

## DESCRIPTION:

The T0850H-8H triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T0850H-8H provides a very high switching capability up to junction temperatures of 150°C. From T2 terminals to external heatsink. Package TO-251 is RoHS compliant.

## MAIN FEATURES

| Symbol            | Value    | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$      | 8        | A    |
| $V_{DRM}/V_{RRM}$ | 800      | V    |
| $I_{GT} / /$      | 50/50/50 | mA   |

## ABSOLUTE MAXIMUM RATINGS

| Parameter                                                                                                        | Symbol       | Value   | Unit                 |
|------------------------------------------------------------------------------------------------------------------|--------------|---------|----------------------|
| Storage junction temperature range                                                                               | $T_{stg}$    | -40-150 |                      |
| Operating junction temperature range                                                                             | $T_j$        | -40-150 |                      |
| Repetitive peak off-state voltage ( $T_j=25^\circ\text{C}$ )                                                     | $V_{DRM}$    | 800     | V                    |
| Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )                                                       | $V_{RRM}$    | 800     | V                    |
| RMS on-state current ( $T_c 0 119^\circ\text{C}$ )                                                               | $I_{T(RMS)}$ | 8       | A                    |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )             | $I_{TSM}$    | 80      | A                    |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )           |              | 88      |                      |
| $I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )                                           | $I^2t$       | 32      | $\text{A}^2\text{s}$ |
| Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100\text{Hz}$ , $T_j=150^\circ\text{C}$ ) | $di/dt$      | 100     | $\text{A/s}$         |
| Peak gate current ( $t_p=20\text{ s}$ , $T_j=150^\circ\text{C}$ )                                                | $I_{GM}$     | 4       | A                    |
| Average gate power dissipation ( $T_j=150^\circ\text{C}$ )                                                       | $P_{G(AV)}$  | 1       | W                    |
| Peak gate power                                                                                                  | $P_{GM}$     | 10      | W                    |





FIG.1: Maximum power dissipation versus RMS  
on-state current

FIG.2: RMS on-state current versus case  
temperature

FIG.7 ÖTest circuit for inductive and resistive loads to IEC-61000-4-

ORDERING INFORMATION

| Order code | Voltage<br>V <sub>DRM</sub> /V <sub>RRM</sub> (V) | IGT(mA)<br>H- I- J | Package | Base qty.<br>(pcs) | Delivery<br>mode |
|------------|---------------------------------------------------|--------------------|---------|--------------------|------------------|
|------------|---------------------------------------------------|--------------------|---------|--------------------|------------------|

T0850H-8H

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