

## isc N-Channel MOSFET Transistor

## IXTP230N075T2

## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 4.2m\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATION

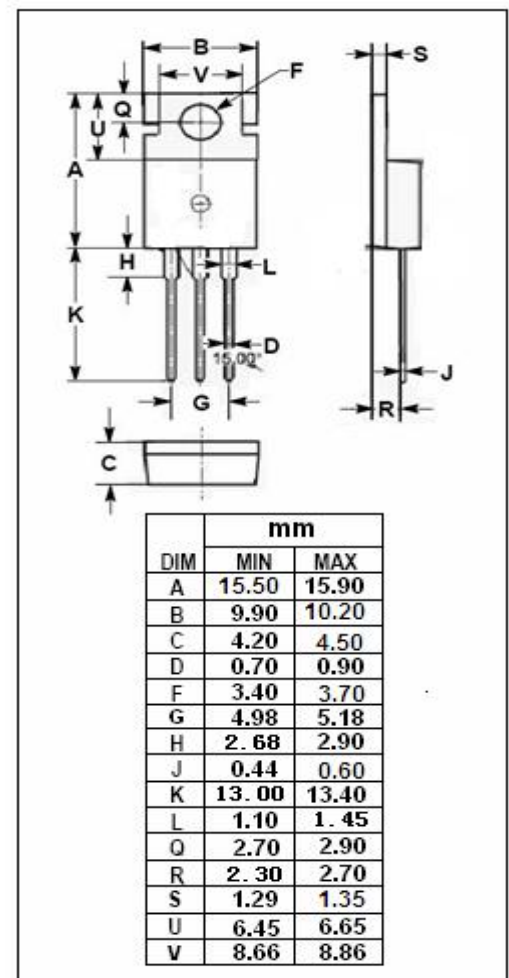
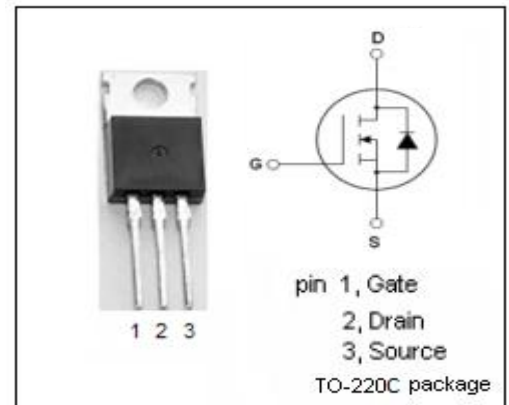
- DC/DC Converters
- High Current Switching Applications

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

| SYMBOL    | PARAMETER                            | VALUE    | UNIT       |
|-----------|--------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                 | 75       | V          |
| $V_{GS}$  | Gate-Source Voltage                  | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous             | 230      | A          |
| $I_{DM}$  | Drain Current-Single Pulsed          | 700      | A          |
| $P_D$     | Total Dissipation @ $T_c=25^\circ C$ | 480      | W          |
| $T_j$     | Operating Junction Temperature       | -55~175  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                  | -55~175  | $^\circ C$ |

## • THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | MAX  | UNIT         |
|---------------|-------------------------------------|------|--------------|
| $R_{th(j-c)}$ | Junction-to-case thermal resistance | 0.31 | $^\circ C/W$ |



**isc N-Channel MOSFET Transistor****IXTP230N075T2****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL       | PARAMETER                      | CONDITIONS                                                 | MIN | MAX       | UNIT      |
|--------------|--------------------------------|------------------------------------------------------------|-----|-----------|-----------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V$ ; $I_D = 250\ \mu A$                           | 75  |           | V         |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}$ ; $I_D = 250\ \mu A$                       | 2.0 | 4.0       | V         |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V$ ; $I_D=50A$                                   |     | 4.2       | $m\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}= \pm 20V$ ; $V_{DS}=0V$                            |     | $\pm 200$ | nA        |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=V_{DSS}$ ; $V_{GS}=0V$                             |     | 5         | $\mu A$   |
|              |                                | $V_{DS}=V_{DSS}$ ; $V_{GS}=0V$ ; $T_J=150^{\circ}\text{C}$ |     | 150       |           |
| $V_{SD}$     | Diode forward voltage          | $I_F=100A$ ; $V_{GS}=0V$                                   |     | 1.3       | V         |

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