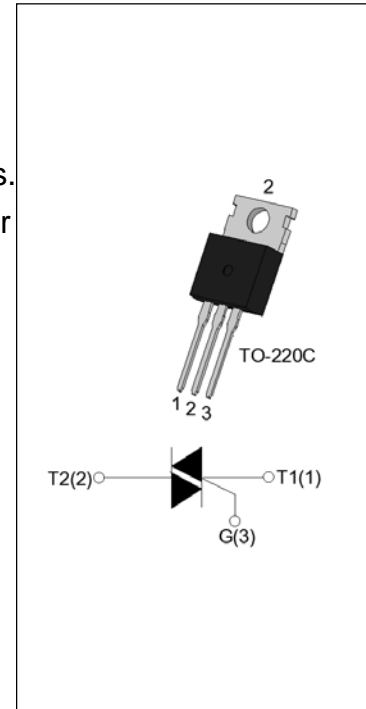




**DESCRIPTION:**

The JST10C-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. JST10C-600BW 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
$I_{T(RMS)}$	10	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT} / /$	50/50/50	mA

**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 ( $T_j=25^\circ C$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	600	V
RMS on-state current ( $T_c$ O106 )	$I_{T(RMS)}$	10	A
Non repetitive surge peak on-state current (full cycle , $t_p=20ms$ , $T_j=25^\circ C$ )	$I_{TSM}$	100	A
Non repetitive surge peak on-state current (full cycle , $t_p=16.6ms$ , $T_j=25^\circ C$ )		110	
$I^2t$ value for fusing ( $t_p=10ms$ , $T_j=25^\circ C$ )	$I^2t$	50	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100Hz$ , $T_j=125^\circ C$ )	$di/dt$	100	A/s
Peak gate current ( $t_p=20\ \mu s$ , $T_j=125^\circ C$ )	$I_{GM}$	4	A
Average gate power dissipation ( $T_j=125^\circ C$ )	$P_{G(AV)}$	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
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## ELECTRICAL CHARACTERISTICS (unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	50	mA
$V_{GT}$		- -	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM} T_j=125$ $R_L=3.3k$	- -	MIN.	0.2	V
$I_L$	$I_G=1.2I_{GT}$	-	MAX.	70	mA
				90	
$I_H$	$I_T=500mA$		MAX.	60	mA
dV/dt	$V_D=400V$ Gate Open $T_j=125$		MIN.	2000	V/s
(dI/dt) <sub>c</sub>	$I_G=90mA$ $I_A=400mA$ $I_R=40mA$ $T_j=125$		MIN.	15	A/ms
$t_{on}$	$I_G=80mA$ $I_A=400mA$ $I_R=40mA$ $T_j=25$		TYP.	5	s
$t_{off}$				50	

## STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=16A$ $t_p=380$ s	$T_j=25$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=125$	0.77	V

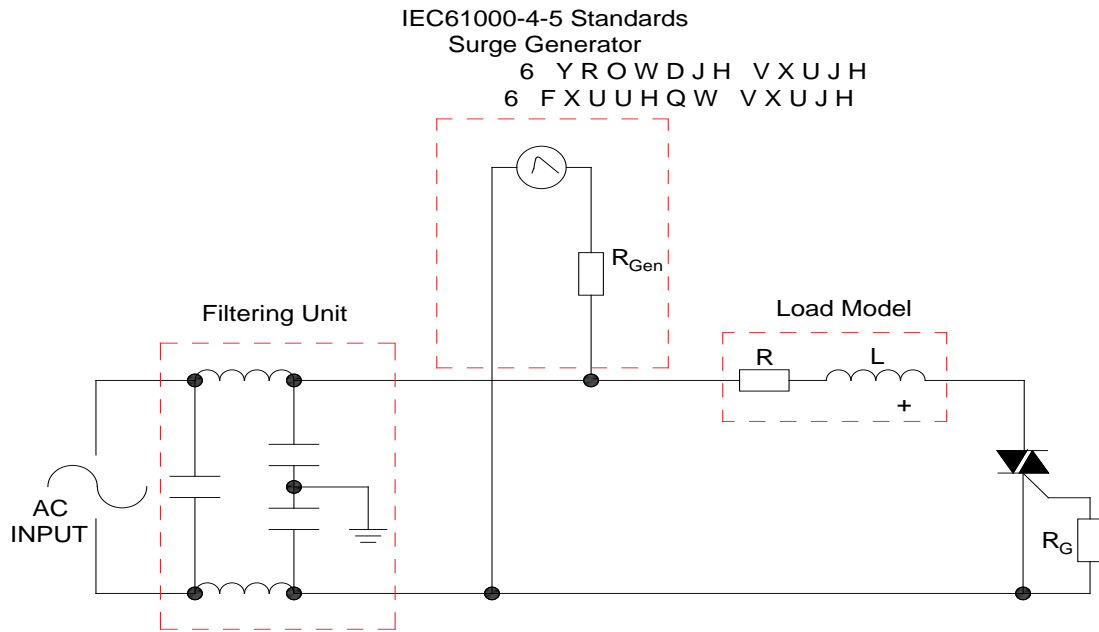


FIG.1: Maximum power dissipation versus RMS on-state current



FIG.2: RMS on-state current versus case temperature 1012141618024681012P (W)IT(R

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

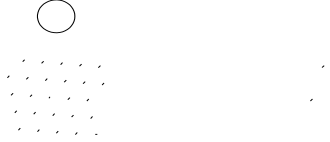


## LEAD FORMING AND SOLDERING

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics



PACKAGE MECHANICAL DATA



JST10C-600BW