

# isc N-Channel Mosfet Transistor

BUZ64

## • FEATURES

- 11.5A, 400V
- SOA is Power Dissipation Limited
- Nanosecond Switching Speeds
- Linear Transfer Characteristics
- High Input Impedance
- Majority Carrier Device
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

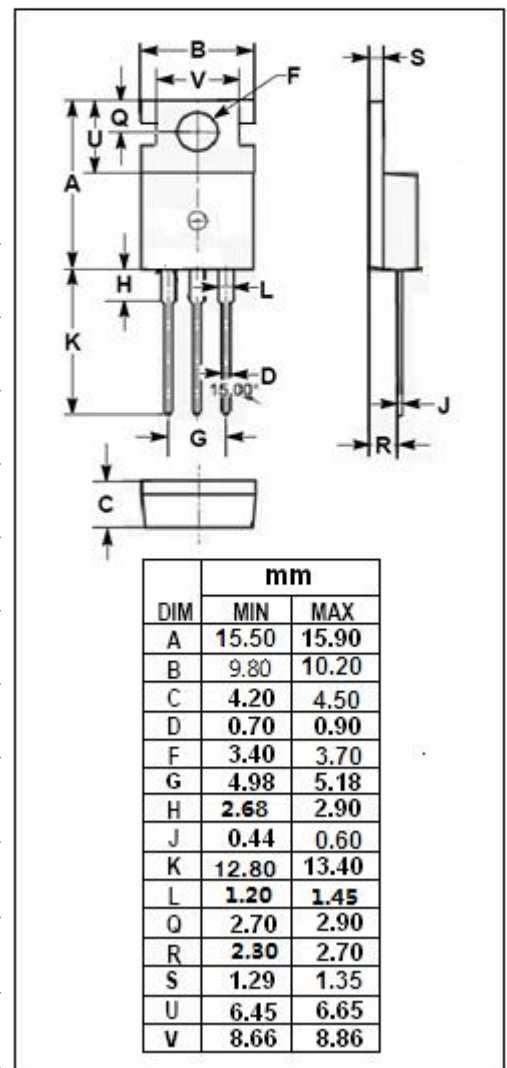
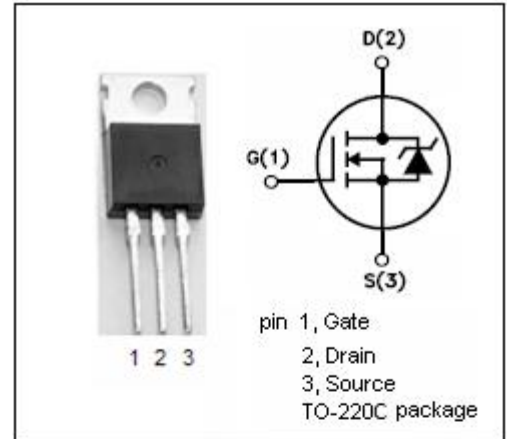
Designed for applications such as switching regulators, switching converters, motor drivers, relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power.

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

| SYMBOL    | ARAMETER                                          | VALUE    | UNIT               |
|-----------|---------------------------------------------------|----------|--------------------|
| $V_{DS}$  | Drain-Source Voltage ( $V_{GS}=0$ )               | 400      | V                  |
| $V_{GS}$  | Gate-Source Voltage                               | $\pm 20$ | V                  |
| $I_D$     | Drain Current-continuous@ $TC=37^{\circ}\text{C}$ | 11.5     | A                  |
| $P_{tot}$ | Total Dissipation@ $TC=25^{\circ}\text{C}$        | 125      | W                  |
| $T_j$     | Max. Operating Junction Temperature               | -55~150  | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                         | -55~150  | $^{\circ}\text{C}$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                               | MAX  | UNIT                        |
|---------------|-----------------------------------------|------|-----------------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case    | 1.67 | $^{\circ}\text{C}/\text{W}$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 75   | $^{\circ}\text{C}/\text{W}$ |



**isc N-Channel Mosfet Transistor****BUZ64****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C 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              | 400 |       | V    |
| V <sub>GS(TH)</sub>  | Gate Threshold Voltage           | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 10mA | 2.1 | 4     | V    |
| R <sub>DS(ON)</sub>  | Drain-Source On-stage Resistance | V <sub>GS</sub> = 10V; I <sub>D</sub> = 5A                |     | 0.4   | Ω    |
| I <sub>GSS</sub>     | Gate Source Leakage Current      | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0               |     | ± 100 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current  | V <sub>DS</sub> = 400V; V <sub>GS</sub> = 0               |     | 250   | uA   |
| V <sub>SD</sub>      | Diode Forward Voltage            | I <sub>F</sub> =11A; V <sub>GS</sub> = 0                  |     | 1.6   | V    |

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