

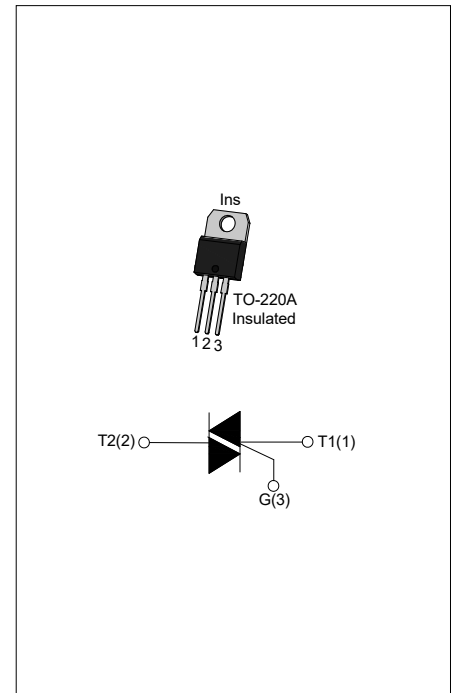


JST12A-600B 12A TRIACs

Rev.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JST12A-600B triacs provide high dv/dt rate with strong resistance to electromagnetic interface. With high commutation performances, From all three terminals to external heatsink, JST12A-600B provides a rated insulation voltage of 2500 V_{RMS}, complying with UL standards (File ref: E252906). Package TO-220B is RoHS compliant. (2011/65/EU)



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	12	A
V_{DRM} / V_{RRM}	600	V

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	°C
Operating junction temperature range		T_j	-40-125	°C
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	TO-220A(Ins) ($T_c=80^\circ\text{C}$)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I_{TSM}	120	A
I^2t value for fusing ($t_p=10\text{ms}$)		I^2t	78	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	I - II - III	di/dt	50	$\text{A}/\mu\text{s}$
Peak gate current		I_{GM}	4	A
Average gate power dissipation		$P_{G(AV)}$	1	W
Peak gate power		P_{GM}	5	W

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	$V_D=12\text{V}$ $R_L=33\Omega$	I - II -III	MAX	50	mA
		IV		70	
V_{GT}		ALL	MAX	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3\text{K}\Omega$	ALL	MIN	0.2	V
I_L	$I_G=1.2I_{GT}$	I -III-IV	MAX	50	mA
		II		100	
I_H	$I_T=100\text{mA}$		MAX	50	mA
dv/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	500	V/ μs
(dv/dt) _c	(di/dt) _c =5.3A/ms $T_j=125^\circ\text{C}$		MIN	10	V/ μs

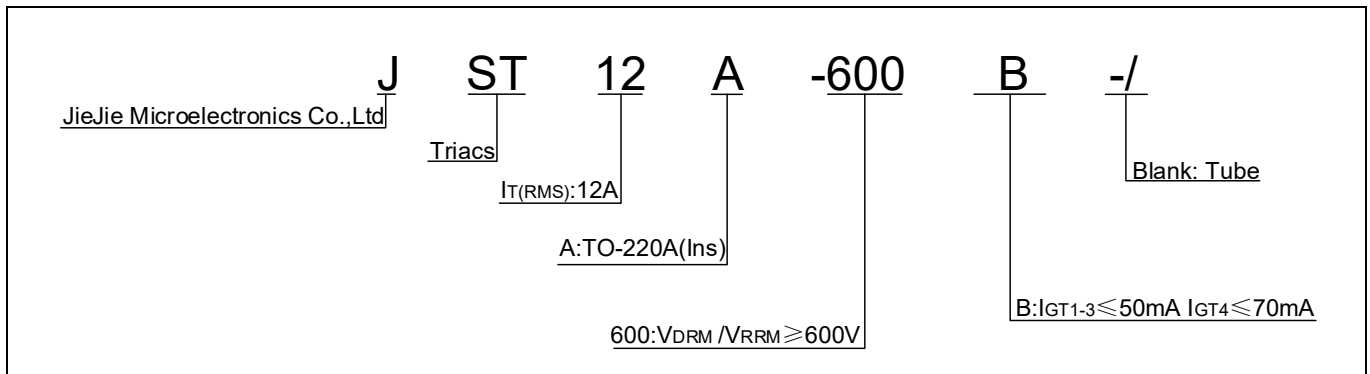
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=17\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
V_{TO}	Threshold voltage	$T_j=125^\circ\text{C}$	0.95	V
R_d	Dynamic resistance	$T_j=125^\circ\text{C}$	26	m Ω
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=125^\circ\text{C}$	1	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)	2.5	$^\circ\text{C}/\text{W}$

ORDERING INFORMATION



MARKING

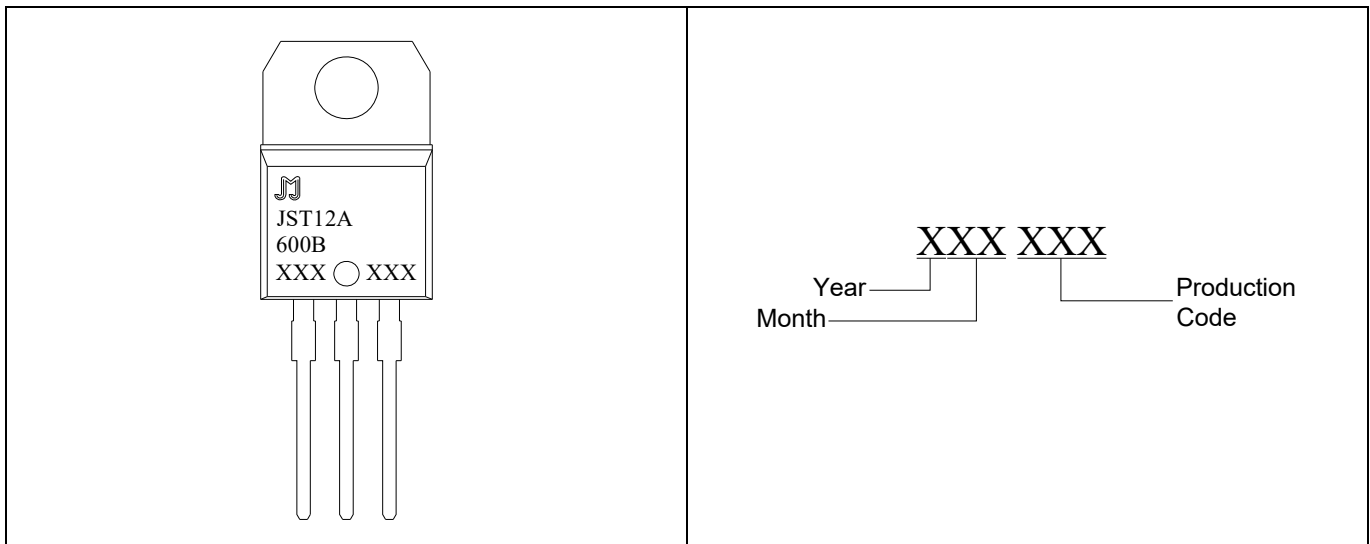


FIG.1 Maximum power dissipation versus RMS on-state current

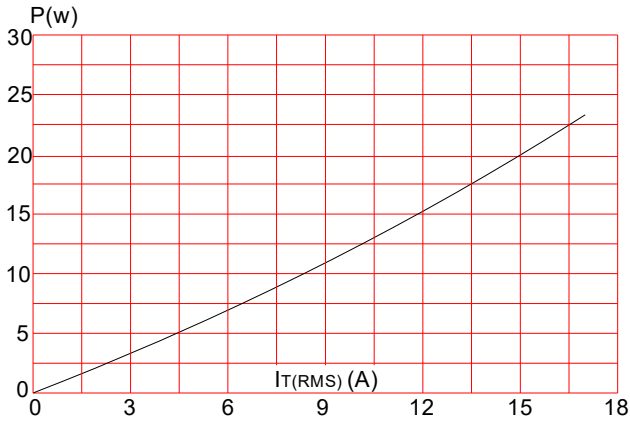


FIG.3: Surge peak on-state current versus number of cycles

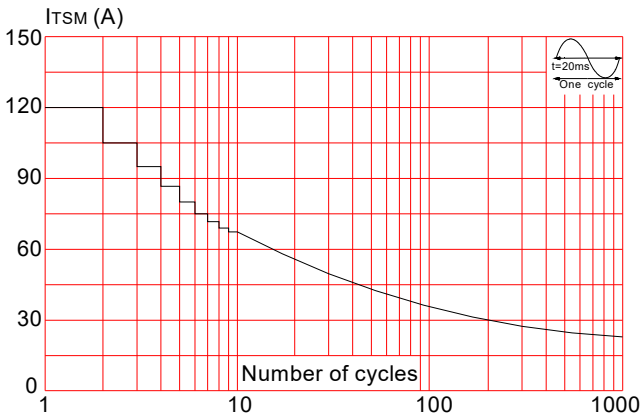


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t (di/dt (I-II-III) $< 50\text{A}/\mu\text{s}$)

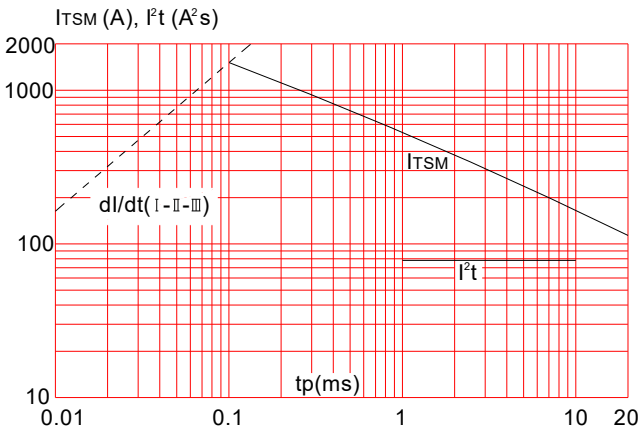


FIG.2: RMS on-state current versus case temperature

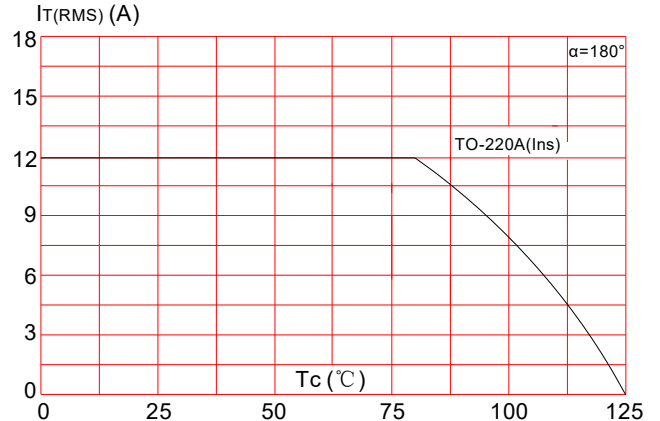


FIG.4: On-state characteristics (maximum values)

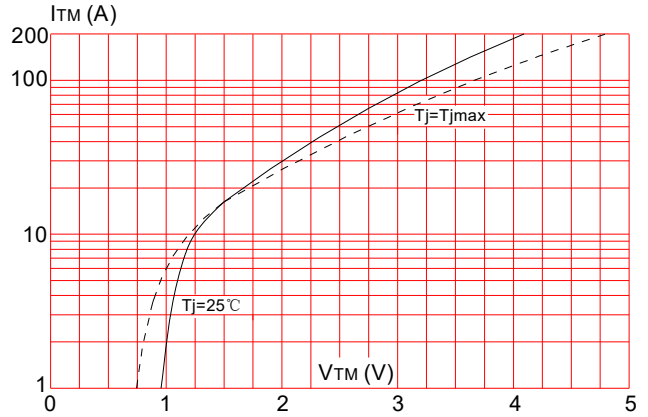
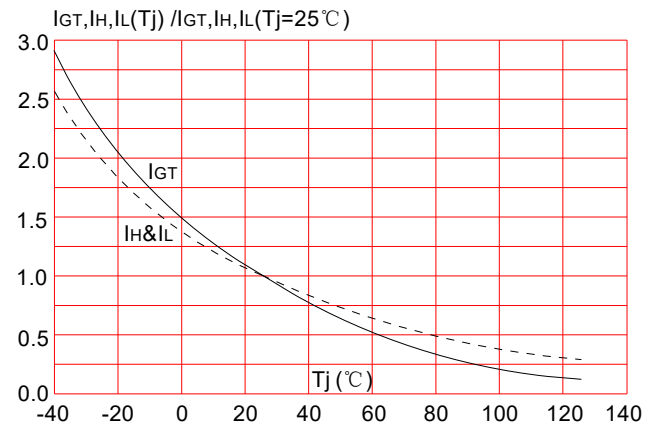


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



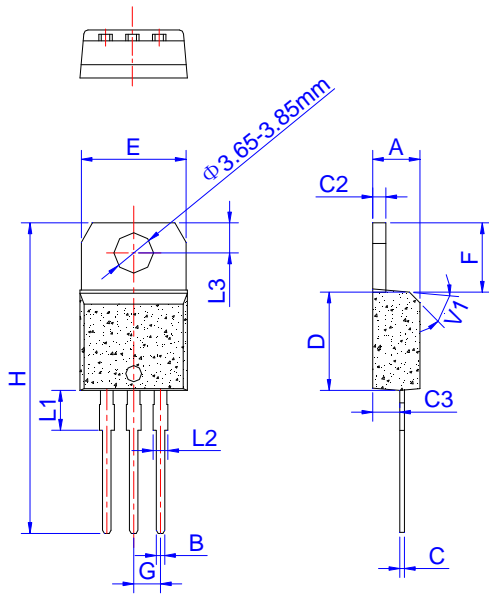
ORDERING INFORMATION

Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		I - II -III	IV			
JST12A-600B	600	50	70	TO-220A(Ins)	50	Tube

Document Revision History

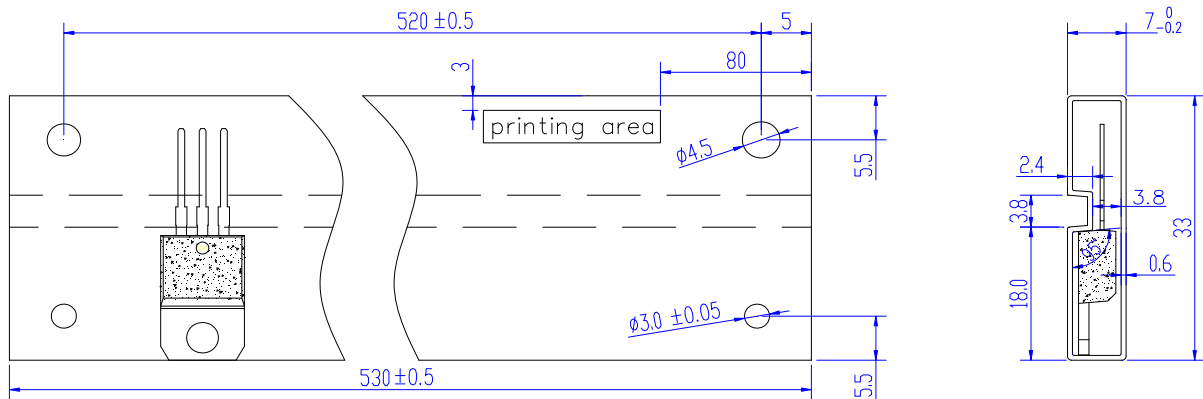
Date	Revision	Changes
Mar 15, 2022	1	Last update

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	


DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	5,000



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 ©2022 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JW\(捷捷微\)](#)