

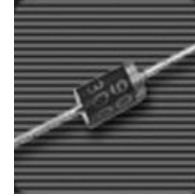


# SB520 thru SB560

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

## Features

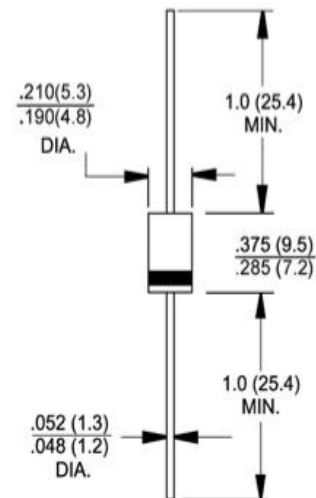
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



**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)

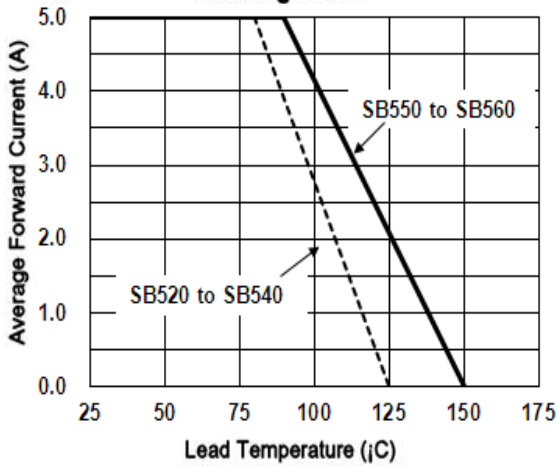
PARAMETER	SYMBOL	SB520	SB530	SB540	SB550	SB560	UNIT
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	V
Maximum RMS voltage	VRMS	14	21	28	35	42	V
Maximum DC blocking voltage	VDC	20	30	40	50	60	V
Maximum average forward rectified current at $T_L$ (see Fig.1)	IF(AV)	5					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	150					A
Maximum forward voltage at 5.0A DC (Note1)	VF	0.50			0.67		V
Maximum DC reverse current at rated DC blocking voltage	$T_J=25^\circ\text{C}$	0.15					mA
	$T_J=125^\circ\text{C}$	15					
Typical thermal resistance junction to ambient(Note1)	$R_{\theta JA}$	43				$^\circ\text{C/W}$	
Typical thermal resistance junction to lead(Note1)	$R_{\theta JL}$	18				$^\circ\text{C/W}$	
Typical thermal resistance junction to case(Note1)	$R_{\theta JC}$	22				$^\circ\text{C/W}$	
Typical junction capacitance. Measured at 1.0MHz and applied reverse voltage of 4.0V DC	$C_j$	250					pF
Operating junction temperature range	$T_J$	- 55 to + 125			- 55 to + 150		$^\circ\text{C}$
Storage temperature range	TSTG	- 55 to + 150					$^\circ\text{C}$

Note: 1. Thermal Resistance at .375"(9.5mm)Lead Length, PC Board Mounted.

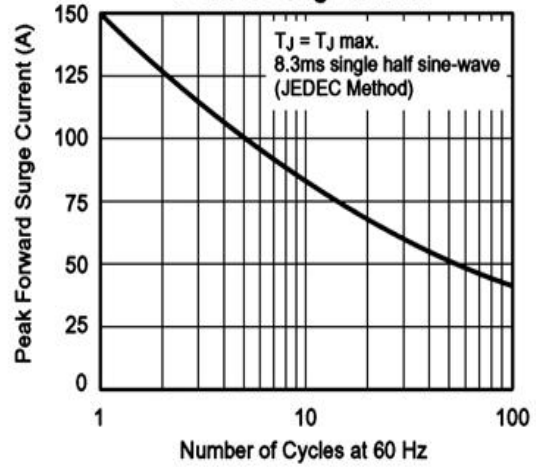
# RATINGS AND CHARACTERISTIC CURVES

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

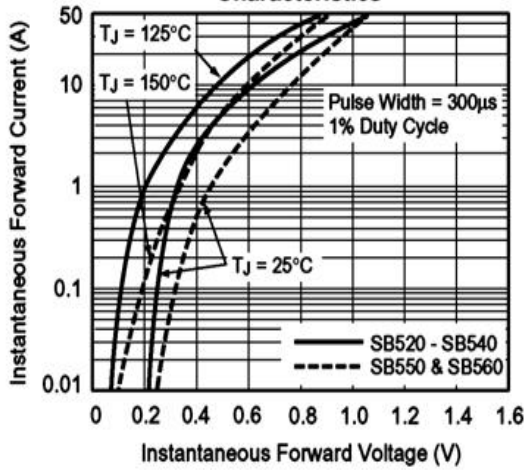
**Fig. 1 - Forward Current Derating Curve**



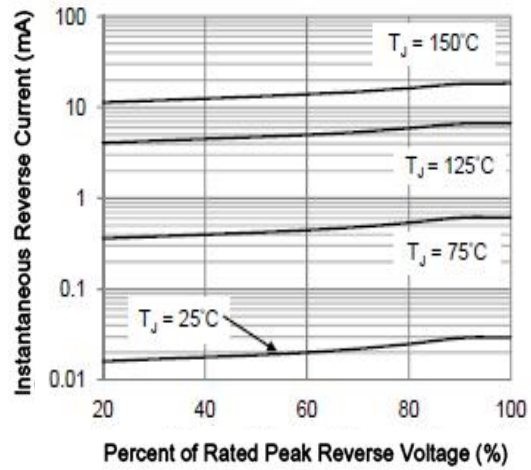
**Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current**



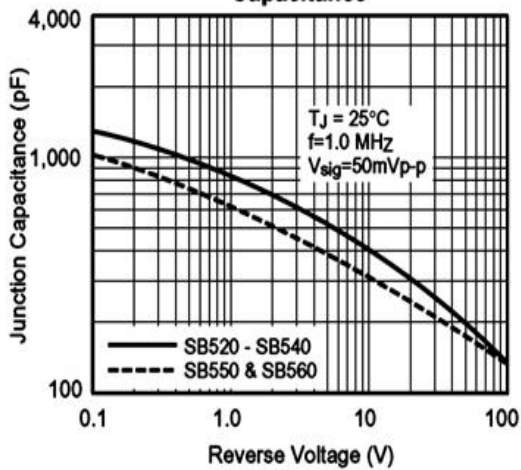
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



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

