



1N4154

High Conductance Fast Diode

Features

- 500 milliwatt Power Dissipation package.
- Fast Switching Speed.
- Typical capacitance less than 1.0 picofarad.

General Description

The high breakdown voltage, fast switching speed and high forward conductance of this diode packaged in a DO-35 miniature Glass Axial leaded package makes it desirable also as a general purpose diode.



DO-35
Color Band Denotes Cathode

Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Unit |
|-----------------------|---|-------------|------------------|
| W_{IV} | Working Inverse Voltage | 35 | V |
| I_O | Average Rectified Current | 100 | mA |
| I_F | DC Forward Current (I_F) | 300 | mA |
| i_f | Recurrent Peak Forward Current (I_F) | 400 | mA |
| $i_{F(\text{surge})}$ | Peak Forward Surge Current (I_{FSM}) Pulse Width = 1.0 second Pulse Width = 1.0 microsecond | 1.0 | A |
| | | 4.0 | A |
| T_{STG} | Storage Temperature Range | -65 to +200 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | 175 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

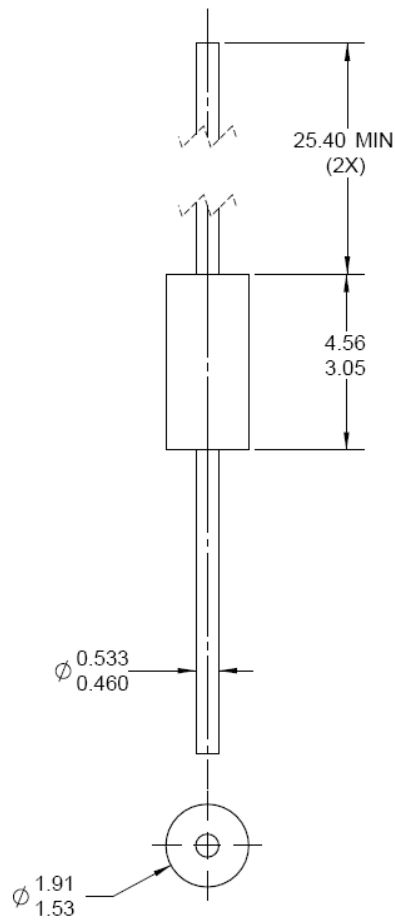
Thermal Characteristics

| Symbol | Parameter | Value | Unit |
|-----------------|--|-------|---------------------------|
| P_D | Total Power Dissipation at $T_A = 25^\circ\text{C}$ | 500 | mW |
| | Linear Derating Factor from $T_A = 25^\circ\text{C}$ | 3.33 | mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300 | $^\circ\text{C}/\text{W}$ |

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Conditions | Min. | Max | Units |
|----------|-----------------------|--|------|------------|---------------------|
| B_V | Breakdown Voltage | $I_R = 5.0\mu\text{A}$ | 35 | | V |
| I_R | Reverse Leakage | $V_R = 25\text{V}$ $V_R = 25\text{V}, T_A = 150^\circ\text{C}$ | | 100 100 | nA μA |
| V_F | Forward Voltage | $I_F = 30\text{mA}$ | | 1.0 | V |
| C_T | Capacitance | $V_R = 0, f = 1.0\text{MHz}$ | | 4.0 | pF |
| T_{RR} | Reverse Recovery Time | $I_F = 10\text{mA}, V_R = 6.0\text{V}$ $I_{RR} = 1.0\text{mA}, R_L = 100\Omega$ | | 4.0 | ns |

Physical Dimensions (DO-35)









NOTES: UNLESS OTHERWISE SPECIFIED

- A) PACKAGE STANDARD REFERENCE: JEDEC DO-204, VARIATION AH.
- B) HERMETICALLY SEALED GLASS PACKAGE.
- C) PACKAGE WEIGHT IS 0.137 GRAM.
- D) ALL DIMENSIONS ARE IN MILLIMETERS.
- E) DRAWING FILE NAME: DO35AREV02



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