

**JST137D-800D 8A TRIAC**

Rev.A.1.1

The JST137D-800D 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 TO-262 is RoHS compliant.

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 ($T_c=100^\circ\text{C}$)	$I_{T(RMS)}$	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	A^2s	
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	-	di/dt	50	$\text{A}/\mu\text{s}$
			20	
Peak gate current ($t_p=20\mu\text{s}$) p				

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I _{GT}	V _D =12V R _L =33	- -	MAX.	5	mA
				10	
V _{GT}		ALL	MAX.	1	V
V _{GD}	V _D =V _{DRM} T _j =125 R _L =3.3k	ALL	MIN.	0.2	V
I _L	I _G =1.2I _{GT}	- -	MAX.	15	mA
				20	
I _H	I _T =500mA		MAX.	10	mA
dV/dt	V _D =540V Gate Open T _j =125		MIN.	50	V/μs
(dV/dt) _c	(dI/dt) _c =2.7A/ms, T _j =125		MIN.	2	V/μs
t _{on}	I _G =20mA I _A =200mA I _R =20mA T _j =25		TYP.	1.2	μs
t _{off}				15	

Symbol **Parameter** **Value(MAX.)** **Unit**⁼²

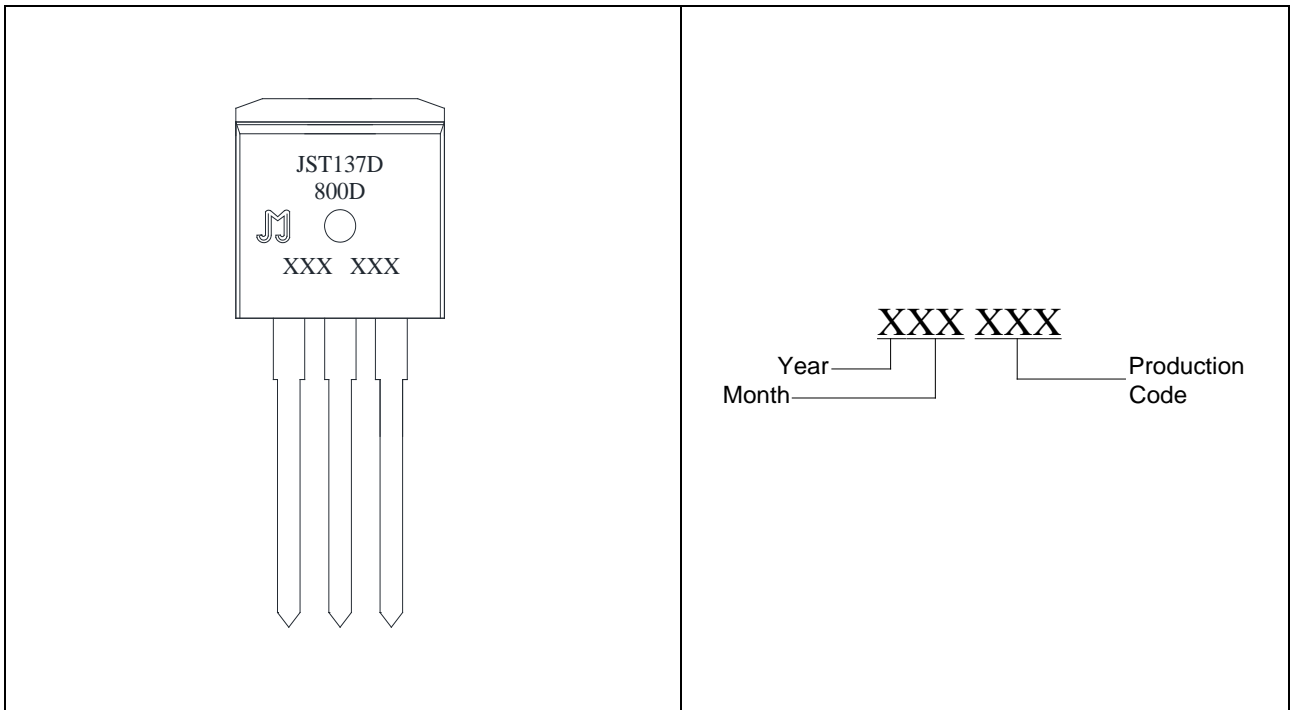
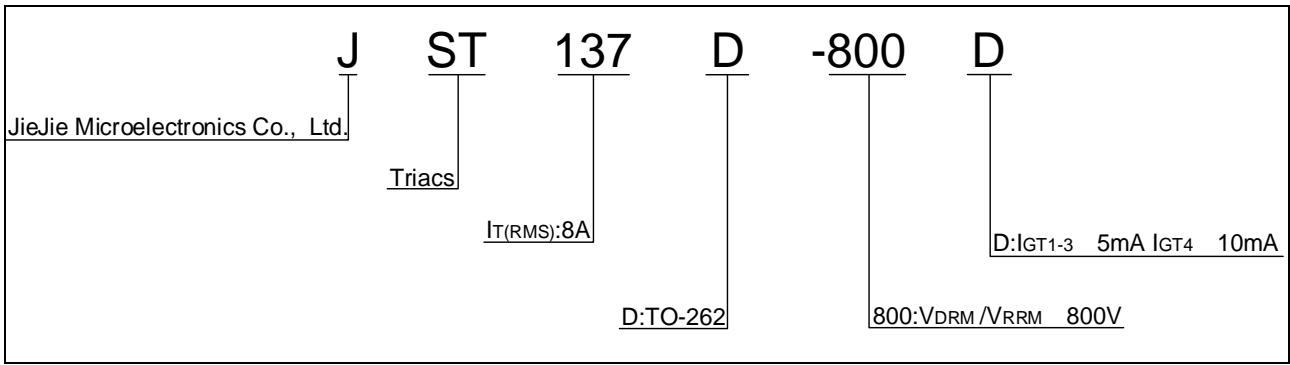


FIG.1: Maximum power dissipation versus RMS on-state current

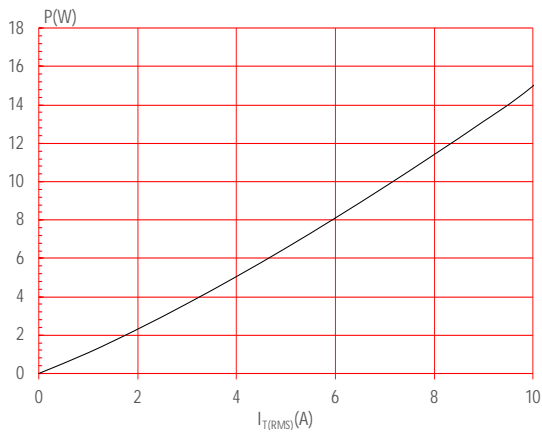


FIG.2: RMS on-state current versus case temperature

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

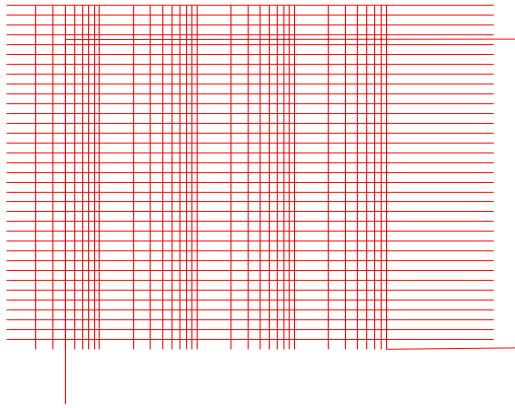
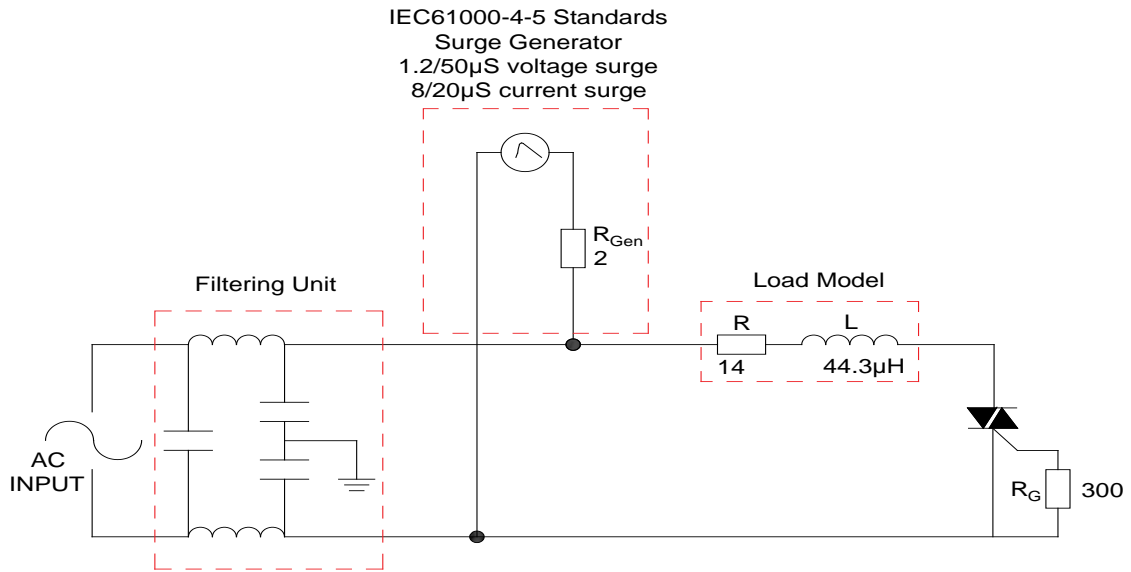
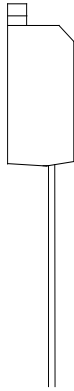
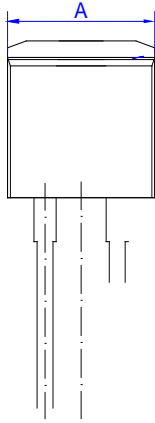


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards






Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.95		10.20	0.392		0.402
B	23.85		24.05	0.939		0.947
C	9.40		9.60	0.370		0.378
D	4.95		5.25	0.195		0.207
E	1.35		1.40	0.053		0.055
F	0.80		0.85	0.031		0.033
G						
H	4.45		4.55	0.175		0.179
J	2.20		2.60	0.087		0.102
K	0.48		0.52	0.019		0.020

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