# JST04H-600BW 4A TRIAC

Rev.A.1.1

## DESCRIPTION:

The JST04H-600BW 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. JST04H-600BW snubberless triac is especially recommended for use on inductive loads. From T2 terminals to external heatsink. Package TO-251 is RoHS compliant.

## MAIN FEATURES

## ABSOLUTE MAXIMUM RATINGS

| | | | |
|---|---|---|---|
| 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 |
| $V_{GT}$ | | - - | MAX. | 1 | V |
| $V_{GD}$ | $V_D$ =$V_{DRM}$ $T_j$ =125 $R_L$ =3.3kΩ | - - | MIN. | 0.2 | V |
| $I_L$ | $I_G$ =1.2$I_{GT}$ | - | MAX. | 70 | mA |
| | | | | 80 | |
| $I_H$ | $I_T$ =100mA | | MAX. | 60 | mA |
| dV/dt | $V_D$=400V Gate Open $T_j$ =125 | | MIN. | 2000 | V/μs |
| (dI/dt)c | (dV/dt)c=20V/μs, $T_j$=125 | | MIN. | 10 | A/ms |
| $t_{on}$ | $I_G$=80mA $I_A$=400mA $I_R$=40mA $T_j$=25 | | TYP. | 5 | μs |
| $t_{off}$ | | | | 50 | |

## STATIC CHARACTERISTICS

| Symbol | Parameter | | Value(MAX.) | Unit |
|---|---|---|---|---|
| $V_{TM}$ | $I_{TM}$ =5A $t_p$=380μs | $T_j$=25 | 1.65 | V |
| $V_{TO}$ | Threshold voltage | $T_j$=125 | 0.799 | V |
| $R_D$ | Dynamic resistance | $T_j$=125 | 151 | mΩ |
| $I_{DRM}$ | $V_D$ =$V_{DRM}$ $V_R$ =$V_{RRM}$ | $T_j$=25 | 5 | μA |
| $I_{RRM}$ | | $T_j$=125 | 0.2 | mA |

## THERMAL RESISTANCES

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $R_{th(j-c)}$ | junction to case (AC) | 4.5 | /W |
| $R_{th(j-a)}$ | junction to ambient (AC) | 120 | /W |

## ORDERING INFORMATION

J ST 04 H -600 BW

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

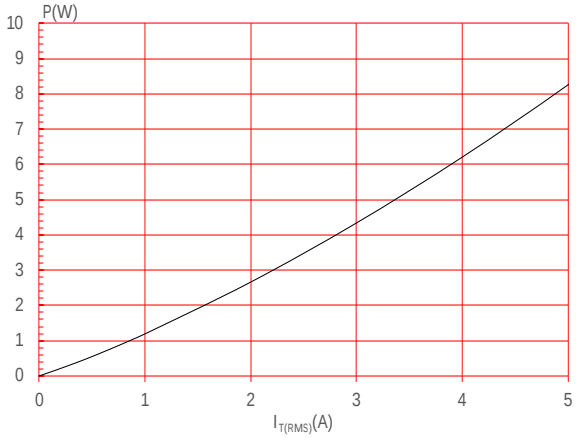
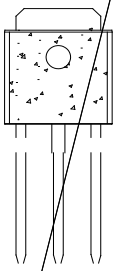



**FIG.2:** RMS on-state current versus case temperature



# JST04H-600BW

## PACKAGE MECHANICAL DATA



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