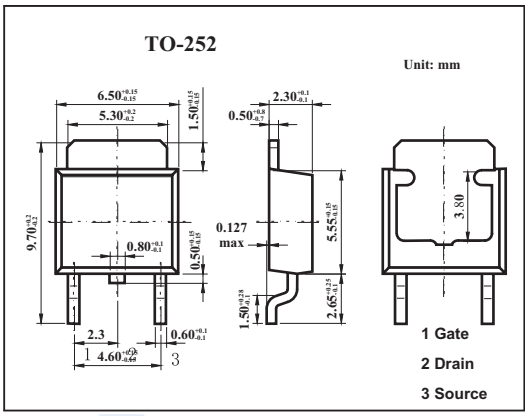
# MOS Field Effect Transistor
# 2SK3635

## Features

- High voltage: $V_{DSS}$ = 200 V
- Gate voltage rating: ±30 V
- Low on-state resistance
  $R_{DS(on)}$ = 0.43 Ω MAX. ($V_{GS}$ = 10 V, $I_D$ = 4.0 A)
- Low Ciss: Ciss = 390 pF TYP.
- Built-in gate protection diode




## Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Drain to source voltage | $V_{DSS}$ | 200 | V |
| Gate to source voltage | $V_{GSS}$ | ±30 | V |
| Drain current | $I_D$ | ±8.0 | A |
| | $I_{dp}$ * | ±24 | A |
| Power dissipation Tc=25℃<br>Ta=25℃ | $P_D$ | 24<br>1.0 | W |
| Channel temperature | $T_{ch}$ | 150 | ℃ |
| Storage temperature | $T_{stg}$ | -55 to +150 | ℃ |

* PW≤10 μ s,Duty Cycle≤1%

## Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Drain cut-off current | $I_{DSS}$ | $V_{DS}$=200V,$V_{GS}$=0 | | | 10 | μ A |
| Gate leakage current | $I_{GSS}$ | $V_{GS}$=±30V,$V_{DS}$=0 | | | ±10 | μ A |
| Gate cut off voltage | $V_{GS(off)}$ | $V_{DS}$=10V,$I_D$=1mA | 2.5 | 3.5 | 4.5 | V |
| Forward transfer admittance | \| Yfs \| | $V_{DS}$=10V,$I_D$=4.0A | 3. | 5 | | S |
| Drain to source on-state resistance | $R_{DS(on)}$ | $V_{GS}$=10V,$I_D$=4.0A | | 0.34 | 0.43 | Ω |
| Input capacitance | Ciss | $V_{DS}$=10V,$V_{GS}$=0,f=1MHZ | | 390 | | pF |
| Output capacitance | Coss | | | 95 | | pF |
| Reverse transfer capacitance | Crss | | | 45 | | pF |
| Turn-on delay time | ton | $I_D$=4.0A,$V_{GS(on)}$=10V,$R_G$=0 Ω ,$V_{DD}$=100V | | 5 | | ns |
| Rise time | tr | | | 7 | | ns |
| Turn-off delay time | toff | | | 19 | | ns |
| Fall time | tf | | | 6 | | ns |
| Total Gate Charge | $Q_G$ | $V_{DD}$ = 160V<br>$V_{GS}$ = 10 V<br>$I_D$ =8.0A | | 12 | | nC |
| Gate to Source Charge | $Q_{GS}$ | | | 2 | | nC |
| Gate to Drain Charge | $Q_{GD}$ | | | 6 | | nC |