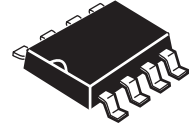
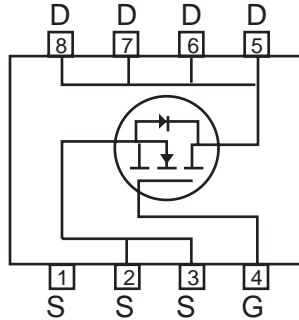


## N-Channel Enhancement Mode MOSFET

### Features

- 20V/6.0A  
 $R_{DS(ON)}=40m.$  (Typ.) @  $V_{GS}=4.5V, I_D=6A$   
 $R_{DS(ON)}=45m.$  (Typ.) @  $V_{GS}=2.5V, I_D=5.2A$
- Super High Dense Cell Design for Extremely Low  $R_{DS(ON)}$
- Reliable and Rugged
- SOP-8 Package

### Pin Description



Top View of SOP-8

### Applications

- Power Management in Notebook Computer  
 Portable Equipment and Battery Powered Systems.

### Electrical Characteristics ( $T_A = 25^\circ C$ unless otherwise noted)

| Symbol        | Parameter                        | Test Condition                   | NK9410 |      |           | Unit       |
|---------------|----------------------------------|----------------------------------|--------|------|-----------|------------|
|               |                                  |                                  | Min.   | Typ. | Max.      |            |
| <b>Static</b> |                                  |                                  |        |      |           |            |
| $BV_{DSS}$    | Drain-Source Breakdown Voltage   | $V_{GS}=0V, I_D=250\mu A$        | 16     |      |           | V          |
| $I_{DSS}$     | Zero Gate Voltage Drain Current  | $V_{DS}=12V, V_{GS}=0V$          |        |      | 1         | $\mu A$    |
| $V_{GS(th)}$  | Gate Threshold Voltage           | $V_{DS}=V_{GS}, I_{DS}=250\mu A$ | 0.4    |      | 1.3       | V          |
| $I_{GSS}$     | Gate Leakage Current             | $V_{GS}=\pm 8V, V_{DS}=0V$       |        |      | $\pm 100$ | nA         |
| $R_{DS(ON)}$  | Drain-Source On-State Resistance | $V_{GS}=4.5V, I_{DS}=6A$         |        | 40   | 50        | m $\Omega$ |
|               |                                  | $V_{GS}=2.5V, I_{DS}=5.2A$       |        | 45   | 55        |            |
| $V_{SD}$      | Diode Forward Voltage            | $I_{SD}=1.5A, V_{GS}=0V$         |        |      | 1.2       | V          |

### Absolute Maximum Ratings ( $T_A = 25$ unless otherwise noted)

| Symbol    | Parameter                          | Rating  | Unit |
|-----------|------------------------------------|---------|------|
| $V_{DSS}$ | Drain-Source Voltage               | 20      | V    |
| $V_{GSS}$ | Gate-Source Voltage                | $\pm 8$ |      |
| $I_D^*$   | Maximum Drain Current – Continuous | 6       | A    |
| $I_{DM}$  | Maximum Drain Current – Pulsed     | 20      |      |

\* Surface Mounted on FR4 Board,  $t \leq 10$  sec.