

## isc Triacs

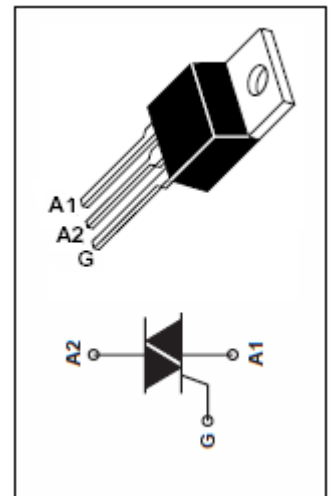
## TIC225M

## FEATURES

- With TO-220 package
- Sensitive Gate Triacs
- Glass Passivated
- Max  $I_{GT}$  of 5 mA (Quadrants 1)

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

| SYMBOL        | PARAMETER                                                      | MIN     | UNIT                        |
|---------------|----------------------------------------------------------------|---------|-----------------------------|
| $V_{DRM}$     | Repetitive peak off-state voltage                              | 600     | V                           |
| $V_{RRM}$     | Repetitive peak reverse voltage                                | 600     | V                           |
| $I_{T(RMS)}$  | RMS on-state current (full sine wave) $T_C=70^{\circ}\text{C}$ | 8       | A                           |
| $I_{TSM}$     | Non-repetitive peak on-state current                           | 70      | A                           |
| $T_j$         | Operating junction temperature                                 | 110     | $^{\circ}\text{C}$          |
| $T_{stg}$     | Storage temperature                                            | -45~150 | $^{\circ}\text{C}$          |
| $R_{th(j-c)}$ | Thermal resistance, junction to case                           | 2.5     | $^{\circ}\text{C}/\text{W}$ |
| $R_{th(j-a)}$ | Thermal resistance, junction to ambient                        | 62.5    | $^{\circ}\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS ( $T_C=25^{\circ}\text{C}$  unless otherwise specified)

| SYMBOL    | PARAMETER                                |     | CONDITIONS                                                                             | MAX | UNIT |
|-----------|------------------------------------------|-----|----------------------------------------------------------------------------------------|-----|------|
| $I_{DRM}$ | Repetitive peak off-state current        |     | $V_D=V_{DRM}$ , $T_C=110^{\circ}\text{C}$                                              | 2.0 | mA   |
| $I_{GT}$  | Gate trigger current                     | I   | $V_{supply} = 12\text{ V}\uparrow$ ; $R_L = 10\ \Omega$ ; $t_{p(g)} > 20\ \mu\text{s}$ | 5   | mA   |
|           |                                          | II  |                                                                                        | 20  |      |
|           |                                          | III |                                                                                        | 10  |      |
|           |                                          | IV  |                                                                                        | 30  |      |
| $I_H$     | Holding current                          |     | $V_{supply} = 12\text{ V}\uparrow$ , $I_G = 0$ initial $I_{TM} = 100\text{mA}$         | 20  | mA   |
| $V_{GT}$  | Gate trigger voltage <b>all quadrant</b> |     | $V_{supply} = 12\text{ V}\uparrow$ ; $R_L = 10\ \Omega$ ; $t_{p(g)} > 20\ \mu\text{s}$ | 2   | V    |
| $V_{TM}$  | On-state voltage                         |     | $I_T = 12\text{A}$ ; $I_G = 50\text{mA}$                                               | 2.1 | V    |