

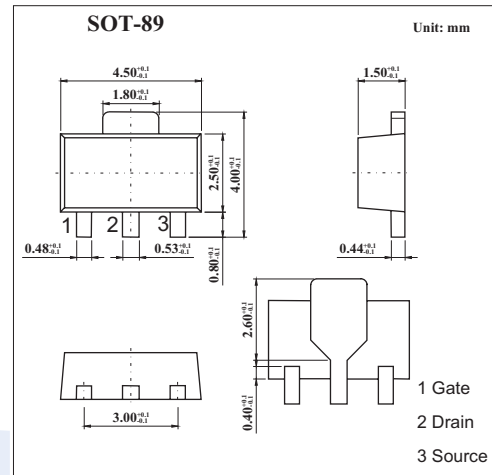
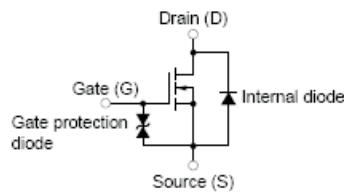
## MOS Field Effect Transistor 2SK2111

### ■ Features

- Low on-resistance

$R_{DS(on)}=0.6\ \Omega\ \text{MAX.}@V_{GS}=4.0V, I_D=0.5A$

- High switching speed



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

| Parameter               | Symbol    | Rating      | Unit             |
|-------------------------|-----------|-------------|------------------|
| Drain to source voltage | $V_{DS}$  | 60          | V                |
| Gate to source voltage  | $V_{GS}$  | $\pm 20$    | V                |
| Drain current           | $I_D$     | $\pm 1.0$   | A                |
|                         | $I_{DP}$  | $\pm 2.0$   | A                |
| Power dissipation *     | $P_D$     | 2.0         | W                |
| Channel temperature     | $T_{ch}$  | 150         | $^\circ\text{C}$ |
| Storage temperature     | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

\*  $16\ \text{cm}^2 \times 0.7\ \text{mm}$ , ceramic substrate used

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

| Parameter                           | Symbol       | Test conditions  | Min | Typ  | Max      | Unit          |
|-------------------------------------|--------------|--|-----|------|----------|---------------|
| Drain cut-off current               | $I_{DSS}$    | $V_{DS}=60V, V_{GS}=0$   |     |      | 1.0      | $\mu\text{A}$ |
| Gate leakage current                | $I_{GSS}$    | $V_{GS}=\pm 20V, V_{DS}=0$   |     |      | $\pm 10$ | $\mu\text{A}$ |
| Gate threshold voltage              | $V_{GS(th)}$ | $V_{DS}=10V, I_D=1\text{mA}$   | 0.8 | 1.4  | 2.0      | V             |
| Forward transfer admittance         | $ Y_{fs} $   | $V_{DS}=10V, I_D=0.5A$   | 0.4 |      |          | S             |
| Drain to source on-state resistance | $R_{DS(on)}$ | $V_{GS}=4.0V, I_D=0.5A$  |     | 0.32 | 0.6      | $\Omega$      |
|                                     |              | $V_{GS}=10V, I_D=0.5A$   |     | 0.24 | 0.45     | $\Omega$      |
| Input capacitance                   | $C_{iss}$    | $V_{DS}=10V, V_{GS}=0, f=1\text{MHz}$                                  |     | 170  |          | pF            |
| Output capacitance                  | $C_{oss}$    |  |     | 87   |          | pF            |
| Reverse transfer capacitance        | $C_{rss}$    |  |     | 32   |          | pF            |
| Turn-on delay time                  | $t_{d(on)}$  |  |     |      | 2.8      |               |
| Rise time                           | $t_r$        | $I_D=0.5A, V_{GS(on)}=10V, R_L=50\ \Omega, R_G=10\ \Omega, V_{DD}=25V$ |     | 2.3  |          | ns            |
| Turn-off delay time                 | $t_{d(off)}$ |  |     | 55   |          | ns            |
| Fall time                           | $t_f$        |  |     | 27   |          | ns            |

### ■ Marking

|         |    |
|---------|----|
| Marking | NU |
|---------|----|