

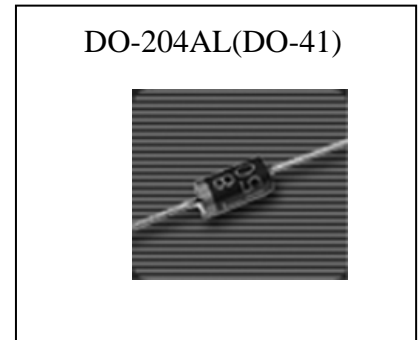
**Schottky Barrier Rectifiers**  
**Reverse Voltage 20V to 60V Forward Current 1.0 Amperes**

# SB120 thru SB160

## Features

- Metal semiconductor junction with guard ring
- 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

## Outline



## Mechanical Characteristics:

- Case: JEDEC DO-204AL(DO-41) molded plastic
- Terminals: Tin plated axial leads, solderable per MIL-STD-202, method 208
- Polarity: Color band denotes cathode
- Mounting position: Any
- Weight : 0.012oz., 0.33grams

## Maximum Ratings and Electrical Characteristics

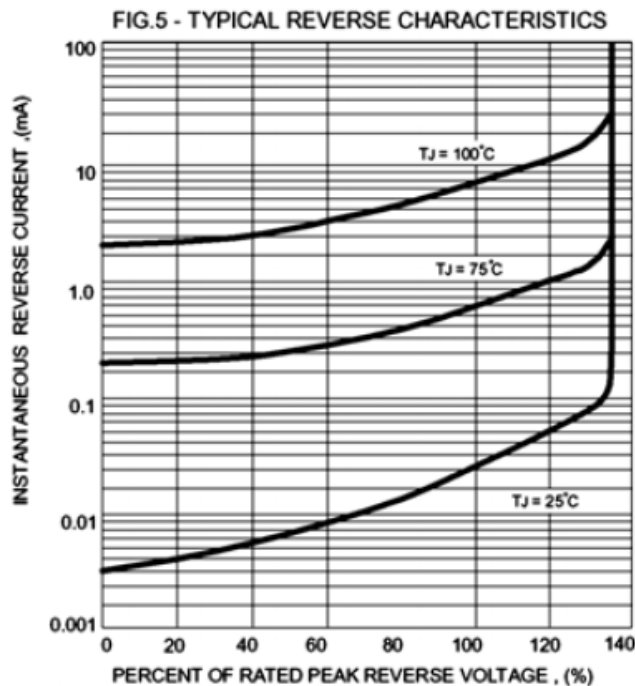
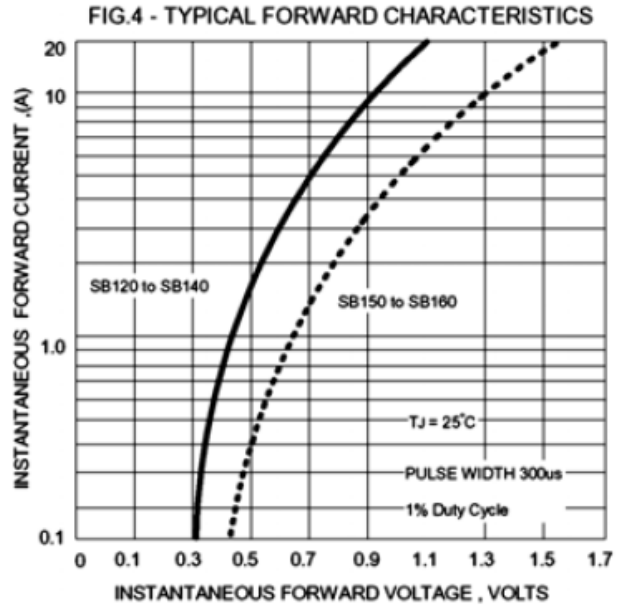
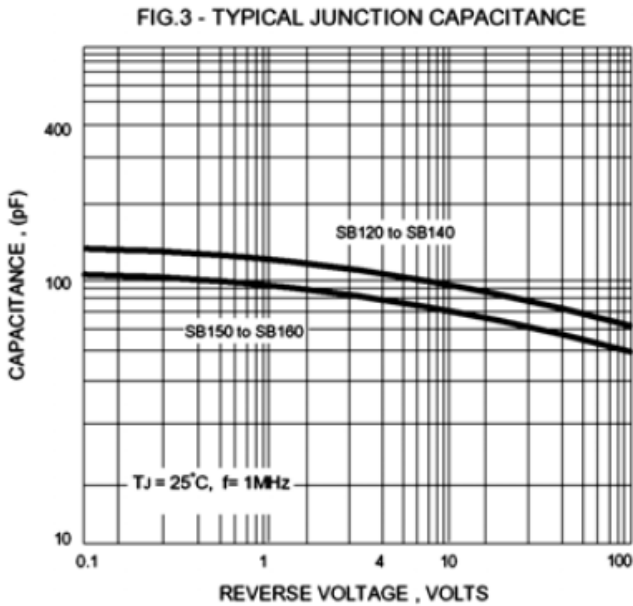
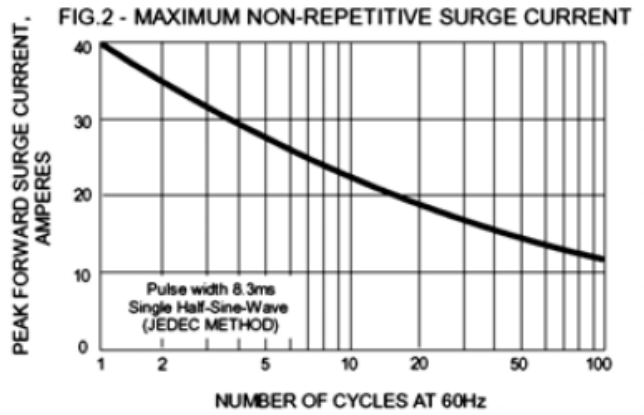
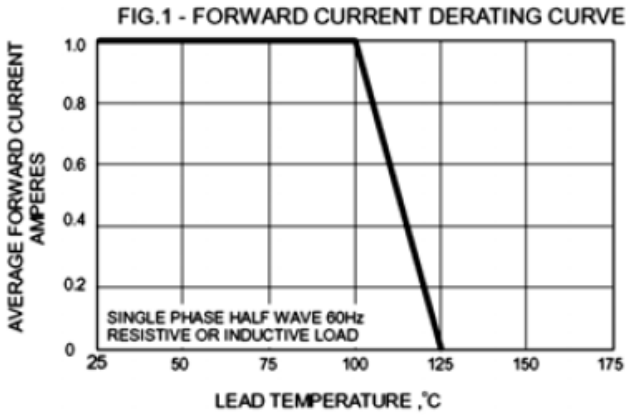
(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%)

Parameter	Symbol	Type					Units
		SB120	SB130	SB140	SB150	SB160	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	V
Maximum forward voltage at 1A	V <sub>F</sub>	0.5		0.70			V
Maximum average forward rectified current .375"(9.5mm) lead lengths @T <sub>L</sub> =100°C	I <sub>F(AV)</sub>	1					A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	40					A
Maximum DC reverse current at rated DC blocking voltage	T <sub>J</sub> =25°C	0.5					mA
	T <sub>J</sub> =100°C	10					
Typical thermal resistance (Note 1)	R <sub>θJL</sub>	15					°C/W
Typical junction capacitance (Note 2)	C <sub>J</sub>	150					pF
Operating junction temperature range	T <sub>J</sub>	-55 ~ +125					°C
Storage temperature range	T <sub>STG</sub>	-55 ~ +150					°C

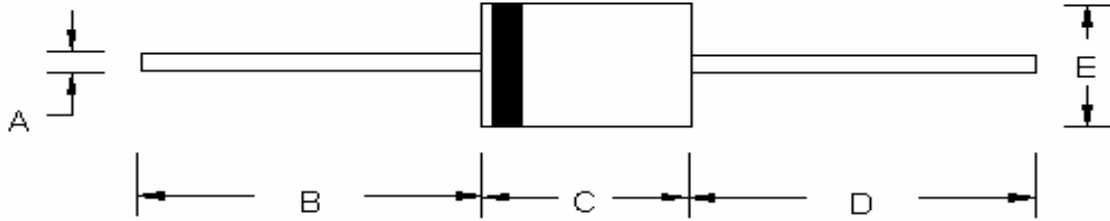
Note: 1.Thermal resistance, junction to lead.

2.Measured at 1.0MHz and applied reverse voltage of 4.0VDC

**Characteristic Curves**



**DO-204AL(DO-41) Dimension**



DO-204AL(DO-41) Molded Plastic Package  
 CYStek Package Code: LB

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	φ0.0280	φ0.0339	φ0.71	φ0.86	D	1.0000	-	25.40	-
B	1.0000	-	25.40	-	E	φ0.0787	φ0.1063	φ2.00	φ2.70
C	0.1654	0.2047	4.20	5.20					

Notes : 1.Controlling dimension : millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material :**

- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
- Mold Compound : Epoxy resin family, flammability solid burning class: UL94V-0

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