



SB170S thru SB1B0S

1.0 Amp. Schottky Barrier Rectifiers
Voltage Range 70 to 100 Volts Forward Current 1.0 Ampere

Features

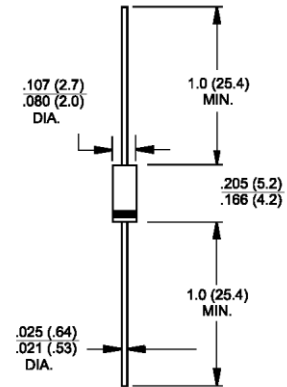
- ◆ Metal-Semiconductor junction with guardring
- ◆ Epitaxial construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



A-405

Mechanical Data

- ◆ Case : A-405 molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : 0.008 ounce, 0.22 gram
- ◆ Mounting position : Any



Dimensions in inches and (millimeters)

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	SB170S	SB180S	SB190S	SB1B0S	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 at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	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

