SB520 thru SB560

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

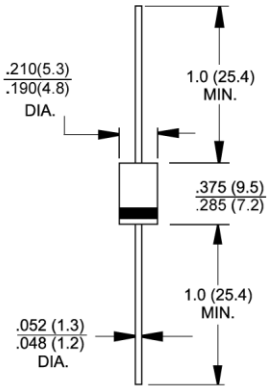
Features

- 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°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_L	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) T_A= 25°C	I_R	0.5					mA
T_A=100°C		50			25		
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	25 8					°C/W
Operating junction temperature range	T_J	-65 to +125			-65 to +150		°C
Storage temperature range	T_{STG}	-65 to +150					°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°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

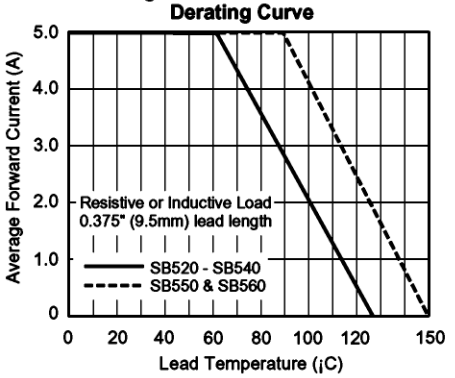


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

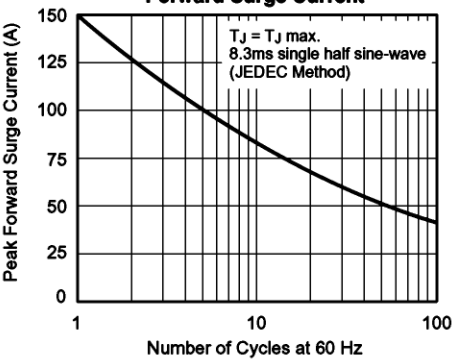


Fig. 3 - Typical Instantaneous Forward Characteristics

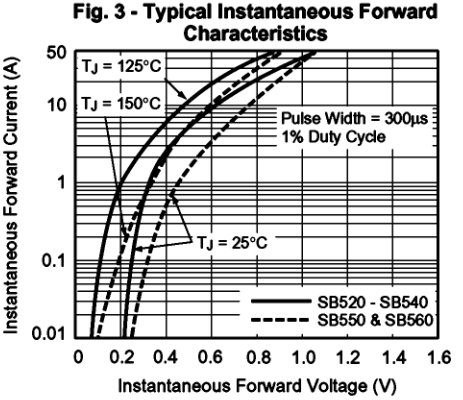


Fig. 4 - Typical Reverse Characteristics

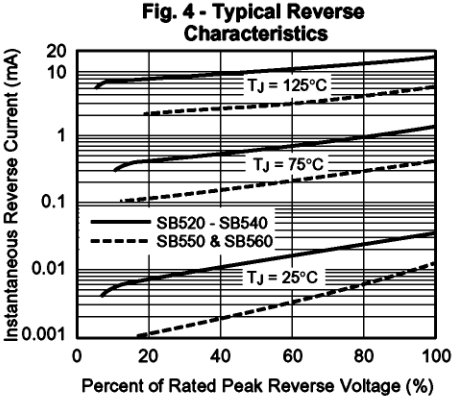


Fig. 5 - Typical Junction Capacitance

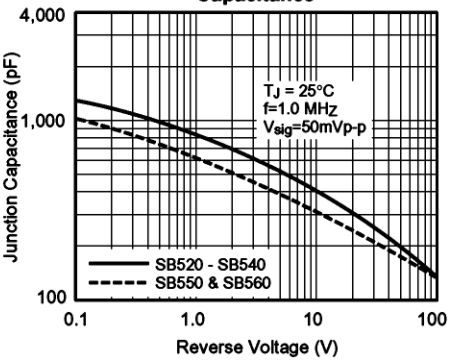
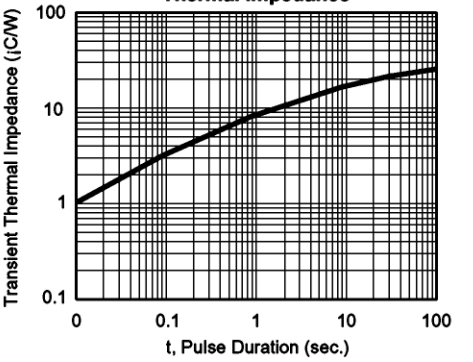



Fig. 6 - Typical Transient Thermal Impedance