JST12C-1000BW 12A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST12C-1000BW 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. JST12C-1000BW snubberless triac is especially recommended for use on inductive loads. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	12	A
V_{DRM} /V_{RRM}	1000	V

I_{GT}

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)	V_{DRM}	1000	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1000	V
RMS on-state current (T_C 103)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	120	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		132	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	72	A^2s
Critical rate of rise of on-state current (I_G=2× I_{GT} , f=100Hz , T_j=125)	dI/dt	100	A/εs
Peak gate current (t_p=20εs , T_j=125)	I_{GM}	4	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.5	W
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.	50	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	- -			

JST12C-1000BW Jie Jie

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

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

PACKAGE MECHANICAL DATA



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