

isc N-Channel Mosfet Transistor

IRF840

FEATURES

- Drain Current  $-I_D=8.0A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}= 500V(Min)$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.85 \Omega (Max)$

DESCRIPTION

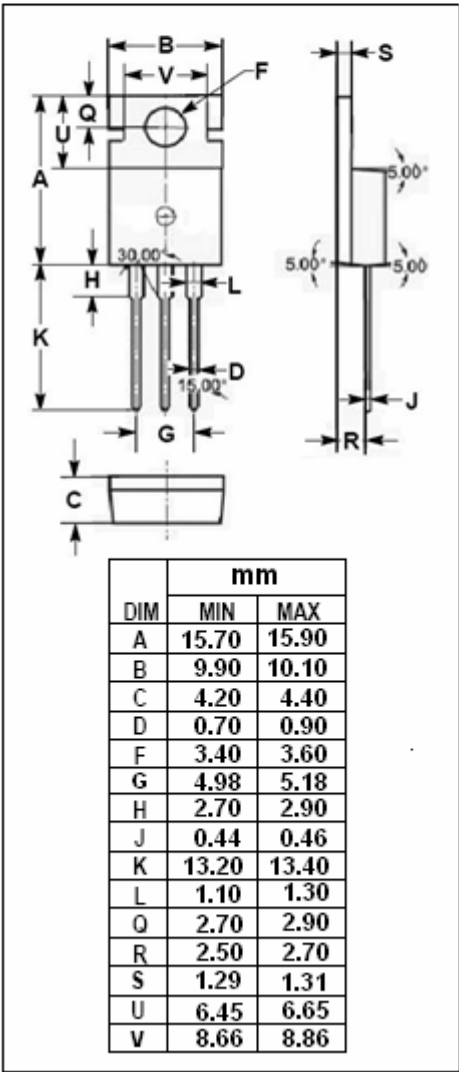
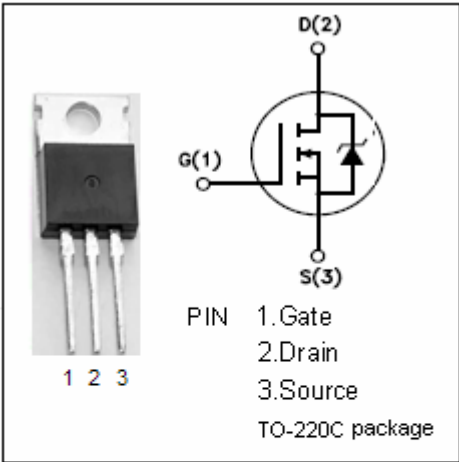
- Designed for high voltage, high speed switching power applications such as switching regulators, converters, solenoid and relay drivers.

ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

| SYMBOL           | PARAMETER                               | VALUE   | UNIT |
|------------------|-----------------------------------------|---------|------|
| V <sub>DSS</sub> | Drain-Source Voltage                    | 500     | V    |
| V <sub>GS</sub>  | Gate-Source Voltage-Continuous          | ±20     | V    |
| I <sub>D</sub>   | Drain Current-Continuous                | 8       | A    |
| I <sub>DM</sub>  | Drain Current-Single Plused             | 32      | A    |
| P <sub>D</sub>   | Total Dissipation @T <sub>C</sub> =25°C | 125     | W    |
| T <sub>j</sub>   | Max. Operating Junction Temperature     | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature                     | -55~150 | °C   |

THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                              | MAX  | UNIT |
|---------------------|----------------------------------------|------|------|
| R <sub>th j-c</sub> | Thermal Resistance,Junction to Case    | 1.0  | °C/W |
| R <sub>th j-a</sub> | Thermal Resistance,Junction to Ambient | 62.5 | °C/W |



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ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25℃ unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS                                                  | MIN | MAX  | UNIT |
|----------------------|---------------------------------|-------------------------------------------------------------|-----|------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA                | 500 |      | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.25mA | 2   | 4    | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 4A                  |     | 0.85 | Ω    |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0                 |     | ±500 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 500V; V <sub>GS</sub> =0                  |     | 250  | nA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 8A; V <sub>GS</sub> =0                     |     | 2.0  | V    |

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