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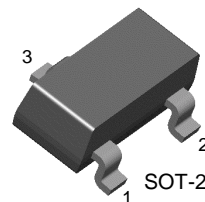
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BSR56

N-Channel JFET Low-Frequency Low-Noise Amplifier

- This device is designed for low-power chopper or switching application sourced from process 51



SOT-23
Mark: M4
1. Drain 2. Source 3. Gate

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

| Symbol | Parameter | Value | Units |
|-----------|--|------------|------------------|
| V_{DGO} | Drain-Gate Voltage | 40 | V |
| V_{GSO} | Gate-Source Voltage | - 40 | V |
| I_{GF} | Forward Gate Current | 50 | mA |
| P_{tot} | Total Power Dissipation up to $T_{amb}=40^\circ\text{C}$ | 250 | mW |
| T_{STG} | Storage Temperature Range | - 55 ~ 150 | $^\circ\text{C}$ |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |

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

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|---------------------------------|---|------|------|------|----------|
| BV_{GSS} | Gate-Source Voltage | $V_{DS} = 0V, I_C = 1\mu\text{A}$ | 40 | | | V |
| I_{GSS} | Gate Reverse Current | $V_{GS} = 20V$ | | | 1 | nA |
| I_{DSS} | Zero-Gate Voltage Drain Current | $V_{DS} = 15V, V_{GS} = 0V$ | 50 | | | mA |
| $V_{GS(off)}$ | Gate-Source Cut-off Voltage | $V_{DS} = 15V, I_D = 0.5\text{nA}$ | 4 | | 10 | V |
| $V_{DS(on)}$ | Drain-Source On Voltage | $V_{GS} = 0V, I_D = 20\text{mA}$ | | | 750 | mV |
| $r_{ds(on)}$ | Drain-Source On Reverse | $V_{GS} = 0V, I_D = 0$ | | | 25 | Ω |
| C_{rss} | Reverse Transfer Capacitance | $V_{DS} = 10V, V_{GS} = 0V$ | | | 5 | pF |
| t_d | Delay Time | $V_{DD} = 10V, V_{GS(on)} = 0V$ $I_D = 20\text{mA}, V_{GS(off)} = 10V$ | | | 6 | nS |
| t_r | Rise Time | | | | 3 | nS |
| t_{off} | Turn-off Time | | | | 25 | nS |

Package Dimensions

SOT-23



Dimensions in Millimeters

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