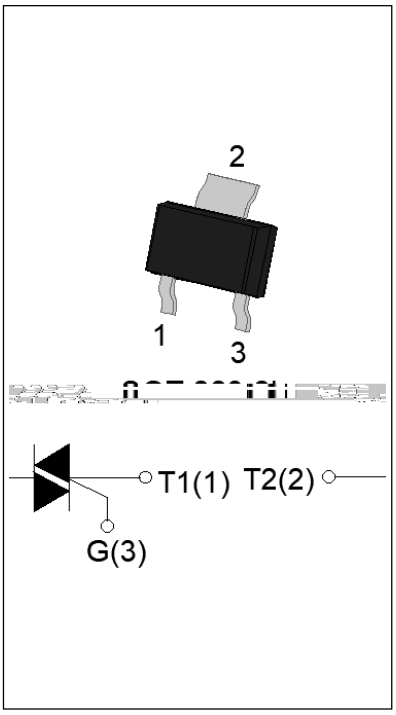
JST008W-600CW 0.8A TRIAC

Rev.A.1.1

The JST008W-600CW 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. JST008W-600CW snubberless triac is especially recommended for use on inductive loads. Package SOT-223-2L is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM} /V_{RRM}	600	V
I_{GT} / /	35/35/35	mA

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)	$I_{T(RMS)}$	0.8	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	10	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		11	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	0.5	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	80	A/εs
Peak gate current (t_p=20εs , T_j=125)	I_{GM}	1	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	5	W

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	1	kV

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33q	- -	MAX.	35	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =125 R_L =3.3kq	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	40	mA
				50	
I_H	I_T =100mA		MAX.	30	mA
dV/dt	V_D=400V Gate Open T_j =125		MIN.	1200	V/εs
(dI/dt)c	(dV/dt)c=20 V/εs, T_j=125		MIN.	3	A/ms
t_{on}	I_G=10mA I_A=200mA I_R=20mA T_j=25		TYP.	5	εs
t_{off}				50	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =1A t_p=380εs	T_j=25	1.5	V
V_{TO}	Threshold voltage	T_j=125	0.826	V
R_D	Dynamic resistance	T_j=125	428	mq
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	εA
I_{RRM}		T_j=125	0.1	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	22	/W
$R_{th(j-a)}$	junction to ambient (AC)	120	/W

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

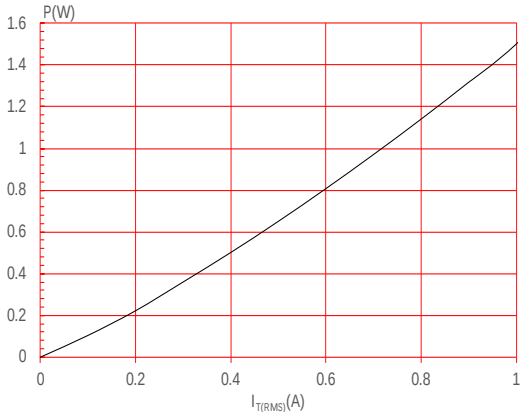


FIG.2: RMS on-state current versus case temperature

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

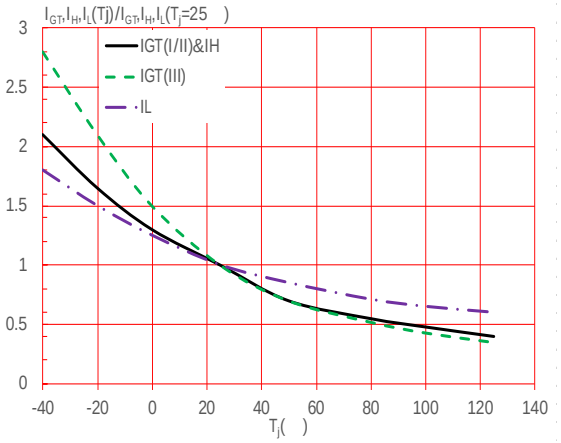
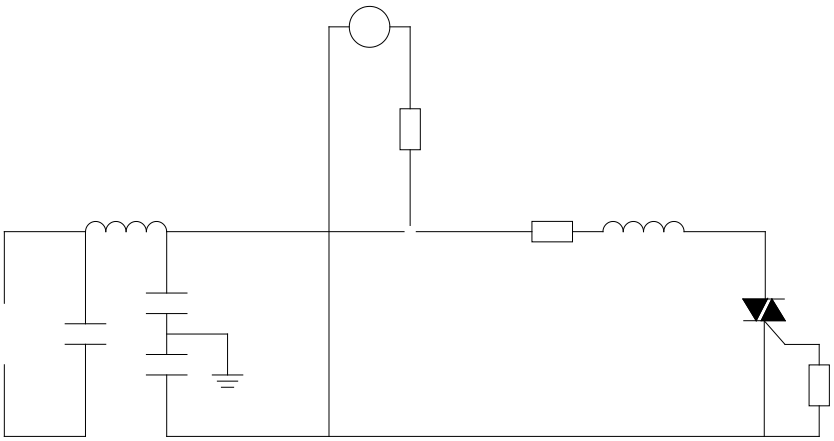


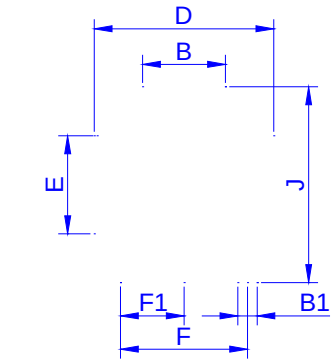
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards

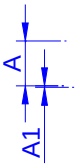


Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST008W-600CW	600	35	SOT-223-2L	4,000	Tape & Reel

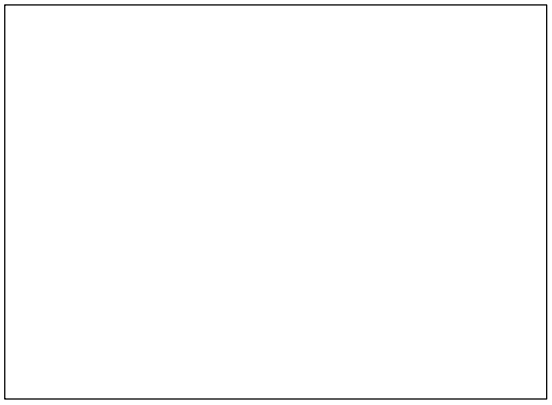
Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.24, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA


D
B
E
J
F1
B1
F


A
A1





	Dimensions	
Ref.	Millimeters	Inches

Ms(E)]TJ 0 Tc 0 -2ic