

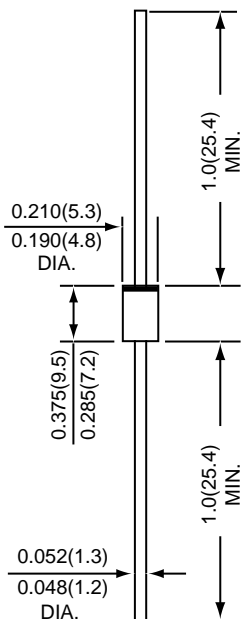


# SB520 THRU SB560 SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 60 Volts

Forward Current - 5.0 Amperes

**DO-201AD**



\*Dimensions in inches and (millimeters)



## FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- \* Metal to silicon rectifier, majority carrier conduction
- \* Guardring for overvoltage protection
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* High surge capability
- \* For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering guaranteed : 260°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, 1.12 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	SYMBOLS	SB520	SB540	SB550	SB560	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	40	50	60	Volts
Maximum RMS voltage	VRMS	14	28	35	42	Volts
Maximum DC blocking voltage	VDC	20	40	50	60	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)	IFSM	150				Amps
Maximum instantaneous forward voltage at 5.0 A (NOTE 1)	VF	0.55		0.70		Volts
Maximum instantaneous reverse current at rated DC blocking voltage TA=25°C TA=100°C	IR	2.0 50				mA
Typical thermal resistance ( NOTE 2 )	RθJA RθJL	25 8				°C / W
Operating and Storage temperature range	TJ,TSTG	-65 to +150				°C

NOTES : (1) Pulse test : 300 us 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 SB520 THRU SB560

FIG.1 - FORWARD CURRENT DERATING CURVE

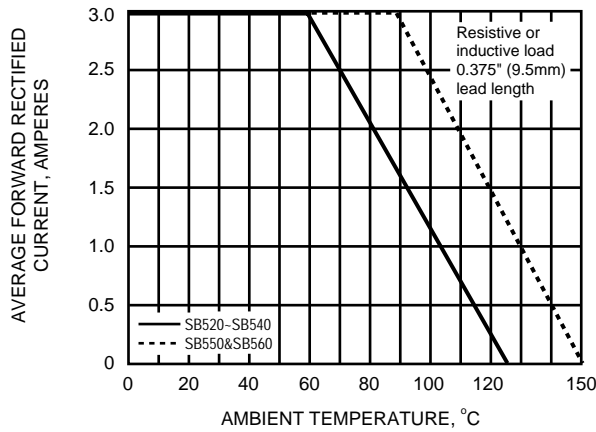


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

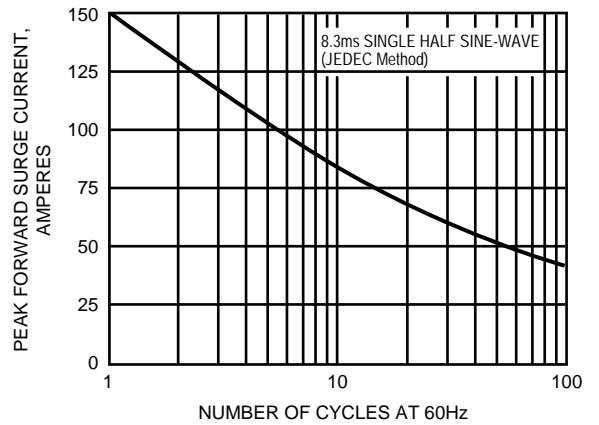


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

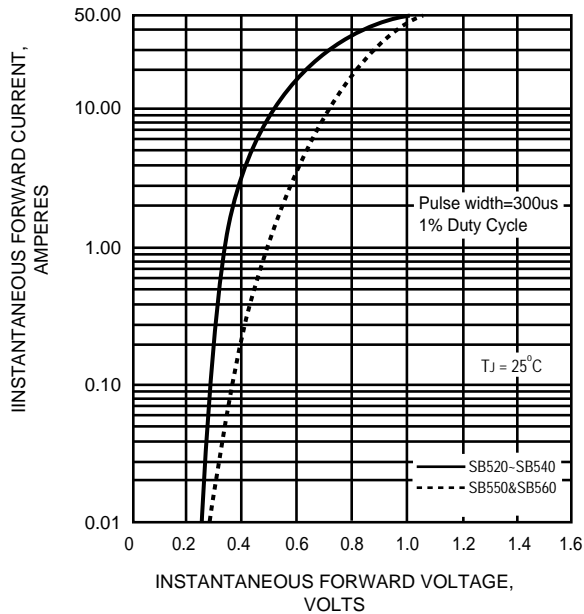


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

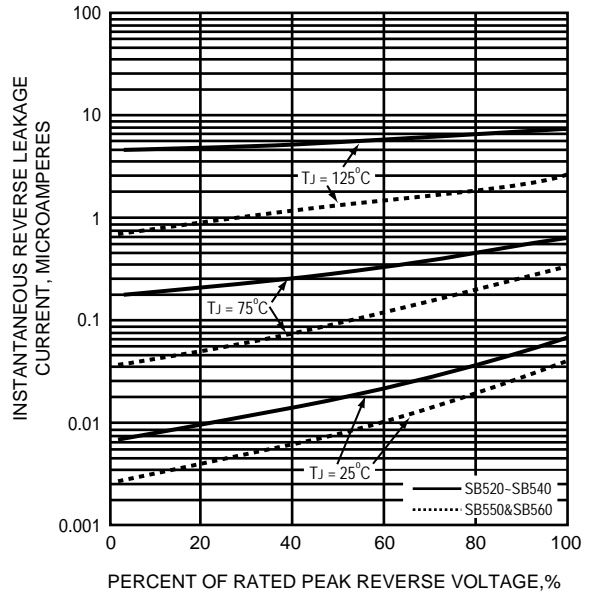


FIG.5 - TYPICAL JUNCTION CAPACITANCE

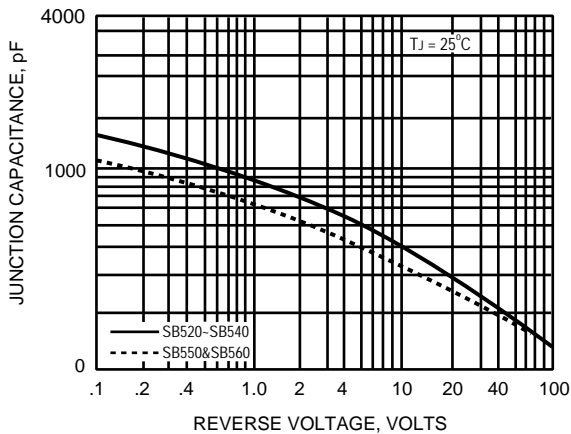


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

