

**JST131U-800DS 1A TRIAC**

Rev.A.1.0

The JST131U-800DS 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.

| 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} | 800 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 800 | V |
| RMS on-state current ($T_c = 44^\circ\text{C}$) | $I_{T(RMS)}$ | 1 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 16.5 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 18 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 1.36 | A^2s |
| Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$) | - | 50 | A/s |
| | | 30 | |

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

($T_j=25$ unless specified)

| Symbol | Test Condition | Quadrant | Value | Unit |
|----------|-------------------------------------|----------|-------|------|
| I_{GT} | $V_D=12V R_L=33$ | - - | 5 | mA |
| | | | 10 | |
| V_{GT} | | ALL | 1.3 | V |
| V_{GD} | $V_D=V_{DRM} T_j=125$ $R_L=3.3K$ | ALL | 0.2 | V |
| I_L | $I_G=1.2I_{GT}$ | - - | 5 | mA |
| | | | 20 | |
| I_H | $I_T=50mA$ | | MAX. | 7 |

dV/dt $V_D=540V$ Gate Open $T_j \neq T$

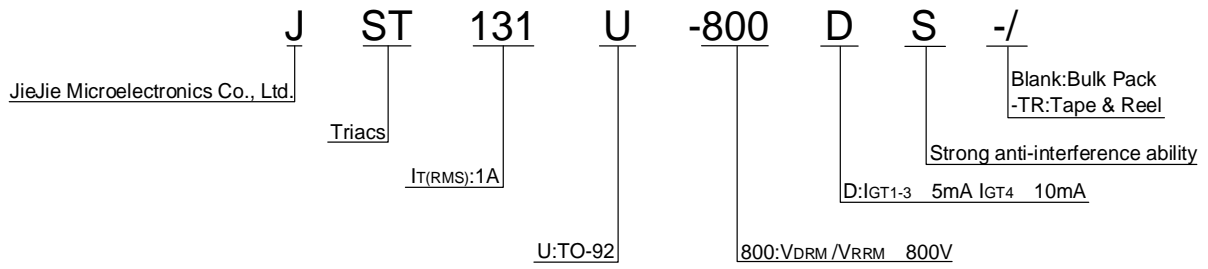


FIG.1 Maximum power dissipation versus RMS on-state current



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

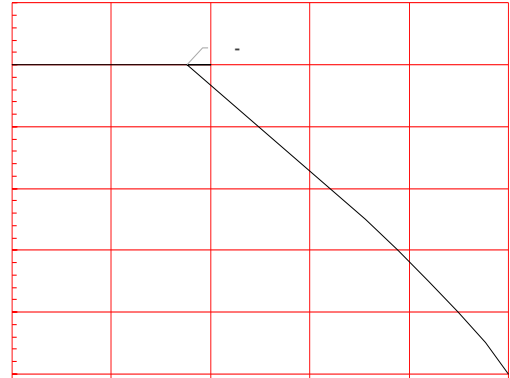


FIG.3: Surge peak on-state current versus number of cycles

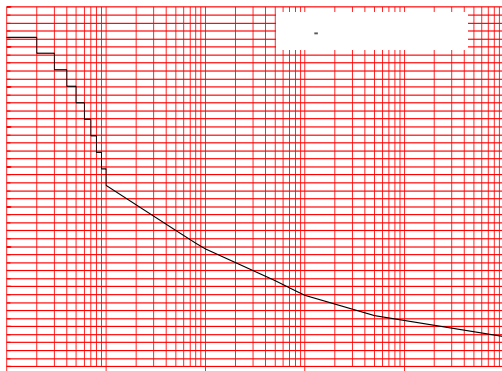


FIG.4: On-state characteristics

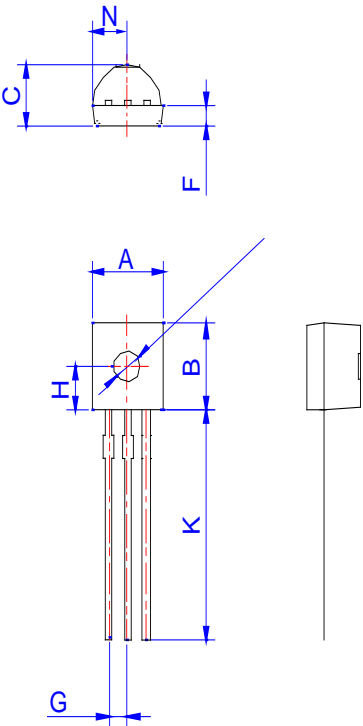


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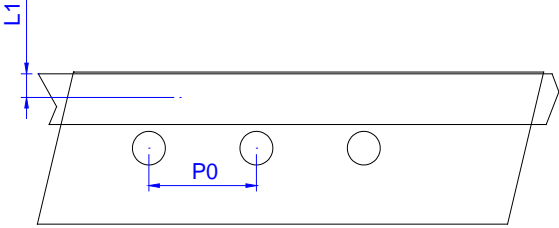
| Order code | Voltage V_{DRM}/V_{RRM} (V) | IGT(mA) | | Package | Base qty. (pcs) | Delivery mode |
|------------------|----------------------------------|---------|----|---------|--------------------|---------------|
| | | H- I- J | K | | | |
| JST131U-800DS | 800 | 5 | 10 | TO-92 | 1,000 | Bulk Pack |
| JST131U-800DS-TR | | | | | 2,000 | Tape & Reel |

Document Revision History

| Date | Revision | Changes |
|--------------|----------|--------------|
| Jan.23, 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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