

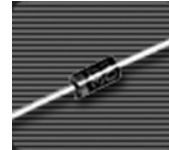


# SB170 thru SB1B0

Schottky Barrier Rectifiers  
Reverse Voltage 70 to 100 Volts    Forward Current 1.0 Ampere

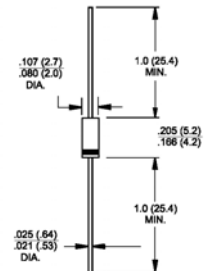
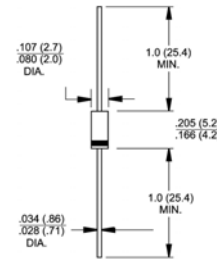
## Features

- ◆ Metal-Semiconductor junction with guarding
- ◆ Epitaxial construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



DO-204AL (DO-41)

A-405



Dimensions in inches and (millimeters)    Dimensions in inches and (millimeters)

**Note:** Lead diameter is 0.025(0.64)/0.021(0.53) for suffix "S" part numbers

## Mechanical Data

- ◆ Case : JEDEC DO-204AL(DO-41)/A-405 molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : DO-41 - 0.012 ounce, 0.33 gram  
A-405 - 0.008 ounce, 0.22 gram
- ◆ Mounting position : Any

## 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, derate current by 20%

Parameter	Symbols	SB170	SB180	SB190	SB1B0	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	70	80	90	100	Volts
Maximum RMS voltage	$V_{RMS}$	49	56	63	70	Volts
Maximum DC blocking voltage	$V_{DC}$	70	80	90	100	Volts
Maximum average forward rectified current .375" (9.5mm) lead lengths @ $T_J=100^\circ\text{C}$	$I_{AV}$	1.0				Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0				Amps
Maximum forward voltage at $I_F=1.0\text{A}, T_J=25^\circ\text{C}$ $I_F=1.0\text{A}, T_J=100^\circ\text{C}$	$V_F$	0.79 0.69				Volts
Maximum DC reverse current @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	$I_R$	0.5 5.0				mA
Typical junction capacitance (Note 1)	$C_J$	30				pF
Typical thermal resistance (Note 2)	$R_{\theta JL}$	35				$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +125				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150				$^\circ\text{C}$

- Notes:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  2. Thermal Resistance Junction to Lead.

# RATINGS AND CHARACTERISTIC CURVES

