

# 1N458A



**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        | 150         | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current         | 500         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current |             |                  |
|             | Pulse Width = 1.0 second                  | 1.0         | A                |
|             | Pulse Width = 1.0 microsecond             | 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 the diode may be impaired.

#### NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady 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   | $^\circ\text{C}$ |

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

| Symbol | Parameter         | Test Conditions                              | Min. | Max. | Units         |
|--------|-------------------|----------------------------------------------|------|------|---------------|
| $V_R$  | Breakdown Voltage | $I_R = 100\mu\text{A}$                       | 150  |      | V             |
| $V_F$  | Forward Voltage   | $I_F = 100\text{mA}$                         |      | 1.0  | V             |
| $I_R$  | Reverse Leakage   | $V_R = 125\text{V}$                          |      | 25   | $\mu\text{A}$ |
|        |                   | $V_R = 125\text{V}, T_A = 150^\circ\text{C}$ |      | 5    | $\mu\text{A}$ |

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