JST138F-800E 12A TRIAC

Rev.A.1.0

The JST138F-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. By using an external plastic package, JST138F-800E provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.

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=26 (v)15.8 9e 0 128<9am -8 (65)Tj EMC /P <</MCID 18 >>1

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	3.5	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 s
(dV/dt)c	(dI/dt)c=5A/ms, T_j=110		MIN.	5	
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	3	s
t_{off}				30	

Symbol	Parameter	Value(MAX.)	Unit am90 488.4

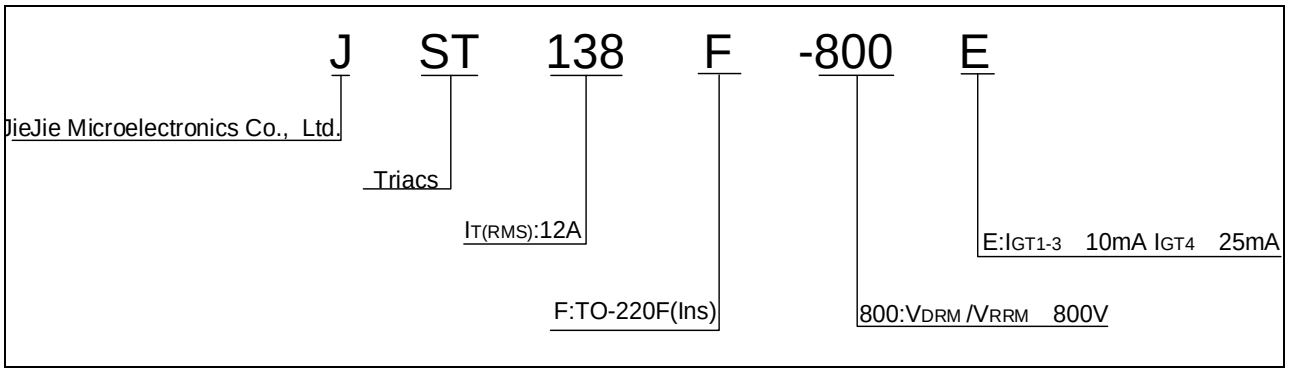

J
ST
138
F
-800
E
JieJie Microelectronics Co., Ltd.
Triacs
IT(RMS):12A
F:TO-220F(Ins)
800:VDRM /VRRM 800V
E:IGT1-3 10mA IGT4 25mA

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

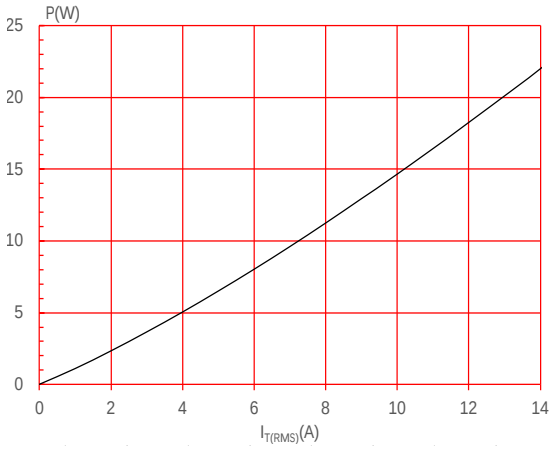


FIG.2: RMS on-state current versus case temperature

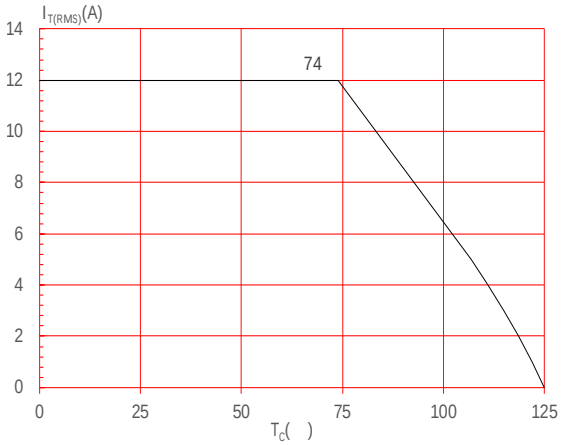


FIG.3: Surge peak on-state current versus number of cycles

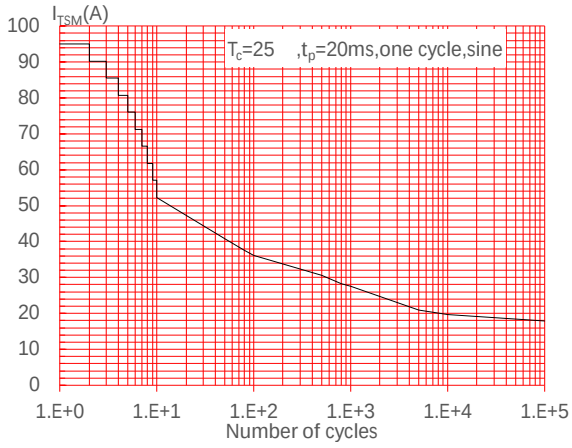


FIG.4: On-state character

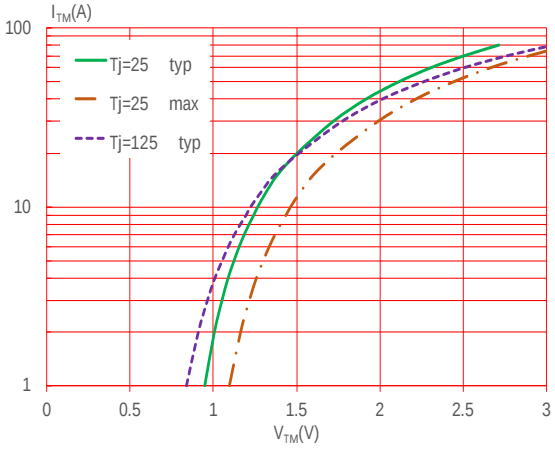


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<20ms, and corresponding value of I^2t (- : dI/dt<80 - : dI/dt<50)

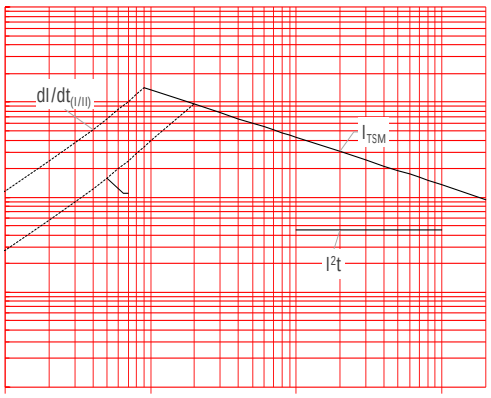
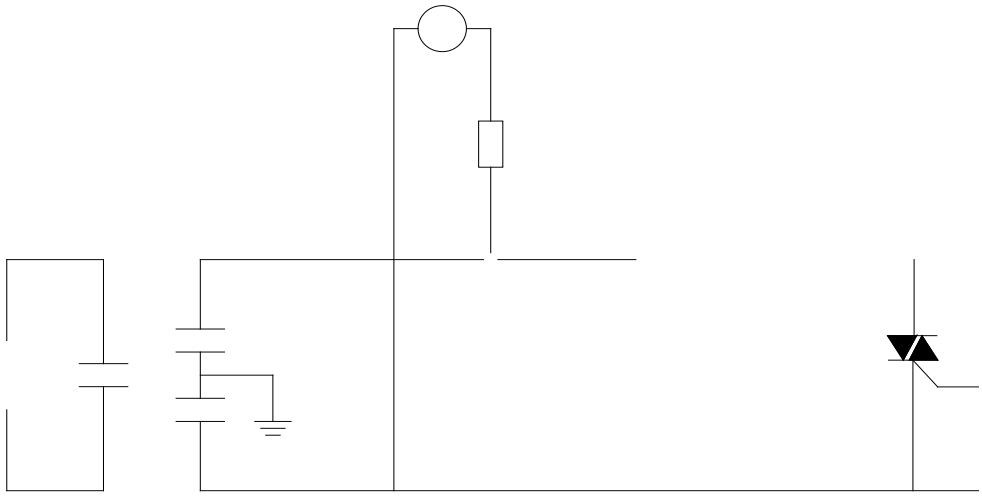


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

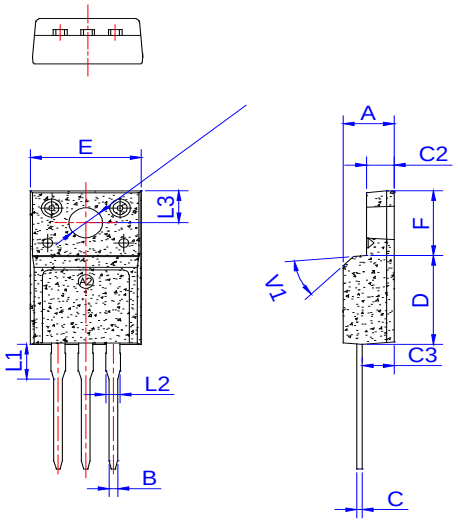
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST138F-800E	800	10	25	TO-220F(Ins)	50	Tube

Document Revision History

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


E
L3
L1
L2
B
A
C2
F
D
C3
C
TV

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