JST12A-1200CW 12A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST12A-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. JST12A-1200CW snubberless triac is especially recommended for use on inductive loads. By using an internal ceramic pad, JST12A-1200CW provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.

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Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	4.5	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =125 R_L =3.3kΩ	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	50	mA
				60	
I_H	I_T =500mA		MAX.	35	mA
dV/dt	V_D=800V Gate Open T_j =125		MIN.	300	V/μs
(dI/dt)c	(dV/dt)c=20V/μs T_j=125		MIN.	10	A/ms
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	3	μs
t_{off}				30	

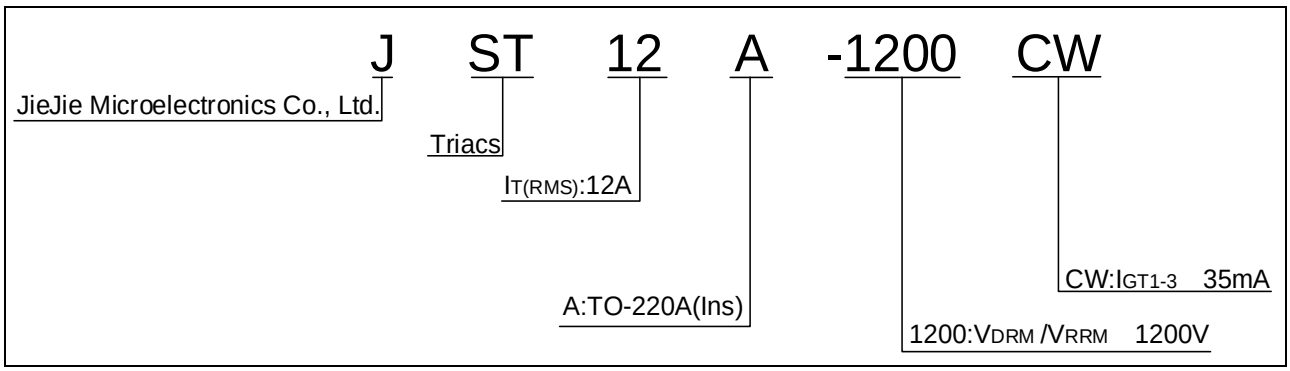
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =17A t_p=380μs	T_j=25	1.5	V
V_{TO}	Threshold voltage	T_j=125	0.78	V
R_D	Dynamic resistance	T_j=125	37	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	10	μA
I_{RRM}		T_j=125	2	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	2.3	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W

ORDERING INFORMATION



MARKING

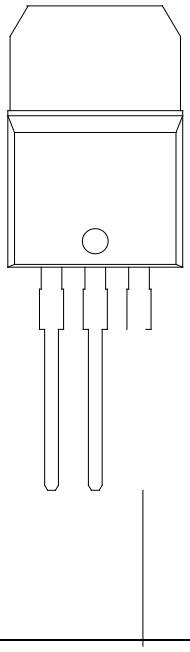


FIG.1: Maximum power dissipation versus RMS on-state current

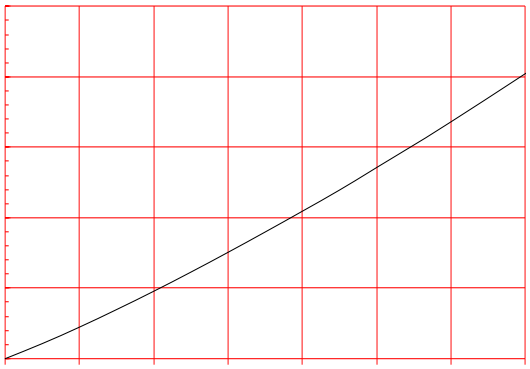


FIG.2: RMS on-state current versus case temperature

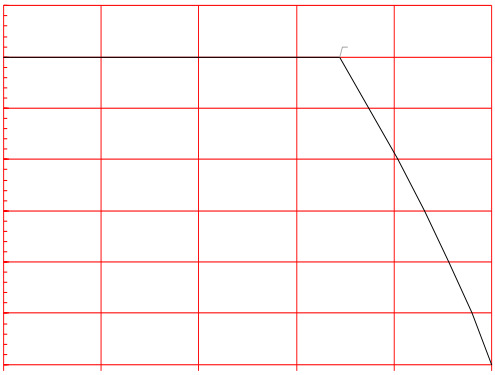


FIG.3: Surge peak on-state current versus number of cycles

FIG.4: On-state characteristics

ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		H I- J			
JST12A-1200CW	1200	35	TO-220A(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.13, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA

