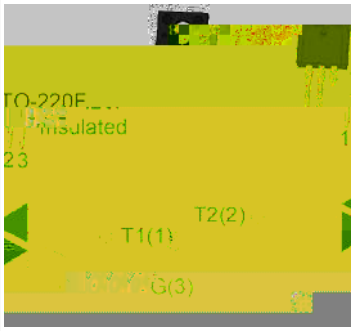
## JST16X-1000CW 16A TRIAC

Rev.A.1.1

### DESCRIPTION:

The JST16X-1000CW triac is suitable for general purpose AC switching. It is more suitable for the switch functions of washing machines' water valve, positive inversion of motor, heat pump...JST16X-1000CW snubberless triac is especially recommended for use on inductive loads. By using an external plastic package, JST16X-1000CW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.




### MAIN FEATURES

| Symbol | Value | Unit |
|---|---|---|
| $I_{T(RMS)}$ | 16 | A |
| $V_{DRM}$ /$V_{RRM}$ | 1000 | V |
| $I_{GT}$ / / | 35/35/35 | mA |

### ABSOLUTE MAXIMUM RATINGS

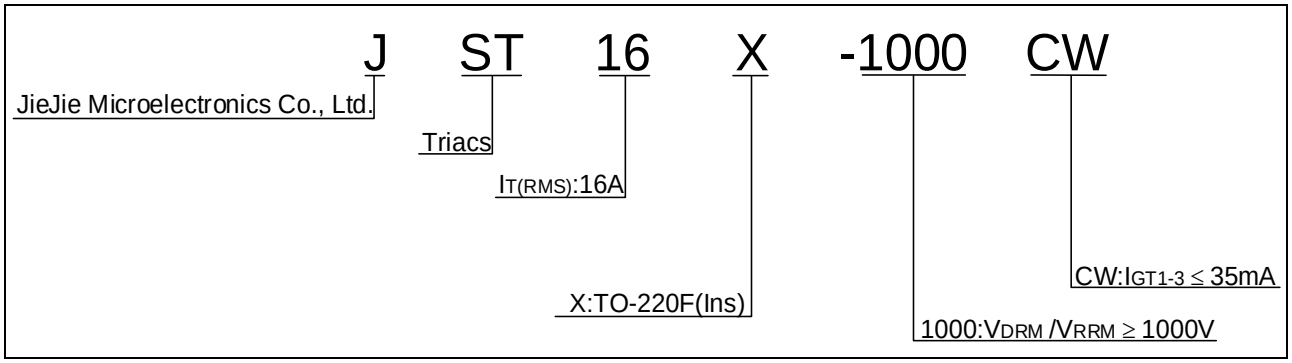
| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | |
| Operating junction temperature range | $T_j$ | -40-125 | |
| Repetitive peak off-state voltage ($T_j$=25 ) | $V_{DRM}$ | 1000 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 1000 | V |
| RMS on-state current ($T_C \leq$ 75 ) | $I_{T(RMS)}$ | 16 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=20ms , $T_j$=25 ) | $I_{TSM}$ | 170 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=16.6ms , $T_j$=25 ) | | 180 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | $I^2t$ | 145 | $A^2s$ |
| Critical rate of rise of on-state current ($I_G$=2 × $I_{GT}$ , f=100Hz , $T_j$=125 ) | dI/dt | 100 | A/μs |
| Peak gate current ($t_p$=20μs , $T_j$=125 ) | $I_{GM}$ | 4 | A |
| Average gate power dissipation ($T_j$=125 ) | $P_{G(AV)}$ | 0.5 | W |
| Peak gate power | $P_{GM}$ | 10 | W |

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

**ELECTRICAL CHARACTERISTICS** ($T_j$=25 unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$ =12V $R_L$ =33Ω | - - | MAX. | 35 | mA |
| $V_{GT}$ | | - - | MAX. | 1 | V |
| $V_{GD}$ | $V_D$ =$V_{DRM}$ $T_j$ =125 $R_L$ =3.3kΩ | - - | MIN. | 0.2 | V |
| $I_L$ | $I_G$ =1.2$I_{GT}$ | - | MAX. | 50 | mA |
| | | | | 60 | |
| [redacted]H | $I_T$ =500mA | | MAX. | 40 | mA |
| [redacted]/dt | $V_D$=670V Gate Open $T_j$ =125 | | MIN. | 1000 | V/μs |
| [redacted]dt)c | (dV/dt)c=20V/μs $T_j$=125 | | MIN. | 12 | A/ms |
| [redacted]on | $I_G$=40mA $I_A$ | | | | |

## ORDERING INFORMATION




## MARKING

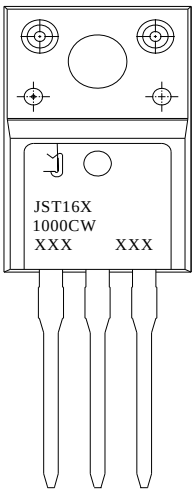
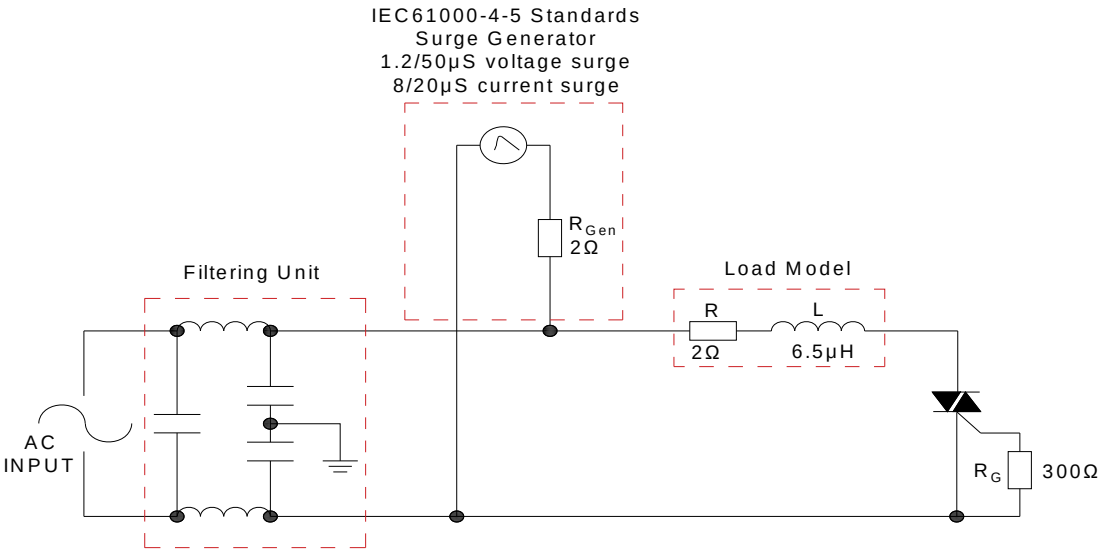


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards




## LEAD FORMING AND SOLDERING

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics.

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