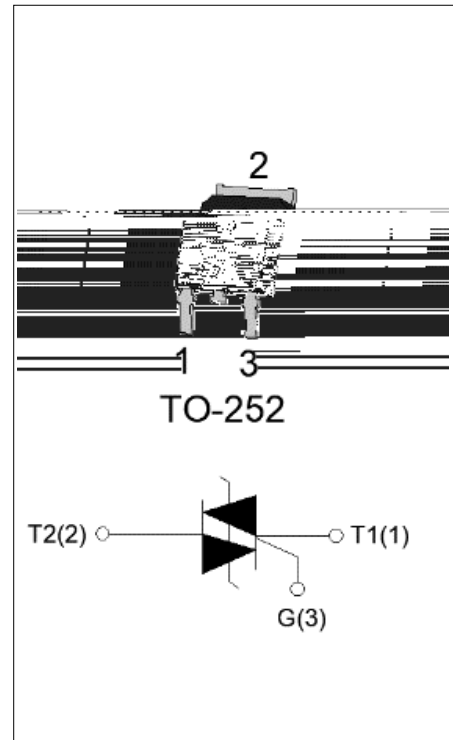




ACJT425-8K 4A TRIAC

Rev.A.1.0

The ACJT425-8K 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 ACJT425-8K embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. Package TO-252 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	800	V
$I_{GT} / /$	25/25/25	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 ($T_c = 99^\circ C$)	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (full cycle, $t_p=20ms$, $T_j=25^\circ C$)	I_{TSM}	40	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6ms$, $T_j=25^\circ C$)		44	
I^2t value for fusing ($t_p=10ms$, $T_j=25^\circ C$)	I^2t	8	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100Hz$, $T_j=125^\circ C$)	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.8)	V_{pp}	3.5	kV
--	----------	-----	----

($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V R_L=33$	- -	MAX.	25	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.	40	mA
				60	
I_H	$I_T=100mA$		MAX.	35	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	2500	V/s
$(dI/dt)_c$	$j=125$		MIN.	8	A/ms
t_{on}	$I_G=40mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	3	s
t_{off}				30	
V_{CL}	$I_{CL}=0.1mA t_p=1ms$		MIN.	850	V

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=5.6A t_p=380 \mu s$	$T_j=25$	1.55	V
V_{TO}	Threshold voltage	$T_j=125$	0.73	V

R_D Dynamic resistance $T=25573571313.2 T_m$ ($T_j < T_m$) $T_c=1DC$ 0.004 $T_c - 0.004 T_m$

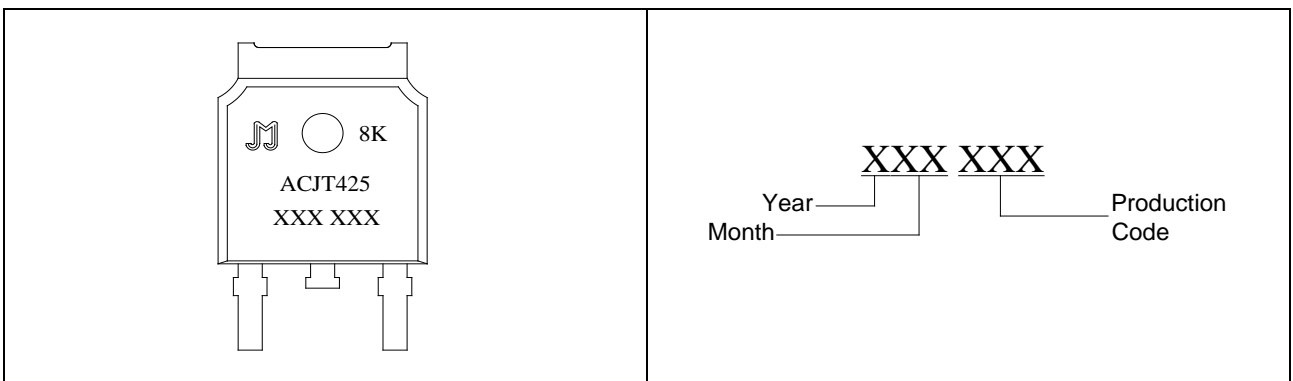
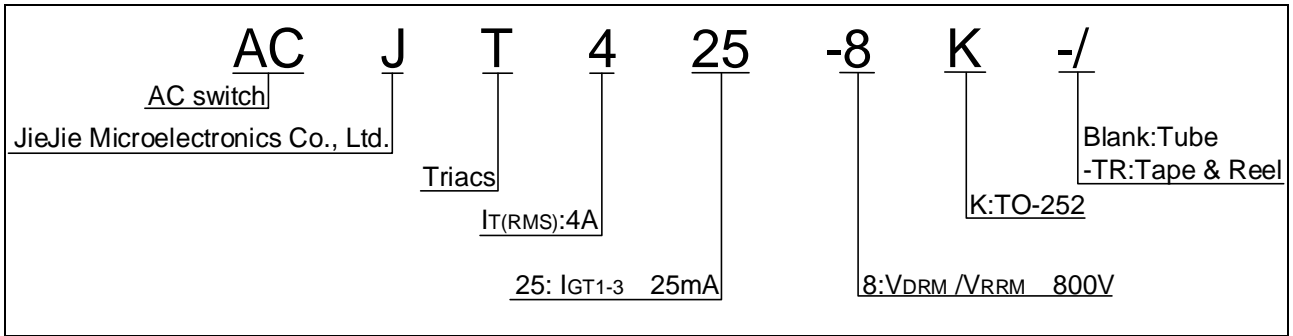


FIG.1 Maximum power dissipation versus RMS on-state current

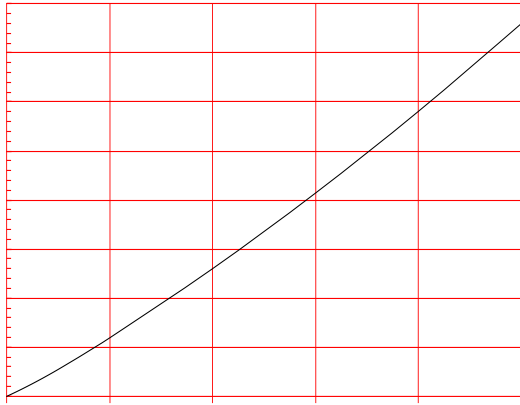


FIG.2: RMS on-state current versus case temperature

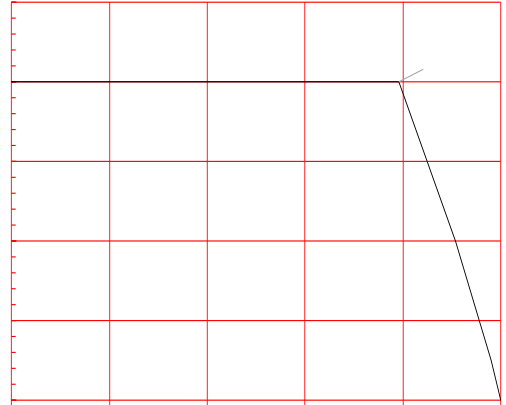


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4,copper)

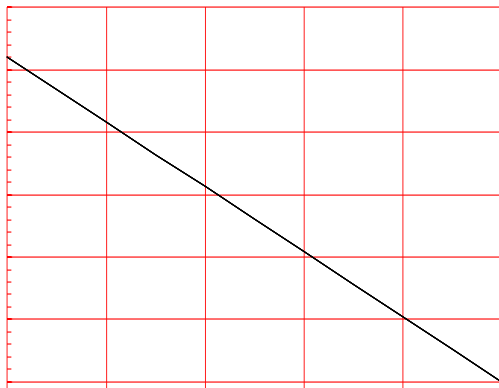


FIG.4: Surge peak on-state current versus number of cycles

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

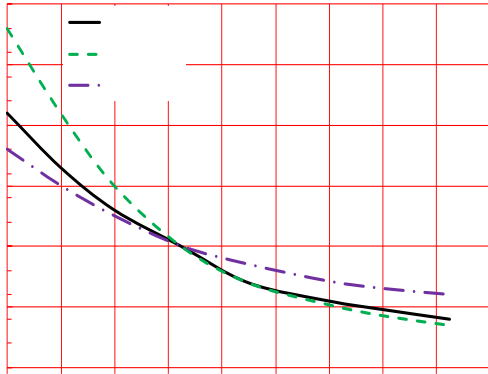
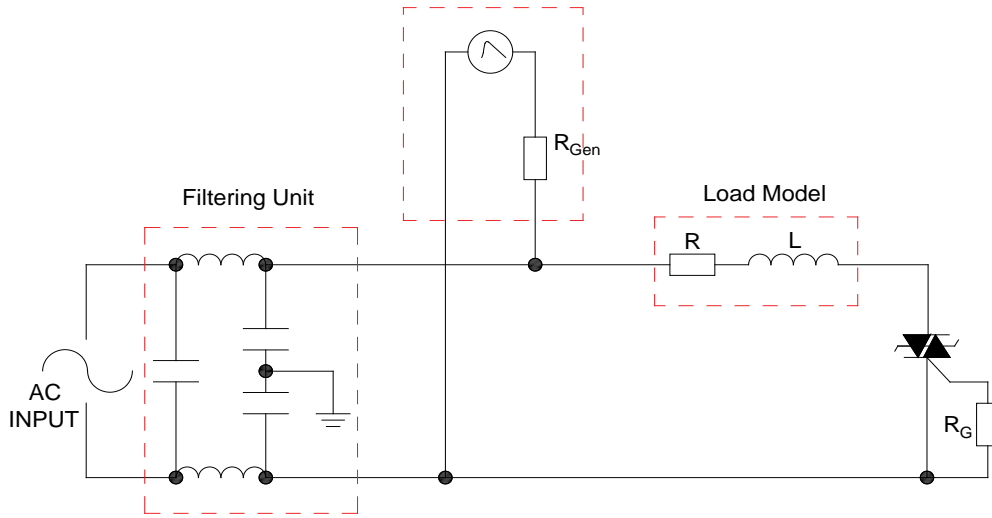


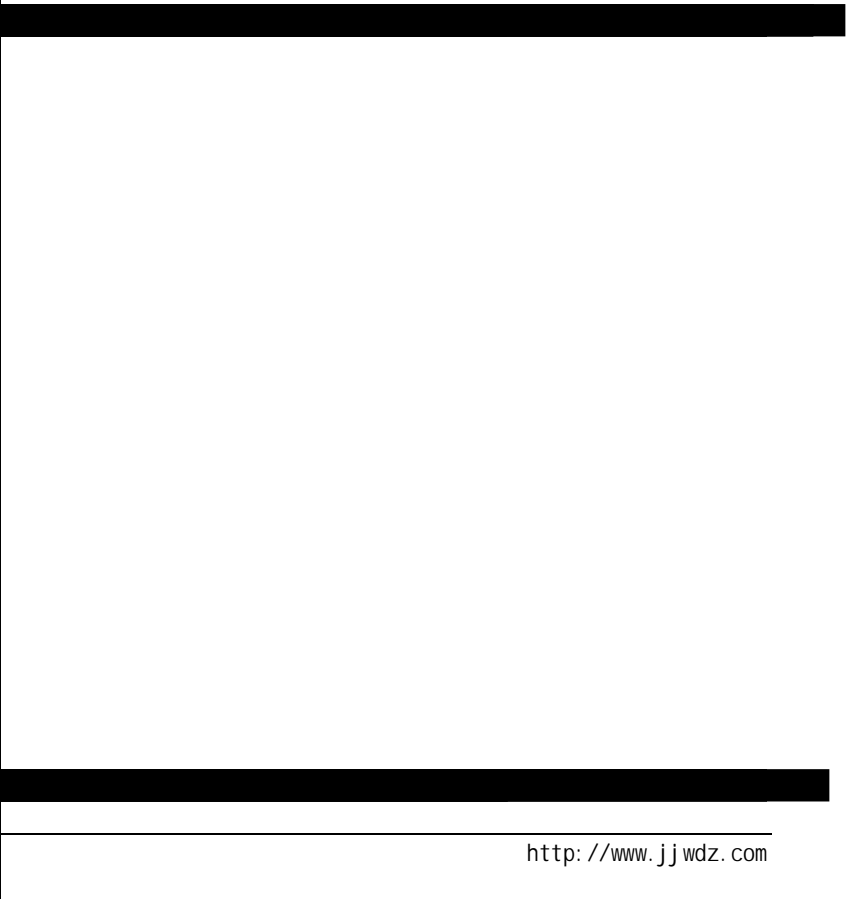
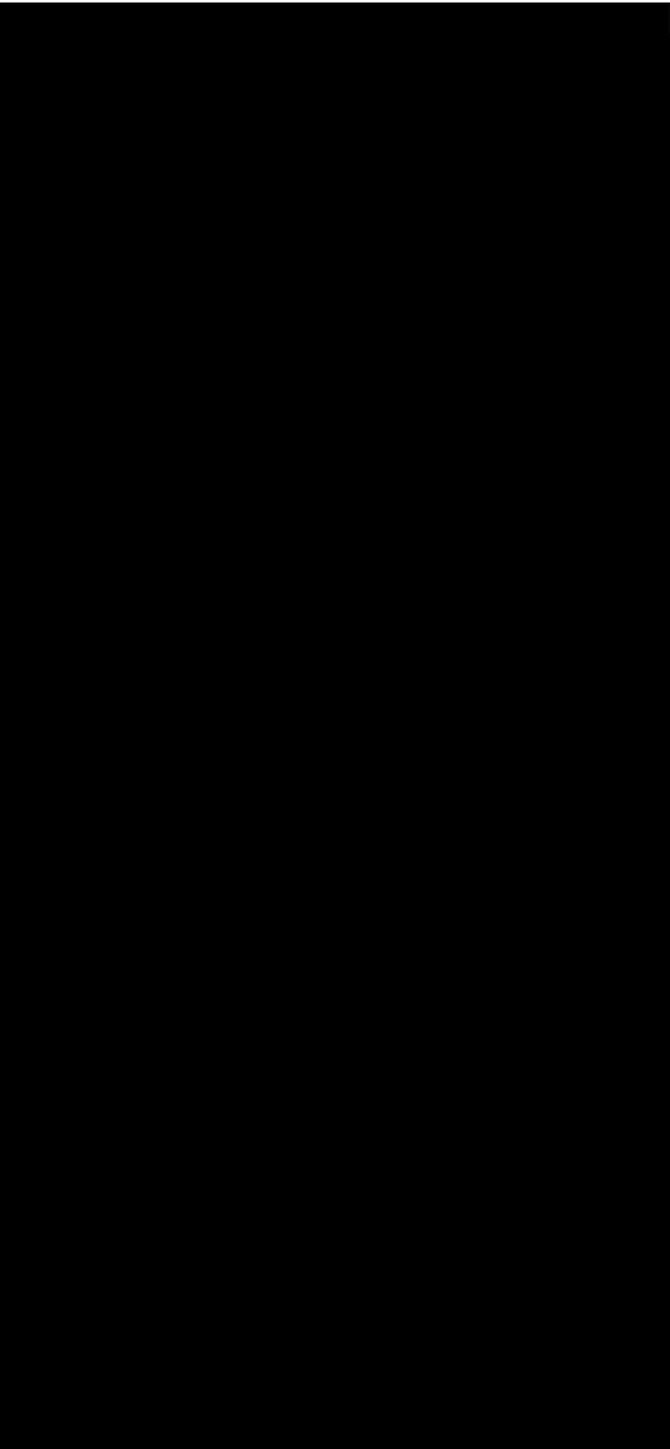
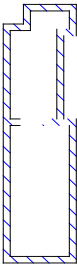
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards

IEC61000-4-5 Standards
Surge Generator




Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150
	-Temperature Max($T_{s(max)}$)	+200
	-Time (Min to Max) (ts)	60-180 secs.





Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.
Copyright © 2023 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.