



# SB520 thru SB5D0

Schottky Barrier Rectifiers  
Reverse Voltage 20 to 200 Volts    Forward Current 5.0 Amperes

## Features

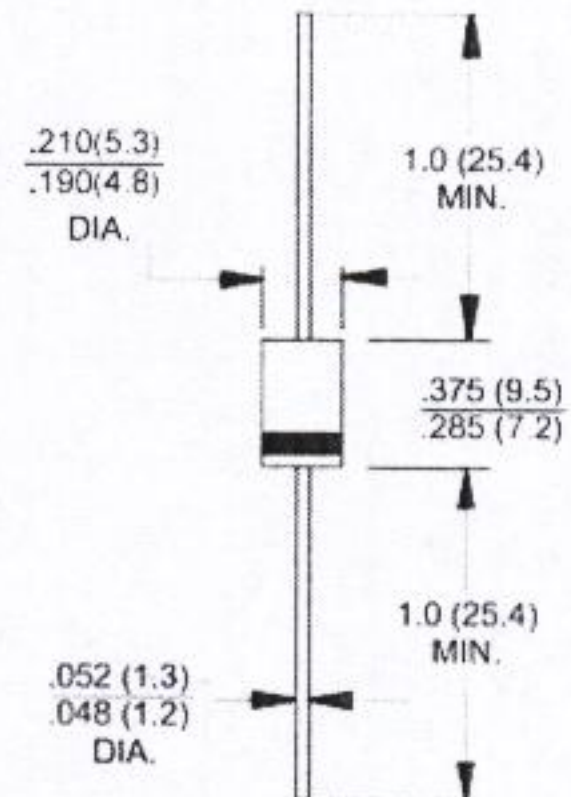
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



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



## Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	SB520	SB530	SB540	SB550	SB560	SB590	SB5B0	SB5D0	Units	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	90	100	200	Volts	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	63	70	140	Volts	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	90	100	200	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 $T_A$	$I_{FSM}$	200.0								150.0	Amps
Max. instantaneous forward voltage at 5.0A (Note 1)	$V_f$	0.55			0.67		0.85			Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	$I_R$	0.5					0.2		0.01		mA
		50		25		10		10			
Typical thermal resistance (Note 2)	$R_{\theta JH}$ $R_{\theta JL}$	35					10		2		$^\circ\text{C/W}$
		2		2		2		2			
Operating junction temperature range	$T_J$	-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

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