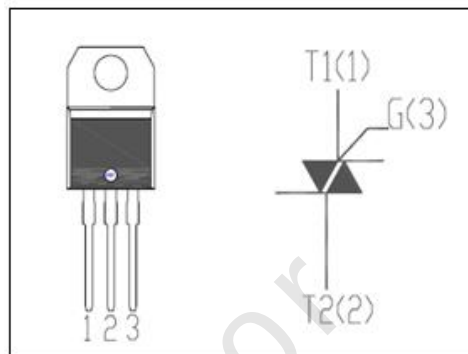


### FEATURES

- With TO-220AB non insulated package
- Suitable for general purpose AC switching. Which can be used as an ON/OFF function in applications such as static relays, heating regulation, induction motor starting circuits. Or for phase control operation in light dimmers, motor speed controllers etc.

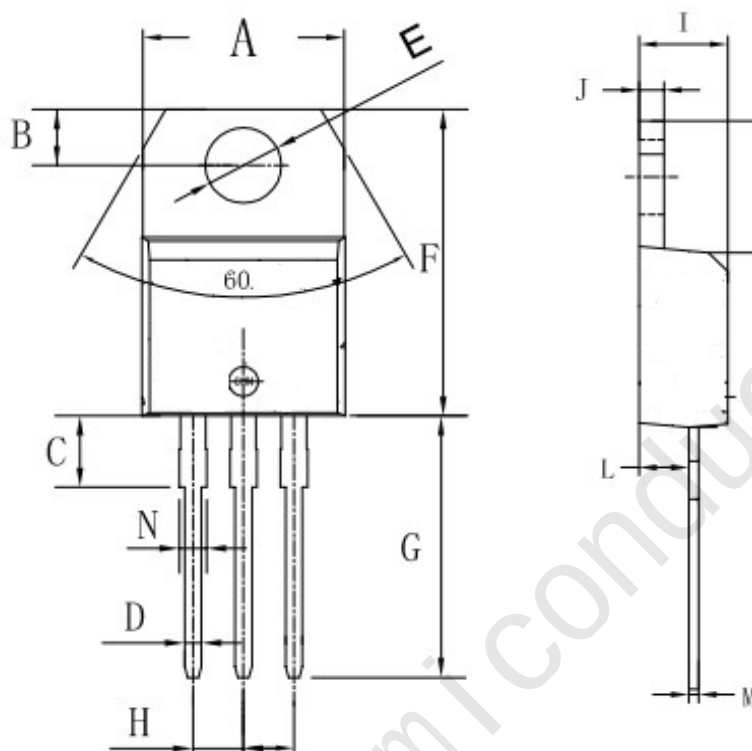


### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL               | PARAMETER                                                 | MIN     | UNIT |
|----------------------|-----------------------------------------------------------|---------|------|
| V <sub>DRM</sub>     | Repetitive peak off-state voltage                         | 800     | V    |
| V <sub>RRM</sub>     | Repetitive peak off-state voltage                         | 800     | V    |
| I <sub>T(RMS)</sub>  | RMS on-state current (full sine wave)                     | 16      | A    |
| I <sub>TSM</sub>     | Non-repetitive peak on-state current t <sub>p</sub> =20ms | 160     | A    |
| T <sub>j</sub>       | Operating junction temperature                            | 125     | °C   |
| T <sub>stg</sub>     | Storage temperature                                       | -40~150 | °C   |
| R <sub>th(j-c)</sub> | Thermal resistance, junction to case                      | 2.1     | °C/W |
| R <sub>th(j-a)</sub> | Thermal resistance, junction to ambient                   | 60      | °C/W |

### ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise specified)

| SYMBOL           | PARAMETER                         |     | CONDITIONS                                                                                     | B            | C            | UNIT |
|------------------|-----------------------------------|-----|------------------------------------------------------------------------------------------------|--------------|--------------|------|
| I <sub>RRM</sub> | Repetitive peak reverse current   |     | V <sub>R</sub> =V <sub>RRM</sub> ,<br>V <sub>R</sub> =V <sub>RRM</sub> , T <sub>j</sub> =110°C | 0.005<br>2   | 0.005<br>2   | mA   |
| I <sub>DRM</sub> | Repetitive peak off-state current |     | V <sub>D</sub> =V <sub>DRM</sub> ,<br>V <sub>D</sub> =V <sub>DRM</sub> , T <sub>j</sub> =110°C | 0.005<br>0.5 | 0.005<br>0.5 | mA   |
| I <sub>GT</sub>  | Gate trigger current              | I   | V <sub>D</sub> =12V; R <sub>L</sub> = 30 Ω                                                     | 50           | 25           | mA   |
|                  |                                   | II  |                                                                                                | 50           | 25           |      |
|                  |                                   | III |                                                                                                | 50           | 25           |      |
|                  |                                   | IV  |                                                                                                | 100          | 50           |      |
| I <sub>H</sub>   | Holding current                   |     | I <sub>GT</sub> = 0.5A, Gate Open                                                              | 50           | 25           | mA   |
| V <sub>GT</sub>  | Gate trigger voltage all quadrant |     | V <sub>D</sub> =12V; R <sub>L</sub> = 30 Ω                                                     | 1.3          |              | V    |
| V <sub>TM</sub>  | On-state voltage                  |     | I <sub>T</sub> = 22.5A; t <sub>p</sub> = 380 μs                                                | 1.55         |              | V    |

**TO-220AB PACKAGE OUTLINE DIMENSIONS**


| Symbol | Dimensions In Millimeters |      | Dimensions In Inches |       |
|--------|---------------------------|------|----------------------|-------|
|        | Min                       | Max  | Min                  | Max   |
| A      | 9.8                       | 10.4 | 0.385                | 0.409 |
| B      | 2.65                      | 3.1  | 0.104                | 0.122 |
| C      | 2.8                       | 4.2  | 0.110                | 0.165 |
| D      | 0.7                       | 0.92 | 0.027                | 0.036 |
| E      | 3.75                      | 3.95 | 0.147                | 0.155 |
| F      | 14.8                      | 16.1 | 0.582                | 0.633 |
| G      | 13.05                     | 13.6 | 0.513                | 0.535 |
| H      | 2.4                       | 2.7  | 0.094                | 0.106 |
| I      | 4.38                      | 4.61 | 0.172                | 0.181 |
| J      | 1.15                      | 1.36 | 0.045                | 0.053 |
| K      | 5.85                      | 6.82 | 0.230                | 0.268 |
| L      | 2.35                      | 2.75 | 0.092                | 0.108 |
| M      | 0.35                      | 0.65 | 0.013                | 0.025 |
| N      | 1.18                      | 1.42 | 0.046                | 0.055 |