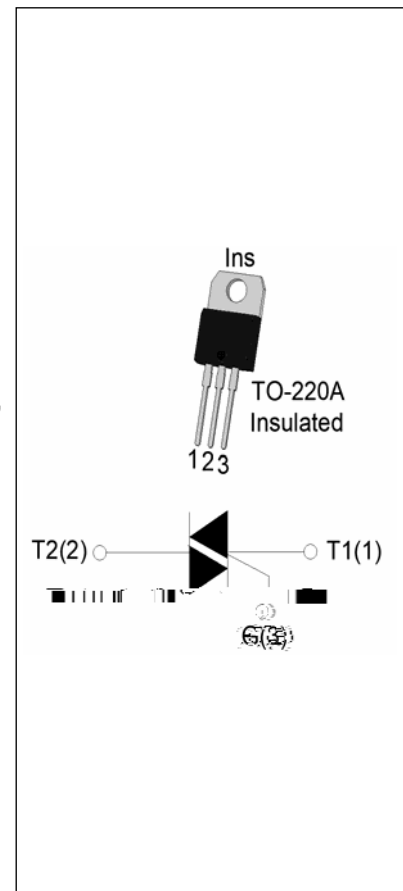


The T0410H-6A triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T0410H-6A provides a very high switching capability up to junction temperatures of 150°C. It can be driven directly through the MCU I/O port. By using an internal ceramic pad, T0410H-6A provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



| Symbol | Value | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$ | 4 | A |
| V_{DRM}/V_{RRM} | 600 | V |
| $I_{GT} / /$ | 10/10/10 | mA |

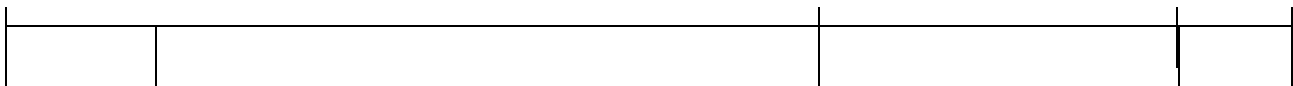
| | | | |
|--|--------------|---------|------------------------|
| Storage junction temperature range | T_{stg} | -40-150 | |
| Operating junction temperature range | T_j | -40-150 | |
| Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$) | V_{DRM} | 600 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 600 | V |
| RMS on-state current ($T_c = 130^\circ\text{C}$) | $I_{T(RMS)}$ | 4 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 40 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 44 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 8 | A^2s |
| 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 | 50 | $\text{A}/\mu\text{s}$ |



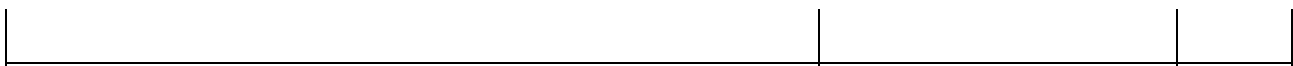
| | | | |
|--|-------------|----|----|
| Peak gate current ($t_p=20\mu s$, $T_j=150$) | I_{GM} | 4 | A |
| Average gate power dissipation ($T_j=150$) | $P_{G(AV)}$ | 1 | W |
| Peak gate power | P_{GM} | 10 | W |
| Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7) | V_{pp} | 3 | kV |

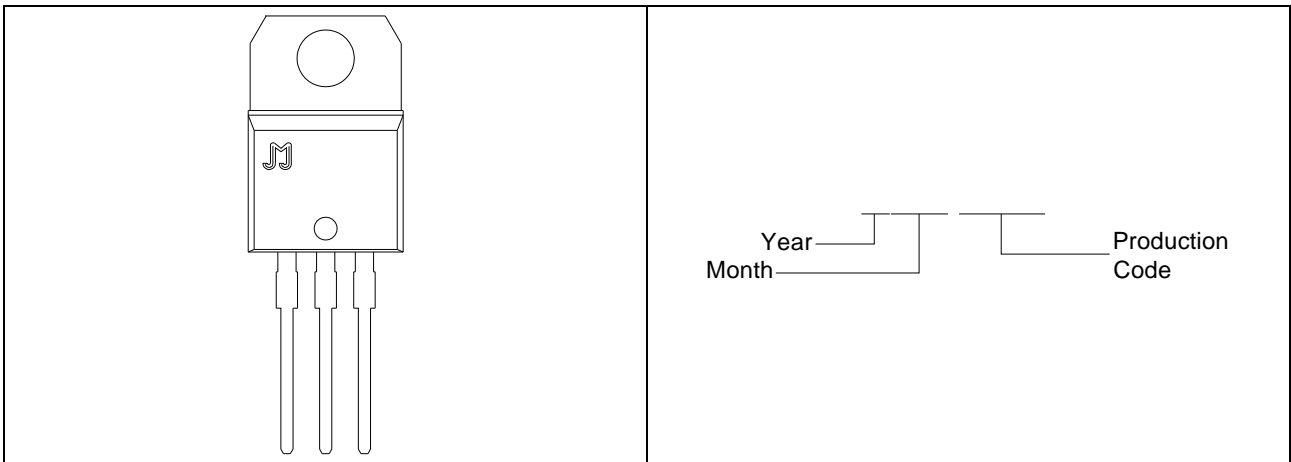
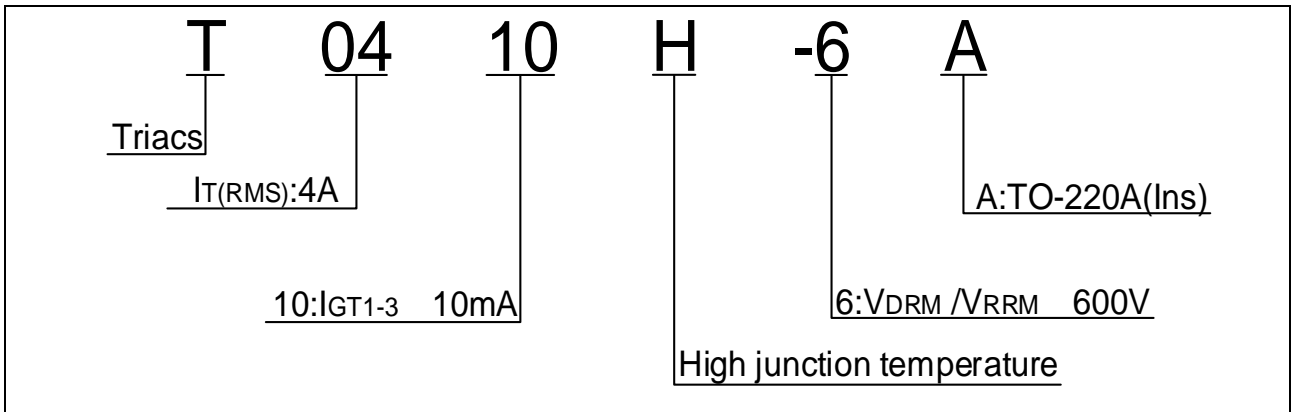
($T_j=25$ unless otherwise specified)

| | | | | | |
|-------------|---|-----|------|-----|-----------|
| | | | | | |
| I_{GT} | $V_D=12V$ $R_L=33$ | - - | MAX. | 10 | mA |
| V_{GT} | | - - | MAX. | 1 | V |
| V_{GD} | $V_D=V_{DRM}$ $T_j=150$ $R_L=3.3K$ | - - | 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 $T_j=150$ | | MIN. | 200 | $V/\mu s$ |
| $(dI/dt)_c$ | $(dV/dt)_c=20V/\mu s$, $T_j=150$ | | MIN. | 1 | A/ms |
| t_{on} | $I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$ | | TYP. | 2.5 | μs |
| t_{off} | | | | 25 | |



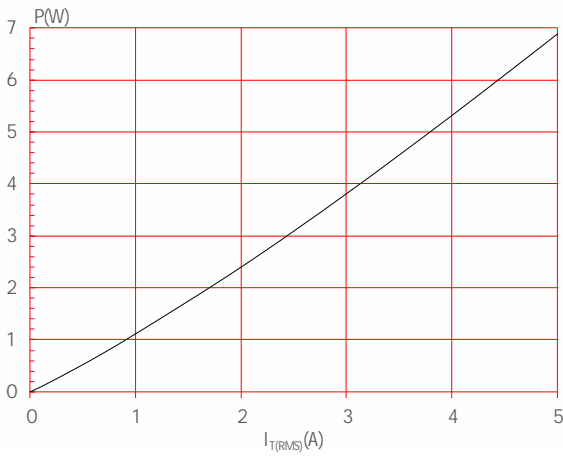
=S - T V_{TM} I



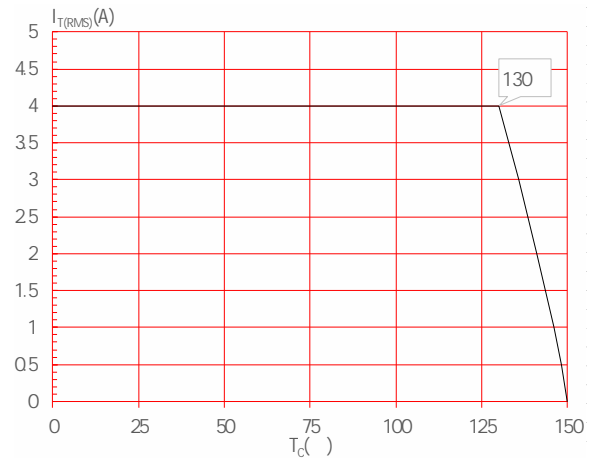




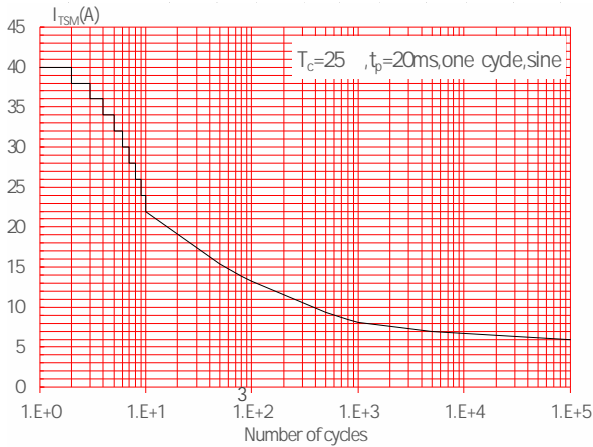
Maximum power dissipation versus RMS on-state current



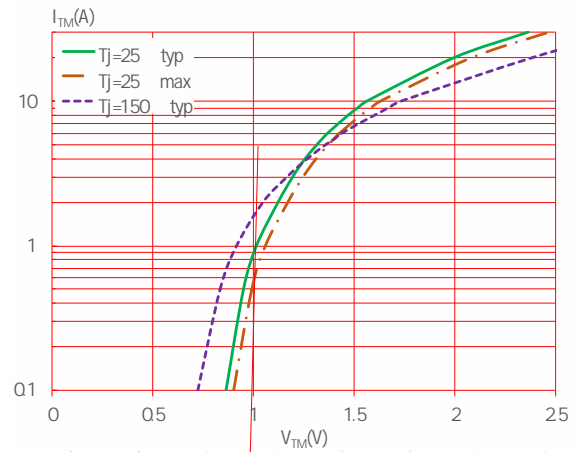
RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles



On-state characteristics



Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

Relative variations of gate trigger current, holding current and latching current versus junction temperature

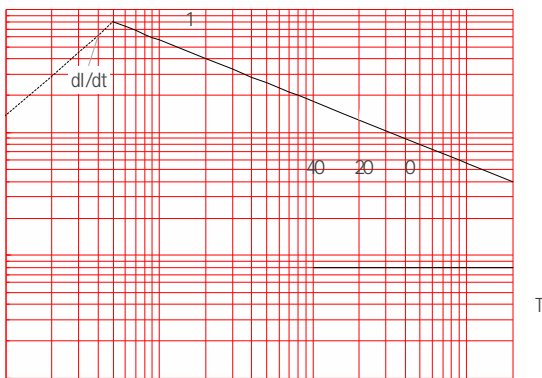
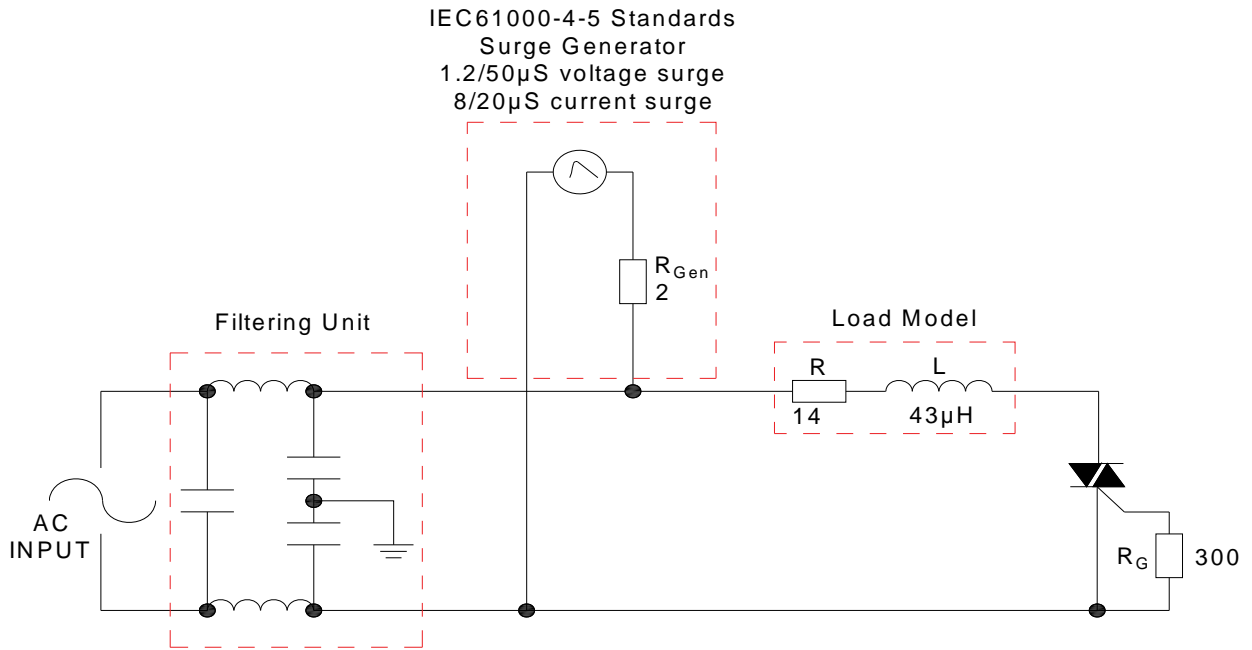




FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards

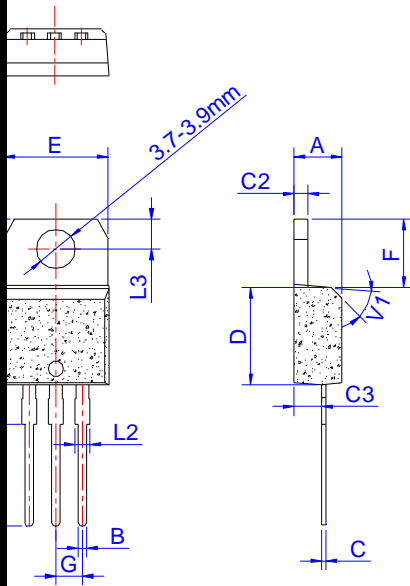


Refer to Instructions for installation of plastic-sealed in-line power devices released by JieJie

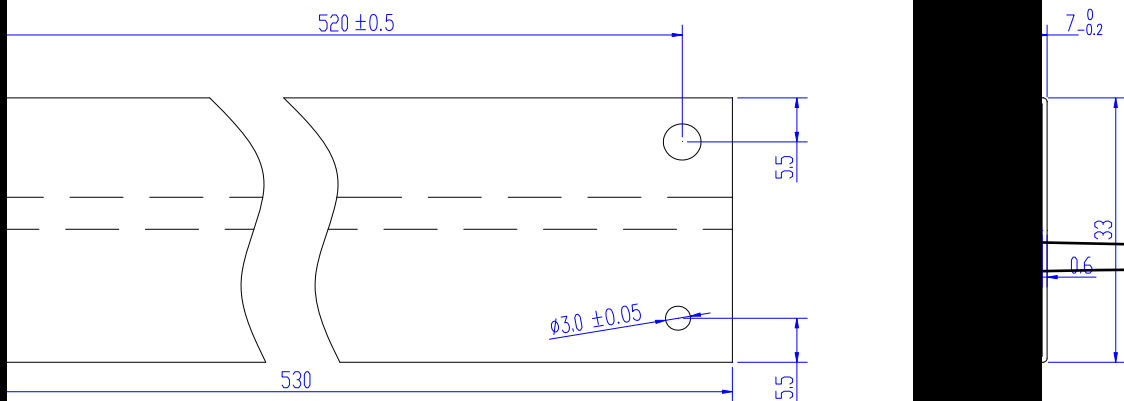


| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| | | | | | |

| Date | Revision | Changes |
|--------------|----------|--------------|
| Apr.10, 2023 | A.1.0 | Last updated |



| Ref. | Dimension | | | | | |
|------|-------------|------|------|------|------|-------|
| | Millimeters | | | | Min. | Max. |
| | Min. | Typ. | Max. | Min. | | |
| A | 4.40 | | 4.60 | 0.1 | | 0.181 |
| B | 0.61 | | 0.88 | 0.0 | | 0.035 |
| C | 0.46 | | 0.70 | 0.0 | | 0.028 |
| C2 | 1.21 | | 1.32 | 0.0 | | 0.052 |
| C3 | 2.40 | | 2.72 | 0.0 | | 0.107 |
| D | 8.60 | | 9.70 | 0.3 | | 0.382 |
| E | 9.80 | | 10.4 | 0.3 | | 0.409 |
| F | 6.25 | | 6.85 | 0.2 | | 0.270 |
| G | 2.40 | | 2.70 | 0.0 | | 0.106 |
| H | 28.0 | | 29.8 | 1.1 | | 1.173 |
| L1 | 3.45 | | 4.05 | 0.1 | | 0.159 |
| L2 | 1.14 | | 1.70 | 0.0 | | 0.067 |
| L3 | 2.65 | | 2.95 | 0.1 | | 0.116 |
| V1 | | 45° | | | | |





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