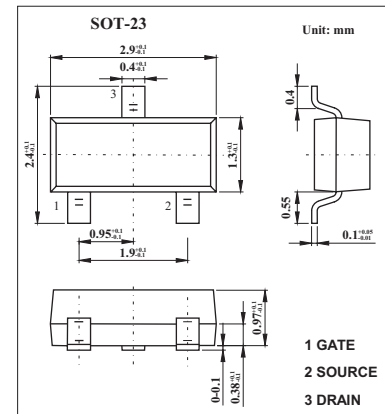


## MOS Field Effect Transistor

### 2SK1582

#### ■ Features

- Can be driven by ICs having a 5V single power supply.
- Not necessary to consider driving current because of its thgh 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>DSS</sub> | 30          | V    |
| Gate to source voltage  | V <sub>GSS</sub> | ±20         | V    |
| Drain current (DC)      | I <sub>D</sub>   | ±200        | mA   |
| Drain current(pulse) *  | I <sub>D</sub>   | ±400        | mA   |
| Power dissipation       | P <sub>D</sub>   | 200         | mW   |
| Channel temperature     | T <sub>ch</sub>  | 150         | °C   |
| Storage temperature     | T <sub>stg</sub> | -55 to +150 | °C   |

\* PW ≤ 10ms, duty cycle ≤ 5%

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

| Parameter                           | Symbol               | Testconditons   | Min | Typ | Max | Unit |
|-------------------------------------|----------------------|---|-----|-----|-----|------|
| Drain cut-off current               | I <sub>DSS</sub>     | V <sub>DS</sub> =30V, V <sub>GS</sub> =0  |     |     | 10  | μA   |
| Gate leakage current                | I <sub>GSS</sub>     | V <sub>GS</sub> =±20V, V <sub>DS</sub> =0   |     |     | ±10 | μA   |
| Gate to source cutoff voltage       | V <sub>GS(off)</sub> | V <sub>DS</sub> =5.0V, I <sub>D</sub> =10 μA  | 0.9 | 1.2 | 1.5 | V    |
| Forward transfer admittance         | Y <sub>fs</sub>      | V <sub>DS</sub> =5.0V, I <sub>D</sub> =10mA   | 20  | 60  |     | ms   |
| Drain to source on-state resistance | R <sub>DS(on)</sub>  | V <sub>GS</sub> =4.0V, I <sub>D</sub> =10mA   |     | 2.2 | 5.0 | Ω    |
|                                     |                      | V <sub>GS</sub> =10V, I <sub>D</sub> =10mA  |     | 1.4 | 3.0 | Ω    |
| Input capacitance                   | C <sub>iss</sub>     | V <sub>DS</sub> =5.0V, V <sub>GS</sub> =0, f=1MHZ   |     | 28  |     | pF   |
| Output capacitance                  | C <sub>oss</sub>     |   |     | 30  |     | pF   |
| Reverse transfer capacitance        | C <sub>rss</sub>     |   |     | 7   |     | pF   |
| Turn-on delay time                  | t <sub>d(on)</sub>   |   |     |     | 55  |      |
| Rise time                           | t <sub>r</sub>       | I <sub>D</sub> =10mA, V <sub>GS(on)</sub> =5.0V, R <sub>L</sub> =500 Ω, V <sub>DD</sub> =5.0V, R <sub>G</sub> =10 Ω |     | 200 |     | ns   |
| Turn-off delay time                 | t <sub>d(off)</sub>  |   |     | 180 |     | ns   |
| Fall time                           | t <sub>f</sub>       |   |     | 250 |     | ns   |

#### ■ Marking

|         |     |
|---------|-----|
| Marking | G15 |
|---------|-----|