



## ACJT8 Series 8A TRIACs

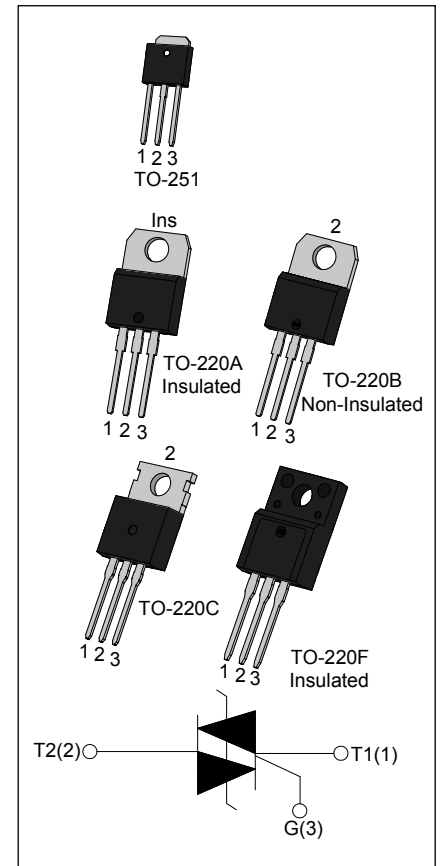
Rev.10.0

### DESCRIPTION:

The ACJT8 series of double mesa technology provide High interference immunity, They can be used as an static ON/OFF function in electrical control system, and used as a driver of low power and high inductance or resistive loads, such as jet pumps of dishwashers, fans of air-conditioner ... From all three terminals to external heatsink, ACJT8xx-xxA provides a rated insulation voltage of 2500 V<sub>RMS</sub>, and ACJT8xx-xxF provides a rated insulation voltage of 2000 V<sub>RMS</sub>, complying with UL standards (File ref: E252906). All the packages listed above are RoHS compliant. (2011/65/EU)

### MAIN FEATURES

Symbol	Value	Unit
I <sub>T(RMS)</sub>	8	A
V <sub>DRM</sub> /V <sub>R<sub>RM</sub></sub>	1000	V
I <sub>GT1-3</sub>	≤5 or ≤10 or ≤25	mA



### ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T <sub>stg</sub>	-40-150	°C
Operating junction temperature range		T <sub>j</sub>	-40-125	°C
Repetitive peak off-state voltage( T <sub>j</sub> =25°C)		V <sub>DRM</sub>	1000	V
Repetitive peak reverse voltage( T <sub>j</sub> =25°C)		V <sub>R<sub>RM</sub></sub>	1000	V
Non repetitive surge peak Off-state voltage		V <sub>D<sub>SM</sub></sub>	V <sub>DRM</sub> +100	V
Non repetitive peak reverse voltage		V <sub>R<sub>SM</sub></sub>	V <sub>R<sub>RM</sub></sub> +100	V
RMS on-state current	TO-220A(Ins)/ TO-220F(Ins) (T <sub>c</sub> =85°C)	I <sub>T(RMS)</sub>	8	A
	TO-251/TO-220C/ TO-220B(Non-Ins) (T <sub>c</sub> =95°C)			
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I <sub>TSM</sub>	80	A

I <sup>2</sup> t value for fusing ( tp=10ms)	I <sup>2</sup> t	32	A <sup>2</sup> s
Rate of rise of on-state current (I <sub>G</sub> =2×I <sub>GT</sub> )	di <sub>T</sub> /dt	50	A/μs
Peak gate current	I <sub>GM</sub>	1	A
Average gate power dissipation	P <sub>G(AV)</sub>	0.1	W
Peak gate power	P <sub>GM</sub>	1	W

**ELECTRICAL CHARACTERISTICS** (T<sub>j</sub>=25°C unless otherwise specified)

Symbol	Test Condition	Quadrant		Value			Unit
				ACJT805	ACJT810	ACJT825	
I <sub>GT</sub>	V <sub>D</sub> =12V R <sub>L</sub> =33Ω	I - II -III	MAX	5	10	25	mA
V <sub>GT</sub>		I - II -III	MAX	1.3			V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> T <sub>j</sub> =125°C R <sub>L</sub> =3.3KΩ	I - II -III	MIN	0.2			V
I <sub>L</sub>	I <sub>G</sub> =1.2I <sub>GT</sub>	I -III	MAX	10	25	35	mA
		II		20	30	55	
I <sub>H</sub>	I <sub>T</sub> =100mA		MAX	10	15	30	mA
dV/dt	V <sub>D</sub> =2/3V <sub>DRM</sub> Gate Open T <sub>j</sub> =125°C		MIN	200	600	1000	V/μs

**STATIC CHARACTERISTICS**

Symbol	Parameter	Value(MAX)	Unit
V <sub>TM</sub>	I <sub>TM</sub> =11A tp=380μs T <sub>j</sub> =25°C	1.55	V
I <sub>DRM</sub>	V <sub>D</sub> =V <sub>DRM</sub> V <sub>R</sub> =V <sub>RRM</sub> T <sub>j</sub> =25°C	5	μA
I <sub>RRM</sub>		T <sub>j</sub> =125°C	1

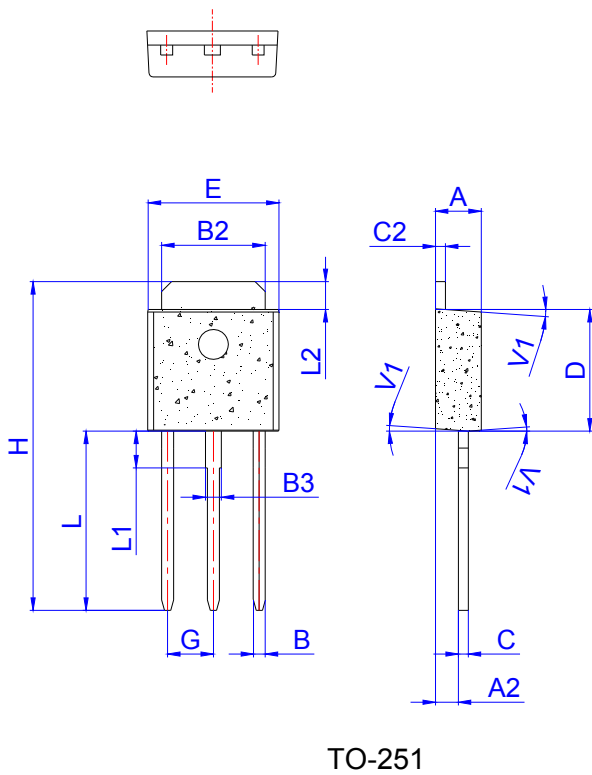
**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
R <sub>th(j-c)</sub>	junction to case(AC)	TO-251	2.5
		TO-220A(Ins)/ TO-220F(Ins)	3.3
		TO-220C/ TO-220B(Non-Ins)	2.3

ORDERING INFORMATION

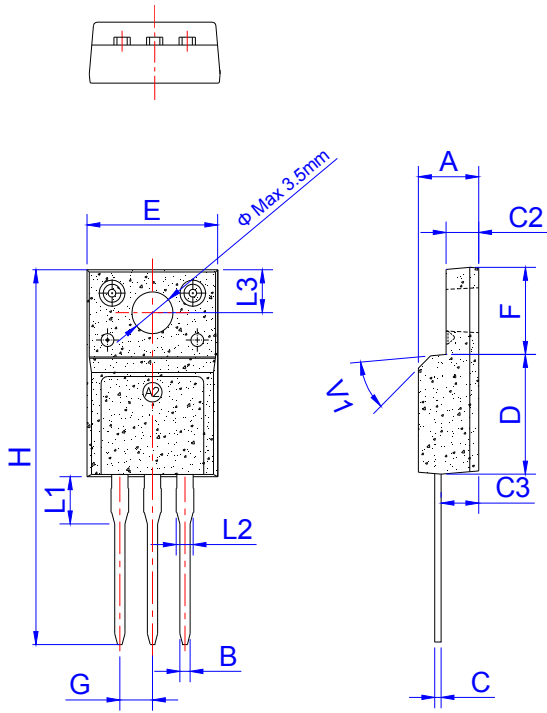
<p><b>AC</b></p> <p>AC switch</p> <p>JieJie Microelectronics Co.,Ltd</p>	<p><b>J</b></p>	<p><b>T</b></p> <p>Triacs</p> <p><math>I_{T(RMS)}:8A</math></p>	<p><b>8</b></p>	<p><b>10</b></p> <p>05: <math>I_{GT1-3} \leq 5mA</math>                  10: <math>I_{GT1-3} \leq 10mA</math>                  25: <math>I_{GT1-3} \leq 25mA</math></p>	<p><b>-10</b></p> <p>10: <math>V_{DRM} / V_{RRM} \geq 1000V</math></p>	<p><b>H</b></p> <p>H: TO-251                  C: TO-220C                  A: TO-220A(Ins)                  F: TO-220F(Ins)                  B: TO-220B(Non-Ins)</p>
--	-----------------	---	-----------------	---	--	---

PACKAGE MECHANICAL DATA

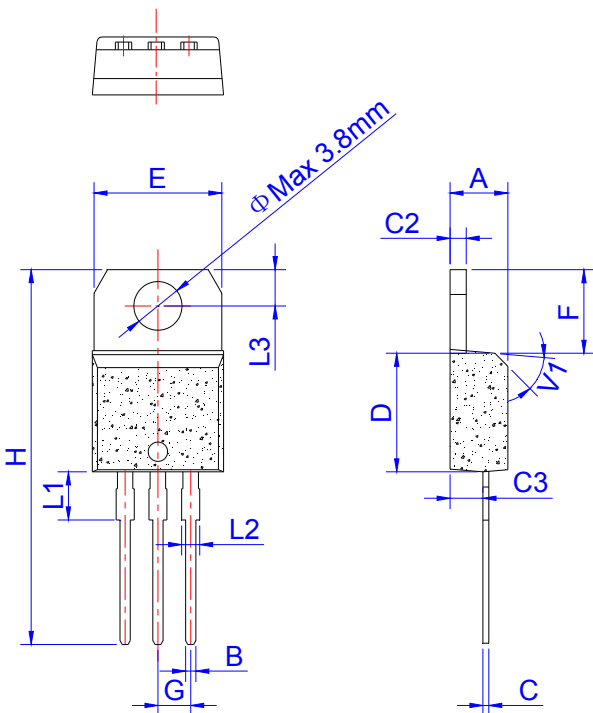


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G		2.30			0.091	
H	16.0		17.0	0.630		0.669
L	8.90		9.40	0.350		0.370
L1	1.80		1.90	0.071		0.075
L2	1.37		1.50	0.054		0.059
V1		4°			4°	

PACKAGE MECHANICAL DATA

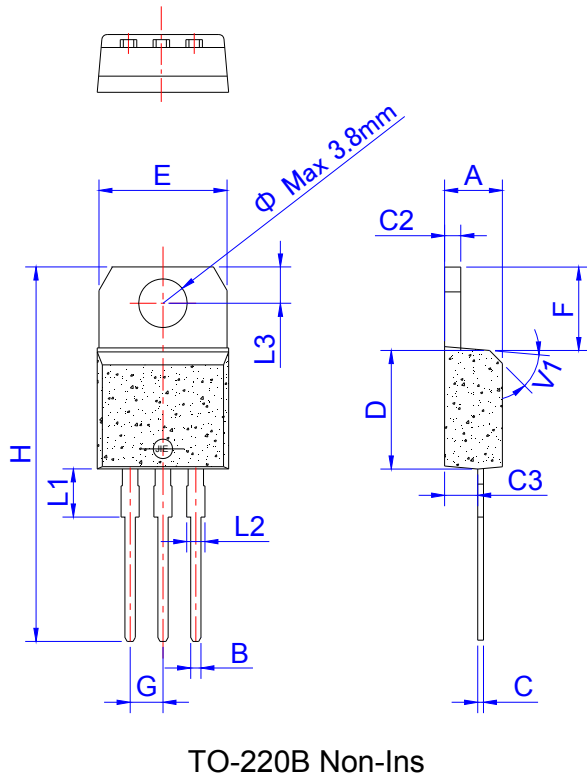


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

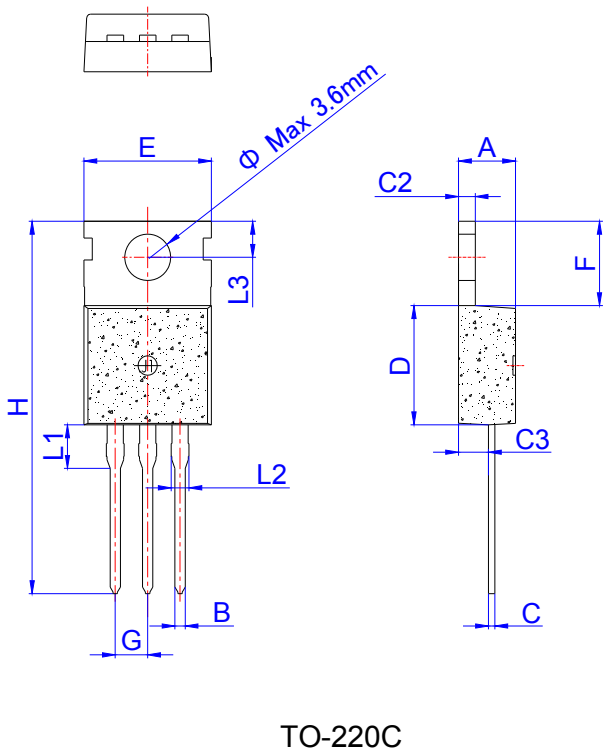


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

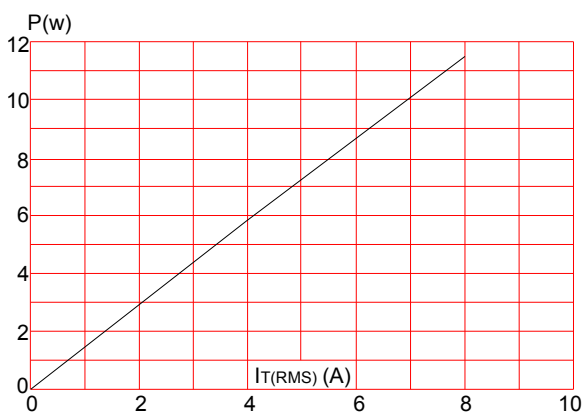


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

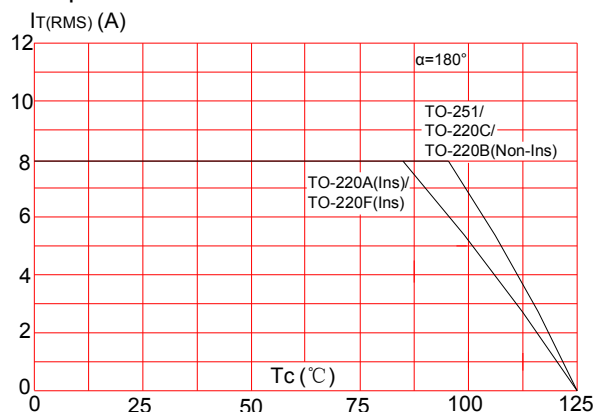
PACKAGE INFORMATION

PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	8,000
TO-220B	TUBE	50	1,000	8,000
TO-220C	TUBE	50	1,000	8,000
TO-220F	TUBE	50	1,000	8,000
TO-251	TUBE	80	4,000	32,000

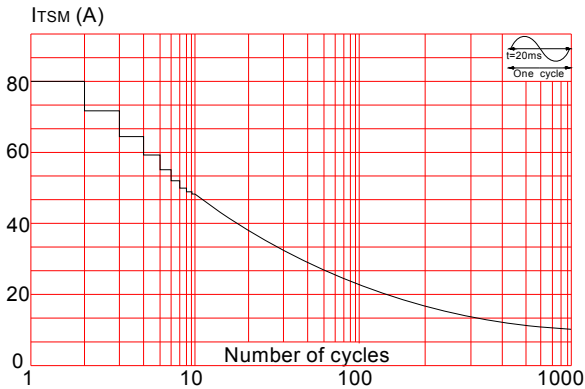
**FIG.1** Maximum power dissipation versus RMS on-state current



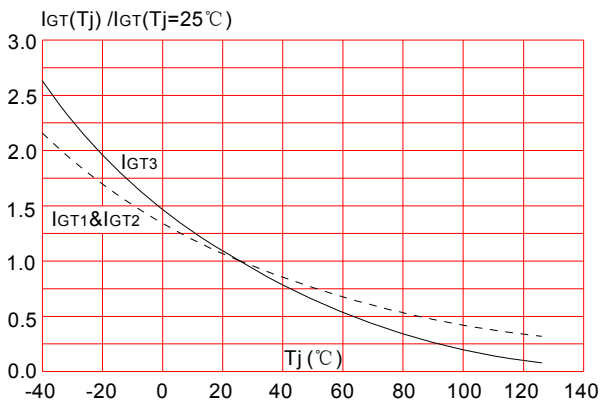
**FIG.2:** RMS on-state current versus case temperature



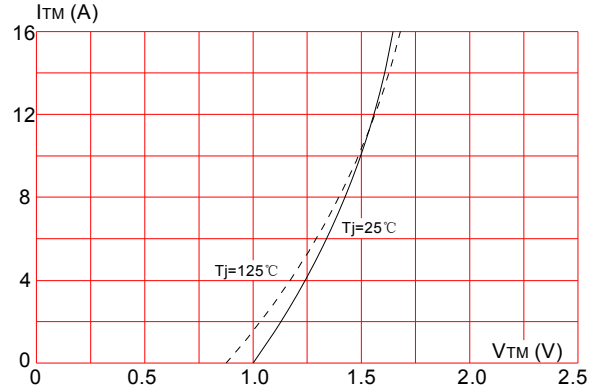
**FIG.3:** Surge peak on-state current versus number of cycles



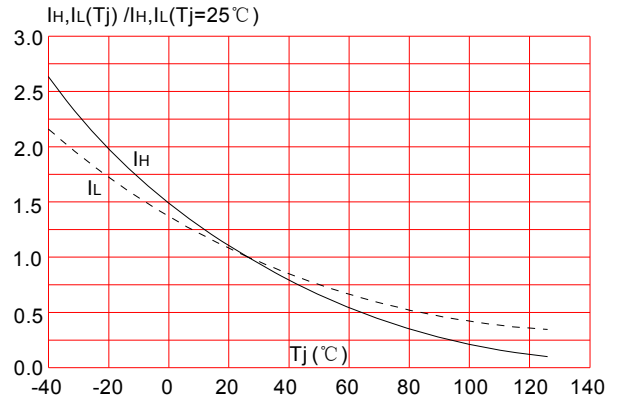
**FIG.5:** Relative variations of gate trigger current versus junction temperature




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



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



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document is the tenth version which is made in 17-Feb.-2019. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright ©2019 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.