JST134H-600D 4A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST134H-600D 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-251 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)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
RMS on-state current ($T_C \leq 84$)	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	25	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		27.5	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	3.125	

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D=12V R_L=33Ω	- -	MAX.	5	mA
				10	
V_{GT}		ALL	MAX.	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	ALL	MIN.	0.2	V
I_L	I_G=1.2I_{GT}	- -	MAX.	10	mA
				20	
I_H	I_T=100mA		MAX.	7	mA
dV/dt	V_D=400V Gate Open T_j=110		MIN.	120	V/μs
(dV/dt)c	(dI/dt)c=1.8A/ms, T_j=110		MIN.	2.5	V/μs
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25		TYP.	2.5	μs
t_{off}				25	

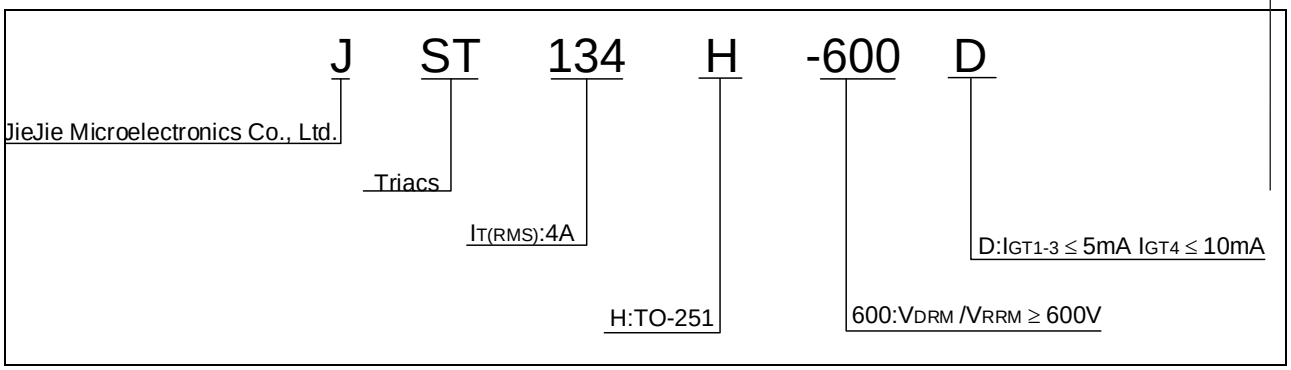
STATIC CHARACTERISTICS

Symbol	Parameter		Value (MAX.)	Unit
V_{TM}	I_{TM}=5A t_p=380μs	T_j=25	1.55	V
V_{TO}	Threshold voltage	T_j=125	0.92	V
R_D	Dynamic resistance	T_j=125	107	mΩ
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.25	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	7	/W
$R_{th(j-a)}$	junction to ambient (AC)	150	/W

ORDERING INFORMATION



MARKING

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

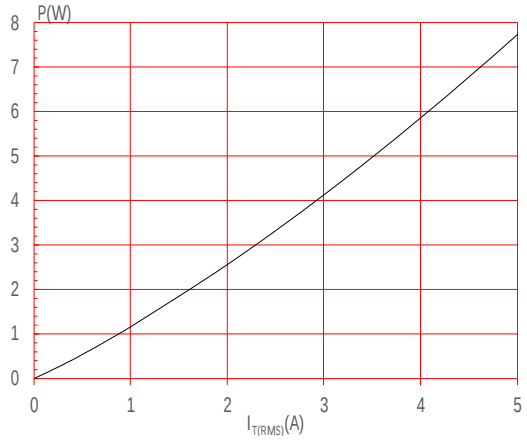


FIG.2: RMS on-state current versus case temperature

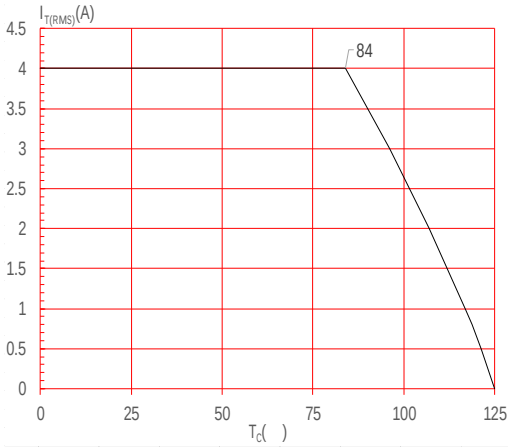


FIG.3: Surge peak on-state current versus number of cycles

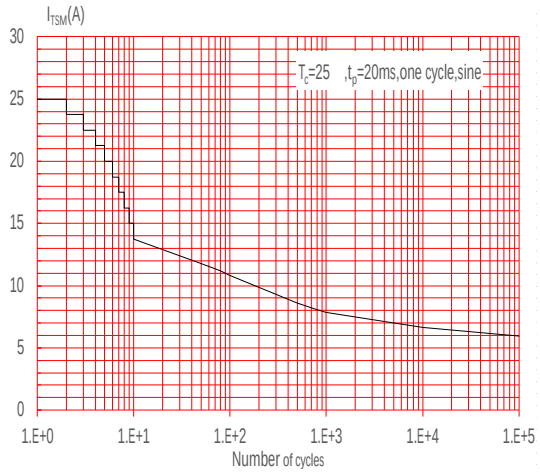


FIG.4: On-state characteristics

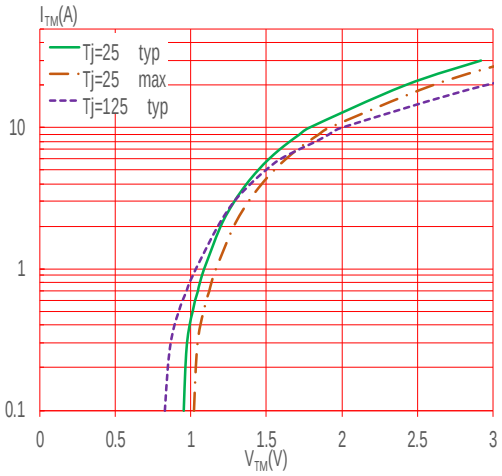


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<20ms, and corresponding value of I^2t

(- - : dI/dt<80A/μs; : dI/dt<50A/μs)

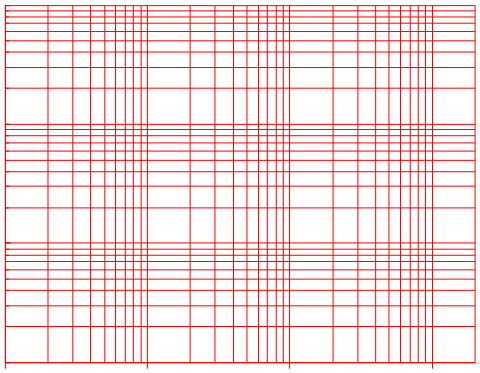
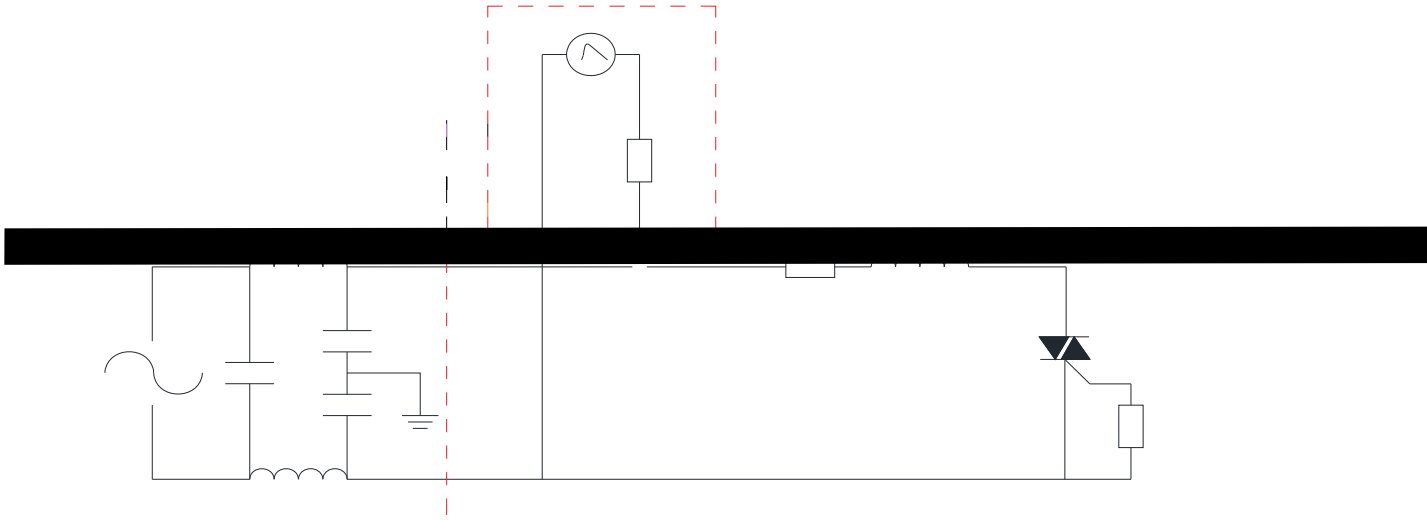


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

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



PACKAGE MECHANICAL DATA

