

isc N-Channel MOSFET Transistor

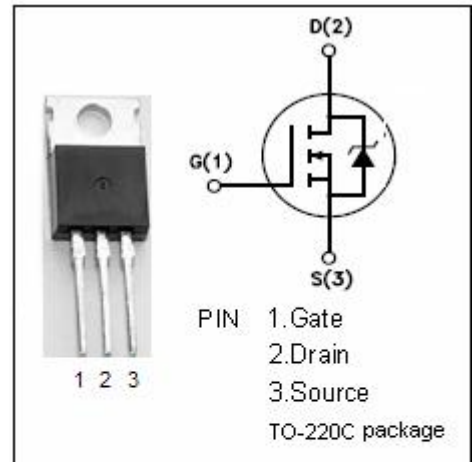
BUK452-60A/B

DESCRIPTION

- High speed switching
- Low  $R_{DS(ON)}$
- Easy driver for cost effective application

APPLICATIONS

- use in Switched Mode Power Supplies (SMPS), motor control,welding, And in general purpose switching resistance application

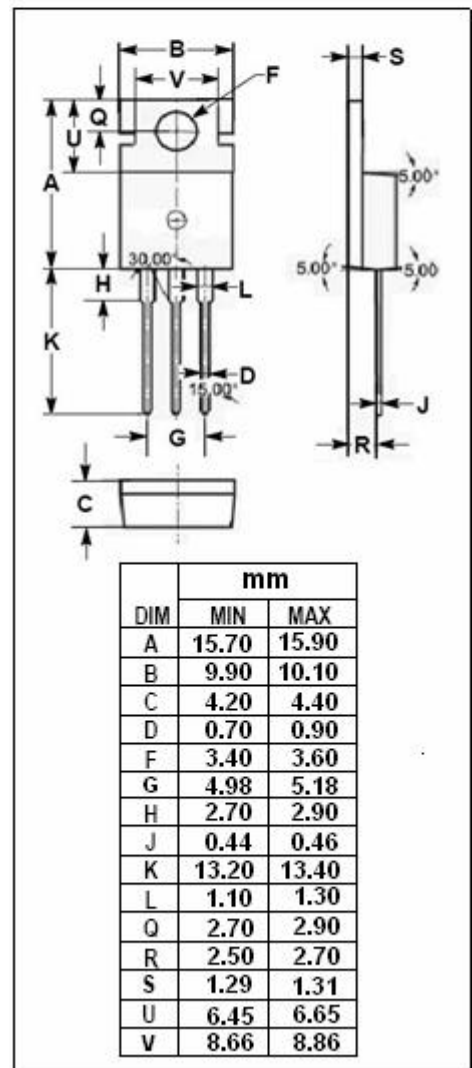


ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )

| SYMBOL    | PARAMETER                                   | VALUE      | UNIT        |
|-----------|---|------------|-------------|
| $V_{DSS}$ | Drain-Source Voltage ( $V_{GS}=0$ )         | 60         | V           |
| $V_{GS}$  | Gate-Source Voltage                         | $\pm 30$   | V           |
| $I_D$     | Drain Current-continuous @ $TC=37^{\circ}C$ | BUK452-60A | 15          |
|           |   | BUK452-60B | 14          |
| $P_{tot}$ | Total Dissipation @ $TC=25^{\circ}C$        | 60         | W           |
| $T_j$     | Max. Operating Junction Temperature         | 175        | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature Range                   | 175        | $^{\circ}C$ |

THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                              | MAX | UNIT          |
|---------------|--|-----|---------------|
| $R_{th\ j-c}$ | Thermal Resistance,Junction to Case    | 2.5 | $^{\circ}C/W$ |
| $R_{th\ j-a}$ | Thermal Resistance,Junction to Ambient | 60  | $^{\circ}C/W$ |



**isc N-Channel Mosfet Transistor****BUK452-60A/B****• ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C)**

| 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             | 60  |      | 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    | V    |
| R <sub>DS(ON)</sub>  | Drain-Source On-stage Resistance | V <sub>GS</sub> = 10V;<br>I <sub>D</sub> = 8.5A          |     | 0.13 | Ω    |
|                      |                                  | BUK452-60A<br>BUK452-60B                                 |     | 0.15 |      |
| 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> = 60V; V <sub>GS</sub> = 0               |     | 10   | uA   |
| V <sub>SD</sub>      | Diode Forward Voltage            | I <sub>F</sub> = 15A; V <sub>GS</sub> = 0                |     | 1.7  | V    |