

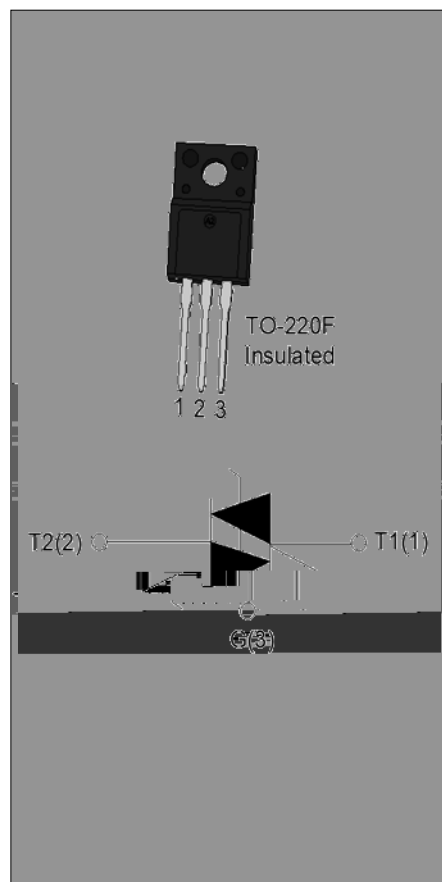


ACJT08F-800CW 8A TRIAC

Rev.A.1.1

DESCRIPTION:

The ACJT08F-800CW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. The ACJT08F-800CW embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. By using an external plastic package, ACJT08F-800CW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	800	V
$I_{GT} / /$	35/35/35	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	V
RMS on-state current ($T_C \leq 94^\circ\text{C}$)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	80	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		88	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	32	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	di/dt	100	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	4	A



Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG. 7)	V_{pp}	2.75	kV

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

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12\text{V}$ $R_L=33\Omega$	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3\text{k}\Omega$	- -	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	-	MAX.	35	mA
				55	
I_H	$I_T=100\text{mA}$		MAX.	30	mA
dV/dt	$V_D=540\text{V}$ Gate Open $T_j=125^\circ\text{C}$		MIN.	2600	V/ μs
$(dI/dt)_c$	$(dV/dt)_c=10\text{V}/\mu\text{s}$, $T_j=125^\circ\text{C}$		MIN.	10	A/ms
t_{on}	$I_G=40\text{mA}$ $I_A=200\text{mA}$ $I_R=20\text{mA}$ $T_j=25^\circ\text{C}$		TYP.	3	μs
t_{off}				30	
V_{CL}	$I_{CL}=0.1\text{mA}$ $t_p=1\text{ms}$		MIN.	850	V

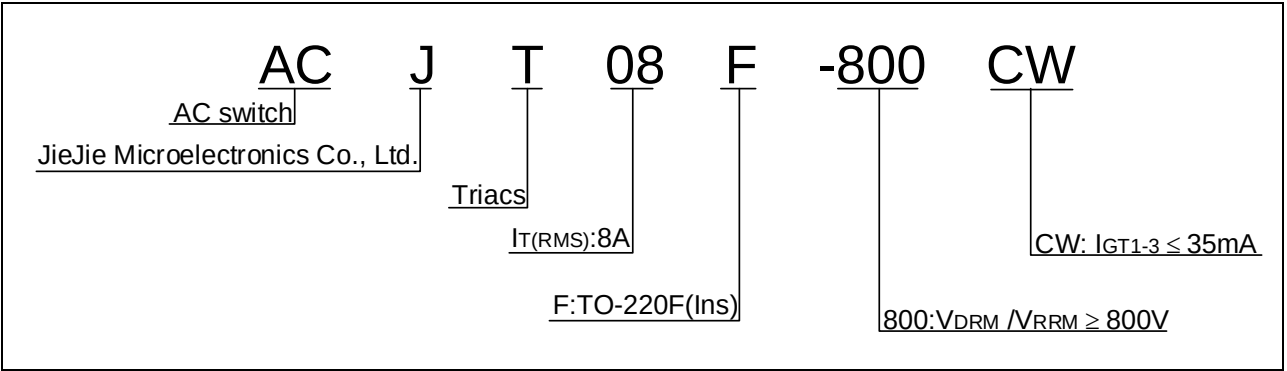
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=10\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.45	V
$V_{TO'}$		$T_j=125^\circ\text{C}$	h 0.78	V
R_D	Dynamic resistance	$T_j=125^\circ\text{C}$	48	$\text{m}\Omega$
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=125^\circ\text{C}$	0.5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
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ORDERING INFORMATION



MARKING

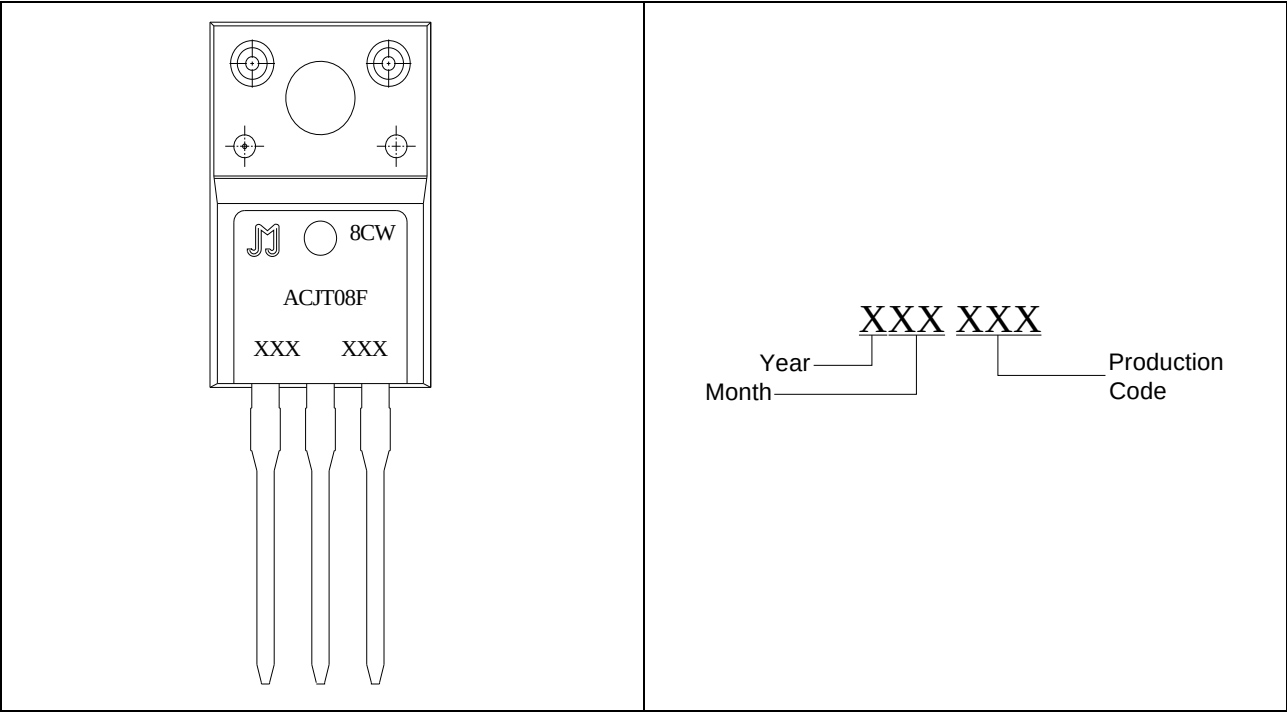




FIG.1: Maximum power dissipation versus RMS on-state current

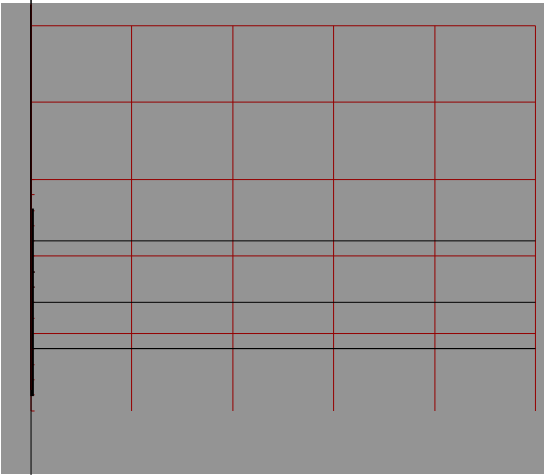


FIG.2: RMS on-state current versus case temperature



ORDERING INFORMATION

Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT08F-800CW	800	35	TO-220F(Ins)	50	Tube

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Document Revision History

Date	Revision	Ch]
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