

## Surface Mount Schottky Barrier Rectifier

### 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, 10 s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



DO-214AA ( SMB )

### TYPICAL APPLICATIONS

For use in general purpose rectification of lighting, power supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecommunication.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	5 A
$V_{RRM}$	200 V
$I_{FSM}$	120A
$V_F$	0.85V
$T_J \text{ max.}$	150 °C

### 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	$V_{RRM}$	200	V
Maximum RMS voltage	$V_{RMS}$	140	V
Maximum DC blocking voltage	$V_{DC}$	200	V
Maximum average forward rectified current at TL (See Fig.1)	$I_{F(AV)}$	5	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	120	A
Operating junction temperature range	$T_J$	- 55 to + 150	°C
Storage temperature range	$T_{stg}$	- 55 to + 150	°C



# SK5C0B

ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	SK5C0B	UNIT
Maximum instantaneous forward voltage	IF=0.5A	VF	0.7	V
	IF=1 A		0.75	
	IF=3 A		0.8	
	IF=5A		0.85	
Maximum DC reverse current at rated DC blocking voltage	TA=25	IR	100	uA
	TA=125		500	
Typical junction capacitance	4.0 V, 1 MHz	CJ	96	pF

THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	SK5C0B	UNIT	
Typical thermal resistance	RθJA (1)	85	°C/W	
	RθJT (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 (Tj = 25 °C unless otherwise noted)

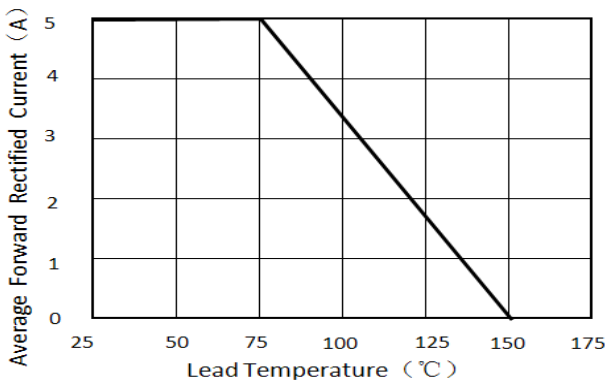


Figure 1. Forward Current Derating Curve

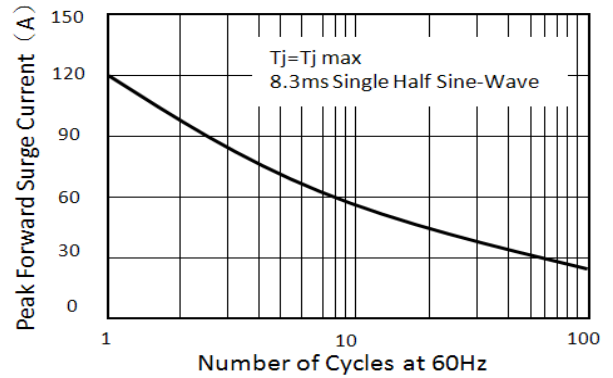


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

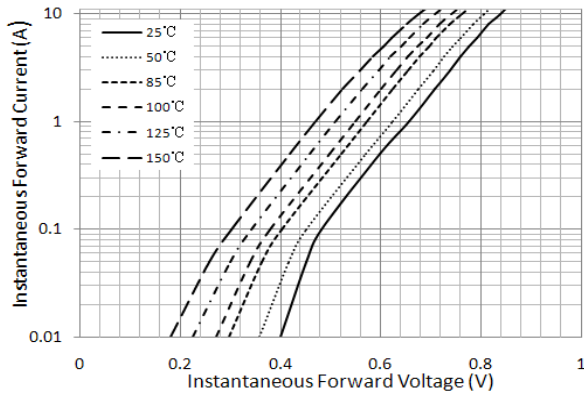


Figure 3. Typical Instantaneous Forward Characteristics

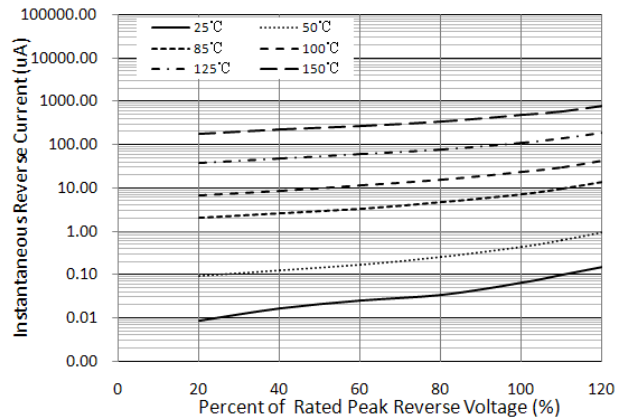


Figure 4. Typical Reverse Characteristics

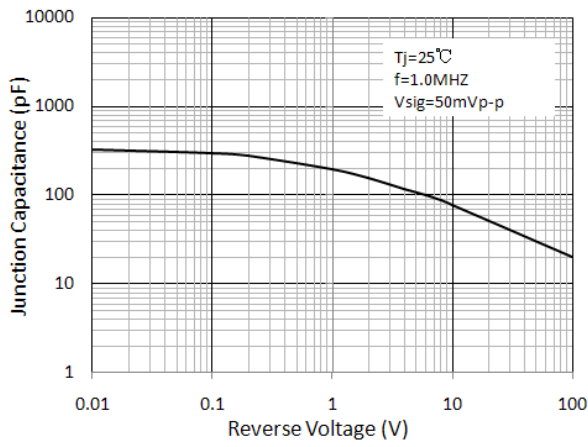


Figure 5. Typical Junction Capacitance

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

