



DESCRIPTION:

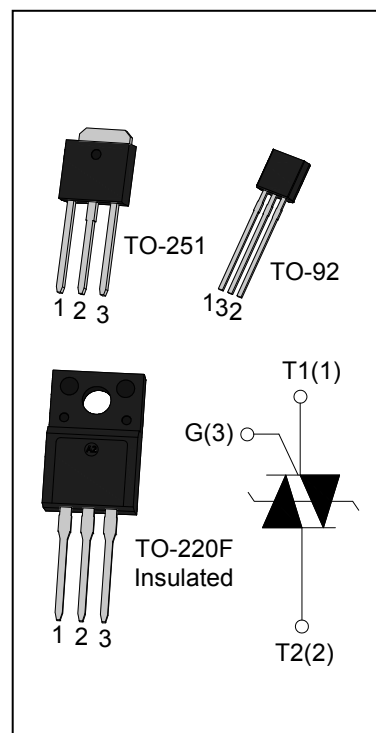
With high ability to withstand the shock loading of large current, ACJT02 series triacs provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on inductive load and serious electromagnetic interference place.

From all three terminals to external heatsink, ACJT02F provides a rated insulation voltage of 2000 V_{RMS}.

(File ref: E252906). All the packages listed are RoHS Compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
I _{T(RMS)}	2	A
V _{DRM} / V _{R_{RM}}	800/1000	V



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°C)	V _{DRM}	800/1000	V	
Repetitive peak reverse voltage(T _j =25°C)	V _{R_{RM}}	800/1000	V	
RMS on-state current	TO-251 (T _C =103°C)	I _{T(RMS)}	2	A
	TO-92 (T _C =90°C)			
	TO-220F(Ins) (T _C =100°C)			
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I _{TSM}	20	A	
I ² t value for fusing (tp=10ms)	I ² t	2	A ² s	
Rate of rise of on-state current (I _G =2×I _{GT})	dI/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
Non repetitive mains peak mains voltage (FIG.7)	V_{PP}	4	kV

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value		Unit
				TW	SW	
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	10	20	mA
		II		15	30	
I_H	$I_T=100\text{mA}$		MAX	10	15	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$		MIN	50	200	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=2.8\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.55	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	10	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	1	mA

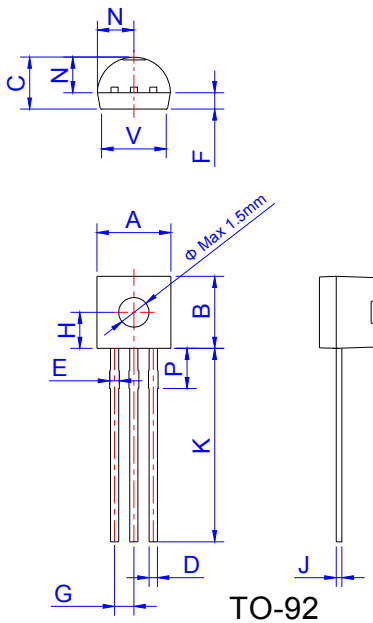
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-251	4.5	$^{\circ}\text{C/W}$
		TO-92	11.2	
		TO-220F(Ins)	7.5	

ORDERING INFORMATION

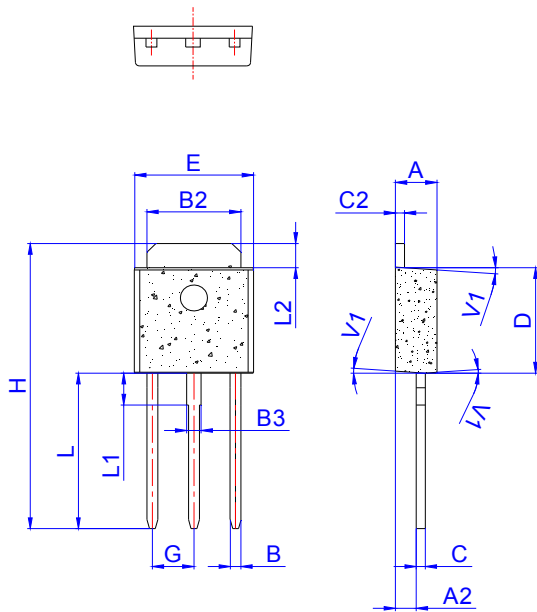
<p>AC AC switch JieJie Microelectronics Co.,Ltd</p>	<p>J</p>	<p>T Triacs $I_{T(RMS)}:2A$</p>	<p>02</p>	<p>U U:TO-92 H:TO-251 F:TO-220F(Ins)</p>	<p>-800</p>	<p>TW TW: $I_{GT1-3} \leq 5mA$ SW: $I_{GT1-3} \leq 10mA$ 800: $V_{DRM} / V_{RRM} \geq 800V$ 1000: $V_{DRM} / V_{RRM} \geq 1000V$</p>
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PACKAGE MECHANICAL DATA



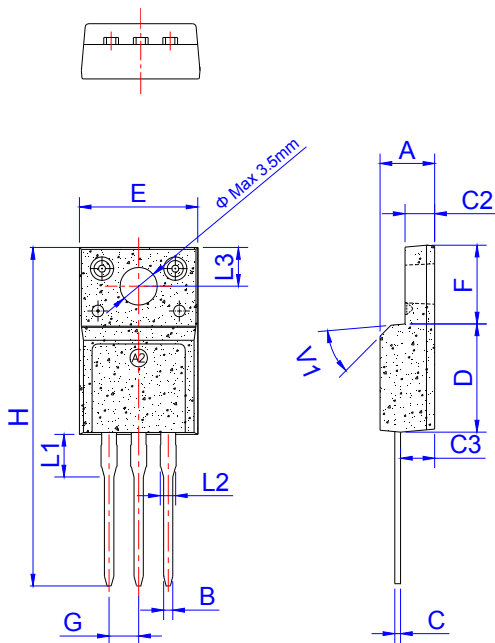
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169

PACKAGE MECHANICAL DATA



TO-251

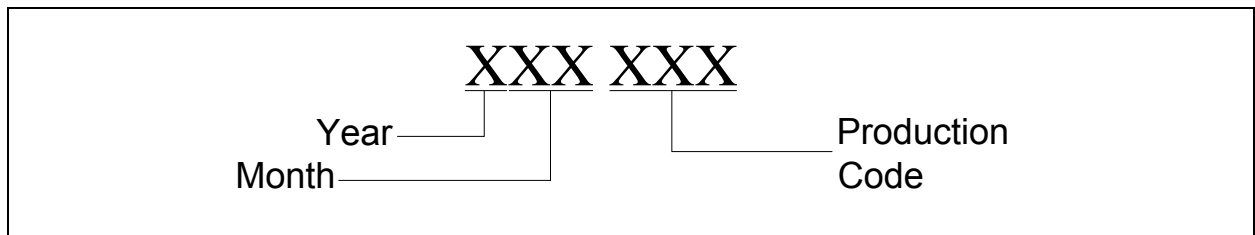
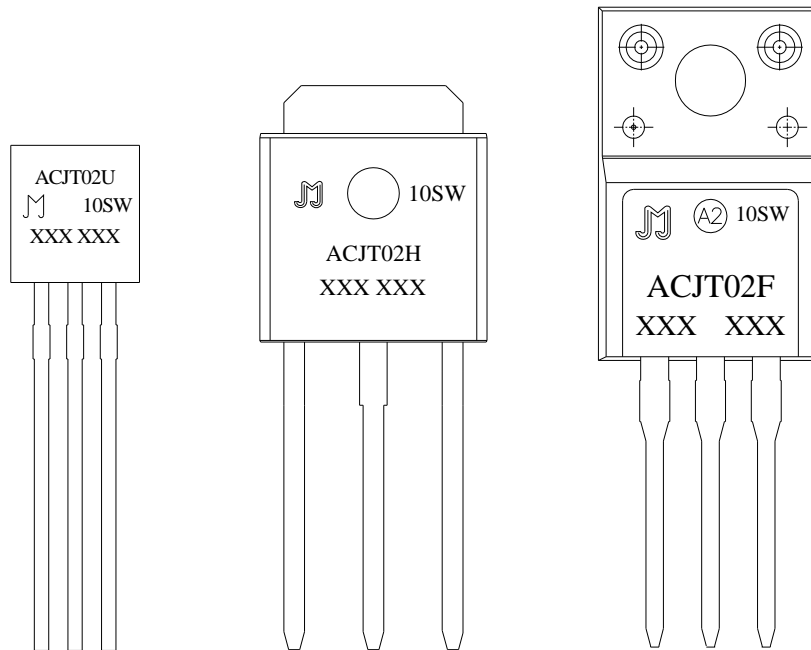
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	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-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		2.54			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°	

MARKING



PACKAGE INFORMATION

PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220F	TUBE	50	1,000	8,000
TO-251	TUBE	80	4,000	32,000
PACKAGE	OUTLINE	BAG (PCS)	INNER BOX (PCS)	PER CARTON
TO-92	Shielding Bag	1,000	10,000	50,000

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

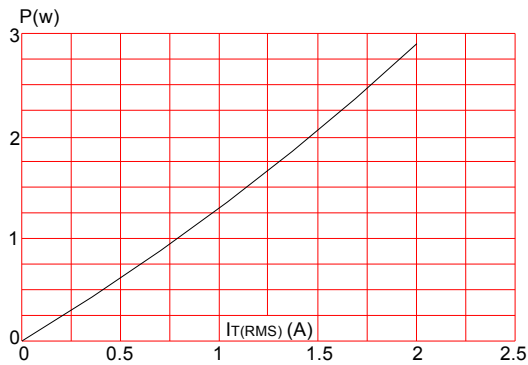


FIG.2: RMS on-state current versus case temperature

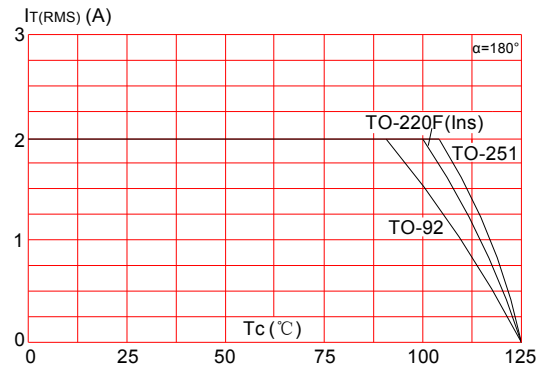


FIG.3: Surge peak on-state current versus number of cycles

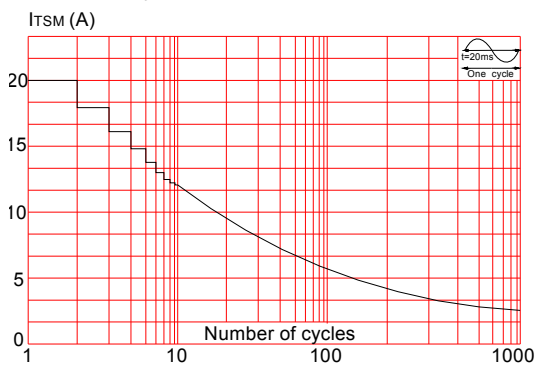


FIG.4: On-state characteristics (maximum values)

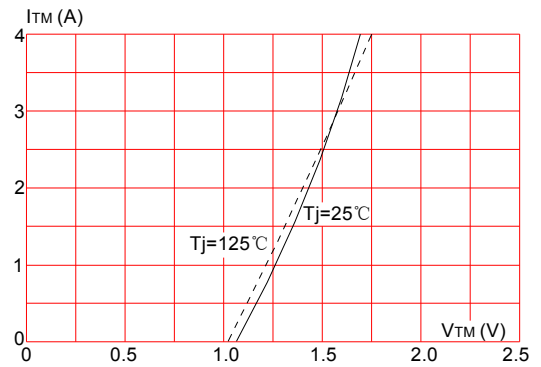


FIG.5: Relative variations of gate trigger current versus junction temperature

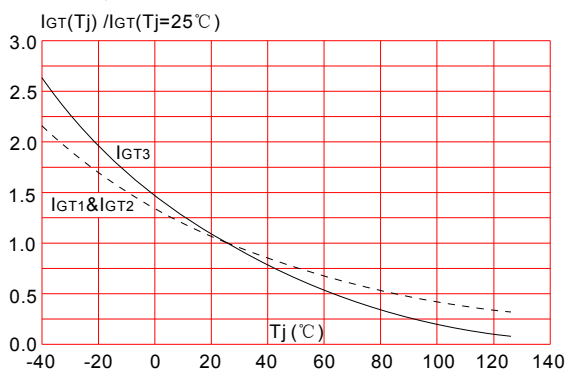


FIG.6: Relative variations of holding current, latching current versus junction temperature

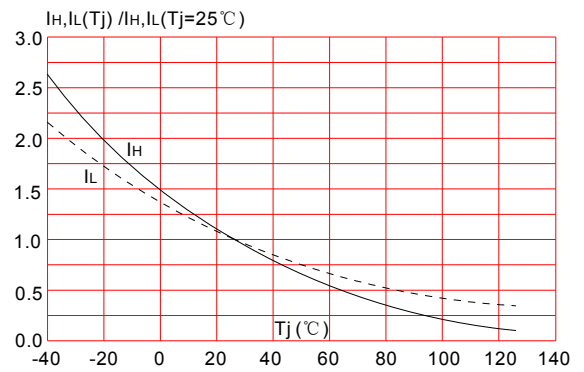
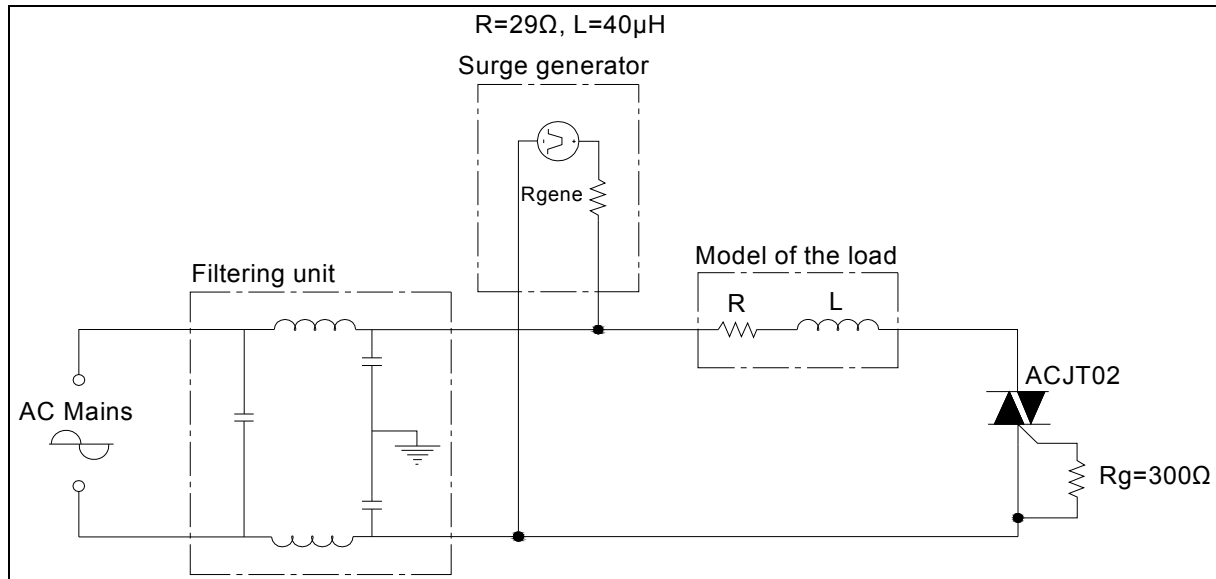


Fig.7: Overvoltage ruggedness test circuit for resistive and inductive loads for IEC 61000-4-5 standards




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