F-46

NJ1800DL Process

Silicon Junction Field-Effect Transistor

- Low-Current
- Low Gate Leakage Current
- High Input Impedance
- Low-Noise

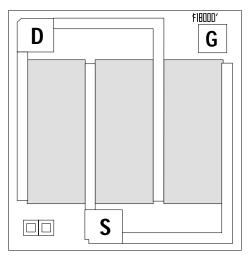
Absolute maximum ratings at 25°C free-air temperature.

Gate Current, Ig 10 mA Operating Junction Temperature, Tj $+150^{\circ}$ C Storage Temperature, Ts -65° C to $+175^{\circ}$ C

Device in this Databook based on the NJ1800DL Process.

Datasheet

IF1801



Die Size = 0.052" X 0.052" All Bond Pads ≥ 0.004" Sq. Substrate is also Gate.

| At 25°C free air temperature: | | | NJ1800DL Process | | | | | | |
|-----------------------------------|----------------------|-------|------------------|-------|------|--|--|--|--|
| Static Electrical Characteristics | | Min | Тур | Max | Unit | Test Conditions | | | |
| Gate Source Breakdown Voltage | V _{(BR)GSS} | - 15 | - 25 | | V | $I_G = -1 \mu A$, $V_{DS} = \emptyset V$ | | | |
| Reverse Gate Leakage Current | I _{GSS} | | - 30 | - 100 | pА | $V_{GS} = -10 \text{ V}, V_{DS} = \emptyset \text{ V}$ | | | |
| Drain Saturation Current (Pulsed) | I _{DSS} | 50 | | 800 | mA | V _{DS} = 10V, V _{GS} = ØV | | | |
| Gate Source Cutoff Voltage | V _{GS(OFF)} | - 0.1 | | - 4 | V | V _{DS} = 10V, I _D = 1 nA | | | |

Dynamic Electrical Characteristics

| Forward Transconductance (Pulsed) | g _{fs} | 350 | mS | V _{DS} = 10 V, V _{GS} = Ø V | f = 1 kHz |
|-----------------------------------|------------------|-----|--------|---|-----------|
| Input Capacitance | C _{iss} | 160 | pF | I _D = 1 mA, V _{GS} = ØV | f = 1 MHz |
| Feedback Capacitance | C _{rss} | 50 | pF | $V_{DS} = 10 V$, $V_{GS} = \emptyset V$ | f = 1 MHz |
| Equivalent Noise Voltage | ē _N | 0.7 | nV/√HZ | $V_{DG} = 4 V$, $I_D = 5 \text{ mA}$ | f = 1 kHz |

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