

## 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

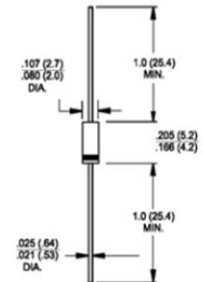
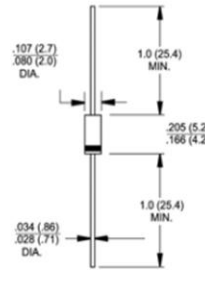


## Mechanical Data

- 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

DO-204AL (DO-41)

A-405



Note: Lead diameter is 0.025(0.64)/0.021(0.53) for suffix "S" part numbers

## Maximum Ratings 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	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 $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	40					A
Maximum Forward Voltage at 1A DC	$V_F$	0.5			0.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	0.5					mA
	$T_J=125^\circ\text{C}$	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

