

**JST008U-800CW 0.8A TRIAC**

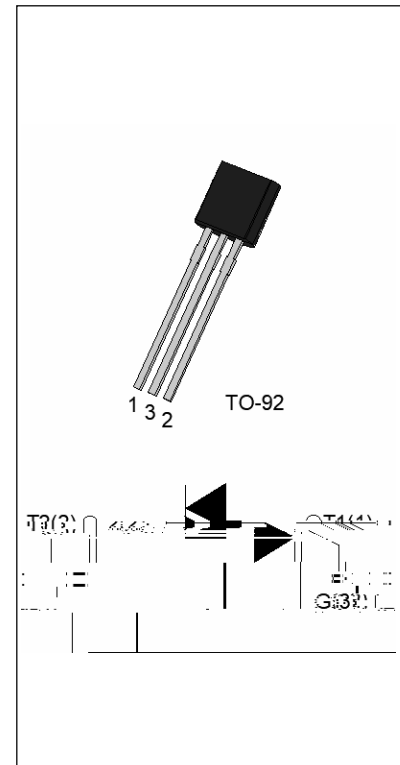
Rev.A.2.1

**DESCRIPTION:**

The JST008U-800CW 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. JST008U-800CW snubberless triac is especially recommended for use on inductive loads. Complying with UL standards (File ref: E252906). Package TO-92 is RoHS compliant.

**MAIN FEATURES**

| Symbol                   | Value    | Unit |
|--------------------------|----------|------|
| $I_{T(RMS)}$             | 0.8      | A    |
| $V_{DRM}/V_{RRM}$        | 800      | V    |
| $I_{GT} \quad / \quad /$ | 35/35/35 | mA   |

**ABSOLUTE MAXIMUM RATINGS**

| 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 ( $T_C \leq 51^\circ\text{C}$ )                                                             | $I_{T(RMS)}$ | 0.8     | A                      |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )             | $I_{TSM}$    | 10      | A                      |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )           |              | 11      |                        |
| $I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )                                           | $I^2t$       | 0.5     | $\text{A}^2\text{s}$   |
| Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ ) | $di/dt$      | 80      | $\text{A}/\mu\text{s}$ |
| Peak gate current ( $t_p=20\mu\text{s}$ , $T_j=125^\circ\text{C}$ )                                              | $I_{GM}$     | 1       | A                      |
| Average gate power dissipation ( $T_j=125^\circ\text{C}$ )                                                       | $P_{G(AV)}$  | 0.1     | W                      |
| Peak gate power                                                                                                  | $P_{GM}$     | 5       | W                      |

|                                                                |     |   |    |
|----------------------------------------------------------------|-----|---|----|
| Peak pulse voltage<br>(Tj=25 ; non-repetitive,off-state;FIG.7) | Vpp | 1 | kV |
|----------------------------------------------------------------|-----|---|----|

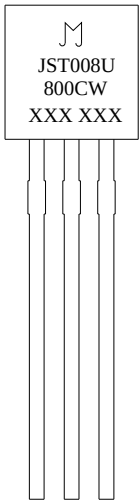
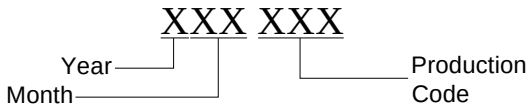
ELECTRICAL CHARACTERISTICS (Tj=25 unless otherwise specified)

|        |                |          |   |    |   |   |   |   |
|--------|----------------|----------|---|----|---|---|---|---|
| Symbol | Test Condition | Quadrant | h | Rs | W | Ä | W | ó |
|--------|----------------|----------|---|----|---|---|---|---|

## ORDERING INFORMATION

| J                                 | ST     | 008                | U       | -800                             | CW                        | -/                                   |
|-----------------------------------|--------|--------------------|---------|----------------------------------|---------------------------|--------------------------------------|
| JieJie Microelectronics Co., Ltd. | Triacs | $I_{T(RMS)}: 0.8A$ | U:TO-92 | 800: $V_{DRM}/V_{RRM} \geq 800V$ | CW: $I_{GT1-3} \leq 35mA$ | Blank: Bulk Pack<br>-TR: Tape & Reel |

## MARKING

|                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p> <br/> JST008U<br/> 800CW<br/> XXX XXX </p> | <p>  </p> <p> Year    <br/> Month     </p> <p>     </p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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



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



## ORDERING INFORMATION

| Order code       | Voltage<br>V <sub>DRM</sub> /V <sub>RRM</sub> (V) | IGT(mA) | Package | Base qty.<br>(pcs) | Delivery<br>mode |
|------------------|---------------------------------------------------|---------|---------|--------------------|------------------|
|                  |                                                   | - -     |         |                    |                  |
| JST008U-800CW    | 800                                               | 35      | TO-92   | 1,000              | Bulk Pack        |
| JST008U-800CW-TR |                                                   |         |         | 2,000              | Tape & Reel      |

## Document Revision History

| Date          | Revision | Changes                        |
|---------------|----------|--------------------------------|
| Apr.11, 2023  | A.1.0    | Last updated                   |
| Mar.28, 2025  | A.2.0    | Renew PACKAGE MECHANICAL DATA  |
| Sept.28, 2025 | A.2.1    | Revise PACKAGE MECHANICAL DATA |



## DELIVERY MODE

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

| Ref.  | Dimensions  |       |       |        |       |       |
|-------|-------------|-------|-------|--------|-------|-------|
|       | Millimeters |       |       | Inches |       |       |
|       | Min.        | Typ.  | Max.  | Min.   | Typ.  | Max.  |
| P     | 12.40       | 12.70 | 13.00 | 0.488  | 0.500 | 0.512 |
| P0    | 12.40       | 12.70 | 13.00 | 0.488  | 0.500 | 0.512 |
| P1    | 3.55        | 3.85  | 4.15  | 0.140  | 0.152 | 0.163 |
| P2    | 5.95        | 6.35  | 6.75  | 0.233  | 0.250 | 0.265 |
| P     | -1.00       | 0     | 1.00  | -0.039 | 0     | 0.039 |
| F1 F2 | 2.30        | 2.50  | 2.70  | 0.090  | 0.098 | 0.106 |
| F1-F2 | -0.10       | 0     | 0.10  | -0.004 | 0     | 0.004 |
| W     | 17.50       | 18.00 | 19.00 | 0.689  | 0.709 | 0.748 |
| W0    | 5.50        | 6.00  | 6.50  | 0.217  | 0.236 | 0.256 |
| W1    | 8.50        | 9.00  | 9.50  | 0.335  | 0.354 | 0.374 |
| W2    |             |       | 1.00  |        |       | 0.039 |
| D0    | 3.80        | 4.00  | 4.20  | 0.150  | 0.157 | 0.165 |
| H     | -1.00       | 0     | 1.00  | -0.039 | 0     | 0.039 |
| L1    | 2.50        |       |       | 0.098  |       |       |
| H     | 18.00       | 19.00 | 20.00 | 0.709  | 0.748 | 0.787 |
|       |             |       |       |        |       |       |



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