

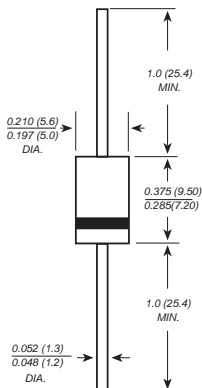


# SB520 THRU SB5200

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts    Forward Current - 5.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

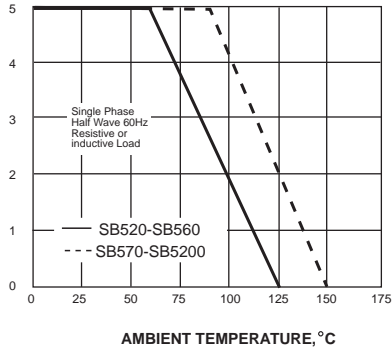
MDD Catalog Number	SYMBOLS	SB 520	SB 530	SB 540	SB 550	SB 560	SB 570	SB 580	SB 590	SB 5B0	SB 5150	SB 5200	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	150	200	VOLTS	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	105	140	VOLTS	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	150	200	VOLTS	
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig. 1)	$I_{(AV)}$	5.0											Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0											Amps	
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.55		0.70		0.85		0.95					Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	0.5								0.2		2.0		mA
Typical junction capacitance (NOTE 1)	$C_J$	500				400								pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	25.0											°C/W	
Operating junction temperature range	$T_J$	-65 to +125					-65 to +150							°C
Storage temperature range	$T_{STG}$	-65 to +150											°C	

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES SB520 THRU SB5200

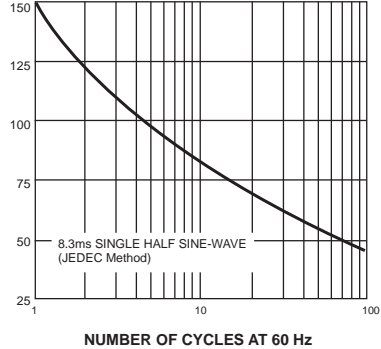
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



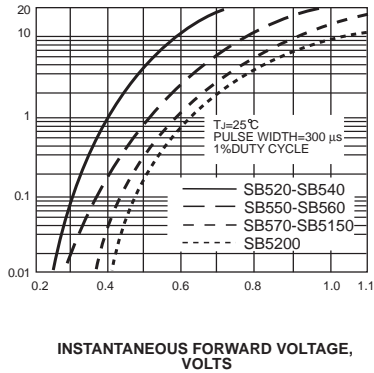
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



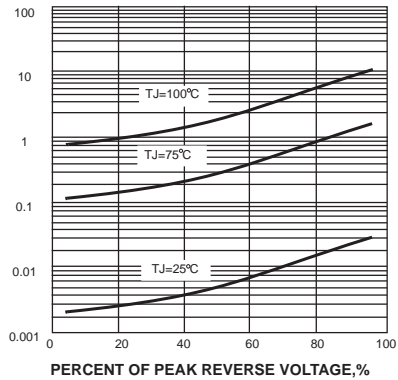
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



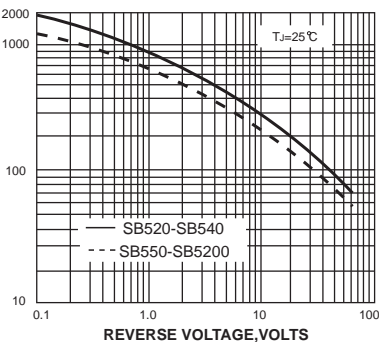
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

