JST131N2-600D 1A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST131N2-600D 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. Package SOT-89-2L is RoHS compliant.

MAIN FEATURES

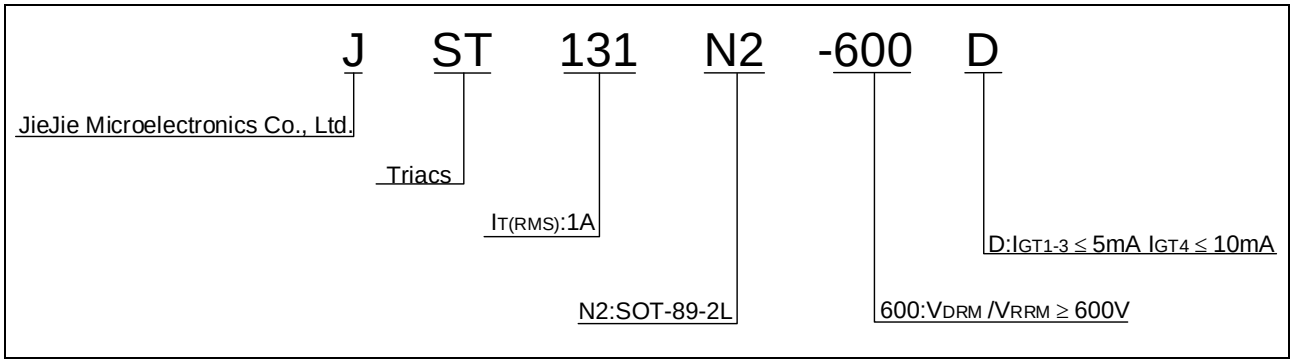
ABSOLUTE MAXIMUM RATINGS

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 ($T_C \leq$ 58)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	16.5	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		18	
I^2t value for fusing (t_p=20ms , T_j=25)	I^2t	1.361	A^2s

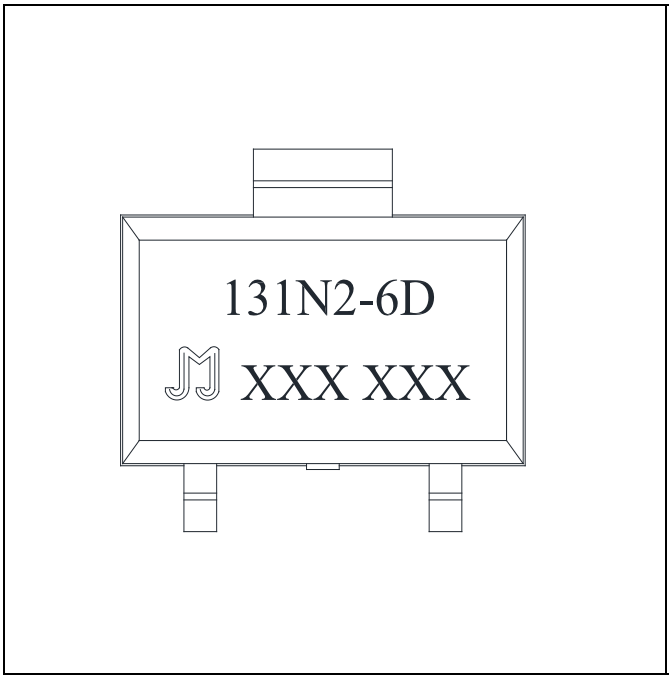
ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D=12V R_L=33Ω	- -	MAX.	5	mA
				10	
V_{GT}		ALL	MAX.	1.3	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.	5	mA
				20	
I_H	I_T=50mA		MAX.	7	mA
dV/dt	V_D=400V Gate Open T_j=125		MIN.	120	V/μs
(dV/dt)c	(dI/dt)c=0.44A/ms, T_j=110		MIN.	3	V/μs
t_{on} t_{off}	I_G=20mA I_A=200mA I_R=20mA T_j=25		TYP.	2.5	μs

ORDERING INFORMATION



MARKING



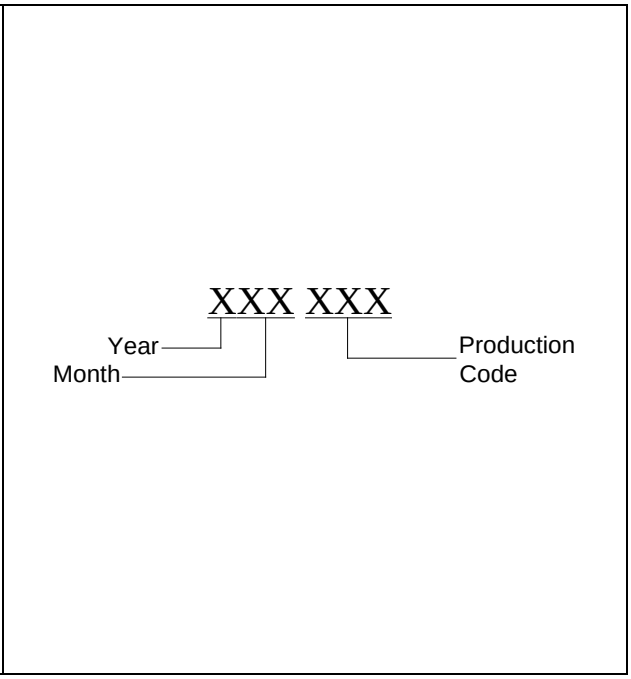


FIG.1:/He( )]TJ /TT3 1 Tf 0.001 Tc -0.006 Tw 0.614 0 FIG.2:[(M)-28(a)-2(x)]TJ /T3 1 Tf -0.011 Tc 0.006 Tw 0.91 0 T
on-sate cent temper

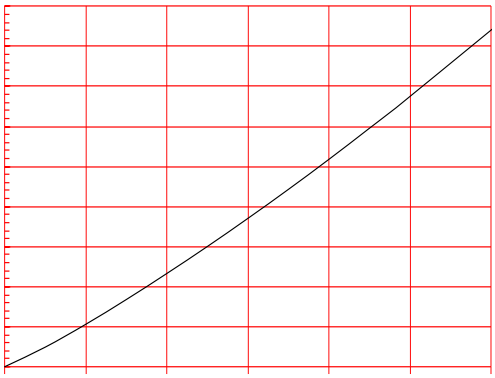


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: 35µm) (full cycle)

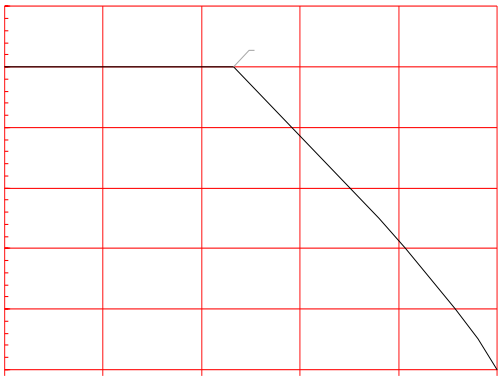


FIG.4: Surge peak on-state current versus number of cycles

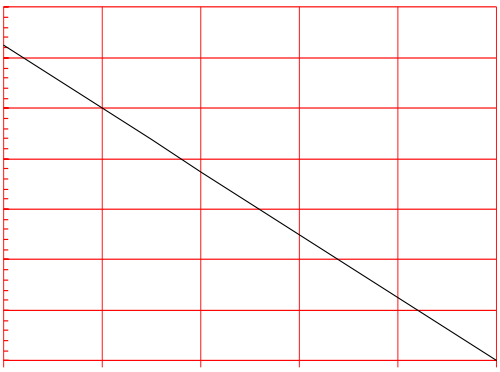


FIG.5: On-state characteristics

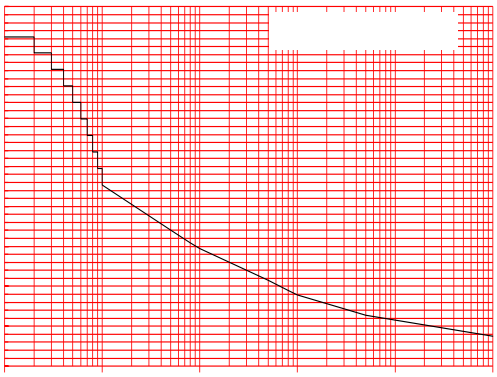


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<20ms, and corresponding value of I^2t
(- - : dI/dt<50A/µs; : dI/dt<30A/µs)

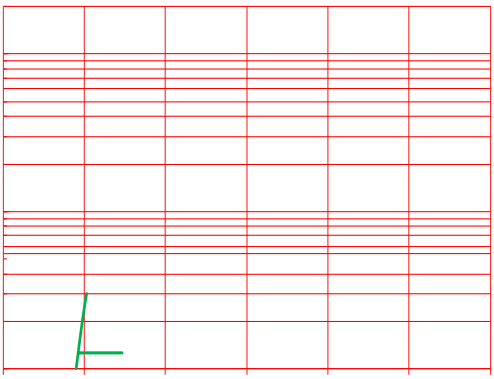


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

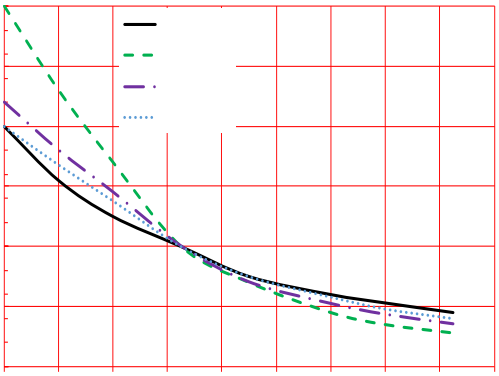


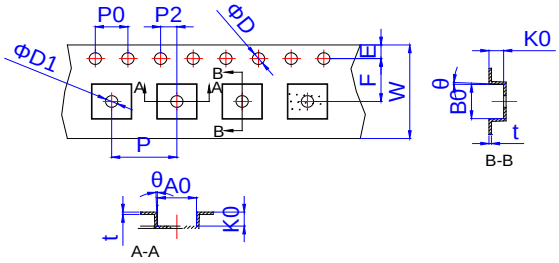
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			

DELIVERY MODE



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
P2	1.90	2.00	2.10	0.075	0.079	0.082
D	-	1.50	1.60	-	0.059	0.063
D1	1.50			0.059		
P0	3.90	4.00	4.10	0.154	0.157	0.161
10P0	39.80	40.00	40.20	1.567	1.575	1.583
W			12.30			0.482
P	7.90	8.00	8.10	0.311	0.315	0.319
A0	5.20	5.30	5.40	0.204	0.208	0.212
B0	4.80	4.90	5.00	0.188	0.192	0.196
K0	1.75	1.85	1.95	0.069	0.073	0.076
t	0.20	0.25	0.30	0.008	0.010	0.012
θ	3°		5°	3°		5°

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