

## isc N-Channel MOSFET Transistor

## FCP150N65F

## • FEATURES

- With TO-220 packaging
- High speed switching
- Low gate input resistance
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

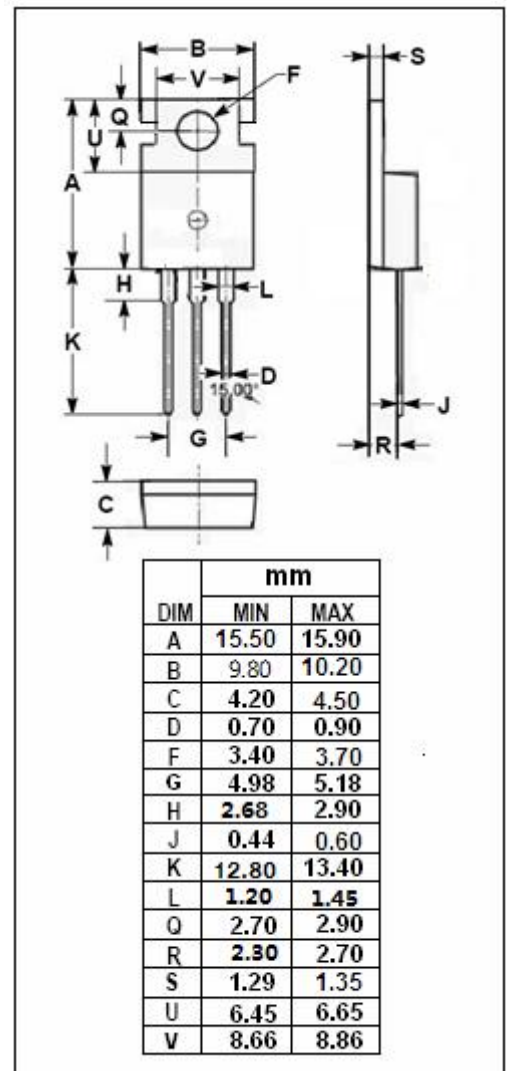
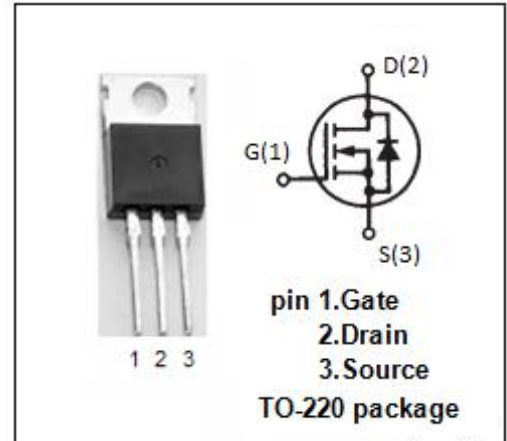
- Power supply
- Switching applications

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

| SYMBOL    | PARAMETER                                                                         | VALUE      | UNIT               |
|-----------|-----------------------------------------------------------------------------------|------------|--------------------|
| $V_{DS}$  | Drain-Source Voltage                                                              | 650        | V                  |
| $V_{GS}$  | Gate-Source Voltage                                                               | $\pm 20$   | V                  |
| $I_D$     | Drain Current-Continuous; @ $T_c=25^{\circ}\text{C}$<br>$T_c=100^{\circ}\text{C}$ | 24<br>14.9 | A                  |
| $I_{DM}$  | Drain Current-Single Pulsed                                                       | 72         | A                  |
| $P_D$     | Total Dissipation                                                                 | 298        | W                  |
| $T_j$     | Operating Junction Temperature                                                    | -55~150    | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature                                                               | -55~150    | $^{\circ}\text{C}$ |

## • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                          | MAX  | UNIT                 |
|----------------|------------------------------------|------|----------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 0.42 | $^{\circ}\text{C/W}$ |



**isc N-Channel MOSFET Transistor****FCP150N65F****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               | 650 |     |      | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =2.4mA | 3   |     | 5    | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> = 12A              |     |     | 150  | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V             |     |     | ±100 | nA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> = 650V; V <sub>GS</sub> = 0V             |     |     | 10   | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =10A, V <sub>GS</sub> = 0 V              |     |     | 1.2  | V    |

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