

## P-CHANNEL J-FET

Qualified per MIL-PRF-19500/296

### Devices

**2N2609**

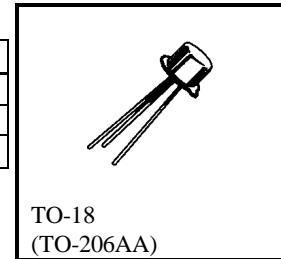
### Qualified Level

**JAN**

### ABSOLUTE MAXIMUM RATINGS ( $T_A = +25^{\circ}\text{C}$ unless otherwise noted)

| Parameters / Test Conditions                   | Symbol            | Value       | Units              |
|--|-------------------|-------------|--------------------|
| Gate-Source Voltage                            | $V_{GSS}$         | 30          | V                  |
| Power Dissipation <sup>(1)</sup>               | $P_D$             | 300         | mW                 |
| Operating Junction & Storage Temperature Range | $T_{op}, T_{stg}$ | -65 to +200 | $^{\circ}\text{C}$ |

(1) Derate linearly 1.71 mW/ $^{\circ}\text{C}$  for  $T_A > +25^{\circ}\text{C}$ .



TO-18  
(TO-206AA)

\*See appendix A for package outline

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETERS / TEST CONDITIONS   | Symbol        | Min.  | Max.       | Units           |
|--|---------------|-------|------------|-----------------|
| Gate-Source Breakdown Voltage<br>$V_{DS} = 0, I_G = 1.0 \mu\text{A}$   | $V_{(BR)GSS}$ | 30    |            | Vdc             |
| Gate Reverse Current<br>$V_{DS} = 0, V_{GS} = 30 \text{ Vdc}$<br>$V_{DS} = 0, V_{GS} = 15 \text{ Vdc}$   | $I_{GSS}$     |       | 30<br>22.5 | $\eta\text{A}$  |
| Drain Current<br>$V_{GS} = 0, V_{DS} = 5.0 \text{ Vdc}$  | $I_{DDSS}$    | -2.0  | -10.0      | mAdc            |
| Gate-Source Cutoff Voltage<br>$V_{DS} = 5.0 \text{ V}, I_D = 1.0 \mu\text{A}$  | $V_{GS(off)}$ | 0.75  | 6.0        | Vdc             |
| Magnitude of Small-Signal, Common-Source Short-Circuit Forward Transfer Admittance<br>$V_{GS} = 0, V_{DS} = 5.0 \text{ Vdc}, f = 1.0 \text{ kHz}$  | $ Y_{fs2} $   | 2,000 | 6,250      | $\mu\text{mho}$ |
| Small-Signal, Common-Source Short-Circuit Input Capacitance<br>$V_{GS} = 0, V_{DS} = 5.0 \text{ Vdc}, f = 1.0 \text{ MHz}$   | $C_{iss}$     |       | 10         | pF              |
| Common-Source Spot Noise Figure<br>$V_{GS} = 0, V_{DS} = 5.0 \text{ Vdc}, f = 1.0 \text{ kHz}$<br>$B_w = 16\%, R_G = 1.0 \text{ megohms}, e_{gen} = 1.82 \text{ mVdc}, R_L = 220 \Omega$ | NF            |       | 3.0        | dB              |