

# Single Thyristor Modules

TYPE: MT(R)250A/1200V

## Features

- Industrial standard package
- Electrically insulated base plate
- Heat transfer through aluminium oxide ceramic insulated metal base plate
- Chip soldered on direct copper bonded  $Al_2O_3$  ceramic
- Thyristor chip with center gate

## Typical Applications

- DC motor control
- AC motor soft starters
- Temperature control
- Professional light dimming

|                   |  |           |   |
|-------------------|--|-----------|---|
| $V_{DRM}/V_{RRM}$ |  | 1200/1200 | V |
| $V_{RSM}$         |  | 1300      | V |

## Maximum Ratings

| Symbol         | Condition                           | Ratings    | Unit       |
|----------------|-------------------------------------|------------|------------|
| $I_{T(AV)}$    | sin. 180; $T_c = 85^\circ C$ ,      | 250        | A          |
| $I_{TSM}$      | $T_{vj} = 25^\circ C$ ; 10 ms       | 9500       | A          |
| $I^2t$         | $T_{vj} = 25^\circ C$ ; 8,3...10 ms | 450        | $kA^2S$    |
| $(di/dt)_{cr}$ |                                     | 130        | A/us       |
| $V_{iso}$      | A.C. 1s / 1min.                     |            | V          |
| $T_j$          |                                     | -40 ~ +125 | $^\circ C$ |
| $T_{stg}$      |                                     | -40 ~ +125 | $^\circ C$ |
| W              |                                     | -          | g          |

## Electrical Characteristics

| Symbol              | Condition                                 | Ratings  | Unit |
|---------------------|---|----------|------|
| $I_{DRM} / I_{RRM}$ | At $V_{DRM}$ , $T_j = 125^\circ C$        | 85       | mA   |
| $V_T$               | On-State Current 750A, $T_j = 25^\circ C$ | 1.43     | V    |
| $V_{T(TO)}$         | $T_j = 125^\circ C$                       | 0.81     | V    |
| $t_{gd}$            | $T_j = 25^\circ C$                        | 1        | us   |
| $t_q$               | $T_j = 125^\circ C$                       | 150      | us   |
| $I_{GT}/V_{GT}$     | $T_j = 25^\circ C$                        | 145 / 2  | mA/V |
| $V_{GD}$            | $T_j = 125^\circ C$                       | 0.25     | V    |
| $(dv/dt)_{cr}$      | $T_j = 125^\circ C$                       | 1000     | V/us |
| $I_H$               | $T_j = 25^\circ C$ , typ. / max.          | 140/450  | mA   |
| $I_L$               | $T_j = 25^\circ C$ , typ. / max.          | 200/1800 | mA   |
| $R_{th(j-c)}$       | Per Module                                | 0.0455   | K/W  |



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Outline Drawing

