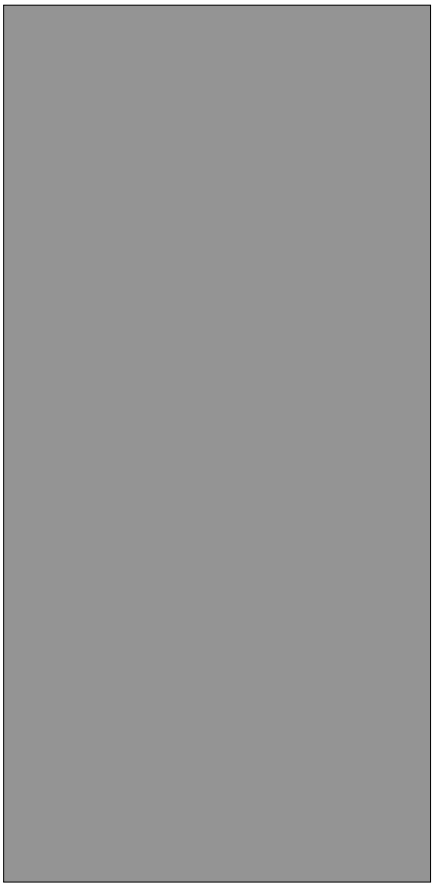
# ACJT1210-10F 12A TRIAC

Rev.A.1.1

## DESCRIPTION:

The ACJT1210-10F 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. The ACJT1210-10F embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. By using an external plastic package, ACJT1210-10F provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



## MAIN FEATURES

## ABSOLUTE MAXIMUM RATINGS

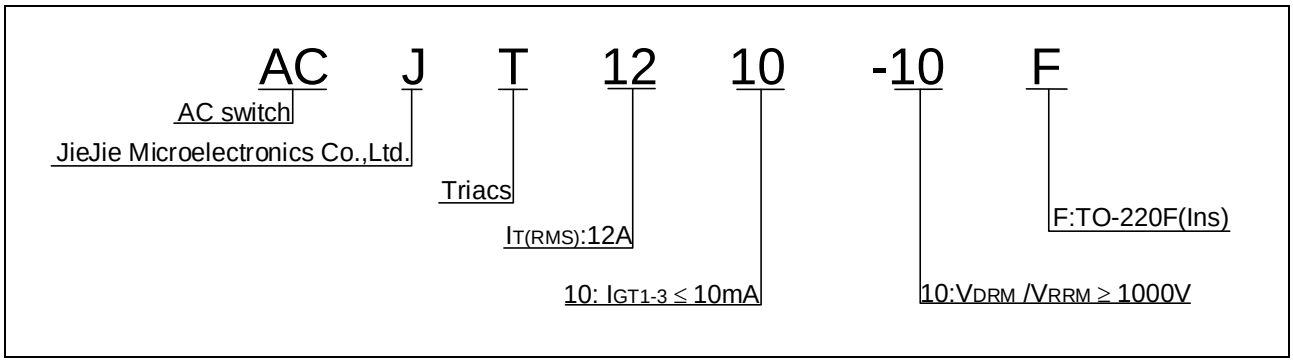
| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | |
| Operating junction temperature range | $T_j$ | -40-125 | |
| Repetitive peak off-state voltage ($T_j$=25 ) | $V_{DRM}$ | 1000 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 1000 | V |
| RMS on-state current ($T_C \leq$ 86 ) | $I_{T(RMS)}$ | 12 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=20ms , $T_j$=25 ) | $I_{TSM}$ | 120 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=16.6ms , $T_j$=25 ) | | 132 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | $I^2t$ | 72 | $A^2s$ |
| Critical rate of rise of on-state current ($I_G$=2 × $I_{GT}$ , f=100Hz , $T_j$=125 ) | dI/dt | 50 | A/μs |

| | | | |
|---|---|---|---|
| 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) | $V_{pp}$ | 4.5 | kV |

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

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$ =12V $R_L$ =33Ω | - - | MAX. | 10 | mA |
| $V_{GT}$ | | - - | MAX. | 1 | V |
| $V_{GD}$ | $V_D$ =$V_{DRM}$ $T_j$ =125 $R_L$ =3.3kΩ | - - | MIN. | 0.2 | V |

## ORDERING INFORMATION




## MARKING

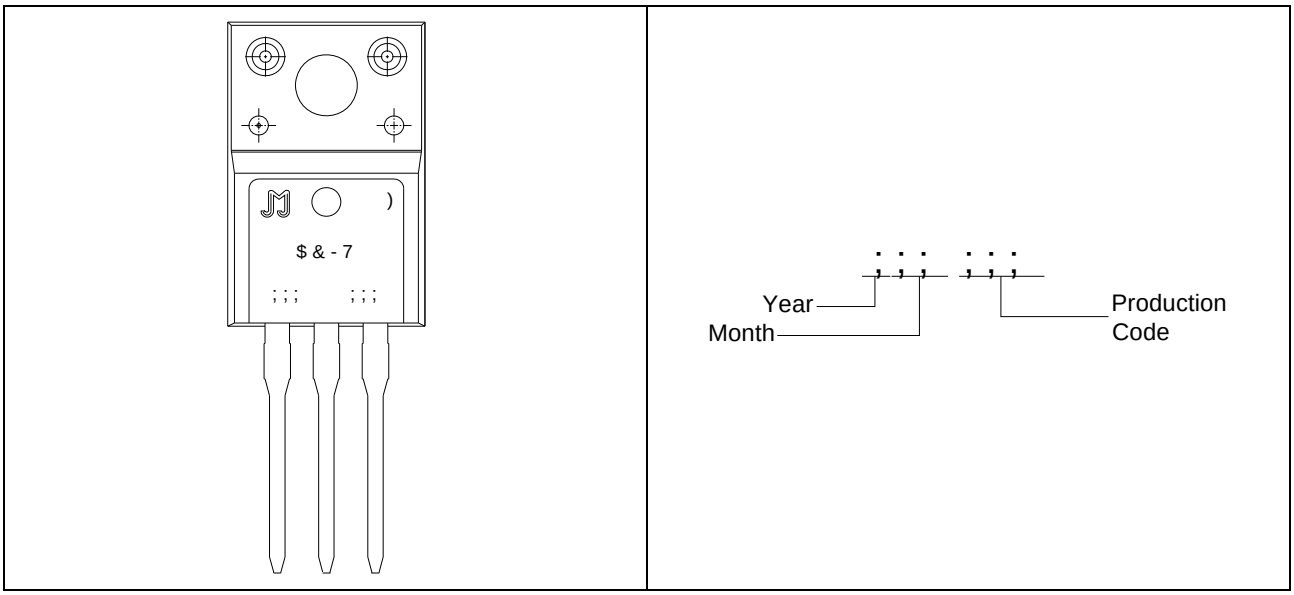


**FIG.1:** Maximum power dissipation versus RMS on-state current

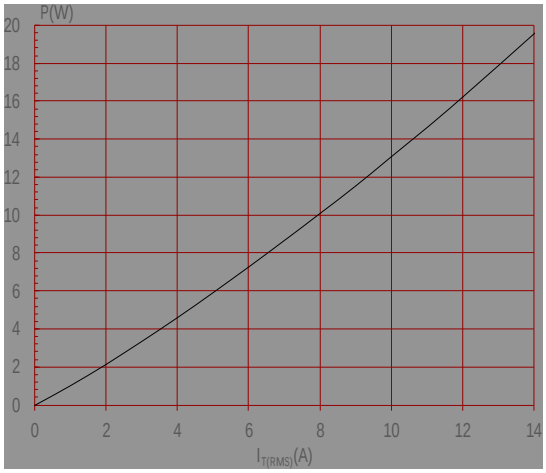



**FIG.2:** RMS on-state current versus case temperature

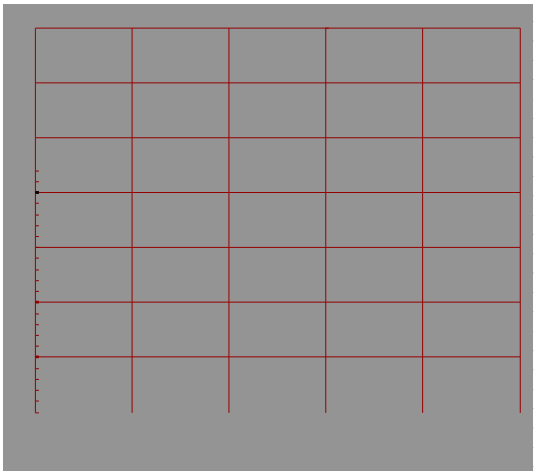
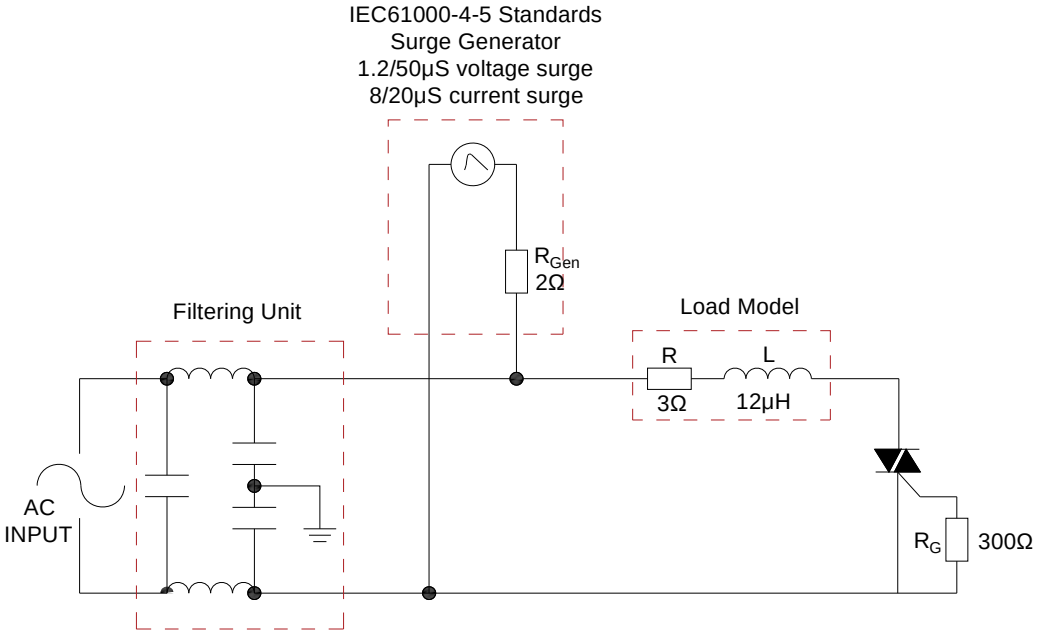


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



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