





5.0 Amp. Schottky Barrier Rectifier

| | | | |
|--|---|-------------------------|--|
| DO-201AD (DO-27)  | Voltage 20 V to 200 V | Current 5.0 A | |
| | FEATURE <ul style="list-style-type: none"> • Low power losses, high efficiency • High surge current capability • High frequency operation • Guardring for overvoltage protection • Low forward voltage drop • Solder dip 260 °C, 10s • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC | |   RoHS COMPLIANT  |
| | MECHANICAL DATA <ul style="list-style-type: none"> • Case: DO-201AD (DO-27). Epoxy meets UL 94V-0 flammability rating. • Polarity: Color band denotes cathode end. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. | | |
| | TYPICAL APPLICATIONS Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications. | | |

Maximum Ratings and Electrical Characteristics at 25 °C

| | | SB 520 | SB 540 | SB 560 | SB 5100 | SB 5150 | SB 5200 |
|---------------------|---|-----------------|--------|--------|---------|---------|---------|
| Marking Code | | SB520 | SB540 | SB560 | SB5100 | SB5150 | SB5200 |
| V_{RRM} | Maximum Recurrent Peak Reverse Voltage (V) | 20 | 40 | 60 | 100 | 150 | 200 |
| V_{RMS} | Maximum RMS Voltage (V) | 14 | 28 | 42 | 70 | 105 | 140 |
| V_{DC} | Maximum DC Blocking Voltage (V) | 20 | 40 | 60 | 100 | 150 | 200 |
| $I_{F(AV)}$ | Maximum Average Forward Rectified Current (See graphic) | 5.0 A | | | | | |
| $I_{F(RMS)}$ | Forward RMS Current | 7.0 A | | | | | |
| I_{FSM} | 8,3 ms. Peak Forward Surge Current (Jedec Method) | 120 A | | | | | |
| Cj | Typical Junction Capacitance | 250 pF | 210 pF | 120 pF | | | |
| T_j | Operating Temperature Range | -55 to + 150 °C | | | | | |
| T_{stg} | Store Temperature Range | -55 to + 150 °C | | | | | |

Electrical Characteristics at Tamb = 25 °C

| | | | | | |
|---------------|--|---------|--------|--------|--------|
| V_F | Maximum Instantaneous Forward Voltage $I_F = 5.0 A$ (Note 1) | 0.55 V | 0.67 V | 0.80 V | 0.90 V |
| I_R | Maximum DC Reverse Current $T_a = 25 °C$ | 0.5 mA | | 0.1 mA | |
| | at Rated DC Blocking Voltage $T_a = 125 °C$ (Note 3) | 20 mA | 15 mA | 10 mA | 5 mA |
| $R_{th(j-a)}$ | Typical Thermal Resistance (Note 2) | 40 °C/W | | | |
| $R_{th(j-c)}$ | | 25 °C/W | | | |

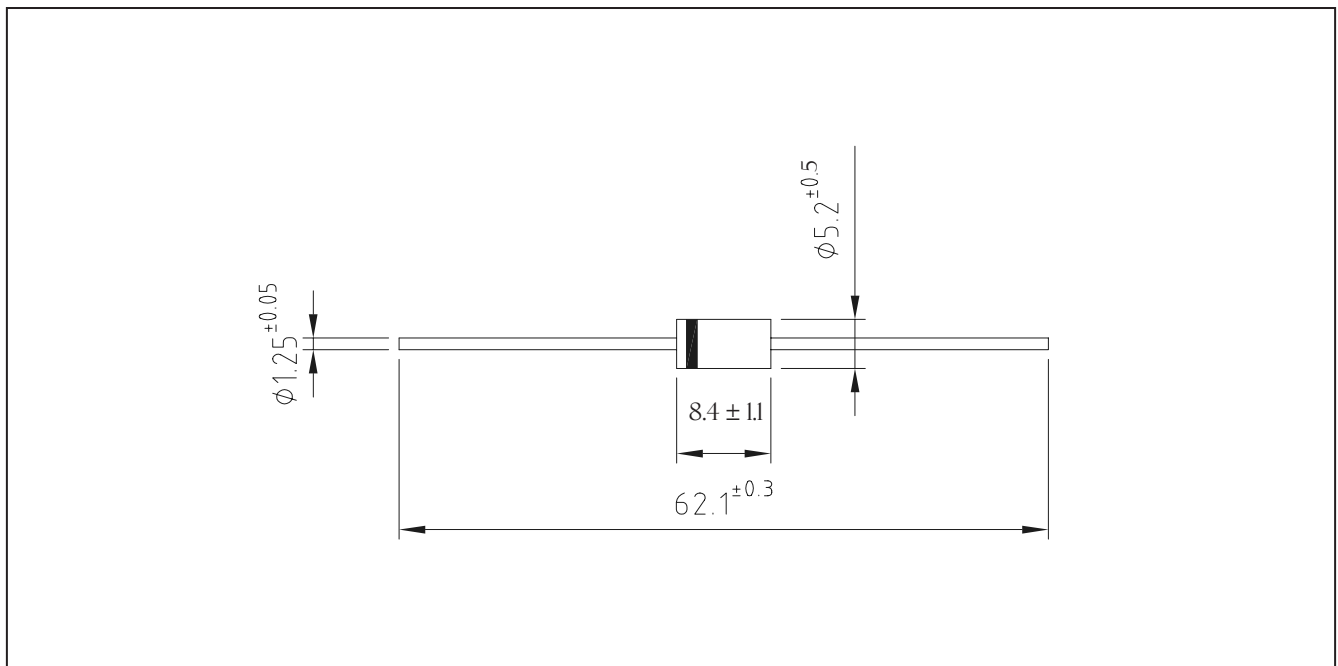
Notes:
 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
 2. Thermal Resistance from Junction to Case per diode
 3. Pulse test: Pulse width ≤ 40ms

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Ordering information

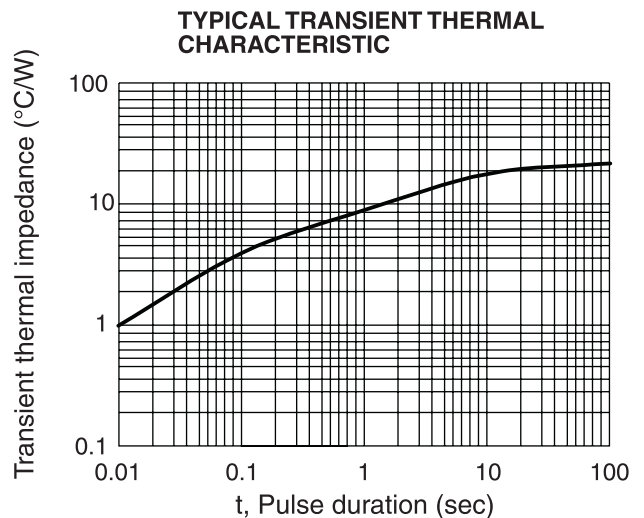
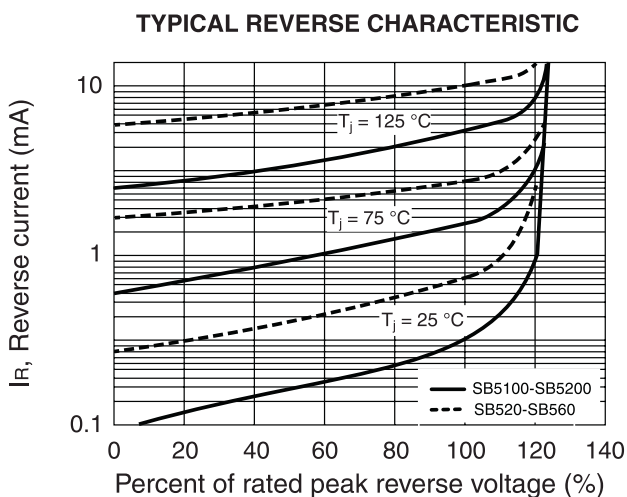
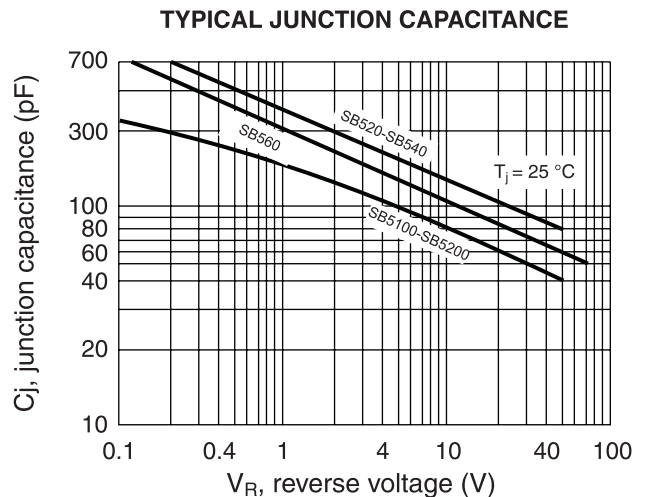
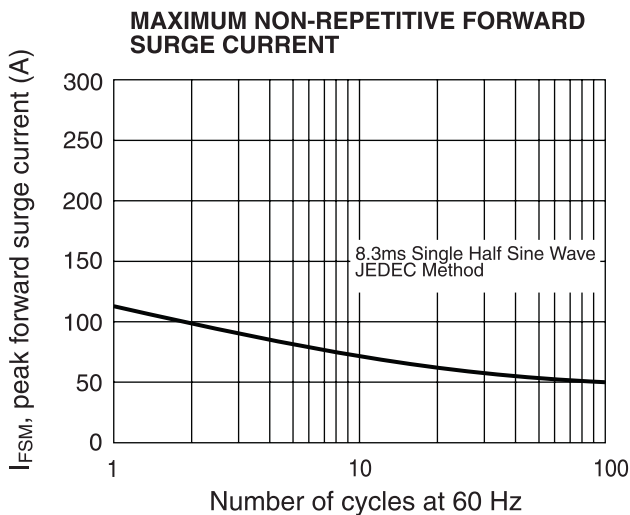
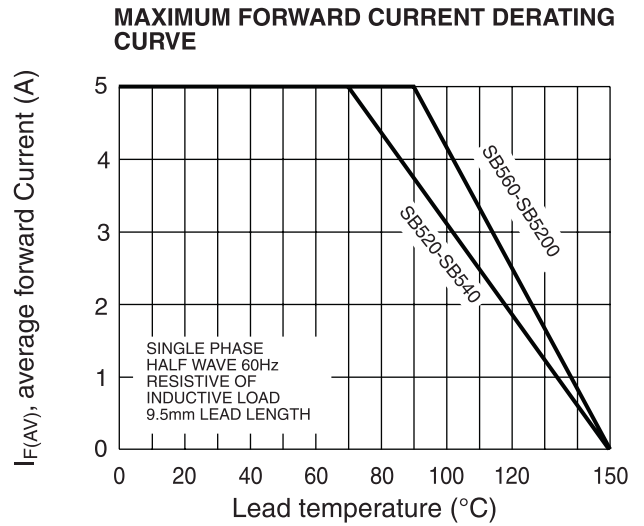
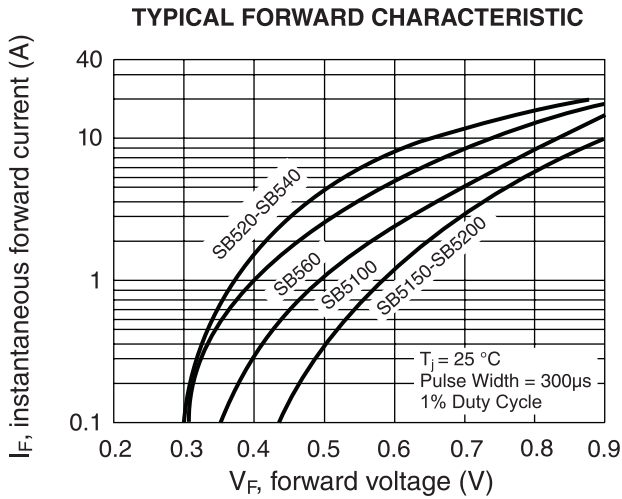
| PREFERRED P/N | PACKAGE CODE | DELIVERY MODE | BASE QUANTITY | UNIT WEIGHT (g) |
|---------------|--------------|----------------------------|---------------|-----------------|
| SB560 AMP | AMP | AMMO BOX | 800 | 1.100 |
| SB560 TR | TR | 13" diameter tape and reel | 1,200 | 1.100 |
| SB560 HF AMP | AMP | AMMO BOX | 800 | 1.100 |
| SB560 HF TR | TR | 13" diameter tape and reel | 1,200 | 1.100 |

Package Outline Dimensions: (mm) DO-201AD (DO-27)



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Rating and Characteristics (Ta 25 °C unless otherwise noted)



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Revision History

| DATE | REVISION | DESCRIPTION OF CHANGES |
|-------------|----------|--|
| 15-Jan-2012 | 0 | Original Data Sheet |
| 07-Feb-2014 | 1 | Modified: Package Outline dimensions & Tj, Tstg, IR, Rth (j-a)/Rth (j-c) |
| 19-Feb-2014 | 2 | Modified: IF (RMS) included |
| 19-Dec-2014 | 3 | Modified: Electrical Characteristics (VF, IR) at temperature |
| 02-Oct-2018 | 4 | Modify Package Outline dimensions |

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