



ACJT8 Series 8A TRIACs

Rev.3.0

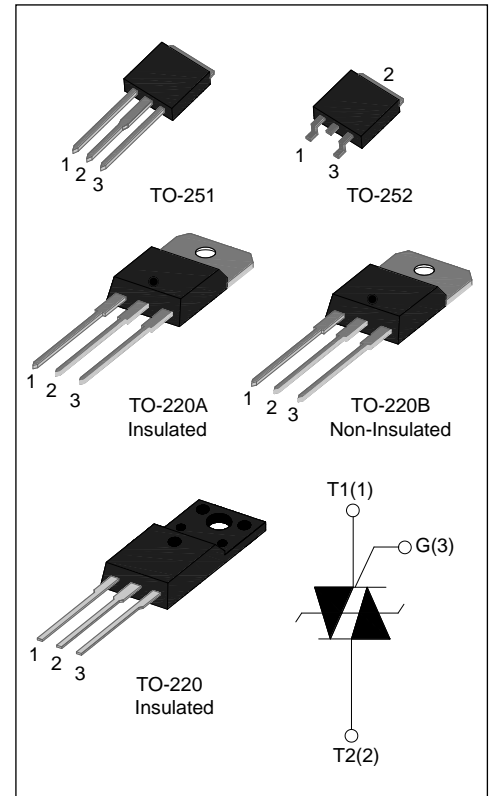
DESCRIPTION:

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 ...

ACJT8xx-xxA provides insulation voltage rated at 2500V RMS and ACJT8xx-xxF provides insulation voltage rated at 2000V RMS from all three terminals to external heatsink.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	1000	V
I_{GT}	≤ 5 or ≤ 10 or ≤ 25	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}	1000	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)		V_{RRM}	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	TO-251/ TO-252 ($T_C=100^{\circ}C$)	$I_{T(RMS)}$	8	A
	TO-220A(Ins)/ TO-220F(Ins) ($T_C=90^{\circ}C$)			
	TO-220B(Non-Ins) ($T_C=103^{\circ}C$)			
Non repetitive surge peak on-state current (full cycle, $F=50Hz$)		I_{TSM}	80	A

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

ELECTRICAL CHARACTERISTICS (T_j=25°C unless otherwise specified)

Symbol	Test Condition	Quadrant		Value			Unit
				ACJT805	ACJT810	ACJT825	
I _{GT}	V _D =12V R _L =33Ω	I - II -III	MAX	5	10	25	mA
V _{GT}		I - II -III	MAX	1.3	1.4	1.5	V
V _{GD}	V _D =V _{DRM} T _j =125°C R _L =3.3KΩ	I - II -III	MIN	0.2			V
I _L	I _G =1.2I _{GT}	I -III	MAX	10	25	35	mA
		II		20	30	55	
I _H	I _T =100mA		MAX	10	15	30	mA
dV/dt	V _D =2/3V _{DRM} Gate Open T _j =125°C		MIN	200	600	1000	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =11A tp=380μs	T _j =25°C	1.55	V
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25°C	10	μA
I _{RDM}		T _j =125°C	1.25	mA

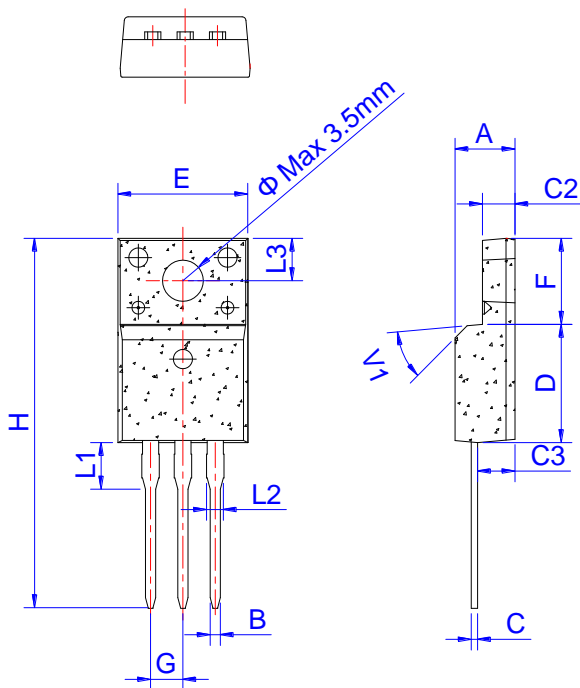
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-251/ TO-252	2.5	°C/W
		TO-220A(Ins)/ TO-220F(Ins)	3.5	
		TO-220B(Non-Ins)	2.1	

ORDERING INFORMATION

<p>AC</p> <p>AC switch</p> <p>JieJie Microelectronics Co.,Ltd</p>	<p>J</p> <p>Triacs</p>	<p>T</p> <p>IT(RMS):8A</p>	<p>8</p>	<p>10</p> <p>05: IGT1-3 ≤ 5mA 10: IGT1-3 ≤ 10mA 25: IGT1-3 ≤ 25mA</p>	<p>-10</p> <p>10: VDRM / VRRM ≥ 1000V</p>	<p>H</p> <p>A: TO-220A(Ins) F: TO-220F(Ins) B: TO-220B(Non-Ins) H: TO-251 K: TO-252</p>
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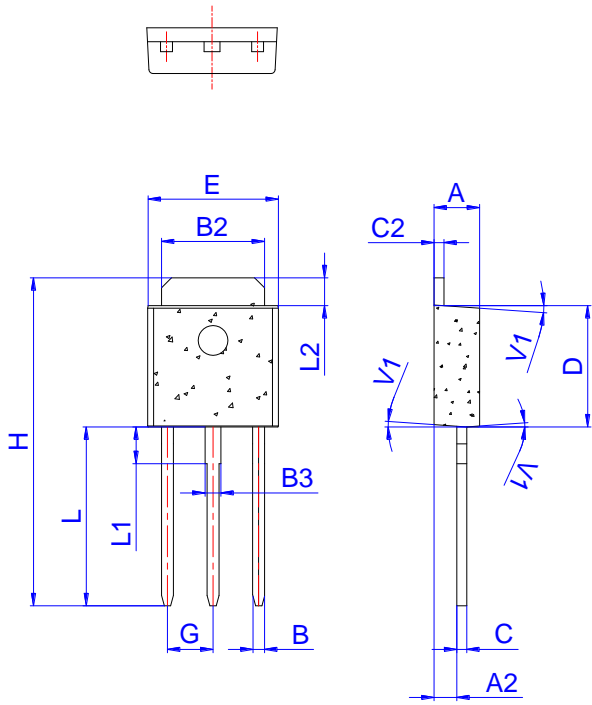
PACKAGE MECHANICAL DATA



TO-220F Ins

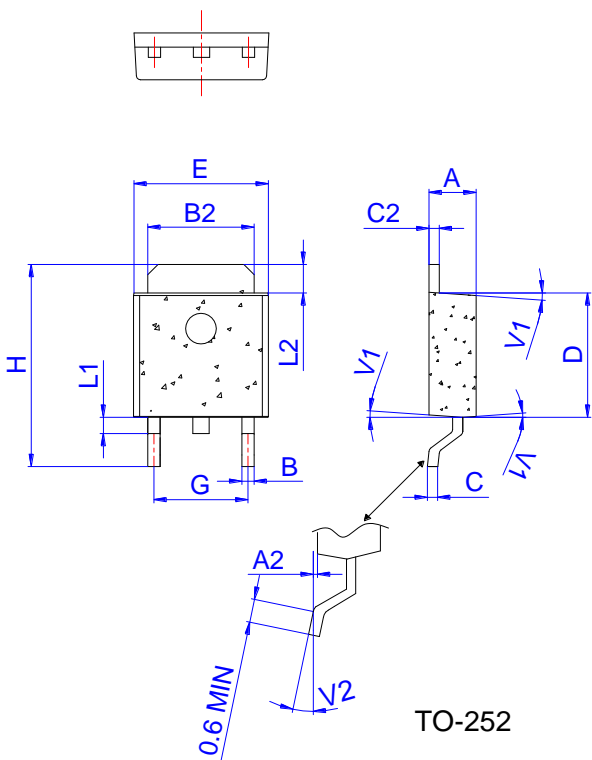
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.48		0.75	0.019		0.030
C2	2.40		2.70	0.094		0.106
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.70		10.3	0.382		0.406
F	6.40		7.00	0.252		0.276
G		2.54			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°	

PACKAGE MECHANICAL DATA



TO-251

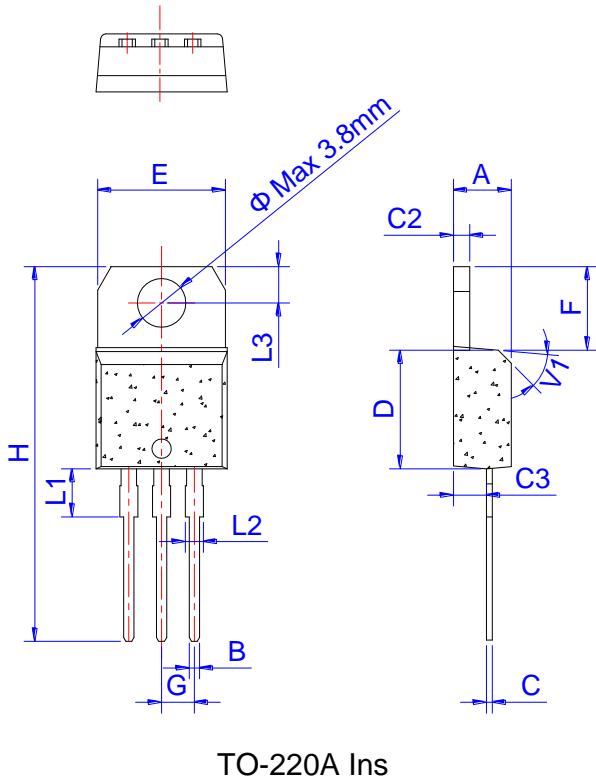
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	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°	



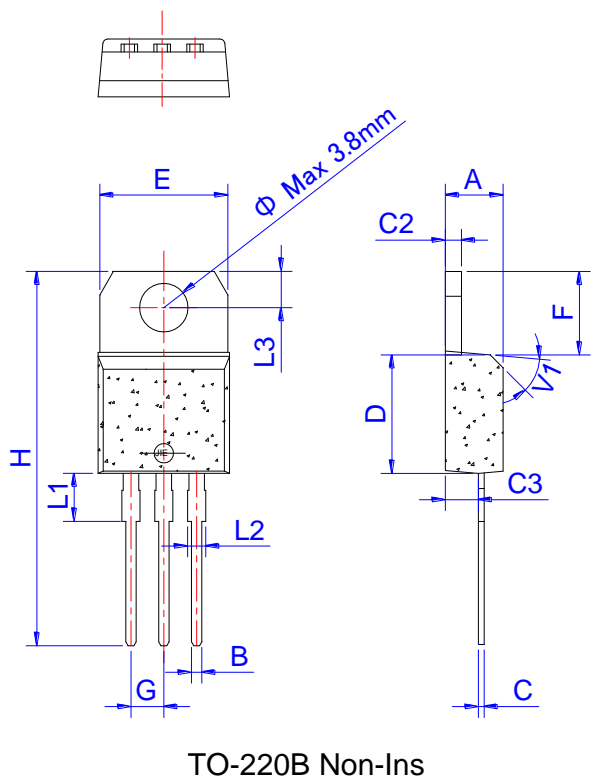
TO-252

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
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	4.40		4.70	0.173		0.185
H	9.35		10.6	0.368		0.417
L1	1.30		1.70	0.051		0.067
L2	1.37		1.50	0.054		0.059
V1		4°			4°	
V2	0°		8°	0°		8°

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	9.80		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°	



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°	

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

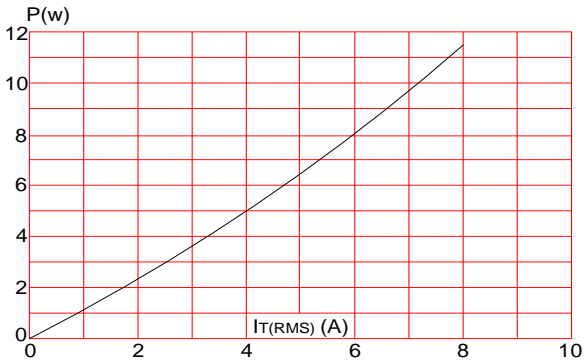


FIG.3: Surge peak on-state current versus number of cycles

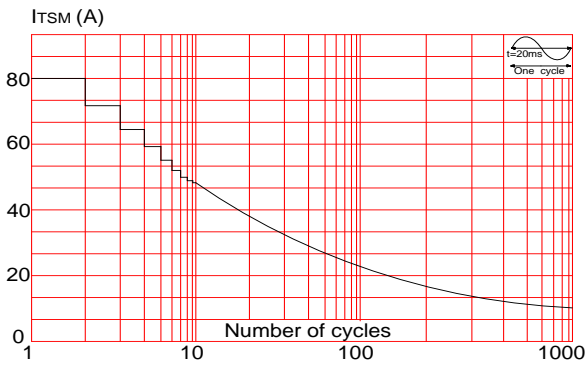


FIG.5: Relative variations of gate trigger current versus junction temperature

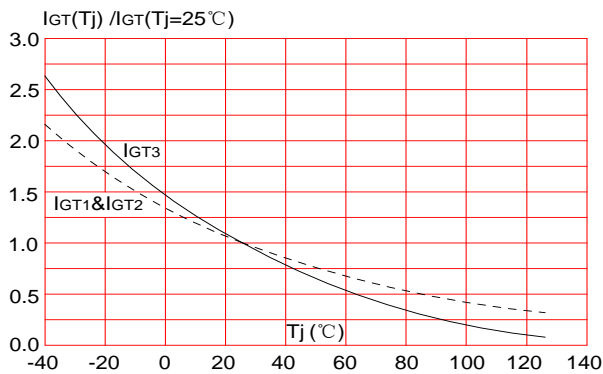


FIG.2: RMS on-state current versus case temperature

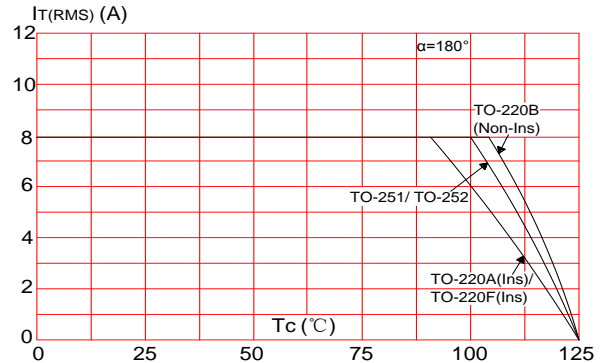


FIG.4: On-state characteristics (maximum values)

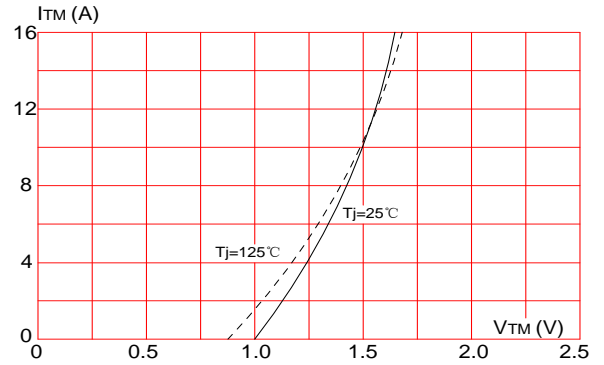
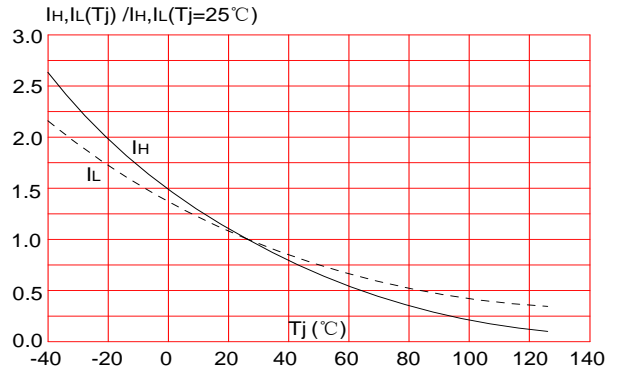


FIG.6: Relative variations of holding current, latching current versus junction temperature



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