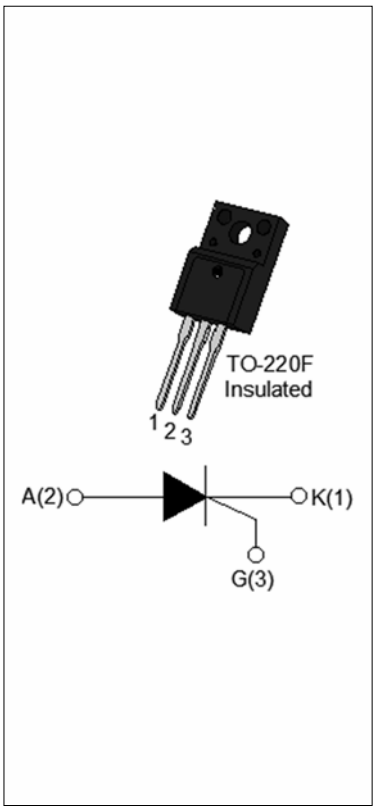
^ Z / W d / K E W

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

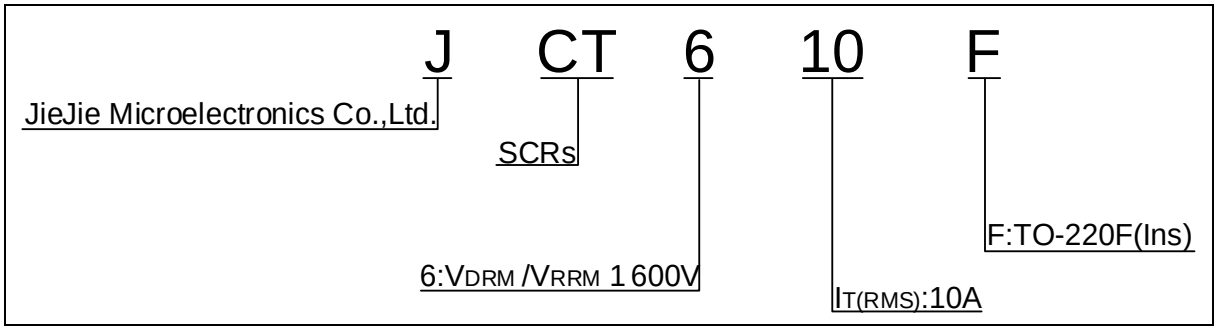
Peak gate current (t_p=20μs , T_j=125)	I_{GM}	4	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	0.7	kV

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

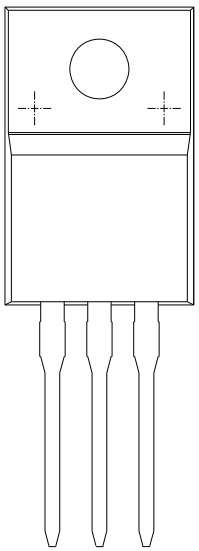
I_{GT}

V_D=12V R_L (T

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



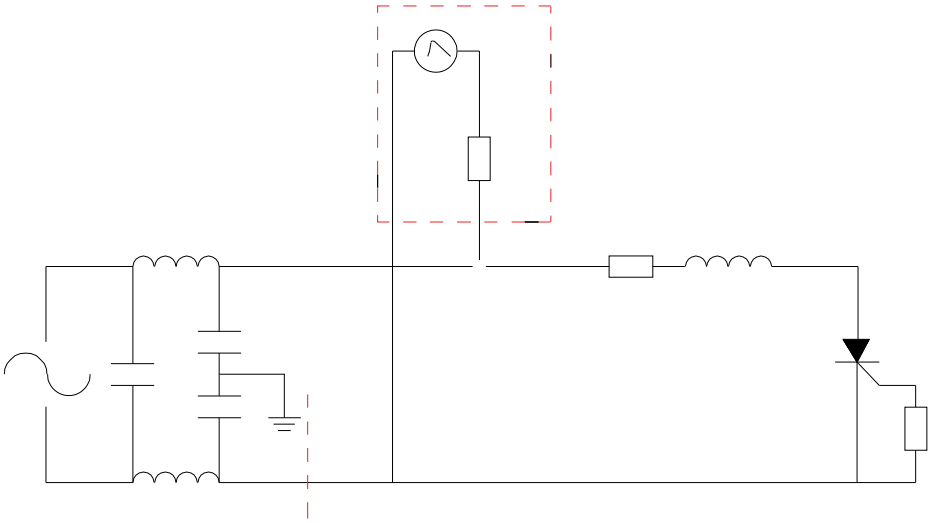
D Z</E'



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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