# JST06C-600B 6A TRIAC

Rev.A.1.1

## DESCRIPTION:

The JST06C-600B 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. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.

## MAIN FEATURES

## ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | |
| Operating junction temperature range | $T_j$ | -40-125 | |
| Repetitive peak off-state voltage ($T_j$=25 ) | $V_{DRM}$ | 600 | V |

| | | | |
|---|---|---|---|
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.7) | $V_{pp}$ | 4 | kV |

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

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$=12V $R_L$=33Ω | - - | MAX. | 50 | mA |
| | | | | 70 | |
| $V_{GT}$ | | ALL | MAX. | 1 | V |
| $V_{GD}$ | $V_D$=$V_{DRM}$ $T_j$=125 $R_L$=3.3kΩ | ALL | MIN. | 0.2 | V |
| $I_L$ | $I_G$=1.2$I_{GT}$ | - - | MAX. | 70 | mA |
| | | | | 80 | |
| $I_H$ | $I_T$=200mA | | MAX. | 60 | mA |
| dV/dt | $V_D$=400V Gate Open $T_j$=125 | | MIN. | 600 | V/μs |
| (dV/dt)c | (dI/dt)c=2.7A/ms, $T_j$=125 | | MIN. | 10 | V/μs |
| $t_{on}$ | $I_G$=80mA $I_A$=400mA $I_R$=40mA $T_j$=25 | | TYP. | 3 | μs |
| $t_{off}$ | | | | 30 | |

## STATIC CHARACTERISTICS

| Symbol | Parameter | Value(MAX.) | Unit |
|---|---|---|---|
| $V_{TM}$ | $I_{TM}$=8.5A t | | |

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

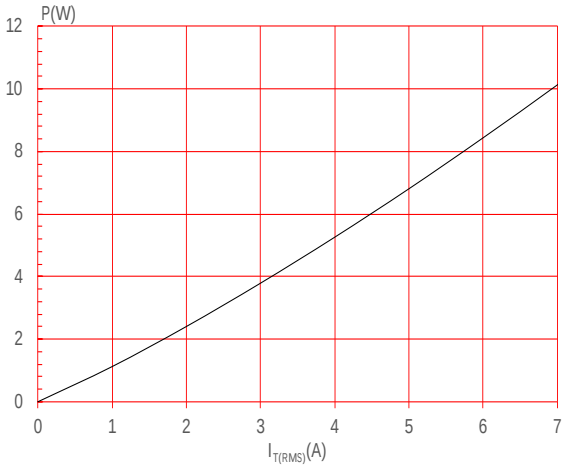
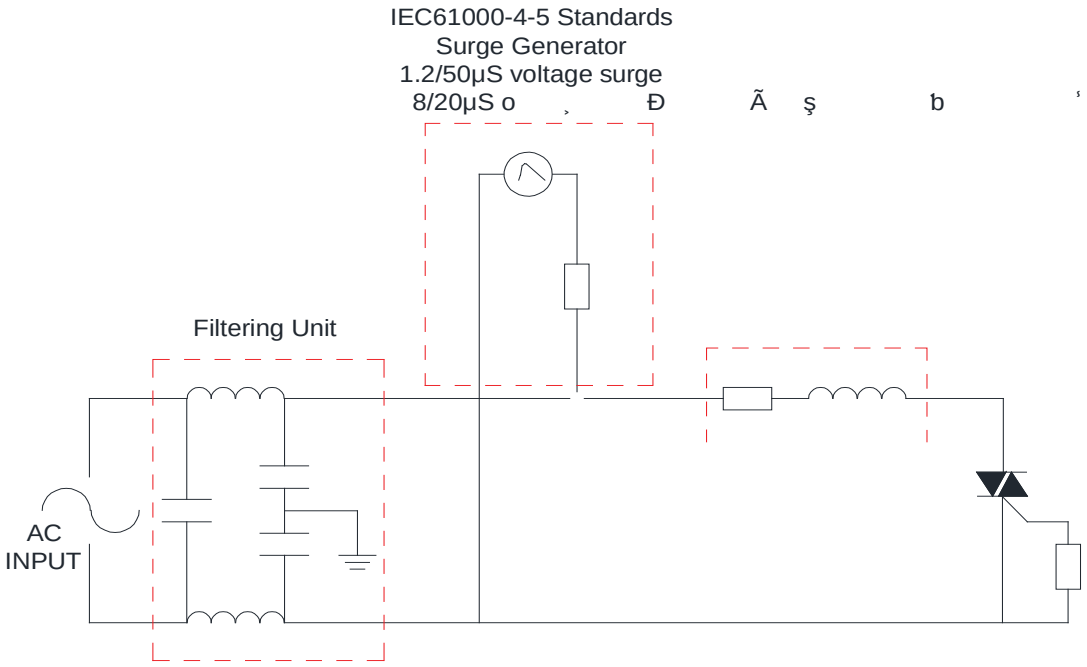



**FIG.2:** RMS on-state current versus case temperature

**FIG.3:** Surge peak on-state current versus number of cycles

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



## ORDERING INFORMATION

| Order code | Voltage $V_{DRM}/V_{RRM}$ (V) | IGT(mA) | | Package | Base qty. (pcs) | Delivery mode |
|---|---|---|---|---|---|---|
| | | H- I- J | K | | | |
| **JST06C-600B** | **600** | **50** | **70** | **TO-220C** | **50** | **Tube** |

### Document Revision History

| Date | Revision | Changes |
|---|---|---|
| Apr.14, 2023 | A.1.0 | Last updated |
| Oct.15, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |