



JST30E-600BW 30A TRIAC

Rev.A.1.1

The JST30E-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. JST30E-600BW snubberless triac is especially recommended for use on inductive loads. Package TO-263 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 ($T_j=25^\circ\text{C}$) | V_{DRM} | 600 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 600 | V |
| RMS on-state current ($T_c=96^\circ\text{C}$) | $I_{T(RMS)}$ | 30 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 300 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 330 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 450 | A^2 |

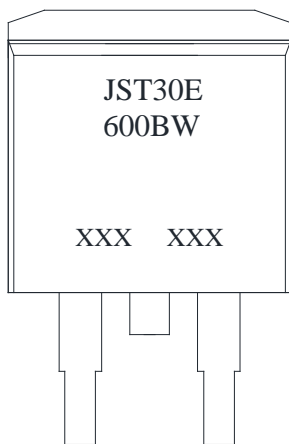
| | | | |
|--|----------|-----|----|
| Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8) | V_{pp} | 2.5 | kV |
|--|----------|-----|----|

($T_j=25$ unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|----------------------|--|----------|-------|------|------------|
| I_{GT} | $V_D=12V R_L=33$ | - - | MAX. | 50 | mA |
| V_{GT} | | - - | MAX. | 1.3 | V |
| V_{GD} | $V_D=V_{DRM} T_j=125$ $R_L=3.3k$ | - - | MIN. | 0.15 | V |
| I_L | $I_G=1.2I_{GT}$ | - | MAX. | 80 | mA |
| | | | | 100 | |
| I_H | $I_T=500mA$ | | MAX. | 75 | mA |
| dV/dt | $V_D=400V$ Gate Open $T_j=125$ | | MIN. | 2500 | V/ μs |
| (dI/dt) _c | (dV/dt) _c =20V/ μs $T_j=125$ | | MIN. | 25 | A/ms |

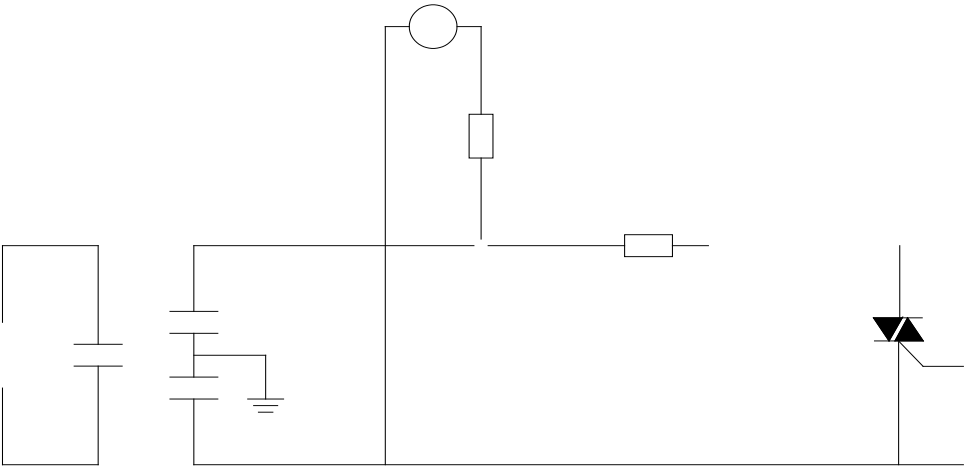
t_{on} $I_G=80mA I_A=400mA I_R=40mA$
 $T_j=25$

| | | | | | | |
|-----------------------------------|-----------------------|-----------|----------|---|----------------|-------------------------------|
| J | ST | 30 | E | -600 | BW | -/ |
| JieJie Microelectronics Co., Ltd. | Triacs IT(RMS):30A | | E:TO-263 | | BW:IGT1-3 50mA | Blank:Tube -TR:Tape & Reel |
| | | | | 600:V _{DRM} /V _{RRM} 600V | | |



JST30E-600BW

FIG.8: 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 |
|-----------------|---|---------|---------|--------------------|---------------|
| | | H- I- J | | | |
| JST30E-600BW | 600 | 50 | TO-263 | 50 | Tube |
| JST30E-600BW-TR | | | | 800 | Tape & Reel |

Document Revision History

| Date | Revision | Changes |
|--------------|----------|--------------------------------|
| Apr.11, 2023 | A.1.0 | Last updated |
| Oct.20, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |

JST30E-600BW

JieJie Microelectronics Co., Ltd.

JST30E-600BW

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