



SYNSEMI SEMICONDUCTOR

SB120 thru SB160

1.0 Amp. Schottky Barrier Rectifiers
Voltage Range 20 to 60 Volts Forward Current 1.0 Ampere

Features

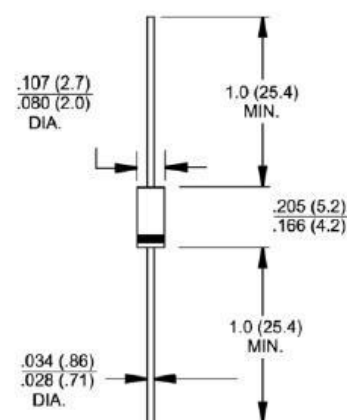
- ◆ Metal-Semiconductor junction with guardring
- ◆ Epitaxial construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



DO-204AL (DO-41)

Mechanical Data

- ◆ Case : JEDEC DO-204AL(DO-41) molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : 0.012 ounce, 0.33 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	SB120	SB130	SB140	SB150	SB160	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	Volts
Maximum average forward rectified current .375" (9.5mm) lead lengths @ $T_L=100^{\circ}\text{C}$	$I_{(AV)}$	1.0					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40.0					Amps
Maximum forward voltage at 1.0A DC	V_F	0.50			0.70		Volts
Maximum DC reverse current @ $T_J=25^{\circ}\text{C}$ at rated DC blocking voltage @ $T_J=100^{\circ}\text{C}$	I_R	0.5 10.0					mA
Typical junction capacitance (Note 1)	C_J	110			80		pF
Typical thermal resistance (Note 2)	$R_{\theta JL}$	15					$^{\circ}\text{C/W}$
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.

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RATINGS AND CHARACTERISTIC CURVES

