

**isc N-Channel MOSFET Transistor**
**IXFP14N85X**
**• FEATURES**

- Drain Source Voltage-  
:  $V_{DSS} \geq 850V$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} \leq 550m\Omega @ V_{GS} = 10V$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

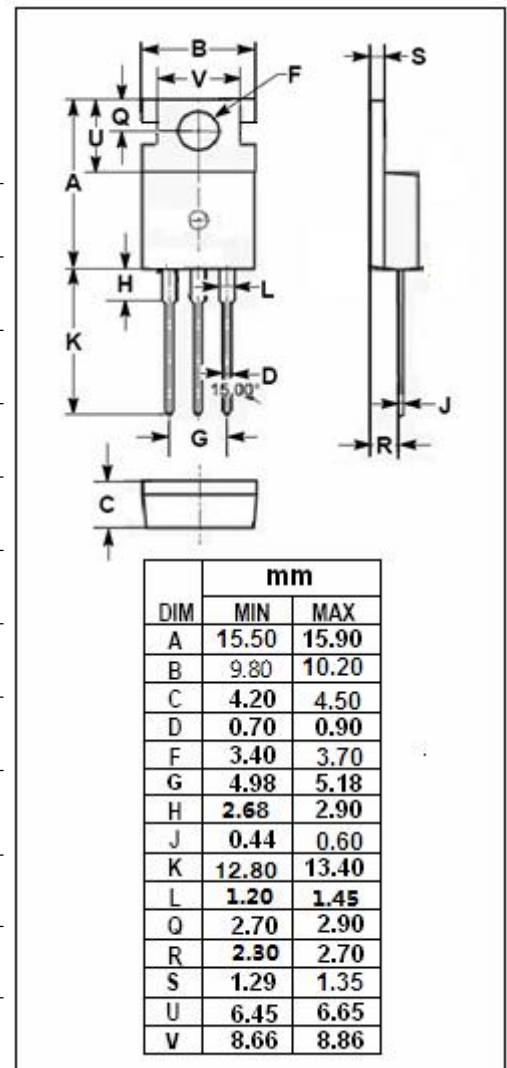
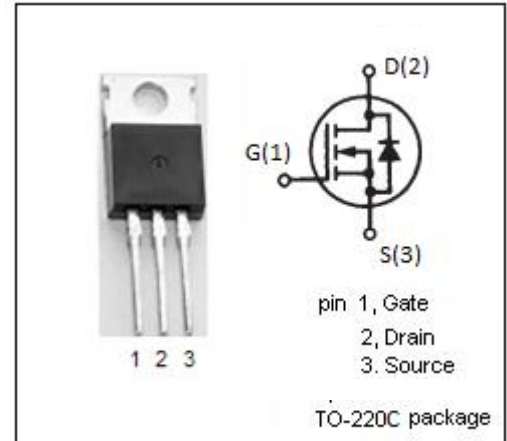
- DC-DC Converters
- Switch-Mode and Resonant-Mode Power Supplies

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

| SYMBOL    | PARAMETER                            | VALUE    | UNIT       |
|-----------|--------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                 | 850      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous       | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous             | 14       | A          |
| $I_{DM}$  | Drain Current-Single Pulsed          | 35       | A          |
| $P_D$     | Total Dissipation @ $T_c=25^\circ C$ | 460      | W          |
| $T_j$     | Max. Operating Junction Temperature  | -55~150  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                  | -55~150  | $^\circ C$ |

**• THERMAL CHARACTERISTICS**

| SYMBOL      | PARAMETER                            | MAX  | UNIT         |
|-------------|--------------------------------------|------|--------------|
| $R_{thj-c}$ | Thermal Resistance, Junction to Case | 0.27 | $^\circ C/W$ |



## isc N-Channel MOSFET Transistor

## IXFP14N85X

## • ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS  | MIN | TYPE | MAX        | UNIT |
|----------------------|---------------------------------|---|-----|------|------------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA   | 850 |      |            | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1mA  | 3.5 |      | 5.5        | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 7A  |     |      | 550        | mΩ   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0   |     |      | ±100       | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 850V; V <sub>GS</sub> = 0<br>V <sub>DS</sub> = 850V; V <sub>GS</sub> = 0; T <sub>J</sub> =125°C |     |      | 10<br>1000 | μA   |
| V <sub>SD</sub>      | Diode Forward On-voltage        | I <sub>F</sub> = 14A; V <sub>GS</sub> = 0   |     |      | 1.4        | V    |

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