

# 1N4154

## HIGH SPEED SWITCHING DIODE

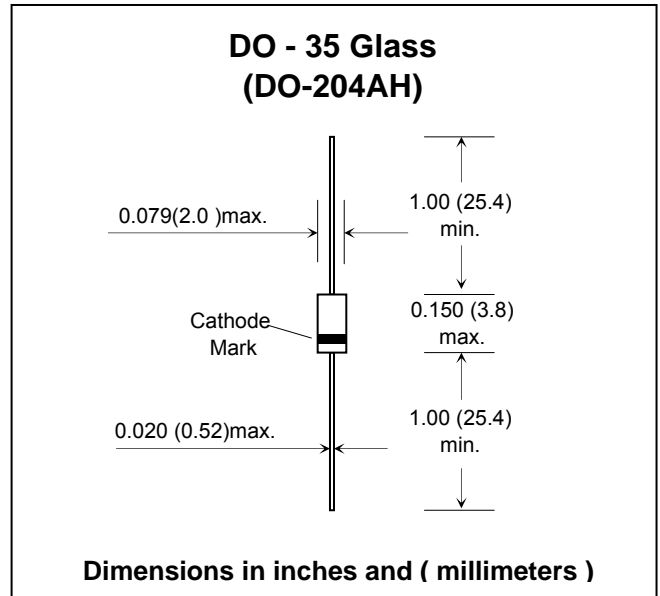
### FEATURES :

- High switching speed: max. 2 ns
- Reverse voltage: max. 25 V
- Repetitive peak reverse voltage: max. 35 V
- Pb / RoHS Free

### MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g



### Maximum Ratings and Thermal Characteristics (Ta = 25 °C unless otherwise noted)

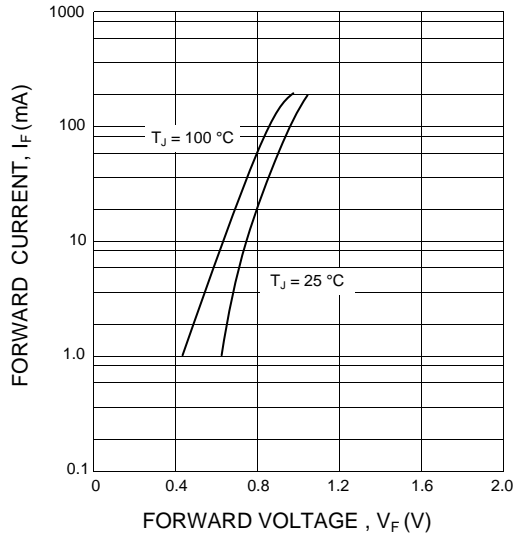
| Parameter   | Symbol          | Value        | Unit       |
|---|-----------------|--------------|------------|
| Maximum Repetitive Peak Reverse Voltage                                     | $V_{RRM}$       | 35           | V          |
| Maximum Reverse Voltage   | $V_R$           | 25           | V          |
| Maximum Average Forward Current   | $I_{F(AV)}$     | 150          | mA         |
| Maximum Forward Current   | $I_F$           | 300          | mA         |
| Maximum Repetitive Peak Forward Current                                     | $I_{FRM}$       | 500          | mA         |
| Maximum Peak Forward Surge Current at $t_p = 1\mu s$                        | $I_{FSM}$       | 2.0          | A          |
| Thermal Resistance Junction to Ambient ( $l = 4mm, T_L = \text{constant}$ ) | $R_{\theta JA}$ | 350          | K/W        |
| Power Dissipation ( $l = 4mm, T_L \leq 25^\circ C$ )                        | $P_D$           | 500          | mW         |
| Operating Junction Temperature  | $T_J$           | 175          | $^\circ C$ |
| Storage Temperature Range   | $T_{STG}$       | -65 to + 175 | $^\circ C$ |

### Electrical Characteristics (Ta = 25 °C unless otherwise noted)

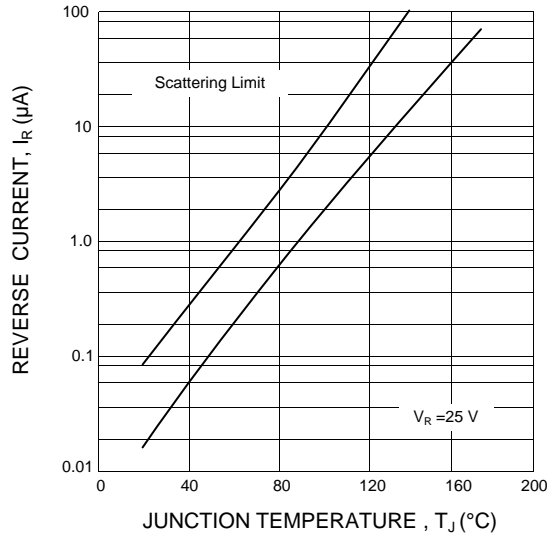
| Parameter                 | Symbol      | Test Condition   | Min | Typ  | Max | Unit    |
|---------------------------|-------------|--|-----|------|-----|---------|
| Reverse Current           | $I_R$       | $V_R = 25 V$   | -   | 9    | 100 | nA      |
|                           |             | $V_R = 25 V, T_a = 150^\circ C$                                  | -   | -    | 100 | $\mu A$ |
| Forward Voltage           | $V_F$       | $I_F = 30 mA$  | -   | 0.88 | 1.0 | V       |
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R = 5 \mu A, t_p/T = 0.01, t_p = 0.3ms$                       | 35  | -    | -   | V       |
| Diode Capacitance         | $C_d$       | $f = 1MHz; V_R = 0, V_{HF} = 50mV$                               | -   | -    | 4   | pF      |
| Reverse Recovery Time     | $T_{rr}$    | $I_F = I_R = 10 mA, i_R = 1 mA$                                  | -   | -    | 4   | ns      |
|                           |             | $I_F = 10 mA, V_R = 6 V, R_L = 100 \Omega, i_R = 0.1 \times I_R$ | -   | -    | 2   | ns      |

**RATING AND CHARACTERISTIC CURVES ( 1N4154 )**

**FIG1. - FORWARD CURRENT VS. FORWARD VOLTAGE**



**FIG.2 - REVERSE CURRENT VS. JUNCTION TEMPERATURE**



**FIG3. - DIODE CAPACITANCE VS. REVERSE VOLTAGE**

