

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 | |
|-------------------------|--------|
| $I_{F(AV)}$ | 3 A |
| V_{RRM} | 200 V |
| I_{FSM} | 80A |
| 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 | SK3C0B | 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) | $I_{F(AV)}$ | 3 | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 80 | A |
| Operating junction temperature range | T_J | - 55 to + 150 | °C |
| Storage temperature range | T_{stg} | - 55 to + 150 | °C |



SK3C0B

| ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted) | | | | |
|--|-----------------|--------|--------|------|
| PARAMETER | TEST CONDITIONS | SYMBOL | SK3C0B | UNIT |
| Maximum instantaneous forward voltage | IF=0.5A | VF | 0.7 | V |
| | IF=1 A | | 0.75 | |
| | IF=2 A | | 0.8 | |
| | IF=3A | | 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 | 68 | pF |

| THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted) | | | | |
|---|----------|--------|------|--|
| PARAMETER | SYMBOL | SK3C0B | UNIT | |
| Typical thermal resistance | RθJA (1) | 90 | °C/W | |
| | RθJT (2) | 30 | | |

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

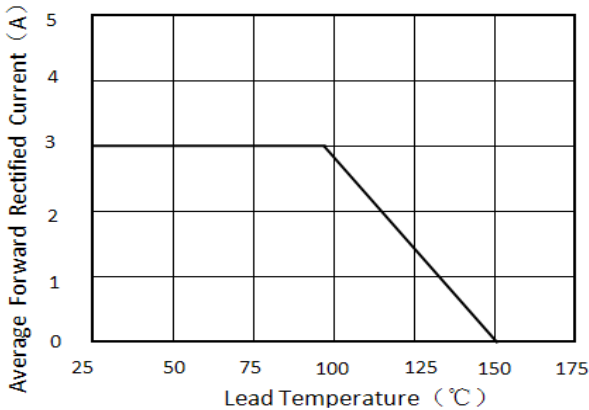


Figure 1. Forward Current Derating Curve

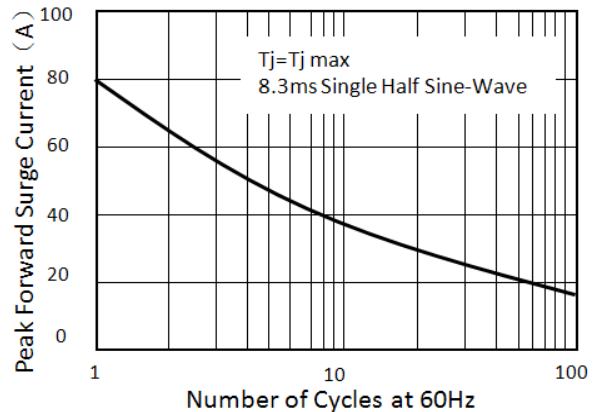


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

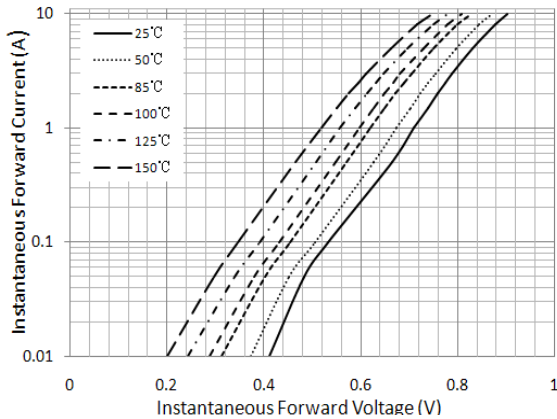


Figure 3. Typical Instantaneous Forward Characteristics

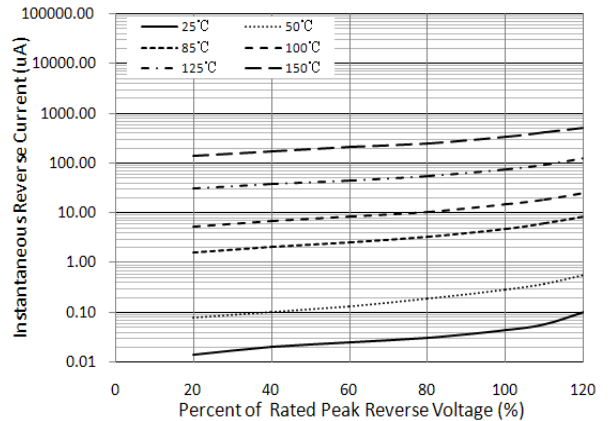


Figure 4. Typical Reverse Characteristics

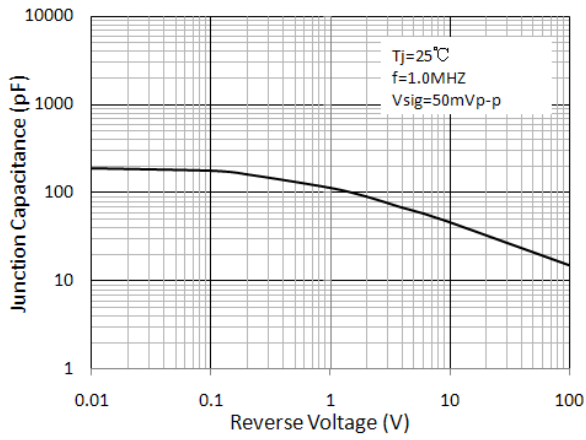


Figure 5. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

