

### FEATURES

- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Meets environmental standard MIL-S-19500D
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 275°C, 10s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



DO-214AA (SMB)

### APPLICATIONS

- General purpose rectification
- Lighting
- Power supplies
- Inverters and converters
- Freewheeling diodes for consumer, automotive and telecommunication



### MECHANICAL DATA

**Case:** DO-214AA, molded epoxy body , Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22B-106

**Polarity:** Laser Band Denotes Cathode Band

MAXIMUM RATINGS (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	SK5C0B	UNIT
Maximum repetitive peak reverse voltage	VRRM	200	V
Maximum RMS voltage	VRMS	140	V
Maximum DC blocking voltage	VDC	200	V
Maximum average forward rectified current at TL (See Fig.1)	IF(AV)	5	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	120	A
Operating junction temperature range	TJ	- 55 to + 150	°C
Storage temperature range	Tstg	- 55 to + 150	°C



# SK5C0B Schottky Barrier Rectifier

ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	SK5C0B	UNIT
Maximum instantaneous forward voltage	I <sub>F</sub> =0.5A	V <sub>F</sub>	0.70	V
	I <sub>F</sub> =1A		0.75	
	I <sub>F</sub> =3 A		0.80	
	I <sub>F</sub> =5A		0.85	
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25	I <sub>R</sub>	100	uA
	T <sub>A</sub> =125		500	
Typical junction capacitance	4.0 V, 1 MHz	C <sub>J</sub>	96	pF

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	SK5C0B	UNIT	
Typical thermal resistance	R <sub>θJA</sub> (1)	85	°C/W	
	R <sub>θJT</sub> (2)	25		

Notes: (1) Thermal resistance from junction to ambient, 0.315 × 0.315" (8.0 × 8.0mm) copper pads to each terminal  
 (2) Thermal resistance from junction to terminal, 0.315 × 0.315" (8.0 × 8.0mm) copper pads to each terminal

## RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

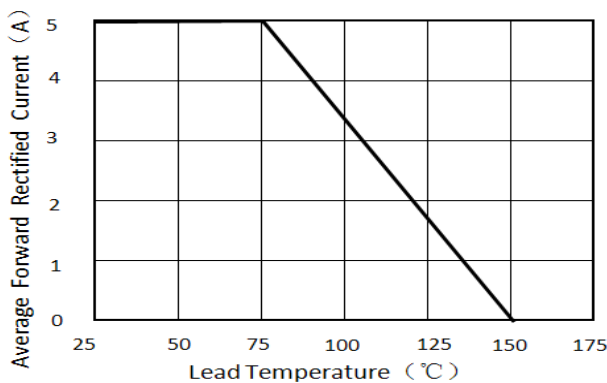


Figure 1. Forward Current Derating Curve

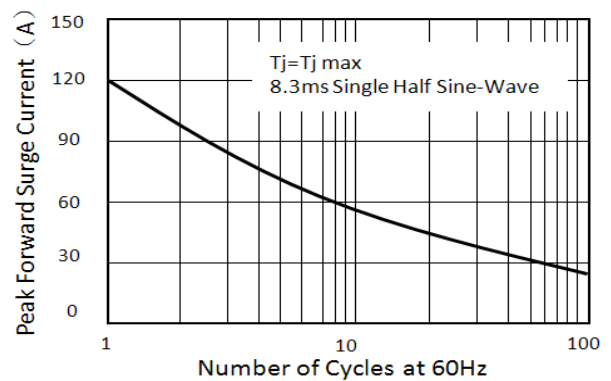


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

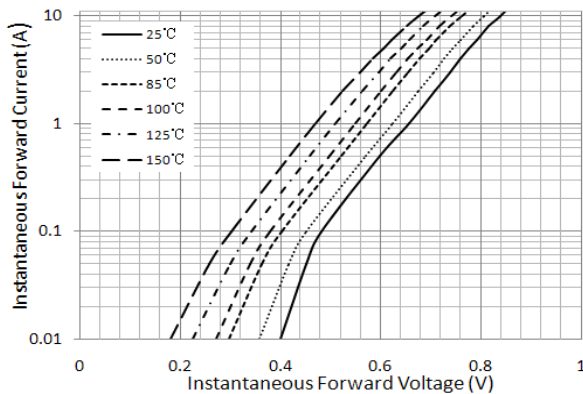


Figure 3. Typical Instantaneous Forward Characteristics

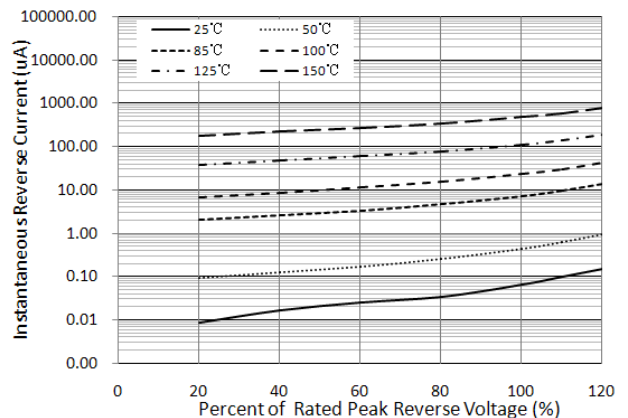


Figure 4. Typical Reverse Characteristics

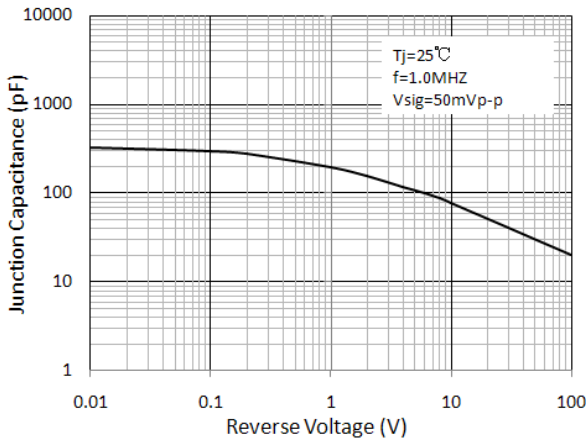


Figure 5. Typical Junction Capacitance

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

