

## Isc N-Channel MOSFET Transistor

## IRFAF30

### • FEATURES

- With To-3 package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

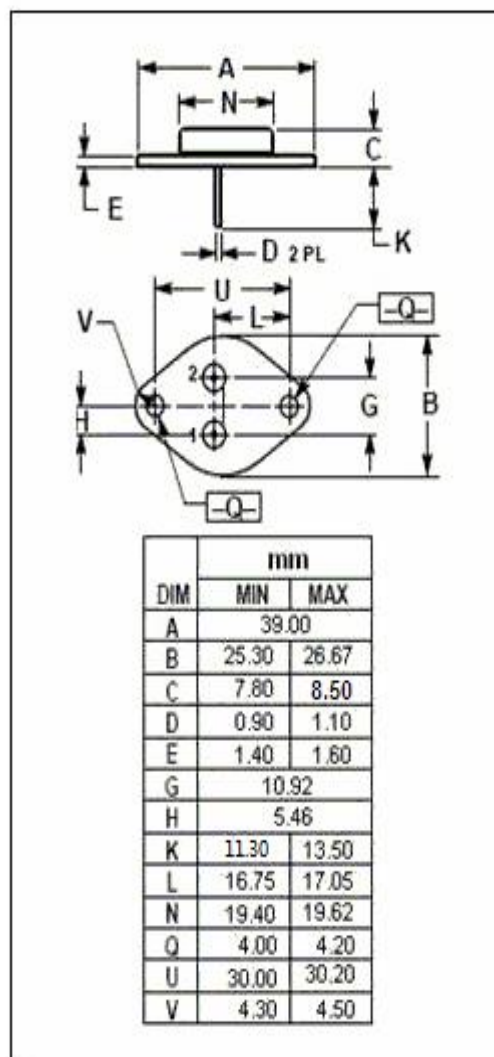
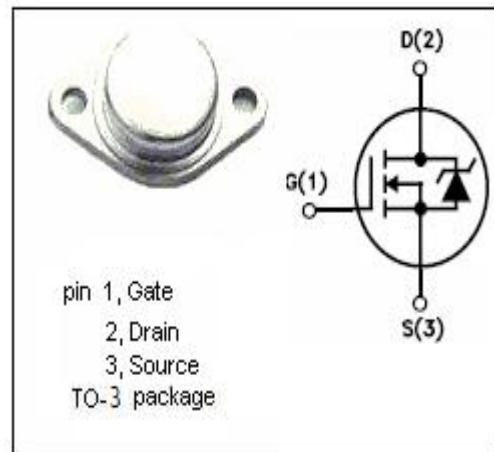
- Switching applications

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

| SYMBOL    | PARAMETER                                    | VALUE    | UNIT               |
|-----------|----------------------------------------------|----------|--------------------|
| $V_{DS}$  | Drain-Source Voltage                         | 900      | V                  |
| $V_{GS}$  | Gate-Source Voltage                          | $\pm 20$ | V                  |
| $I_D$     | Drain Current-Continuous                     | 2.0      | A                  |
| $I_{DM}$  | Drain Current-Single Pulsed                  | 8.0      | A                  |
| $P_D$     | Total Dissipation @ $T_c=25^{\circ}\text{C}$ | 75       | W                  |
| $T_{ch}$  | Max. Operating Junction Temperature          | 150      | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature                          | -55~150  | $^{\circ}\text{C}$ |

### • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                          | MAX  | UNIT                 |
|----------------|------------------------------------|------|----------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 0.42 | $^{\circ}\text{C/W}$ |



**Isc N-Channel MOSFET Transistor****IRFAF30****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> = 1.0mA                                                                                             | 900 |     |           | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> ; 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> =2A                                                                                               |     |     | 4.6       | Ω    |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V                                                                                            |     |     | ±0.1      | μA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> =720V; V <sub>GS</sub> = 0V; T <sub>j</sub> =25°C<br>V <sub>DS</sub> =720V; V <sub>GS</sub> = 0V; T <sub>j</sub> =125°C |     |     | 25<br>250 | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =2A, V <sub>GS</sub> = 0V                                                                                               |     |     | 1.8       | V    |

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