FAIRCHILD SEMICONDUCTOR TM

# 1N4154

**DISCRETE POWER AND SIGNAL TECHNOLOGIES**

**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.

## High Conductance Fast Diode

**Features:**

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

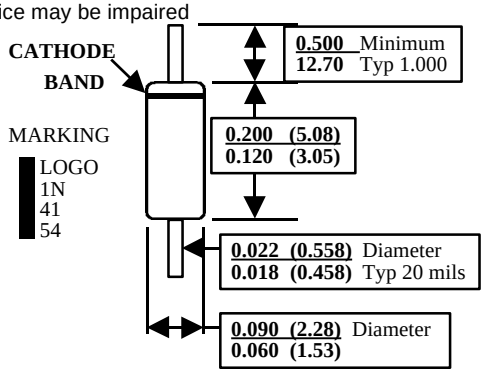
**Ordering:**

- 13 inch reel, 50 mm (T50R) & 26 mm (T26R) Tape; 10,000 units per reel.

## Absolute Maximum Ratings* TA = 25°C unless otherwise noted

| Sym | Parameter | Value | Units |
|---|---|---|---|
| $T_{stg}$ | Storage Temperature | -65 to +200 | °C |
| $T_J$ | Operating Junction Temperature | 175 | °C |
| $P_D$ | Total Power Dissipation at $T_A$ = 25°C | 500 | mW |
| | Linear Derating Factor from $T_A$ = 25°C | 3.33 | mW/°C |
| $R_{OJA}$ | Thermal Resistance Junction-to-Ambient | 300 | °C/W |
| $W_{iv}$ | Working Inverse Voltage | 35 | V |
| $I_O$ | Average Rectified Current | 100 | mA |
| $I_F$ | DC Forward Current (IF) | 300 | mA |
| $i_f$ | Recurrent Peak Forward Current (IF) | 400 | mA |
| $i_{F(surge)}$ | Peak Forward Surge Current (IFSM) Pulse Width = 1.0 second | 1.0 | Amp |
| | Pulse Width = 1.0 microsecond | 4.0 | Amp |

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




## Electrical Characteristics TA = 25°C unless otherwise noted

| SYM | CHARACTERISTICS | MIN | MAX | UNITS | TEST CONDITIONS |
|---|---|---|---|---|---|
| $B_V$ | Breakdown Voltage | 35 | | V | $I_R$ = 5.0 uA |
| $I_R$ | Reverse Leakage | | 100 | nA | $V_R$ = 25 V |
| | | | 100 | uA | $V_R$ = 25 V, $T_A$ = 150°C |
| $V_F$ | Forward Voltage | | 1.0 | V | $I_F$ = 30 mA |
| $C_T$ | Capacitance | | 4.0 | pF | $V_R$ = 0.0 V, f = 1.0 MHz |
| $T_{RR}$ | Reverse Recovery Time | | 4.0 | ns | $I_F$ = 10 mA $V_R$ = 6.0 V<br>$I_{RR}$ = 1.0 mA, $R_L$ = 100 ohms |

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## PRODUCT STATUS DEFINITIONS

### Definition of Terms

| Datasheet Identification | Product Status | Definition |
|---|---|---|
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