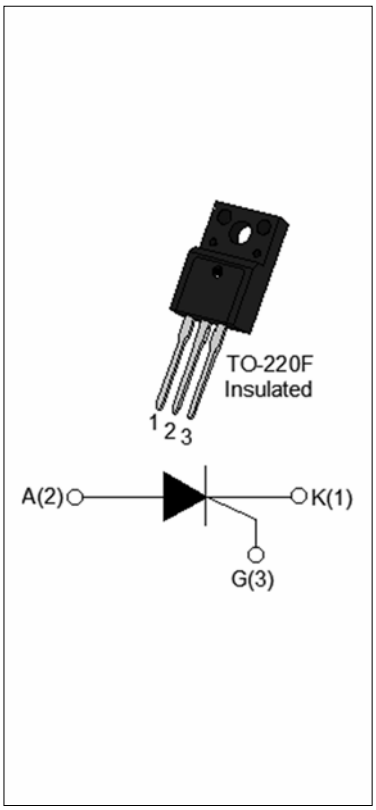
## ^ Z / W d / K E W

With high ability to withstand the shock loading of large current, JCT610F of silicon controlled rectifiers provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink, JCT610F provides a rated insulation voltage of 2000 $V_{RMS,}$ complying with UL standards (File ref: E252906).Package TO-220F is RoHS compliant.




## D / E & d h Z ^

| Symbol | Value | Unit |
|---|---|---|
| $I_{T(RMS)}$ | 10 | A |
| $V_{DRM}/V_{RRM}$ | 600 | V |
| $I_{GT}$ | ≤10 | mA |

## ^ K > h d D y / D h D Z d / E ' ^

| | | | |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | |
| Operating junction temperature range | $T_j$ | -40-125 | |
| Repetitive peak off-state voltage ($T_j$=25 ) | $V_{DRM}$ | 600 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 600 | V |
| Average on-state current ($T_C$ 085 ) | $I_{T(AV)}$ | 6.5 | A |
| RMS on-state current ($T_C$ 085 ) | $I_{T(RMS)}$ | 10 | A |
| Non repetitive surge peak on-state current ($t_p$=10ms, $T_j$=25 ) | $I_{TSM}$ | 110 | A |
| Non repetitive surge peak on-state current ($t_p$=8.3ms, $T_j$=25 ) | | 120 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | $I^2t$ | 61 | $A^2s$ |
| Critical rate of rise of on-state current ($I_G$=2 hI 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 ) | $P_{G(AV)}$ | 1 | W |
| Peak gate power | $P_{GM}$ | 10 | W |
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.7) | $V_{pp}$ | 0.7 | kV |

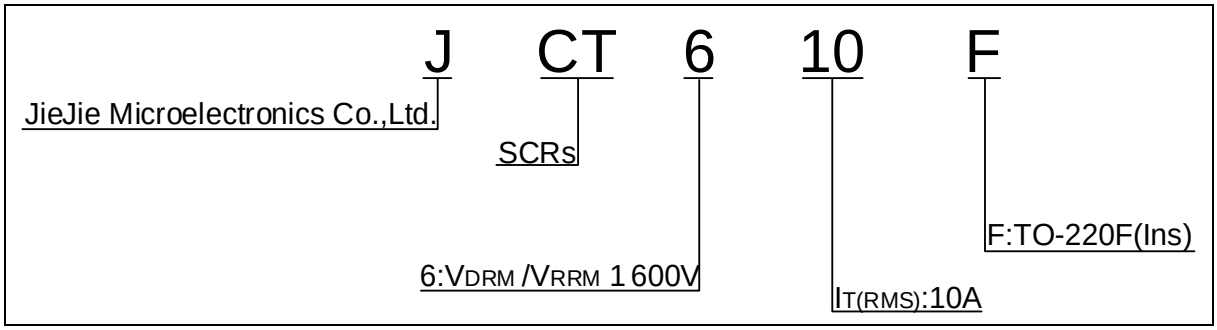
> d Z / > , Z d Z /^ d /unless otherwise specified)

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |

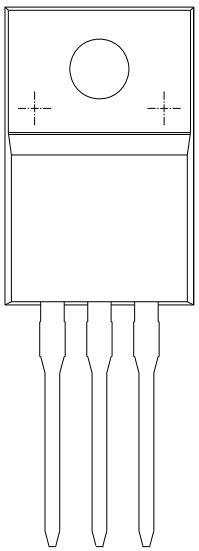
$I_{GT}$

$V_D$=12V $R_L$ (T

## KZ Z/E'/E&KZD d/KE




## D Z</E'

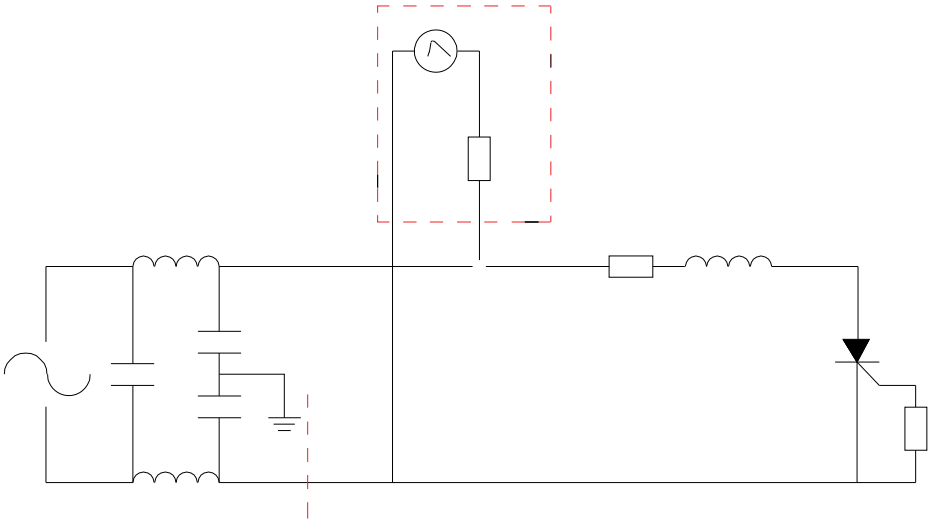


Maximum power dissipation versus RMS on-state current



RMS on-state current versus case temperature

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



| | | | | | |
|---|---|---|---|---|---|
| | | | | | |

| Date | Revision | Changes |
|---|---|---|
| Apr.13, 2023 | A.1.0 | Last update |
| Sept.28, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |

W < ' D , E / > d

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