

**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)		V _{DRM}	600	V
Repetitive peak reverse voltage (T _j =25)		V _{RRM}	600	V
RMS on-state current (T _C ≤ 100)		I _{T(RMS)}	8	A
Non repetitive surge peak on-state current (full cycle , t _p =20ms , T _j =25)		I _{TSM}	65	A
Non repetitive surge peak on-state current (full cycle , t _p =16.6ms , T _j =25)			72	
I ² t value for fusing (t _p =10ms , T _j =25)		I ² t	21	A ² s
Critical rate of rise of on-state current (I _G =2 × I _{GT} , f=100Hz , T _j =125)	- -	di/dt	100	A/μs
			50	
Peak gate current (t _p =20μs , T _j =125)		I _{GM}	4	A
Average gate power dissipation (T _j =125)		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}	$V_D=12V$ $R_L=33\Omega$	- -	MAX.	25	mA
				70	
V_{GT}		ALL	MAX.	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k\Omega$	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/ μs
$(dV/dt)_c$	$(dI/dt)_c=2.7A/ms$, $T_j=125$		MIN.	8	V/ μs
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 Ω
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

J	ST	137	D	-600	F
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}:8A$	D:TO-262		$F:I_{GT1-3} \leq 25mA \ I_{GT4} \leq 70mA$
				$600:V_{DRM} / V_{RRM} \geq 600V$	

MARKING

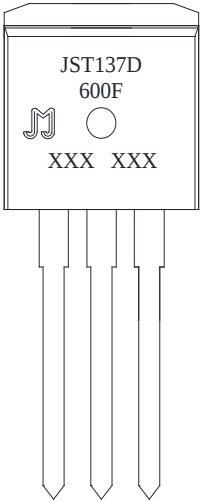
	XXX XXX Year Month Production Code
---	---

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 $V_{\text{DRM}}/V_{\text{RRM}}$ (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

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.



is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright © 2023 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.