## JST12A-600CW 12A TRIAC

Rev.A.1.1

The JST12A-600CW 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. JST12A-600CW snubberless triac is especially recommended for use on inductive loads. By using an internal ceramic pad, JST12A-600CW provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | |
| Operating junction temperature range | $T_j$ | -40-125 | |
| Repetitive peak off-state voltage ($T_j$=25 ) | $V_{DRM}$ | 600 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 600 | V |
| RMS on-state current ($T_C$ 86 ) | $I_{T(RMS)}$ | 12 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=20ms , $T_j$=25 ) | $I_{TSM}$ | 120 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=16.6ms , $T_j$=25 ) | | 132 | |

| | | | |
|---|---|---|---|
| Peak gate power | $P_{GM}$ | 10 | W |
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.7) | $V_{pp}$ | 4.5 | kV |

($T_j$=25 unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | Unit |
|---|---|---|---|---|
| $I_{GT}$ | $V_D$ =12V $R_L$ =33 | - | | |

J ST 12 A -600 CW

- J: JieJie Microelectronics Co., Ltd.
- ST: Triacs
- 12: $I_{T(RMS)}$:12A
- A: A:TO-220A(Ins)
- -600: 600:$V_{DRM}$ /$V_{RRM}$ 600V
- CW: CW:$I_{GT1-3}$ 35mA

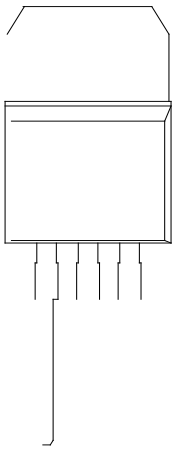


**FIG.1:** Maximum power dissipation versus RMS on-state current

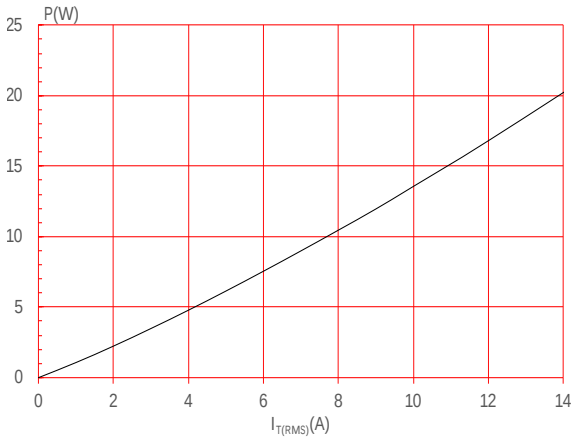
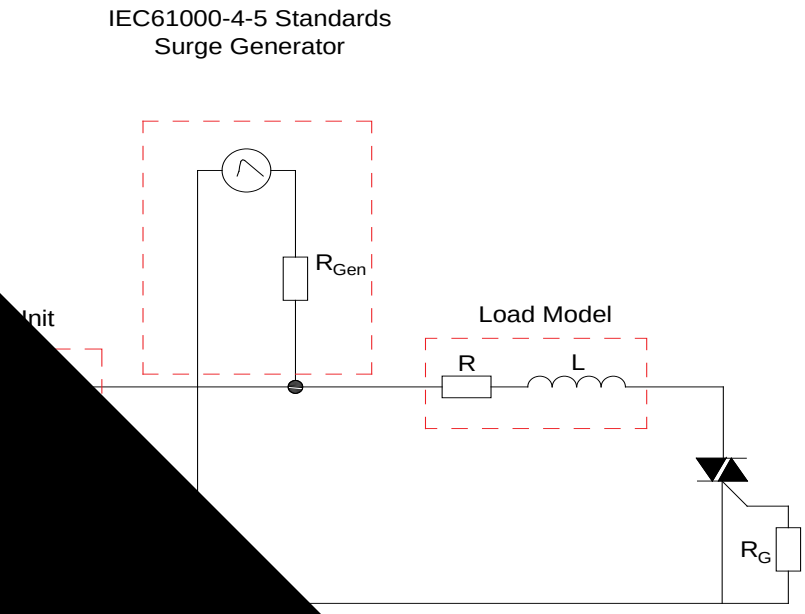



**FIG.2:** RMS on-state current versus case temperature

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



| Order code | Voltage $V_{DRM}/V_{RRM}$ (V) | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---|---|---|---|---|---|
| | | - - | | | |
| JST12A-600CW | 600 | 35 | TO-220A(Ins) | 50 | Tube |

## Document Revision History

| Date | Revision | Changes |
|---|---|---|
| Apr.11, 2023 | A.1.0 | Last updated |
| Oct.13, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |