

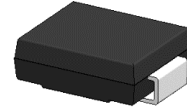
## 5A,70-100V Schottky Barrier Rectifiers

### 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



SMC (DO-214AB)

### 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	SK57	SK58	SK59	SK5B	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	70	80	90	100	V
Maximum RMS voltage	V <sub>RMS</sub>	49	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>	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>	65	°C / W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	10	°C / W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	15	°C / W

Electrical Specifications ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)							
Parameter	Symbol	Test Conditions	SK57	SK58	SK59	SK5B	Unit
Forward Drop Voltage	$V_F$	$I_F=5\text{A}$	0.79				V
Reverse leakage current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	0.03				mA
		$T_J=125^{\circ}\text{C}$	2				
Typical junction capacitance	$C_J$	4.0 V 1 MHz	96				pF

Note:

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

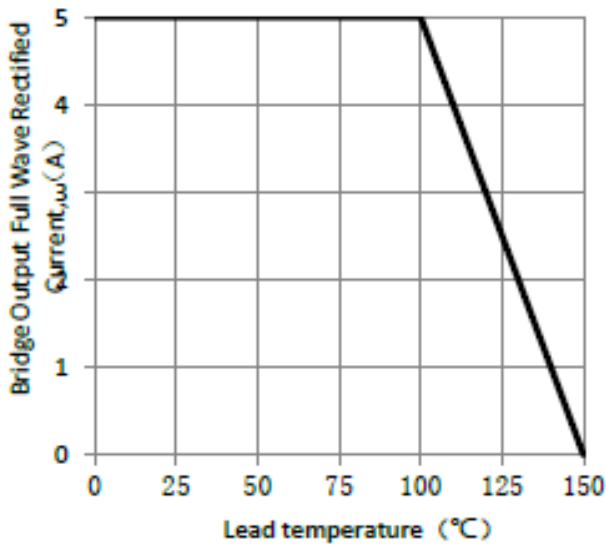


Figure 1. Forward Current Derating Curve

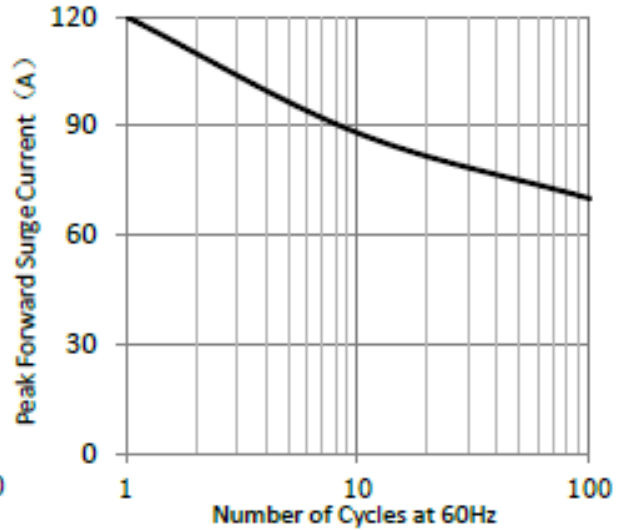


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

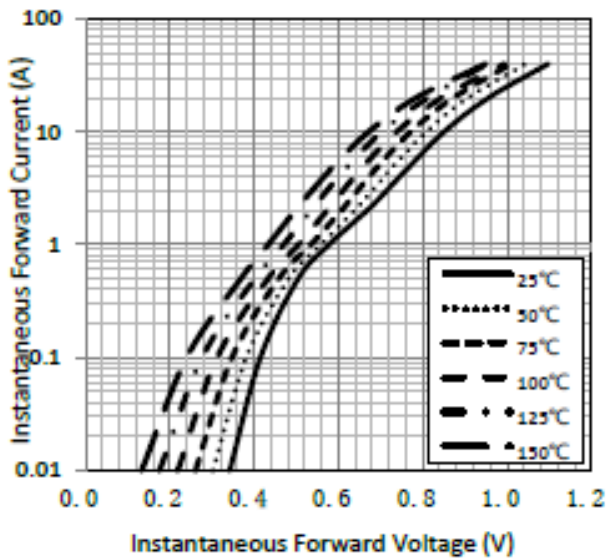


Figure 3. Typical Instantaneous Forward Characteristics

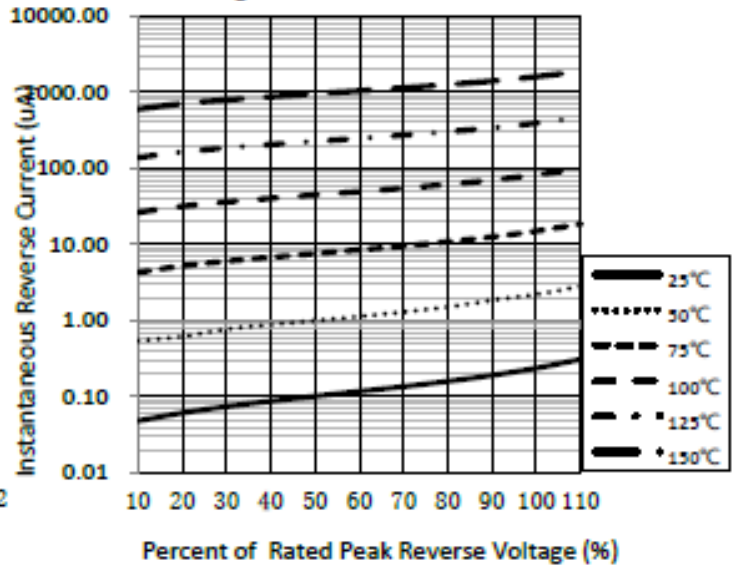
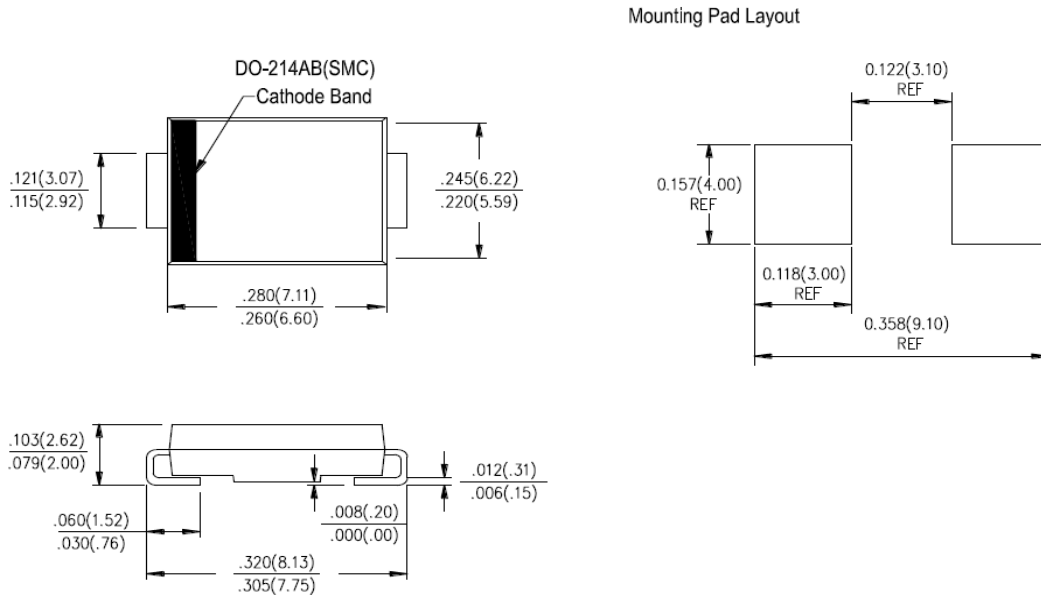


Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions

in inches (millimeters)

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## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format

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