## T0650H-8E 6A TRIAC

Rev.A.1.0

## DESCRIPTION:

T0650H-8E is a triac in a TO-220AB plastic package.
It is suitable for AC switching applications.
Typical applications include motor control, industrial and domestic lighting, heating and static switching.

| | | | |
|---|---|---|---|
| Repetitive peak off-state voltage ($T_j$=25 ; one cycle 50Hz/60Hz sine wave) | $V_{DRM}$ | 4 | kV |

## ELECTRICAL CHARACTERISTICS ($T_j$=25 unless otherwise noted)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$=12V $R_L$=33Ω | I - III | MAX. | 50 | mA |
| $V_{GT}$ | | II - IV | MAX. | 1 | V |
| $V_{GD}$ | $V_D$=$V_{DRM}$ $T_j$=150 $R_L$=3.3kΩ | I - III - IV | MIN. | 0.2 | V |
| $I_L$ | $I_G$=1.2$I_{GT}$ | I - III | MAX. | 70 | mA |
| | | II | | 100 | |
| $I_H$ | $I_T$=100mA | | MAX. | 50 | mA |
| $dV/dt$ | $V_D$=540V $T_j$=150 | | MIN. | 1200 | V/μs |
| $(dI/dt)c$ | (dV/dt)c=20V/μs, $T_j$=150 | | MIN. | 5 | A/ms |
| $t_{gd}$ | $I_G$=80mA $I_A$=400mA $I_R$=40mA $T_j$=25 | | TYP. | 5 | μs |
| $t_q$ | | | | 50 | |

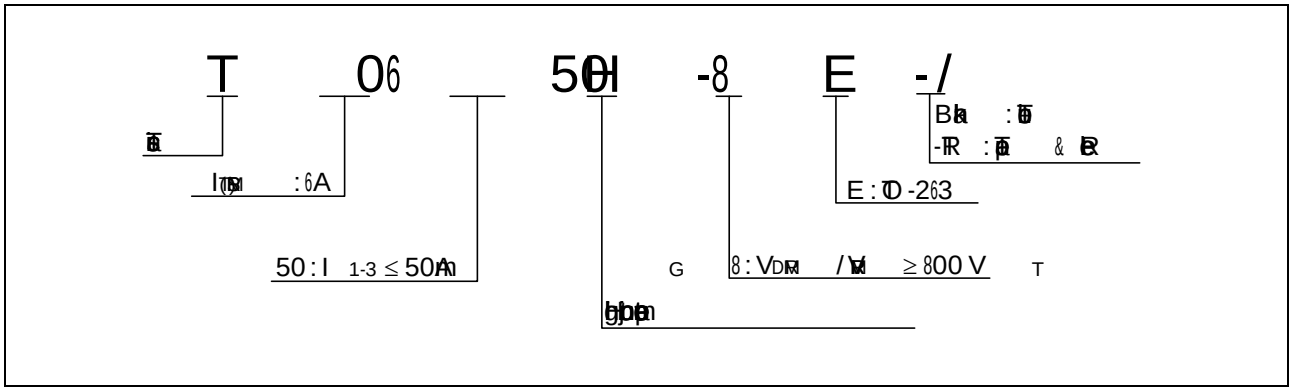
## STATIC CHARACTERISTICS

| Symbol | Parameter | | Value(MAX.) | Unit |
|---|---|---|---|---|
| $V_{TM}$ | $I_{TM}$=8.5A $t_p$=380μs | $T_j$=25 | 1.4 | V |
| $V_{TO}$ | Threshold voltage | $T_j$=150 | 0.8 | V |
| $R_D$ | Dynamic resistance | $T_j$=150 | 63 | mΩ |
| $I_{DRM}$ | $V_D$=$V_{DRM}$ $V_R$=$V_{RRM}$ | $T_j$=25 | 5 | μA |
| $I_{RRM}$ | | $T_j$=150 | 1 | mA |

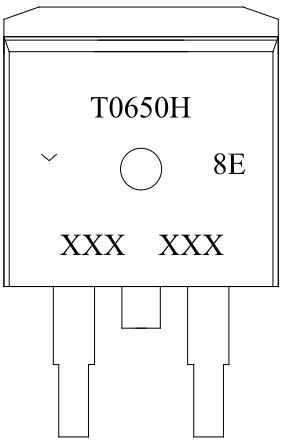
## THERMAL RESISTANCES

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $R_{th(j-c)}$ | Junction to case (AC) | 2.3 | /W |
| $R_{th(j-a)}$ | Junction to ambient (AC, one cycle, S=2cm$^2$) | 45 | /W |

## ORDERING INFORMATION



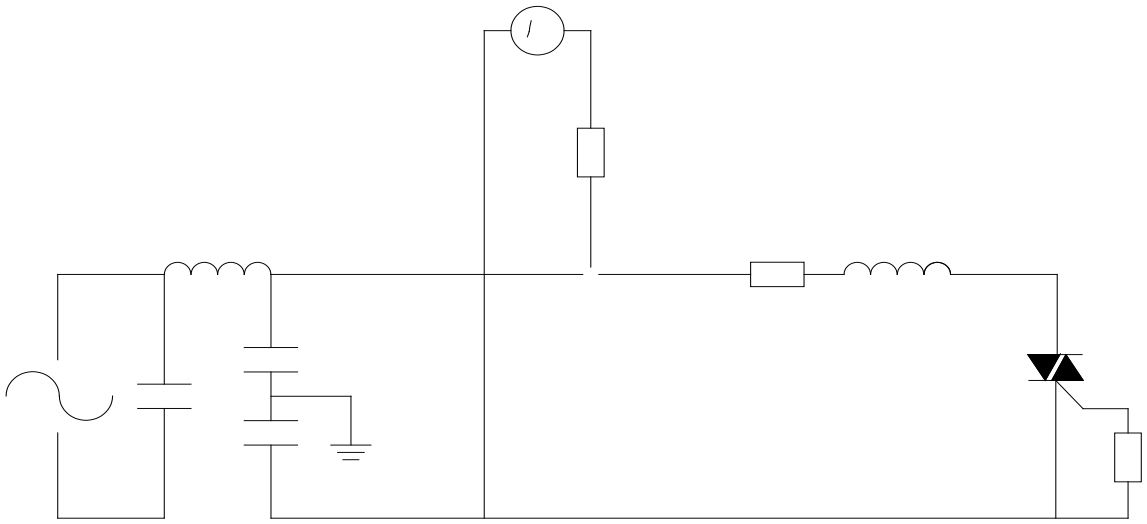

## MARKING



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FIG.7: 1 . 1 ( g

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DELIVERY MODE

