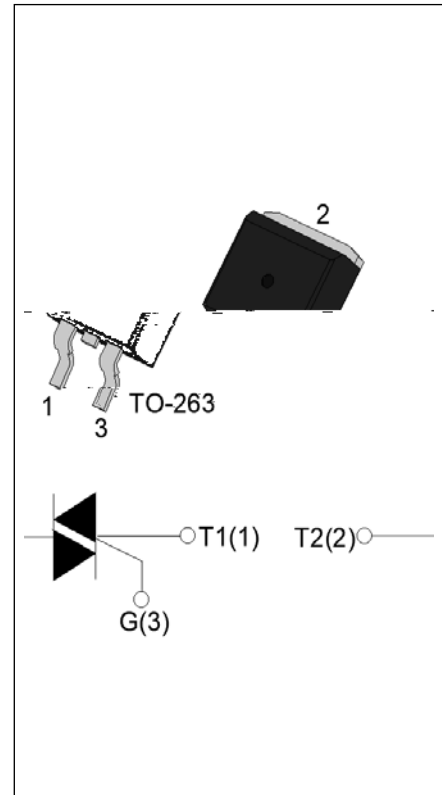


T1610H-6E 16A TRIAC

Rev.A.1.0

DESCRIPTION:

The T1610H-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, T1610H-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

| Symbol | Value | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$ | 16 | A |
| V_{DRM}/V_{RRM} | 600 | V |
| $I_{GT} / /$ | 10/10/10 | 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} | 600 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 600 | V |
| RMS on-state current ($T_c = 125^\circ\text{C}$) | $I_{T(RMS)}$ | 16 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 160 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 176 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 128 | A^2s |
| Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=150^\circ\text{C}$) | di/dt | 100 | $\text{A}/\mu\text{s}$ |
| Peak gate current ($t_p=20\mu\text{s}$, $T_j=150^\circ\text{C}$) | I_{GM} | 4 | A |
| Average gate power dissipation ($T_j=150^\circ\text{C}$) | $P_{G(AV)}$ | 1 | W |

T1610H-6E

| | | | |
|--|----------|----|----|
| Peak gate power | P_{GM} | 10 | W |
| Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8) | V_{pp} | 4 | kV |

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | Unit |
|--------|----------------|----------|-------|------|
|--------|----------------|----------|-------|------|

I_{GT}

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

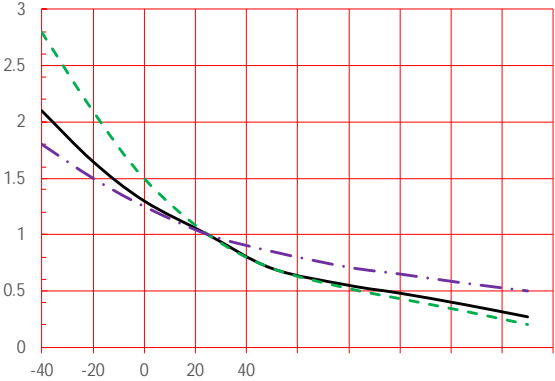
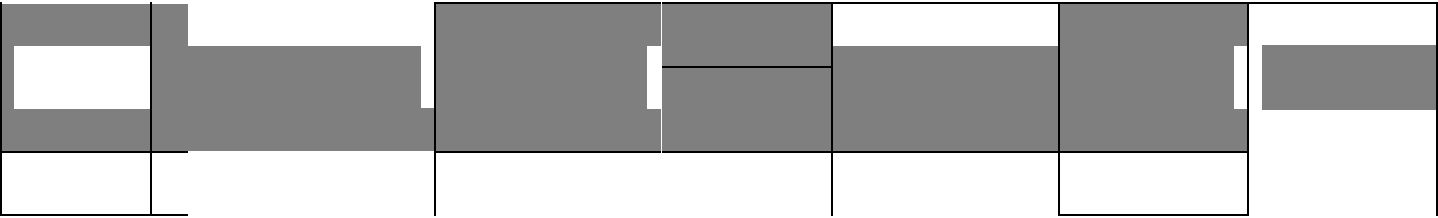


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards





DELIVERY MODE



