



JST131U-600E 1A TRIAC

Rev.A.1.0

The JST131U-600E 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. Complying with UL standards (File ref: E252906). Package TO-92 is RoHS compliant.

| | | | |
|--|----------|-----|----|
| Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7) | V_{PP} | 3.5 | kV |
|--|----------|-----|----|

($T_j=25$ unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|----------------------|---|----------|-------|-----|------------|
| I_{GT} | $V_D=12V R_L=33$ | - - | MAX. | 10 | mA |
| | | | | 25 | |
| V_{GT} | | ALL | MAX. | 1.3 | V |
| V_{GD} | $V_D=V_{DRM} T_j=125$ $R_L=3.3K$ | ALL | MIN. | 0.2 | V |
| I_L | $I_G=1.2I_{GT}$ | - - | MAX. | 15 | mA |
| | | | | 30 | |
| I_H | $I_T=50mA$ | | MAX. | 15 | mA |
| dV/dt | $V_D=400V$ Gate Open $T_j=110$ | | MIN. | 250 | V/ μs |
| (dV/dt) _c | (dI/dt) _c =0.44A/ms, $T_j=110$ | | MIN. | 6 | V/ μs |
| t_{on} | $I_G=40mA I_A=200mA I_R=20mA$ $T_j=25$ | | TYP. | 3 | μs |
| t_{off} | | | | 30 | |

| Symbol | Parameter | | Value(MAX.) | Unit |
|-----------|----------------------------|-----------|-------------|---------|
| V_{TM} | $I_{TM}=1.4A t_p=380\mu s$ | $T_j=25$ | 1.45 | V |
| V_{TO} | Threshold voltage | $T_j=125$ | 0.96 | V |
| R_D | Dynamic resistance | $T_j=125$ | 225 | m |
| I_{DRM} | $V_D=V_{DRM} V_R=V_{RRM}$ | $T_j=25$ | 5 | μA |
| I_{RRM} | | $T_j=125$ | 0.2 | mA |

| Symbol | Parameter | Value | Unit |
|---------------|--------------------------|-------|---------|
| $R_{th(j-c)}$ | junction to case (AC) | 60 | μW |
| $R_{th(j-a)}$ | junction to ambient (AC) | 150 | μW |

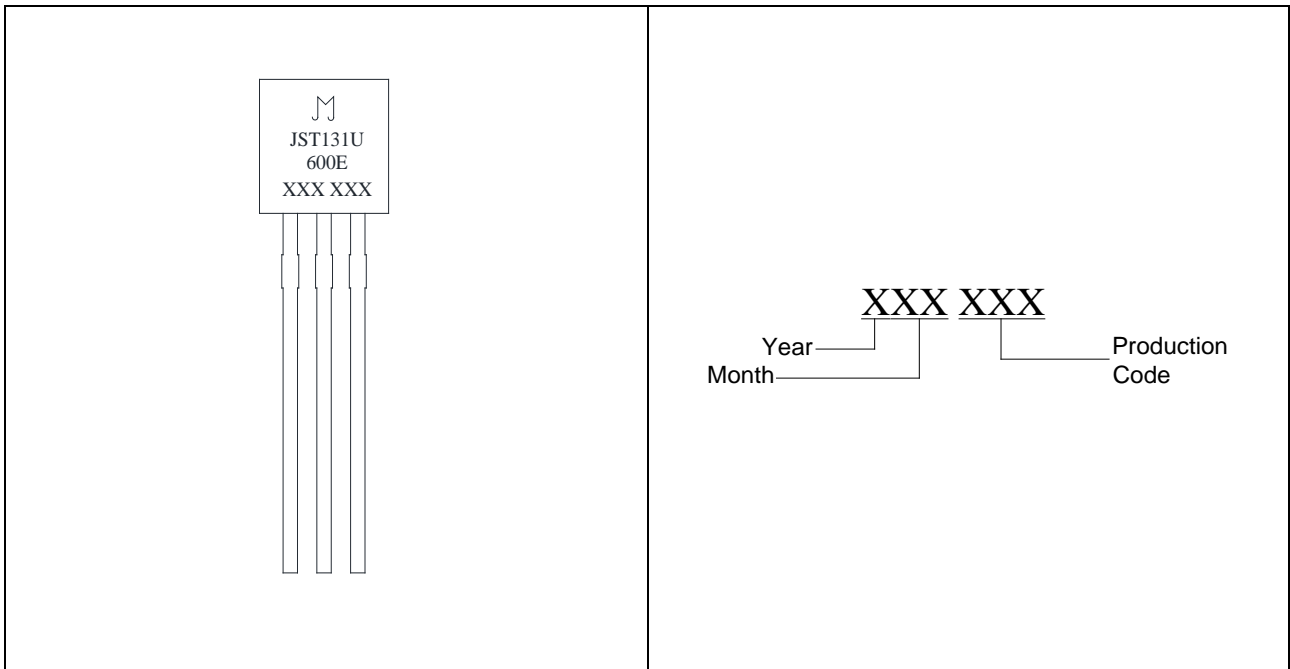
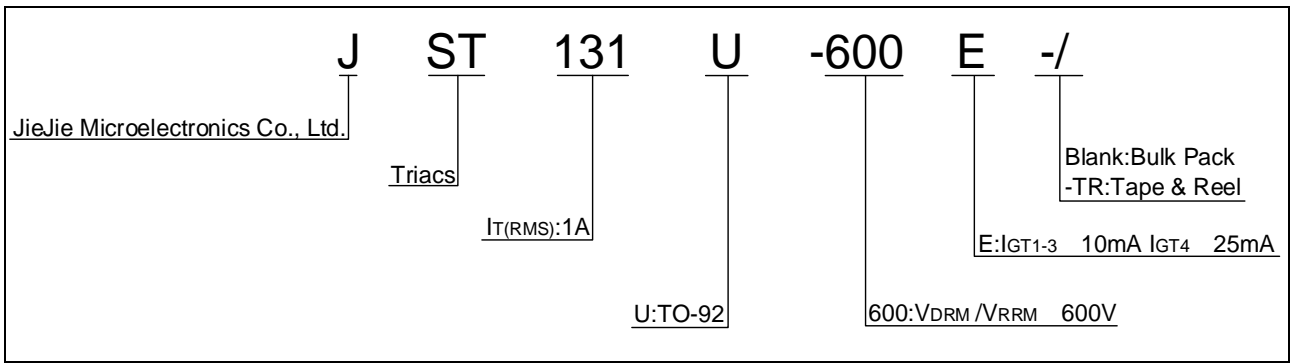
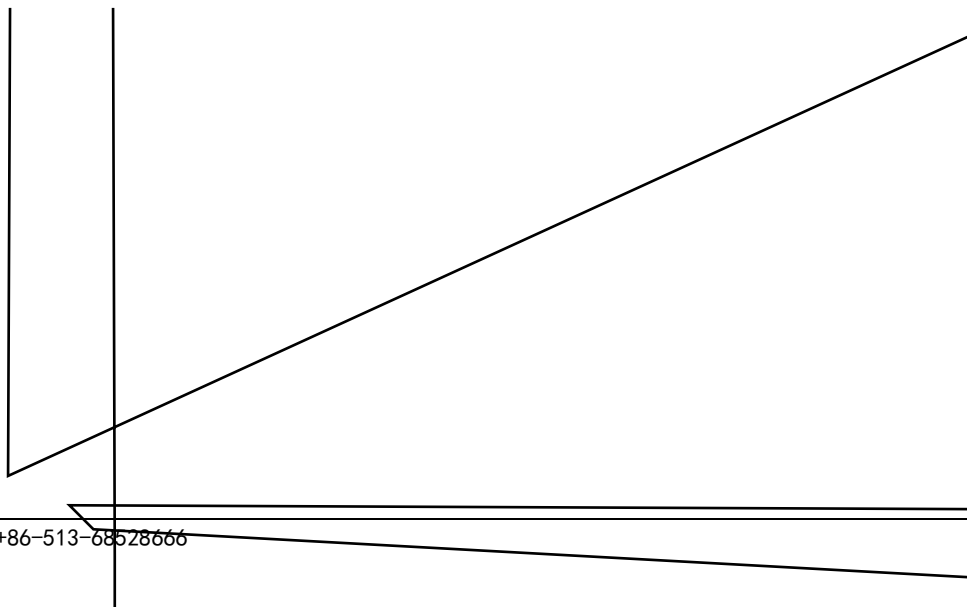
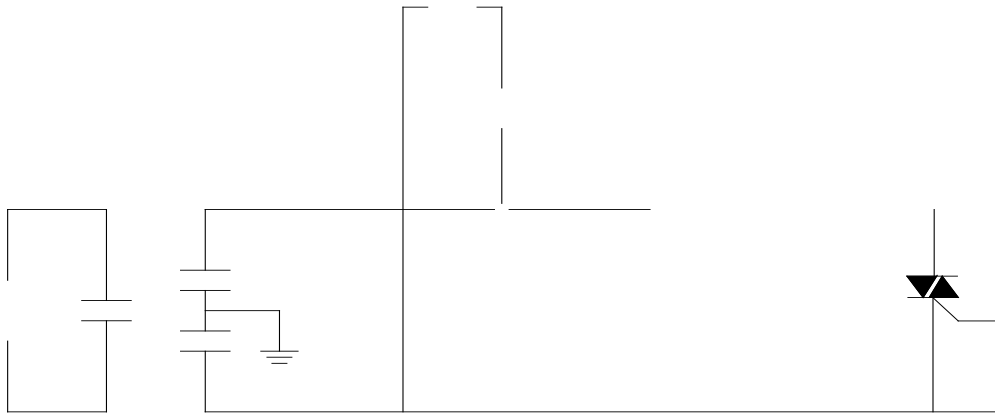


FIG.1 Maximum power dissipation versus RMS
on-state current

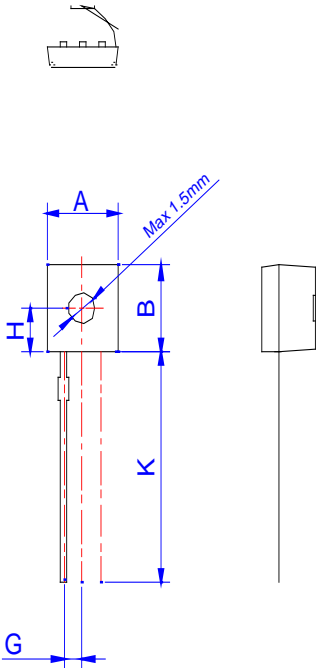
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



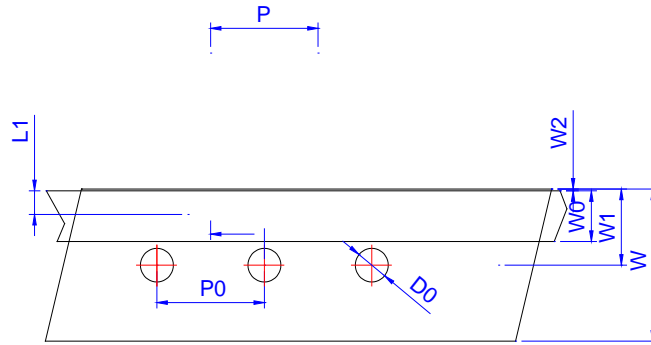
| Order code | Voltage V_{DRM}/V_{RRM} (V) | IGT(mA) | | Package | Base qty. (pcs) | Delivery mode |
|-----------------|----------------------------------|---------|----|---------|--------------------|---------------|
| | | - | - | | | |
| JST131U-600E | 600 | 10 | 25 | TO-92 | 1,000 | Bulk Pack |
| JST131U-600E-TR | | | | | 2,000 | Tape & Reel |

Document Revision History

| Date | Revision | Changes |
|--------------|----------|--------------|
| Apr.14, 2023 | A.1.0 | Last updated |



| PACKAGE | OUTLINE | BAG (PCS) | INNER BOX (PCS) | CARTON BOX (PCS) |
|---------|-----------|-----------|-----------------|------------------|
| TO-92 | Bulk Pack | 1,000 | 10,000 | 50,000 |



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