

**JST08C-800SW 8A TRIAC**

Rev.A.1.1

DESCRIPTION:

The JST08C-800SW 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. JST08C-800SW snubberless triac is especially recommended for use on inductive loads. It can be driven directly through the MCU I/O port. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.

MAIN FEATURES**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 ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	V
RMS on-state current ($T_c=108^\circ\text{C}$)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	80	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		88	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	32	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	di/dt	50	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	4	A
Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.5	W

Peak gate power	P_{GM}	10	W
Peak pulse voltage ($T_j=25$; non-repetitive,off-state;FIG.7)	V_{pp}	1.5	kV

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V R_L=33$	- -	MAX.	10	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.	25	mA
				30	
I_H	$I_T=100mA$		MAX.	15	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	400	V/ μs
(dI/dt)c	(dV/dt)c=10V/ μs , $T_j=125$		MIN.	3	A/ms
t_{on}	$I_G=20mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	2.5	μs
t_{off}				25	

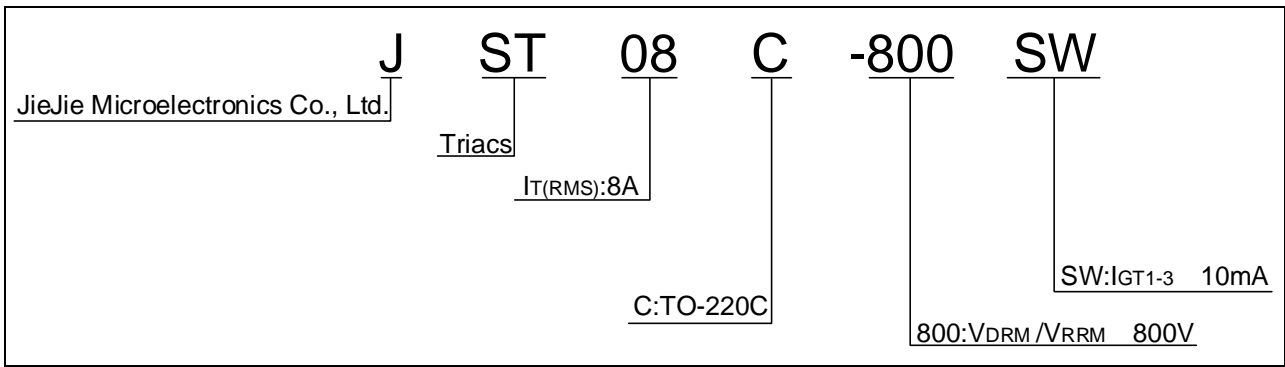
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=11A t_p=380\mu s$	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.8	V
R_D	Dynamic resistance	$T_j=125$	44	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	0.35	mA

THERMAL RESISTANCES

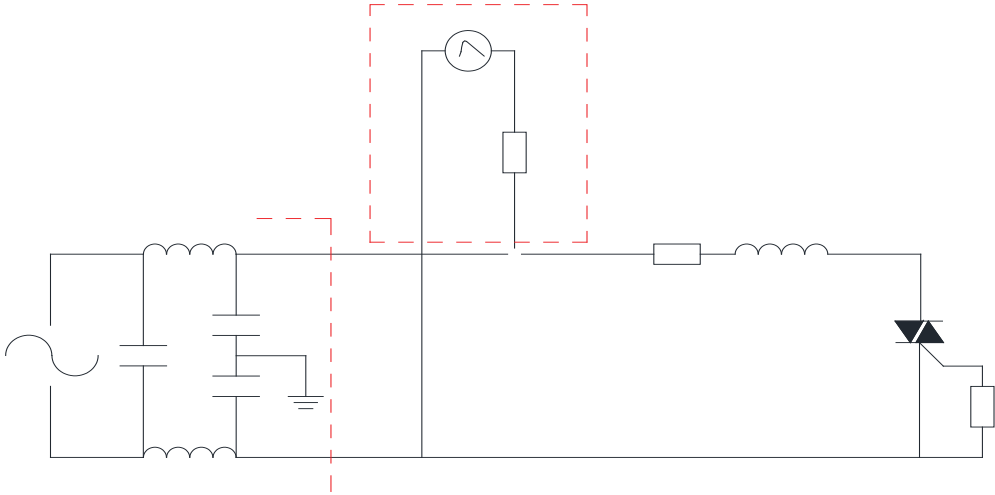
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.5	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W

ORDERING INFORMATION

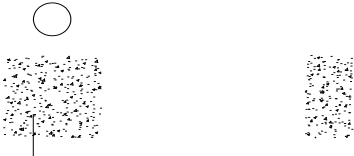


MARKING

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



PACKAGE MECHANICAL DATA



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