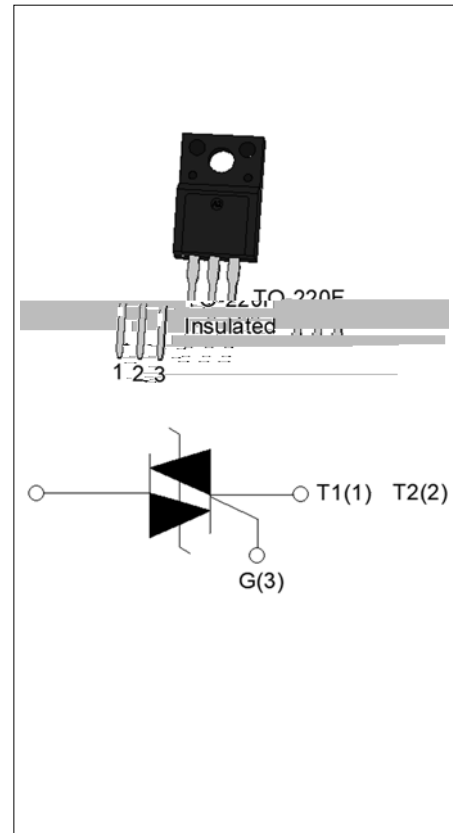


ACJT1010-10F 10A TRIAC

Rev.A.1.0

DESCRIPTION:

The ACJT1010-10F 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 ACJT1010-10F 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, ACJT1010-10F provides a rated insulation voltage of 2000 VRMS. Package TO-220F is RoHS compliant.

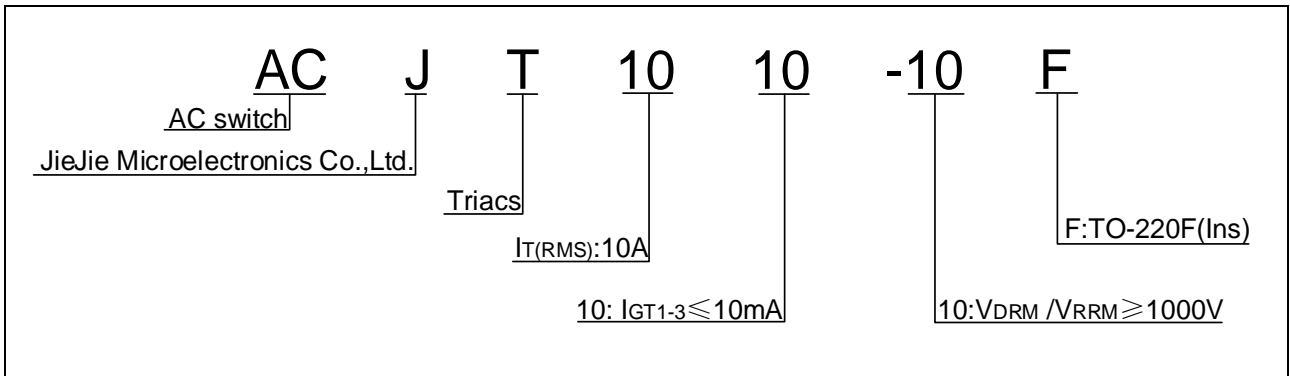

MAIN FEATURES

| Symbol | Value | Unit |
|--------------------|----------|------|
| $I_{T(RMS)}$ | 10 | A |
| V_{DRM}/V_{RRM} | 1000 | V |
| $I_{GT\ I/II/III}$ | 10/10/10 | mA |

ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Value | Unit |
|--|--------------|---------|------------------------|
| Storage junction temperature range | T_{stg} | -40-150 | °C |
| Operating junction temperature range | T_j | -40-125 | °C |
| Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$) | V_{DRM} | 1000 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 1000 | V |
| RMS on-state current ($T_c \leq 92^\circ\text{C}$) | $I_{T(RMS)}$ | 10 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 100 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 110 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 50 | A^2s |
| 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 | 100 | $\text{A}/\mu\text{s}$ |
| Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$) | I_{GM} | 4 | A |

ORDERING INFORMATION



MARKING

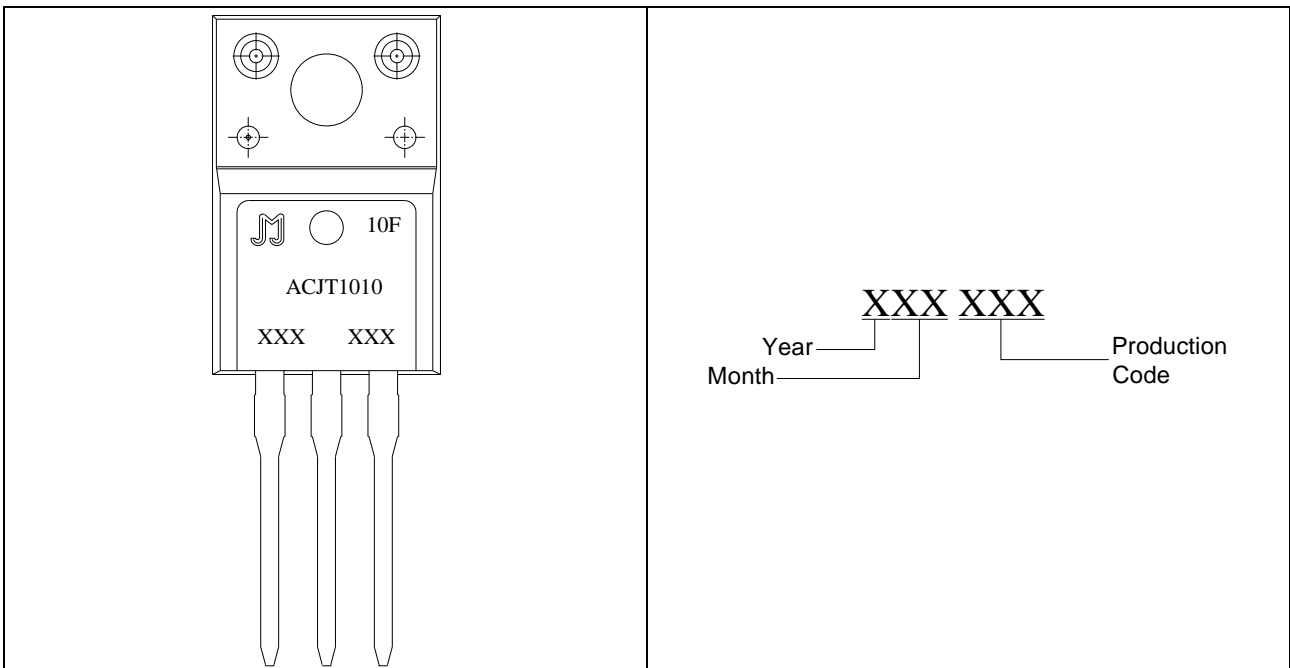


FIG.1 Maximum power dissipation versus RMS on-state current

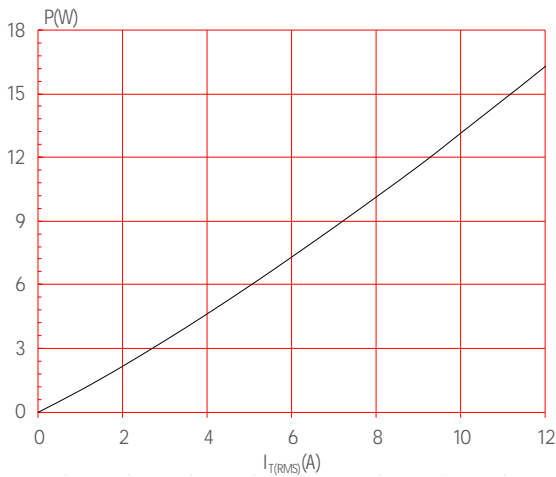


FIG.3: Surge peak on-state current versus number of cycles

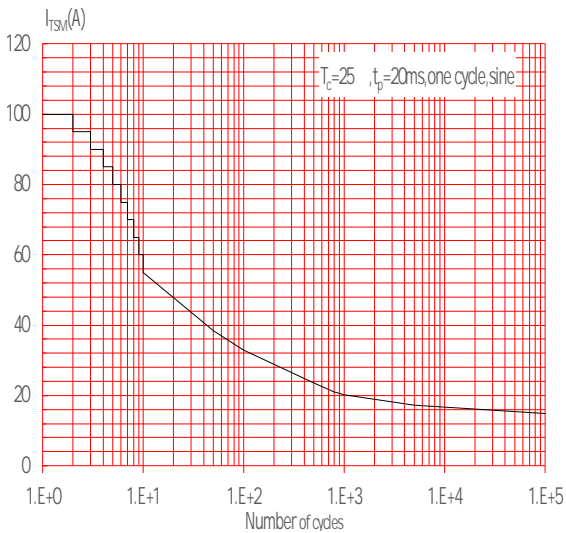


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($di/dt < 100\text{A}/\mu\text{s}$)

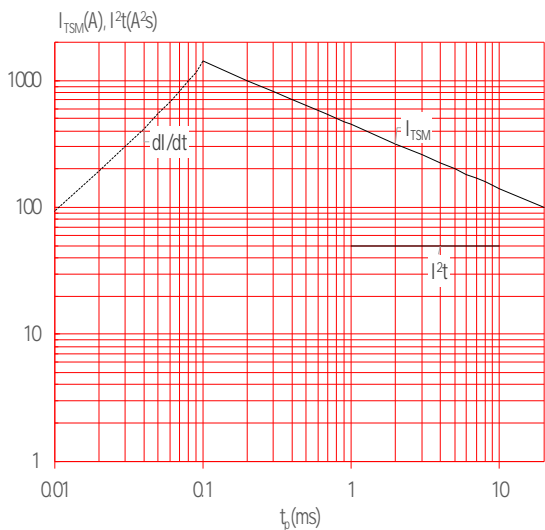


FIG.2: RMS on-state current versus case temperature

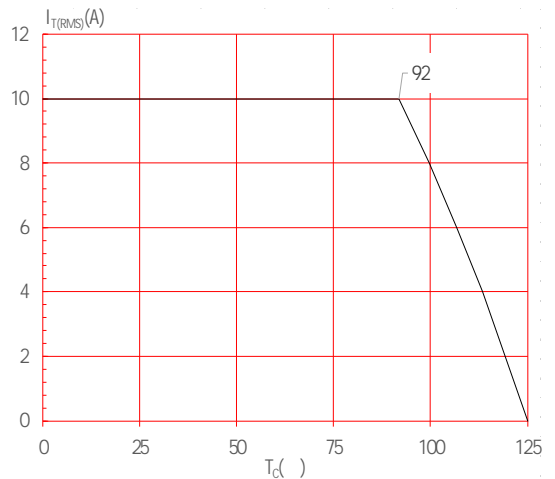


FIG.4: On-state characteristics

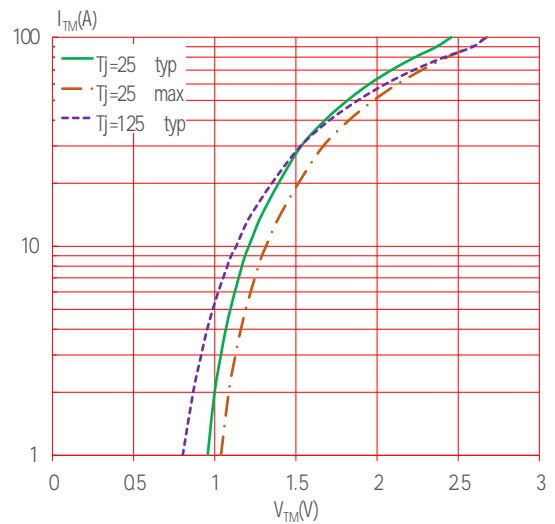


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

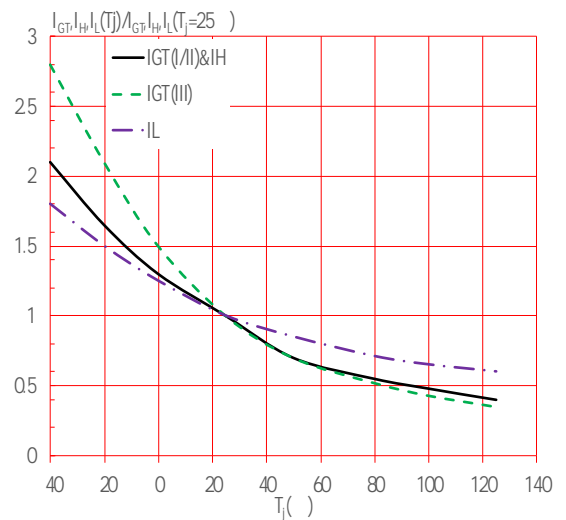
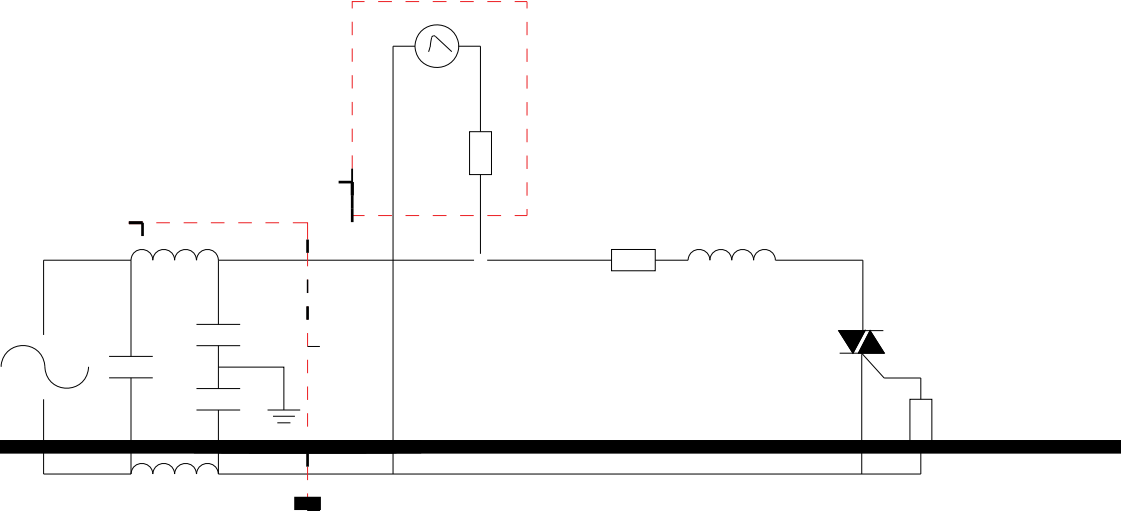


FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



ORDERING INFORMATION

| Order code | Voltage V_{DRM}/V_{RRM} (V) | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---------------------|--|----------------|---------------------|----------------------------|--------------------------|
| ACJT1010-10F | 1000 | 10 | TO-220F(Ins) | 50 | Tube |

Document Revision History

| Date | Revision | Changes |
|--------------|-----------------|----------------|
| Apr.13, 2023 | A.1.0 | Last updated |

PACKAGE MECHANICAL DATA

