

## isc N-Channel MOSFET Transistor

## IXTA230N04T4

## • FEATURES

- With TO-220F 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

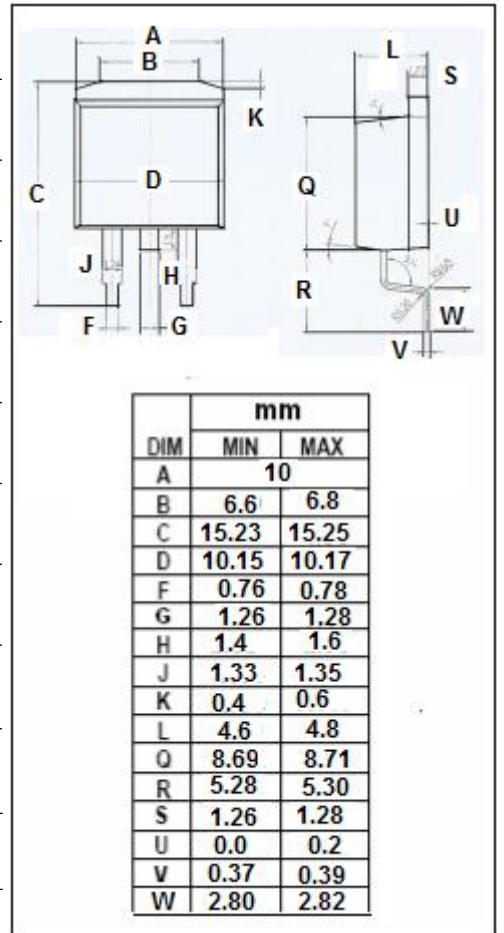
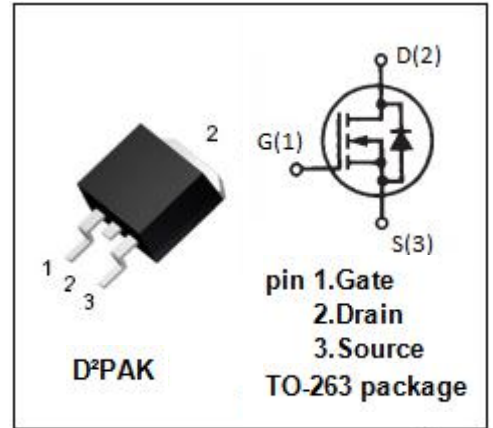
- Power supply
- Switching applications

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

| SYMBOL    | PARAMETER   | VALUE      | UNIT               |
|-----------|---|------------|--------------------|
| $V_{DS}$  | Drain-Source Voltage  | 40         | V                  |
| $V_{GS}$  | Gate-Source Voltage   | $\pm 15$   | V                  |
| $I_D$     | Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$<br>$T_c=100^{\circ}\text{C}$ | 230<br>160 | A                  |
| $I_{DM}$  | Drain Current-Single Pulsed   | 700        | A                  |
| $P_D$     | Total Dissipation   | 40         | W                  |
| $T_j$     | 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 | 3.75 | $^{\circ}\text{C/W}$ |



**isc N-Channel MOSFET Transistor****IXTA230N04T4****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> = 0.25mA  | 40  |     |       | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =5V; I <sub>D</sub> =0.25mA   | 2.0 |     | 4.0   | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> =110A   |     |     | 2.9   | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ± 15V; V <sub>DS</sub> = 0V |     |     | ± 0.2 | μA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> = 40V; V <sub>GS</sub> = 0V;  |     |     | 5     | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =100A, V <sub>GS</sub> = 0 V  |     |     | 1.4   | V    |

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