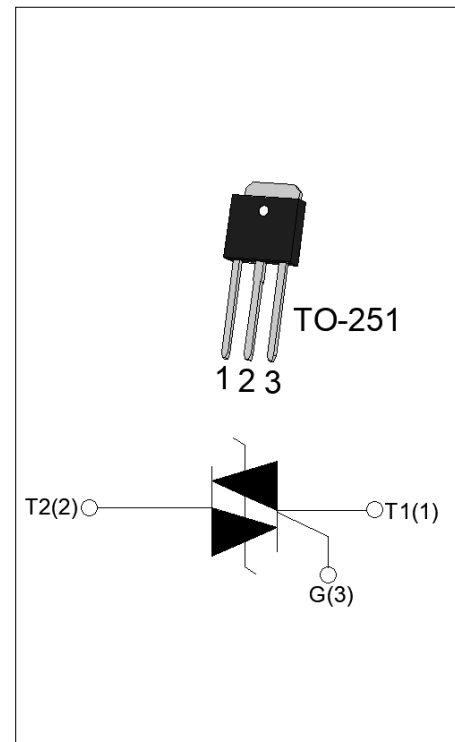




## ACJT610-8H 6A TRIAC

Rev.A.1.0

The ACJT610-8H 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 ACJT610-8H embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. Package TO-251 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	6	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT} / /$	10/10/10	mA

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 ( $T_j=25^\circ C$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	800	V
RMS on-state current ( $T_c = 91^\circ C$ )	$I_{T(RMS)}$	6	A
Non repetitive surge peak on-state current (full cycle, $t_p=20ms$ , $T_j=25^\circ C$ )	$I_{TSM}$	60	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6ms$ , $T_j=25^\circ C$ )		66	
$I^2t$ value for fusing ( $t_p=10ms$ , $T_j=25^\circ C$ )	$I^2t$	18	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100Hz$ , $T_j=125^\circ C$ )	$di/dt$	100	$A/s$
Peak gate current ( $t_p=20\mu s$ , $T_j=125^\circ C$ )	$I_{GM}$	4	A
Average gate power dissipation ( $T_j=125^\circ C$ )	$P_{G(AV)}$	0.5	W
Peak gate power	$P_{GM}$	10	W

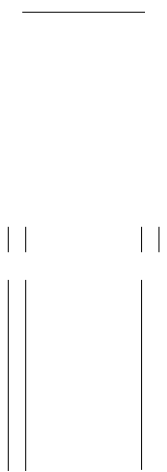
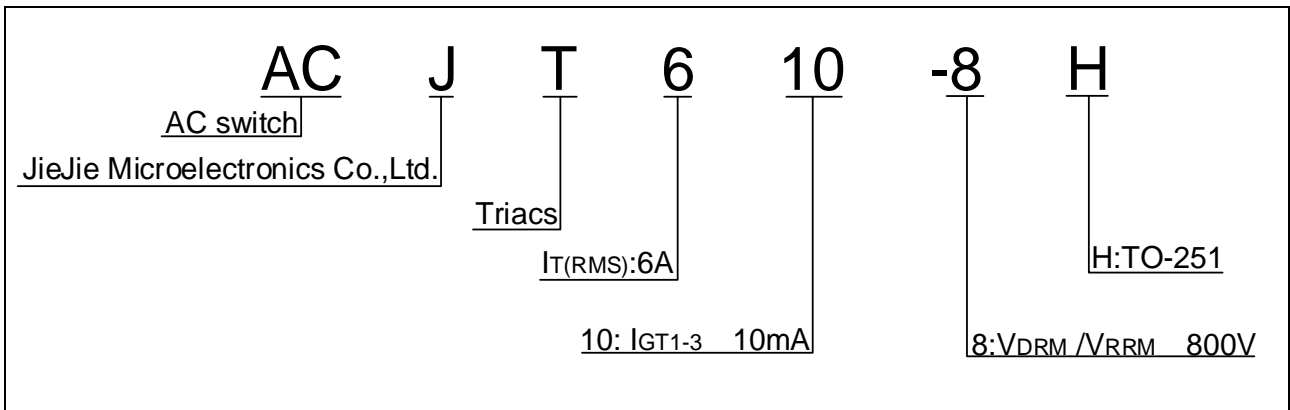
Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	3.5	kV
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(T<sub>j</sub>=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	10	mA
$V_{GT}$		- -	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM} T_j=125$ $R_L=3.3K$	- -	MIN.	0.2	V
$I_L$	$I_G=1.2I_{GT}$	-	MAX.	20	mA
				35	
$I_H$	$I_T=100mA$		MAX.	20	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	500	V s
(dI/dt) <sub>c</sub>	(dV/dt) <sub>c</sub> =1 $T_j=125$		MIN.	3	A/ms
$t_{on}$	$I_G=20mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	2.5	s
$t_{off}$				25	
$V_{CL}$	$I_{CL}=0.1mA t_p=1ms$		MIN.	850	V

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=8.5A t_p=380 s$	$T_j=25$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=125$	0.82	V
$R_D$	Dynamic resistance	$T_j=125$	64	
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	A
$I_{RRM}$		$T_j=125$	0.3	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	4	W
$R_{th(j-a)}$	junction to ambient (AC)	120	W



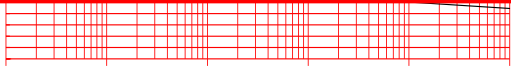
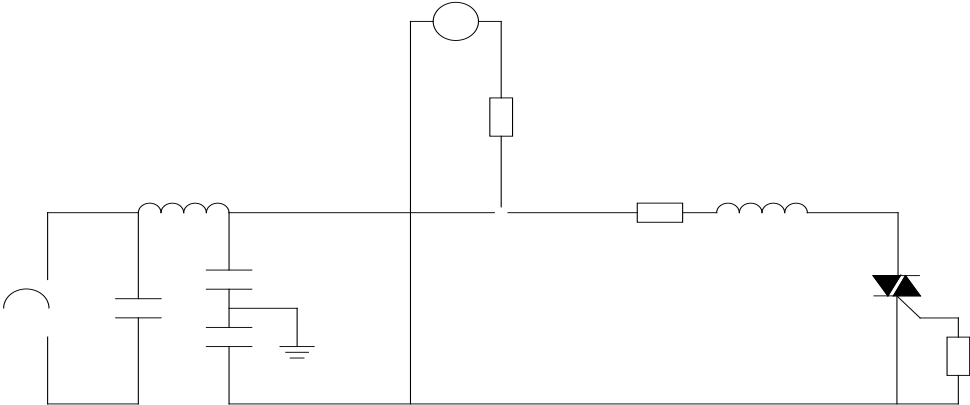


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT610-8H	800	10	TO-251	80	Tube


#### Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated

**ACJT610-8H**

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