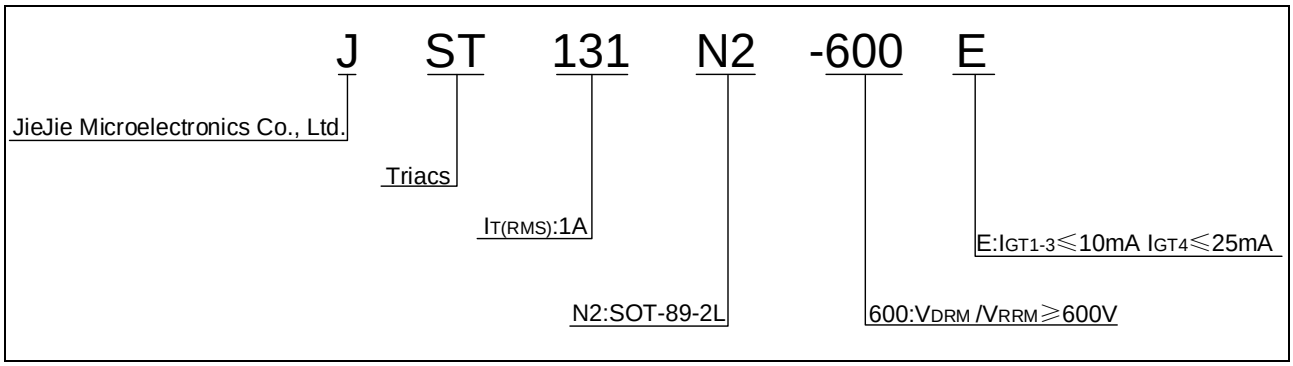
Average gate power dissipation (T_j=125℃)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	5	W
Peak pulse voltage (T_j=25℃; non-repetitive,off-state;FIG.8)	V_{PP}	3.5	kV

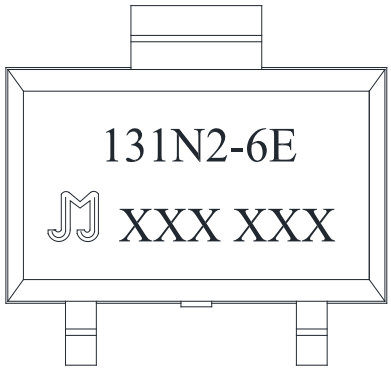
(T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D=12V R_L=33Ω	Ⅰ-Ⅱ-Ⅲ	MAX.	10	mA
		Ⅳ		25	
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}	Ⅰ-Ⅲ-Ⅳ	MAX.	15	mA
		Ⅱ		30	
I_H	I_T=50mA		MAX.	15	mA
dV/dt	V_D=400V Gate Open T_j=110℃		MIN.	250	V/μs
(dV/dt)c	(dI/dt)c=0.44A/ms, T_j=110℃		MIN.	6	V/μs
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25℃		TYP.	3	μs
t_{off}				30	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=1.4A t_p=380μs	T_j=25℃	1.45	V
V_{TO}	Threshold voltage	T_j=125℃	0.96	V
R_D	Dynamic resistance	T_j=125℃	225	mΩ
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25℃	5	μA
I_{RRM}		T_j=125℃	0.2	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	50	℃/W
$R_{th(j-a)}$	junction to ambient (AC, in free air, S=5cm^2)	100	℃/W


J
ST
131
N2
-600
E
JieJie Microelectronics Co., Ltd.
Triacs
IT(RMS):1A
N2:SOT-89-2L
600:VDRM /VRRM≥600V
E:IGT1-3≤10mA IGT4≤25mA


131N2-6E
XXX XXX

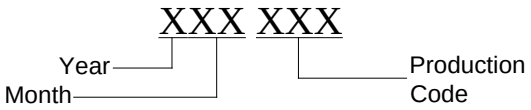

XXX XXX
Year
Month
Production
Code

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

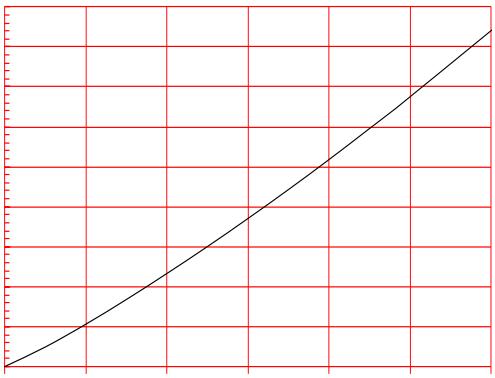


FIG.2: RMS on-state current versus case temperature

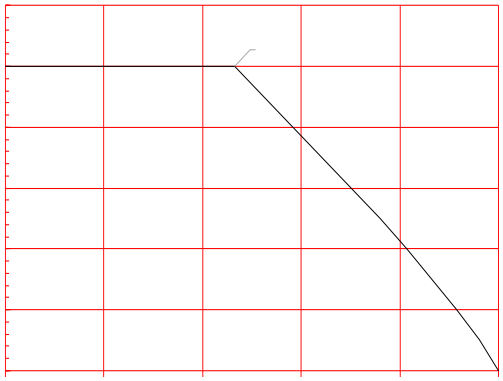


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: 35μm) (full cycle)

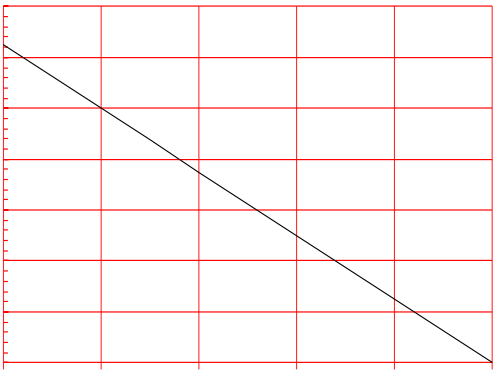


FIG.4: Surge peak on-state current versus number of cycles

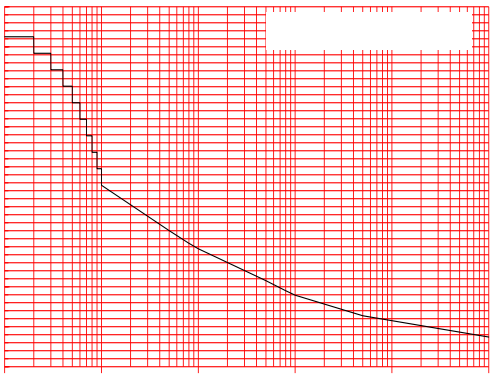


FIG.5: On-state characteristics

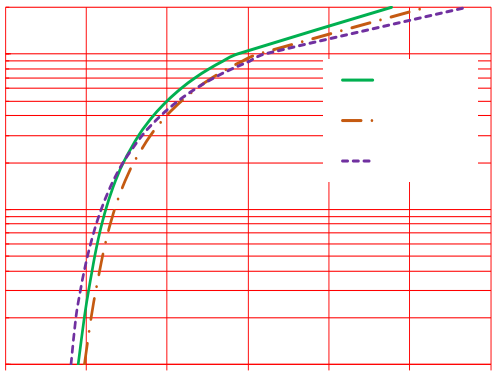


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<20ms, and corresponding value of I^2t (Ⅰ-Ⅱ-Ⅲ: dI/dt<70A/μs;Ⅳ: dI/dt<40A/μs)

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

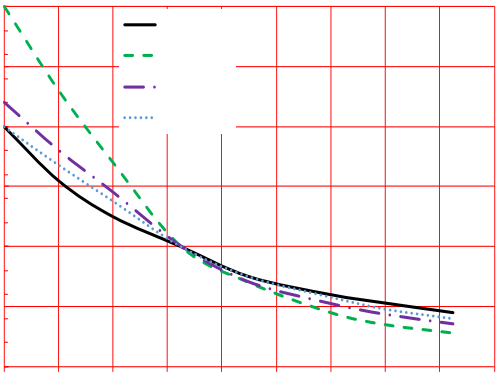
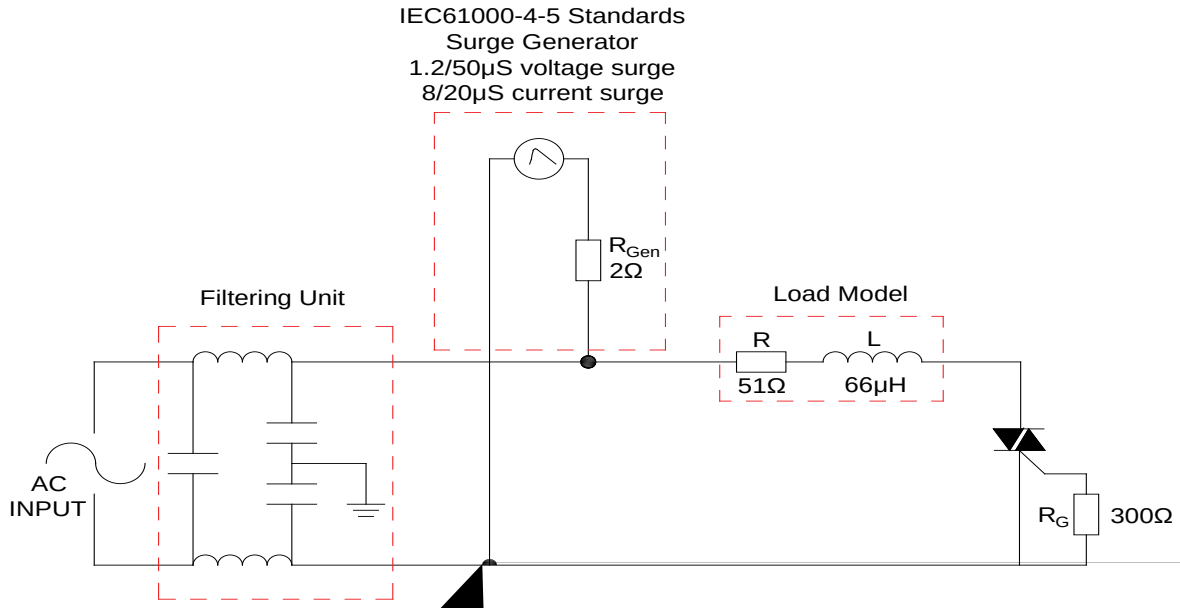


FIG.8：Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST131N2-600E	600	10	25	SOT-89-2L	4,000	Tape & Reel

Document Revision History

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

Dimensions						
Ref.	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°