

# 2SK2373

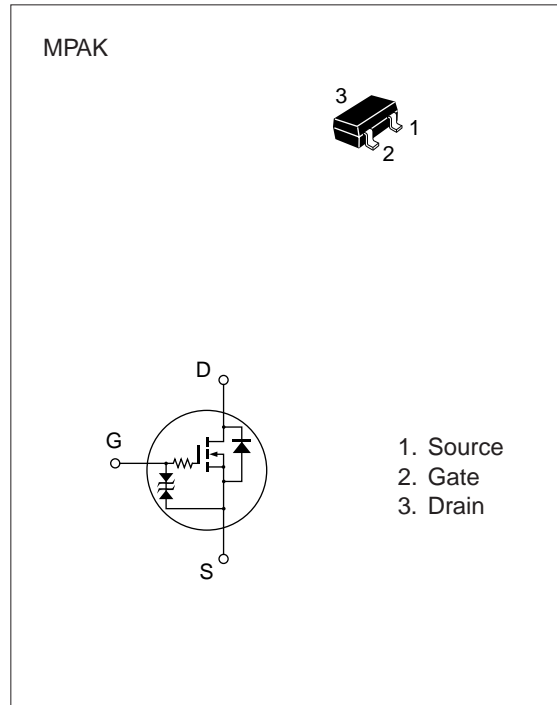
## Silicon N Channel MOS FET

### Application

Low frequency power switching

### Features

- Low on-resistance
- Small package
- Low drive current
- 4 V gate drive device - - - can be driven from 5 V source.
- Suitable for low signal load switch



**Table 1 Absolute Maximum Ratings** ( $T_a = 25^\circ\text{C}$ )

| Item                                   | Symbol                  | Ratings     | Unit             |
|--|-------------------------|-------------|------------------|
| Drain to source voltage                | $V_{DSS}$               | 30          | V                |
| Gate to source voltage                 | $V_{GSS}$               | $\pm 20$    | V                |
| Drain current                          | $I_D$                   | 0.2         | A                |
| Drain peak current                     | $I_{D(\text{pulse})}^*$ | 0.4         | A                |
| Body-drain diode reverse drain current | $I_{DR}$                | 0.2         | A                |
| Channel dissipation                    | $P_{ch}^{**}$           | 150         | mW               |
| Channel temperature                    | $T_{ch}$                | 150         | $^\circ\text{C}$ |
| Storage temperature                    | $T_{stg}$               | -55 to +150 | $^\circ\text{C}$ |

\*  $PW \leq 100 \mu\text{s}$ , duty cycle  $\leq 10\%$

\*\* Marking is "ZE-".

**Table 2 Electrical Characteristics** ( $T_a = 25^\circ\text{C}$ )

| Item                                       | Symbol        | Min      | Typ  | Max     | Unit          | Test Conditions                                    |
|--|---------------|----------|------|---------|---------------|--|
| Drain to source breakdown voltage          | $V_{(BR)DSS}$ | 30       | —    | —       | V             | $I_D = 100 \mu\text{A}$ , $V_{GS} = 0$             |
| Gate to source breakdown voltage           | $V_{(BR)GSS}$ | $\pm 20$ | —    | —       | V             | $I_G = \pm 100 \mu\text{A}$ , $V_{DS} = 0$         |
| Gate to source leak current                | $I_{GSS}$     | —        | —    | $\pm 2$ | $\mu\text{A}$ | $V_{GS} = \pm 16 \text{ V}$ , $V_{DS} = 0$         |
| Zero gate voltage drain current            | $I_{DSS}$     | —        | —    | 1       | $\mu\text{A}$ | $V_{DS} = 30 \text{ V}$ , $V_{GS} = 0$             |
| Gate to source cutoff voltage              | $V_{GS(off)}$ | 1.0      | —    | 2.0     | V             | $I_D = 10 \mu\text{A}$ , $V_{DS} = 5 \text{ V}$    |
| Static drain to source on state resistance | $R_{DS(on)}$  | —        | 1.4  | 2.5     | $\Omega$      | $I_D = 20 \text{ mA}$<br>$V_{GS} = 4 \text{ V}^*$  |
|  |               | —        | 1.0  | 1.4     | $\Omega$      | $I_D = 10 \text{ mA}$<br>$V_{GS} = 10 \text{ V}^*$ |
| Input capacitance                          | $C_{iss}$     | —        | 17.8 | —       | pF            | $V_{DS} = 10 \text{ V}$                            |
| Output capacitance                         | $C_{oss}$     | —        | 25.4 | —       | pF            | $V_{GS} = 0$                                       |
| Reverse transfer capacitance               | $C_{rss}$     | —        | 3.7  | —       | pF            | $f = 1 \text{ MHz}$                                |
| Turn-on delay time                         | $t_{d(on)}$   | —        | 50   | —       | ns            | $I_D = 0.1 \text{ A}$                              |
| Rise time                                  | $t_r$         | —        | 125  | —       | ns            | $V_{GS} = 10 \text{ V}$                            |
| Turn-off delay time                        | $t_{d(off)}$  | —        | 660  | —       | ns            | $R_L = 100 \Omega$                                 |
| Fall time                                  | $t_f$         | —        | 400  | —       | ns            | $PW = 2 \mu\text{s}$                               |

\* Pulse Test

