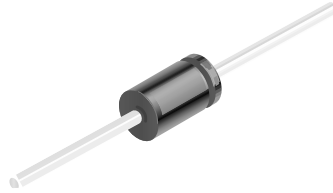


1N4152



DO-35

Color Band Denotes Cathode

Small Signal Diode

Absolute Maximum Ratings*

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

| Symbol | Parameter | Value | Units |
|-------------|--|-------------|------------------|
| V_{RRM} | Maximum Repetitive Reverse Voltage | 40 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 200 | mA |
| I_{FSM} | Non-repetitive Peak Forward Surge Current 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.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

| Symbol | Parameter | Value | Units |
|-----------------|---|-------|--------------------|
| P_D | Power Dissipation | 500 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300 | $^\circ\text{C/W}$ |

Electrical Characteristics

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

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|-----------|-----------------------|--|------|------|---------------|
| V_R | Breakdown Voltage | $I_R = 5.0 \mu\text{A}$ | 40 | | V |
| V_F | Forward Voltage | $I_F = 0.1 \text{ mA}$ | 0.49 | 0.55 | V |
| | | $I_F = 0.25 \text{ mA}$ | 0.53 | 0.59 | V |
| | | $I_F = 1.0 \text{ mA}$ | 0.59 | 0.67 | V |
| | | $I_F = 2.0 \text{ mA}$ | 0.62 | 0.70 | V |
| | | $I_F = 10 \text{ mA}$ | 0.70 | 0.81 | V |
| | | $I_F = 20 \text{ mA}$ | 0.74 | 0.88 | V |
| I_R | Reverse Current | $V_R = 30 \text{ V}$ | | 50 | nA |
| | | $V_R = 30 \text{ V}, T_A = 150^\circ\text{C}$ | | 50 | μA |
| C_T | Total Capacitance | $V_R = 0, f = 1.0 \text{ MHz}$ | | 2 | pF |
| t_{rr1} | Reverse Recovery Time | $I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega$ $I_{rr} = 1.0 \text{ mA}$ | | 4 | ns |
| t_{rr2} | Reverse Recovery Time | $I_F = 10 \text{ mA}, V_R = 6.0 \text{ V},$ $R_L = 100 \Omega, I_{rr} = 1.0 \text{ mA}$ | | 2 | ns |

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|--------------------------|------------------------|---|
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