

# 1N4447

## HIGH SPEED SWITCHING DIODE

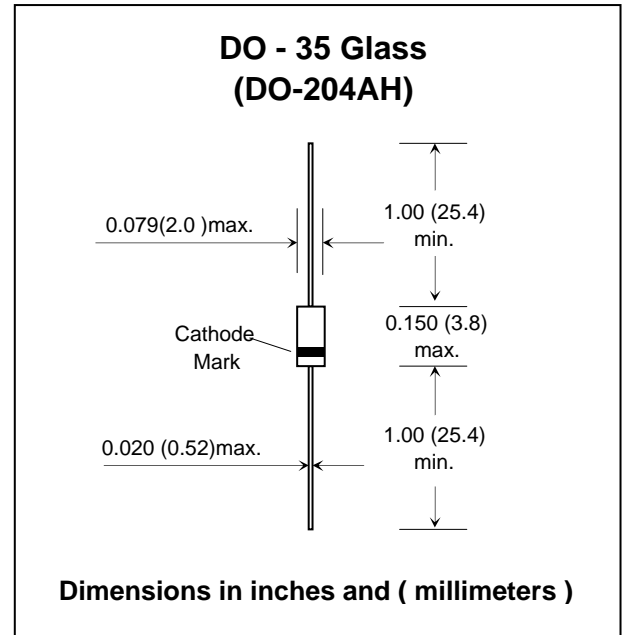
### FEATURES :

- High switching speed: max. 4 ns
- Reverse voltage: max. 75V
- Peak reverse voltage: max. 100 V
- Pb / RoHS Free

### MECHANICAL DATA :

Case: DO-35 Glass Case

Weight: approx. 0.13g



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

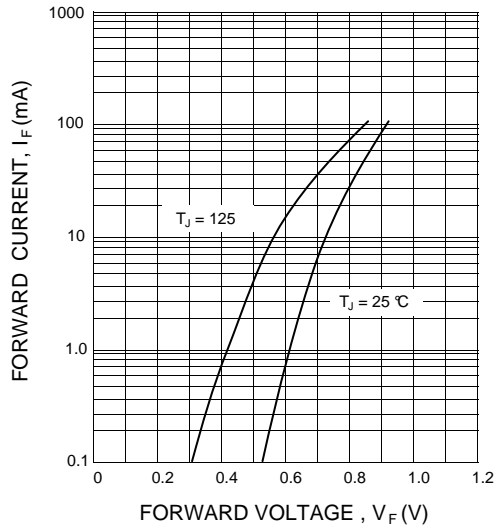
| Parameter  | Symbol      | Value        | Unit |
|--|-------------|--------------|------|
| Maximum Peak Reverse Voltage                     | $V_{RM}$    | 100          | V    |
| Maximum Reverse Voltage                          | $V_R$       | 75           | V    |
| Maximum Forward DC Current                       | $I_F$       | 200          | mA   |
| Maximum Average Forward Current                  | $I_{F(AV)}$ | 150          | mA   |
| Maximum Surge Forward Current at $t_p = 1 \mu s$ | $I_{FSM}$   | 2            | A    |
| Power Dissipation                                | $P_D$       | 500          | mW   |
| Maximum Junction Temperature                     | $T_J$       | 200          | °C   |
| Storage Temperature Range                        | $T_{STG}$   | -65 to + 200 | °C   |

### Electrical Characteristics ( Ta = 25 °C )

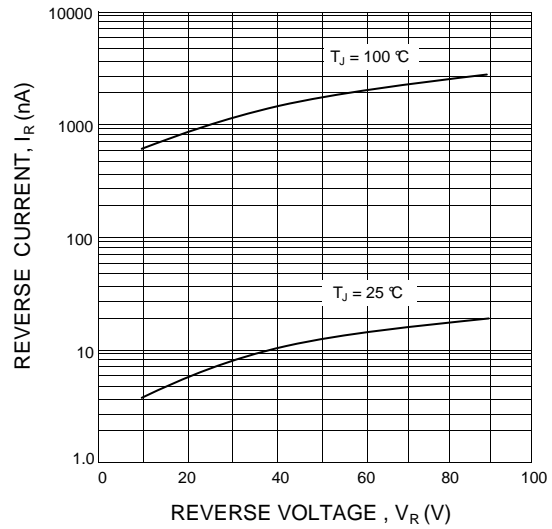
| Parameter                 | Symbol      | Test Condition                             | Min. | Typ. | Max. | Unit    |
|---------------------------|-------------|--|------|------|------|---------|
| Reverse Current           | $I_R$       | $V_R = 20 V$                               | -    | -    | 25   | nA      |
|                           |             | $V_R = 20 V, T_J = 150 °C$                 | -    | -    | 50   | $\mu A$ |
| Forward Voltage           | $V_F$       | $I_F = 20 mA$                              | -    | -    | 1    | V       |
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R = 100 \mu A$ (pulsed)                 | 100  | -    | -    | V       |
| Diode Capacitance         | $C_d$       | $f = 1MHz ; V_R = 0$                       | -    | -    | 2    | pF      |
| Reverse Recovery          | $T_{rr}$    | $I_F = 10 mA, V_R = 6 V, R_L = 100 \Omega$ | -    | -    | 4    | ns      |

## RATING AND CHARACTERISTIC CURVES ( 1N4447 )

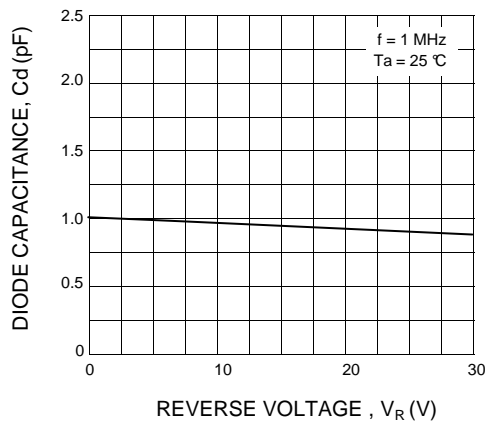
**FIG1. - FORWARD CURRENT VS. FORWARD VOLTAGE**



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



**FIG3. - CAPACITANCE BETWEEN TERMINALS VS. REVERSE VOLTAGE**



**FIG. 4 - REVERSE RECOVERY TIME VS. FORWARD CURRENT**

