



# SB170 thru SB1B0

Schottky Barrier Rectifiers

Reverse Voltage 70V to 100V Forward Current 1.0A Amperes

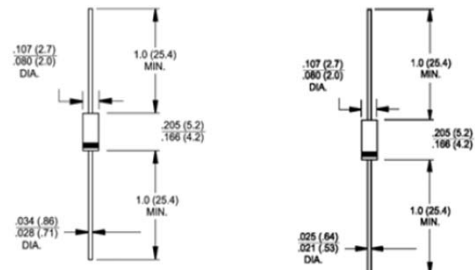
## Features

- 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)

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 end
- 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	SYMBOL	SB170	SB180	SB190	SB1B0	UNIT
Maximum repetitive peak reverse voltage	VRRM	70	80	90	100	V
Maximum RMS voltage	VRMS	49	56	63	70	V
Maximum DC blocking voltage	VDC	70	80	90	100	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at T <sub>L</sub> =100°C	IF(AV)	1.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	30				A
Maximum forward voltage at 1A DC T <sub>A</sub> =25°C T <sub>A</sub> =100°C	VF	0.79 0.69				V
Maximum DC reverse current at rated DC blocking voltage <sup>(1)</sup>	IR	T <sub>J</sub> =25°C				mA
		T <sub>J</sub> =125°C				
Typical junction capacitance (Note 1)	C <sub>j</sub>	30				pF
Typical thermal resistance(Note 2)	R <sub>θJA</sub>	76				°C/W
	R <sub>θJC</sub>	41				
	R <sub>θJL</sub>	32				
Operating junction temperature range	T <sub>J</sub>	- 55 to + 150				°C
storage temperature range	T <sub>STG</sub>	- 55 to + 150				°C

Notes: 1. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC

2. Thermal Resistance at .375(9.5mm) Lead Length, PC Board Mounted



GOOD-ARK

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## RATINGS AND CHARACTERISTICS CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

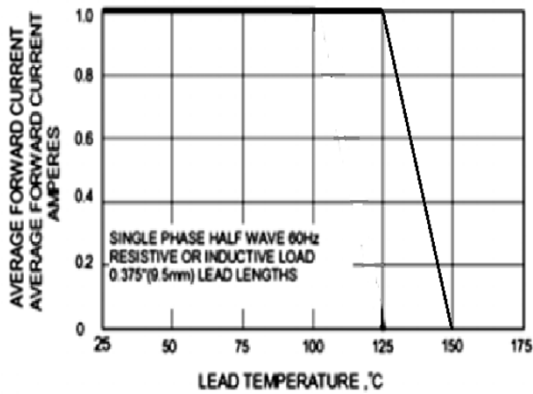


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

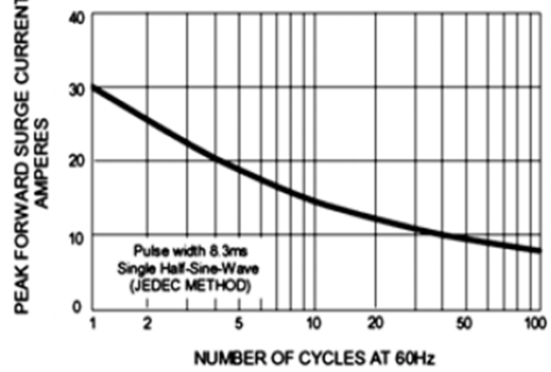


FIG.3 - TYPICAL JUNCTION CAPACITANCE

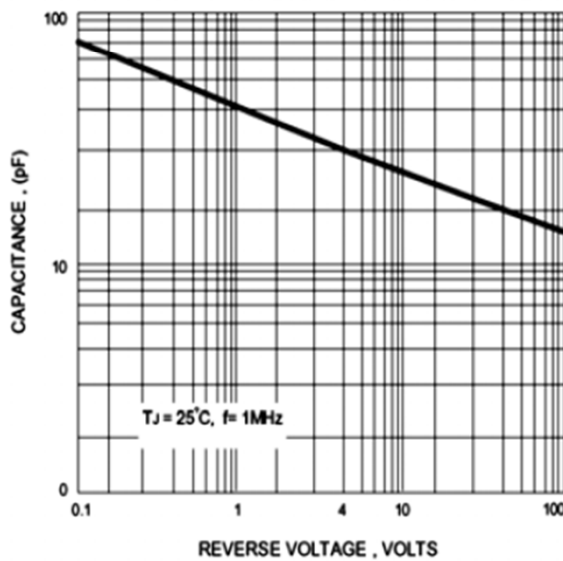


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

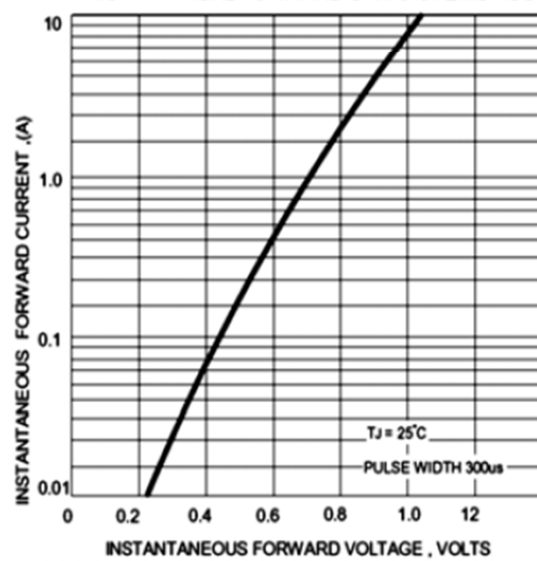


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

