



## ACJT10 Series 10A TRIACs

Rev.3.0

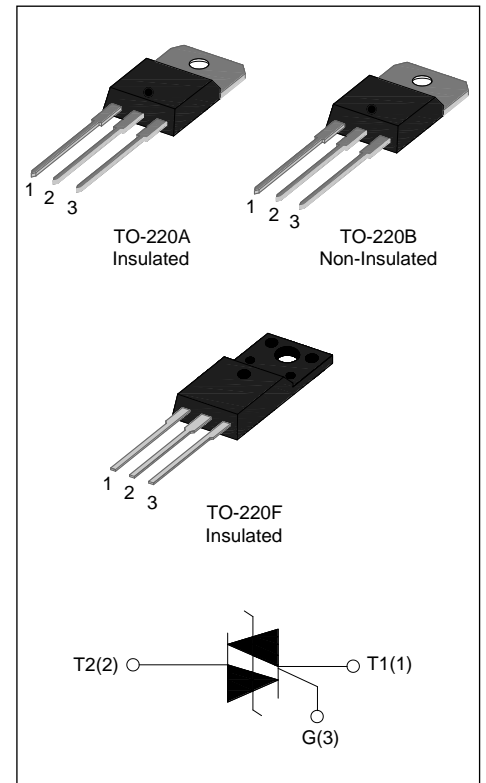
### DESCRIPTION:

The ACJT10 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 ...

ACJT10xx-xxA provides insulation voltage rated at 2500V RMS and ACJT10xx-xxF provides insulation voltage rated at 2000V RMS from all three terminals to external heatsink.

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	10	A
$V_{DRM}/V_{RRM}$	1000	V
$I_{GT}$	$\leq 10$ or $\leq 35$ or $\leq 50$	mA



### ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		$T_{stg}$	-40-150	°C
Operating junction temperature range		$T_j$	-40-125	°C
Repetitive peak off-state voltage( $T_j=25^\circ\text{C}$ )		$V_{DRM}$	1000	V
Repetitive peak reverse voltage( $T_j=25^\circ\text{C}$ )		$V_{RRM}$	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-220A(Ins) ( $T_C=90^\circ\text{C}$ )	$I_{T(RMS)}$	10	A
	TO-220B(Non-Ins) ( $T_C=100^\circ\text{C}$ )			
	TO-220F(Ins) ( $T_C=84^\circ\text{C}$ )			
Non repetitive surge peak on-state current (full cycle, $F=50\text{Hz}$ )		$I_{TSM}$	100	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )		$I^2t$	55	$\text{A}^2\text{s}$

Rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	$di_T/dt$	50	A/ $\mu$ s
Peak gate current	$I_{GM}$	2	A
Average gate power dissipation	$P_{G(AV)}$	0.1	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
				ACJT1010	ACJT1035	ACJT1050	
$I_{GT}$	$V_D=12\text{V } R_L=33\Omega$	I - II -III	MAX	10	35	50	mA
$V_{GT}$		I - II -III	MAX	1.4	1.4	1.5	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	20	70	80	mA
		II		35	80	100	
$I_H$	$I_T=100\text{mA}$		MAX	20	50	70	mA
$dV/dt$	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	500	1500	2000	V/ $\mu$ s

**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=14\text{A } tp=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.55	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	10	$\mu$ A
$I_{RRM}$		$T_j=125^\circ\text{C}$	1.5	mA

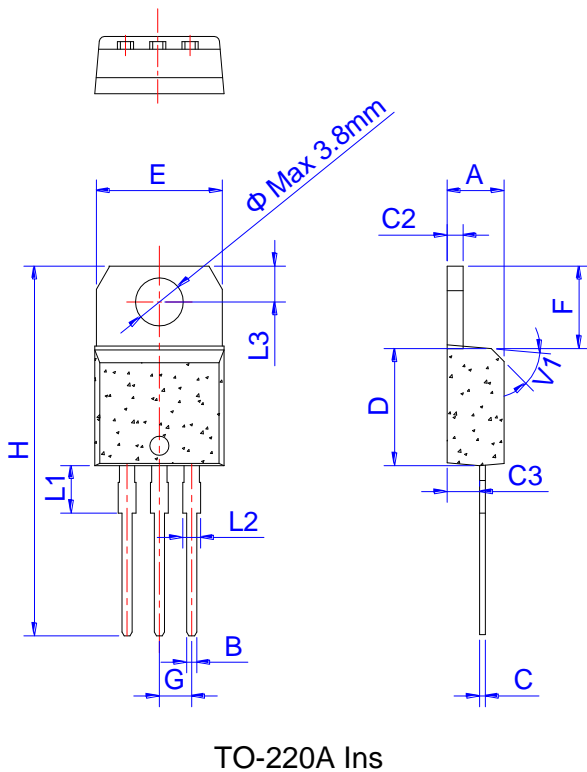
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)	3.1	$^\circ\text{C/W}$
		TO-220B(Non-Ins)	2.3	
		TO-220F(Ins)	3.5	

ORDERING INFORMATION

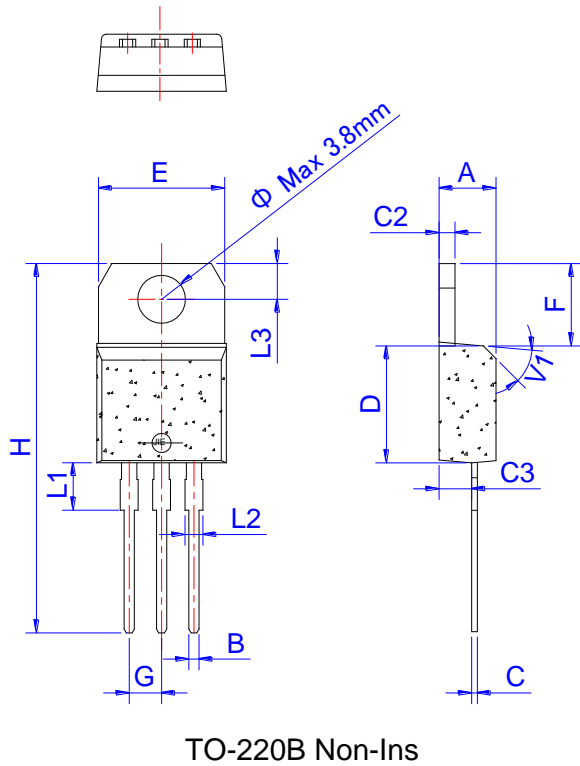
<p><b>AC</b></p> <p>AC switch</p> <p>JieJie Microelectronics Co.,Ltd</p>	<p><b>J</b></p>	<p><b>T</b></p> <p>Triacs</p> <p><math>I_{T(RMS)}:10A</math></p>	<p><b>10</b></p>	<p><b>35</b></p>	<p><b>-10</b></p>	<p><b>F</b></p> <p>A:TO-220A(Ins) F:TO-220F(Ins) B:TO-220B(Non-Ins)</p> <p>10:<math>V_{DRM}/V_{RRM} \geq 1000V</math></p> <p>10: <math>I_{GT1-3} \leq 10mA</math> 35: <math>I_{GT1-3} \leq 35mA</math> 50: <math>I_{GT1-3} \leq 50mA</math></p>
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PACKAGE MECHANICAL DATA

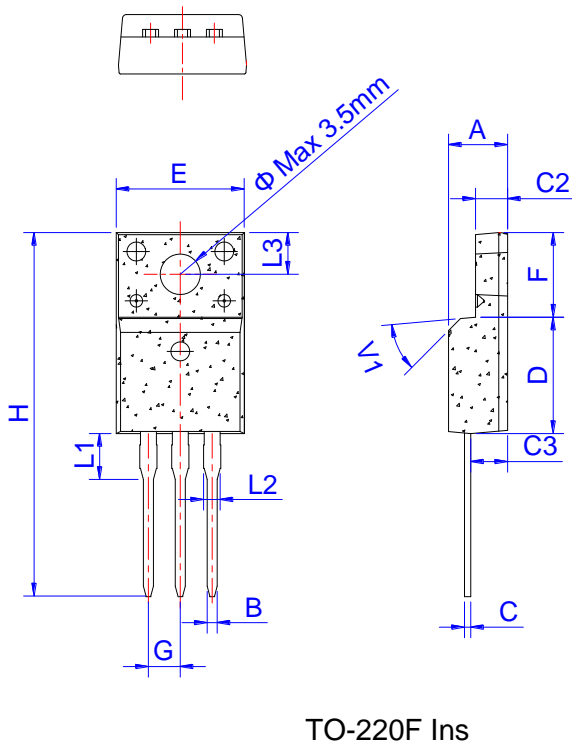


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
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°	

PACKAGE MECHANICAL DATA

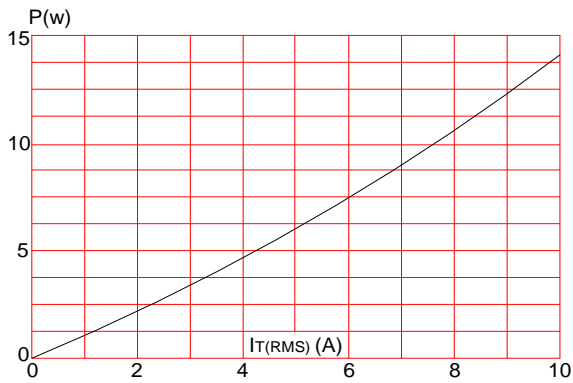


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G		2.54			0.1	
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°	

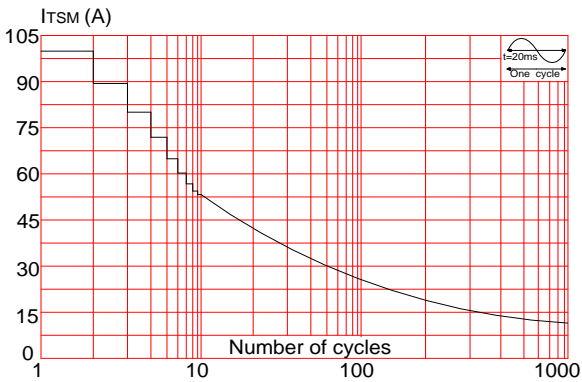


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.48		0.75	0.019		0.030
C2	2.40		2.70	0.094		0.106
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.70		10.3	0.382		0.406
F	6.40		7.00	0.252		0.276
G		2.54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

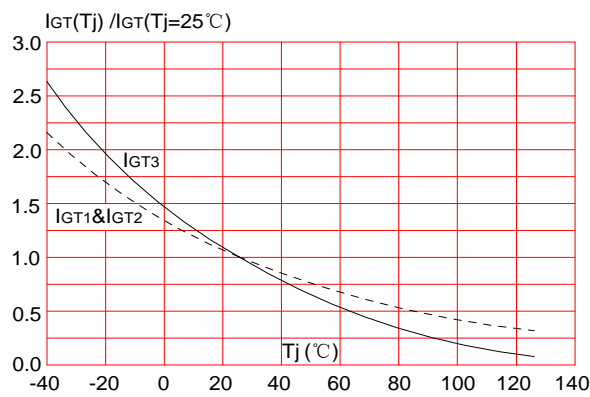
**FIG.1** Maximum power dissipation versus RMS on-state current



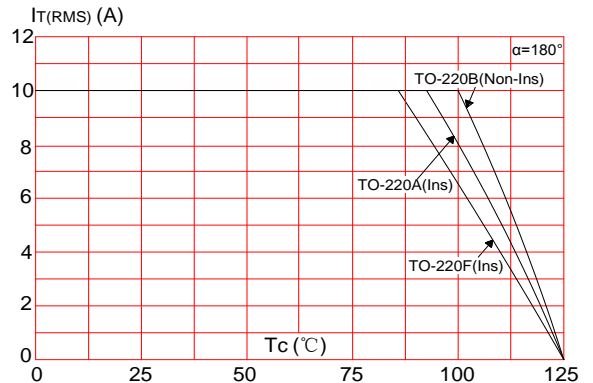
**FIG.3:** Surge peak on-state current versus number of cycles



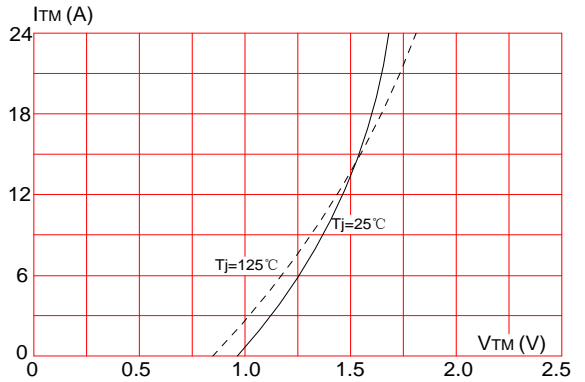
**FIG.5:** Relative variations of gate trigger current versus junction temperature



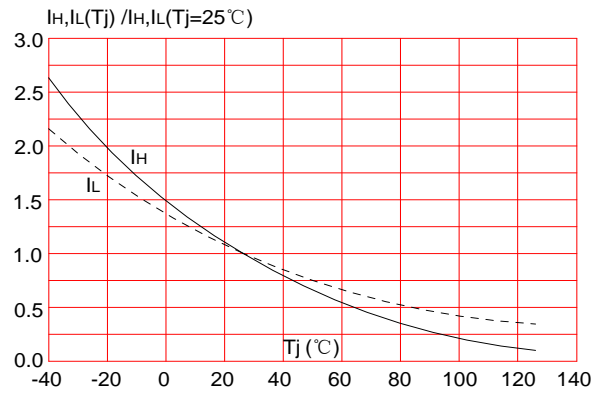
**FIG.2:** RMS on-state current versus case temperature



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



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



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