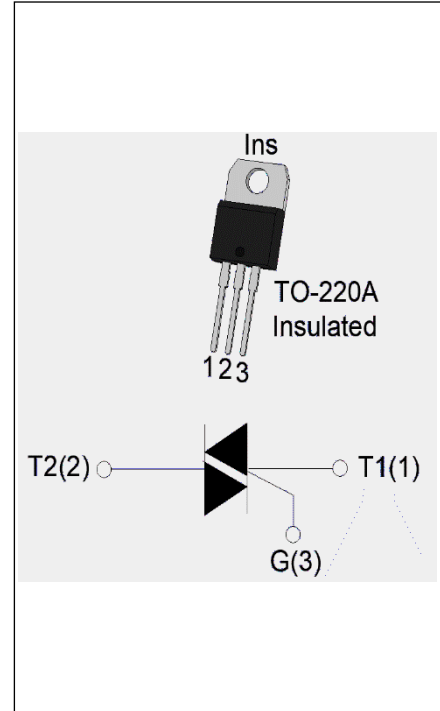




JST24A-800C 25A TRIAC

Rev.A.1.0

The JST24A-800C 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. By using an internal ceramic pad, JST24A-800C provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	25	A
V_{DRM}/V_{RRM}	800	V
$I_{GT\ I/II/III/IV}$	25/25/25/50	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-125	°C
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 ($T_c \leq 79^\circ\text{C}$)	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (full cycle , $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	250	A
Non repetitive surge peak on-state current (full cycle , $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		275	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	340	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	I - II	80	$\text{A}/\mu\text{s}$
	III-IV	40	
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 ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG.7)	V_{pp}	2	kV
--	----------	---	----

($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12\text{V } R_L=33$	I - II - III	MAX.	25	mA
		IV		50	
V_{GT}		ALL	MAX.	1	V
V_{GD}	$V_D=V_{DRM} T_j=125^\circ\text{C}$ $R_L=3.3\text{K}$	ALL	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX.	70	mA
		II		100	
I_H	$I_T=500\text{mA}$		MAX.	60	mA
dV/dt	$V_D=540\text{V}$ Gate Open $T_j=125^\circ\text{C}$		MIN.	500	V/ μs
(dV/dt) _c	(dI/dt) _c =13.3A/ms, $T_j=125^\circ\text{C}$		MIN.	6	V/ μs
t_{on}	$I_G=80\text{mA } I_A=400\text{mA } I_R=40\text{mA}$ $T_j=25^\circ\text{C}$		TYP.	3	μs
t_{off}				50	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=35\text{A } t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
V_{TO}	Threshold voltage	$T_j=125^\circ\text{C}$	0.75	V
R_D	Dynamic resistance	$T_j=125^\circ\text{C}$	18	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=125^\circ\text{C}$	2	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.3	$^\circ\text{C/W}$
$R_{th(j-a)}$	junction to ambient (AC)	60	$^\circ\text{C/W}$

J ST 24 A -800 C

Jie _____

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

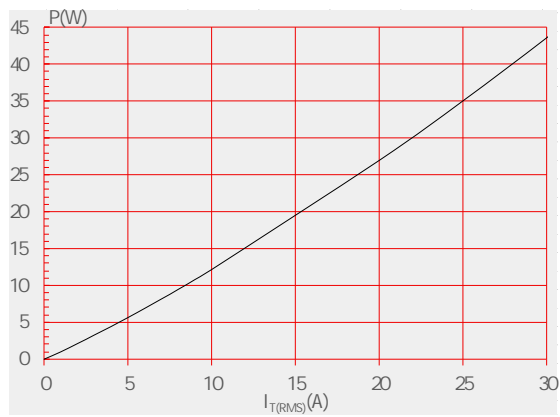


FIG.3: Surge peak on-state current versus number of cycles

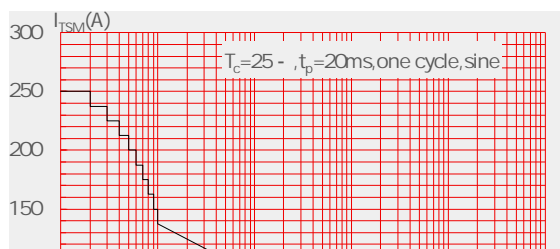


FIG.2: RMS on-state current versus case temperature

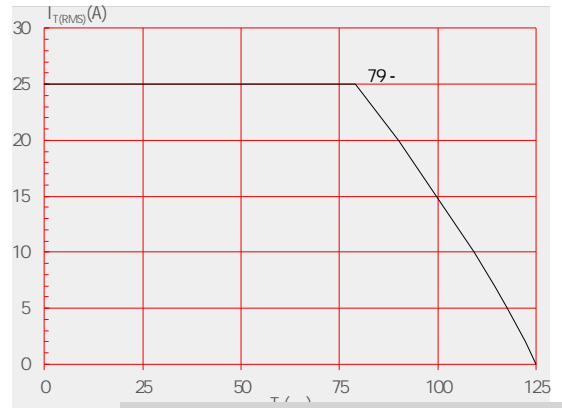


FIG.4: C

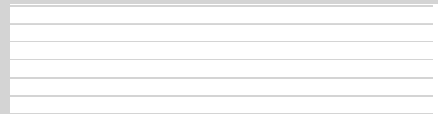
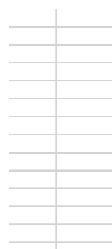
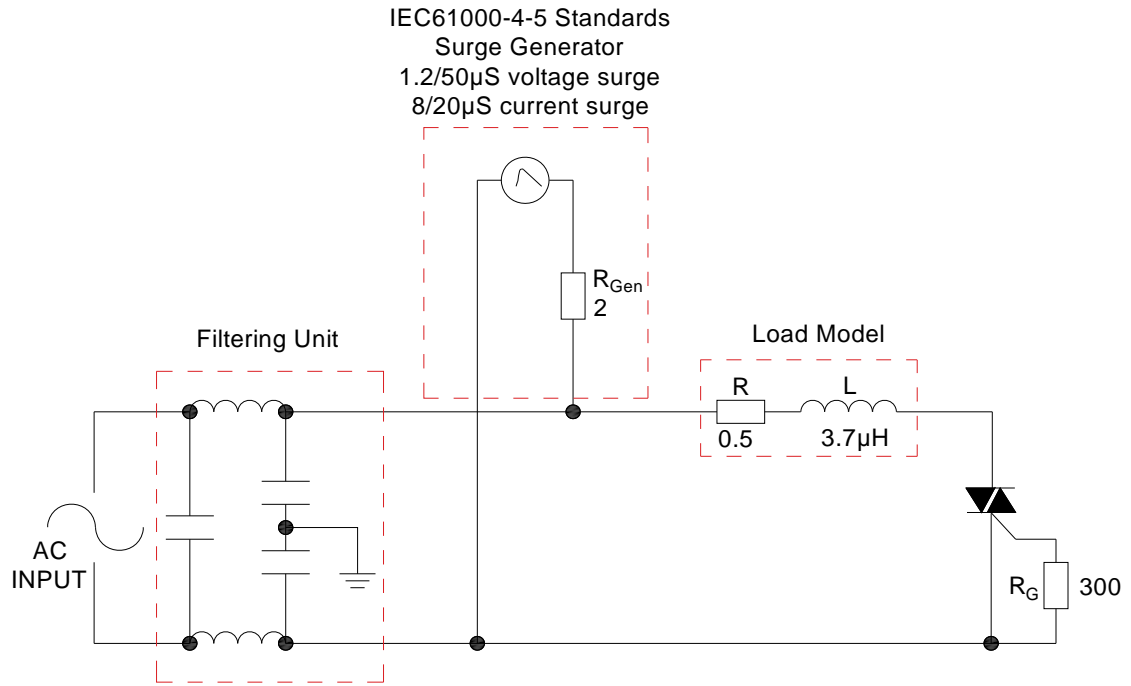


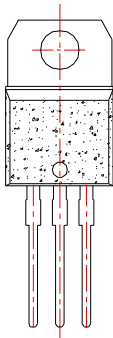
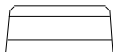
FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		H- I- J	K			
JST24A-800C	800	25	50	TO-220A(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is for reference only.