



JST138E-600E 12A TRIAC

Rev.A.1.0

DESCRIPTION:

The JST138E-600E is a 12A TRIAC with a maximum off-state current of 100μA and a maximum on-state current of 12A. It is designed for AC load switching applications. The device is housed in a TO-263 package.

MAIN FEATURES

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature range	T_s	-40-150	
Operating temperature range	T_j	-40-125	
Repetitive peak reverse voltage (pulse width limited, $f=25\text{Hz}$)	V_{DRM}	600	V
Peak reverse voltage (pulse width limited, $f=25\text{Hz}$)	V_{RRM}	600	V
RMS on-state current (at $T_j=96^\circ\text{C}$)	$I_{T(RMS)}$	12	A
Non-repetitive peak on-state current (at $T_j=25^\circ\text{C}$, $p=20\mu\text{T}$)	I_{TSM}	95	A
Non-repetitive peak on-state current (at $T_j=25^\circ\text{C}$, $p=16.6\mu\text{T}$)		105	
On-state surge current (at $T_j=25^\circ\text{C}$, $p=10\mu\text{T}$)	I^2t	45	A^2s

Notes: 1. The maximum junction temperature T_j must not exceed 125°C.

2. The maximum on-state current I_T is limited by the thermal resistance $R_{\theta j-c}$ and the ambient temperature T_a . The maximum on-state current I_T can be calculated by the following formula: $I_T = \sqrt{\frac{P_{max}}{R_{\theta j-c}}}$, where $P_{max} = (T_j - T_a) / R_{\theta j-c}$.

ELECTRICAL CHARACTERISTICS (T_j=25 °C)

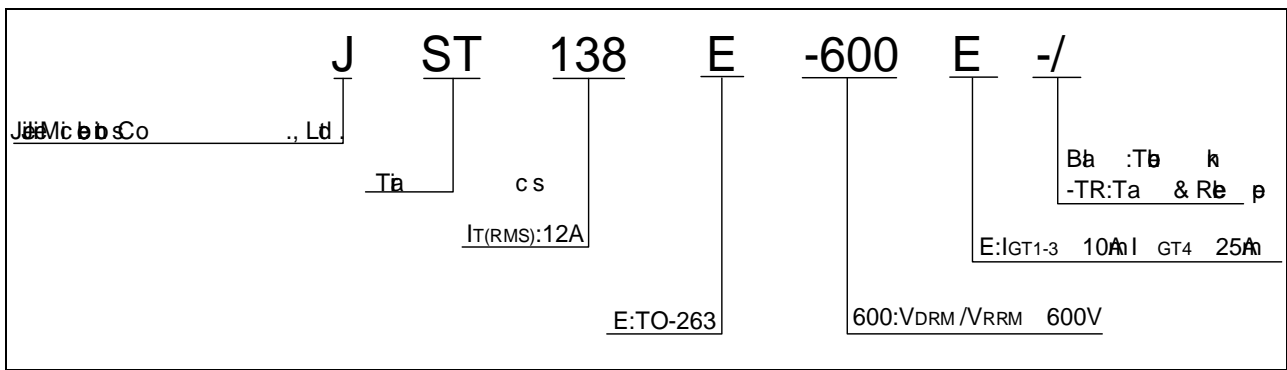
Symbol	Test Condition	Quadrant	Value		Unit
I _{GT}	V _D =12V R _L =33	- -	MAX.	10	A
				25	
V _{GT}		ALL	MAX.	1	V
V _{GD}	V _D =V _{DRM} T _j =125 R _L =3.3K	ALL	MIN.	0.2	V
I _L	I _G =1.2I _{GT}	- -	MAX.	25	A
				35	
I _H	I _T =500A		MAX.	25	A
dV/dt	V _D =400V Ga nT j=25		MIN.	150	V s
(dV/dt) _{crit}	(dV/dt) _{crit} = 5A/nT j=110		MIN.	5	
t ₀	I _G =40A I _A =200A I _R =20A T _j =25		TYP.	3	s
t ₆				30	

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit
V _{TM}	I _{TM} =15A t _p =380 s T _j =25	1.6	V

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ORDERING INFORMATION



MARKING

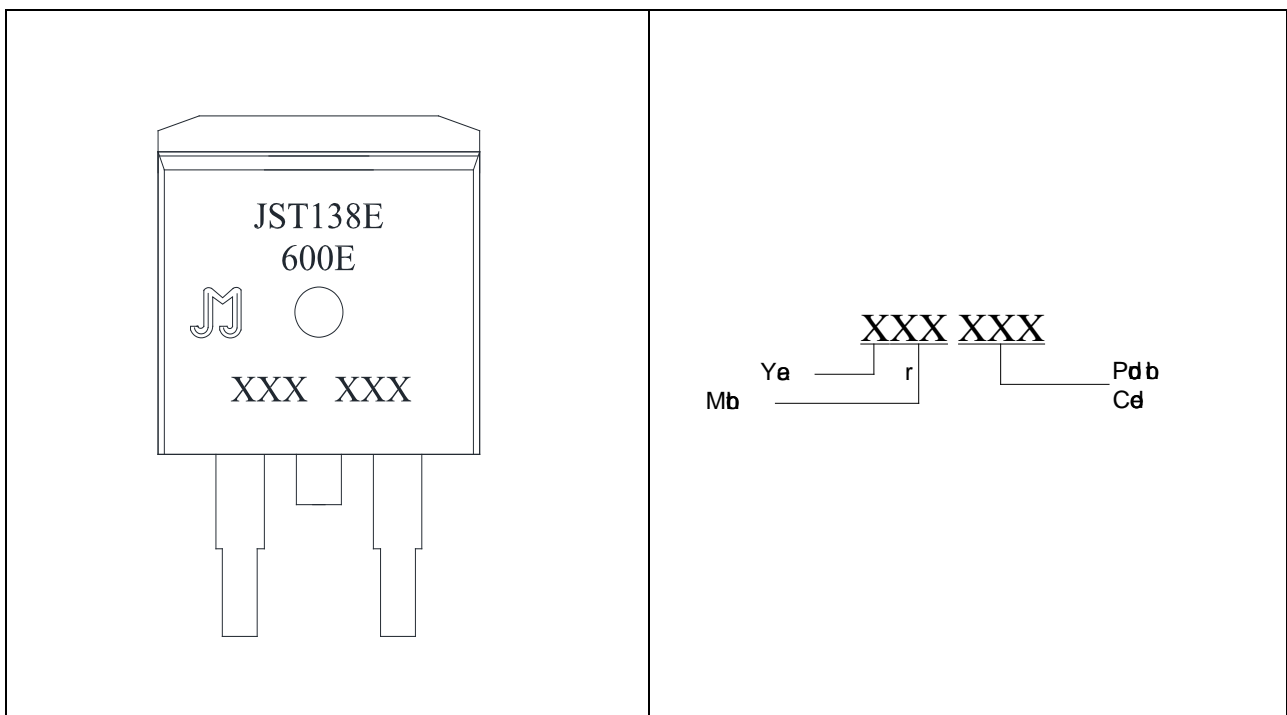
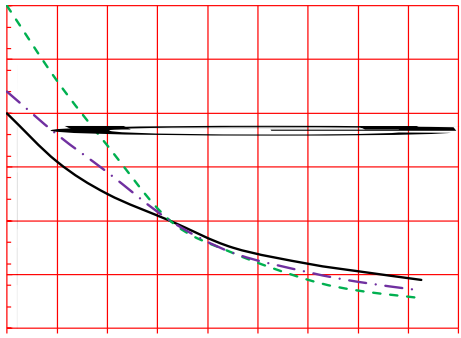
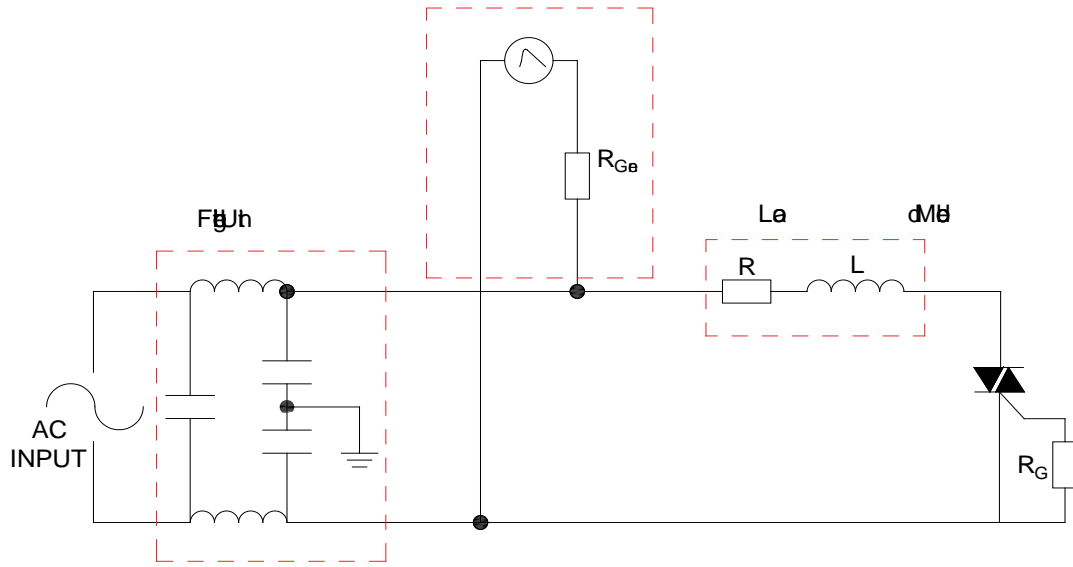


FIG.7: Rb α β γ δ
 ϵ ζ η θ ι κ λ μ ν ξ \omicron π ρ σ τ υ ϕ χ ψ ω

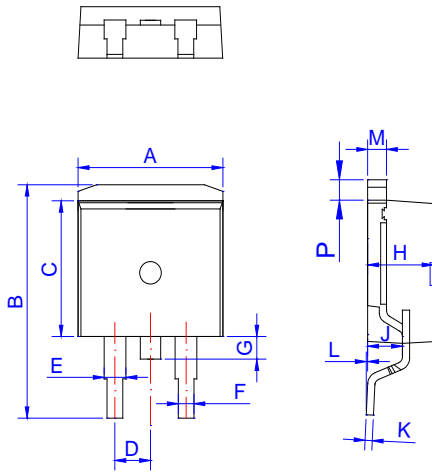




ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST138E-600E	600	10	25	TO-263	50	Tube

PACKAGE MECHANICAL DATA



Ré	Din					
	Min			Max		
	Min	Tp	Ma	Min x	Tp	Ma
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		2.70	0.094		0.106
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033
G	1.00		1.50	0.039		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
P	1.20		1.50	0.047		0.059

FOOTPRINT-TO-263 (dimensions in mm)



DELIVERY MODE

