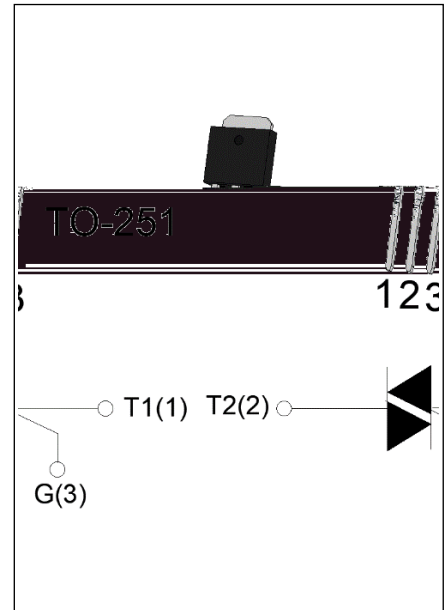


The JST137H-800G triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. From T2 terminals to external heatsink. Package TO-251 is RoHS compliant.



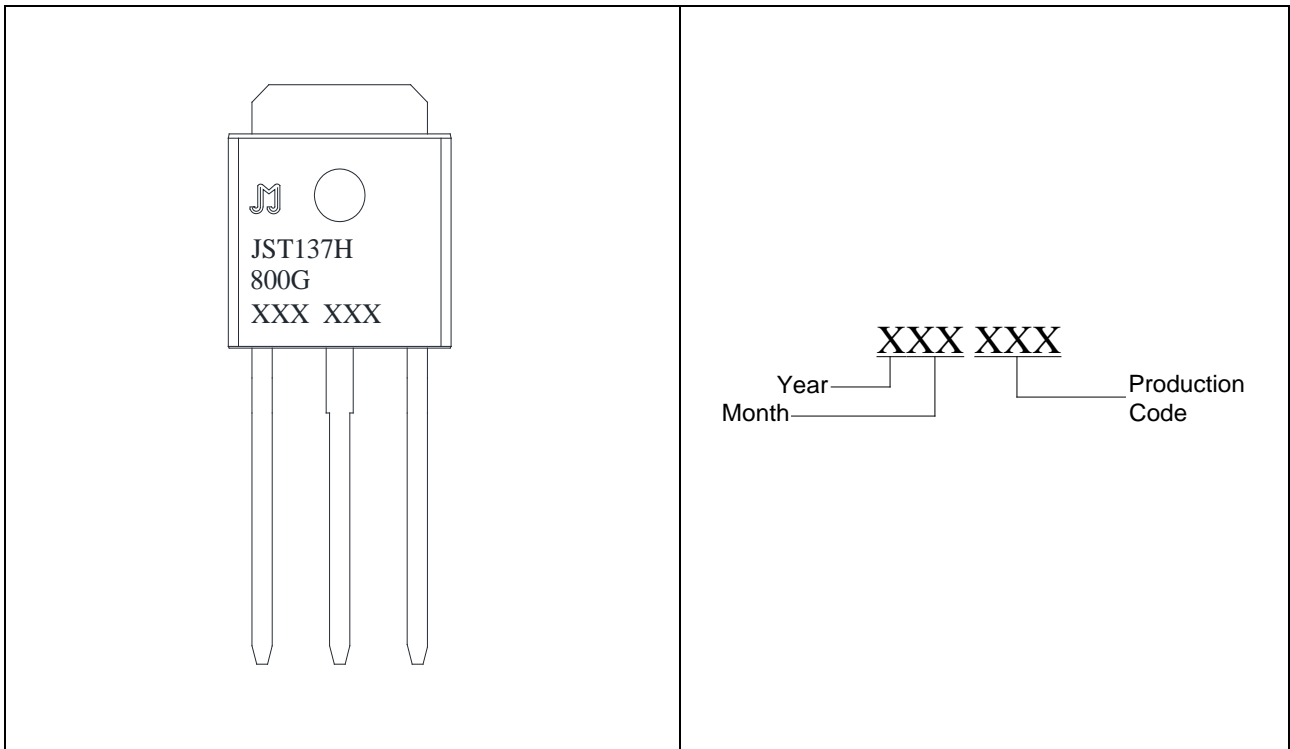
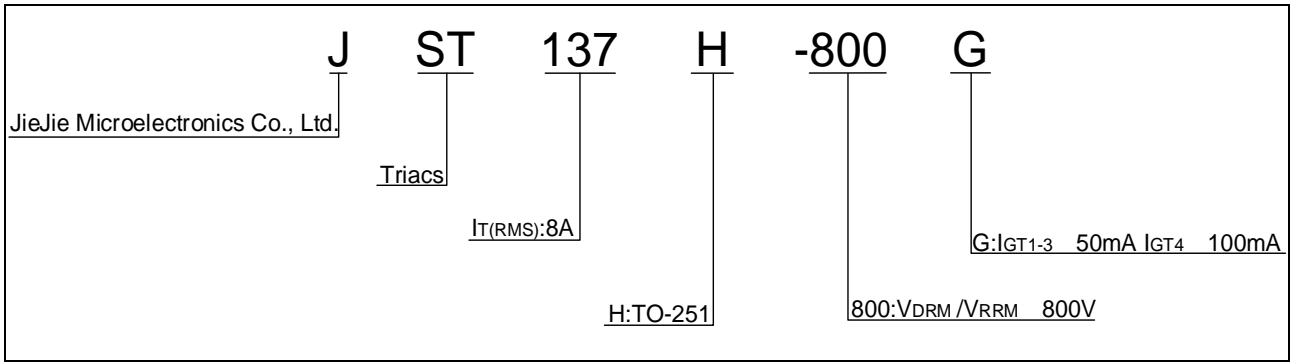
Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT} / / /$	50/50/50/100	mA

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 ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	800	V	
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	800	V	
RMS on-state current ( $T_c = 68^\circ\text{C}$ )	$I_{T(RMS)}$	8	A	
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	65	A	
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		72		
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	21	$\text{A}^2\text{s}$	
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ )	- -	$di/dt$	100	$\text{A/s}$
			50	
Peak gate current ( $t_p=20\text{ }\mu\text{s}$ , $T_j=125^\circ\text{C}$ )	$I_{GM}$	4	A	
Average gate power dissipation ( $T_j=125^\circ\text{C}$ )	$P_{G(AV)}$	0.5	W	
Peak gate power	$P_{GM}$	10	W	
Peak pulse voltage ( $T_j=25^\circ\text{C}$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	4	kV	

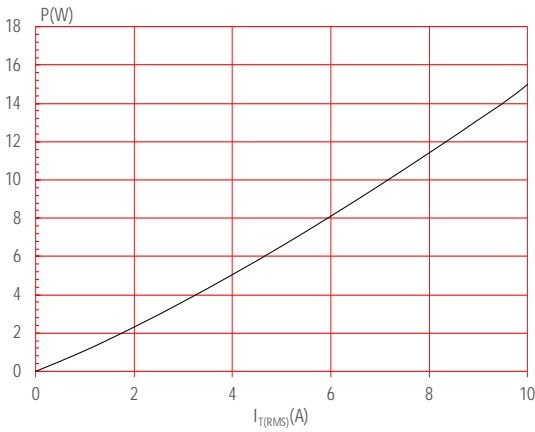
(T<sub>j</sub>=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I <sub>GT</sub>	V <sub>D</sub> =12V R <sub>L</sub> =33	- -	MAX.	50	mA
				100	
V <sub>GT</sub>		ALL	MAX.	1	V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> T <sub>j</sub> =125 R <sub>L</sub> =3.3K	ALL	MIN.	0.2	V
I <sub>L</sub>	I <sub>G</sub> =1.2I <sub>GT</sub>	- -	MAX.	70	mA
				100	
I <sub>H</sub>	I <sub>T</sub> =500mA		MAX.	60	mA
dV/dt	V <sub>D</sub> =540V Gate Open T <sub>j</sub> =125		MIN.	400	V s
(dV/dt) <sub>c</sub>	(dI/dt) <sub>c</sub> =2.7A/ms, T <sub>j</sub> =125		MIN.	15	
t <sub>on</sub>	I <sub>G</sub> =80mA I <sub>A</sub> =400mA I <sub>R</sub> =40mA T <sub>j</sub> =25		TYP.	5	s
t <sub>off</sub>				50	

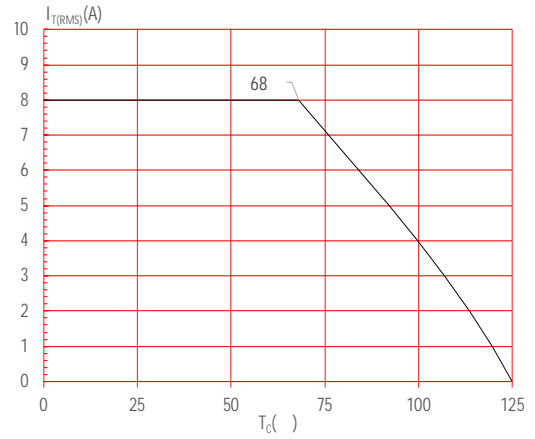
Symbol	Parameter	Value(MAX.)	Unit
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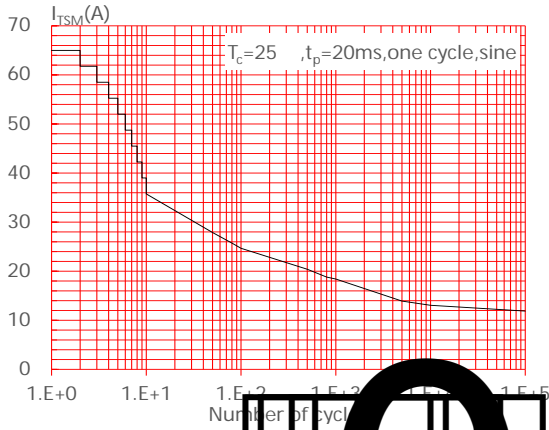
**FIG.1** Maximum power dissipation versus RMS on-state current



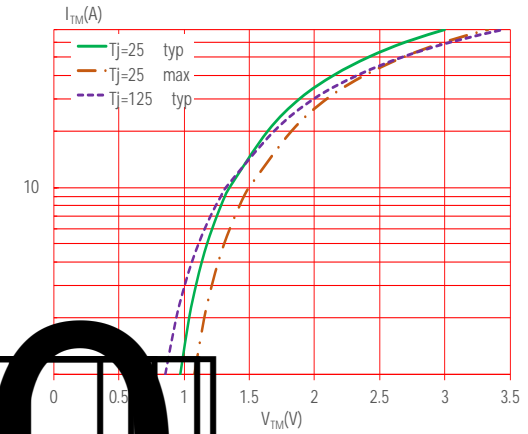
**FIG.2:** RMS on-state current versus case temperature



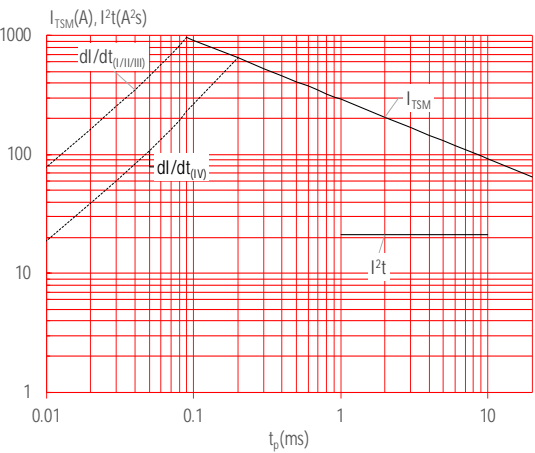
**FIG.3:** Surge peak on-state current versus number of cycles



**FIG.4:** On-state characteristics



**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20 \mu s$ , and corresponding value of  $I^2t$  (A<sup>2</sup>s)



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

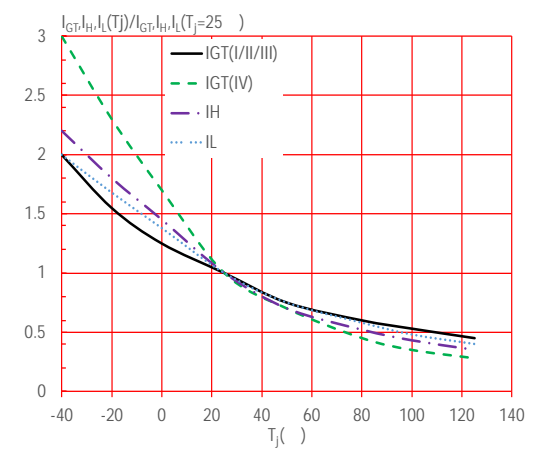
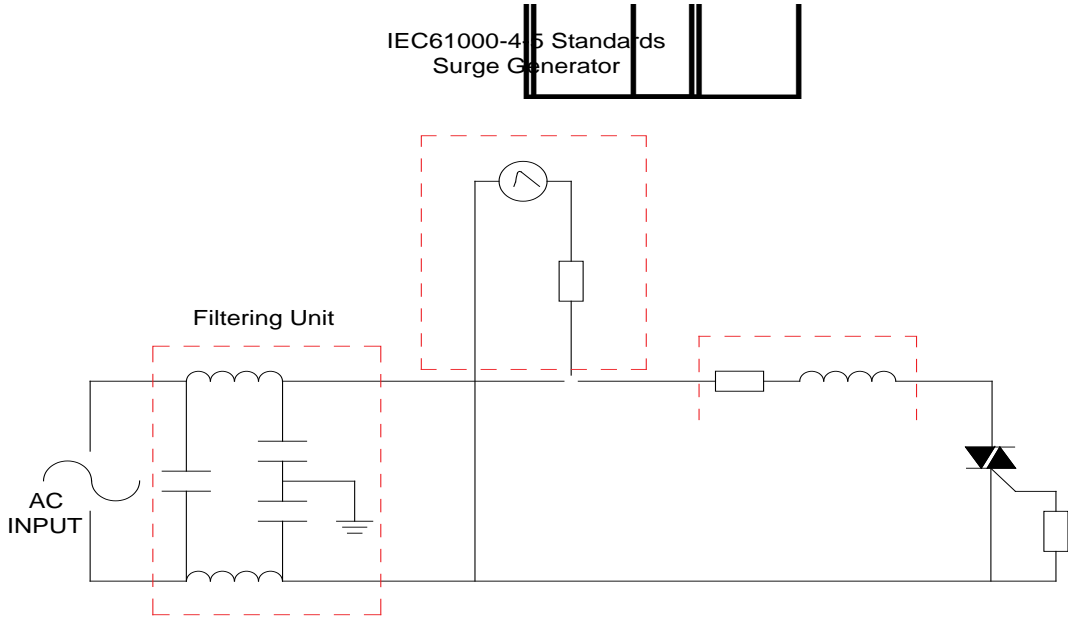


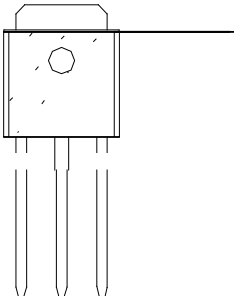
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST137H-800G	800	50	100	TO-251	80	Tube

**Document Revision History**

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



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