



# SB520 thru SB560

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

## Features

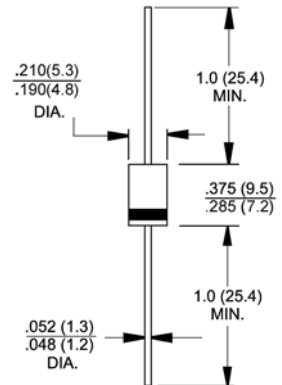
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



**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)

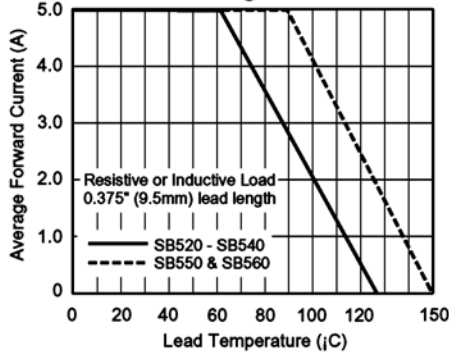
Parameter	Symbols	SB520	SB530	SB540	SB550	SB560	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (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		25			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

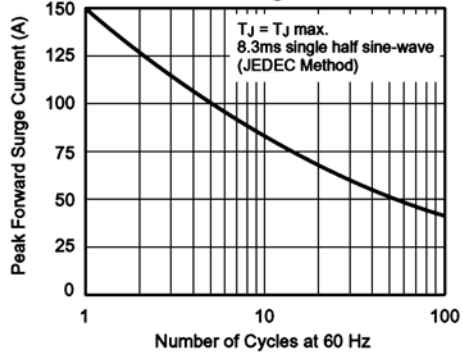
# RATINGS AND CHARACTERISTIC CURVES

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

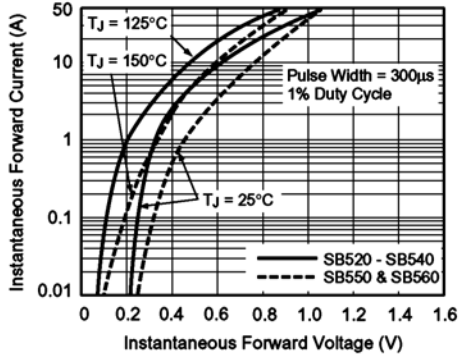
**Fig. 1 - Forward Current Derating Curve**



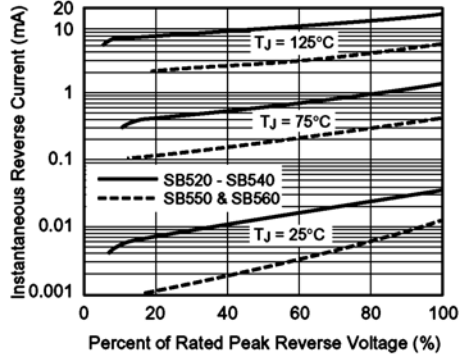
**Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current**



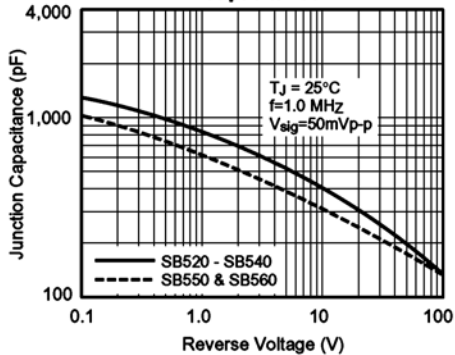
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**

