JST16C-600C 16A TRIAC

Rev.A.1.1

The JST16C-600C 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. 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 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_{GT} , f=100Hz , T_j=125)	-	dI/dt	80	A/μs
	-		40	
Peak gate current (t_p=20μs , T_j=125)		I		

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D=12V R_L=33Ω	- -	MAX.	25	mA
				50	
V_{GT}		ALL	MAX.	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	ALL	MIN.	0.2	V
I_L	I_G=1.2I_{GT}	- -	MAX.	40	mA
				80	
I_H	I_T=500mA		MAX.	40	mA
dV/dt	V_D=400V Gate Open T_j=125		MIN.	800	V/μs
(dV/dt)c	(dI/dt)c=7A/ms, T_j=125		MIN.	6	V/μs
t_{on}	I_G=80mA I_A=400mA I_R=40mA 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
$R_{th(j}$	/W69 0 Td ( )Tj EMC2ET 56.4 203.16 0.48 0.4814 re 259.68 302.04 1222 0.484 re 2516.4 250.92		

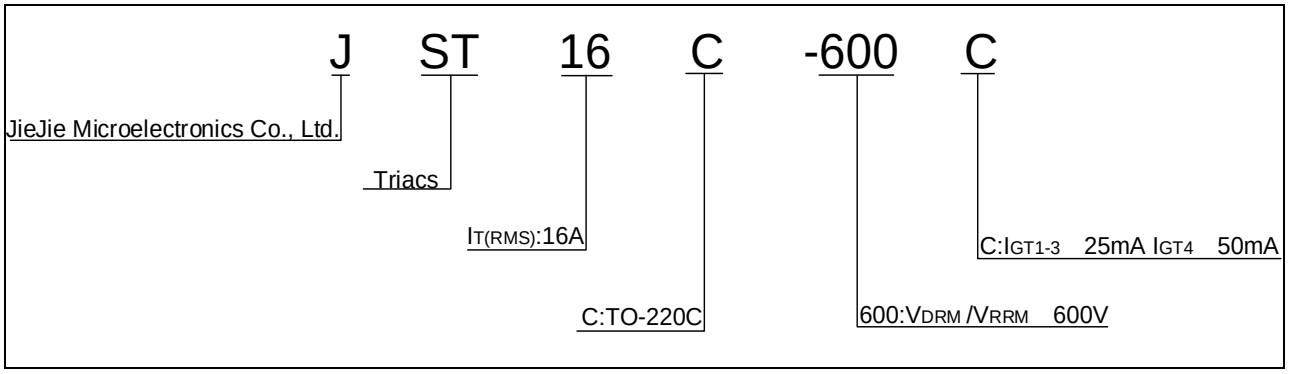
J
ST
16
C
-600
C
JieJie Microelectronics Co., Ltd.
Triacs
IT(RMS):16A
C:TO-220C
600:VDRM /VRRM 600V
C:IGT1-3 25mA IGT4 50mA

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

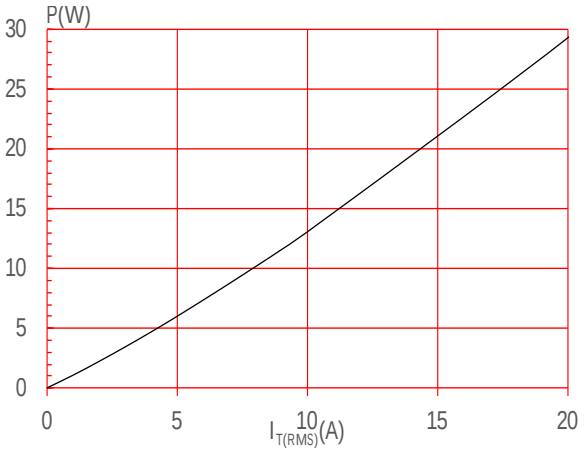

FIG.2: RMS on-state current versus case temperature

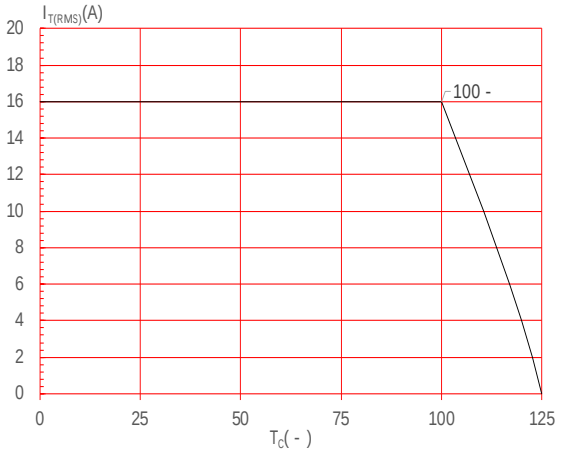

FIG.3: Surge peak on-state current versus number of cycles

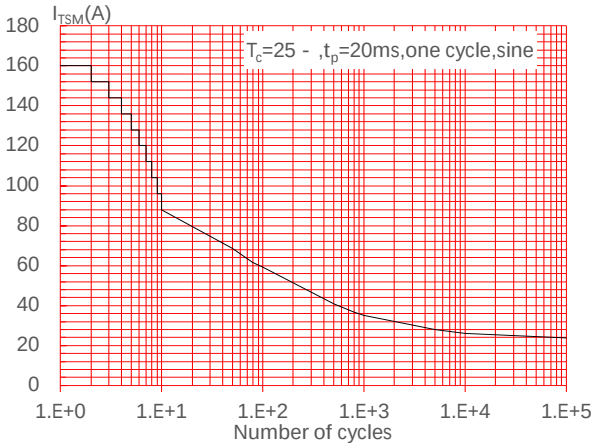

FIG.4: On-state characteristics

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