



# BY251 THRU BY255

## 3.0 AMPS. Silicon Rectifiers

Voltage Range  
200 to 1300 Volts  
Current  
3.0Amperes

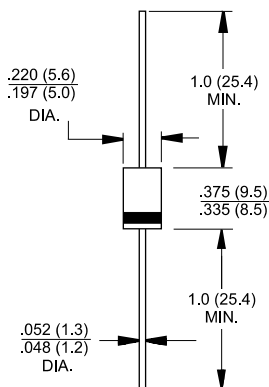
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2 grams

### DO-201AD



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number                                                                                                  | BY251       | BY252 | BY253 | BY254 | BY255 | Units    |
|--------------------------------------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                       | 200         | 400   | 600   | 800   | 1300  | V        |
| Maximum RMS Voltage                                                                                          | 140         | 280   | 420   | 560   | 910   | V        |
| Maximum DC Blocking Voltage                                                                                  | 200         | 400   | 600   | 800   | 1300  | V        |
| Maximum Average Forward Rectified Current<br>.375 (9.5mm) Lead Length @ T <sub>A</sub> = 75°C                | 3.0         |       |       |       |       | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method )    | 150         |       |       |       |       | A        |
| Maximum Instantaneous Forward Voltage<br>@ 3.0A                                                              | 1.0         |       |       |       |       | V        |
| Maximum DC Reverse Current @ T <sub>A</sub> =25°C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C    | 5.0<br>100  |       |       |       |       | uA<br>uA |
| Maximum Full Load Reverse Current, Full<br>Cycle Average .375" (9.5mm) Lead Length<br>@ T <sub>L</sub> =75°C | 30          |       |       |       |       | uA       |
| Typical Junction Capacitance ( Note 1 )                                                                      | 50          |       |       |       |       | pF       |
| Typical Thermal Resistance RθJA ( Note 2 )                                                                   | 18          |       |       |       |       | °C/W     |
| Operating Temperature Range T <sub>J</sub>                                                                   | -65 to +125 |       |       |       |       | °C       |
| Storage Temperature Range T <sub>STG</sub>                                                                   | -65 to +150 |       |       |       |       | °C       |

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY255)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

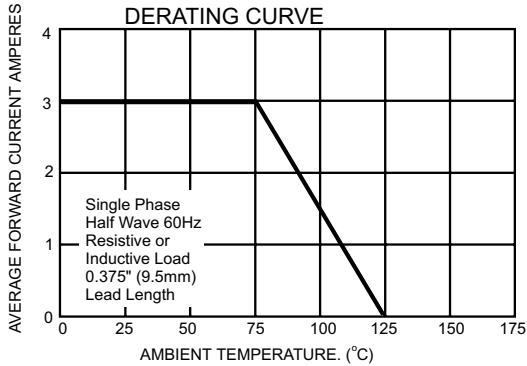


FIG.2- MAXIMUM FORWARD SURGE CURRENT

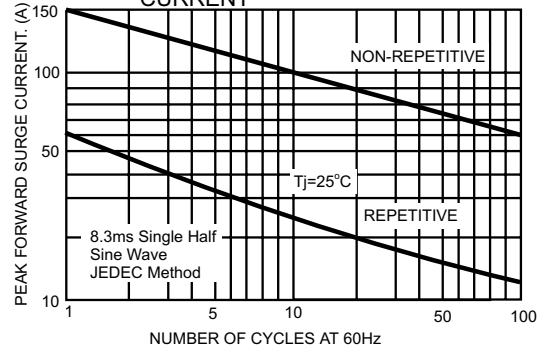


FIG.3- TYPICAL FORWARD CHARACTERISTICS

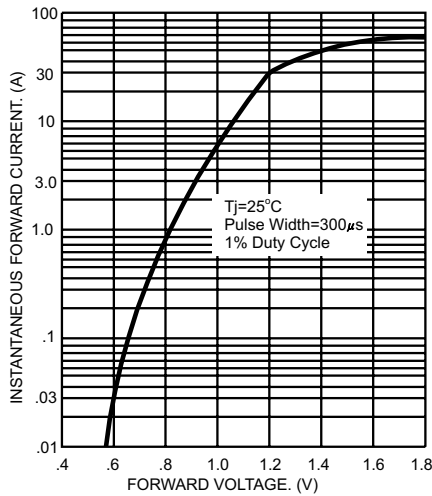


FIG.4- TYPICAL JUNCTION CAPACITANCE

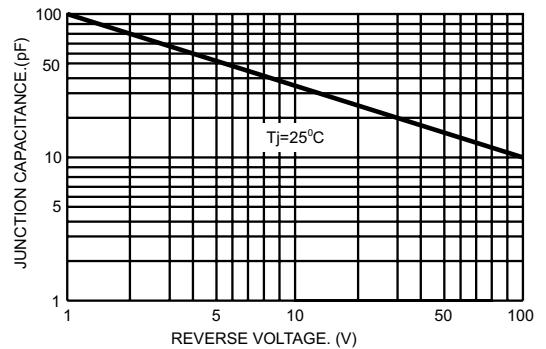


FIG.5- TYPICAL REVERSE CHARACTERISTICS

