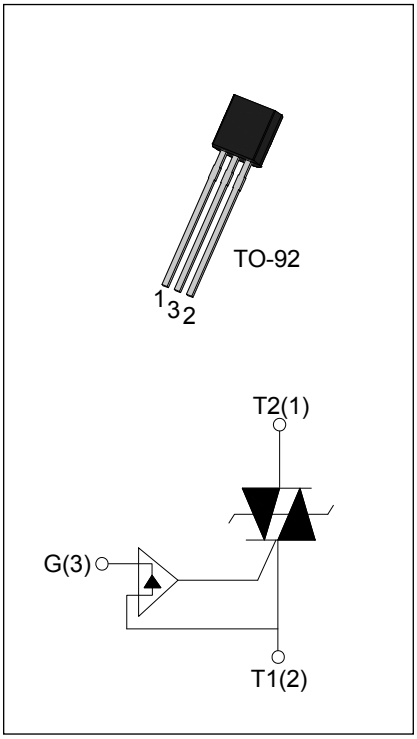
ACJ110U 1A TRIACs

Rev.5.0

DESCRIPTION:

Available either in through-hole or surface-mount package, the ACJ110U can be used as an AC static ON/OFF function in domestic and industrial control systems, or as a driver of low power and high inductance loads, such as solenoid valves, pumps, fans, micro-motors. Package TO-92 is RoHS compliant. (2011/68/EU)



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
I_{GT2-3}	≤10	mA
V_{TM}	≤1.7	V

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}	600/800	V
Repetitive peak reverse voltage(T_j =25℃)		V_{RRM}	600/800	V
RMS on-state current	TO-92 (T_C=45℃)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I_{TSM}	12	A
I^2t value for fusing (tp=10ms)		I^2t	0.72	A^2s
Rate of rise of on-state current (I_G =2×I_{GT})		dI/dt	100	A/μs
Peak gate current		I_{GM}	1	A
Average gate power dissipation		$P_{G(AV)}$	0.1	W
Peak gate power		P_{GM}	0.5	W

ELECTRICAL CHARACTERISTICS (T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	V_D=12V R_L=33Ω	Ⅱ-Ⅲ	MAX	10	mA
V_{GT}		Ⅱ-Ⅲ	MAX	1.2	V
V_{GD}	V_D=V_{DRM} T_j=125℃ R_L=3.3KΩ	Ⅱ-Ⅲ	MIN	0.2	V
I_L	I_G=1.2I_{GT}	Ⅱ	MAX	30	mA
		Ⅲ		20	
I_H	I_T=100mA		MAX	20	mA
dV/dt	V_D=2/3V_{DRM} Gate Open T_j=125℃		MIN	500	V/μs

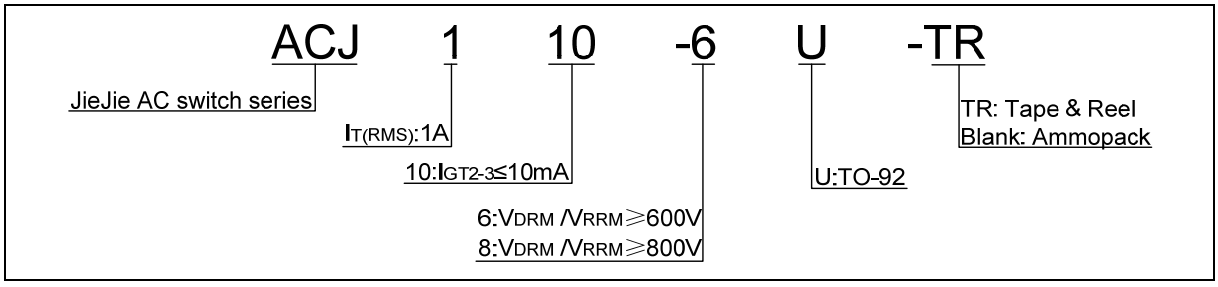
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	I_{TM}=2A tp=380μs	T_j=25℃	1.7	V
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25℃	5	μA
I_{RRM}		T_j=125℃	1	mA

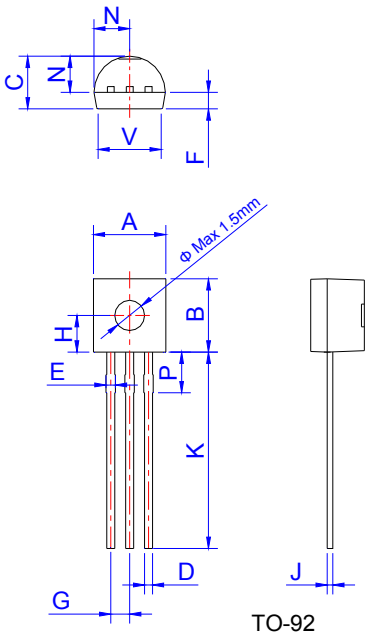
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92	60	℃/W

ORDERING INFORMATION



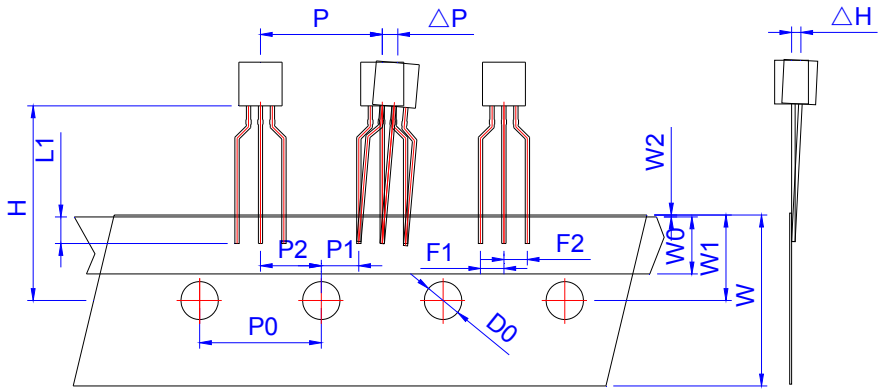
PACKAGE MECHANICAL DATA



TO-92

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	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169

INFORMATION OF TAPE & REEL - TO-92



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
P	12.40	12.70	13.00	0.488	0.500	0.512
P0	12.40	12.70	13.00	0.488	0.500	0.512
P1	3.55	3.85	4.15	0.140	0.152	0.163
P2	6.05	6.35	6.65	0.238	0.250	0.262
△P	-1.0	0	1.0	-0.039	0	0.039
F1、F2	2.20	2.50	2.80	0.087	0.098	0.110
F1-F2	-0.3	0	0.3	-0.012	0	0.012
W	17.50	18.00	19.00	0.689	0.709	0.748
W0	5.50	6.00	6.50	0.217	0.236	0.256
W1	8.50	9.00	9.50	0.335	0.354	0.374
W2			1.0			0.039
D0	3.80	4.0	4.20	0.150	0.157	0.165
△H	-1.0	0	1.0	-0.039	0	0.039
L1	2.5			0.098		
H	18.0	19.0	20.0	0.709	0.748	0.787

Packaging Information	**Reel**	**Inner Box**	**Outer Box**
Net Weight (g)	140	80	600
Quantity (pcs)	/	2000	20000
N. W. Per Unit (mg/pcs)	189		

PACKAGE INFORMATION

PACKAGE	WEIGHT (PER PCS)	OUTLINE	BAG (PCS)	INNER BOX (PCS)	PER CARTON
TO-92	0.1894g	Ammopack	1,000	10,000	30,000
PACKAGE	**WEIGHT (PER PCS)**	**OUTLINE**	**REEL**	**INNER BOX (PCS)**	**PER CARTON**
TO-92	0.1894g	Tape & Reel	2,000	2,000	20,000

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

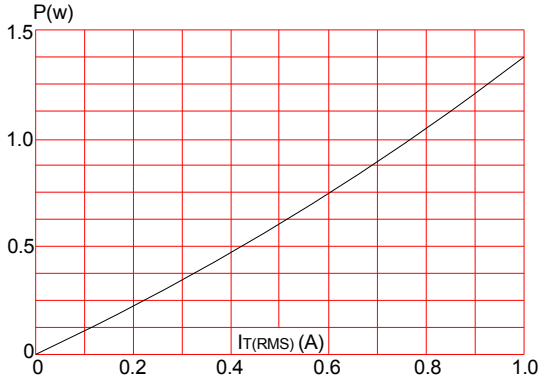


FIG.2: RMS on-state current versus case temperature

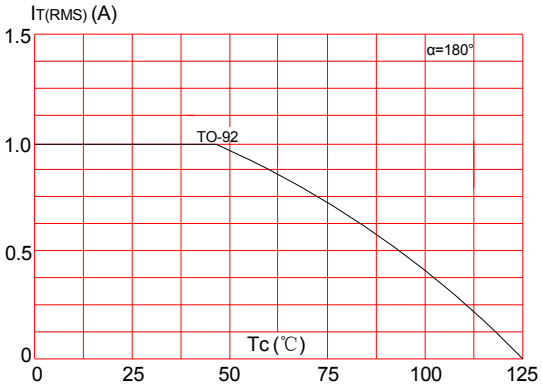


FIG.3: Surge peak on-state current versus number of cycles

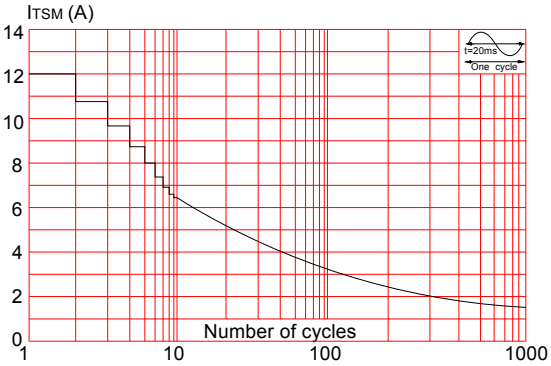


FIG.4: On-state characteristics (maximum values)

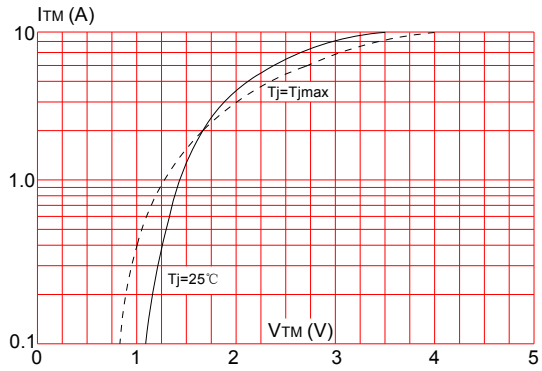


FIG.5: Relative variations of gate trigger current versus junction temperature

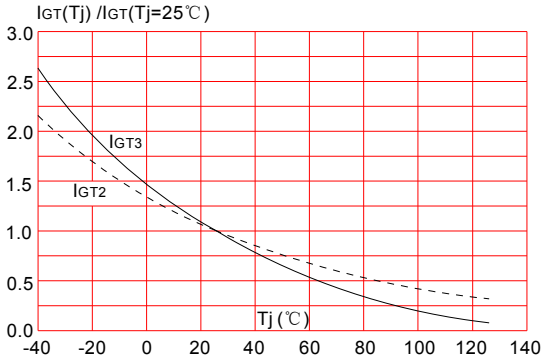
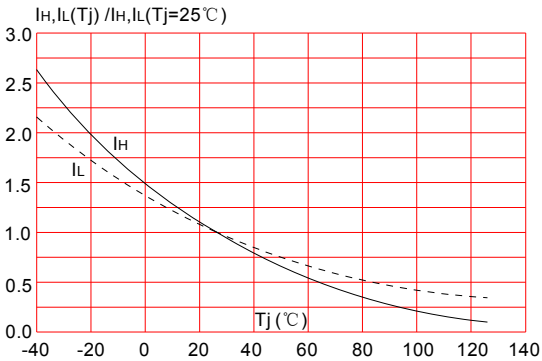


FIG.6: Relative variations of holding current, latching curretn versus junction temperature



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