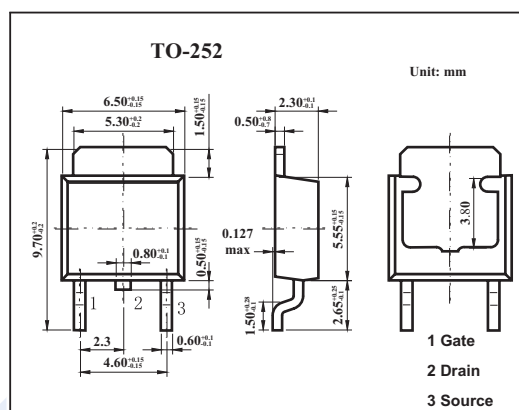
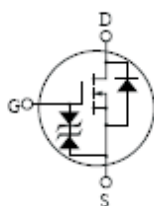


## N-Channel Silicon MOSFET

### 2SK2925S

#### ■ Features

- Low on-resistance  
 $R_{DS} = 0.060 \Omega$  typ.
- High speed switching
- 4V gate drive device can be driven from 5V source



#### ■ 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           | $I_D$      | 10          | A                |
|                         | $I_{Dp}^*$ | 40          | A                |
| Power dissipation       | $P_D$      | 20          | W                |
| Channel temperature     | $T_{ch}$   | 150         | $^\circ\text{C}$ |
| Storage temperature     | $T_{stg}$  | -55 to +150 | $^\circ\text{C}$ |

\*  $PW \leq 10 \mu\text{s}$ , Duty Cycle  $\leq 1\%$

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

| Parameter                           | Symbol        | Test conditions                                          | Min                                                              | Typ   | Max      | Unit          |
|-------------------------------------|---------------|----------------------------------------------------------|------------------------------------------------------------------|-------|----------|---------------|
| Drain to source breakdown voltage   | $V_{DS}$      | $I_D = 10\text{mA}$ , $V_{GS} = 0$                       | 60                                                               |       |          | V             |
| Drain cut-off current               | $I_{DSS}$     | $V_{DS} = 60\text{V}$ , $V_{GS} = 0$                     |                                                                  |       | 10       | $\mu\text{A}$ |
| Gate leakage current                | $I_{GSS}$     | $V_{GS} = \pm 16\text{V}$ , $V_{DS} = 0$                 |                                                                  |       | $\pm 10$ | $\mu\text{A}$ |
| Gate to source cutoff voltage       | $V_{GS(off)}$ | $V_{DS} = 10\text{V}$ , $I_D = 1\text{mA}$               | 1.5                                                              |       | 2.5      | V             |
| Forward transfer admittance         | $ Y_{fs} $    | $V_{DS} = 10\text{V}$ , $I_D = 5\text{A}$                | 5                                                                | 8     |          | S             |
| Drain to source on-state resistance | $R_{DS(on)}$  | $V_{GS} = 10\text{V}$ , $I_D = 5\text{A}$                |                                                                  | 0.060 | 0.080    | $\Omega$      |
|                                     |               | $V_{GS} = 4\text{V}$ , $I_D = 5\text{A}$                 |                                                                  | 0.095 | 0.160    | $\Omega$      |
| Input capacitance                   | $C_{iss}$     | $V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$ |                                                                  | 350   |          | pF            |
| Output capacitance                  | $C_{oss}$     |                                                          |                                                                  | 190   |          | pF            |
| Reverse transfer capacitance        | $C_{rss}$     |                                                          |                                                                  | 70    |          | pF            |
| Turn-on delay time                  | $t_{on}$      |                                                          | $I_D = 5\text{A}$ , $V_{GS(on)} = 10\text{V}$ , $R_L = 6 \Omega$ |       | 10       |               |
| Rise time                           | $t_r$         |                                                          |                                                                  | 55    |          | ns            |
| Turn-off delay time                 | $t_{off}$     |                                                          |                                                                  | 60    |          | ns            |
| Fall time                           | $t_f$         |                                                          |                                                                  | 70    |          | ns            |