

SB370 - SB3100

3.0A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 80A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Lead Free Finish, RoHS Compliant (Note 3)

Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Tin. Solderable per MIL-STD-202, Method 208 (3)
- Polarity: Cathode Band
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 1.1 grams (approximate)

Maximum Ratings and Electrical Characteristics @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

| Characteri | stic | Symbol | SB370 | SB380 | SB390 | SB3100 | Unit |
|--|---|--|-----------|-------|-------|--------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | | V _{RRM} V _{RWM} V _R | 70 | 80 | 90 | 100 | V |
| RMS Reverse Voltage | | V _{R(RMS)} | 49 | 56 | 63 | 70 | V |
| Average Rectified Output Current (Note 1) | @ T _L = 80°C | Io | | 3 | .0 | | А |
| Non-Repetitive Peak Forward Surge Single Half Sine-Wave Superimposed | | I _{FSM} | | 1 | 00 | | А |
| Forward Voltage | @ I _F = 3.0A | V _{FM} | | 0. | 79 | | V |
| Peak Reverse Current at Rated DC Blocking Voltage | @ T _A = 25°C @ T _A = 100°C | I _{RM} | 0.5 20 | | | mA | |
| Typical Junction Capacitance (Note 2 |) | Cj | | 2 | 50 | | pF |

Thermal Characteristics

| Characteristic | Symbol | SB370 | SB380 | SB390 | SB3100 | Unit |
|--|---------------------|-------------|-------|-------|--------|------|
| Typical Thermal Resistance Junction to Ambient | $R_{	ext{	heta}JA}$ | 20 | | | K/W | |
| Operating and Storage Temperature Range | $T_{J,} T_{STG}$ | -65 to +150 | | | °C | |

Notes: 1. Measured at ambient temperature at a distance of 9.5mm from the case.

3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, See EU Directive Annex Notes 5 and 7.

^{2.} Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.











Ordering Information (Note 4)

| Part Number | Case | Packaging |
|-------------|----------|---------------------------|
| SB370-B | DO-201AD | 500/Bulk |
| SB370-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| SB380-B | DO-201AD | 500/Bulk |
| SB380-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| SB390-B | DO-201AD | 500/Bulk |
| SB390-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| SB3100-B | DO-201AD | 500/Bulk |
| SB3100-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |

Notes: 4. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Package Outline Dimensions



| DO-201AD | | | | |
|----------------------|-------|------|--|--|
| Dim | Min | Max | | |
| Α | 25.40 | | | |
| В | 7.20 | 9.50 | | |
| С | 1.20 | 1.30 | | |
| D | 4.80 | 5.30 | | |
| All Dimensions in mm | | | | |

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