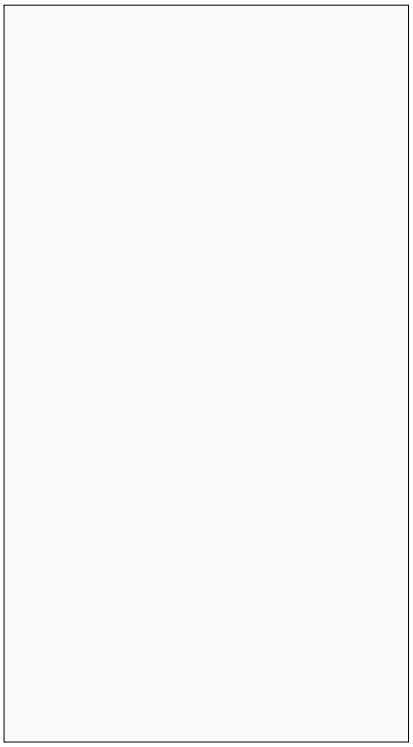
ACJT210-10UR 2A TRIAC

Rev.A.2.1

The ACJT210-10UR 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 ACJT210-10UR embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. Package TO-92UR is RoHS compliant.



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)	V_{DRM}	1000	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1000	V
RMS on-state current	$I_{T(RMS)}$	2	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	25	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		27.5	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	3.125	A^2s
Critical rate of rise of on-state current (I_G=2 × I_{GT} , f=100Hz , T_j=125)	dI/dt	100	A/μs
Peak gate current (t_p=20μs , T_j=125)	I_{GM}	ă ŕ Ğ M ɤ tat ĝ ᵐ ǵ	) ư=

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	4.5	kV

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	10	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =125 R_L =3.3kΩ	- -	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=670V Gate Open T_j =125		MIN.	800	V/μs
(dI/dt)c	(dV/dt)c=10V/μs, T_j=125		MIN.	3	A/ms
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25		TYP.	4	μs
t_{off}				50	
V_{CL}	I_{CL}=0.1mA t_p=1ms		MIN.	1050	V

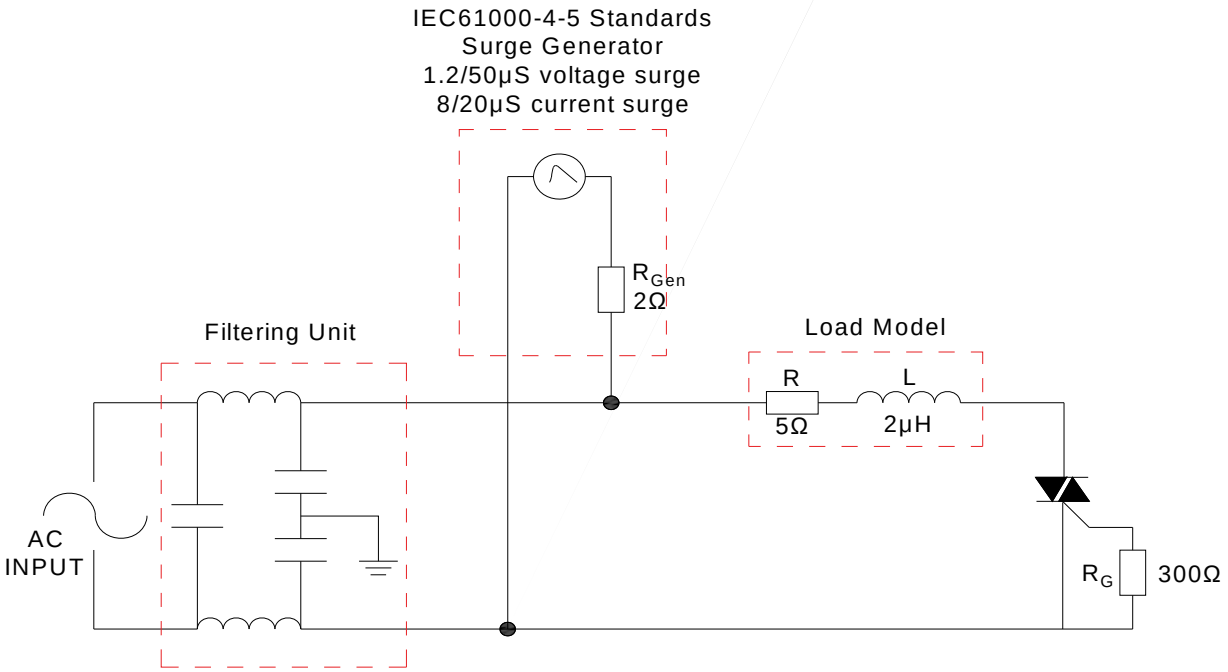
Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =3A t_p=380μs	T_j=25	1.5	V
V_{TO}	Threshold voltage	T_j=125	0.79	V
R_D	Dynamic resistance	T_j=125	242	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	8	μA
I_{RRM}		T_j=125	0.4	mA

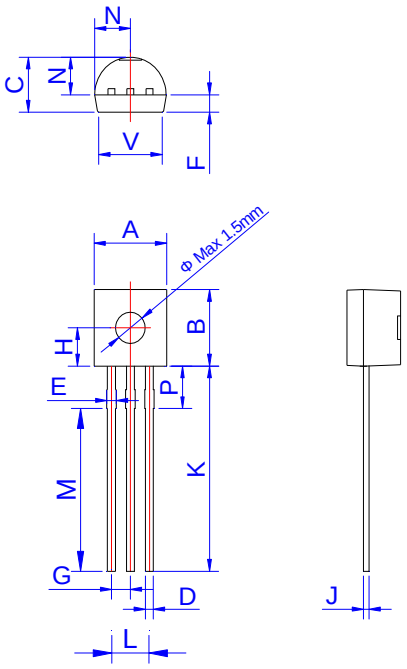
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	60	/W
$R_{th(j-a)}$	junction to ambient (AC)	150	/W

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

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

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





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	0.043		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
L	2.44		2.64	0.096		0.104.m , 094
M						
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-92UR	Bulk Pack	1,000		