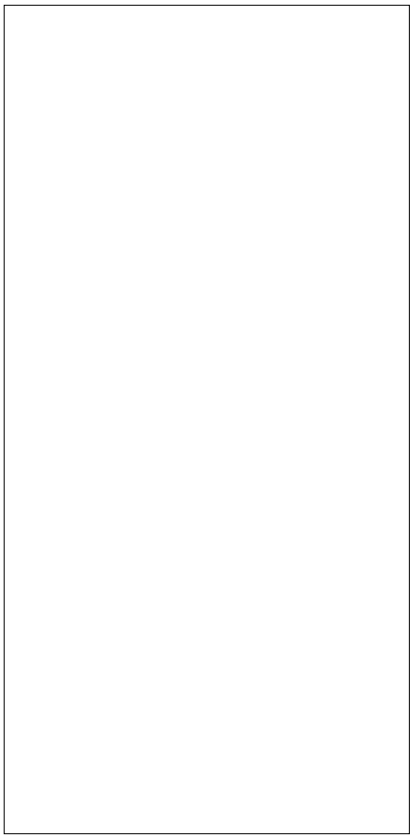
ACJT1010-10A 10A TRIAC

Rev.A.1.1

DESCRIPTION:

The ACJT1010-10A 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 ACJT1010-10A embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. By using an internal ceramic pad, ACJT1010-10A provides a rated insulation voltage of 2500 VRMS. Package TO-220A is RoHS compliant.



MAIN FEATURES

ABSOLUTE MAXIMUM RATINGS

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 (T_C 95)	$I_{T(RMS)}$	10	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	100	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		110	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	50	A^2s
Critical rate of rise of on-state current (I_G=2× I			

Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	4.5	kV

ELECTRICAL CHARACTERISTICS (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.	20	mA
				35	
I_H	I_T =500mA		MAX.	20	mA
dV/dt	V_D=670V Gate Open T_j =125		MIN.	300	V/μs
(dI/dt)c	(dV/dt)c=10V/μs, T_j=125		MIN.	5	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

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX .)	Unit
V_{TM}	I_{TM} =14A t_p=380μs	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=125	0.78	V
R_D	Dynamic resistance	T_j=125	29	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	10	μA
I_{RRM}		T_j=125	1	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	2.3	/W

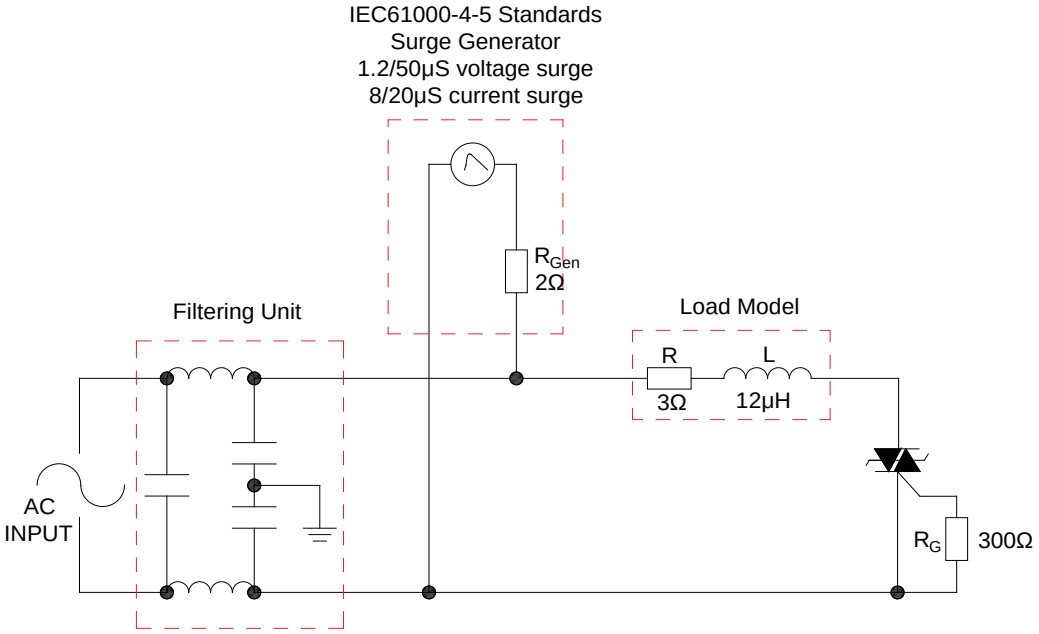
ORDERING INFORMATION

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

FIG.2: RMS on-state current versus case temperature 3691215

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



LEAD FORMING AND SOLDERING

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics

ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT1010-10A	1000	10	TO-220A(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last updated
Oct.13, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA