

**isc N-Channel MOSFET Transistor**
**STD8NM60ND**
**FEATURES**

- Drain Current  $-I_D = 7A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.7 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

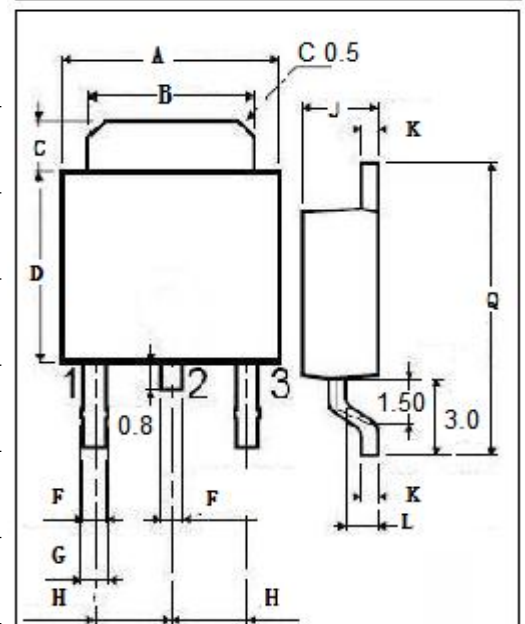
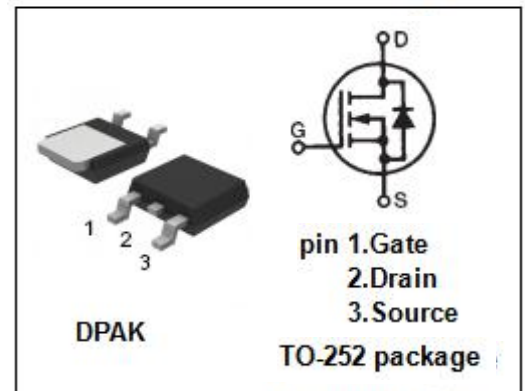
- Switching application

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 600      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous               | 7        | A          |
| $I_{DM}$  | Drain Current-Single Pluse             | 28       | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 70       | W          |
| $T_J$     | Max. Operating Junction Temperature    | 150      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |

**THERMAL CHARACTERISTICS**

| SYMBOL      | PARAMETER                            | MAX  | UNIT         |
|-------------|--------------------------------------|------|--------------|
| $R_{thj-c}$ | Thermal Resistance, Junction to Case | 1.79 | $^\circ C/W$ |



| DIM | mm   |      |
|-----|------|------|
|     | MIN  | MAX  |
| A   | 6.40 | 6.60 |
| B   | 5.20 | 5.40 |
| C   | 1.15 | 1.35 |
| D   | 5.70 | 6.10 |
| F   | 0.65 |      |
| G   | 0.75 |      |
| H   | 2.10 | 2.50 |
| J   | 2.10 | 2.40 |
| K   | 0.40 | 0.60 |
| L   | 0.90 | 1.10 |
| Q   | 9.90 | 10.1 |

## isc N-Channel MOSFET Transistor

## STD8NM60ND

## ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$  unless otherwise specified

| SYMBOL        | PARAMETER                       | CONDITIONS   | MIN | MAX       | UNIT          |
|---------------|---------------------------------|--|-----|-----------|---------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage  | $V_{GS}=0; I_D=1\text{mA}$   | 600 |           | V             |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}; I_D=0.25\text{mA}$   | 3   | 5         | V             |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=10\text{V}; I_D=3.5\text{A}$   |     | 0.7       | $\Omega$      |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 20\text{V}; V_{DS}=0$  |     | $\pm 100$ | nA            |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=\text{Max rating};$<br>$V_{GS}=\text{Max rating}; T_j=125^\circ\text{C}$ |     | 1<br>100  | $\mu\text{A}$ |
| $V_{SD}$      | Forward On-Voltage              | $I_S=7\text{A}; V_{GS}=0$  |     | 1.3       | V             |

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