

**isc N-Channel MOSFET Transistor****IPP072N10N3, IIPP072N10N3****• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 7.2m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

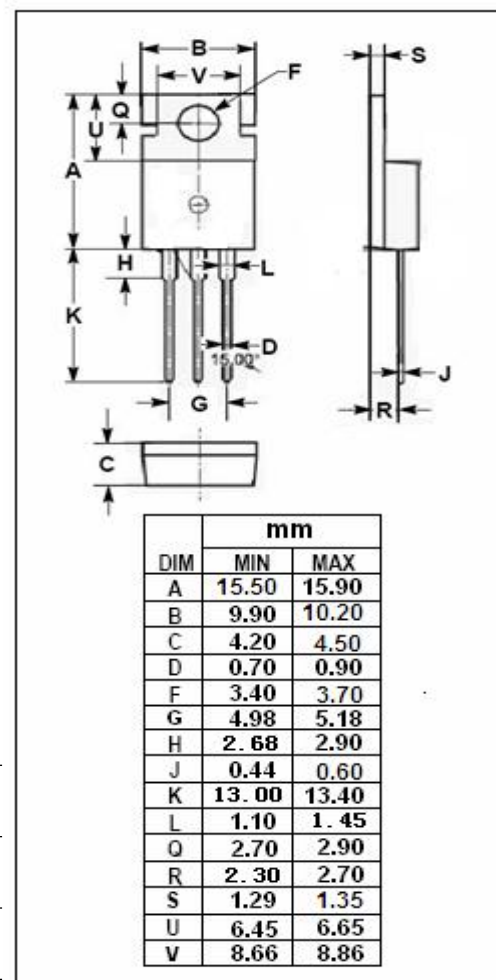
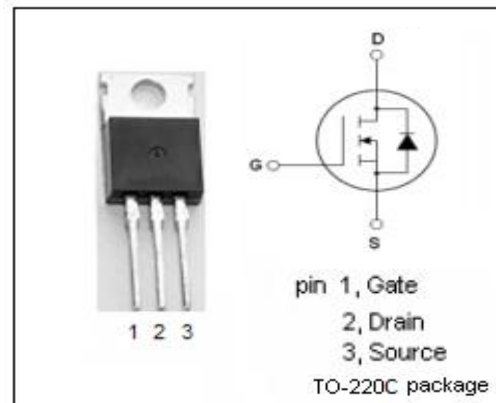
- reliable device for use in a wide variety of applications

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

| SYMBOL    | PARAMETER                                  | VALUE    | UNIT             |
|-----------|--------------------------------------------|----------|------------------|
| $V_{DS}$  | Drain-Source Voltage                       | 100      | V                |
| $V_{GS}$  | Gate-Source Voltage                        | $\pm 20$ | V                |
| $I_D$     | Drain Current-Continuous                   | 80       | A                |
| $I_{DM}$  | Drain Current-Single Pulsed                | 320      | A                |
| $P_D$     | Total Dissipation @ $T_c=25^\circ\text{C}$ | 150      | W                |
| $T_j$     | Max. Operating Junction Temperature        | 175      | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                        | -55~175  | $^\circ\text{C}$ |

**• THERMAL CHARACTERISTICS**

| SYMBOL         | PARAMETER                             | MAX | UNIT               |
|----------------|---------------------------------------|-----|--------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance    | 1   | $^\circ\text{C/W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62  | $^\circ\text{C/W}$ |



**isc N-Channel MOSFET Transistor****IPP072N10N3, IIPP072N10N3****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> =1mA                  | 100 |     |     | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =90 μ A | 2.0 |     | 3.5 | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> =10V; I <sub>D</sub> =80A                 |     |     | 7.2 | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> =20V; V <sub>DS</sub> =0V                 |     |     | 0.1 | μ A  |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V               |     |     | 1   | μ A  |
| V <sub>SD</sub>     | Diode forward voltage          | I <sub>F</sub> =80A, V <sub>GS</sub> = 0 V                |     |     | 1.2 | V    |

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