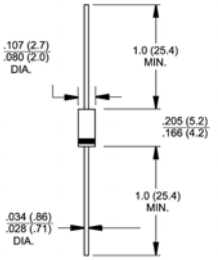
SB120 thru SB160

Schottky Barrier Rectifiers
Reverse Voltage 20 to 60 Volts Forward Current 1.0 Ampere

Features

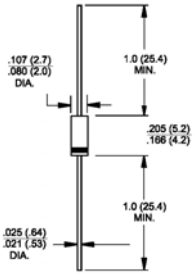
- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

A-405



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	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°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°C at rated DC blocking voltage @T_J=100°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					°C/W
Operating junction temperature range	T_J	-55 to +125					°C
Storage temperature range	T_{STG}	-55 to +150					°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

FIG.1 - FORWARD CURRENT DERATING CURVE

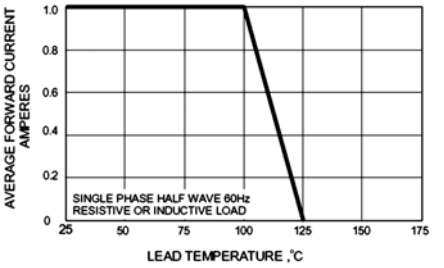


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

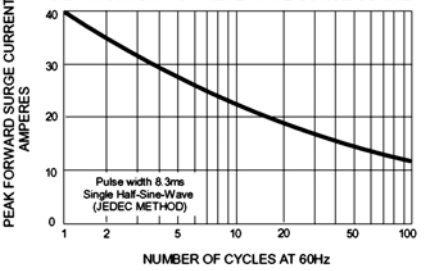


FIG.3 - TYPICAL JUNCTION CAPACITANCE

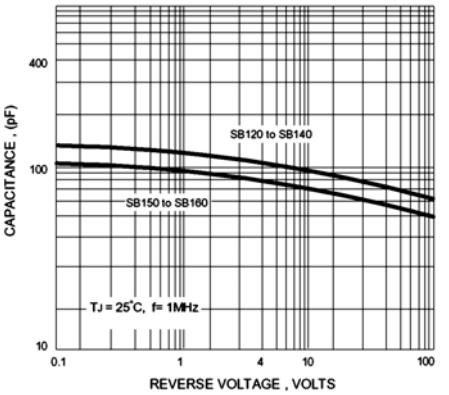


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

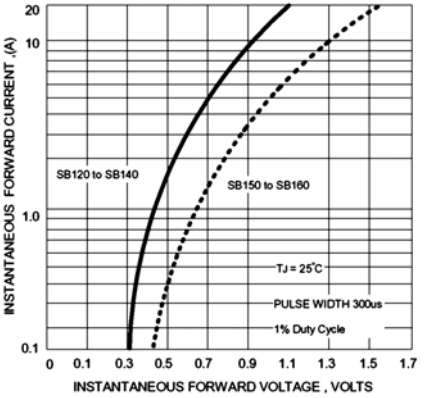


FIG.5 - TYPICAL REVERSE CHARACTERISTICS