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# 1N459/A

## Small Signal Diode



**DO-35**  
Color Band Denotes Cathode

### Absolute Maximum Ratings \* $T_a = 25^\circ\text{C}$ unless otherwise noted

| Symbol      | Parameter  | Value       | Unit             |
|-------------|--|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage   | 200         | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current  | 500         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>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 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 | Unit               |
|-----------------|---|-------|--------------------|
| $P_D$           | Power Dissipation                       | 500   | mW                 |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300   | $^\circ\text{C/W}$ |

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

| Symbol | Parameter                          | Conditions                                   | Min. | Max | Units         |
|--------|------------------------------------|--|------|-----|---------------|
| $V_R$  | Breakdown Voltage                  | $I_R = 100\mu\text{A}$                       | 200  |     | V             |
| $V_F$  | Forward Voltage<br>1N459A          | $I_F = 3\text{mA}$                           |      | 1.0 | V             |
|        |                                    | $I_F = 100\text{mA}$                         |      | 1.0 | V             |
| $I_R$  | Reverse Leakage<br>1N459<br>1N459A | $V_R = 175\text{V}$                          |      | 25  | nA            |
|        |                                    | $V_R = 175\text{V}, T_A = 150^\circ\text{C}$ |      | 5   | $\mu\text{A}$ |
| $C_T$  | Total Capacitance<br>1N459A        | $V_R = 0, f = 1.0\text{MHz}$                 |      | 6.0 | pF            |

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Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)

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