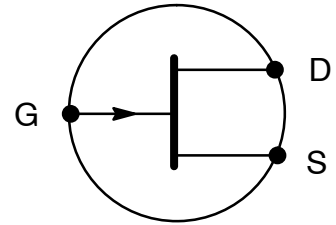




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## NTE468

### Silicon N-Channel JFET Transistor Chopper, High Speed Switch TO92 Type Package



**Applications:**

- Analog Switches
- Choppers
- Commutators

**Absolute Maximum Ratings:**

|   |                                     |
|---|-------------------------------------|
| Drain-Source Voltage, $V_{DS}$ .....                                | 35V                                 |
| Drain-Gate Voltage, $V_{DG}$ .....                                  | 35V                                 |
| Gate Current, $I_G$ .....   | 50mA                                |
| Total Device Dissipation ( $T_A = +25^\circ\text{C}$ ), $P_D$ ..... | 625mW                               |
| Derate Above $25^\circ\text{C}$ .....                               | 5.68mW/ $^\circ\text{C}$            |
| Operating Junction Temperature Range, $T_J$ .....                   | $-55^\circ$ to $+150^\circ\text{C}$ |
| Storage Temperature Range, $T_{stg}$ .....                          | $-55^\circ$ to $+150^\circ\text{C}$ |
| Lead Temperature (During Soldering), $T_L$ .....                    | $+300^\circ\text{C}$                |

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

| Parameter                         | Symbol            | Test Conditions                            | Min | Typ | Max  | Unit     |
|-----------------------------------|-------------------|--|-----|-----|------|----------|
| <b>OFF Characteristics</b>        |                   |  |     |     |      |          |
| Gate-Source Breakdown Voltage     | $V_{(BR)GS}$<br>S | $I_G = 1 \text{ A}, V_{DS} = 0$            | 35  | -   | -    | V        |
| Gate Reverse Current              | $I_{GSS}$         | $V_{GS} = -15\text{V}, V_{DS} = 0$         | -   | -   | -1.0 | nA       |
| Gate-Source Cutoff Voltage        | $V_{GS(off)}$     | $V_{DS} = 5\text{V}, I_D = 1 \text{ A}$    | -3  | -   | -10  | V        |
| Drain Cutoff Current              | $I_{D(off)}$      | $V_{DS} = 5\text{V}, V_{GS} = -10\text{V}$ | -   | -   | 1.0  | nA       |
| <b>ON Characteristics</b>         |                   |  |     |     |      |          |
| Zero-Gate Voltage Drain Current   | $I_{DSS}$         | $V_{DS} = 15\text{V}, V_{GS} = 0$ , Note 1 | 20  | -   | -    | mA       |
| Static Drain-Source ON Resistance | $r_{DS(on)}$      | $V_{DS} = 0.1\text{V}$                     | -   | -   | 30   | $^\circ$ |
| Drain-Gate ON Capacitance         | $C_{dg(on)}$      | $V_{DS} = V_{GS} = 0, f = 1\text{MHz}$     | -   | -   | 28   | pF       |
| Source-Gate ON Capacitance        | $C_{sg(on)}$      | $V_{DS} = V_{GS} = 0, f = 1\text{MHz}$     | -   | -   | 28   | pF       |
| Drain-Gate OFF Capacitance        | $C_{dg(off)}$     | $V_{GS} = -10\text{V}, f = 1\text{MHz}$    | -   | -   | 5    | pF       |
| Source-Gate OFF Capacitance       | $C_{sg(off)}$     | $V_{GS} = -10\text{V}, f = 1\text{MHz}$    | -   | -   | 5    | pF       |

Note 1. Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle = 3%.

