## JST131V-600T 1A TRIAC

Rev.A.1.1

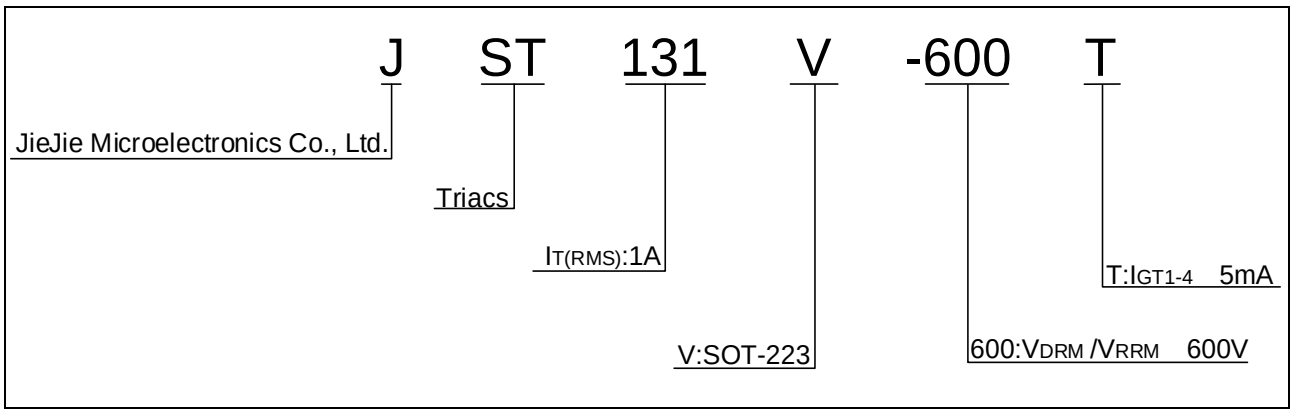
The JST131V-600T triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Package SOT-223 is RoHS compliant.

| Symbol | Value | Unit |
|---|---|---|
| $I_{T(RMS)}$ | 1 | A |

| 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 ($T_C$ 98 ) | | $I_{T(RMS)}$ | 1 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=20ms , $T_j$=25 ) | | $I_{TSM}$ | 16.5 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=16.6ms , $T_j$=25 ) | | | 18 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | | $I^2t$ | 1.36 | $A^2s$ |
| Critical rate of rise of on-state current ($I_G$=2 × $I_{GT}$ , f=100Hz , $T_j$=125 ) | - | dI/dt | 30 | A/μs |
| | - | | 20 | |
| Peak gate current ($t_p$=20μs , $T_j$=125 ) | | $I_{GM}$ | 2 | A |
| Average gate power dissipation ($T_j$=125 ) | | $P_{G(AV)}$ | 0.5 | W |
| Peak gate power | | $P_{GM}$ | 5 | W |
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.8) | | $V_{PP}$ | 3.5 | kV |

($T_j$=25 unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$=12V $R_L$=33Ω | ALL | MAX. | 5 | mA |
| $V_{GT}$ | | ALL | MAX. | 1.3 | 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. | 5 | mA |
| | | | | 10 | |
| $I_H$ | $I_T$=50mA | | MAX. | 5 | mA |
| dV/dt | $V_D$=400V | | | | |


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T
JieJie Microelectronics Co., Ltd.
Triacs
IT(RMS):1A
V:SOT-223
600:VDRM /VRRM 600V
T:IGT1-4 5mA

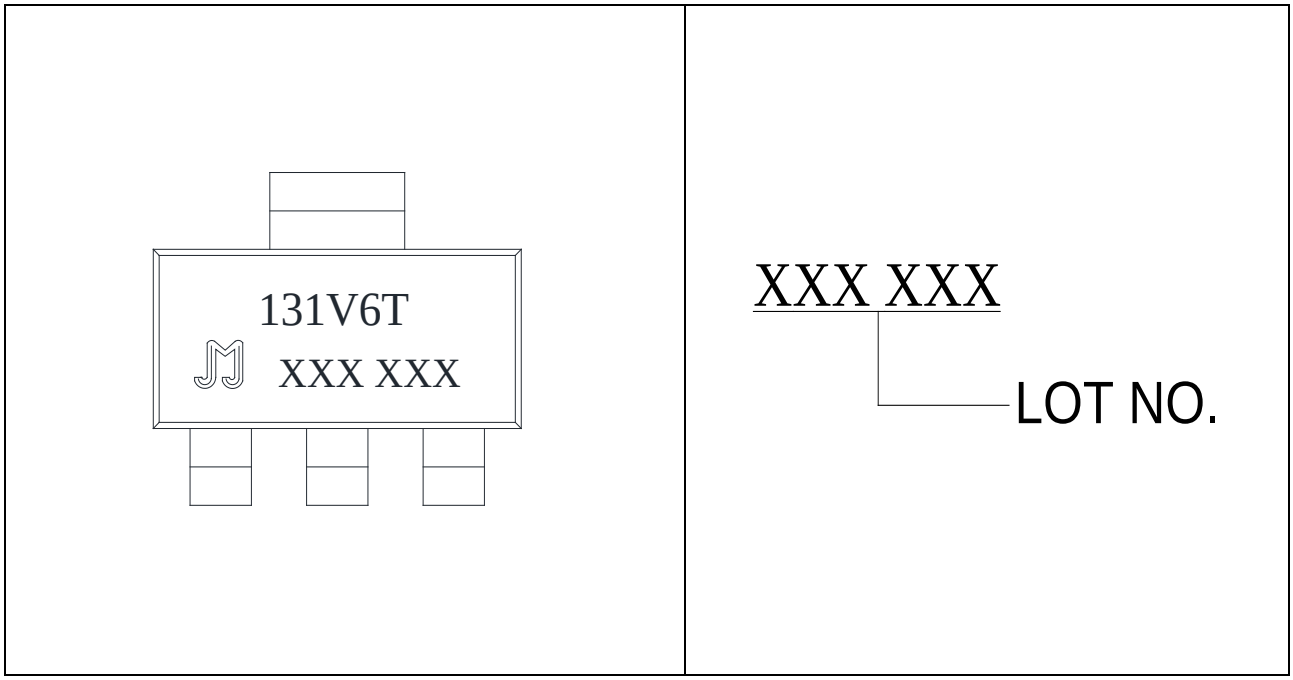

131V6T
XXX XXX
XXX XXX
LOT NO.

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

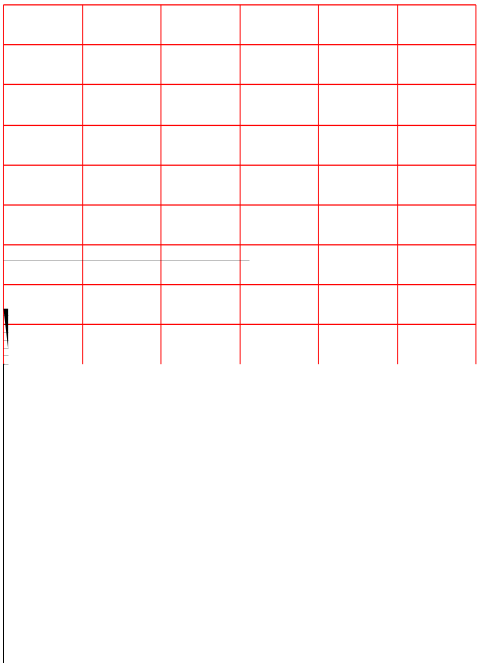


**FIG.2:** RMS on-state current versus case temperature

**FIG.7:** Relative variations of gate trigger current, holding current and latching current versus junction temperature

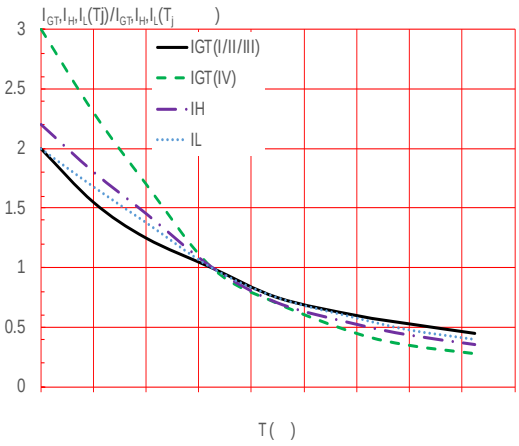
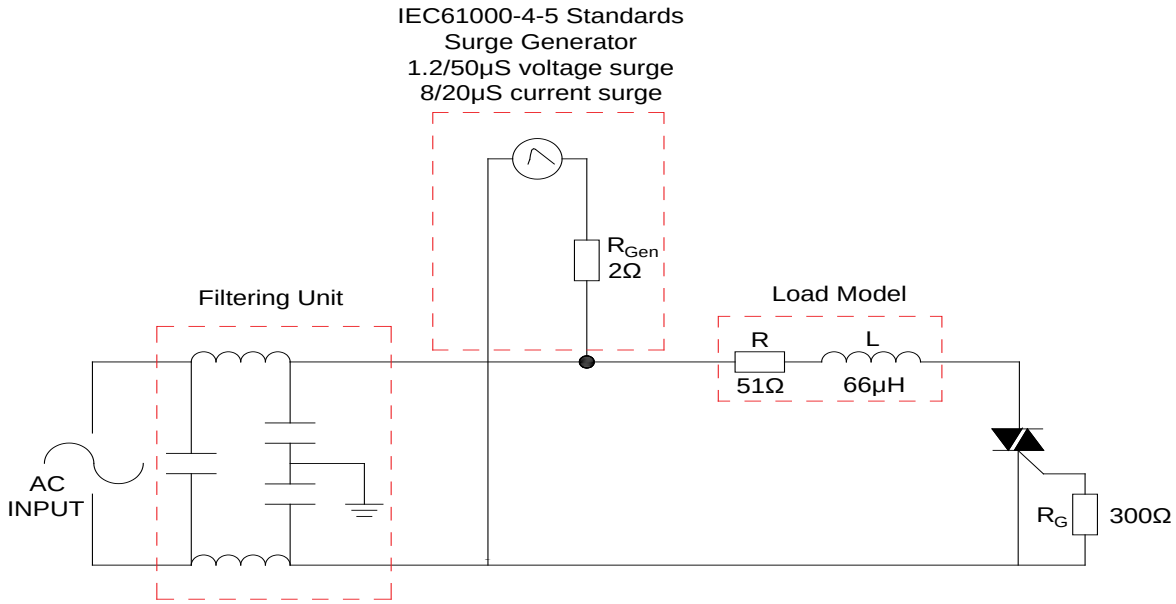
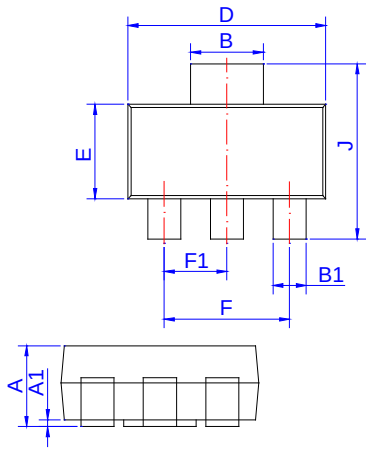


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



| Order code | Voltage $V_{DRM}/V_{RRM}$ (V) | IGT(mA) | Package | Base qty. (pcs) | |
|---|---|---|---|---|---|




| Ref. | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.50 | 1.60 | 1.80 | 0.059 | 0.063 | 0.071 |
| A1 | 0.01 | 0.06 | 0.10 | 0.001 | 0.002 | 0.004 |
| B | 2.90 | 3.00 | 3.10 | 0.114 | 0.118 | 0.122 |
| B1 | 0.60 | 0.70 | 0.80 | 0.024 | 0.028 | 0.031 |
| C | 0.22 | 0.26 | 0.32 | 0.009 | 0.010 | 0.013 |
| D | 6.30 | 6.50 | 6.70 | 0.248 | 0.256 | 0.264 |
| E | 3.30 | 3.50 | 3.70 | 0.130 | 0.138 | 0.146 |
| F | 4.40 | | | 0.173 | | |
| F1 | 2.20 | | | 0.087 | | |
| G | 0.50 | | 1.00 | 0.020 | | 0.039 |
| H | 1.50 | 1.75 | 2.00 | 0.059 | 0.069 | 0.079 |
| J | 6.70 | 7.00 | 7.30 | 0.264 | 0.276 | 0.287 |
| K | 0.80 | | 1.00 | | | 0.039 |
| | | | | | | |