

SB520 thru SB560

5.0 Amps. Schottky Barrier Rectifiers
Voltage Range 20 to 60 Volts Forward Current 5.0 Amperes

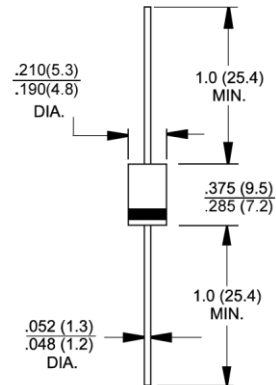
Features

- ◆ 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 ⁽¹⁾	I_R	0.5					mA
$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$		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	-65 to +125			-65 to +150		$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 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

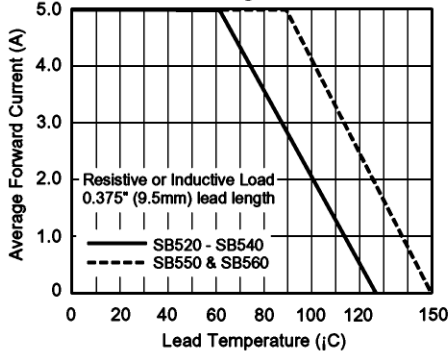


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

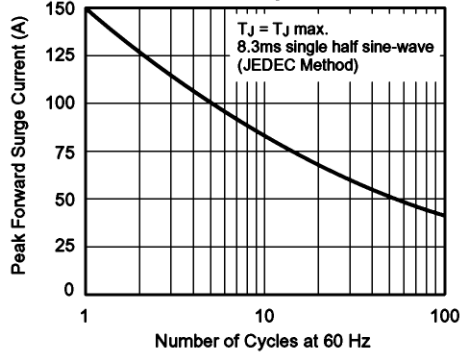


Fig. 3 - Typical Instantaneous Forward Characteristics

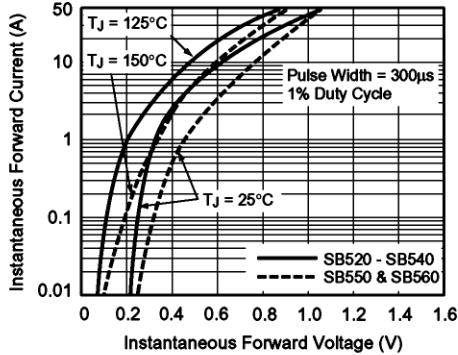


Fig. 4 - Typical Reverse Characteristics

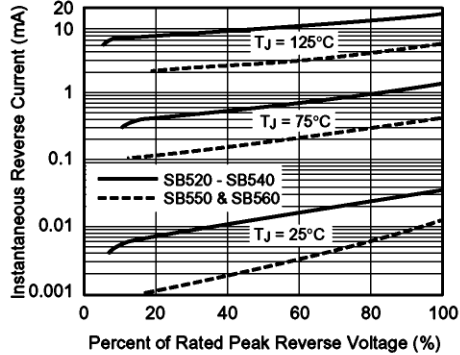


Fig. 5 - Typical Junction Capacitance

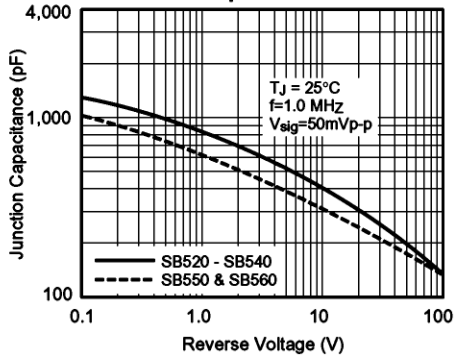


Fig. 6 - Typical Transient Thermal Impedance

