

## 3.0Amp Schottky Barrier Rectifiers

### Reverse Voltage 70V to 100V    Forward Current 3A

# SB370 thru SB3B0

## Features

- Metal-semiconductor junction with guard ring.
- Epitaxial construction
- Low forward voltage drop
- High current capability

## Mechanical Data

- Case : Molded plastic DO-201AD
- Epoxy : UL94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202 method 208 guaranteed
- Polarity: Color band denotes cathode end.
- Mounting Position : Any.
- Weight: 0.041 oz., 1.15 gram

## Outline

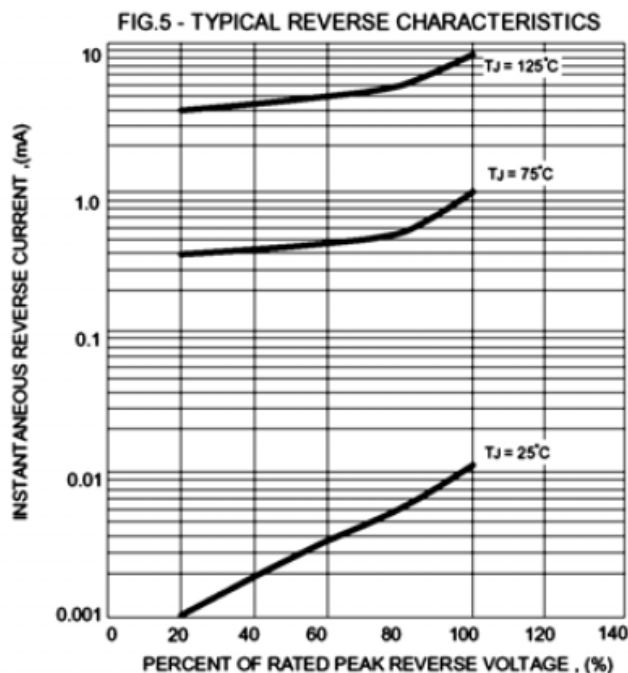
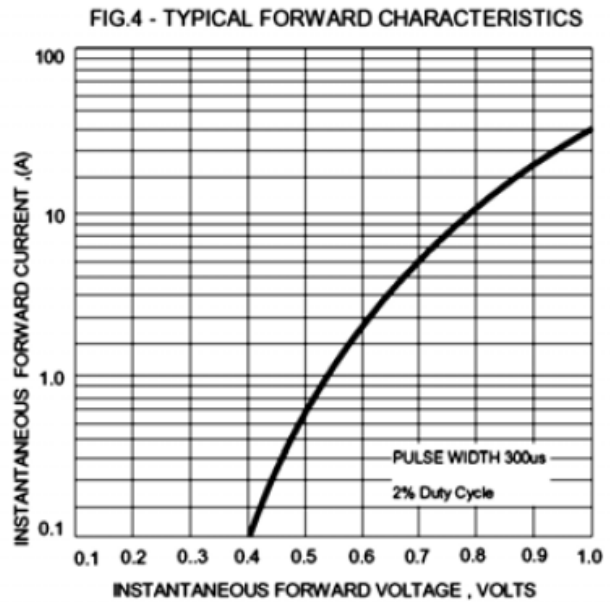
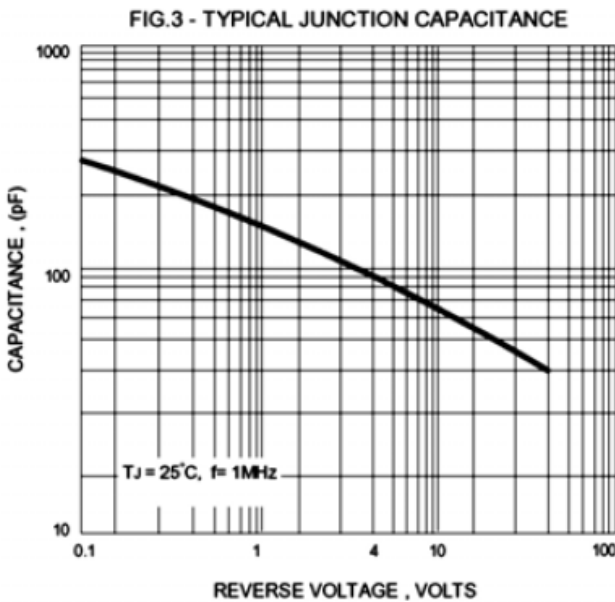
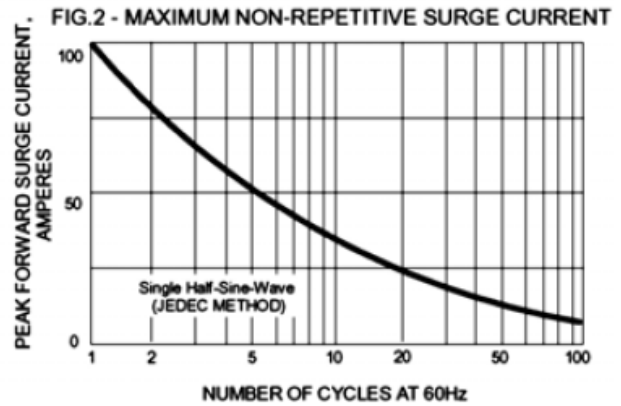
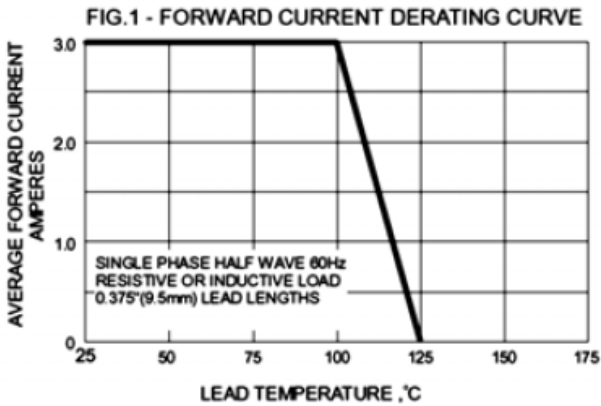


## Maximum Ratings and Electrical Characteristics

(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%)

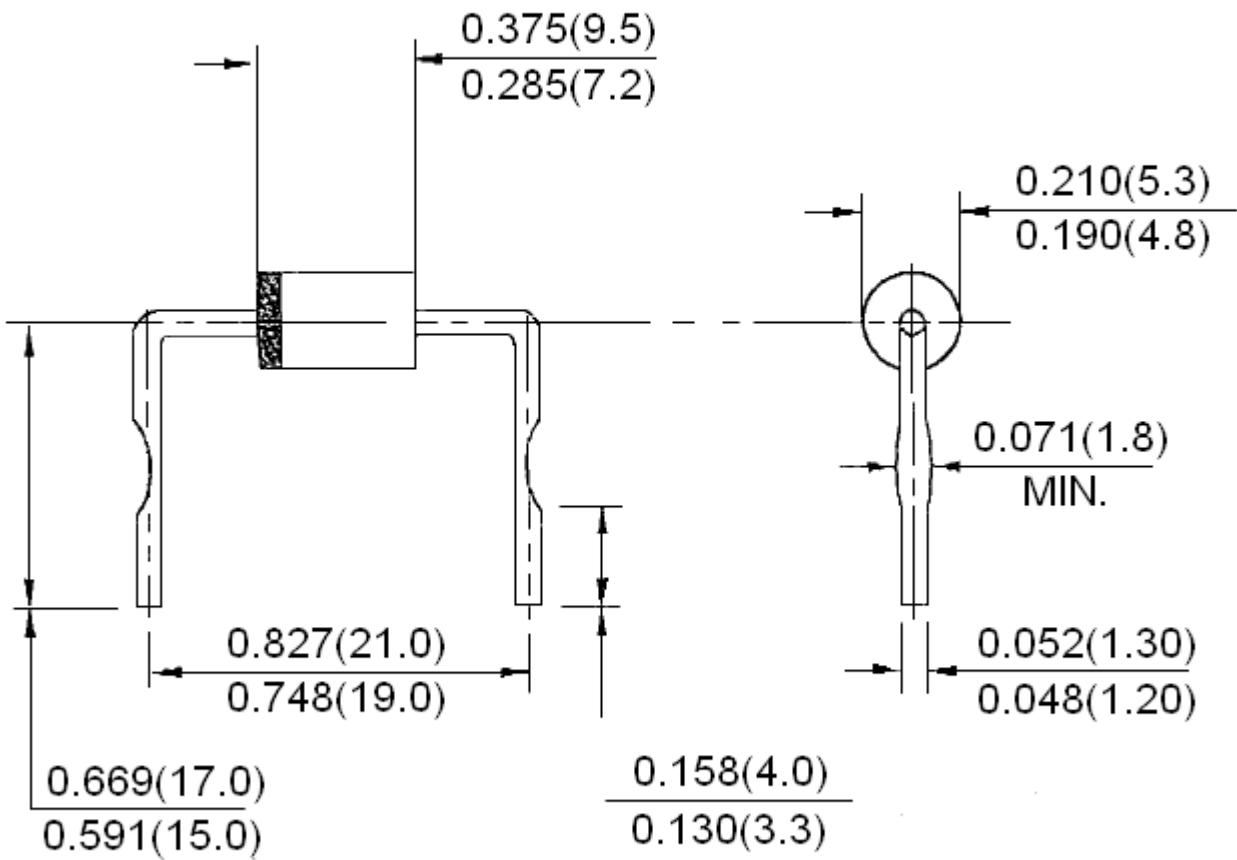
| Parameter   | Symbol             | Type                  |       |       |       | Units |
|---|--------------------|-----------------------|-------|-------|-------|-------|
|   |                    | SB370                 | SB380 | SB390 | SB3B0 |       |
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>   | 70                    | 80    | 90    | 100   | V     |
| Maximum RMS voltage   | V <sub>RMS</sub>   | 49                    | 56    | 63    | 70    | V     |
| Maximum DC blocking voltage   | V <sub>DC</sub>    | 70                    | 80    | 90    | 100   | V     |
| Maximum forward voltage at I <sub>F</sub> =3A   | V <sub>F</sub>     | T <sub>J</sub> =25°C  |       |       |       | V     |
|   |                    | 0.79                  |       |       |       |       |
|   |                    | T <sub>J</sub> =100°C |       |       |       |       |
|   |                    | 0.69                  |       |       |       |       |
| Maximum average forward rectified current @ 0.375"(9.5mm) lead length, T <sub>L</sub> =100°C      | I <sub>F(AV)</sub> | 3                     |       |       |       | A     |
| Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>   | 100                   |       |       |       | A     |
| Maximum DC reverse current at rated DC blocking voltage   | I <sub>R</sub>     | T <sub>J</sub> =25°C  |       |       |       | mA    |
|   |                    | 0.5                   |       |       |       |       |
|   |                    | T <sub>J</sub> =100°C |       |       |       |       |
|   |                    | 20                    |       |       |       |       |
| Typical thermal resistance, junction to lead  | R <sub>θJL</sub>   | 25                    |       |       |       | °C/W  |
| Typical junction capacitance @ f=1MHz and applied 4V DC reverse voltage                           | C <sub>J</sub>     | 90                    |       |       |       | pF    |
| Operating junction temperature range  | T <sub>J</sub>     | -55 ~ +125            |       |       |       | °C    |
| Storage temperature range   | T <sub>STG</sub>   | -55 ~ +150            |       |       |       | °C    |

Characteristic Curves



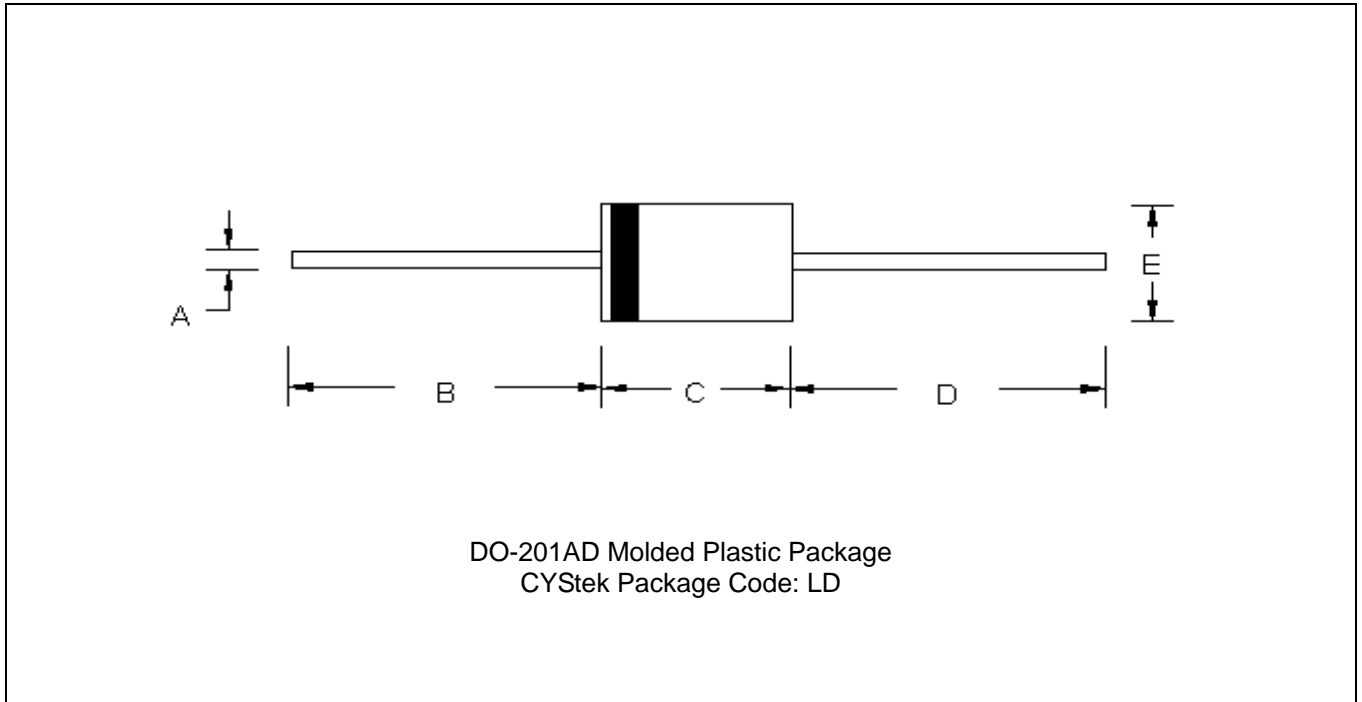
**Forming Dimension**

**C542-2**



Dimensions in inches(millimeters)

**DO-201AD Dimension**



| DIM | Inches |        | Millimeters |       | DIM | Inches |        | Millimeters |       |
|-----|--------|--------|-------------|-------|-----|--------|--------|-------------|-------|
|     | Min.   | Max.   | Min.        | Max.  |     | Min.   | Max.   | Min.        | Max.  |
| A   | φ0.048 | φ0.052 | φ1.20       | φ1.30 | D   | 1.000  | -      | 25.40       | -     |
| B   | 1.000  | -      | 25.40       | -     | E   | φ0.190 | φ0.220 | φ4.80       | φ5.60 |
| C   | 0.285  | 0.375  | 7.20        | 9.50  |     |        |        |             |       |

**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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