



ACJT16 Series 16A TRIACS

Rev.5.0

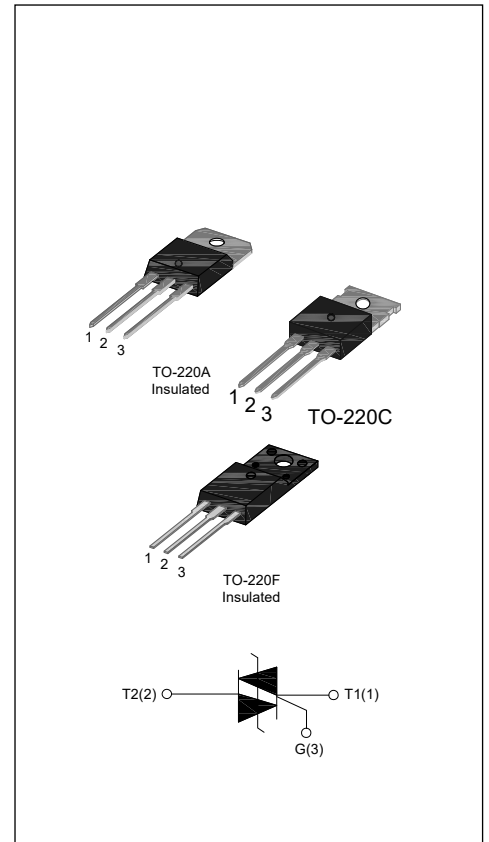
DESCRIPTION:

The ACJT16 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 ...

ACJT16xx-xxA provides insulation voltage rated at 2500V RMS and ACJT16xx-xxF provides insulation voltage rated at 2000V RMS from all three terminals to external heatsink, complying with UL standards (File ref: E252906).All the packages above are RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM}/V_{RRM}	1000	V
I_{GT}	≤10 or ≤35 or ≤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($T_j=25^{\circ}C$)		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-220A(Ins)/ TO-220F(Ins) ($T_c=92^{\circ}C$)	$I_{T(RMS)}$	16	A
	TO-220C ($T_c=103^{\circ}C$)			
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I_{TSM}	160	A

I ² t value for fusing (tp=10ms)	I ² t	128	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}	4	A
Average gate power dissipation	P _{G(AV)}	1	W
Peak gate power	P _{GM}	5	W

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

Symbol	Test Condition	Quadrant		Value			Unit
				ACJT1610	ACJT1635	ACJT1650	
I _{GT}	V _D =12V R _L =33Ω	I - II - III	MAX	10	35	50	mA
V _{GT}		I - II - III	MAX	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	20	60	70	mA
		II		35	70	100	
I _H	I _T =100mA		MAX	20	50	60	mA
dV/dt	V _D =2/3V _{DRM} Gate Open T _j =125°C		MIN	1000	1500	2000	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =22.5A tp=380μs	T _j =25°C	1.65	V
I _{DRM}	V _D =V _{DRM} V _R =V _{RRM}	T _j =25°C	10	μA
I _{RRM}		T _j =125°C	4	mA

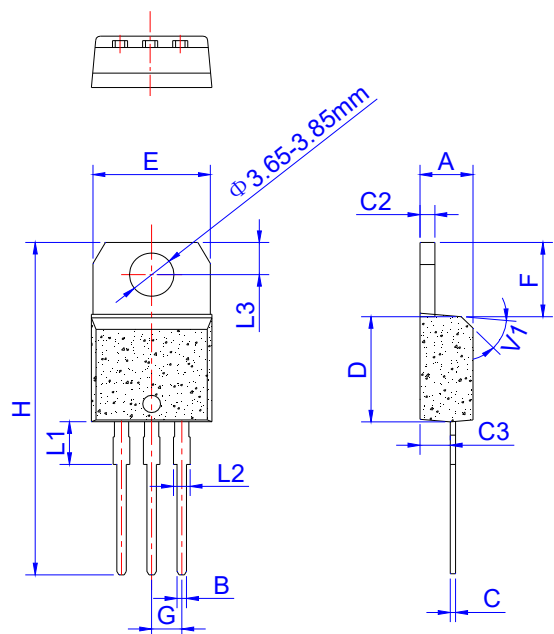
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-220A(Ins)	2.5	°C/W
		TO-220C	1.7	
		TO-220F(Ins)	2.7	

ORDERING INFORMATION

<p>AC</p> <p>AC switch</p> <p>JieJie Microelectronics Co.,Ltd</p>	<p>J</p>	<p>T</p> <p>Triacs</p> <p>$I_{T(RMS)}:16A$</p>	<p>16</p>	<p>35</p> <p>10: $I_{GT1-3} \leq 10mA$ 35: $I_{GT1-3} \leq 35mA$ 50: $I_{GT1-3} \leq 50mA$</p>	<p>-10</p> <p>10: $V_{DRM} / V_{RRM} \geq 1000V$</p>	<p>F</p> <p>A: TO-220A(Ins) F: TO-220F(Ins) C: TO-220C</p>
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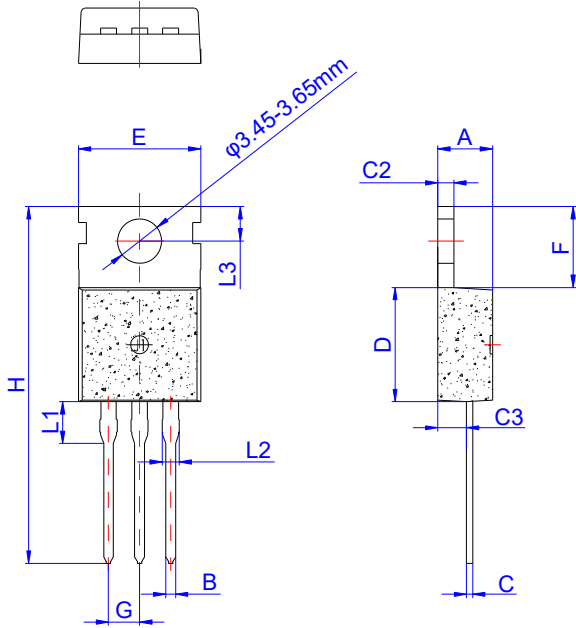
PACKAGE MECHANICAL DATA



TO-220A (Ins)

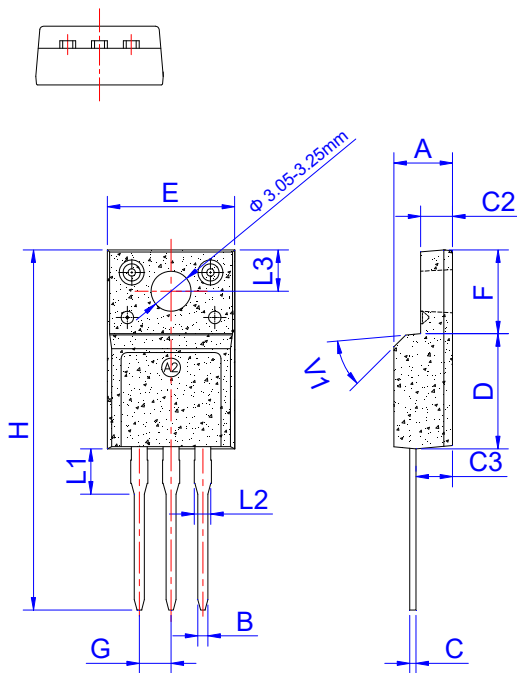
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G	2.40		2.70	0.094		0.106
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



TO-220C

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	1.25		1.35	0.049		0.053
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	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1	2.70		3.30	0.106		0.130
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116



TO-220F (Ins)

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	2.40		2.70	0.094		0.106
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 INFORMATION

PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	5,000
TO-220C	TUBE	50	1,000	5,000
TO-220F	TUBE	50	1,000	5,000

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

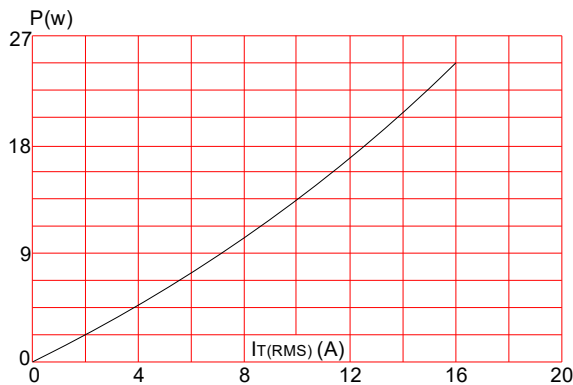


FIG.3: Surge peak on-state current versus number of cycles

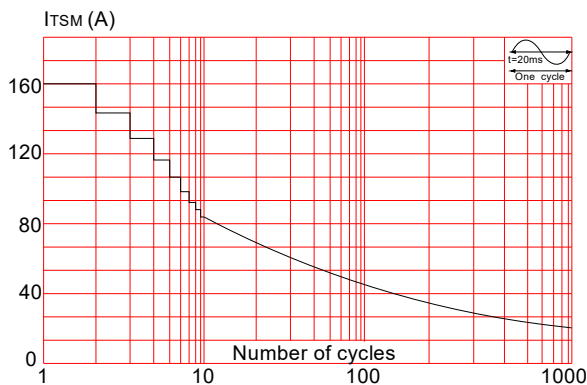


FIG.5: Relative variations of gate trigger current versus junction temperature

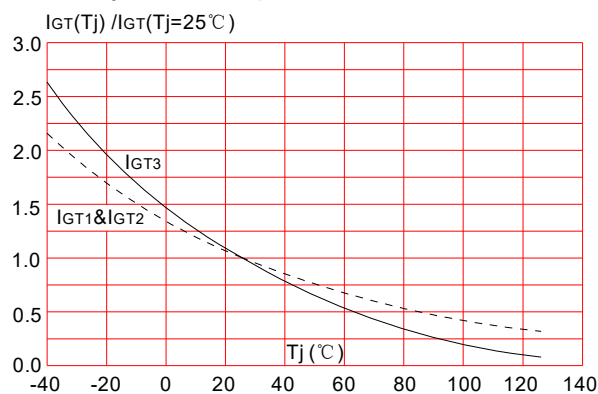


FIG.2: RMS on-state current versus case temperature

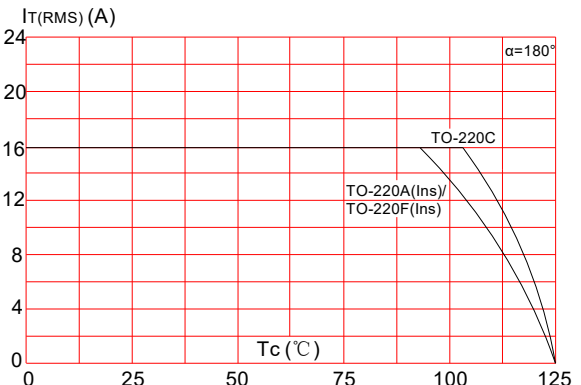


FIG.4: On-state characteristics (maximum values)

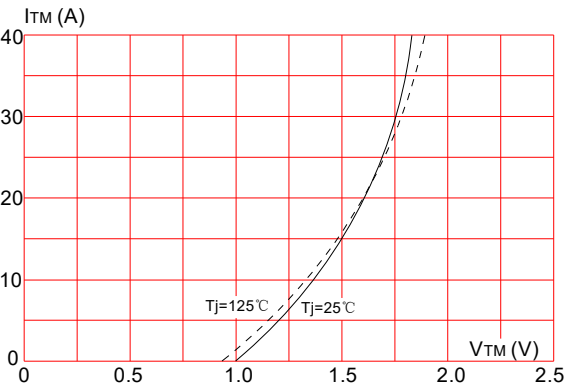
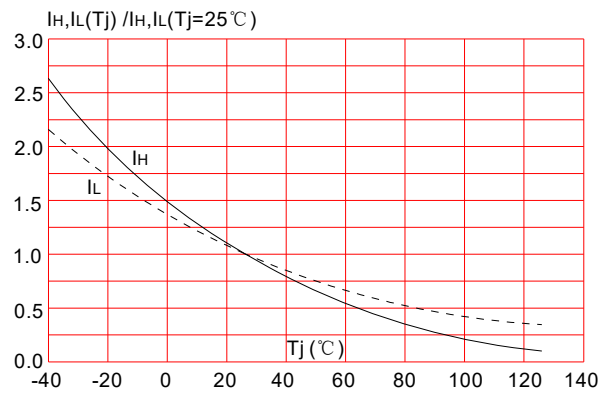


FIG.6: Relative variations of holding current, latching current versus junction temperature



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