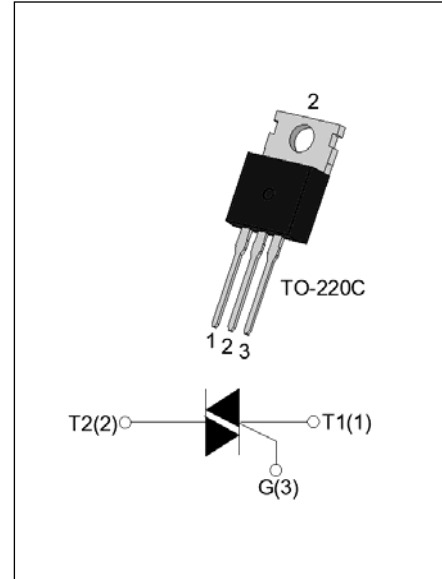


## DESCRIPTION:

The JST08C-600B 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. From T2 terminals to external heatsink. Package TO-220C is RoHS compliant.

## MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT} / / /$	50/50/50/70	mA



## ABSOLUTE MAXIMUM RATINGS

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 ( $T_c = 108^\circ\text{C}$ )	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	80	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		88	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	32	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ )	-	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
Peak pulse voltage ( $T_j=25^\circ\text{C}$ ; non-repetitive, off-state; FIG.7)	$V_{PP}$	1	kV



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

$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	50	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
				100	
$I_H$	$I_T=200mA$		MAX.	60	mA
dV/dt	$V_D=400V$ Gate Open $T_j=125$		MIN.	1200	V/ $\mu s$
(dV/dt) <sub>c</sub>	(dI/dt) <sub>c</sub> =3.5A/ms, $T_j=125$		MIN.	12	V/ $\mu s$
$t_{on}$	$I_G=80mA I_A=400mA I_R=40mA$ $T_j=25$		TYP.	5	$\mu s$
$t_{off}$				30	

## STATIC CHARACTERISTICS

$V_{TM}$	$I_{TM}=11A t_p=380\mu s$	$T_j=25$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=125$	0.81	V
$R_D$	Dynamic resistance	$T_j=125$	44	m
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	$\mu A$
$I_{RRM}$		$T_j=125$	0.25	mA

## THERMAL RESISTANCES

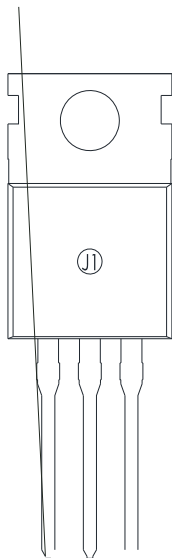
$R_{th(j-c)}$	junction to case (AC)	1.5	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W



## ORDERING INFORMATION

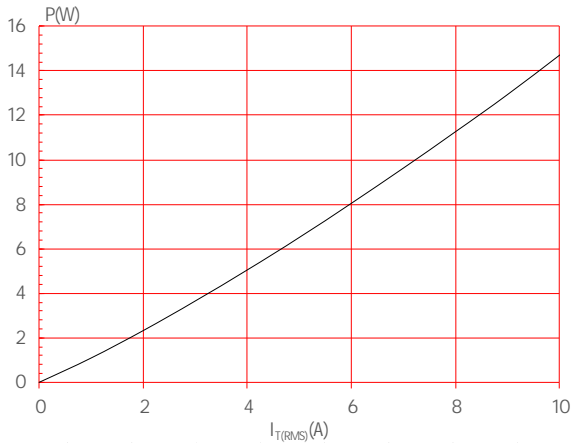
<b>J</b>	<b>ST</b>	<b>08</b>	<b>C</b>	<b>-600</b>	<b>B</b>
JieJie Microelectronics Co., Ltd	Triacs	$I_{T(RMS)}: 8A$	C: TO-220C	600: $V_{DRM} / V_{RRM} \quad 600V$	B: $I_{GT1-3} \quad 50mA \quad I_{GT4} \quad 70mA$

## MARKING

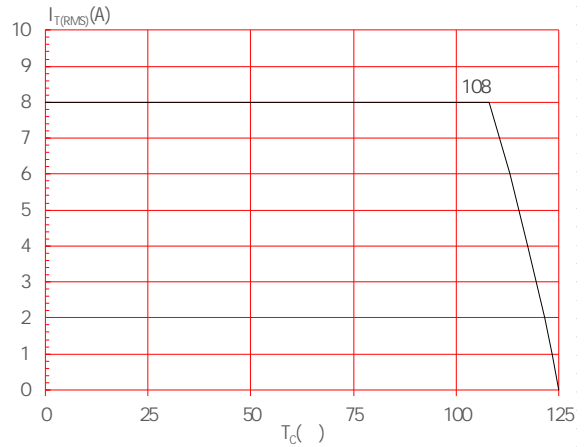




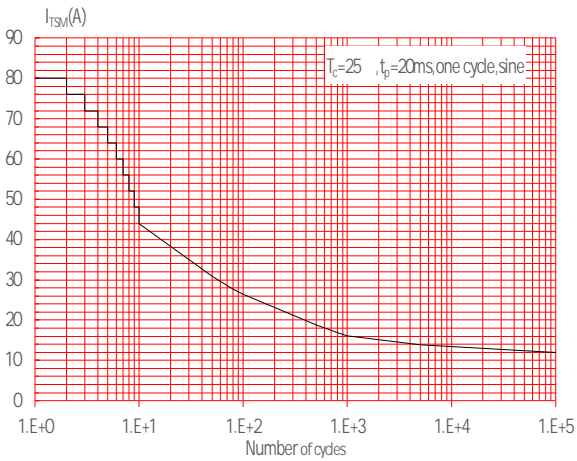
Maximum power dissipation versus RMS on-state current



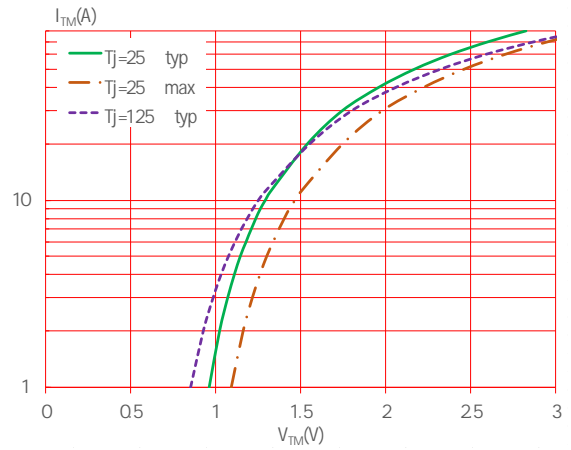
RMS on-state current versus case temperature



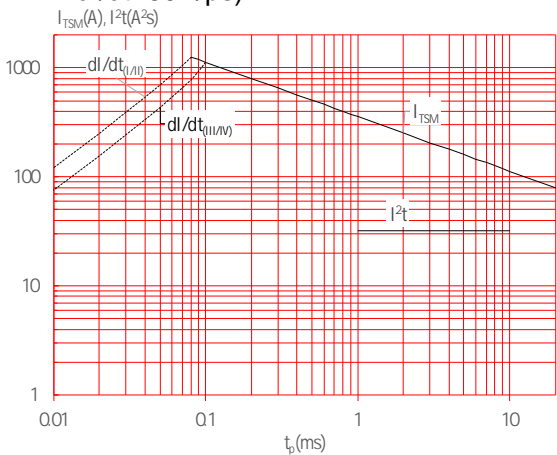
Surge peak on-state current versus number of cycles



On-state characteristics



Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$ , and corresponding value of  $I^2t$  ( $dI/dt < 100\text{A}/\mu\text{s}$ ;  $dI/dt < 50\text{A}/\mu\text{s}$ )



Relative variations of gate trigger current, holding current and latching current versus junction temperature

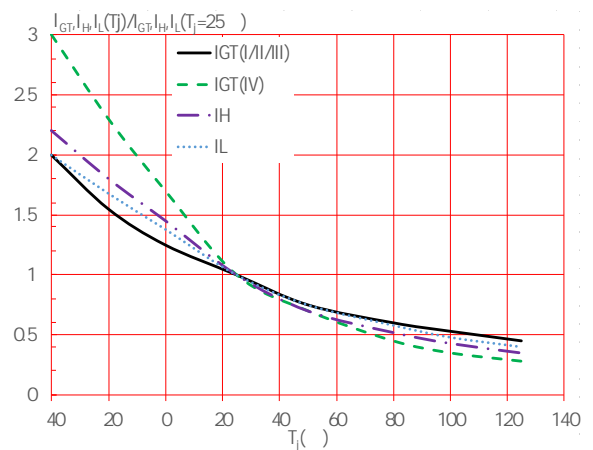
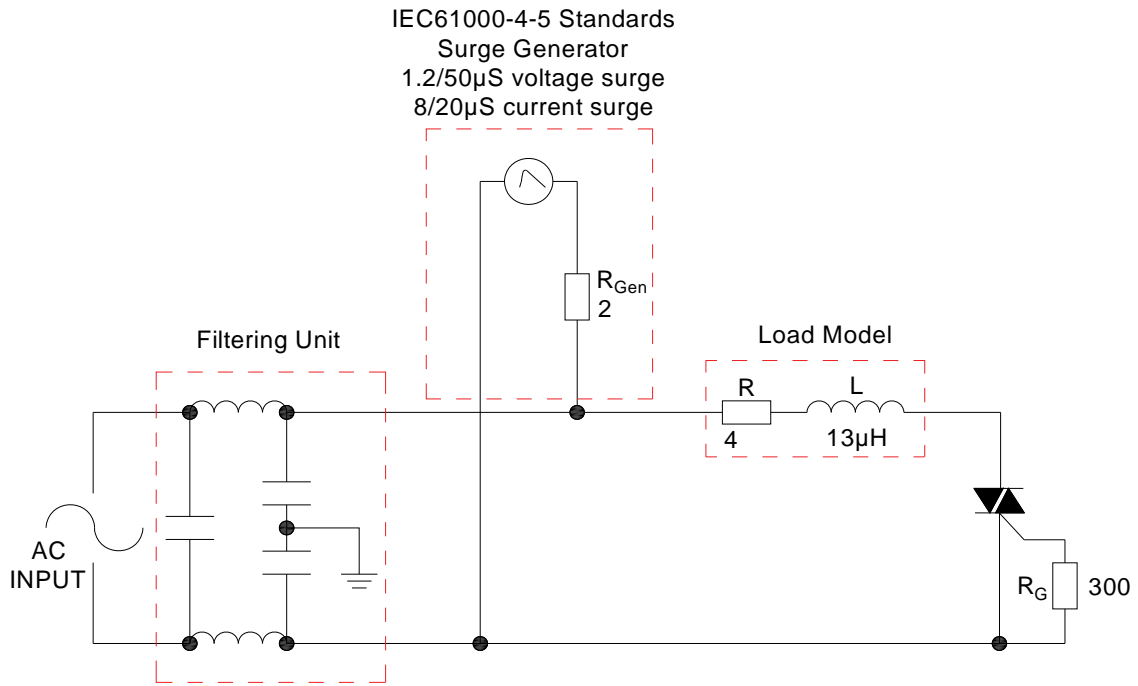


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



## SHAPING AND SOLDERING PARAMETERS

Refer to Instructions for installation of plastic-sealed in-line power devices released by JieJie.



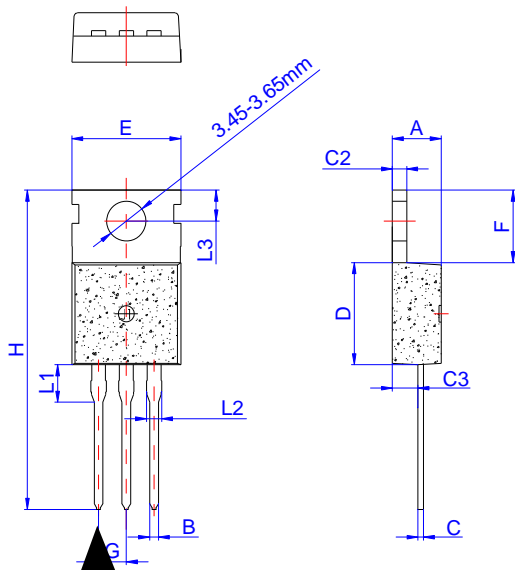
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## ORDERING INFORMATION


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

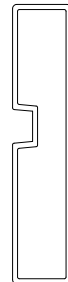
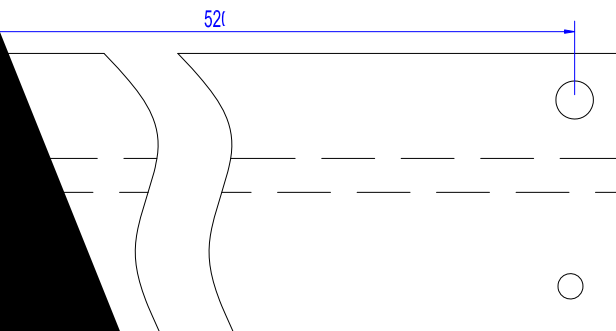


## PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.25		1.35	0.049		0.053
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1	2.70		3.30	0.106		0.130
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116

## DELIVERY MODE





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