

### DESCRIPTION:

The T0410H-6E 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, T0410H-6E provides a very high switching capability up to junction temperatures of 150°C. It can be driven directly through the MCU I/O port. Package TO-263 is RoHS compliant.

### MAIN FEATURES

### 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 of 10--0. 22.68 re f 538.45 0 T=304.0.48 unc2.45 0 TI

|                                                                    |          |    |    |
|--------------------------------------------------------------------|----------|----|----|
| Peak gate power                                                    | $P_{GM}$ | 10 | W  |
| Peak pulse voltage<br>( $T_j=25$ ; non-repetitive,off-state;FIG.8) | $V_{pp}$ | 3  | kV |

ELECTRICAL CHARACTERISTICS (unless otherwise specified)

| Symbol   | Test Condition                        | Quadrant | Value |     | Unit |
|----------|---------------------------------------|----------|-------|-----|------|
| $I_{GT}$ | $V_D=12V$ $R_L=33$                    | - -      | MAX.  | 10  | mA   |
| $V_{GT}$ |                                       | - -      | MAX.  | 1   | V    |
| $V_{GD}$ | $V_D=V_{DRM}$ $T_j=150$<br>$R_L=3.3k$ | - -      | MIN.  | 0.2 | V    |
| $I_L$    | $I_G=1.2I_{GT}$                       | -        | MAX.  | 20  | mA   |
|          |                                       |          |       | 35  |      |
| $I_H$    | $I_T=100mA$                           |          | MAX.  | 20  | mA   |

dV/dt     $V_D=400V$  Gate Open  $T_j=150$      $MINT_m [(j)-2 ( )]T_J 1C /C2\_1 1 T_f 0 T_c 0234.84 0.48$

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

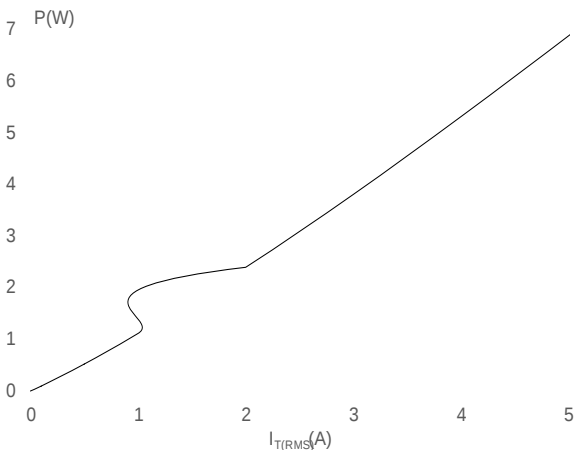


FIG.2: RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

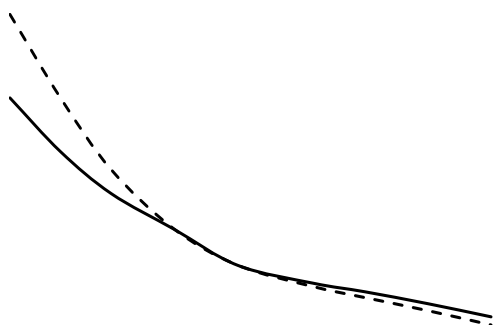
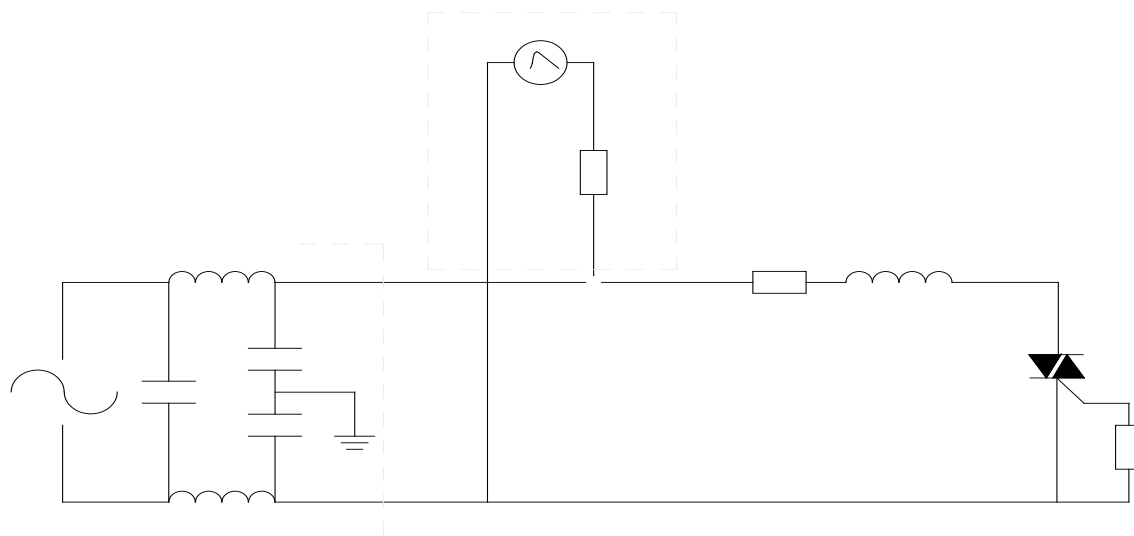
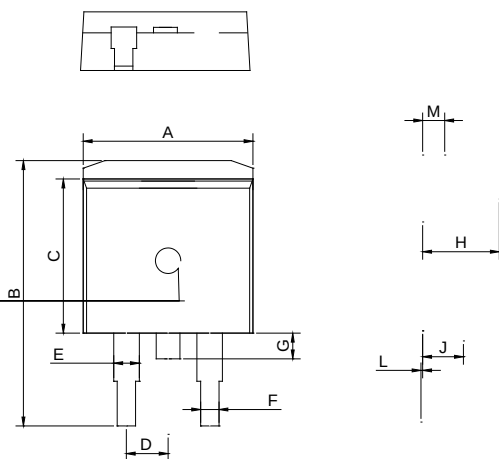


FIG.8 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards



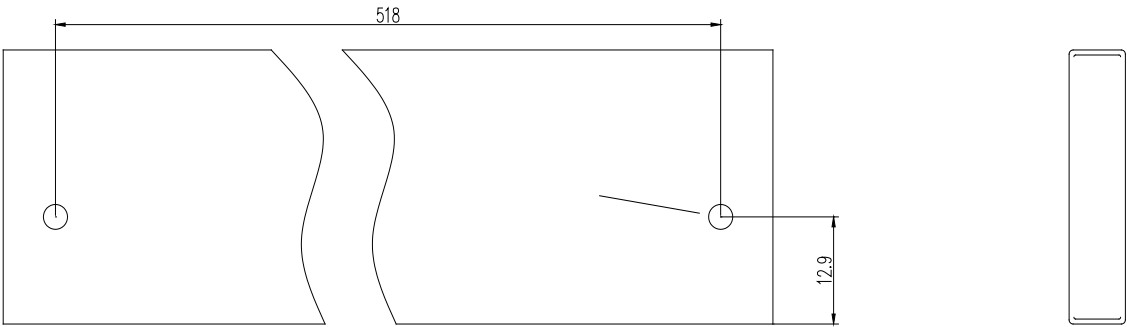
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## PACKAGE MECHANICAL DATA



| Ref. | Dimensions  |      |       |        |      |       |
|------|-------------|------|-------|--------|------|-------|
|      | Millimeters |      |       | Inches |      |       |
|      | Min.        | Typ. | Max.  | Min.   | Typ. | Max.  |
| A    | 9.90        |      | 10.20 | 0.390  |      | 0.402 |
|      |             |      |       |        |      |       |
| B    | 14.70       |      | 15.80 | 0.579  |      | 0.622 |
|      |             |      |       |        |      |       |
| C    | 9.40        |      | 9.60  | 0.370  |      | 0.378 |
|      |             |      |       |        |      |       |
| D    | 2.40        |      |       | 0.094  |      |       |
| E    | 1.20        |      | 1.50  | 0.047  |      | 0.059 |
| F    | 0.75        |      | 0.85  | 0.029  |      | 0.033 |
|      |             |      |       |        |      |       |
|      |             |      |       |        |      |       |
|      |             |      |       |        |      |       |

DELIVERY MODE



Information furnished in this document is believed to be accurate and reliable. However,