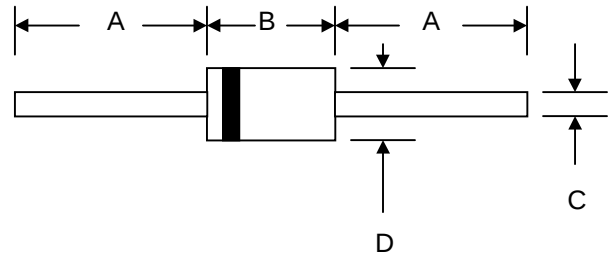


#### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

#### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Epoxy: UL 94V-O rate flame retardant
- **Lead Free: For RoHS / Lead Free Version**



| DO-201AD             |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 24.5 | —    |
| B                    | 7.20 | 9.50 |
| C                    | 1.10 | 1.30 |
| D                    | 5.00 | 5.60 |
| All Dimensions in mm |      |      |

#### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic                                                                                                        | Symbol                                                 | PR1300      | PR3002 | PR3003 | PR3004 | PR3005 | PR3006 | PR3007 | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|--------|--------|--------|--------|--------|--------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Average Rectified Output Current<br>(Note 1)<br>@T <sub>A</sub> = 55°C                                                | I <sub>O</sub>                                         | 3.0         |        |        |        |        |        |        | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 125         |        |        |        |        |        |        | A    |
| Forward Voltage<br>@I <sub>F</sub> = 3.0A                                                                             | V <sub>FM</sub>                                        | 1.28        |        |        |        |        |        |        | V    |
| Peak Reverse Current<br>@T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage<br>@T <sub>A</sub> = 100°C             | I <sub>RM</sub>                                        | 2.0<br>150  |        |        |        |        |        |        | μA   |
| Reverse Recovery Time (Note 2)                                                                                        | t <sub>rr</sub>                                        | 150         |        |        |        | 250    | 450    |        | nS   |
| Typical Junction Capacitance (Note 3)                                                                                 | C <sub>j</sub>                                         | 60          |        |        |        |        |        |        | pF   |
| Operating Temperature Range                                                                                           | T <sub>j</sub>                                         | -55 to +150 |        |        |        |        |        |        | °C   |
| Storage Temperature Range                                                                                             | T <sub>STG</sub>                                       | -55 to +150 |        |        |        |        |        |        | °C   |

#### \*Glass passivated forms are available upon request

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case

2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A. See figure 5.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

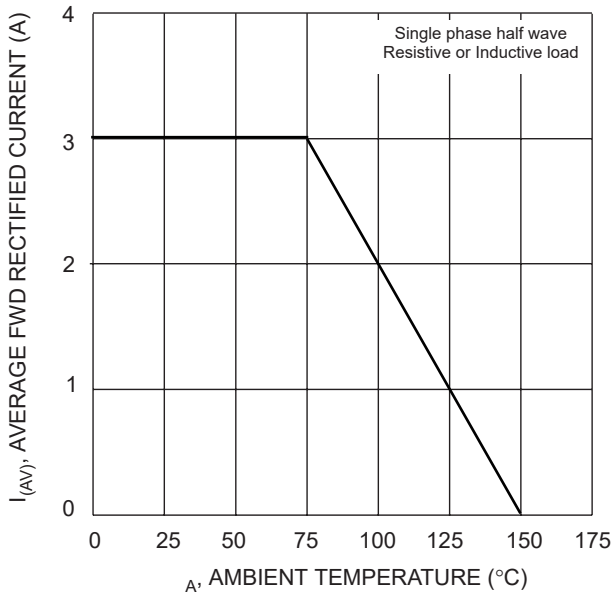


Fig. 1 Forward Derating Curve

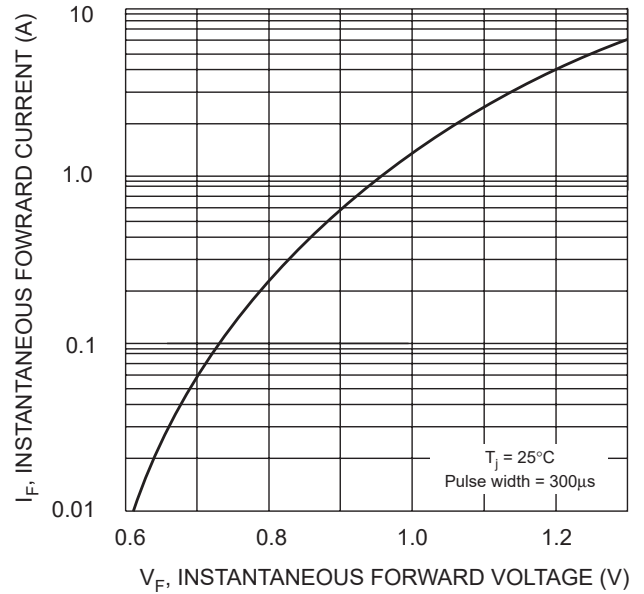


Fig. 2 Typical Forward Characteristics

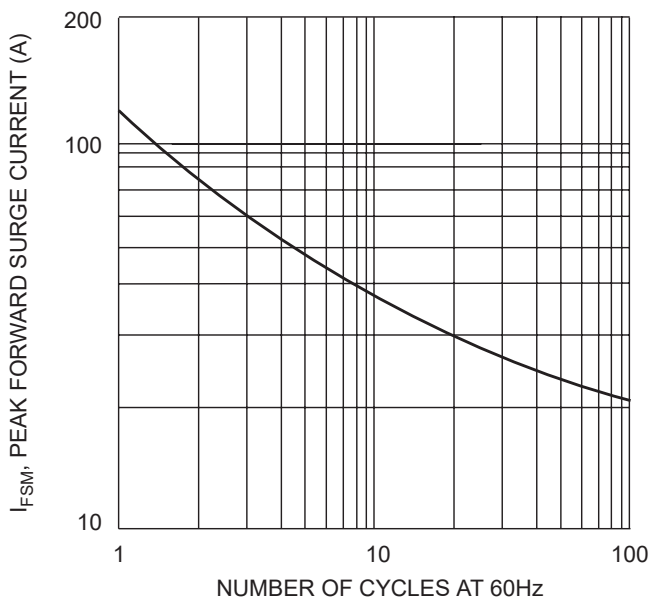


Fig. 3 Peak Forward Surge Current

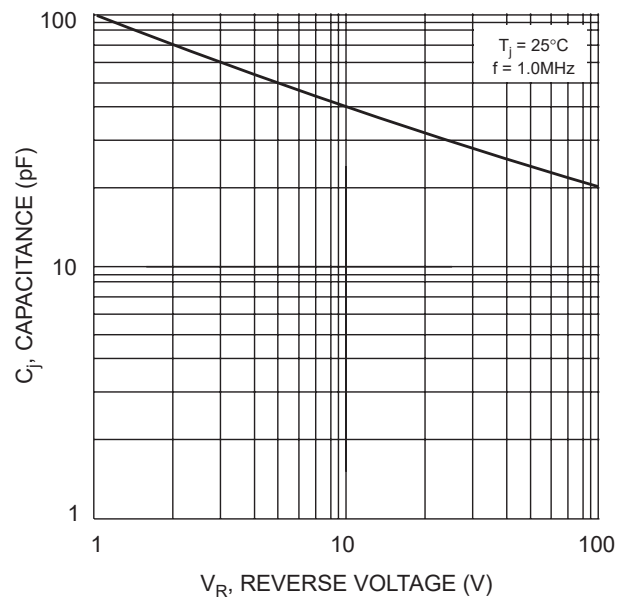
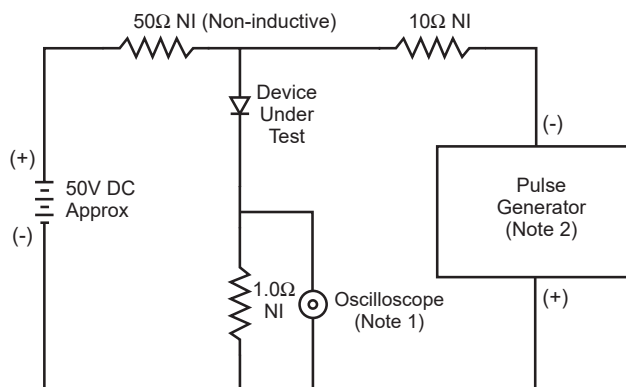


Fig. 4 Typical Junction Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance = 1.0M $\Omega$ , 22pF.
2. Rise Time = 10ns max. Input Impedance = 50 $\Omega$ .

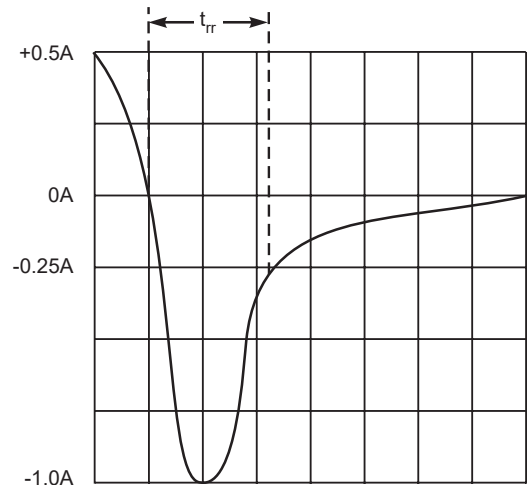


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit