

**isc N-Channel MOSFET Transistor****IRFP15N60L****DESCRIPTION**

- Drain Current  $-I_D=40A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DS}= 600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)}=0.46 \Omega (\text{Max})$
- High Power,High Speed Applications
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

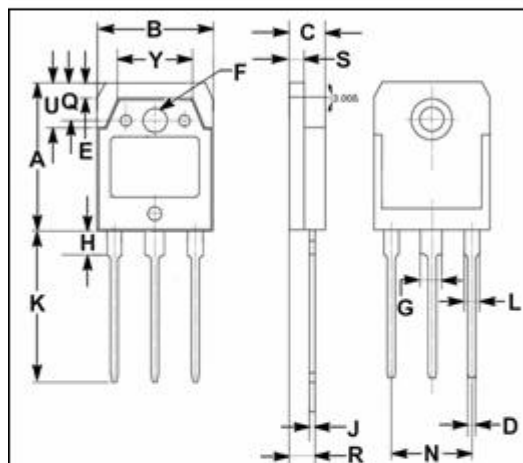
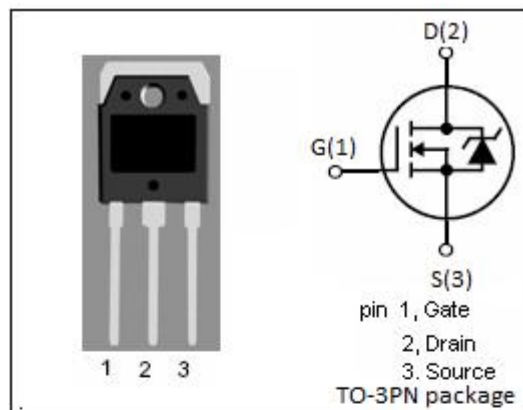
- Switching power supplies
- UPS
- Motor controls
- High energy pulse circuits.

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

| SYMBOL    | ARAMETER                                   | VALUE    | UNIT        |
|-----------|--------------------------------------------|----------|-------------|
| $V_{DS}$  | Drain-Source Voltage ( $V_{GS}=0$ )        | 600      | V           |
| $V_{GS}$  | Gate-Source Voltage                        | $\pm 30$ | V           |
| $I_D$     | Drain Current-continuous@ $TC=25^{\circ}C$ | 15       | A           |
| $P_{tot}$ | Total Dissipation@ $TC=25^{\circ}C$        | 280      | W           |
| $T_j$     | Max. Operating Junction Temperature        | 150      | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature Range                  | -55~150  | $^{\circ}C$ |

**THERMAL CHARACTERISTICS**

| SYMBOL       | PARAMETER                           | MAX  | UNIT          |
|--------------|-------------------------------------|------|---------------|
| $R_{th j-c}$ | Thermal Resistance,Junction to Case | 0.83 | $^{\circ}C/W$ |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 19.60 | 20.30 |
| B   | 15.50 | 15.70 |
| C   | 4.70  | 4.90  |
| D   | 0.90  | 1.10  |
| E   | 1.90  | 2.10  |
| F   | 3.40  | 3.60  |
| G   | 2.90  | 3.20  |
| H   | 3.20  | 3.40  |
| J   | 0.595 | 0.605 |
| K   | 19.80 | 20.70 |
| L   | 1.90  | 2.20  |
| N   | 10.89 | 10.91 |
| Q   | 4.90  | 5.10  |
| R   | 3.35  | 3.45  |
| S   | 1.995 | 2.100 |
| U   | 5.90  | 6.20  |
| Y   | 9.90  | 10.10 |

**isc N-Channel Mosfet Transistor****IRFP15N60L****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

| SYMBOL               | PARAMETER                        | CONDITIONS                                                | MIN | TYPE | MAX  | UNIT |
|----------------------|----------------------------------|-----------------------------------------------------------|-----|------|------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage   | V <sub>GS</sub> =0; I <sub>D</sub> =250μA                 | 600 |      |      | V    |
| V <sub>GS(TH)</sub>  | Gate Threshold Voltage           | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =250μA | 3.0 |      | 5.0  | V    |
| R <sub>DS(ON)</sub>  | Drain-Source On-stage Resistance | V <sub>GS</sub> =10V; I <sub>D</sub> =9A                  |     |      | 0.46 | Ω    |
| I <sub>GSS</sub>     | Gate Source Leakage Current      | V <sub>GS</sub> =±30V; V <sub>DS</sub> =0                 |     |      | ±100 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current  | V <sub>DS</sub> =600V; V <sub>GS</sub> =0                 |     |      | 50   | uA   |
| V <sub>SD</sub>      | Diode Forward Voltage            | I <sub>S</sub> =15A; V <sub>GS</sub> =0                   |     |      | 1.5  | V    |

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