



JST137E-600E 8A TRIAC

Rev.A.1.0

The JST137E-600E 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-263 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)

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I _{GT}	V _D =12V R _L =33	- -	MAX.	10	mA
				25	
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.	20	mA
				35	
I _H	I _T =500mA		MAX.	20	mA
dV/dt	V _D =400V Gate Open T _j =125		MIN.	250	V s
(dV/dt) _c	(dI/dt) _c =2.7A/ms, T _j =125		MIN.	5	
t _{on}	I _G =40mA I _A =200mA I _R =20mA T _j =25		TYP.	1.5	s
t _{off}				15	

Symbol	Parameter		Value(MAX.)	Unit
V _{TM}	I _{TM} =10A t _p =380 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	
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25	5	A
I _{RDM}		T _j =125	0.35	mA

Symbol	Parameter	Value	Unit
R _{th(j-c)}	junction to case (AC)	2.2	/W
R _{th(j-a)}	junction to ambient (AC, in free air, S=2cm ²)	60	/W

<u>J</u>	<u>ST</u>	<u>137</u>	<u>E</u>	<u>-600</u>	<u>E</u>	<u>-/</u>
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}:8A$	E:TO-263	600:V _{DRM} /V _{RRM} 600V	E:IGT1-3 10mA IGT4 25mA	Blank:Tube -TR:Tape & Reel

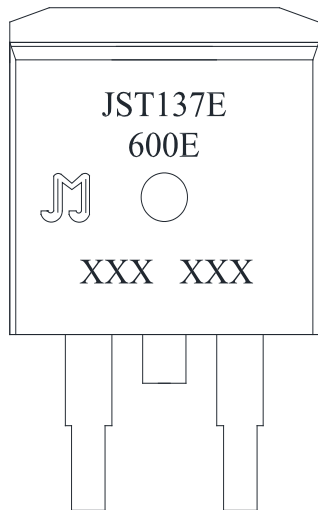


FIG.1 Maximum power dissipation versus RMS on-state current

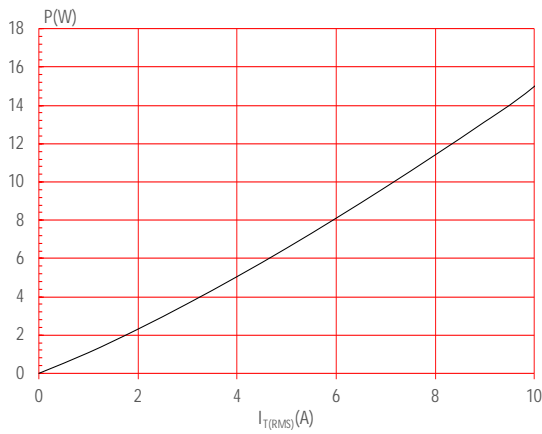


FIG.2: RMS on-state current versus case temperature

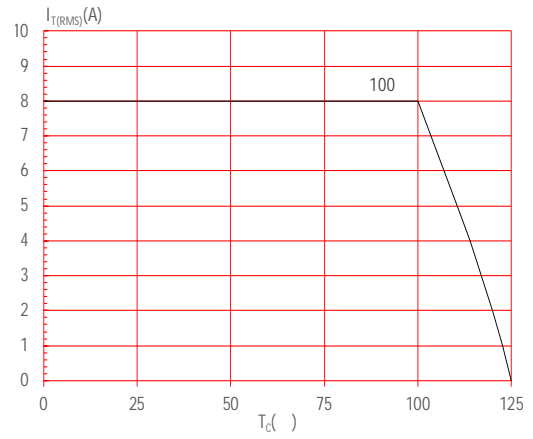


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: (full cycle))

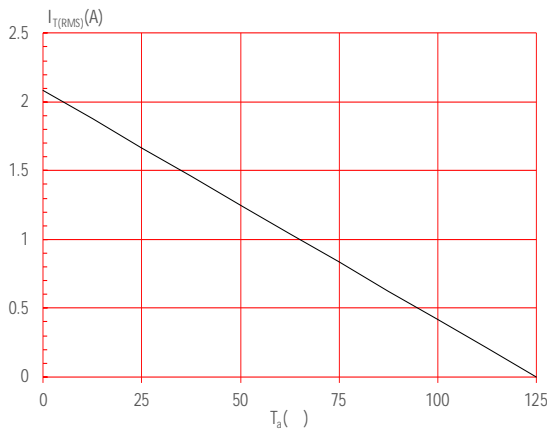
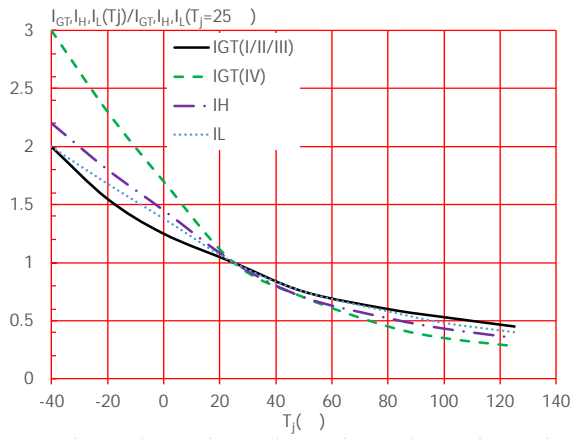


FIG.4: Surge peak on-state current versus number of cycles

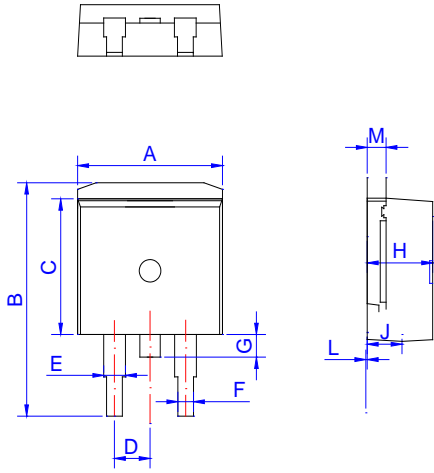
FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature



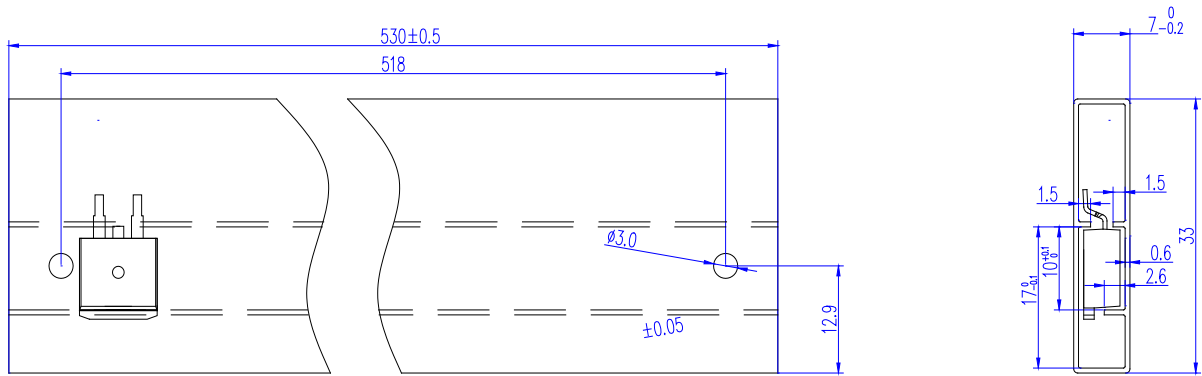
Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST137E-600E	600	10	25	TO-263	50	Tube
JST137E-600E-TR					800	Tape & Reel

Document Revision History

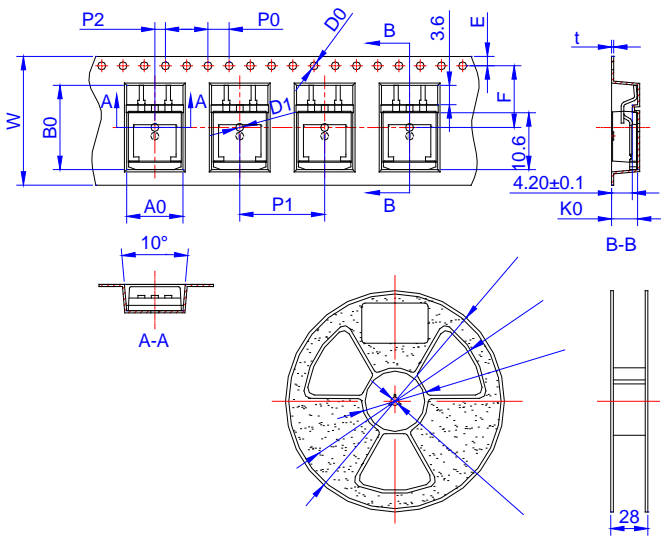
Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.37		0.378
D	2.40			0.094		
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033
G			1.50			0.059
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.25		1.35	0.049		0.053



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-263	TUBE	50	1,000	5,000




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	23.70	24.00	24.30	0.933	0.945	0.957
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
D0	-	1.50	1.60	-	0.059	0.063
D1	-	1.50	1.60	-	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	15.90	16.00	16.10	0.626	0.630	0.634
P2	1.90	2.00	2.10	0.075	0.079	0.083
A0	10.80	10.90	11.00	0.425	0.429	0.433
B0	16.20	16.30	16.40	0.638	0.642	0.646
K0	4.80	4.90	5.00	0.189	0.193	0.197
t	0.35	0.40	0.45	0.014	0.016	0.018

PACKAGE	OUTLINE	REEL (PCS)	PER CARTON (PCS)	TAPE & REEL
TO-263	TAPING	800	4,000	13 inch

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