

JST134H-600D 4A TRIAC

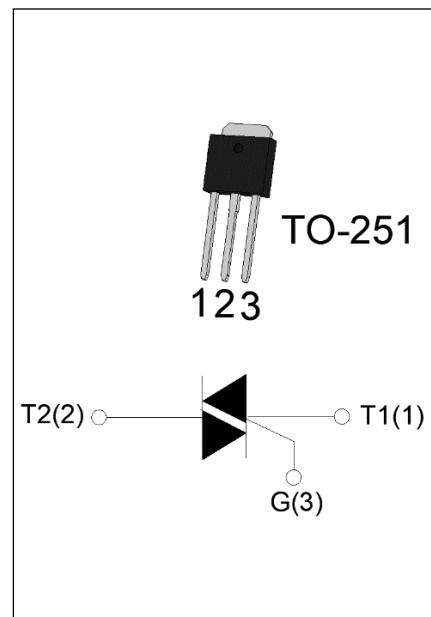
Rev.A.1.1

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

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600	V
$I_{GT\ I/II/III/IV}$	5/5/5/10	mA


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 ≤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 ² t value for fusing (t _p =10ms , T _j =25℃)		I ² t	3.125	A ² s
Critical rate of rise of on-state current (I _G =2×I _{GT} , f=100Hz , T _j =125℃)	I - II -III	di/dt	50	A/μs
	IV		30	
Peak gate current (t _p =20μs , T _j =125℃)		I _{GM}	2	A
Average gate power dissipation (T _j =125℃)		P _{G(AV)}	0.5	W
Peak gate power		P _{GM}	5	W
Peak pulse voltage (T _j =25℃; non-repetitive,off-state;FIG.7)		V _{pp}	3	kV

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

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12\text{V } R_L=33\Omega$	I - II - III	MAX.	5	mA
		IV		10	
V_{GT}		ALL	MAX.	1	V
V_{GD}	$V_D=V_{DRM} \ T_j=125^{\circ}\text{C}$ $R_L=3.3\text{k}\Omega$	ALL	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX.	10	mA
		II		20	
I_H	$I_T=100\text{mA}$		MAX.	7	mA
dV/dt	$V_D=400\text{V}$ Gate Open $T_j=110^{\circ}\text{C}$		MIN.	120	$\text{V}/\mu\text{s}$
$(dV/dt)_c$	$(dI/dt)_c=1.8\text{A/ms}$, $T_j=110^{\circ}\text{C}$		MIN.	2.5	$\text{V}/\mu\text{s}$
t_{on}	$I_G=20\text{mA } I_A=200\text{mA } I_R=20\text{mA}$ $T_j=25^{\circ}\text{C}$		TYP.	2.5	μs
t_{off}				25	

STATIC CHARACTERISTICS

Symbol	Parameter		Value (MAX.)	Unit
V_{TM}	$I_{TM}=5\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.55	V
V_{TO}	Threshold voltage	$T_j=125^{\circ}\text{C}$	0.92	V
R_D	Dynamic resistance	$T_j=125^{\circ}\text{C}$	107	$\text{m}\Omega$
I_{DRM}	$V_D=V_{DRM} \ V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	5	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	0.25	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	7.0	$^{\circ}\text{C}/\text{W}$
$R_{th(j-a)}$	junction to ambient (AC)	150	$^{\circ}\text{C}/\text{W}$

ORDERING INFORMATION

J	ST	134	H	-600	D
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}:4A$	H:TO-251	$600:V_{DRM}/V_{RRM} \geq 600V$	D: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 10mA$

MARKING

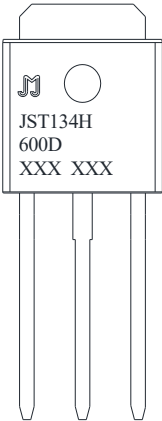
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FIG.1: Maximum power dissipation versus RMS on-state current

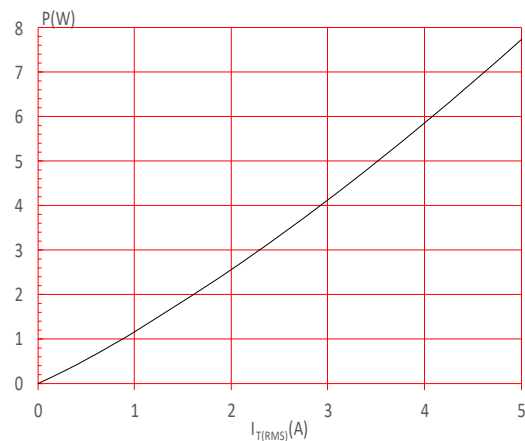


FIG.3: Surge peak on-state current versus number of cycles

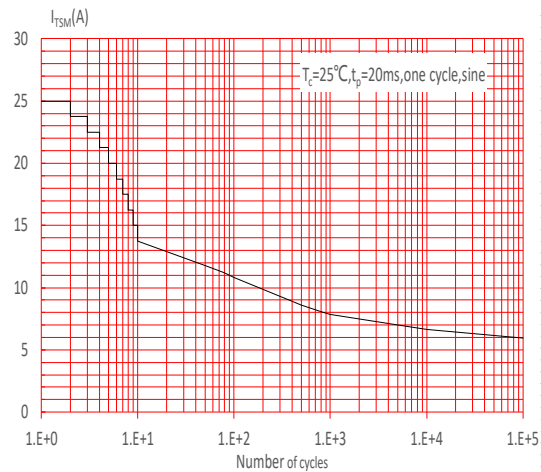


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t (I - II -III: $di/dt < 50\text{A}/\mu\text{s}$; IV: $di/dt < 30\text{A}/\mu\text{s}$)

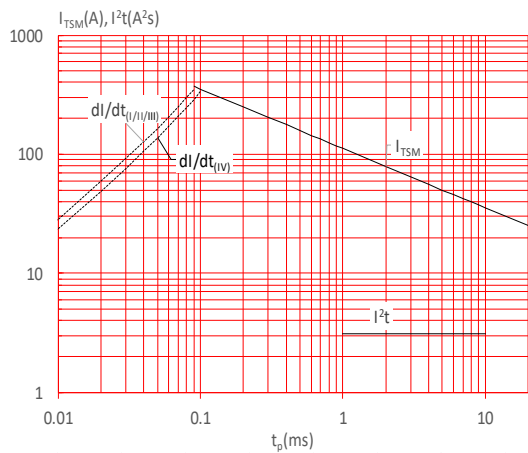


FIG.2: RMS on-state current versus case temperature

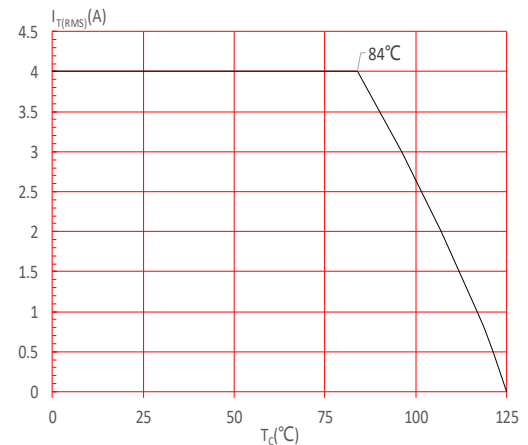


FIG.4: On-state characteristics

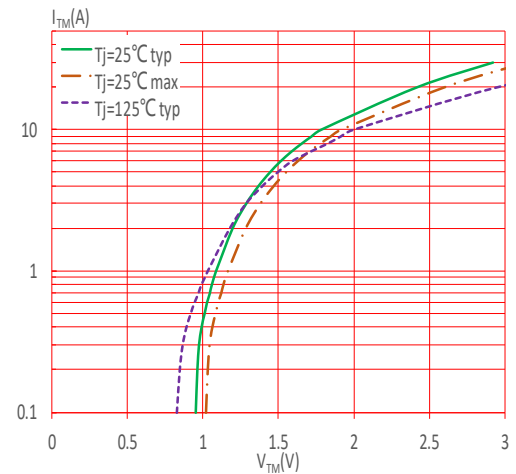


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

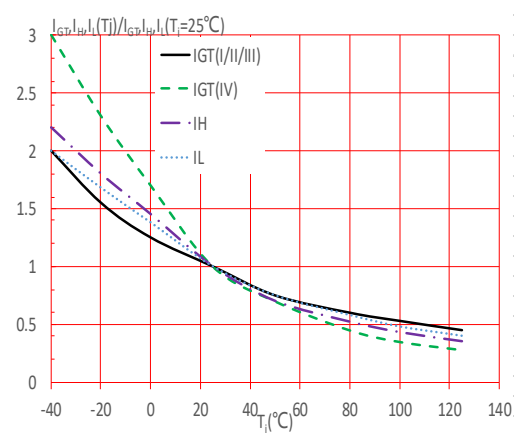
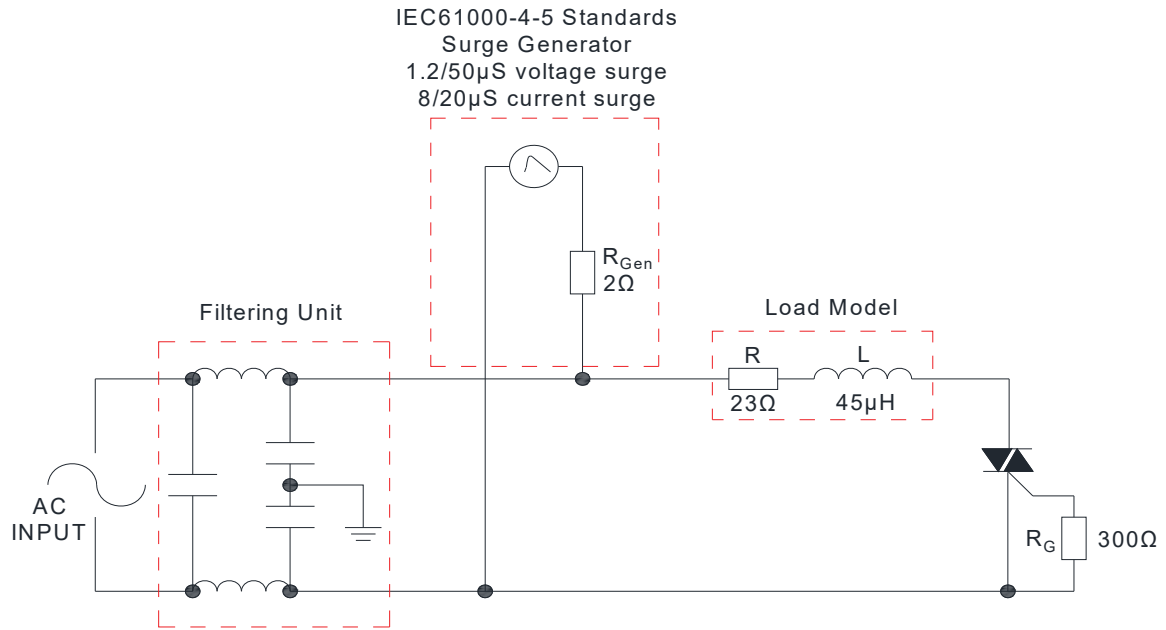


FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards

LEAD FORMING AND SOLDERING

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics

ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		I -II-III	IV			
JST134H-600D	600	5	10	TO-251	80	Tube

Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated
Oct.24, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

Technical drawing of a 3-pin DIN connector, showing three views: top, side, and front views. The drawing includes the following dimension labels:

- Top View:**
 - E : Total width of the connector body.
 - $B2$: Width of the top mounting flange.
 - $L2$: Height of the top mounting flange.
 - H : Total height of the connector body.
 - $L1$: Height of the main body section.
 - $B3$: Width of the main body section.
 - F : Height of the main body section.
 - G : Width of the bottom mounting flange.
 - I : Width of the bottom mounting flange.
 - B : Width of the bottom mounting flange.
- Side View:**
 - A : Total height of the connector body.
 - $C2$: Height of the top mounting flange.
 - $V1$: Angle of the top mounting flange.
 - D : Diameter of the main body section.
 - C : Height of the main body section.
 - $A2$: Height of the bottom mounting flange.
- Front View:**
 - $E1$: Width of the main body section.
 - $H1$: Height of the main body section.

Technical drawing of the printing head assembly, showing front, side, and cross-sectional views with dimensions.

Front View Dimensions:

- Total length: 536 ± 0.5
- Distance from left edge to start of printing area: 5
- Distance from left edge to center of nozzle: 90
- Distance from left edge to center of nozzle: 2.5
- Printing Area label

Side View Dimensions:

- Distance from right edge to center of nozzle: 5
- Distance from right edge to center of nozzle: 6
- Distance from right edge to center of nozzle: 20
- Nozzle diameter: $2 \cdot \phi 2.95$

Cross-sectional View Dimensions:

- Distance from left edge to center of nozzle: 1.65 ± 0.1
- Distance from left edge to center of nozzle: 2
- Distance from left edge to center of nozzle: 11
- Distance from left edge to center of nozzle: 6.8 ± 0.15
- Distance from left edge to center of nozzle: 2.2
- Distance from left edge to center of nozzle: 5.4
- Distance from left edge to center of nozzle: 2.15 ± 0.1
- Distance from left edge to center of nozzle: 2.3
- Distance from left edge to center of nozzle: 0.6
- Distance from left edge to center of nozzle: 11.1 ± 0.1

PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-251	TUBE	80	4,000	20,000

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