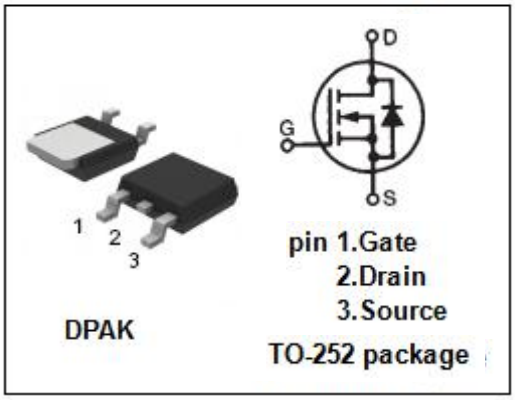
# Isc N-Channel MOSFET Transistor TK7P60W

## • FEATURES

- Low drain-source on-resistance:
  $R_{DS}(ON)$ = 0.5Ω (typ.)
- Easy to control Gate switching
- Enhancement mode:
  Vth = 2.7 to 3.7V ($V_{DS}$ = 10 V, $I_D$=0.35mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## • DESCRITION

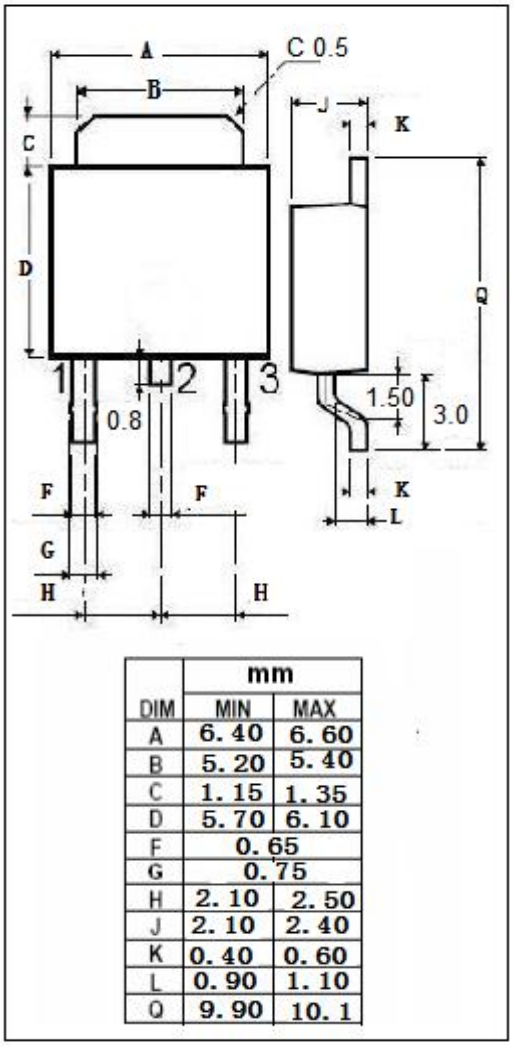
- Switching Voltage Regulators

## • ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage | 600 | V |
| $V_{GS}$ | Gate-Source Voltage | ±30 | V |
| $I_D$ | Drain Current-Continuous | 7.0 | A |
| $I_{DM}$ | Drain Current-Single Pulsed | 28 | A |
| $P_D$ | Total Dissipation @$T_C$=25℃ | 30 | W |
| $T_j$ | Max. Operating Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -55~150 | ℃ |

## • THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| Rth(ch-c) | Channel-to-case thermal resistance | 4.17 | ℃/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 |

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## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $BV_{DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$=0V; $I_D$= 10mA | 600 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= 10V; $I_D$=0.35mA | 2.7 | | 3.7 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$=3.5A | | 500 | 600 | mΩ |
| $I_{GSS}$ | Gate-Source Leakage Current | $V_{GS}$= ±30V;$V_{DS}$= 0V | | | ±1 | μA |
| $I_{DSS}$ | Drain-Source Leakage Current | $V_{DS}$= 600V; $V_{GS}$= 0V | | | 10 | μA |
| $V_{SDF}$ | Diode forward voltage | $I_{DR}$ =7.0A, $V_{GS}$ = 0 V | | | 1.7 | V |

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