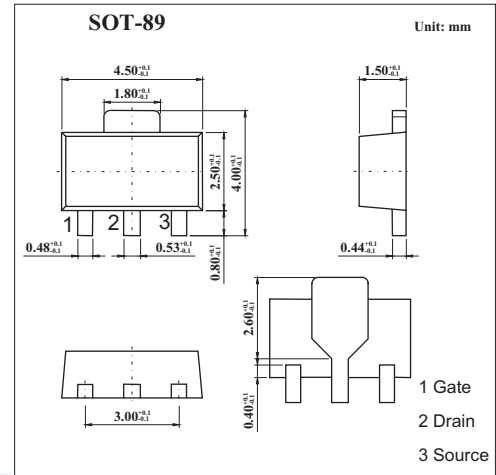


MOS Field Effect Transistor

2SK1584

■ Features

- Directly driven by Ics having a 5V P
- Has low on-state resistance
 $R_{DS(on)}=2.0\ \Omega$ MAX.@ $V_{GS}=4.0V, I_D=0.3A$
 $R_{DS(on)}=1.5\ \Omega$ MAX.@ $V_{GS}=10V, I_D=0.3A$



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|-------------------------|-----------|-------------|------------------|
| Drain to source voltage | V_{DS} | 30 | V |
| Gate to source voltage | V_{GS} | ± 20 | V |
| Drain current (DC) | I_D | ± 0.5 | A |
| Drain current(pulse) * | I_D | ± 1.0 | A |
| Power dissipation | P_D | 2.0 | W |
| Channel temperature | T_{ch} | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

* $PW \leq 10\text{ms}$, duty cycle $\leq 5\%$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|-------------------------------------|---------------|---|-----|------|----------|---------------|
| Drain cut-off current | I_{DSS} | $V_{DS}=30V, V_{GS}=0$ | | | 10 | μA |
| Gate leakage current | I_{GSS} | $V_{GS}=\pm 20V, V_{DS}=0$ | | | ± 10 | μA |
| Gate to source cutoff voltage | $V_{GS(off)}$ | $V_{DS}=10V, I_D=0.1\text{mA}$ | 1.3 | 1.85 | 2.5 | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS}=5.0V, I_D=0.5A$ | 350 | 440 | | ms |
| Drain to source on-state resistance | $R_{DS(on)}$ | $V_{GS}=4.0V, I_D=0.3A$ | | 1.2 | 2.0 | Ω |
| | | $V_{GS}=10V, I_D=0.3A$ | | 0.65 | 1.5 | Ω |
| Input capacitance | C_{iss} | $V_{DS}=5.0V, V_{GS}=0, f=1\text{MHz}$ | | 60 | | pF |
| Output capacitance | C_{oss} | | | 50 | | pF |
| Reverse transfer capacitance | C_{rss} | | | 9 | | pF |
| Turn-on delay time | $t_{d(on)}$ | | | | 80 | ns |
| Rise time | t_r | $I_D=0.3A, V_{GS(on)}=4V, R_L=33\ \Omega, V_{DD}=10V, R_G=10\ \Omega$ | | 270 | | ns |
| Turn-off delay time | $t_{d(off)}$ | | | 100 | | ns |
| Fall time | t_f | | | 110 | | ns |

■ Marking

| | |
|---------|----|
| Marking | NH |
|---------|----|