



SB520 thru SB560

Schottky Barrier Rectifiers
Reverse Voltage 20 to 60 Volts Forward Current 5.0 Amperes

Features

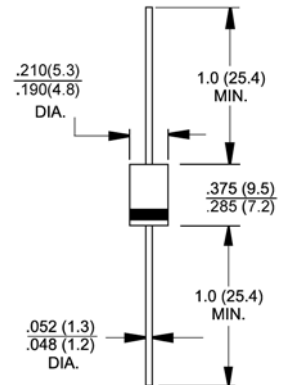
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



DO-201AD

Mechanical Data

- ◆ **Case:** JEDEC DO-201AD molded plastic body
- ◆ **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed:
250°C/10 seconds 0.375" (9.5mm) lead length,
5lbs (2.3kg) tension
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any
- ◆ **Weight:** 0.041 ounce, 1.15 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbols | SB520 | SB530 | SB540 | SB550 | SB560 | Units |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|-------|-------|-------------|-------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (See Fig.1) | $I_{F(AV)}$ | 5.0 | | | | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at rated T_J | I_{FSM} | 150.0 | | | | | Amps |
| Max. instantaneous forward voltage at 5.0A (Note 1) | V_F | 0.55 | | | 0.67 | | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage (Note 1) | I_R | 0.5 | | | | | mA |
| | | 50 | | | 25 | | |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ $R_{\theta JL}$ | 25 8 | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | -55 to +150 | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | $^\circ\text{C}$ |

- Notes:**
1. Pulse test: 300us pulse width, 1% duty cycle
 2. Thermal resistance junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

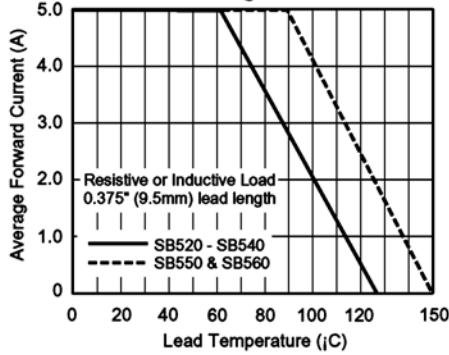


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

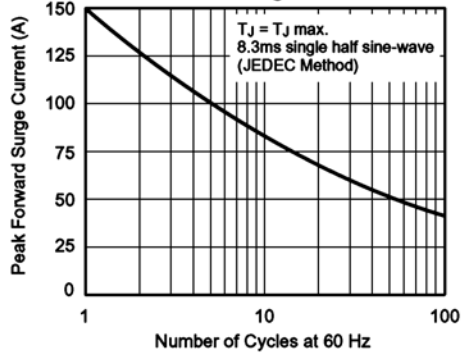


Fig. 3 - Typical Instantaneous Forward Characteristics

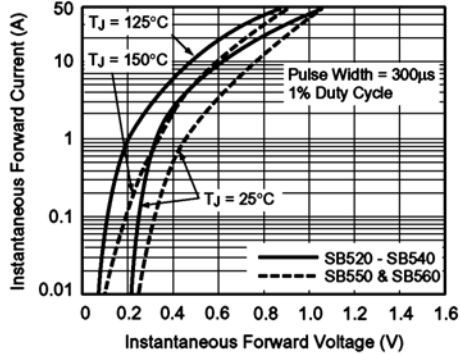


Fig. 4 - Typical Reverse Characteristics

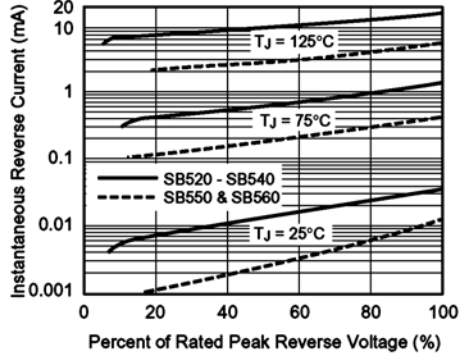


Fig. 5 - Typical Junction Capacitance

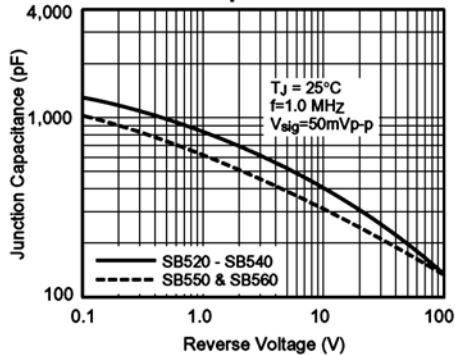


Fig. 6 - Typical Transient Thermal Impedance

