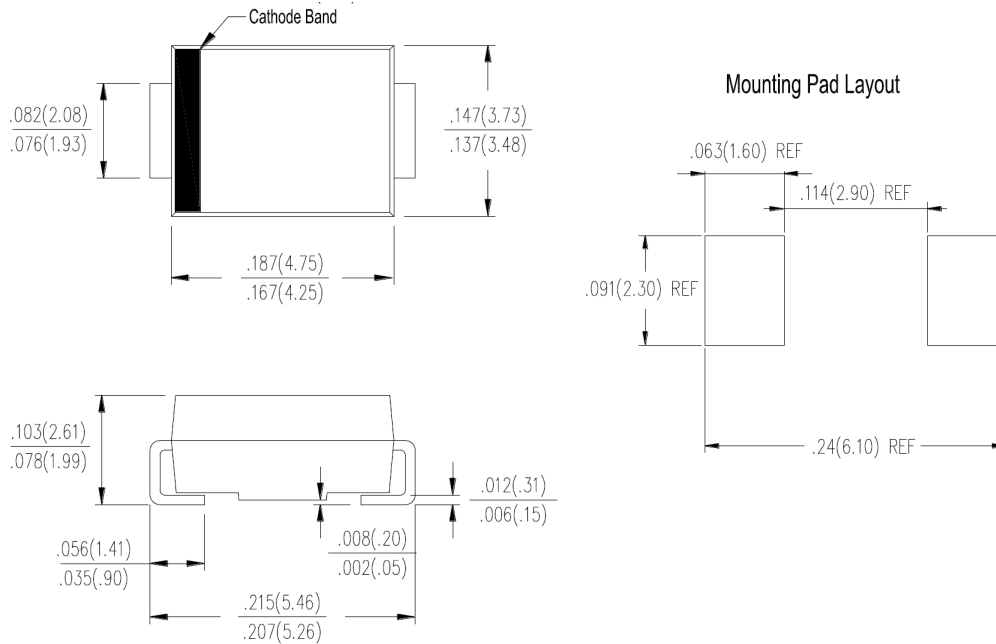


Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions

in inches (millimeters)

### SMB (DO-214AA)



## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.16	Modify document format

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