

## 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-214AC ( SMA )

### TYPICAL APPLICATIONS

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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1 A
$V_{RRM}$	150 V
$I_{FSM}$	30A
$V_F$	0.85V
$T_J \text{ max.}$	150 °C

### MECHANICAL DATA

**Case:** DO-214AC, 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	SK1B5	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	150	V
Maximum RMS voltage	$V_{RMS}$	105	V
Maximum DC blocking voltage	$V_{DC}$	150	V
Maximum average forward rectified current at $T_L$ (See Fig.1)	$I_{F(AV)}$	1	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30	A
Operating junction temperature range	$T_J$	- 55 to + 150	°C
Storage temperature range	$T_{stg}$	- 55 to + 150	°C



# SK1B5

ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	SK1B5	UNIT
Maximum instantaneous forward voltage	IF=1 A	V <sub>F</sub>	0.85	V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25	I <sub>R</sub>	0.2	mA
	T <sub>A</sub> =125		5	
Typical junction capacitance	4.0 V, 1 MHz	C <sub>J</sub>	30	pF

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	SK1B5	UNIT
Typical thermal resistance	R <sub>θJA</sub> (1)	88	°C/W
	R <sub>θJT</sub> (2)	25	

Notes: (1) Thermal resistance from junction to ambient, 0.197 × 0.197" ( 5.0 × 5.0mm ) copper pads to each terminal  
 (2) Thermal resistance from junction to terminal, 0.197 × 0.197" ( 5.0 × 5.0mm ) copper pads to each terminal

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

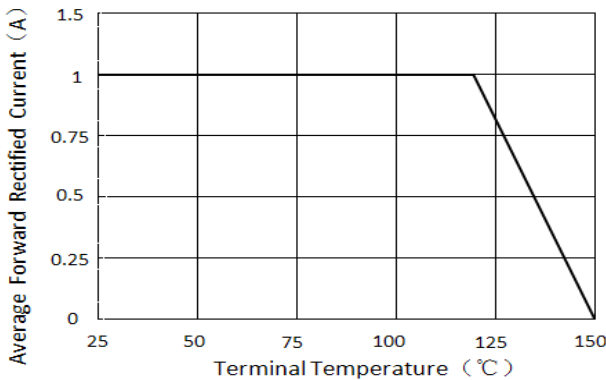


Figure 1. Forward Current Derating Curve

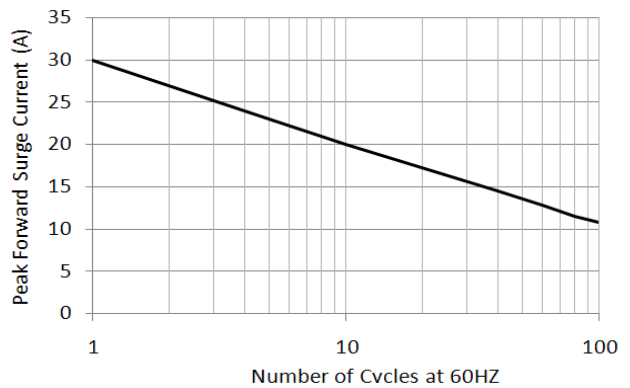


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

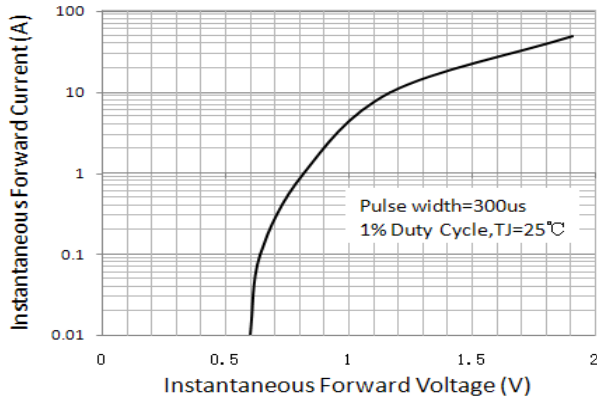


Figure 3. Typical Instantaneous Forward Characteristics

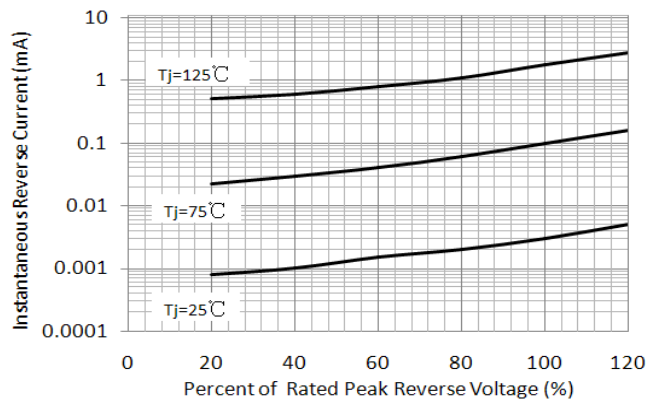


Figure 4. Typical Reverse Characteristics

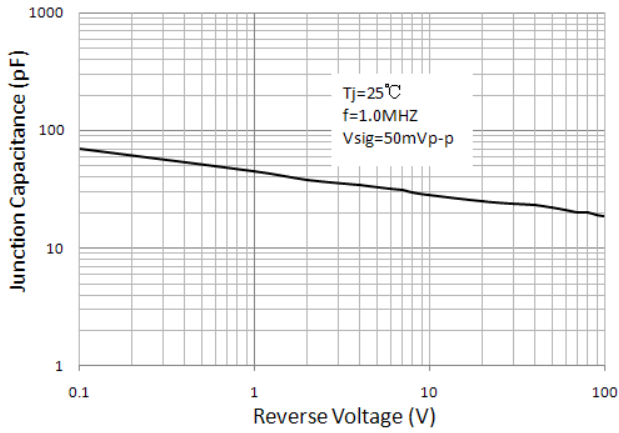


Figure 5. Typical Junction Capacitance

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

