

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.  
جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.



مشاهده قیمت و خرید

برای خرید و مشاهده سایر محصولات کلیک کنید



isc®

INCHARGE SEMICONDUCTOR

## isc N-Channel Mosfet Transistor

BUZ42

## • FEATURES

- 4A, 500V
- SOA is Power Dissipation Limited
- Nanosecond Switching Speeds
- Linear Transfer Characteristics
- High speed switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

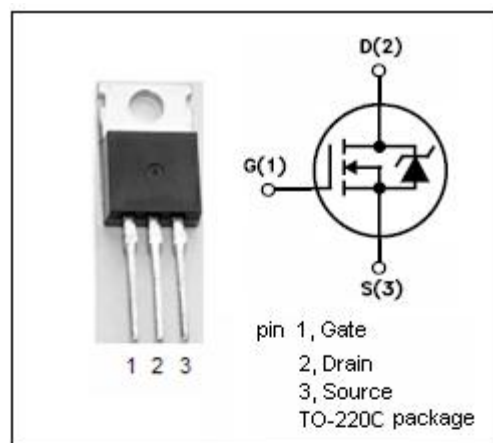
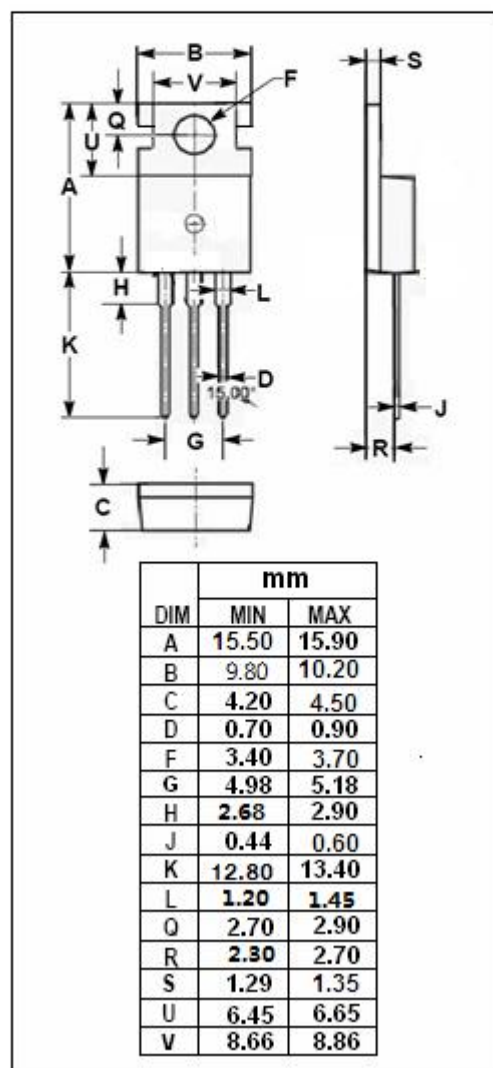
- Designed for applications such as switching regulators, switching converters, motor drivers, relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power.

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

| SYMBOL    | PARAMETER                                         | VALUE    | UNIT               |
|-----------|---------------------------------------------------|----------|--------------------|
| $V_{DS}$  | Drain-Source Voltage ( $V_{GS}=0$ )               | 500      | V                  |
| $V_{GS}$  | Gate-Source Voltage                               | $\pm 20$ | V                  |
| $I_D$     | Drain Current-continuous@ $TC=55^{\circ}\text{C}$ | 4.0      | A                  |
| $I_{DM}$  | Drain Current-Single Pulsed                       | 16       | A                  |
| $P_{tot}$ | Total Dissipation@ $TC=25^{\circ}\text{C}$        | 75       | W                  |
| $T_j$     | Max. Operating Junction Temperature               | 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****BUZ42****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> =0.25mA                                                      | 500 |      |      | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =1mA                                          | 2.1 |      | 4.0  | V    |
| V <sub>SD</sub>      | Diode Forward On-voltage        | I <sub>S</sub> = 8A; V <sub>GS</sub> = 0                                                         |     |      | 1.5  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 2.5A                                                     |     |      | 2.0  | Ω    |
| I <sub>GSS</sub>     | Gate-Body 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> =500V; V <sub>GS</sub> = 0                                                       |     |      | 250  | μA   |
| G <sub>fs</sub>      | Forward Transconductance        | V <sub>DS</sub> = 25V; I <sub>D</sub> =2.5A                                                      | 1.5 |      |      | S    |
| t <sub>d(on)</sub>   | Turn-on Delay Time              | V <sub>GS</sub> =10V;<br>I <sub>D</sub> =2.5A;<br>V <sub>DD</sub> =30V;<br>R <sub>GS</sub> =50 Ω |     |      | 45   | ns   |
| t <sub>r</sub>       | Rise Time                       |                                                                                                  |     |      | 60   |      |
| t <sub>d(off)</sub>  | Turn-off Delay Time             |                                                                                                  |     |      | 140  |      |
| t <sub>f</sub>       | Fall Time                       |                                                                                                  |     |      | 65   |      |

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