



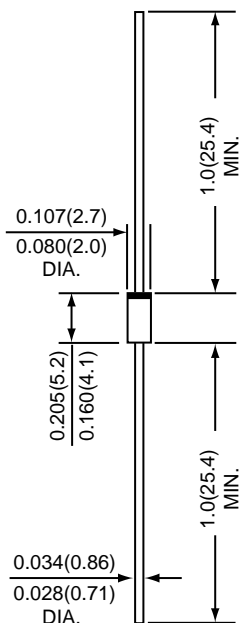
# SB120 THRU SB190

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 90 Volts

Forward Current - 1.0 Ampere

DO-204AL



\*Dimensions in inches and (millimeters)

### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- \* Metal silicon junction, 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-204AL Molded plastic body  
**Terminals :** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity :** Color band denotes cathode end  
**Mounting Position :** Any  
**Weight :** 0.012 ounce, 0.3 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>	SYMBOLS	SB120	SB130	SB140	SB150	SB160	SB180	SB190	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	80	90	Volts
Maximum RMS voltage	VRMS	14	21	28	35	42	56	63	Volts
Maximum DC blocking voltage	VDC	20	30	40	50	60	80	90	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG.1)	I(AV)	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	40							Amps
Maximum instantaneous forward voltage at 1.0 A	VF	0.55			0.70		0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage TA=25°C TA=100°C	IR	1.0 10.0							mA
Typical thermal resistance ( NOTE 2 )	R θJA R θJL	50 15							°C / W
Operating junction temperature range	TJ	-65 to +125			-65 to +150				°C
Storage temperature range	TSTG	-65 to +150							°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
(2) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

# RATINGS AND CHARACTERISTIC CURVES SB120 THRU SB190

FIG.1 - FORWARD CURRENT DERATING CURVE

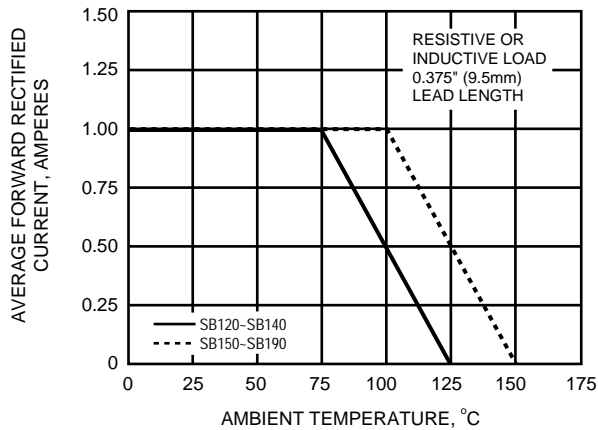


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

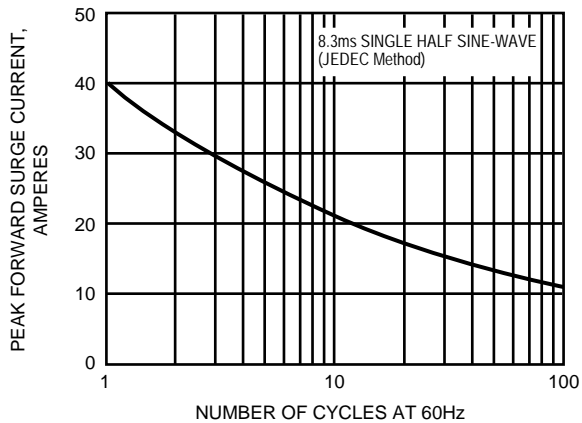


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

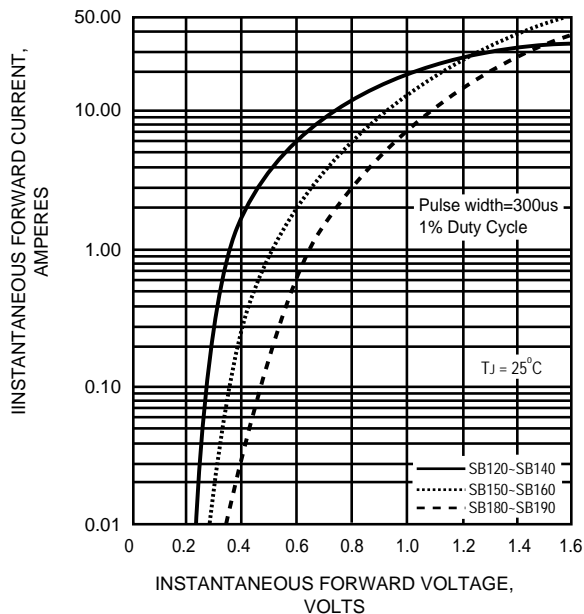


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

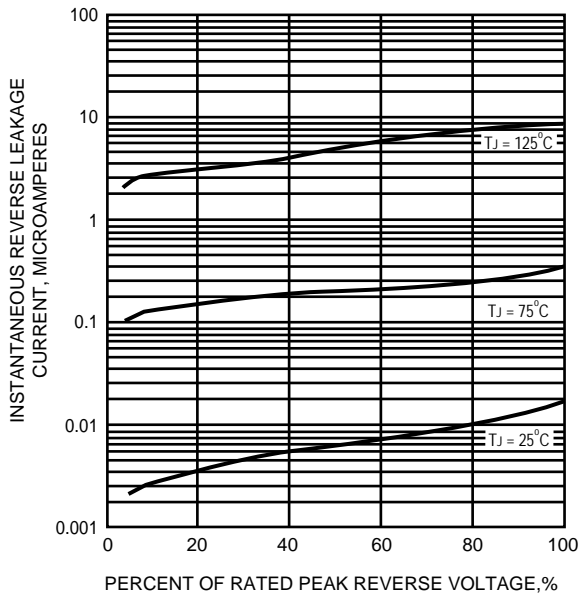


FIG.5 - TYPICAL JUNCTION CAPACITANCE

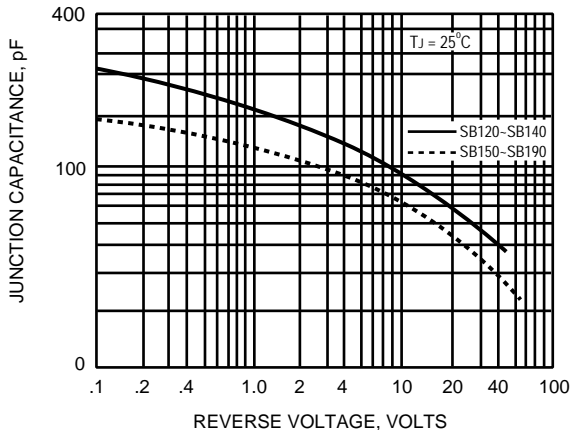


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

