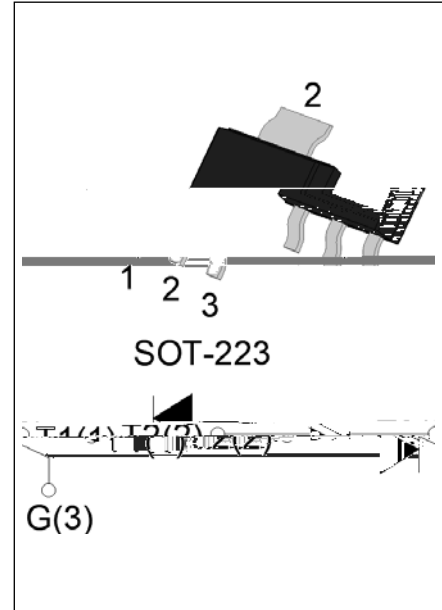




JST130V-600T 0.8A TRIAC

Rev.A.1.1

The JST130V-600T 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. Package SOT-223 is RoHS compliant.



Symbol	Value	Unit
		A
V_{DRM}/V_{RRM}	600	V
		mA

	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 ($T_c = 97^\circ\text{C}$)	$I_{T(RMS)}$	0.8	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)	I_p	10	A
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)			s^2
Critical rate of rise of on-state current ($I_G=2\text{mA}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	di/dt	30	A/ μs
		20	
Peak gate current ($t = 20\mu\text{s}$, $T = 125^\circ\text{C}$)	I_G	1	A
Average gate power dissipation ($T_j=25^\circ\text{C}$)	$P_{GM(AV)}$	0.1	W
Peak gate power	P_{GM}	5	W
Peak pulse voltage	V_{pp}	2.5	kV

(FIG.8)

($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V R_L=33$	ALL	MAX.	5	mA
V_{GT}		ALL	MAX.	1.3	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.	5	mA
				15	
I_H	$I_T=50mA$		MAX.	5	mA
dV/dt	$V_D=400V$ Gate Open $T_j=110$		MIN.	30	V/ μs
(dV/dt)c	(dI/dt)c=0.3A/ms, $T_j=110$		MIN.	1	V/ μs
t_{on}	$I_G=10mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	2	μs
t_{off}				20	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=1A t_p=380\mu s$	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	1.01	V
R_D	Dynamic resistance	$T_j=125$	316	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	0.2	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	25	μW
$R_{th(j-a)}$	junction to ambient (AC)	120	μW

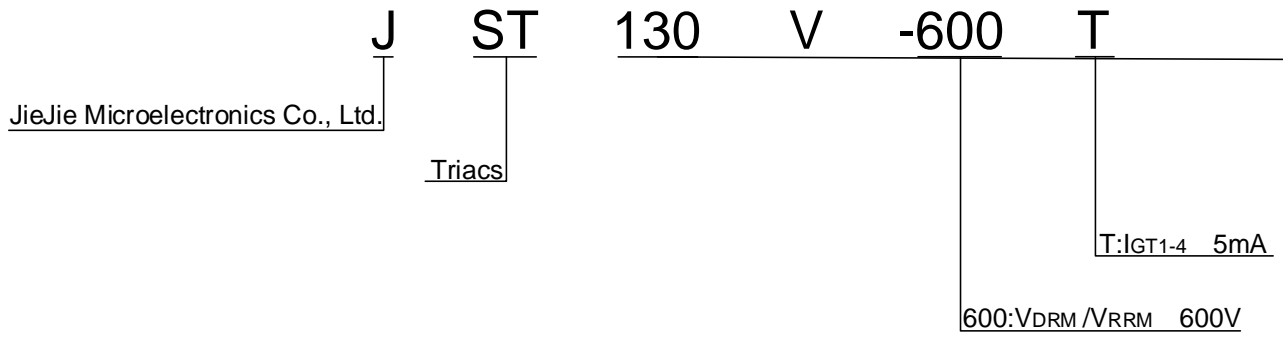


FIG.1: Maximum power dissipation versus RMS on-state current

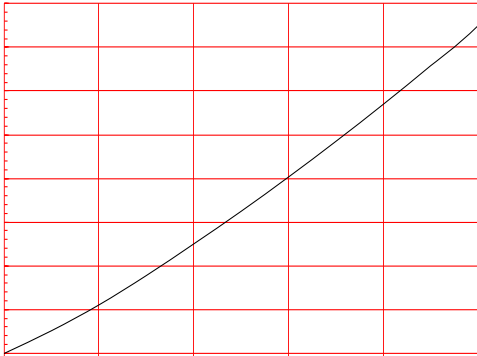
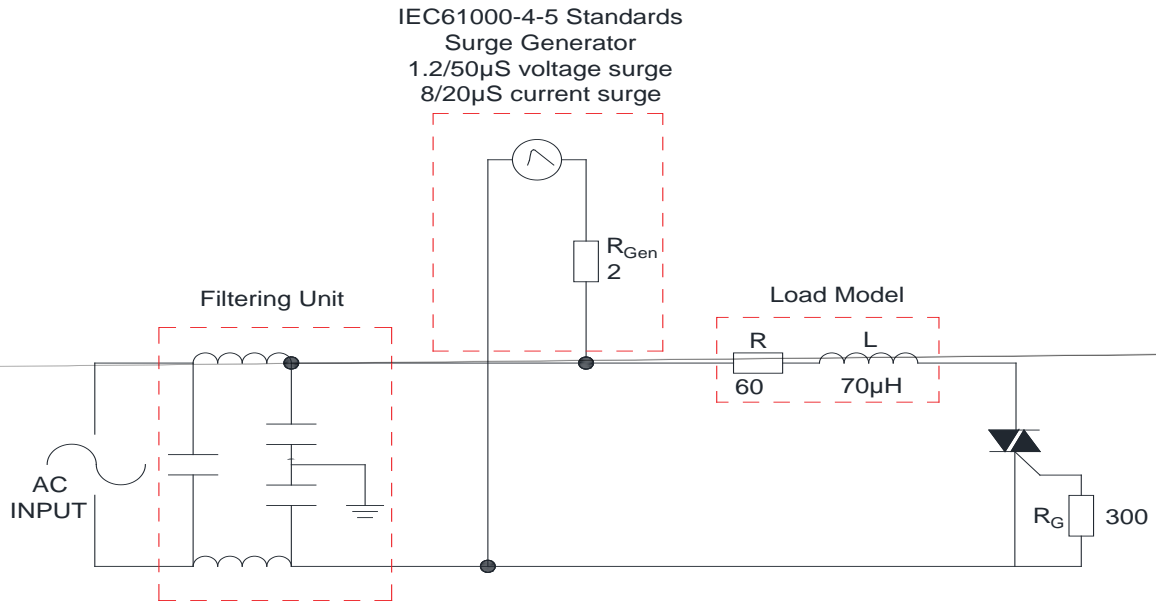


FIG.2: RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature



FIG.8 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
		- - -			
JST130V-600T	600	5	SOT-223	4,000	Tape & Reel

Document Revision History

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	MaW85 2

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