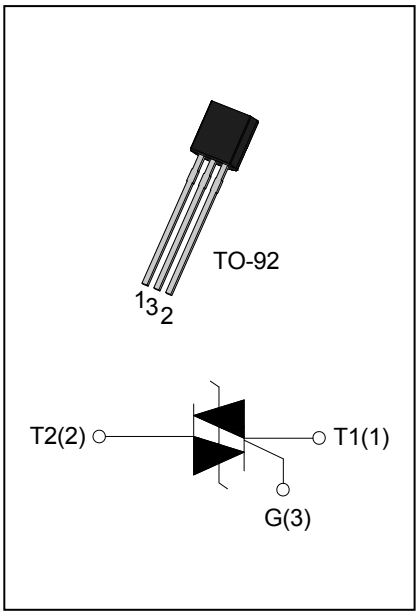
ACJT01U 1A TRIACs

Rev.3.0

DESCRIPTION:

With high ability to withstand the shock loading of large current, ACJT01U triacs provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on inductive load and serious electromagnetic interference place. Package TO-92 is RoHS compliant. (2011/65/EU)



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM} /V_{RRM}	800/1000	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}	800/1000	V
Repetitive peak reverse voltage(T_j =25℃)		V_{RRM}	800/1000	V
RMS on-state current	TO-92 (T_C=56℃)	$I_{T(RMS)}$	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	50	A/μs
Peak gate current		I_{GM}	1	A
Average gate power dissipation		$P_{G(AV)}$	0.2	W
Peak gate power		P_{GM}	0.5	W
Non repetitive mains peak mains voltage (FIG.7)		V_{PP}	4.5	kV

ELECTRICAL CHARACTERISTICS (T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value		Unit
				TW	SW	
I_{GT}	V_D=12V R_L=33Ω	Ⅰ-Ⅱ-Ⅲ	MAX	5	10	mA
V_{GT}		Ⅰ-Ⅱ-Ⅲ	MAX	1.3		V
V_{GD}	V_D=V_{DRM} T_j=125℃ R_L=3.3KΩ	Ⅰ-Ⅱ-Ⅲ	MIN	0.2		V
I_L	I_G=1.2I_{GT}	Ⅰ-Ⅲ	MAX	10	20	mA
		Ⅱ		15	30	
I_H	I_T=100mA		MAX	10	20	mA
dV/dt	V_D=2/3V_{DRM} Gate Open T_j=125℃		MIN	200	500	V/μs

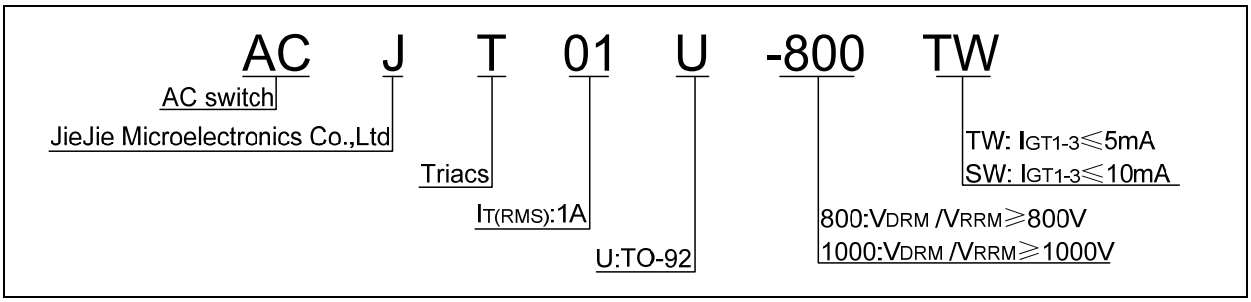
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	I_{TM}=2.8A tp=380μs	T_j=25℃	1.6	V
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25℃	5	μA
I_{RRM}		T_j=125℃	1	mA

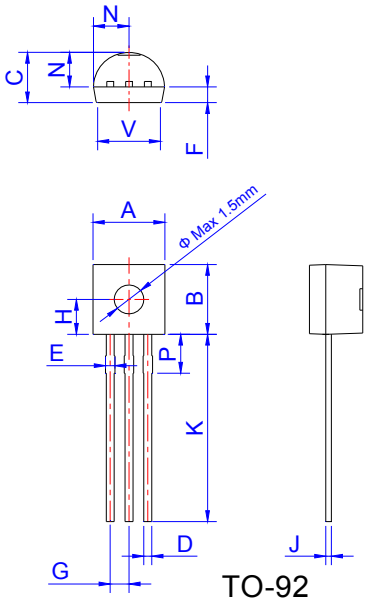
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92	11.3	℃/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

PACKAGE INFORMATION

PACKAGE	WEIGHT (PER PCS)	OUTLINE	BAG (PCS)	INNER BOX (PCS)	PER CARTON
TO-92	0.1894g	Shielding Bag	1,000	10,000	30,000

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

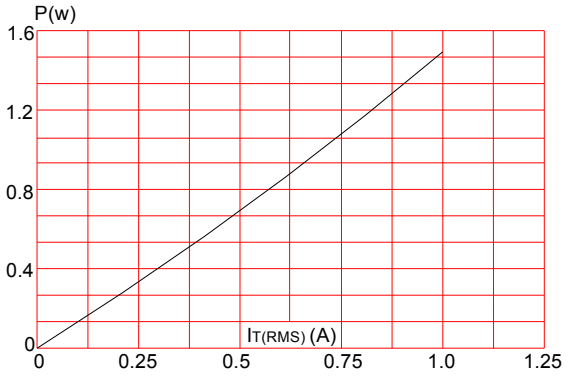


FIG.2: RMS on-state current versus case temperature

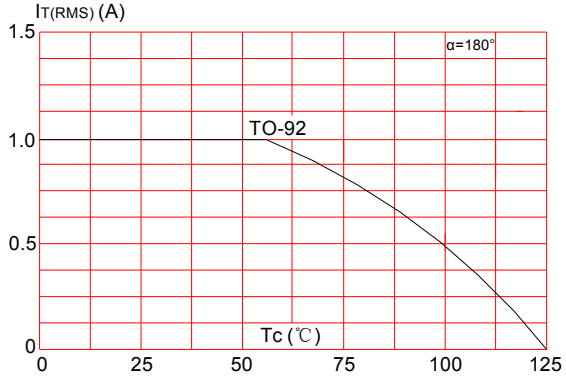


FIG.3: Surge peak on-state current versus number of cycles

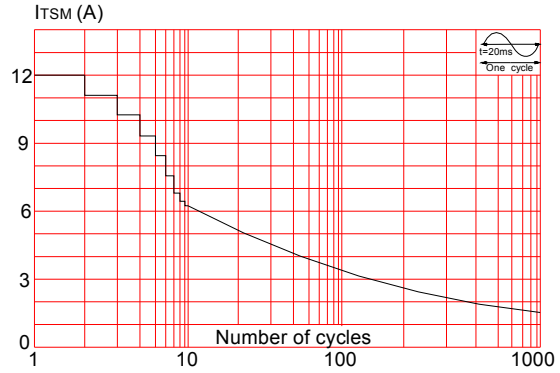


FIG.4: On-state characteristics (maximum values)

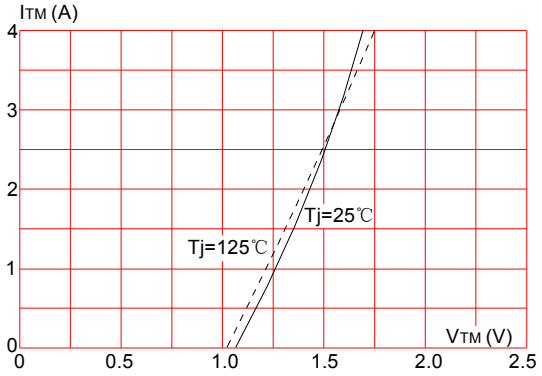


FIG.5: Relative variations of gate trigger current versus junction temperature

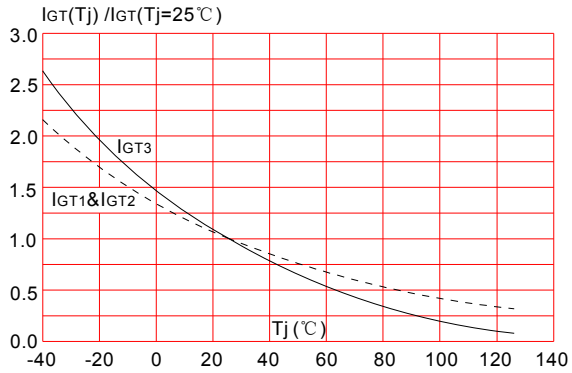


FIG.6: Relative variations of holding current, latching curretn versus junction temperature

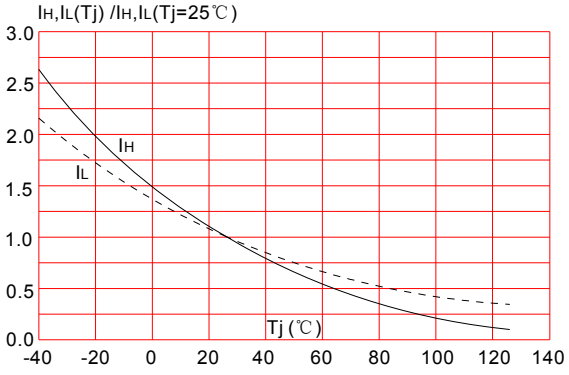


Fig.7: Overvoltage ruggedness test circuit for resistive and inductive loads for IEC 61000-4-5 standards