

## Features and Benefits

- Glass Passivated Die Construction
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 125A Peak
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

## Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin. Plated Leads Solderable per MIL-STD-202, Method 638
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.12 grams (approximate)

## Ordering Information (Note 3)

| Device    | Packaging | Shipping                  |
|-----------|-----------|---------------------------|
| 1N5400G-B | DO-201AD  | 500/Bulk                  |
| 1N5400G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5401G-B | DO-201AD  | 500/Bulk                  |
| 1N5401G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5402G-B | DO-201AD  | 500/Bulk                  |
| 1N5402G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5403G-B | DO-201AD  | 500/Bulk                  |
| 1N5403G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5404G-B | DO-201AD  | 500/Bulk                  |
| 1N5404G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5405G-B | DO-201AD  | 500/Bulk                  |
| 1N5405G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5406G-B | DO-201AD  | 500/Bulk                  |
| 1N5406G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5407G-B | DO-201AD  | 500/Bulk                  |
| 1N5407G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |
| 1N5408G-B | DO-201AD  | 500/Bulk                  |
| 1N5408G-T | DO-201AD  | 1.2K/Tape & Reel, 13-inch |

## 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                            | 1N<br>5400G | 1N<br>5401G | 1N<br>5402G | 1N<br>5403G | 1N<br>5404G | 1N<br>5405G | 1N<br>5406G | 1N<br>5407G | 1N<br>5408G | Unit |
|-----------------------------------------------------------------------------------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| Peak Repetitive Reverse Voltage                                                                     | V <sub>RRM</sub>                  |             |             |             |             |             |             |             |             |             |      |
| Working Peak Reverse Voltage                                                                        | V <sub>RWM</sub>                  | 50          | 100         | 200         | 300         | 400         | 500         | 600         | 800         | 1000        | V    |
| DC Blocking Voltage                                                                                 | V <sub>R</sub>                    |             |             |             |             |             |             |             |             |             |      |
| RMS Reverse Voltage                                                                                 | V <sub>R(RMS)</sub>               | 35          | 70          | 140         | 210         | 280         | 350         | 420         | 580         | 700         | V    |
| Average Rectified Output Current<br>(Note 4) @ T <sub>A</sub> = 55°C                                | I <sub>O</sub>                    | 3.0         |             |             |             |             |             |             |             |             | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>single half sine-wave superimposed on rated load | I <sub>FSM</sub>                  | 125         |             |             |             |             |             |             |             |             | A    |
| Forward Voltage @ I <sub>F</sub> = 3.0A                                                             | V <sub>FM</sub>                   | 1.1         |             |             |             |             |             |             |             |             | V    |
| Peak Reverse Current @ T <sub>A</sub> = 25°C                                                        | I <sub>RM</sub>                   | 5.0         |             |             |             |             |             |             |             |             | μA   |
| at Rated DC Blocking Voltage @ T <sub>A</sub> = 125°C                                               |                                   | 100         |             |             |             |             |             |             |             |             |      |
| Typical Reverse Recovery Time (Note 5)                                                              | t <sub>rr</sub>                   | 2.0         |             |             |             |             |             |             |             |             | μs   |
| Typical Total Capacitance (Note 6)                                                                  | C <sub>T</sub>                    | 40          |             |             |             |             |             |             |             |             | pF   |
| Typical Thermal Resistance Junction to Ambient                                                      | R <sub>θJA</sub>                  | 16          |             |             |             |             |             |             |             |             | °C/W |
| Operating and Storage Temperature Range                                                             | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 |             |             |             |             |             |             |             |             | °C   |

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
  2. See <http://www.diodes.com> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. For packaging details, visit our website at <http://www.diodes.com>.
  4. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
  5. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.
  6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

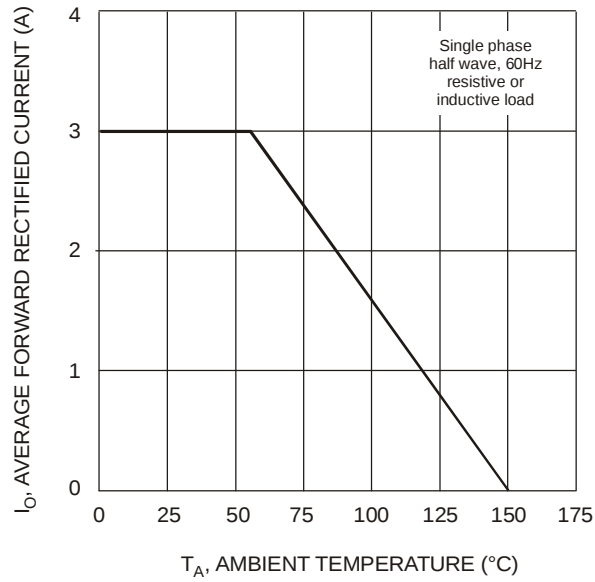


Fig. 1 Forward Current Derating Curve

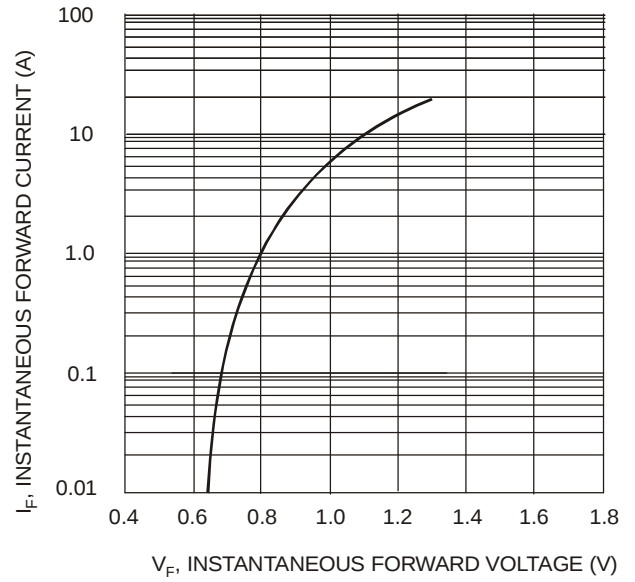


Fig. 2 Typical Forward Characteristics

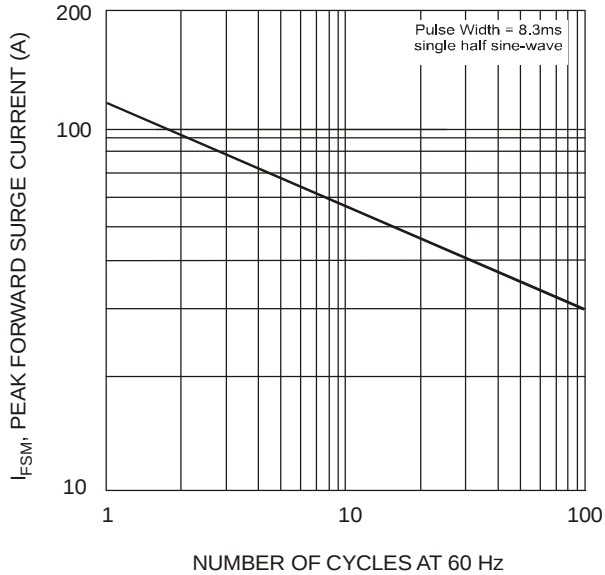


Fig. 3 Peak Forward Surge Current

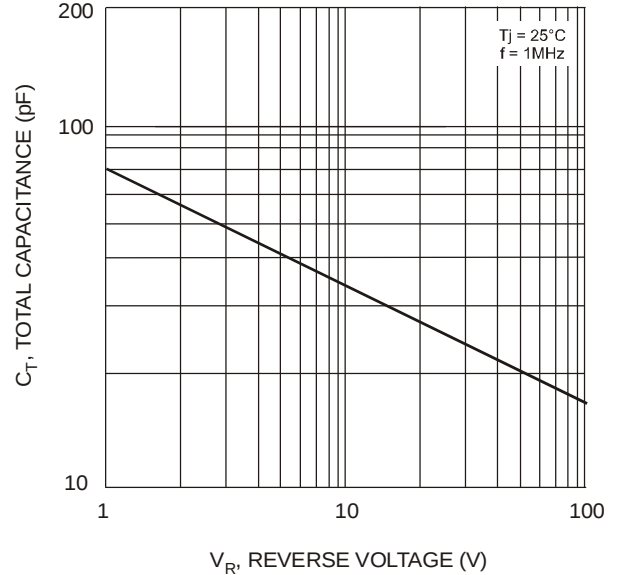


Fig. 4 Typical Total Capacitance

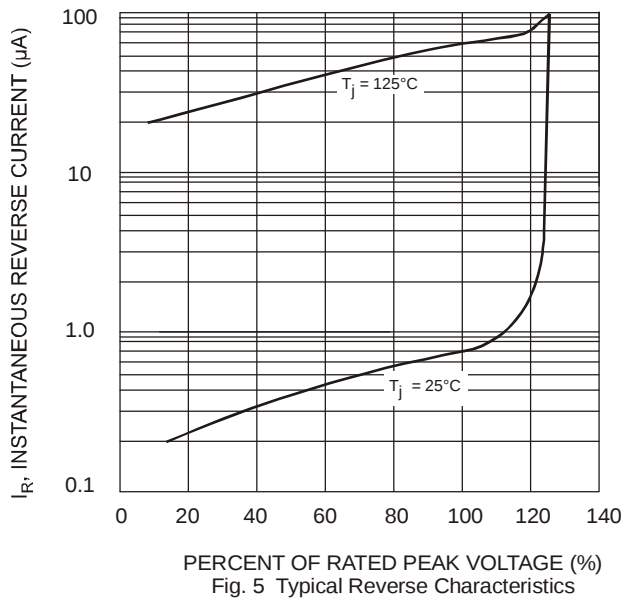
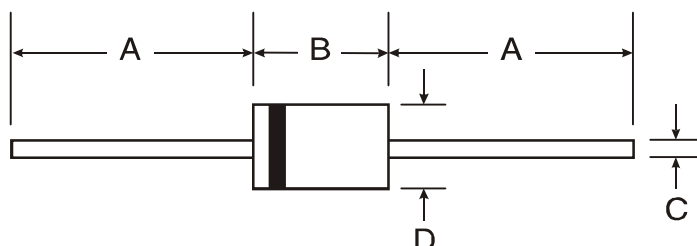


Fig. 5 Typical Reverse Characteristics

## Package Outline Dimensions



| DO-201AD             |       |      |
|----------------------|-------|------|
| Dim                  | Min   | Max  |
| A                    | 25.40 | —    |
| B                    | 7.20  | 9.50 |
| C                    | 1.20  | 1.30 |
| D                    | 4.80  | 5.30 |
| All Dimensions in mm |       |      |

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