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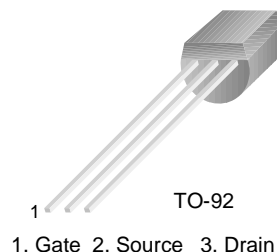
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2N5952

2N5952

N-Channel RF Amplifier

- This device is designed primarily for electronic switching applications such as low on resistance analog switching.
- Sourced from process 50.



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

| Symbol | Parameter | Value | Units |
|----------------|--|------------|------------------|
| V_{DG} | Drain-Gate Voltage | 30 | V |
| V_{GS} | Gate-Source Voltage | -30 | V |
| I_{GF} | Forward Gate Current | 10 | mA |
| T_J, T_{STG} | Operating and Storage Junction Temperature Range | -55 ~ +150 | $^\circ\text{C}$ |

* 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 150 degrees C.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

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

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|-------------------------------------|-----------------------------------|---|------|------|------|------------------|
| Off Characteristics | | | | | | |
| $V_{(BR)GSS}$ | Gate-Source Breakdown Voltage | $V_{DS} = 0, I_G = -1.0\mu\text{A}$ | -30 | | | V |
| I_{GSS} | Gate Reverse Current | $V_{GS} = -15\text{V}, V_{DS} = 0$ | | | -1.0 | nA |
| $V_{GS(off)}$ | Gate-Source Cutoff Voltage | $V_{DS} = 15\text{V}, I_D = 100\text{nA}$ | -1.3 | | -3.5 | V |
| On Characteristics | | | | | | |
| I_{DSS} | Zero-Gate Voltage Drain Current * | $V_{DS} = 15\text{V}, V_{GS} = 0$ | 4.0 | | 8.0 | mA |
| Small Signal Characteristics | | | | | | |
| g_{fs} | Forward Transfer Conductance | $V_{DS} = 15\text{V}, V_{GS} = 0, f = 1.0\text{kHz}$ | 2000 | | 6500 | μmhos |
| g_{os} | Output Conductance | $V_{DS} = 15\text{V}, V_{GS} = 0, f = 100\text{MHz}$ | | | 75 | μmhos |
| C_{iss} | Input Capacitance | $V_{DS} = 15\text{V}, V_{GS} = 0, f = 1.0\text{MHz}$ | | | 6.0 | pF |
| C_{rss} | Reverse Transfer Capacitance | $V_{DS} = 15\text{V}, V_{GS} = 0, f = 1.0\text{MHz}$ | | | 2.0 | pF |
| NF | Noise Figure | $V_{DS} = 15\text{V}, R_G = 1.0\text{k}\Omega, f = 1.0\text{kHz}$ | | | 2.0 | dB |

* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 1.0\%$

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

| Symbol | Parameter | Max. | Units |
|-----------------|---|------------|----------------------------|
| P_D | Total Device Dissipation Derate above 25°C | 350 2.8 | mW mW/ $^\circ\text{C}$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 125 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357 | $^\circ\text{C}/\text{W}$ |

Package Dimensions

2N5952

TO-92



Dimensions in Millimeters

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