

# 1N4151

## HIGH SPEED SWITCHING DIODE

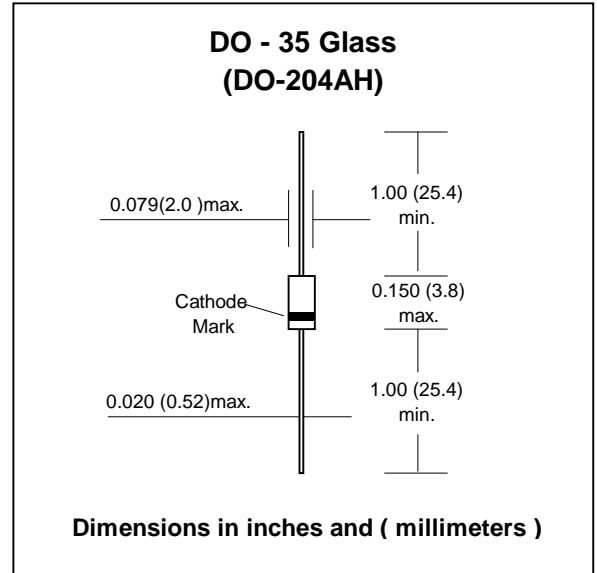
### FEATURES :

- High switching speed: max. 4 ns
- Reverse voltage: max. 50 V
- Peak reverse voltage: max. 75 V
- Pb / RoHS Free

### MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g



### Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

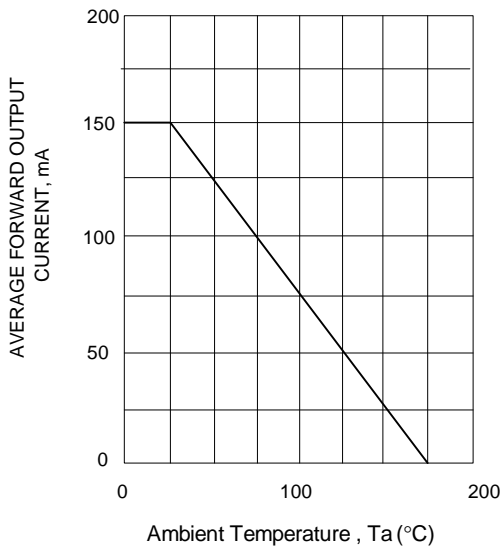
| Parameter  | Symbol      | Value        | Unit |
|--|-------------|--------------|------|
| Maximum Peak Reverse Voltage   | $V_{RM}$    | 75           | V    |
| Maximum Reverse Voltage  | $V_R$       | 50           | V    |
| Maximum Continuous Forward Current   | $I_F$       | 200          | mA   |
| Maximum Average Forward Current<br>Half Wave Rectification with Resistive Load , $f \geq 50\text{Hz}$ <sup>(1)</sup> | $I_{F(AV)}$ | 150          | mA   |
| Maximum non-repetitive peak forward current at $t = 1\text{s}$   | $I_{FSM}$   | 0.5          | A    |
| Maximum Power Dissipation  | $P_D$       | 500          | mW   |
| Maximum Junction Temperature   | $T_J$       | 175          | °C   |
| Storage Temperature Range  | $T_S$       | -65 to + 175 | °C   |

### Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

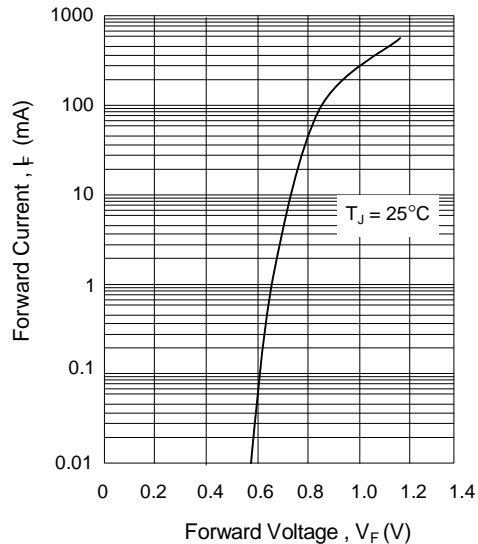
| Parameter                 | Symbol      | Test Condition   | Min | Typ | Max  | Unit          |
|---------------------------|-------------|--|-----|-----|------|---------------|
| Reverse Current           | $I_R$       | $V_R = 50\text{ V}$  | -   | -   | 0.05 | $\mu\text{A}$ |
|                           |             | $V_R = 50\text{ V}$ , $T_J = 150\text{ }^\circ\text{C}$                | -   | -   | 50   | $\mu\text{A}$ |
| Forward Voltage           | $V_F$       | $I_F = 50\text{ mA}$   | -   | -   | 1.0  | V             |
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R = 5\text{ A}$ (pulsed)  | 75  | -   | -    | V             |
| Diode Capacitance         | $C_d$       | $f = 1\text{MHz}$ ; $V_R = 0$  | -   | -   | 2.5  | pF            |
| Reverse Recovery Time     | $T_{rr}$    | $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$<br>to $I_R = 1\text{ mA}$ | -   | -   | 4    | ns            |

### RATING AND CHARACTERISTIC CURVES ( 1N4151 )

**FIG. 1 MAXIMUM FORWARD CURRENT VERSUS AMBIENT TEMPERATURE**



**FIG. 2 TYPICAL FORWARD VOLTAGE**



**FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE**

