

**isc N-Channel MOSFET Transistor**
**IPP070N08N3,IIPP070N08N3**
**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 6.7m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

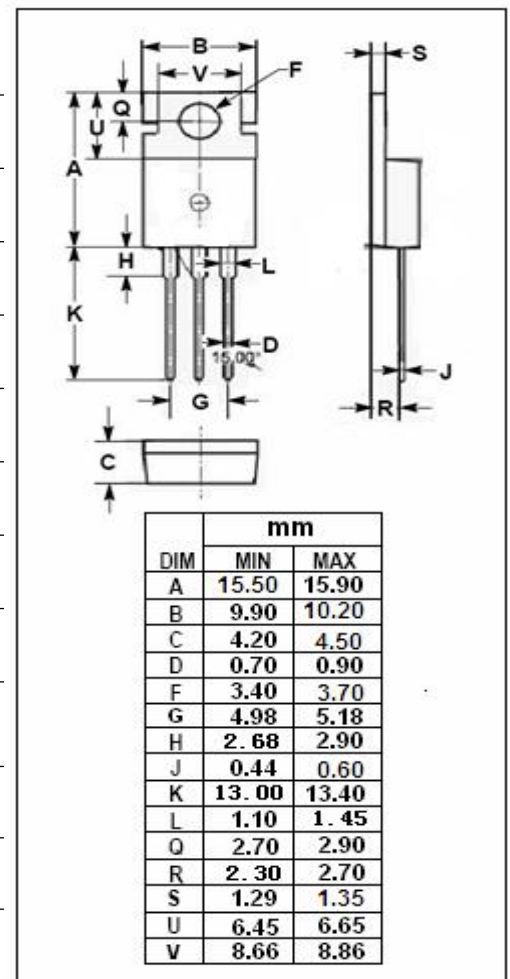
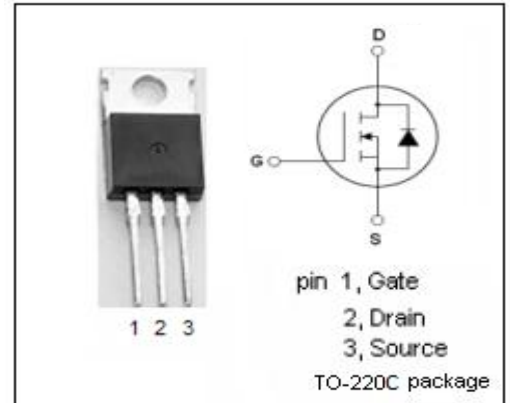
- Ideal for high frequency switching and sync. Rec.
- Optimized technology for DC/DC converters

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

| SYMBOL    | PARAMETER                            | VALUE    | UNIT       |
|-----------|--------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                 | 80       | 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 @ $T_c=25^\circ C$ | 136      | W          |
| $T_j$     | Max. Operating Junction Temperature  | 175      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                  | -55~175  | $^\circ C$ |

**• THERMAL CHARACTERISTICS**

| SYMBOL         | PARAMETER                             | MAX | UNIT         |
|----------------|---------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance    | 1.1 | $^\circ C/W$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62  | $^\circ C/W$ |



## isc N-Channel MOSFET Transistor

## IPP070N08N3, IIPP070N08N3

## ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$  unless otherwise specified

| SYMBOL       | PARAMETER                      | CONDITIONS                                       | MIN | TYP | MAX | UNIT          |
|--------------|--------------------------------|--|-----|-----|-----|---------------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D = 1\text{mA}$                    | 80  |     |     | V             |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}; I_D=73\ \mu\text{A}$             | 2   |     | 3.5 | V             |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V; I_D=73A$                            |     |     | 6.7 | m $\Omega$    |
|              |                                | $V_{GS}=6V; I_D=36A$                             |     |     | 12  | m $\Omega$    |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}=20V; V_{DS}=0V$                          |     |     | 100 | nA            |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=80V; V_{GS}= 0V$                         |     |     | 1   | $\mu\text{A}$ |
|              |                                | $V_{DS}=80V; V_{GS}= 0V; T_j= 125^\circ\text{C}$ |     |     | 100 | $\mu\text{A}$ |
| $V_{SD}$     | Diode forward voltage          | $I_F =73A; V_{GS} = 0\text{V}$                   |     |     | 1.2 | V             |

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