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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 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 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 | $^\circ\text{C}/\text{W}$ |

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 1N459A | $I_F = 3\text{mA}$ | | 1.0 | V |
| | | $I_F = 100\text{mA}$ | | 1.0 | V |
| I_R | Reverse Leakage | 1N459 $V_R = 175\text{V}$ | | 25 | nA |
| | | 1N459A $V_R = 175\text{V}, T_A = 150^\circ\text{C}$ | | 5 | μA |
| C_T | Total Capacitance | 1N459A $V_R = 0, f = 1.0\text{MHz}$ | | 6.0 | pF |

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

Email: org@lifeelectronics.ru