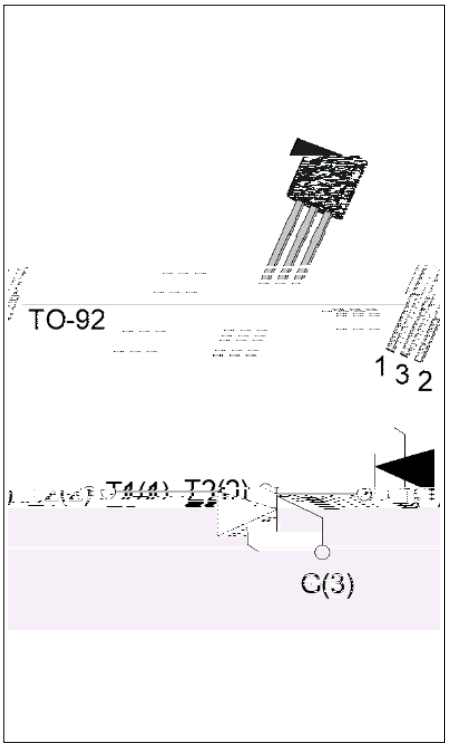
ACJT01U-800TW 1A TRIAC

Rev.A.2.1

DESCRIPTION:

The ACJT01U-800TW 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 ACJT01U-800TW 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.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM} /V_{RRM}	800	V
I_{GT} / /	5/5/5	mA

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}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
RMS on-state current (T_C 39)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	15	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		16.5	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	1.25	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	50	A/μs
Peak gate current (t_p=20μs , T_j=125)	I_{GM}	2	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	5	W

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	3.75	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	5	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.	10	mA
				20	
I_H	I_T =100mA		MAX.	10	mA
dV/dt	V_D=540V Gate Open T_j =125		MIN.	650	V/μs
(dI/dt)c	(dV/dt)c=10V/μs, T_j=125		MIN.	0.6	A/ms
t_{on}	I_G=10mA I_A=200mA I_R=20mA T_j=25		TYP.	2	

ORDERING INFORMATION

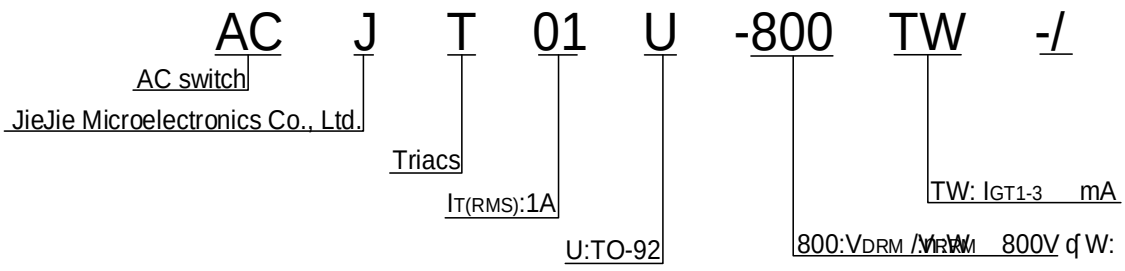
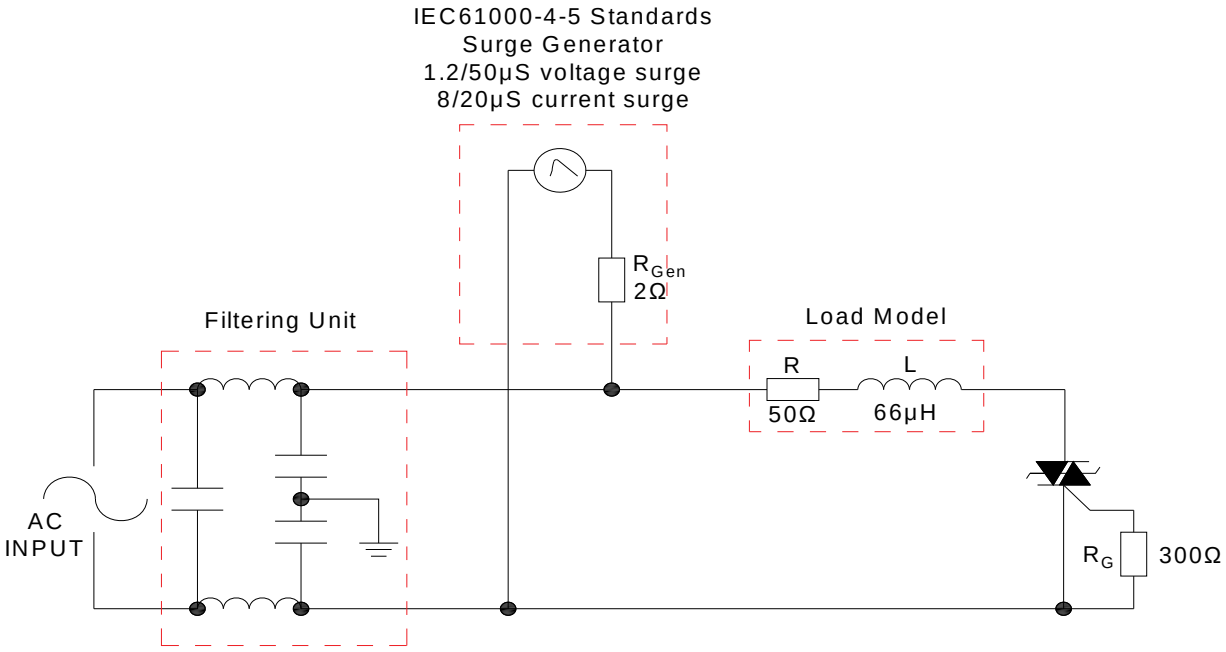


FIG.1: Maximum power dissipation versus RMS on-state current

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

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



LEAD FORMING AND SOLDERING

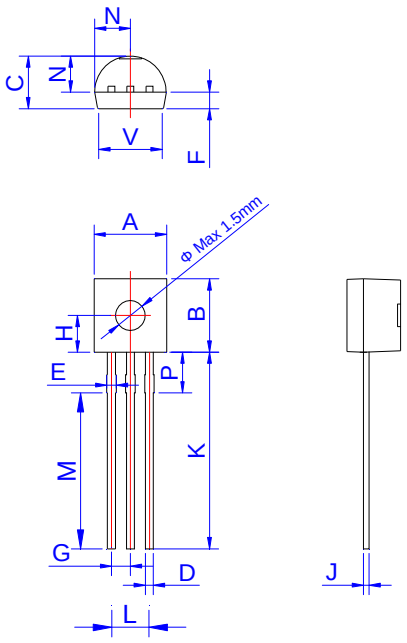
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT01U-800TW	800	5	TO-92	1,000	Bulk Pack
ACJT01U-800TW-TR				2,000	Tape & Reel

Document Revision History

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last updated
Mar.27, 2025	A.2.0	Renew PACKAGE MECHANICAL DATA
Sept.28, 2025	A.2.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA



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	11.64		12.04	0.458		0.474
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

DELIVERY MODE

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

Dimensions

Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
P	12.40	12.70	13.00			
P0	12.40	12.70	13.00			
P1	3.55	3.85	4.15			
P2	5.95	6.35	6.75			
P	-1.00	0	1.00			
F1 F2	2.30	2.50	2.70			
F1-F2	-0.10	0	0.10			
W	17.50	18.00	19.00			0 ÿ 1500.0 4
W0	5.50	6.00	6.50	-3 ŵ 30		: ε 339 ă ƽ
W1	8.50	9.00	9.50	0.335	0.354	0.374
W2			1.00			0.039
D0	3.80	4.00	4.20	0.150	0.157	0.165
H	-1.00	0	1.00	-0.039	0	0.039
L1	2.50			0.098		
H	18.00	19.00	20.00	0.709	0.748	0.787

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