



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 ($T_j=25^\circ\text{C}$)	V_{DRM}	600	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600	V
RMS on-state current ($T_c=100^\circ\text{C}$)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	160	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		176	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	128	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	-	80	A/ μs
	-	40	
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I		

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I _{GT}	V _D =12V R _L =33	- -	MAX.	25	mA
				50	
V _{GT}		ALL	MAX.	1	V
V _{GD}	V _D =V _{DRM} T _j =125 R _L =3.3k	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	m
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25	5	μA
I _{RDM}		T _j =125	0.4	mA

Symbol	Parameter	Value	Unit
--------	-----------	-------	------

R_{thj}

/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

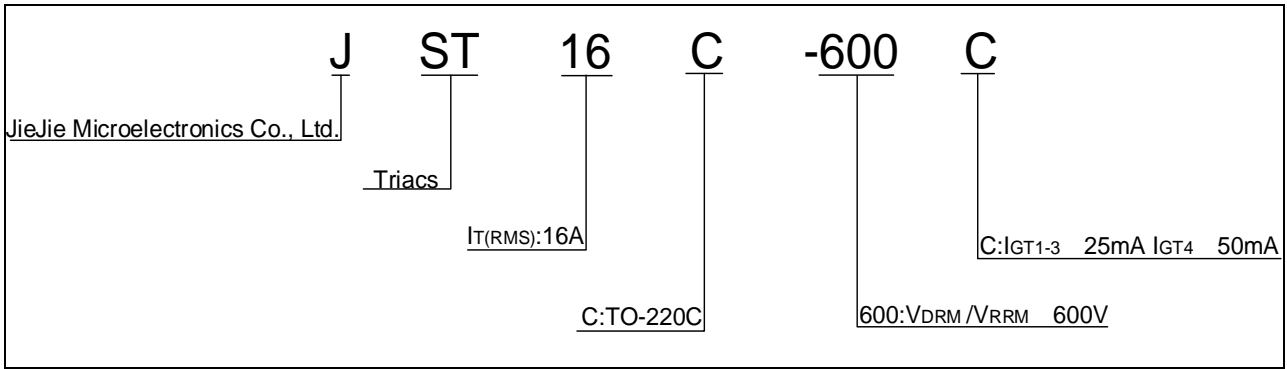


FIG.1: Maximum power dissipation versus RMS on-state current

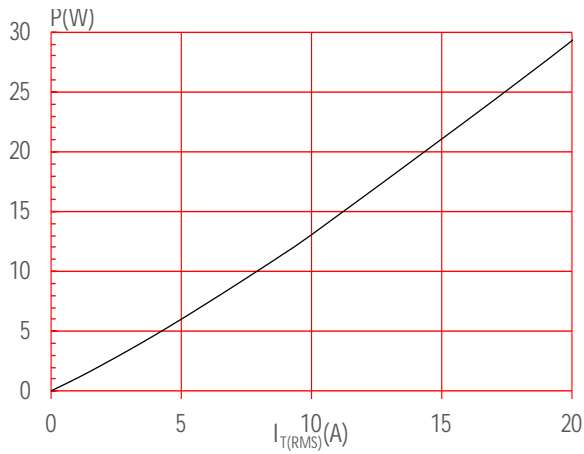


FIG.2: RMS on-state current versus case temperature

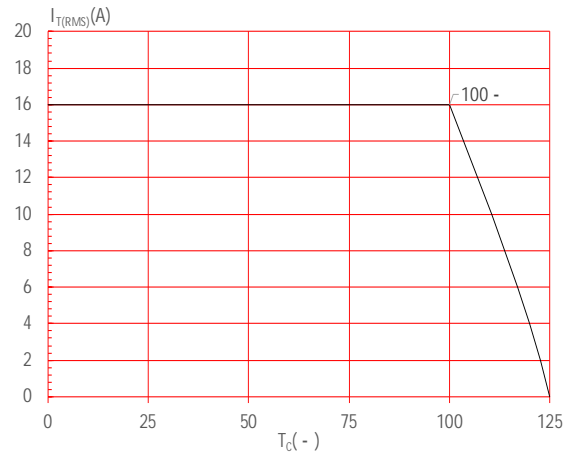


FIG.3: Surge peak on-state current versus number of cycles

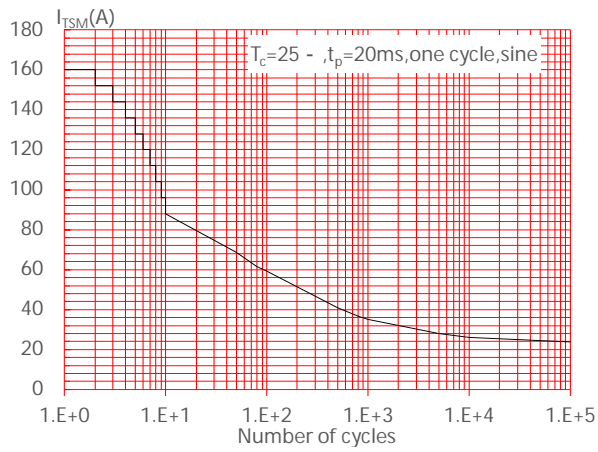


FIG.4: On-state characteristics

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



