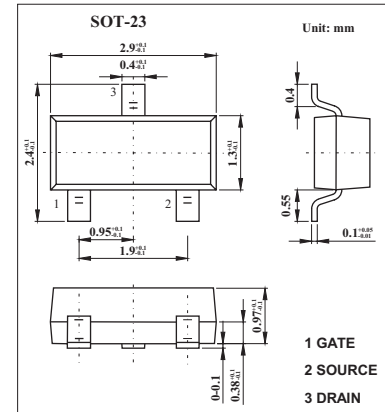
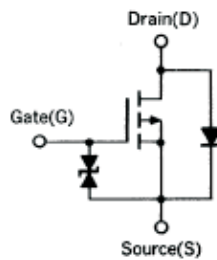


## MOS Fied Effect Transistor

### 2SJ166

#### ■ Features

- Directly driven by Ics having a 5V poer supply.
- Not necessary to consider dreving current because of its high input impedance.
- Possible to reduce the number of parts by omitting the bias resistor.



#### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter                                  | Symbol           | Rating      | Unit |
|--|------------------|-------------|------|
| Drain to source voltage V <sub>GS</sub> =0 | V <sub>DSS</sub> | -50         | V    |
| Gate to source voltage V <sub>DS</sub> =0  | V <sub>GSS</sub> | ±7.0        | V    |
| Drain current (DC)                         | I <sub>D</sub>   | ±100        | mA   |
| Drain current(pulse) *                     | I <sub>D</sub>   | ±200        | mA   |
| Total power dissipation                    | P <sub>T</sub>   | 200         | mW   |
| Channel temperature                        | T <sub>ch</sub>  | 150         | °C   |
| Storage temperature                        | T <sub>stg</sub> | -55 to +150 | °C   |

\* PW ≤ 10 ms; d ≤ 50%.

#### ■ Electrical Characteristics Ta = 25°C

| Parameter                           | Symbol               | Testconditons   | Min  | Typ  | Max  | Unit |
|-------------------------------------|----------------------|---|------|------|------|------|
| Drain cut-off current               | I <sub>DSS</sub>     | V <sub>DS</sub> =-50V, V <sub>GS</sub> =0   |      |      | -10  | μ A  |
| Gate leakage current                | I <sub>GSS</sub>     | V <sub>GS</sub> =±7.0V, V <sub>DS</sub> =0  |      |      | ±1.0 | μ A  |
| Gate cut-off voltage                | V <sub>GS(off)</sub> | V <sub>DS</sub> =-5.0V, I <sub>D</sub> =-1.0 μ A  | -1.0 | -2.1 | -3.0 | V    |
| Forward transfer admittance         | Y <sub>fs</sub>      | V <sub>DS</sub> =-5.0V, I <sub>D</sub> =-20mA   | 30   | 50   |      | ms   |
| Drain to source on-state resistance | R <sub>DS(on)</sub>  | V <sub>GS</sub> =-4.0V, I <sub>D</sub> =-20mA   |      | 18   | 50   | Ω    |
| Input capacitance                   | C <sub>iss</sub>     | V <sub>DS</sub> =-5.0V, V <sub>GS</sub> =0, f=1Mhz  |      | 18   |      | pF   |
| Output capacitance                  | C <sub>oss</sub>     |   |      | 11   |      | pF   |
| Reverse transfer capacitance        | C <sub>rss</sub>     |   |      | 3    |      | pF   |
| Turn-on delay time                  | t <sub>d(on)</sub>   | V <sub>GS(on)</sub> =-5.0V, R <sub>G</sub> =10 Ω, V <sub>DD</sub> =-5.0V, I <sub>D</sub> =-20mA R <sub>L</sub> =250 Ω |      | 40   |      | ns   |
| Rise time                           | t <sub>r</sub>       |   |      | 58   |      | ns   |
| Turn-off delay time                 | t <sub>d(off)</sub>  |   |      | 62   |      | ns   |
| Fall time                           | t <sub>f</sub>       |   |      | 62   |      | ns   |

#### ■ Marking

|         |     |
|---------|-----|
| Marking | H11 |
|---------|-----|