

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 | |
|-------------------------|---------------------|
| $I_{F(AV)}$ | 2 A |
| V_{RRM} | 20 V to 100 V |
| I_{FSM} | 45A |
| V_F | 0.42V, 0.47V, 0.72V |
| $T_J \text{ max.}$ | 125 °C , 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 (T _A = 25 °C unless otherwise noted) | | | | | | | | | | | |
|--|-------------|---------------|-------|-------|-------|---------------|-------|-------|-------|------------|------|
| PARAMETER | SYMBOL | SL22A | SL23A | SL24A | SL25A | SL26A | SL27A | SL28A | SL29A | SL210 A | UNIT |
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | V |
| Maximum average forward rectified current at T _L (See Fig.1) | $I_{F(AV)}$ | 2 | | | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 45 | | | | | | | | | A |
| Operating junction temperature range | T_J | - 55 to + 125 | | | | - 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 | SL22A | SL23A | SL24A | SL25A | SL26A | SL27A | SL28A | SL29A | SL210A | UNIT |
|---|-----------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| Maximum instantaneous forward voltage | IF=2 A | V _F | 0.42 | | 0.47 | | 0.72 | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C | I _R | 0.2 | | 0.15 | | | | | | | mA |
| | TA=100°C | | 10 | | TBD | | | | | | | |
| Typical junction capacitance | 4.0 V, 1 MHz | C _J | 175 | | | | | | | | | pF |

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | SL22A | SL23A | SL24A | SL25A | SL26A | SL27A | SL28A | SL29A | SL210A | UNIT |
|----------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| Maximum thermal resistance | R _{θJA} (1) | TBD | | | | | | | | | °C/W |
| | R _{θJT} (2) | TBD | | | | | | | | | |

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_A = 25 °C unless otherwise noted)

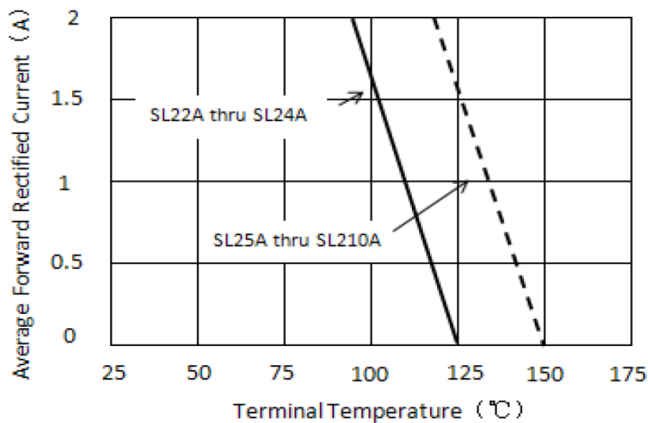


Figure 1. Forward Current Derating Curve

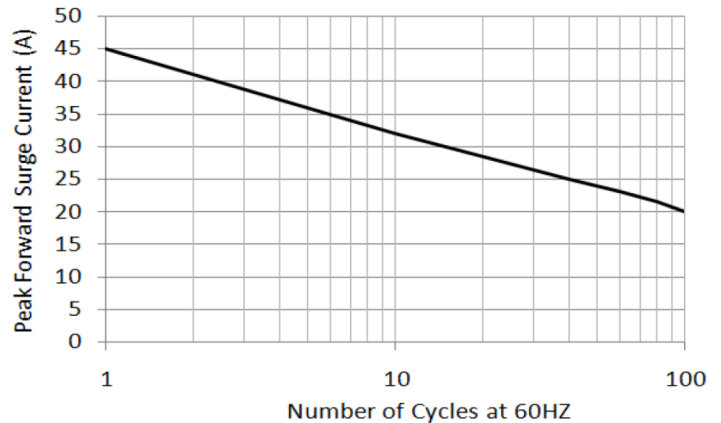


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

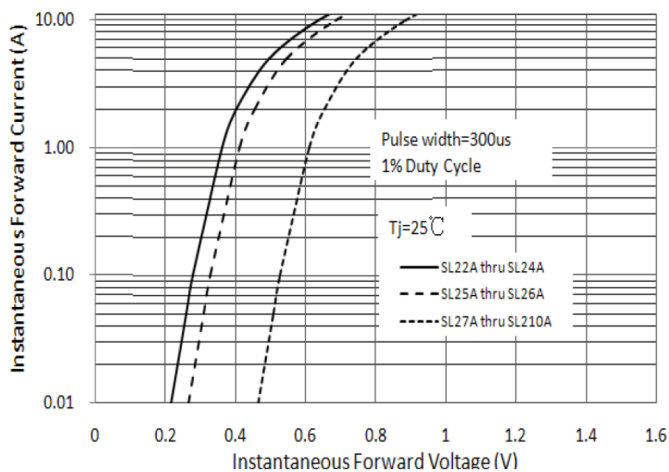


Figure 3. Typical Instantaneous Forward Characteristics

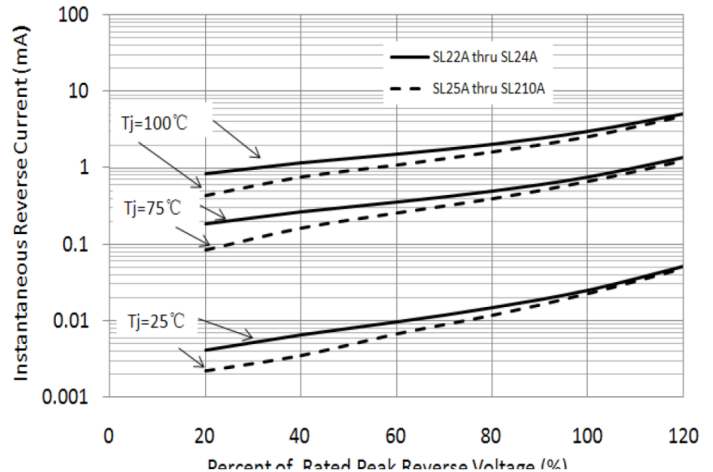


Figure 4. Typical Reverse Characteristics

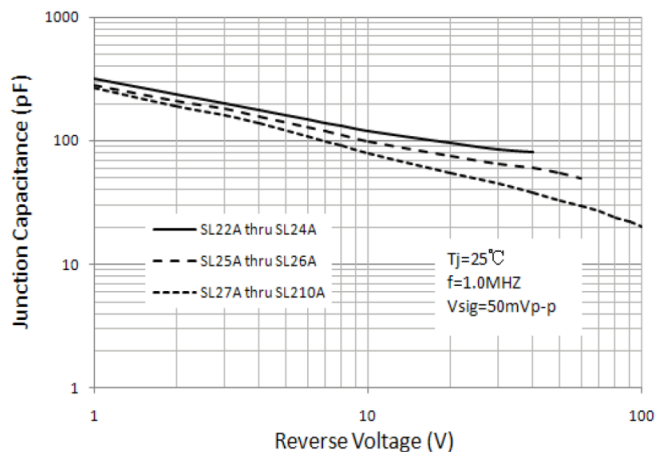


Figure 5. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

