

**JST137D-600F 8A TRIAC**

Rev.A.1.0

DESCRIPTION:

The JST137D-600F 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.

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 ($T_j=25^\circ\text{C}$)	V_{DRM}	600	V	
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600	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	100	$\text{A}/\mu\text{s}$
			50	
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	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	

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

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V R_L=33$	- -	MAX.	25	mA
				70	
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.	50	mA
				80	
I_H	$I_T=500mA$		MAX.	40	mA
dV/dt	$V_D=400V$ Gate Open $T_j=125$		MIN.	350	$V/\mu s$
$(dV/dt)_c$	$(dI/dt)_c=2.7A/ms, T_j=125$		MIN.	8	$V/\mu s$
t_{on}	$I_G=80mA I_A=400mA I_R=40mA$ $T_j=25$		TYP.	5	μs
t_{off}				50	

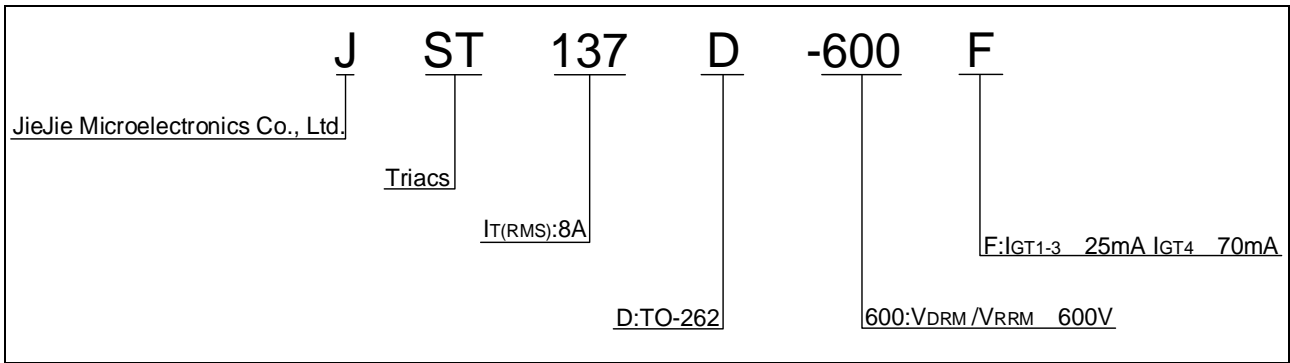
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=10A t_p=380\mu s$	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.8	V
R_D	Dynamic resistance	$T_j=125$	53	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	0.35	mA

THERMAL RESISTANCES

Symbol

ORDERING INFORMATION



MARKING

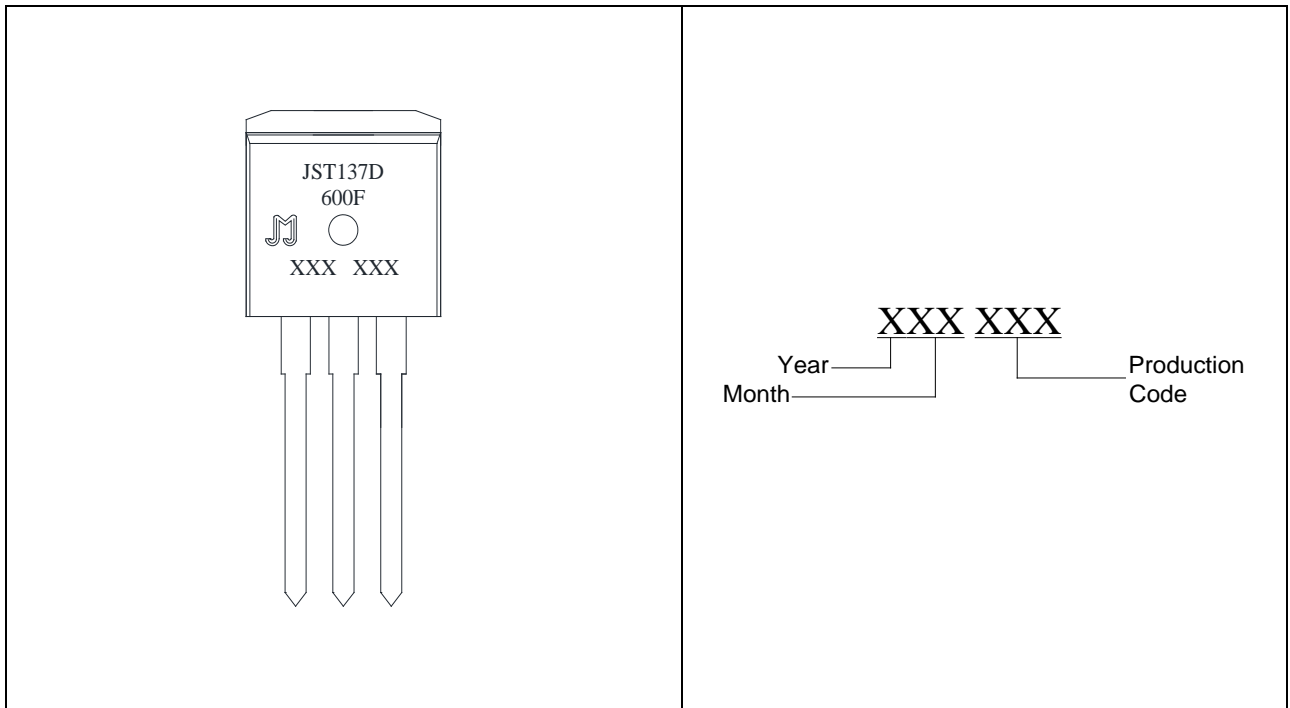


FIG.1: Maximum power dissipation versus RMS

on-state current (R5 0 T18.004 1 56.617ed 15.2059ion6 64Tw-10 Td *999q)31771c 0 T0Td [366Mz3.6 J TO

FIG.7 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
		-	-			
JST137D-600F	600	25	70	TO-262	50	Tube

Document Revision History

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

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