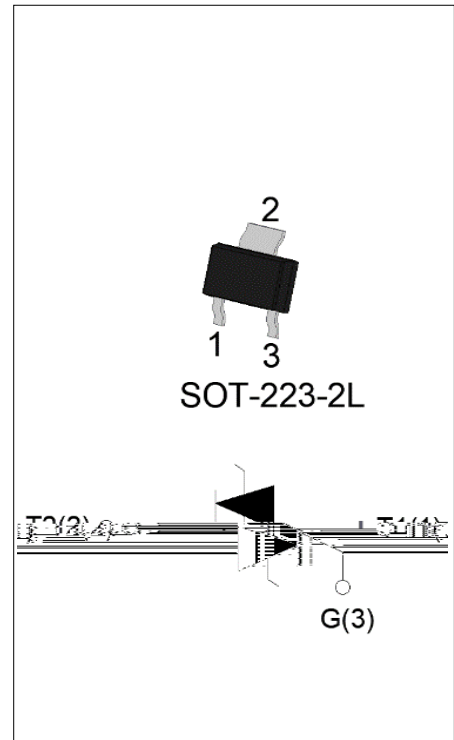




ACJT110-8W 1A TRIAC

Rev.A.1.0

The ACJT110-8W 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 ACJT110-8W embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. Package SOT-223-2L is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	800	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 ($T_j=25^\circ C$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ C$)	V_{RRM}	800	V
RMS on-state current ($T_c = 90^\circ C$)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle, $t_p=20ms$, $T_j=25^\circ C$)	I_{TSM}	15	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6ms$, $T_j=25^\circ C$)		16.5	
I^2t value for fusing ($t_p=10ms$, $T_j=25^\circ C$)	I^2t	1.25	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100Hz$, $T_j=125^\circ C$)	di/dt	60	$A/\mu s$
Peak gate current ($t_p=20\mu s$, $T_j=125^\circ C$)	I_{GM}	2	A
Average gate power dissipation ($T_j=125^\circ C$)	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	5	W

Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8)	V_{pp}	3.5	kV
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(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V$ $R_L=33\Omega$	- -	MAX.	10	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3K\Omega$	- -	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	-	MAX.	20	mA
				30	
I_H	$I_T=100mA$		MAX.	20	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	700	V/ μs
(dI/dt) _c	(dV/dt) _c =10V/ μs , $T_j=125$		MIN.	1.2	A/ms
t_{on}	$I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	2.5	

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

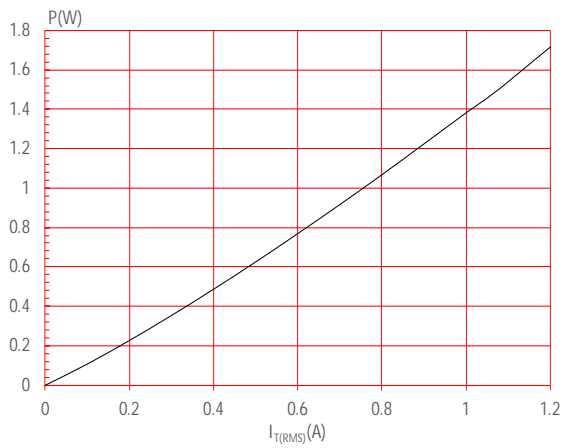


FIG.2: RMS on-state current versus case temperature

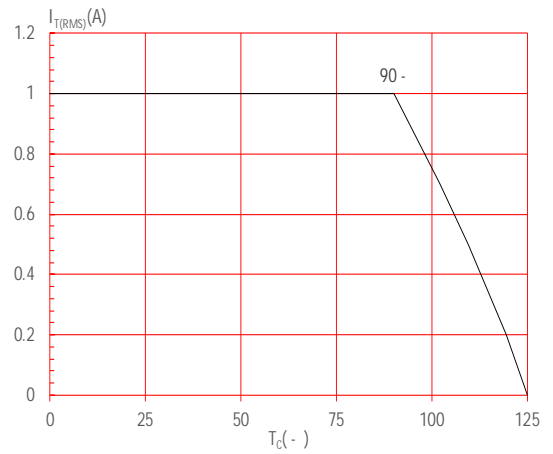


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4,copper thickness:35 μ m)(full cycle)

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

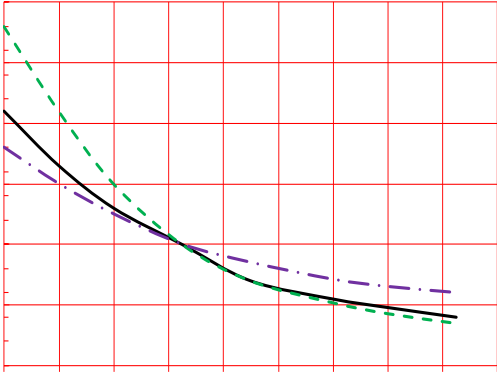
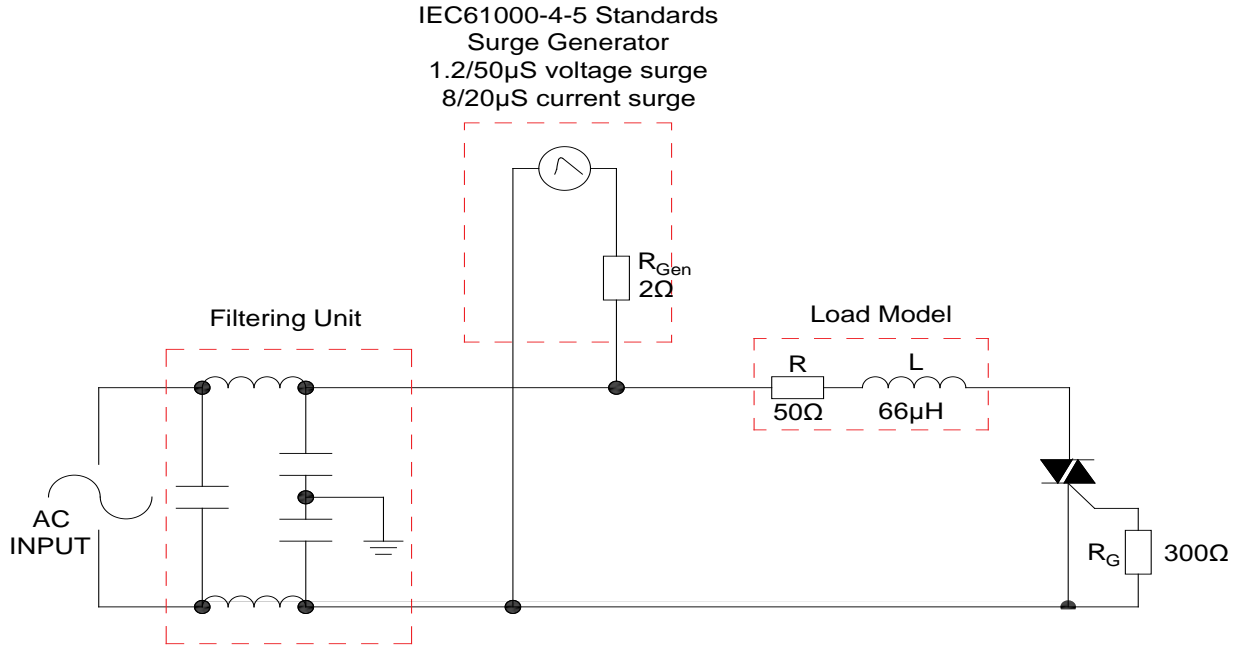
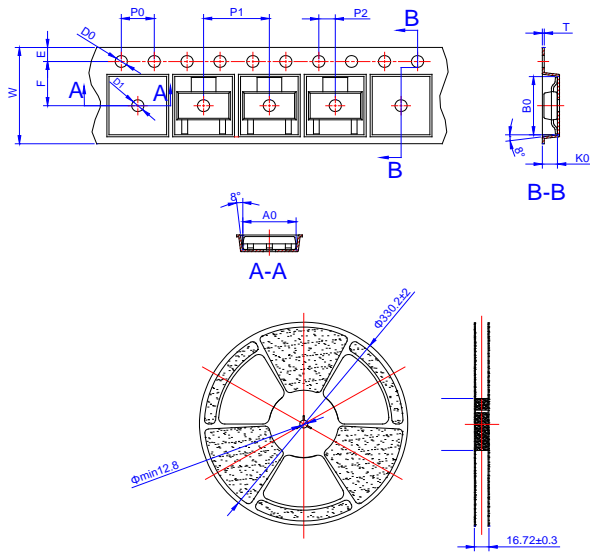


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards




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Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-	-	12.30	-	-	0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0	1.50	1.55	1.60	0.059	0.061	0.063
D1	1.50	-	-	0.059	-	-
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.85	6.95	7.05	0.269	0.273	0.276
B0	7.15	7.25	7.35	0.280	0.284	0.288
K0	1.95	2.05	2.15	0.076	0.080	0.084
T	0.20	0.25	0.30	0.008	0.010	0.012

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