



ACJT1 Series 1A TRIACs

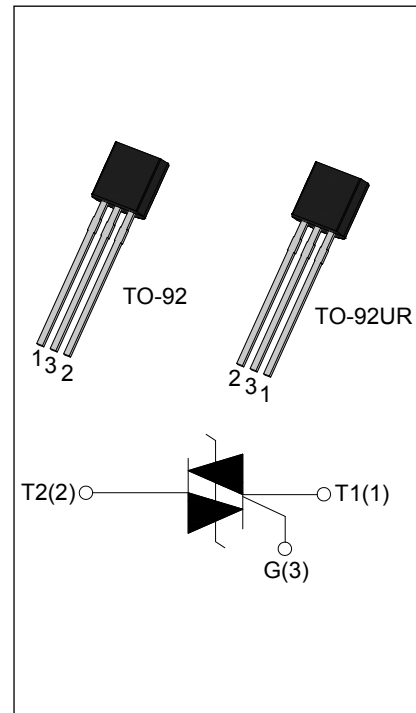
Rev.8.0

DESCRIPTION:

ACJT1 series triacs with high ability to withstand the shock loading of large current 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 & TO-92UR are RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	600/800/1000	V
I_{GT}	≤ 5 or ≤ 10	mA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	$^{\circ}C$
Operating junction temperature range		T_j	-40-125	$^{\circ}C$
Repetitive peak off-state voltage($T_j=25^{\circ}C$)		V_{DRM}	600/800/1000	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)		V_{RRM}	600/800/1000	V
RMS on-state current	TO-92/ TO-92UR ($T_C=50^{\circ}C$)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I_{TSM}	10	A
I^2t value for fusing ($t_p=10ms$)		I^2t	1.12	A^2s
Rate of rise of on-state current ($I_G=2 \times I_{GT}$)		di_T/dt	50	$A/\mu s$
Peak gate current		I_{GM}	1	A
Average gate power dissipation		$P_{G(AV)}$	0.2	W
Peak gate power		P_{GM}	1	W

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value		Unit
				ACJT105	ACJT110	
I_{GT}	$V_D=12\text{V } R_L=33\Omega$	I - II -III	MAX	5	10	mA
V_{GT}		I - II -III	MAX	1.3		V
V_{GD}	$V_D=V_{DRM} T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$	I - II -III	MIN	0.2		V
I_L	$I_G=1.2I_{GT}$	I -III	MAX	15	25	mA
		II		25	35	
I_H	$I_T=100\text{mA}$		MAX	10	20	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$		MIN	400	600	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=1.4\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.5	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	5	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	0.5	mA

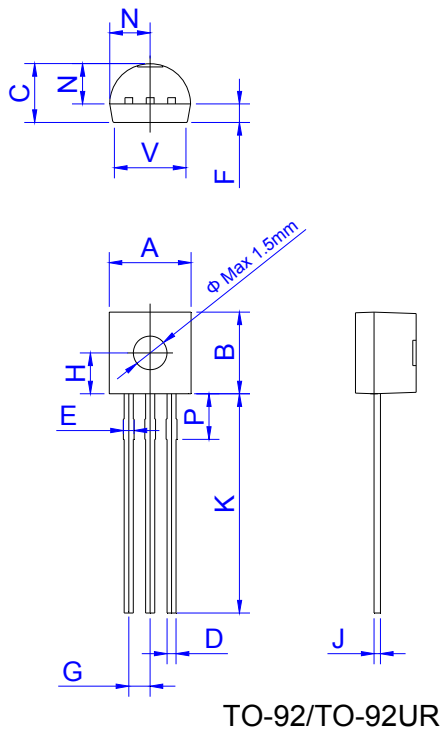
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92	60	$^{\circ}\text{C}/\text{W}$

ORDERING INFORMATION

<p>AC AC switch JieJie Microelectronics Co.,Ltd</p>	<p>J Triacs $I_{T(RMS)}:1\text{A}$</p>	<p>T</p>	<p>1</p>	<p>05 05: $I_{GT1-3}\leq 5\text{mA}$ 10: $I_{GT1-3}\leq 10\text{mA}$</p>	<p>-6 6: $V_{DRM} / V_{RRM}\geq 600\text{V}$ 8: $V_{DRM} / V_{RRM}\geq 800\text{V}$ 10: $V_{DRM} / V_{RRM}\geq 1000\text{V}$</p>	<p>U U: TO-92 UR: TO-92UR</p>
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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	0.024		0.031
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/ TO-92UR	0.1894g	Shielding Bag	1,000	10,000	30,000

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

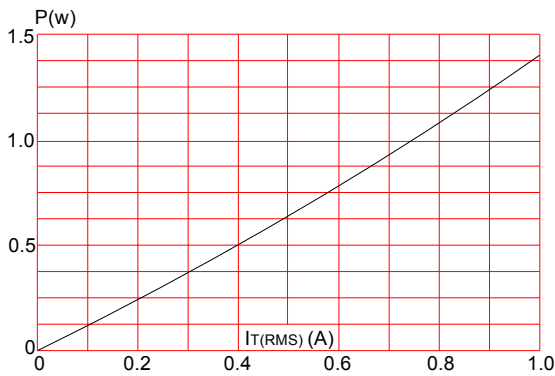


FIG.2: RMS on-state current versus case temperature

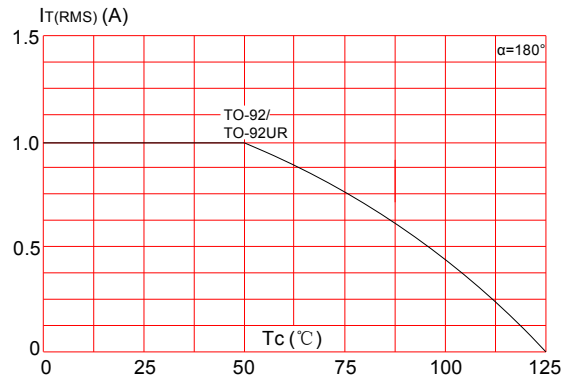


FIG.3: Surge peak on-state current versus number of cycles

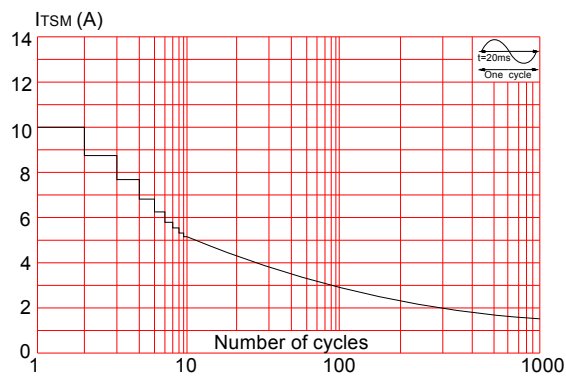


FIG.4: On-state characteristics (maximum values)

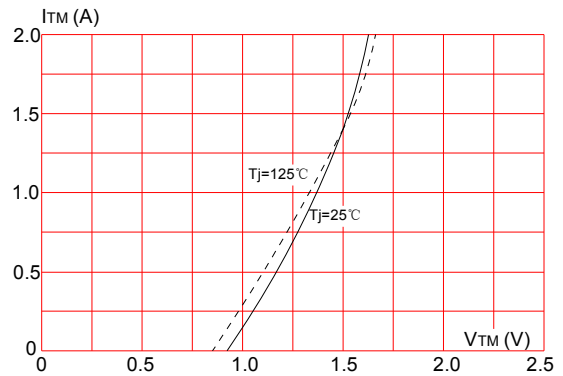


FIG.5: Relative variations of gate trigger current versus junction temperature

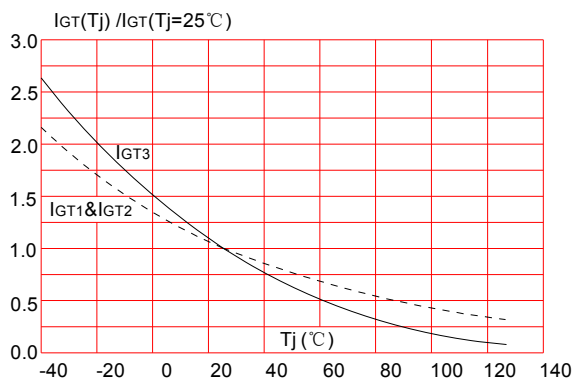
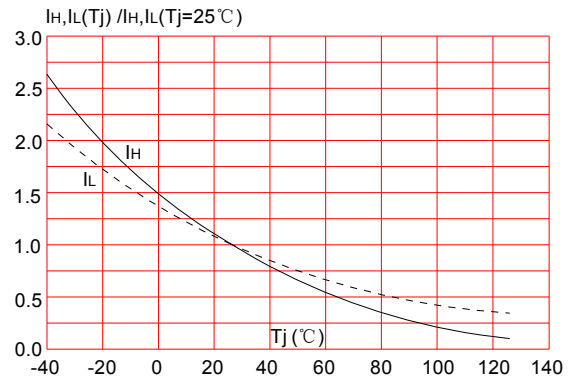


FIG.6: Relative variations of holding current, latching current versus junction temperature




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