

# n-channel JFETs designed for . . .



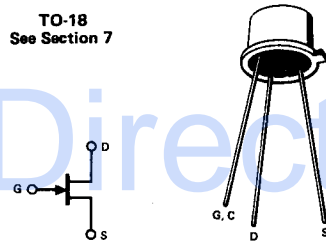
**Performance Curves NP**  
See Section 5

## ■ Small-Signal Low Power Applications

**\*ABSOLUTE MAXIMUM RATINGS (25°C)**

|   |     |               |
|---|-----|---------------|
| Gate-Drain or Gate-Source Voltage (Note 1)  | ... | -40 V         |
| Gate Current                                | ... | 10 mA         |
| Total Device Dissipation at (or below) 25°C | ... | 300 mW        |
| Free-Air Temperature (Note 2)               | ... | -65 to +175°C |
| Storage Temperature Range                   | ... | 150°C         |
| Maximum Operating Temperature               | ... |               |

TO-18  
See Section 7



**\*ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)**

| Characteristic  | 2N3368   |  | 2N3369 |              | 2N3370      |             | Unit      | Test Conditions       |       |                    |                              |  |           |
|---|----------|--|--------|--------------|-------------|-------------|-----------|-----------------------|-------|--------------------|------------------------------|--|-----------|
|   | Min      | Max                                    | Min    | Max          | Min         | Max         |           |                       |       |                    |                              |  |           |
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br><br>S<br>T<br>A<br>T<br>I<br>C | IGSS     | Gate Reverse Current                   |        | -5           | -5          | -5          | nA        | VGS = -30 V, VDS = 0  | 100°C |                    |                              |  |           |
|   |          |  |        | -1.5         | -1.5        | -1.5        | µA        |                       |       |                    |                              |  |           |
|   | BVGSS    | Gate-Source Breakdown Voltage          |        | -40          | -40         | -40         | V         | IG = -1 µA, VDS = 0   |       |                    |                              |  |           |
|   | VGS(off) | Gate-Source Cutoff Voltage             |        | -11.5        | -6.5        | -3.2        |           | VDS = 20 V, ID = 1 µA |       |                    |                              |  |           |
|   | ID(off)  | Drain Cutoff Current                   |        | 5<br>(-12.0) | 5<br>(-7.0) | 5<br>(-3.5) | nA<br>(V) | VDS = 20 V, VGS = ( ) |       |                    |                              |  |           |
|   | IDSS     | Saturation Drain Current               |        | 2.0          | 12.0        | 0.5         | 2.5       | 0.1                   | 0.6   | mA                 | VDS = 30 V (Note 3), VGS = 0 |  |           |
|   | 9fs      | Common-Source Forward Transconductance |        | 1000         | 4000        | 600         | 2500      | 300                   | 2500  | µmho               | VDS = 30 V (Note 3), VGS = 0 |  | f = 1 kHz |
|   | 9oss     | Common-Source Output Conductance       |        |              | 80          |             | 30        | 15                    |       |                    | VDS = 30 V, VGS = 0          |  | f = 1 MHz |
|   | Coss     | Common-Source Output Capacitance       |        |              | 3           |             | 3         | 3                     |       |                    |                              |  |           |
|   | Ciss     | Common-Source Input Capacitance        |        |              | 20          |             | 20        | 20                    |       | VDS = 8 V, VGS = 0 |                              |  |           |

\*JEDEC registered data.

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**NOTES:**

- Due to symmetrical geometry, these units may be operated with source and drain leads interchanged.
- Derate linearly to 150°C free-air temperature at rate of 2.1 mW/°C.
- To minimize heating on high IDSS units, this parameter is measured during a 2 ms interval 100 ms after power is applied. (Not a JEDEC condition.)