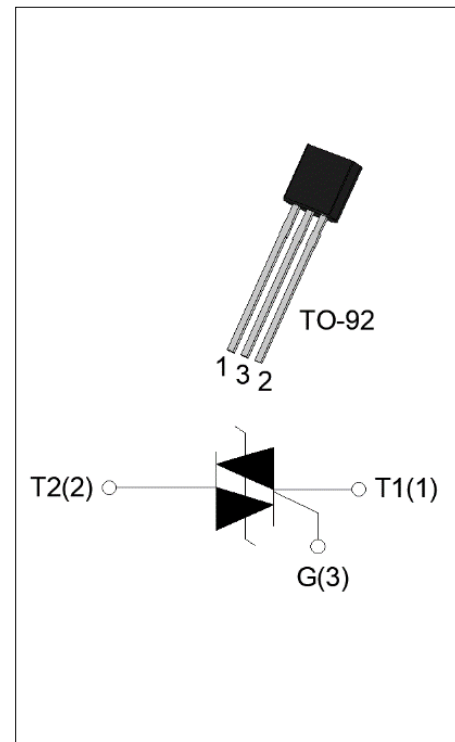


ACJT210-6U 2A TRIAC

Rev.A.1.0

The ACJT210-6U 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 ACJT210-6U embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. Package TO-92 is RoHS compliant.

Symbol	Value	Unit
$I_{T(RMS)}$	2	A
V_{DRM}/V_{RRM}	600	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 ($T_j=25^\circ\text{C}$)	V_{DRM}	600	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600	V
RMS on-state current	$I_{T(RMS)}$	2	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	25	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		27.5	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	3.125	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	A/s
Peak gate current ($t_p=20\text{ }\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	2	A
Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	10	W

Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	4.5	kV
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(T_j=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.	25	mA
				35	
I_H	$I_T=100mA$		MAX.	15	mA
dV/dt	$V_D=400V$ Gate Open $T_j=125$		MIN.	1000	V s
(dI/dt) _c	(dV/dt) _c =1 $j=125$		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.	700	V

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=3A t_p=380$ s	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.79	V
R_D	Dynamic resistance	$T_j=125$	242	
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	A
I_{RRM}		$T_j=125$	0.15	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	60	W
$R_{th(j-a)}$	junction to ambient (AC)	150	W

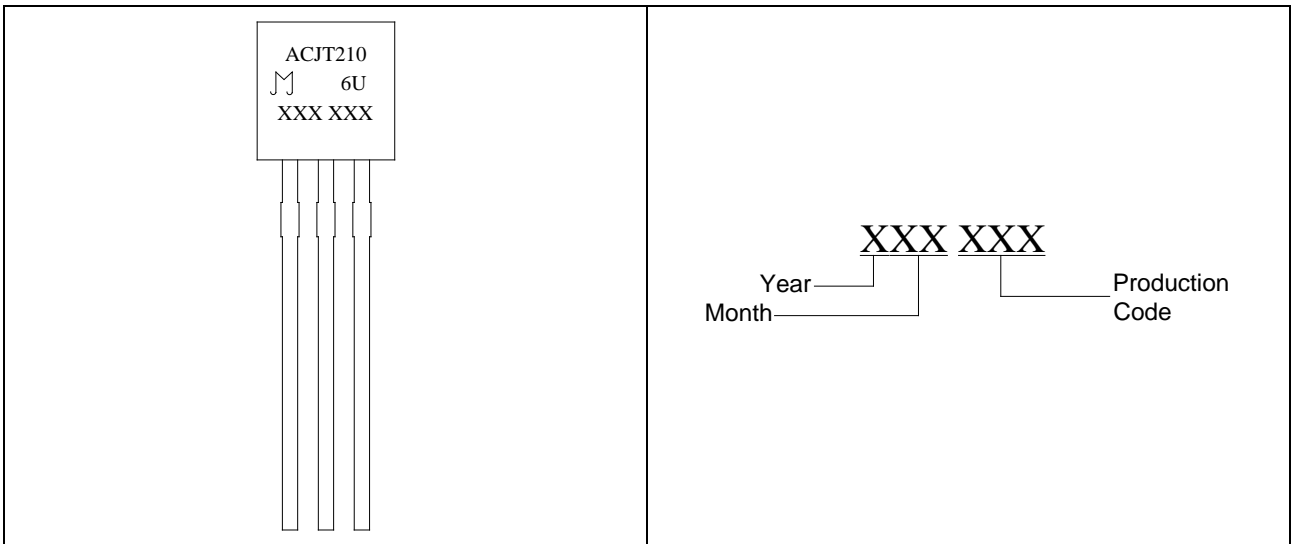
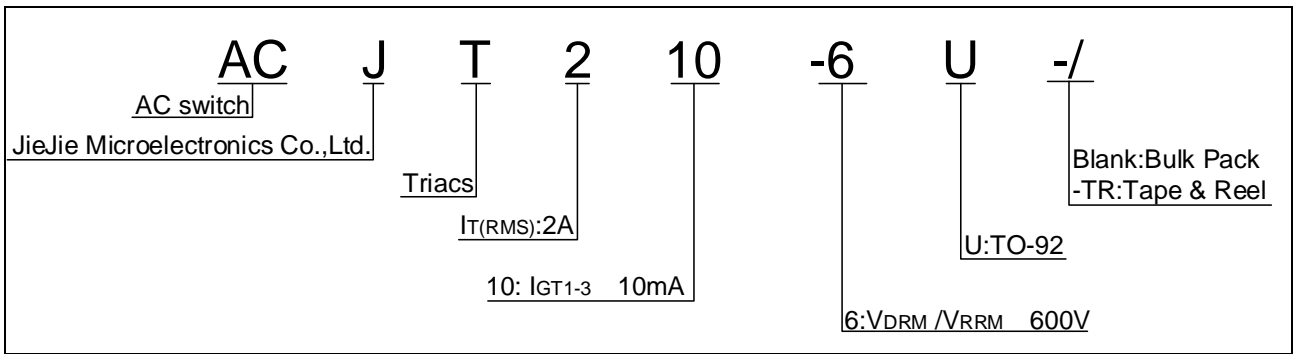


FIG.1 Maximum power dissipation versus RMS on-state current

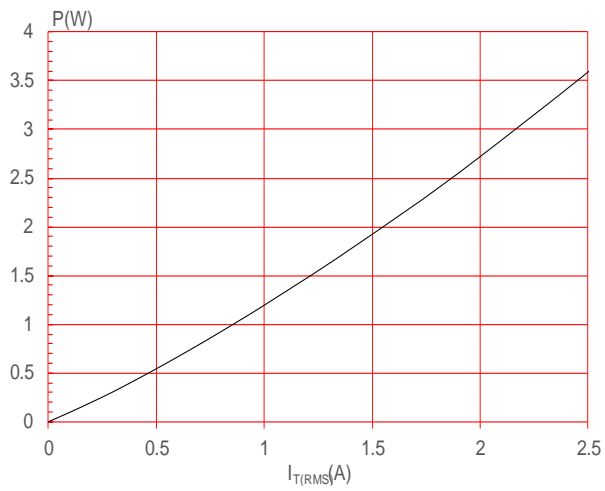


FIG.3: Surge peak on-state current versus number of cycles

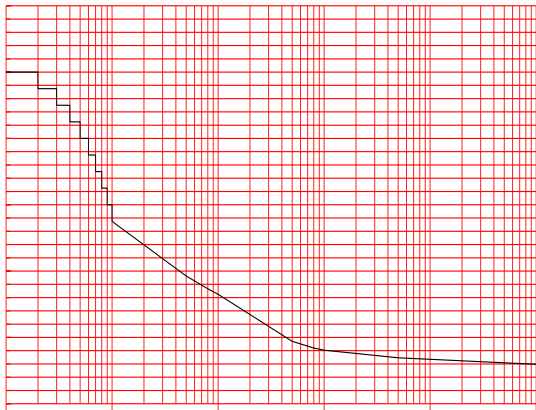


FIG.2: RMS on-state current versus case temperature

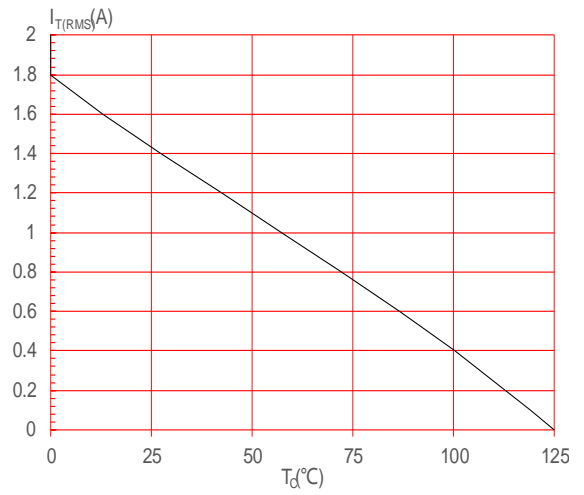
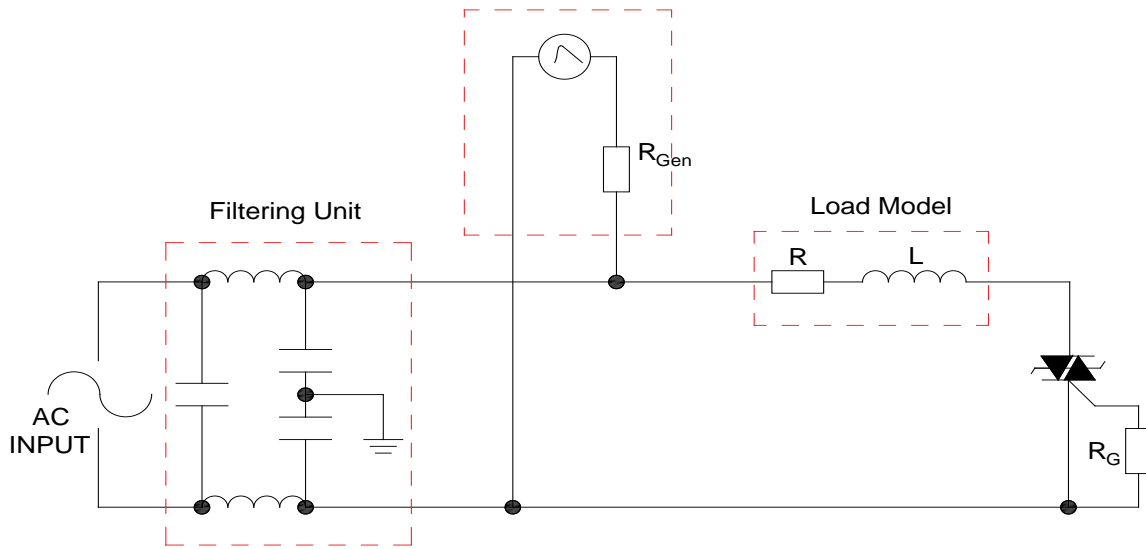


FIG.4: On-state characteristics

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

IEC61000-4-5 Standards
Surge Generator

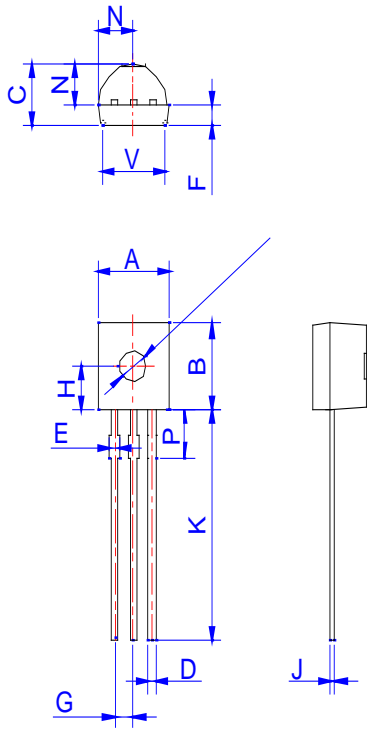


Refer to Instructions for installation of plastic-sealed in-line power devices released by JieJie

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT210-6U	600	10	TO-92	1,000	Bulk Pack
ACJT210-6U-TR				2,000	Tape & Reel

Document Revision History

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



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	1.10		1.30			0.051
G	1.10		1.40	0.043		0.055
H	2.20		2.40	0.087		0.094
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.80		2.30	0.071		0.091
V	4.10		4.50	0.161		0.177

PACKAGE	OUTLINE	BAG (PCS)	INNER BOX (PCS)	CARTON BOX (PCS)
TO-92	Bulk Pack	1,000	10,000	50,000

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