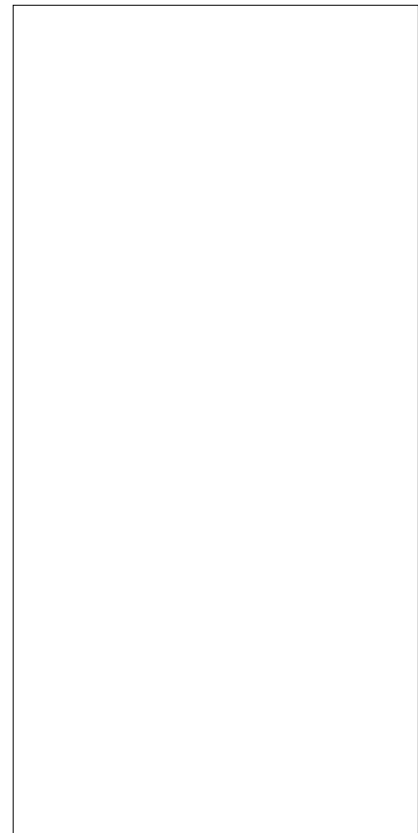




DESCRIPTION:

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 ($T_j=25^\circ\text{C}$)	V_{DRM}	1000	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1000	V
RMS on-state current ($T_c = 95^\circ\text{C}$)	$I_{T(RMS)}$	10	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	100	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		110	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	50	A^2s

Critical rate of rise of on-state current ($I_G=2 \times I$)

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 (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	$I_T=500mA$		MAX.	20	mA
dV/dt	$V_D=670V$ Gate Open $T_j=125$		MIN.	300	V/ μs
$(dI/dt)_c$	$(dV/dt)_c=10V/\mu s$, $T_j=125$		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}	$I_{TM}=14A$ $t_p=380\mu s$	$T_j=25$	1.4	V
V_{TO}	Threshold voltage	$T_j=125$	0.78	V
R_D	Dynamic resistance	$T_j=125$	29	m
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)	$T_m [004]$ 2.3	W (on)10

ORDERING INFORMATION

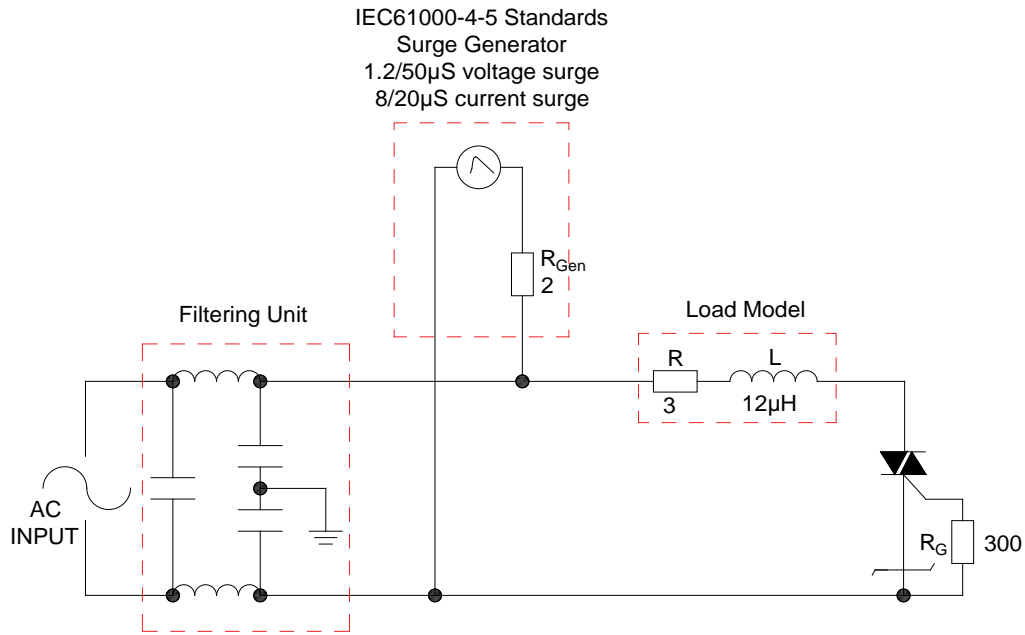
AC J T 10 10 -10 A

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

