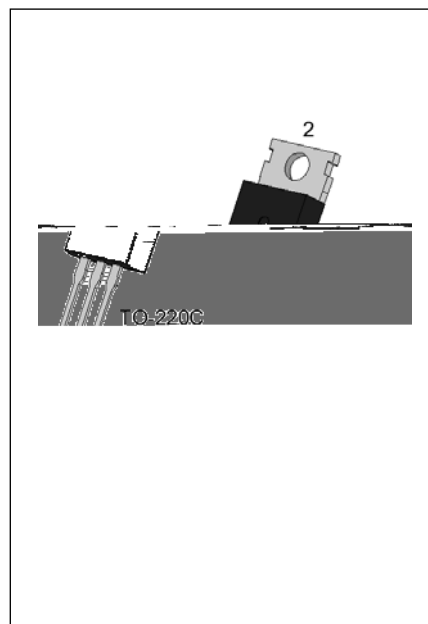


## DESCRIPTION:

The JST08C-600C 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. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.



## MAIN FEATURES

| Symbol            | Value       | Unit |
|-------------------|-------------|------|
| $I_{T(RMS)}$      | 8           | A    |
| $V_{DRM}/V_{RRM}$ | 600         | V    |
| $I_{GT} / / /$    | 25/25/25/50 | mA   |

## ABSOLUTE MAXIMUM RATINGS

| Parameter                                                                                                        |   | Symbol              | Value   | Unit             |
|------------------------------------------------------------------------------------------------------------------|---|---------------------|---------|------------------|
| Storage junction temperature range                                                                               |   | T <sub>stg</sub>    | -40-150 |                  |
| Operating junction temperature range                                                                             |   | T <sub>j</sub>      | -40-125 |                  |
| Repetitive peak off-state voltage (T <sub>j</sub> =25℃)                                                          |   | V <sub>DRM</sub>    | 600     | V                |
| Repetitive peak reverse voltage (T <sub>j</sub> =25℃)                                                            |   | V <sub>RRM</sub>    | 600     | V                |
| RMS on-state current (T <sub>c</sub> 108℃)                                                                       |   | I <sub>T(RMS)</sub> | 8       | A                |
| Non repetitive surge peak on-state current<br>(full cycle , t <sub>p</sub> =20ms , T <sub>j</sub> =25℃)          |   | I <sub>TSM</sub>    | 80      | A                |
| Non repetitive surge peak on-state current<br>(full cycle , t <sub>p</sub> =16.6ms , T <sub>j</sub> =25℃)        |   |                     | 88      |                  |
| I <sup>2</sup> t value for fusing (t <sub>p</sub> =10ms , T <sub>j</sub> =25℃)                                   |   | I <sup>2</sup> t    | 32      | A <sup>2</sup> s |
| Critical rate of rise of on-state current<br>(I <sub>G</sub> =2I <sub>GT</sub> , f=100Hz , T <sub>j</sub> =125℃) | - | di/dt               | 80      | A/s              |
|                                                                                                                  | - |                     | 40      |                  |
| Peak gate current (t <sub>p</sub> =20μs , T <sub>j</sub> =125℃)                                                  |   | I <sub>GM</sub>     | 4       | A                |
| Average gate power dissipation (T <sub>j</sub> =125℃)                                                            |   | P <sub>G(AV)</sub>  | 0.5     | W                |
| Peak gate power                                                                                                  |   | P <sub>GM</sub>     | 10      | W                |
| Peak pulse voltage<br>(T <sub>j</sub> =25℃ ; non-repetitive,off-state;FIG.7)                                     |   | V <sub>PP</sub>     | 1       | kV               |

ELECTRICAL CHARACTERISTICS (unless otherwise specified)

| Symbol          | Test Condition                                                               | Quadrant | Value |     | Unit |
|-----------------|------------------------------------------------------------------------------|----------|-------|-----|------|
| I <sub>GT</sub> | V <sub>D</sub> =12V R <sub>L</sub> =33                                       | - -      | MAX.  | 25  | mA   |
|                 |                                                                              |          |       | 50  |      |
| V <sub>GT</sub> |                                                                              | ALL      | MAX.  | 1   | V    |
| V <sub>GD</sub> | V <sub>D</sub> =V <sub>DRM</sub> T <sub>J</sub> =125<br>R <sub>L</sub> =3.3k | ALL      | MIN.  | 0.2 | V    |
| I <sub>L</sub>  | I <sub>G</sub> =1.2I <sub>GT</sub>                                           | - -      | MAX.  | 40  | mA   |
|                 |                                                                              |          |       | 80  |      |
| I <sub>H</sub>  | I <sub>T</sub> =200mA                                                        |          | MAX.  | 30  | mA   |

ORDERING INFORMATION /Spanw ( )Tj E3C ET /lc -0.005TT5j 1 J81 1 J8 q 5flc -0.0

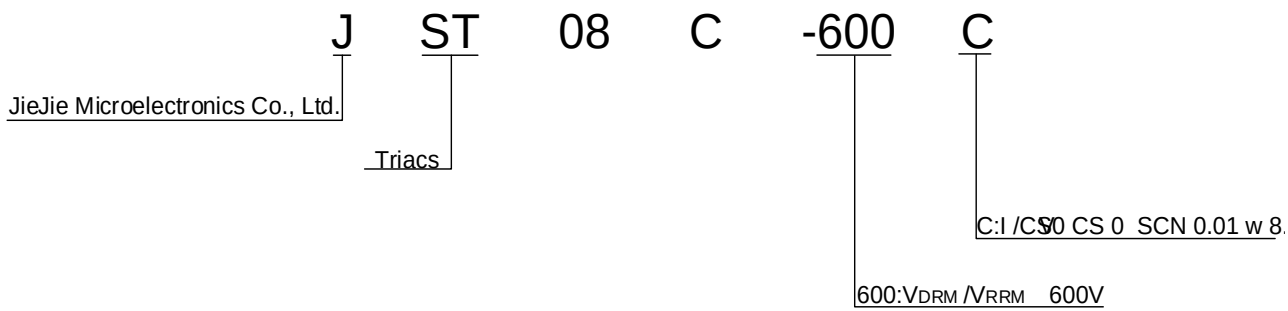


FIG.1: Maximum power dissipation versus RMS on-state current

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







