



## ACJT1 Series 1A TRIACs

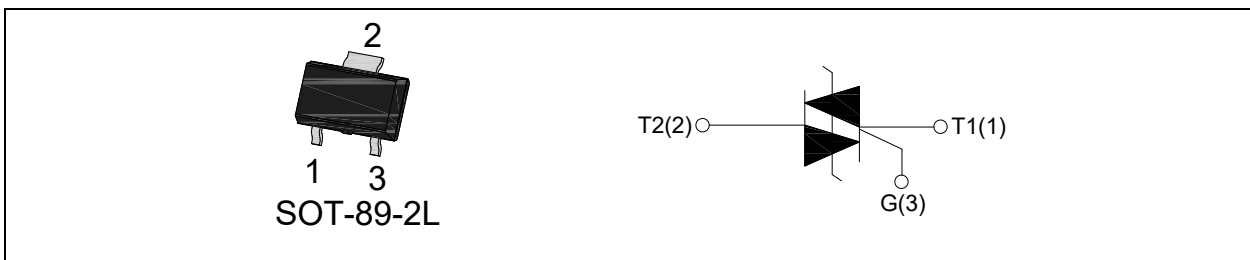
Rev.1.0

### 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.

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
$V_{DRM}/V_{RRM}$	800/1000	V
$I_{GT}$	$\leq 5$ or $\leq 10$	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( $T_j=25^{\circ}C$ )	$V_{DRM}$	800/1000	V
Repetitive peak reverse voltage( $T_j=25^{\circ}C$ )	$V_{RRM}$	800/1000	V
Non repetitive surge peak Off-state voltage	$V_{DSM}$	$V_{DRM} + 100$	V
Non repetitive peak reverse voltage	$V_{RSM}$	$V_{RRM} + 100$	V
RMS on-state current	$I_{T(RMS)}$	1	A
SOT-89-2L ( $T_C=70^{\circ}C$ )			
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/ $\mu\text{s}$

## 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	$\mu\text{A}$
$I_{RRM}$		$T_j=125^{\circ}\text{C}$	0.5	mA

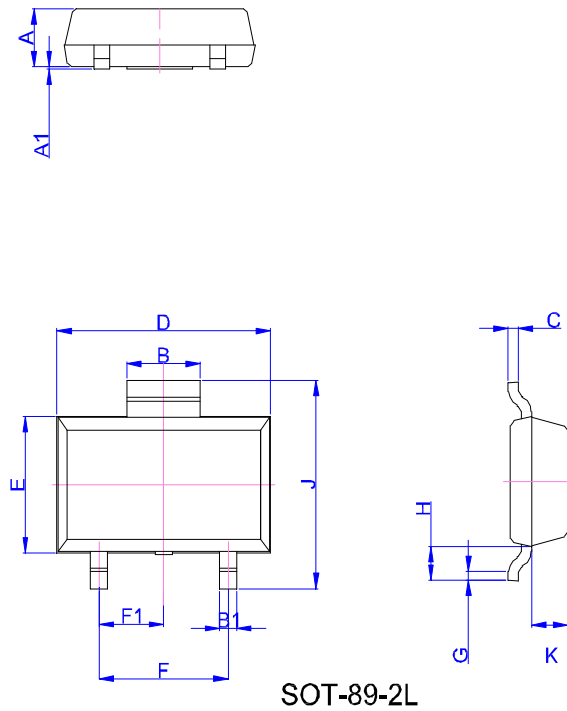
## THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	SOT-89-2L	44	$^{\circ}\text{C/W}$

ORDERING INFORMATION

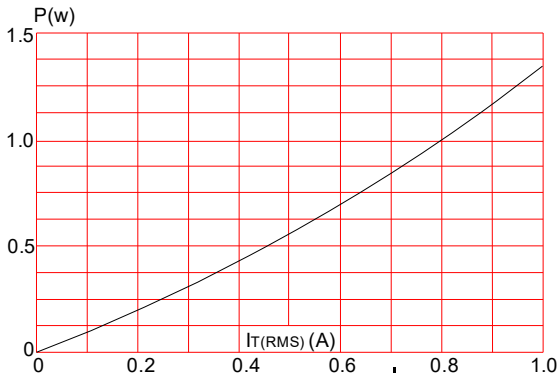
<p><b>AC</b> AC switch JieJie Microelectronics Co.,Ltd</p>	<p><b>J</b> Triacs</p>	<p><b>T</b> <math>I_{T(RMS)}:1A</math></p>	<p><b>1</b></p>	<p><b>05</b> 05: <math>I_{GT1-3} \leq 5mA</math> 10: <math>I_{GT1-3} \leq 10mA</math></p>	<p><b>-10</b></p>	<p><b>N2</b> N2:SOT-89-2L 8: <math>V_{DRM} / V_{RRM} \geq 800V</math> 10: <math>V_{DRM} / V_{RRM} \geq 1000V</math></p>
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PACKAGE MECHANICAL DATA

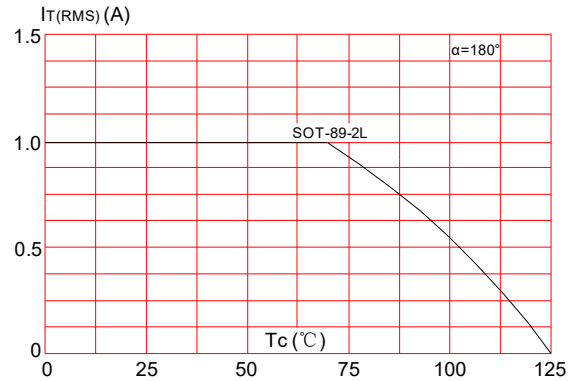


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.3	1.4	1.5	0.051	0.055	0.059
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	1.6	1.7	1.8	0.063	0.067	0.071
B1	0.3	0.4	0.5	0.012	0.016	0.020
C	0.22	0.254	0.32	0.009	0.010	0.013
D	4.75	4.95	5.15	0.187	0.195	0.203
E	2.90		3.30	0.114		0.130
F	2.80		3.20	0.110		0.126
F1	1.40		1.60	0.055		0.063
G	0.20	0.30	0.40	0.008	0.012	0.016
H	0.58	0.78	0.98	0.023	0.031	0.039
J	4.30	4.50	4.70	0.169	0.177	0.185
K	0.80		1.00	0.031		0.039

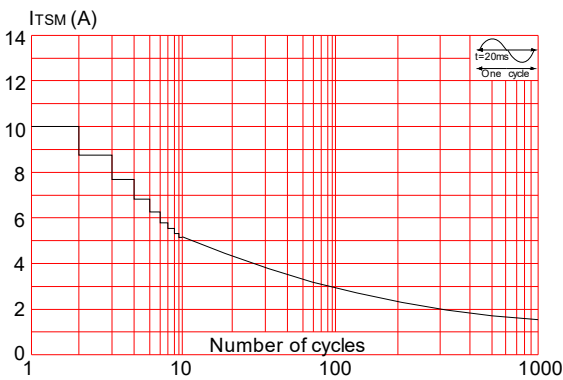
**FIG.1** Maximum power dissipation versus RMS on-state current



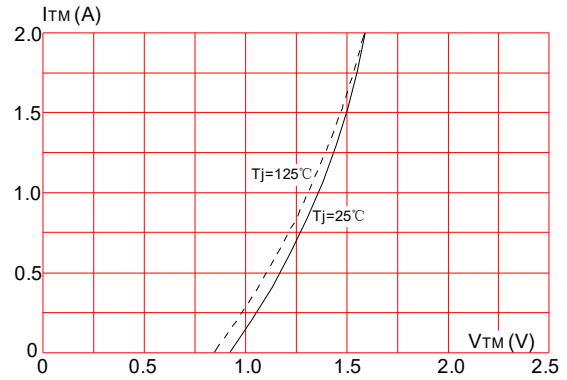
**FIG.2:** RMS on-state current versus case temperature



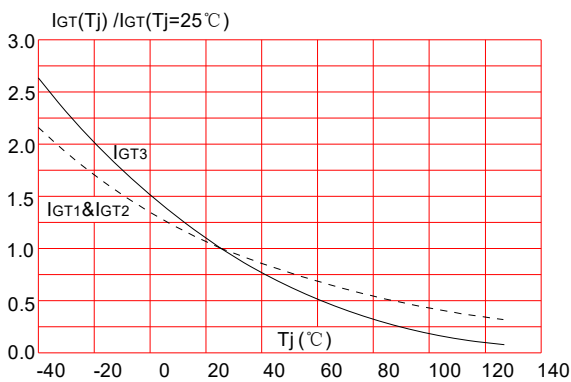
**FIG.3:** Surge peak on-state current versus number of cycles



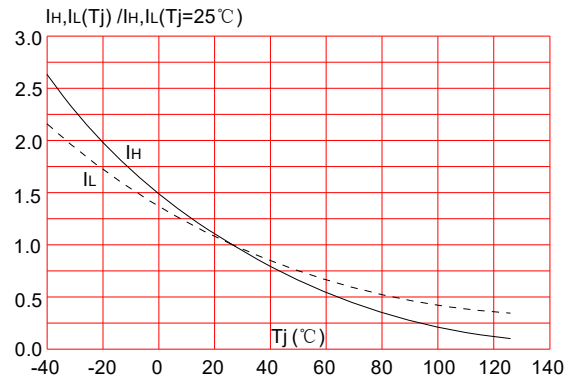
**FIG.4:** On-state characteristics (maximum values)



**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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