



JST131U-600D 1A TRIAC

Rev.A.2.1

DESCRIPTION:

The JST131U-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. Complying with UL standards (File ref: E252906). Package TO-92 is RoHS compliant.

MAIN FEATURES

U 3 I Sn 5

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j		

Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{PP}	3.5	kV
--	----------	-----	----

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V$ $R_L=33\Omega$	- -	MAX.	5	mA
				10	
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k\Omega$	ALL	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	- -	MAX.	5	mA
				20	
I_H	$I_T=50mA$		MAX.	7	mA
dV/dt	$V_D=400V$ Gate Open $T_j=110$		MIN.	120	V/ μs
$(dV/dt)_c$	$(dI/dt)_c=0.44A/ms$, $T_j=110$		MIN.	3	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
		1.45	V

ORDERING INFORMATION

<u>J</u>	<u>ST</u>	<u>131</u>	<u>U</u>	<u>-600</u>	<u>D</u>	<u>-/</u>
JieJie Microelectronics Co., Ltd.	Triacs	<u>It(RMS):1A</u>	<u>U:TO-92</u>	<u>600:VDRM /VRRM ≥ 600V</u>	<u>D:Igt1-3 ≤ 5mA Igt4 ≤ 10mA</u>	Blank: Bulk Pack -TR: Tape & Reel

MARKING

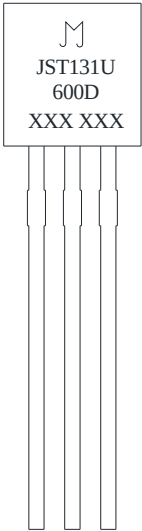
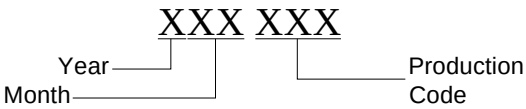
	
---	--

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

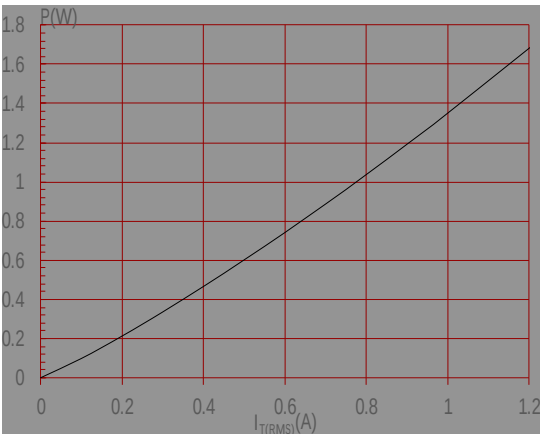


FIG.3: Surge peak on-state current versus number of cycles

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

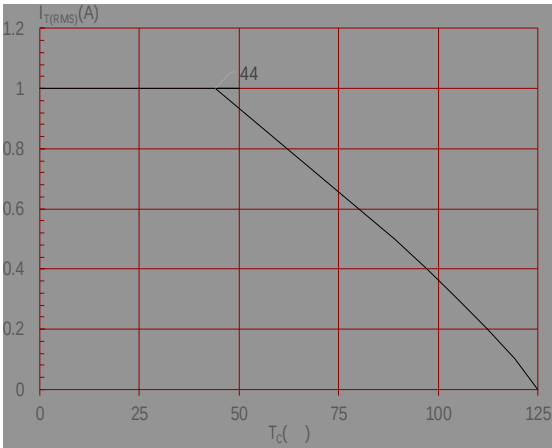
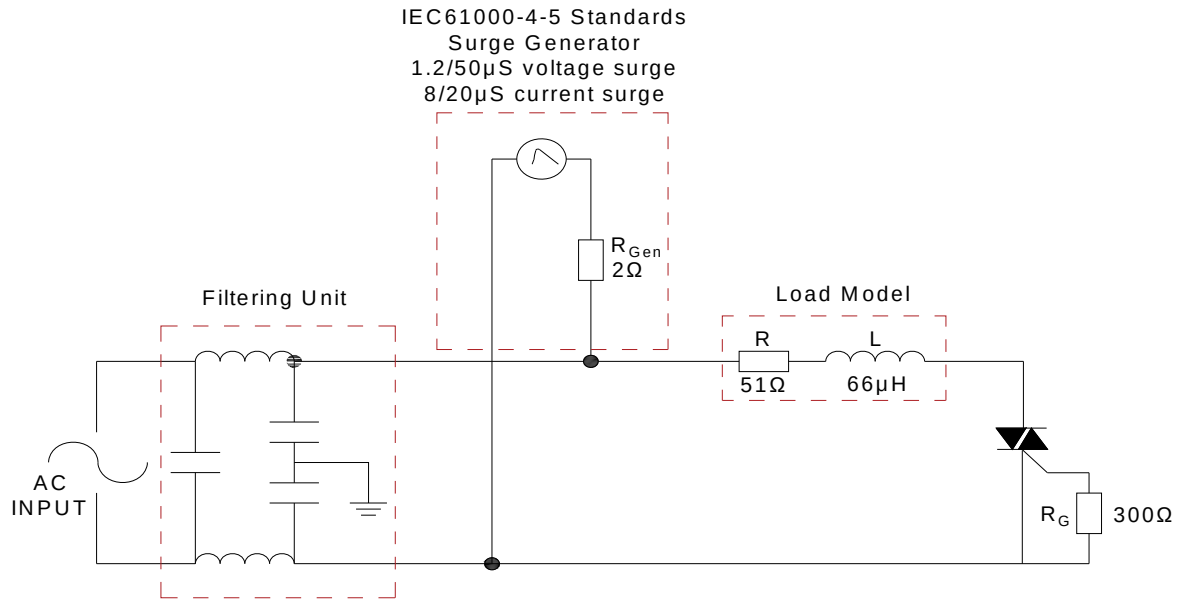


FIG.4:

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





ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		- -				
JST131U-600D	600	5	10	TO-92	1,000	Bulk Pack
JST131U-600D-TR					2,000	Tape & Reel

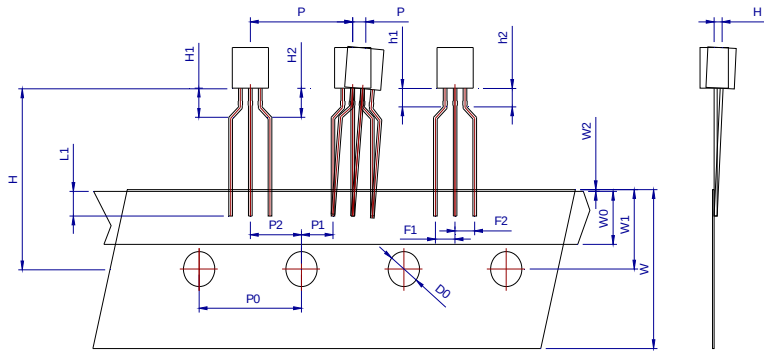
Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated
Mar.26, 2025	A.2.0	Renew PACKAGE MECHANICAL DATA
Sept.28, 2025	A.2.1	Revise PACKAGE MECHANICAL DATA



DELIVERY MODE

PACKAGE	OUTLINE	BAG (PCS)	INNER BOX (PCS)	CARTON BOX (PCS)
TO-92	Bulk Pack	1,000	10,000	50,000



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
P	12.40	12.70	13.00	0.488	0.500	0.512
P0	12.40	12.70	13.00	0.488	0.500	0.512
P1	3.55	3.85	4.15	0.140	0.152	0.163
P2	5.95	6.35	6.75	0.233	0.250	0.265
P	-1.00	0	1.00	-0.039	0	0.039
F1 F2	2.30	2.50	2.70	0.090	0.098	0.106
F1-F2	-0.10	0	0.10	-0.004	0	0.004
W	17.50	18.00	19.00	0.689	0.709	0.748
W0	5.50	6.00	6.50	0.217	0.236	0.256
W1	8.50	9.00	9.50	0.335	0.354	0.374
W2			1.00			0.039
D0	3.80	4.00	4.20	0.150	0.157	0.165
H	-1.00	0	1.00	-0.039	0	0.039
L1	2.50			0.098		
H	18.00	19.00	20.00	0.709	0.748	0.787
H1 H2			3.00			0.119
H1-H2	-0.50		0.50	-0.020		0.020
h1 h2			1.00			0.040
h1-h2	-0.20		0.20	-0.008		0.008

PACKAGE	OUTLINE	REEL (PCS)	INNER BOX (PCS)	CARTON BOX (PCS)
TO-92	Tape & Reel	/	2,000	20,000

