

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-214AB (SMC)

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}	150V
I_{FSM}	120A
V_F	0.85V
$T_J \text{ max.}$	150 °C

MECHANICAL DATA

Case: DO-214AB, 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	SK5B5C	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 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

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	SK5B5C	UNIT
Maximum instantaneous forward voltage	IF=5 A	V _F	0.85	V
Maximum DC reverse current at rated DC blocking voltage	TA=25	I _R	0.2	mA
	TA=125		2	
Typical junction capacitance	4.0 V, 1 MHz	C _J	118	pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	SK5B5C	UNIT	
Maximum thermal resistance	R _{θJA} (1)	80	°C/W	
	R _{θJT} (2)	20		

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_A = 25 °C unless otherwise noted)

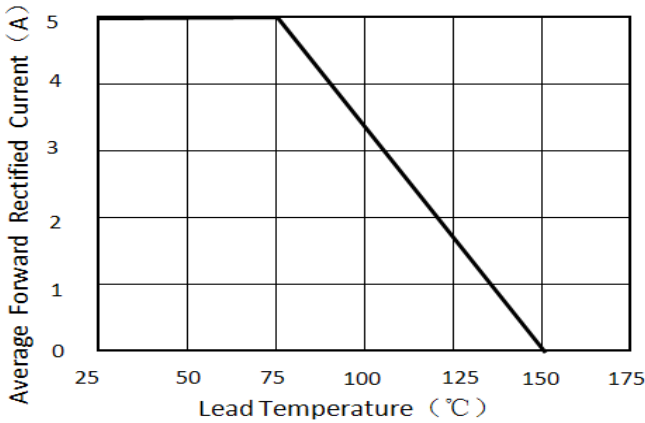


Figure 1. Forward Current Derating Curve

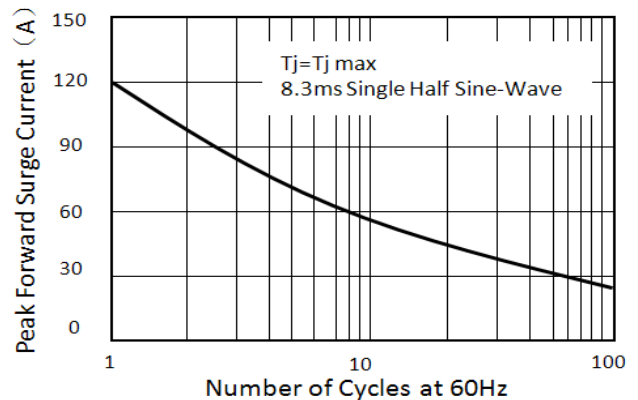


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

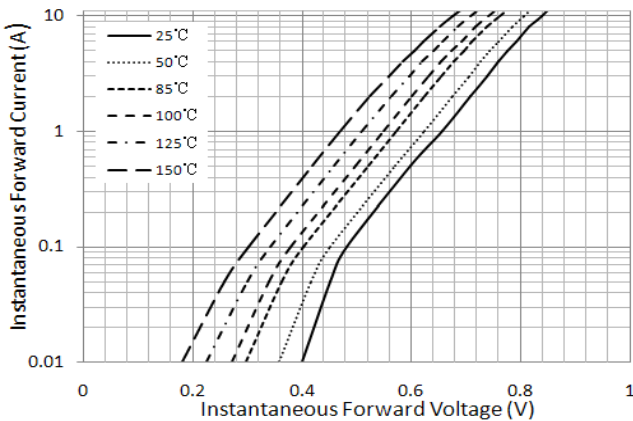


Figure 3. Typical Instantaneous Forward Characteristics

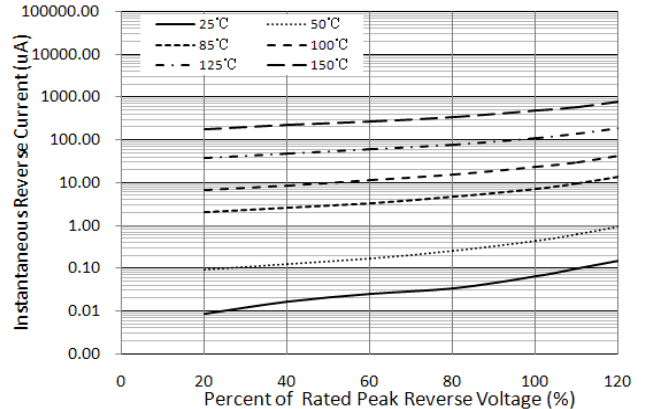


Figure 4. Typical Reverse Characteristics

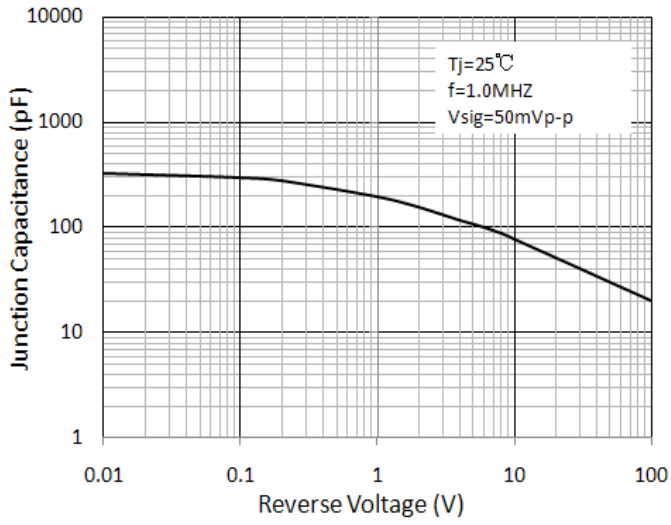


Figure 5. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

