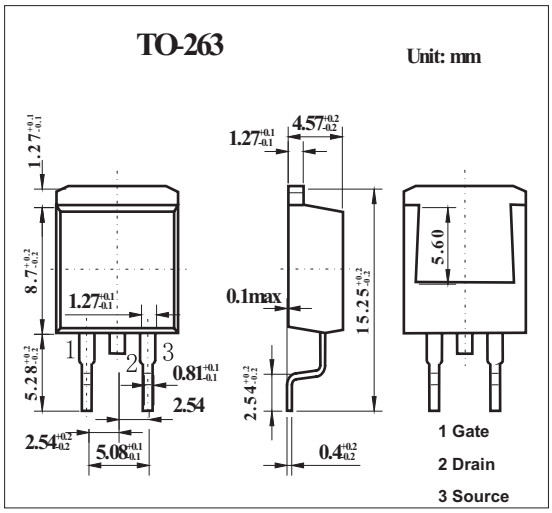
# MOS Field Effect Transistors

# 2SK2484




## ■ Features

- Low On-state Resistance:$R_{DS(on)}$=2.8Ω max.($V_{GS}$=10V,$I_D$=3.0A)
- Low Ciss Ciss=1200pF TYP
- High Avalanche Capability Ratings

## ■ Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Drain to Source Voltage | $V_{DSS}$ | 900 | V |
| Gate to Source Voltage | $V_{GSS}$ | ±30 | V |
| Drain Current(DC) | $I_{D(DS)}$ | ±5 | A |
| Drain Current(pulse) *1 | $I_{D(pulse)}$ | ±10 | A |
| Total Power Dissipation Ta = 25℃ | $P_T$ | 1.5 | W |
| Total Power Dissipation $T_C$ = 25℃ | | 75 | |
| Channel Temperature | Tch | 150 | ℃ |
| Storage temperature | Tstg | -55 to +150 | ℃ |
| Single Avalanche Current *2 | $I_{AS}$ | 5 | A |
| Single Avalanche Energy *2 | $E_{AS}$ | 75 | mJ |

*1. PW≤10μs,Dduty cycle≤1%.

*2.Starting Tch=25℃,$R_G$=25Ω,$V_{GS}$=20V→0

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■ Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Drain to Source On-state Resistance | $R_{DS(on)}$ | $V_{GS}$ = 10 V, $I_D$ = 3.0 A | | 2.2 | 2.8 | Ω |
| Gate Cut-off Voltage | $V_{GS(off)}$ | $V_{DS}$ = 10 V, $I_D$ = 1 mA | 2.5 | | 3.5 | V |
| Forward Transfer Admittance | $\|Y_{fs}\|$ | $V_{DS}$ = 20 V, $I_D$ = 3.0 A | 2.0 | | | S |
| Drain Cut-off Current | $I_{DSS}$ | $V_{DS}$ = $V_{DSS}$, $V_{GS}$ = 0 | | | 100 | μA |
| Gate Leakage Current | $I_{GSS}$ | $V_{GS}$ = □30 V, $V_{DS}$ = 0 | | | ±100 | nA |
| Input Capacitance | $C_{iss}$ | $V_{DS}$ = 10 V | | 1200 | | pF |
| Output Capacitance | $C_{oss}$ | $V_{GS}$ = 0 | | 170 | | pF |
| Feedback Capacitance | $C_{rss}$ | f = 1 MHz | | 30 | | pF |
| Turn-on Delay Time | $t_{d(on)}$ | $I_D$ = 3.0 A | | 20 | | ns |
| Rise Time | $t_r$ | $V_{GS}$ = 10 V | | 10 | | ns |
| Turn-off Delay Time | $t_{d(off)}$ | $V_{DD}$ = 150 V | | 70 | | ns |
| Fall Time | $t_f$ | $R_G$ = 10 Ω | | 15 | | ns |
| Total Gate Charge | $Q_g$ | $I_D$ = 5.0 A | | 40 | | nC |
| Gate-Source Charge | $Q_{gs}$ | $V_{DD}$ = 450 V | | 7 | | |
| Gate-Drain Charge | $Q_{gd}$ | $V_{GS}$ = 10 V | | 17 | | |
| Diode Forward Voltage | $V_{F(S-D)}$ | $I_F$ = 5.0 A, $V_{GS}$ = 0 | | 1.0 | | V |
| Reverse Recovery Time | $t_{rr}$ | $I_F$ = 5.0 A, $V_{GS}$ = 0 | | 670 | | ns |
| Reverse Recovery Charge | $Q_{rr}$ | di/dt = 50 A/ μs | | 3.5 | | μC |