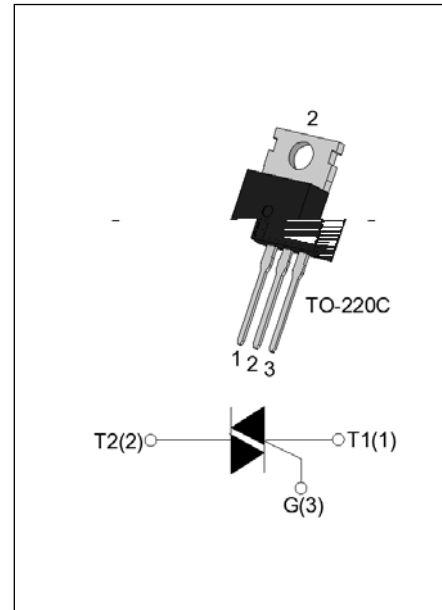


The JST139C-800E triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM}/V_{RRM}	800	V
$I_{GT} / / /$	10/10/10/25	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 ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	V
RMS on-state current ($T_c = 95^\circ\text{C}$)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	140	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		154	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	98	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	-	80	$\text{A}/\mu\text{s}$
	-	50	
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}	4.5	kV

(T_j=25 unless otherwise specified)

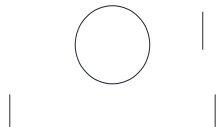
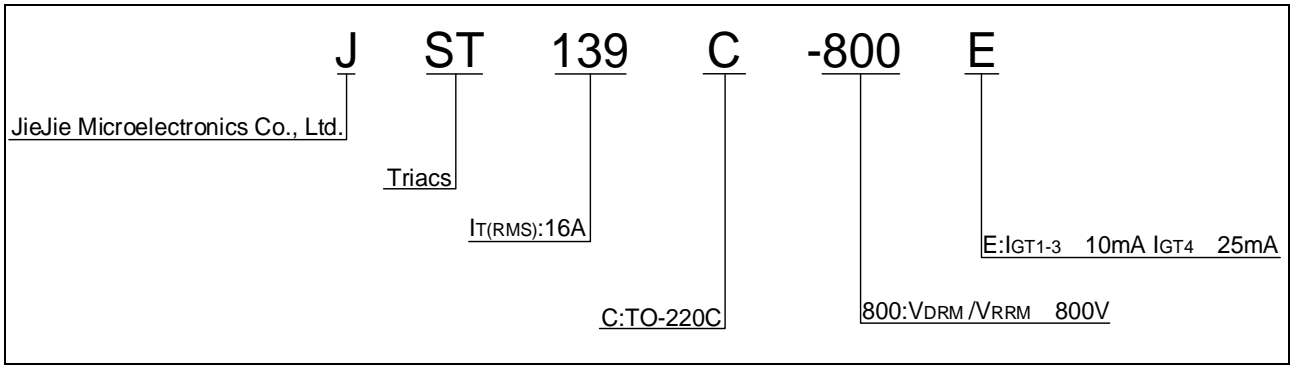
Symbol	Test Condition	Quadrant		Value	Unit
I _{GT}	V _D =12V R _L =33	- -	MAX.	10	mA
				25	
V _{GT}		ALL	MAX.	1	V
V _{GD}	V _D =V _{DRM} T _j =125 R _L =3.3K	ALL	MIN.	0.2	V
I _L	I _G =1.2I _{GT}	- -	MAX.	25	mA
				35	
I _H	I _T =500mA		MAX.	25	mA
dV/dt	V _D =540V Gate Open T _j =125		MIN.	100	V/μs
(dV/dt) _c	(dI/dt) _c =7.2A/ms, T _j =110		MIN.		V/μs
t _{on}	I _G =40mA I _A =200mA I _R =20mA		TYP.	50	μs
t _{off}	T _j =25				

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Symbol	Parameter	Value(MAX.)	Unit
V _{TM}	I _{TM} =20A t _p =380μs T _j =25	1.5	p V

V

j



/

ssipation versus RMS

FIG.2: RMS of
temperature

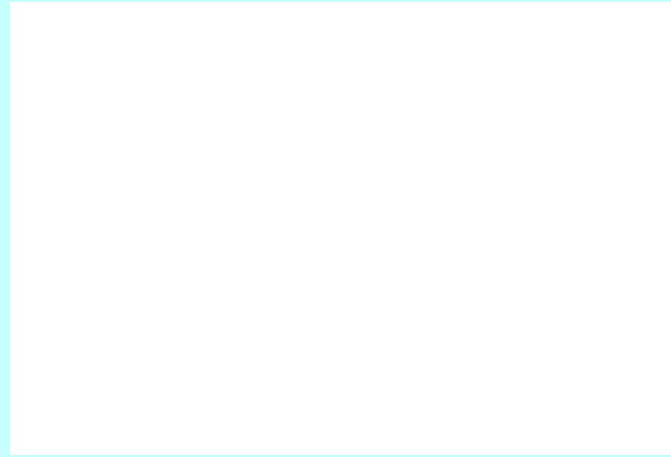
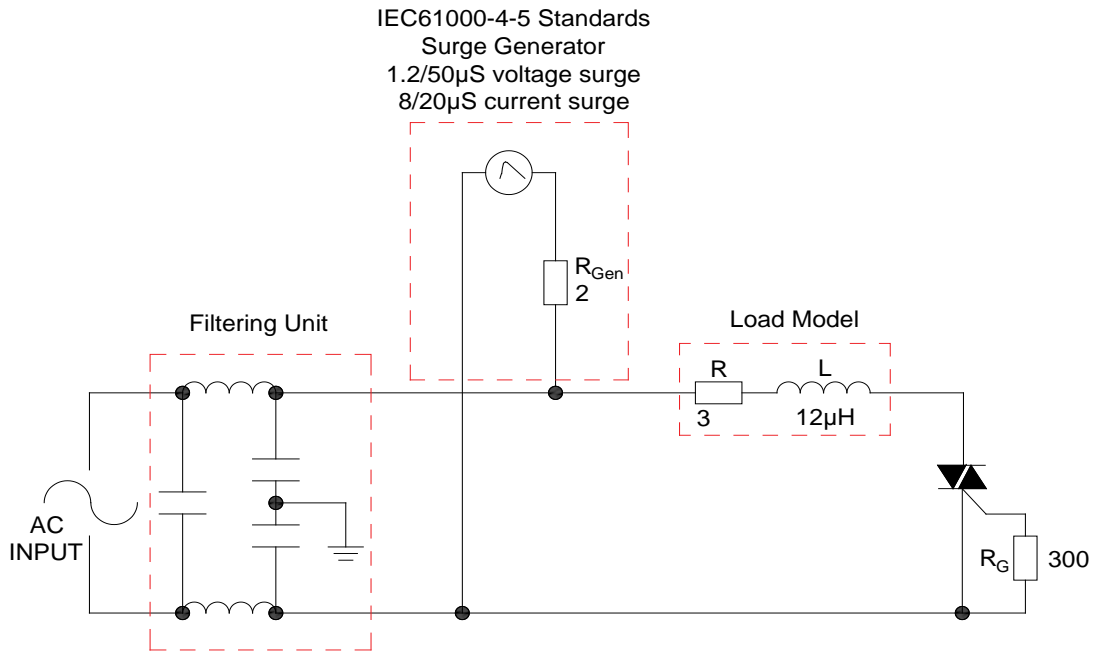


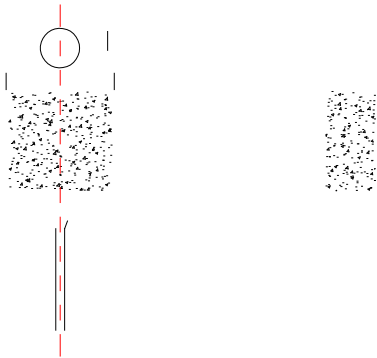
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST139C-800E	800	10	25	TO-220C	50	Tube

Document Revision History

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



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