

# BY550-50 ~ BY550-1000

## SILICON RECTIFIER DIODES

**PRV : 50 - 1000 Volts**

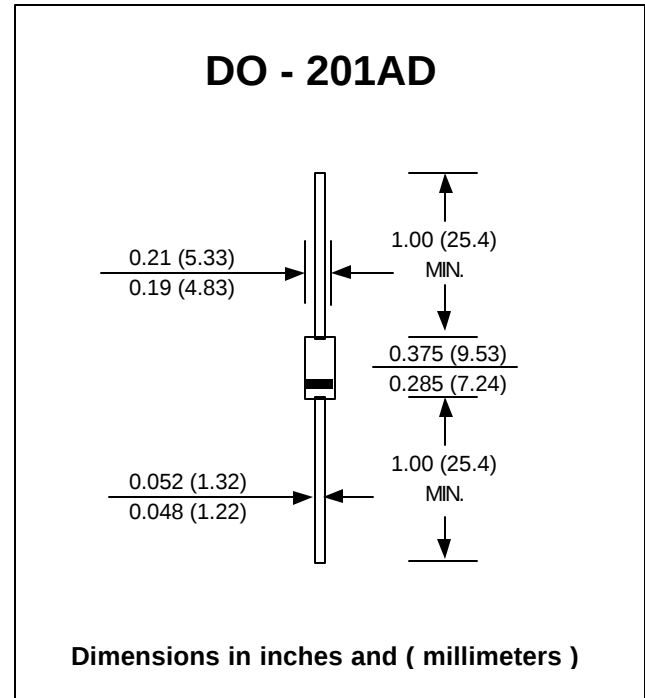
**Io : 5.0 Amperes**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop

### MECHANICAL DATA :

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 1.21 grams



### 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%.

| RATING                                                                                                 | SYMBOL          | BY550<br>- 50 | BY550<br>- 100 | BY550<br>- 200 | BY550<br>- 400 | BY550<br>- 600 | BY550<br>- 800 | BY550<br>- 1000 | UNIT         |
|--------------------------------------------------------------------------------------------------------|-----------------|---------------|----------------|----------------|----------------|----------------|----------------|-----------------|--------------|
| Maximum Repetitive Peak Reverse Voltage                                                                | $V_{RRM}$       | 50            | 100            | 200            | 400            | 600            | 800            | 1000            | Volts        |
| Maximum RMS Voltage                                                                                    | $V_{RMS}$       | 35            | 70             | 140            | 280            | 420            | 560            | 700             | Volts        |
| Maximum DC Blocking Voltage                                                                            | $V_{DC}$        | 50            | 100            | 200            | 400            | 600            | 800            | 1000            | Volts        |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length $T_a = 60^\circ C$                        | $I_F$           | 5.0           |                |                |                |                |                |                 | Amps.        |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 300           |                |                |                |                |                |                 | Amps.        |
| Maximum Forward Voltage at $I_F = 5.0$ Amps.                                                           | $V_F$           | 0.95          |                |                |                |                |                |                 | Volts        |
| Maximum DC Reverse Current $T_a = 25^\circ C$<br>at rated DC Blocking Voltage $T_a = 100^\circ C$      | $I_R$           | 20            |                |                |                |                |                |                 | $\mu A$      |
|                                                                                                        | $I_{R(H)}$      | 50            |                |                |                |                |                |                 | $\mu A$      |
| Typical Junction Capacitance (Note1)                                                                   | $C_J$           | 50            |                |                |                |                |                |                 | pF           |
| Typical Thermal Resistance (Note2)                                                                     | $R_{\theta JA}$ | 18            |                |                |                |                |                |                 | $^\circ C/W$ |
| Junction Temperature Range                                                                             | $T_J$           | - 65 to + 175 |                |                |                |                |                |                 | $^\circ C$   |
| Storage Temperature Range                                                                              | $T_{STG}$       | - 65 to + 175 |                |                |                |                |                |                 | $^\circ C$   |

### Notes :

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0V<sub>DC</sub>
- (2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

**UPDATE : MAY 27, 1998**

## RATING AND CHARACTERISTIC CURVES ( BY550-50 - BY550-1000 )

