

**isc N-Channel MOSFET Transistor**

**IRF3808**

**DESCRIPTION**

- Drain Current  $I_D=140A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}=75V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 7m\Omega (\text{Max})@V_{GS}= 10V; I_D= 82A$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

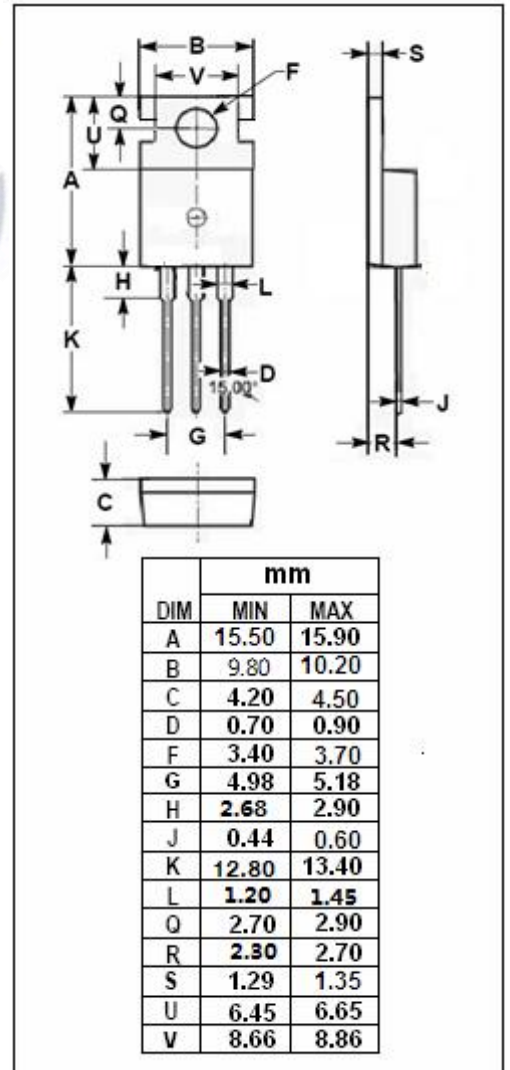
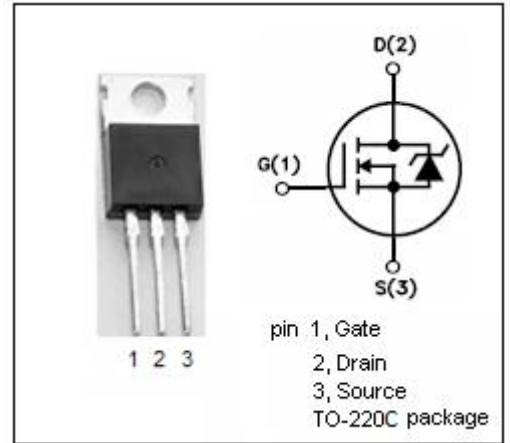
- Switch mode power supplies
- DC-DC converters for telecom, Off-line UPS, automotive System, solenoid and Motor Control

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

| SYMBOL    | ARAMETER                                    | VALUE    | UNIT        |
|-----------|---|----------|-------------|
| $V_{DSS}$ | Drain-Source Voltage ( $V_{GS}=0$ )         | 75       | V           |
| $V_{GS}$  | Gate-Source Voltage                         | $\pm 20$ | V           |
| $I_D$     | Drain Current-continuous@ $T_C=25^{\circ}C$ | 140      | A           |
| $I_{DM}$  | Pulsed Drain Current                        | 550      | A           |
| $P_{tot}$ | Total Dissipation@ $T_C=25^{\circ}C$        | 330      | W           |
| $T_{stg}$ | Storage Temperature Range                   | -55~150  | $^{\circ}C$ |

**THERMAL CHARACTERISTICS**

| SYMBOL       | PARAMETER                              | MAX  | UNIT          |
|--------------|--|------|---------------|
| $R_{th j-c}$ | Thermal Resistance,Junction to Case    | 0.45 | $^{\circ}C/W$ |
| $R_{th j-a}$ | Thermal Resistance,Junction to Ambient | 62   | $^{\circ}C/W$ |



**isc N-Channel Mosfet Transistor****IRF3808****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

| SYMBOL              | PARAMETER                        | CONDITIONS                                     | MIN | MAX  | UNIT |
|---------------------|----------------------------------|--|-----|------|------|
| V <sub>DSS</sub>    | Drain-Source Breakdown Voltage   | V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA   | 75  |      | V    |
| V <sub>GS(TH)</sub> | Gate Threshold Voltage           | V <sub>DS</sub> = 10V; I <sub>D</sub> = 0.25mA | 2   | 4    | V    |
| R <sub>DS(ON)</sub> | Drain-Source On-stage Resistance | V <sub>GS</sub> = 10V; I <sub>D</sub> = 82A    |     | 7    | mΩ   |
| I <sub>GSS</sub>    | Gate Source Leakage Current      | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0    |     | ±200 | nA   |
| I <sub>DSS</sub>    | Zero Gate Voltage Drain Current  | V <sub>DS</sub> = 75V; V <sub>GS</sub> = 0     |     | 20   | uA   |
| V <sub>SD</sub>     | Diode Forward Voltage            | I <sub>F</sub> = 82A; V <sub>GS</sub> = 0      |     | 1.3  | V    |

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