

**iscN-Channel MOSFET Transistor**
**TK15A60D**
**• FEATURES**

- Low drain-source on-resistance:  
 $R_{DS(ON)} = 370m\Omega$  (MAX)
- Enhancement mode:  
 $V_{th} = 2$  to  $4V$  ( $V_{DS} = 10V$ ,  $I_D = 1.0mA$ )
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

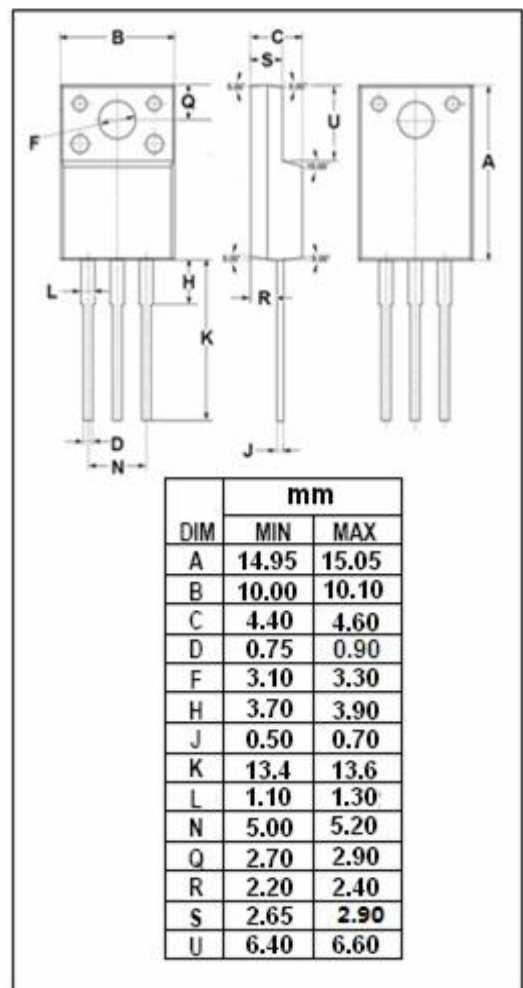
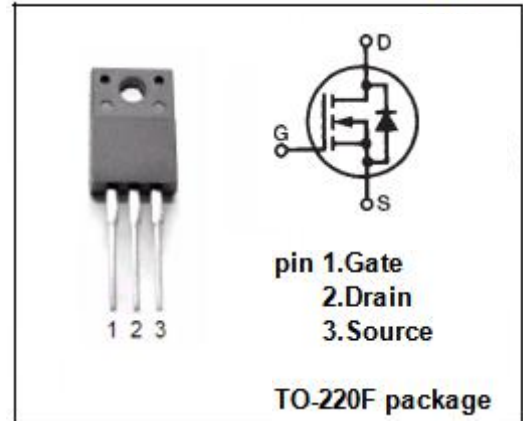
- Switching Voltage Regulators

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

| SYMBOL    | PARAMETER                            | VALUE    | UNIT       |
|-----------|--------------------------------------|----------|------------|
| $V_{DS}$  | Drain-Source Voltage                 | 600      | V          |
| $V_{GS}$  | Gate-Source Voltage                  | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous             | 15       | A          |
| $I_{DM}$  | Drain Current-Single Pulsed          | 60       | A          |
| $P_D$     | Total Dissipation @ $T_c=25^\circ C$ | 50       | W          |
| $T_j$     | Max. Operating Junction Temperature  | 150      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                  | -55~150  | $^\circ C$ |

**• THERMAL CHARACTERISTICS**

| SYMBOL         | PARAMETER                          | MAX | UNIT         |
|----------------|------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 2.5 | $^\circ C/W$ |



**iscN-Channel MOSFET Transistor****TK15A60D****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

| SYMBOL              | PARAMETER                      | CONDITIONS                                   | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|--|-----|-----|-----|------|
| BV <sub>DSS</sub>   | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V; I <sub>D</sub> = 10mA   | 600 |     |     | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> = 10V; I <sub>D</sub> =1.0mA | 2   |     | 4   | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> =10V; I <sub>D</sub> =7.5A   |     |     | 370 | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0V |     |     | ±1  | μA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> =600V; V <sub>GS</sub> = 0V  |     |     | 10  | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>DR</sub> =15A, V <sub>GS</sub> = 0 V  |     |     | 1.7 | V    |

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