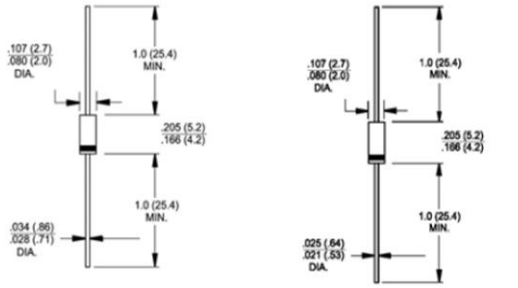
SB120 thru SB160

Schottky Barrier Rectifiers Reverse Voltage 20V to 60V Forward Current 1.0A

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 Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load.
For capactive load, derate current by 20%

Parameter		Symbol	SB120	SB130	SB140	SB150	SB160	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	50	60	V
Maximum RMS Voltage		V_{RMS}	14	21	28	35	42	V
Maximum DC Blocking Voltage		V_{DC}	20	30	40	50	60	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length at T_L=100°C		$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load		IFSM	40					A
Maximum Forward Voltage at 1A DC		V_F	0.5			0.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25°C	I_R	0.5					mA
	T_J=125°C		8					mA
Typical Junction Capacitance (Note 1)		C_j	110					pF
Typical Thermal Resistance(Note 2)		$R_{\theta JA}$	76					°C/W
		$R_{\theta JC}$	41					
		$R_{\theta JL}$	32					
Operating Junction Temperature Range		T_J	- 55 to + 125			- 55 to + 150		°C
storage Temperature Range		T_{STG}	- 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

Typical Characteristic Curves

FIG.1 - FORWARD CURRENT DERATING CURVE

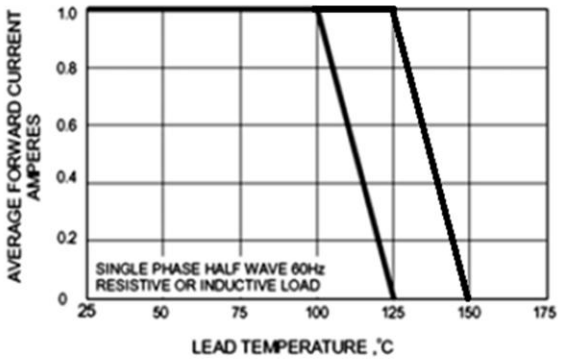


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

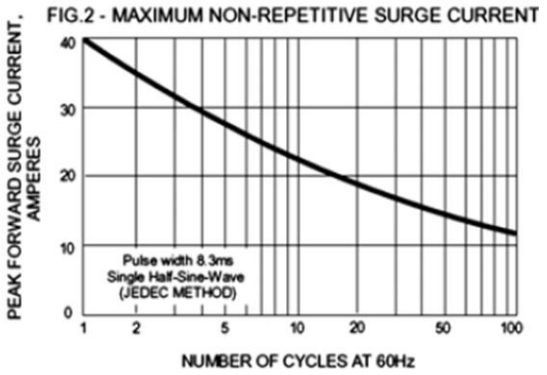


FIG.3 - TYPICAL JUNCTION CAPACITANCE

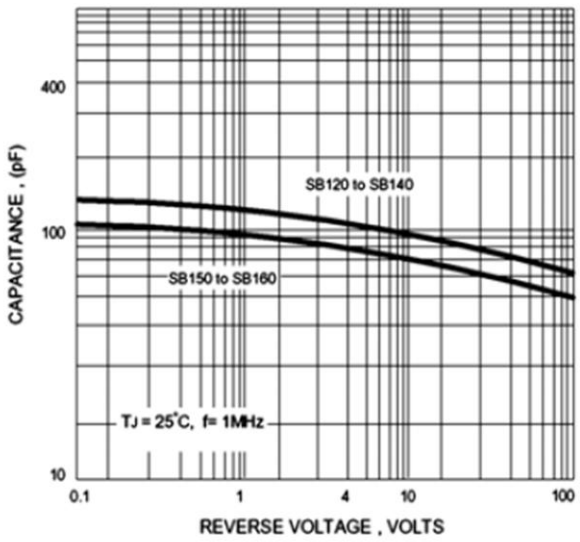


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

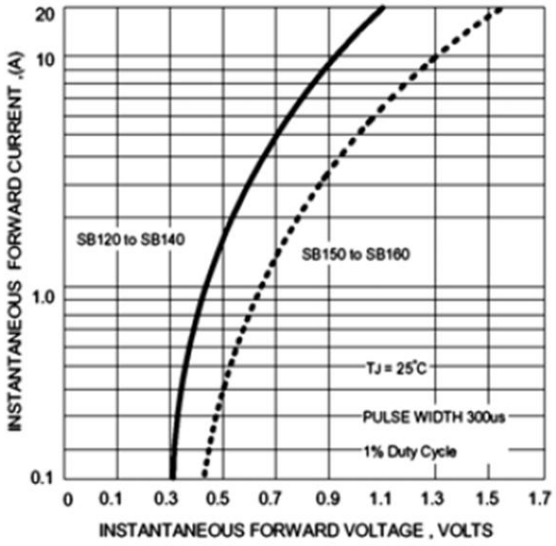


FIG.5 - TYPICAL REVERSE CHARACTERISTICS