

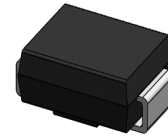
## 5A,20-60V Schottky Barrier Rectifiers

### Features

- Low leakage current
- Schottky barrier diodes
- 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



RoHS  
COMPLIANT



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	SK52B	SK53B	SK54B	SK55B	SK56B	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	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	SK52B	SK53B	SK54B	SK55B	SK56B	Unit
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =5A	0.55			0.67		V
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	0.20			0.15		mA
		T <sub>J</sub> =125°C	15					
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)

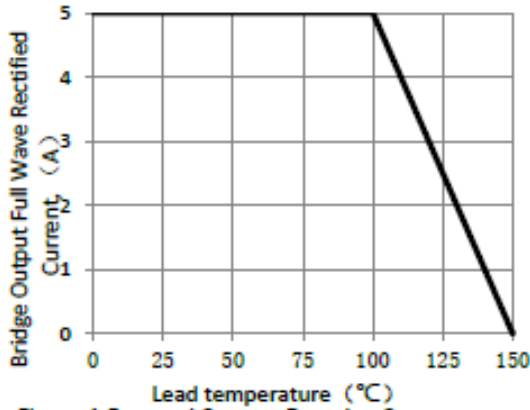


Figure 1. Forward Current Derating Curve

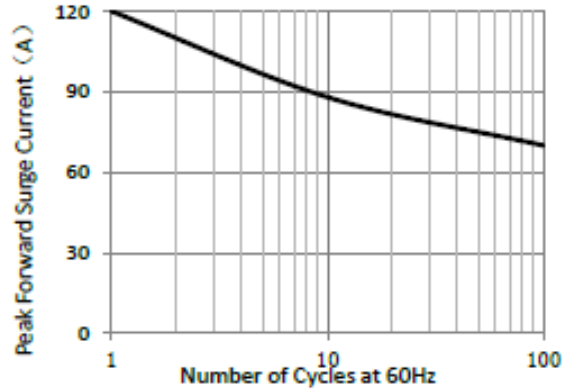


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

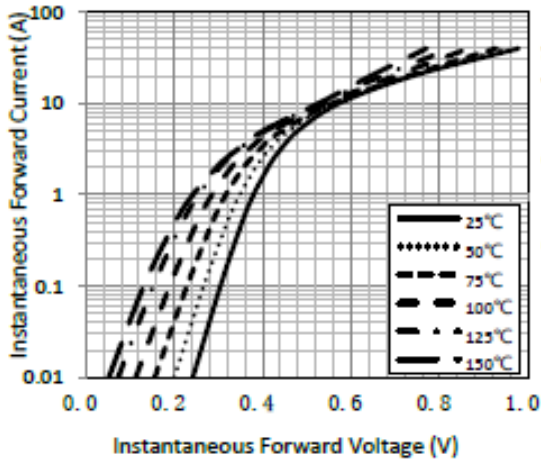


Figure 3. Typical Instantaneous Forward Characteristics (SK52B thru SK54B)

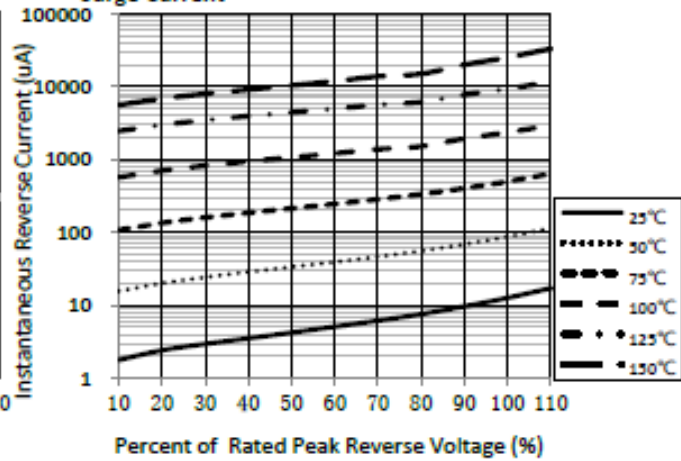


Figure 4. Typical Reverse Characteristics (SK52B thru SK54B)

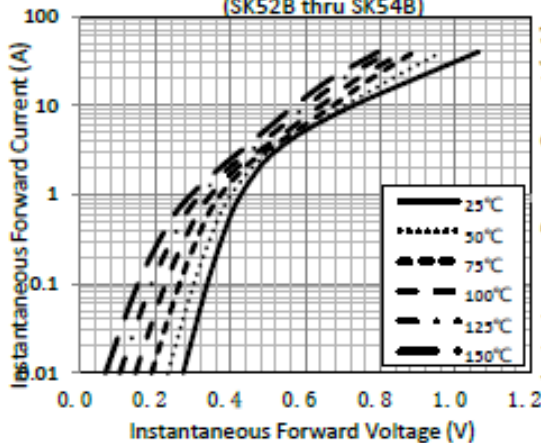


Figure 5. Typical Instantaneous Forward Characteristics (SK55B thru SK56B)

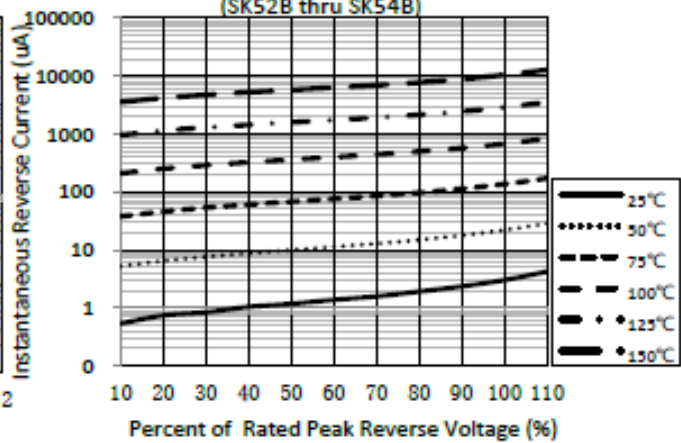
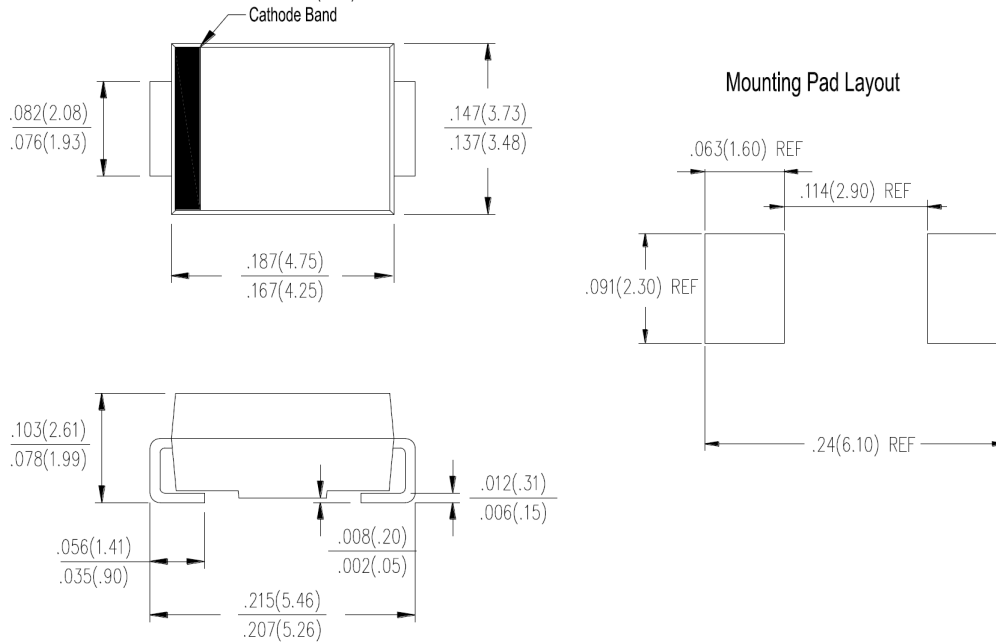


Figure 6. Typical Reverse Characteristics (SK55B thru SK56B)

## 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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