

**JST30C-1200CW 30A TRIAC**

Rev.A.1.1

The JST30C-1200CW 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. JST30C-1200CW snubberless triac is especially recommended for use on inductive loads. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.

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}	1200	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1200	V
RMS on-state current ($T_C \leq 100^\circ\text{C}$)	$I_{T(RMS)}$	30	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	300	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		330	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	450	A^2s

Critical rate of rise of on

Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	2.5	kV
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(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V$ $R_L=33\Omega$	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k\Omega$	- -	MIN.	0.15	V
I_L	$I_G=1.2I_{GT}$	-	MAX.	70	mA
				80	
I_H	$I_T=500mA$		MAX.	60	mA
dV/dt	$V_D=800V$ Gate Open $T_j=125$		MIN.	1000	V/μs
(dI/dt) _c	(dV/dt) _c =20V/μs $T_j=125$		MIN.	15	A/ms
t_{on}	$I_G=40mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	7	μs
t_{off}				50	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=42A$ $t_p=380\mu s$	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.73	V
R_D	Dynamic resistance	$T_j=125$	25	mΩ
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	10	μA
I_{RRM}		$T_j=125$	4	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	0.6	W
$R_{th(j-a)}$	junction to ambient (AC)	60	W

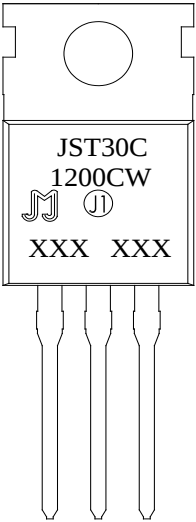
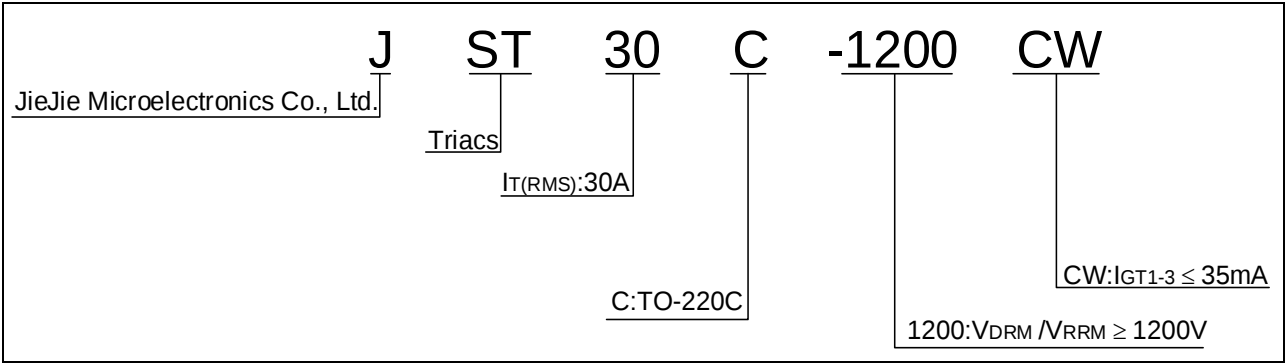


FIG.1: Maximum power dissipation versus RMS on-state current

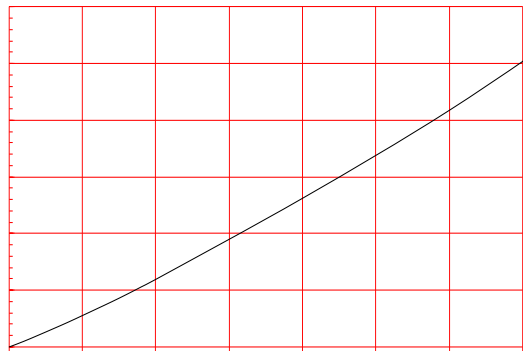
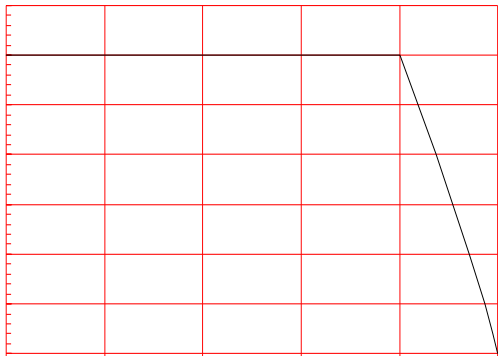


FIG.2: RMS on-state current versus case temperature



Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST30C-1200CW	1200	35	TO-220C	50	Tube

JST30C-1200CW

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