JST16C-600BW 16A TRIAC

Rev.A.1.0

The JST16C-600BW 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. JST16C-600BW 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)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
RMS on-state current ($T_C \leq$ 100)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	160	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		176	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	128	A^2s
Critical rate of rise of on-state current (I_G=2×I			

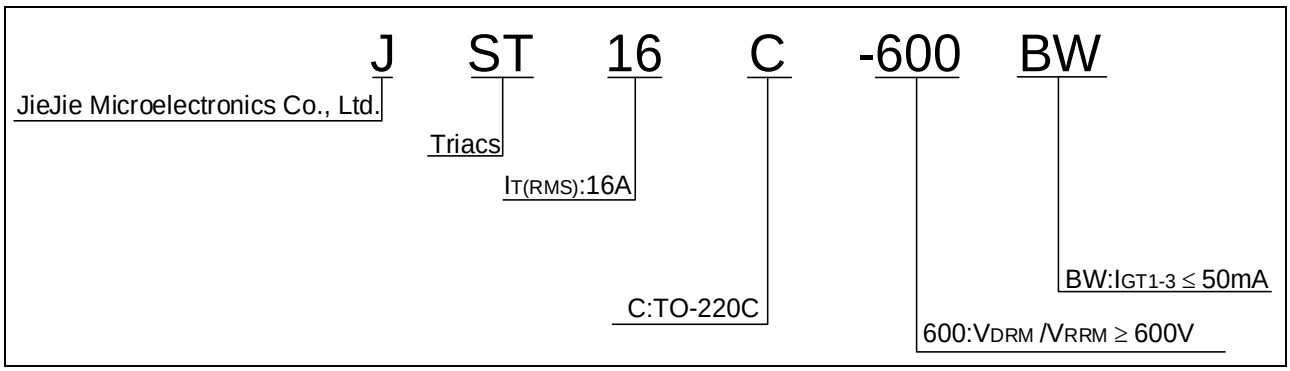
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	4	kV

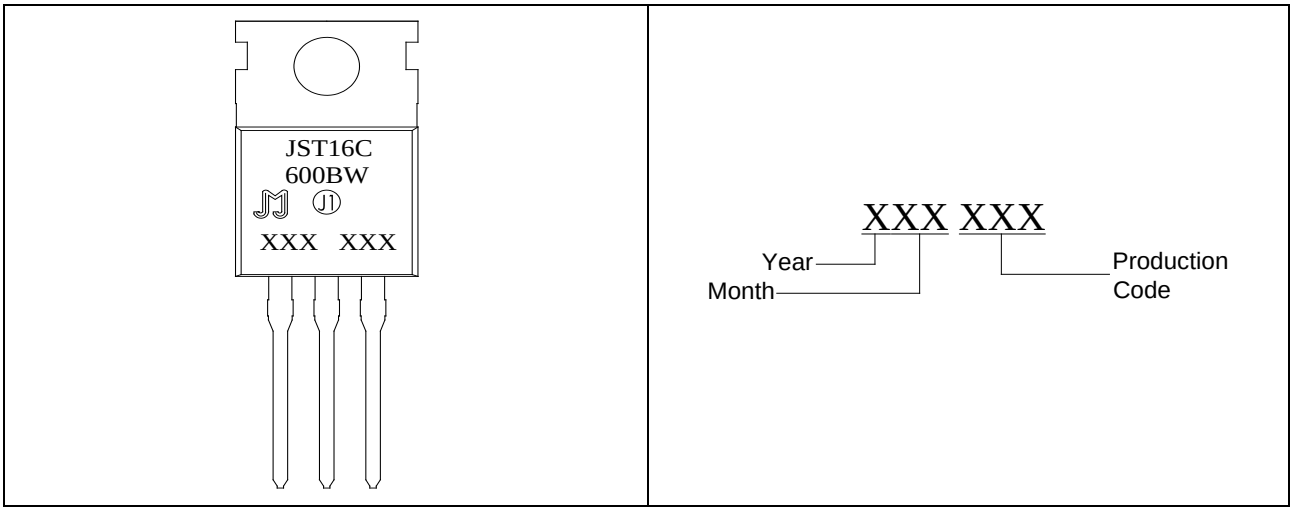
(T_j=25 unless otherwise specified)

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	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	70	mA
				80	
I_H	I_T =500mA		MAX.	50	mA
dV/dt	V_D=400V Gate Open T_j =125		MIN.	2000	V/μs
(dI/dt)c	(dV/dt)c=20V/μs T_j=125		MIN.	18	A/ms
t_{on}	I_G=80mA I_A=200mA I_R=20mA T_j=25		TYP.	10	μs
t_{off}				70	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =22.5A t_p=380μs	T_j=25	1.5	V
V_{TO}	Threshold voltage	T_j=125	0.77	V
R_D	Dynamic resistance	T_j=125	30	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.4	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.1	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W


J
ST
16
C
-600
BW
JieJie Microelectronics Co., Ltd.
Triacs
IT(RMS):16A
C:TO-220C
600:VDRM /VRRM ≥ 600V
BW:IGT1-3 ≤ 50mA


JST16C
600BW
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Year
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Production
Code

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

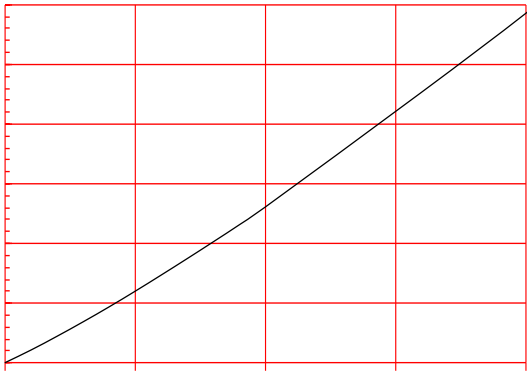


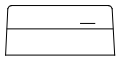
FIG.2: RMS on-state current versus case temperature

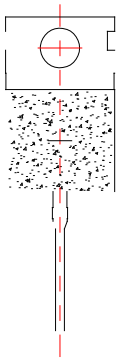
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards

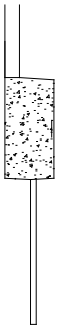
Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST16C-600BW	600	50	TO-220C	50	Tube

Document Revision History

Date	Revision	Changes
Apr.12, 2023	A.1.0	Last update







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