



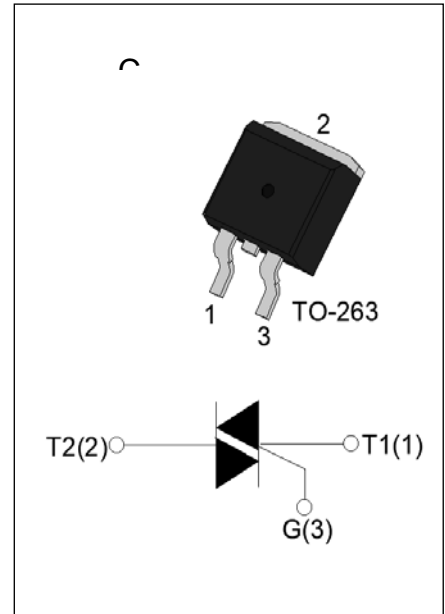
JST16E-600B 16E TRIAC

Rev.A.1.0

DESCRIPTION:

The JST16E-600B is a

TO-263 package



MAIN FEATURES

Symbol	Value	Unit
$I_T$	16	A (RMS)
$V_{DRM} / V_{RRM}$	600	V
$t_{GT} / / /$	50/50/50/70	ms

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature	$T_S$	-40-150	°C
Operating temperature	T	-40-125	°C
Repetitive peak reverse voltage (at $T = 25^\circ\text{C}$ )	$V_{DRM}$	600	V
Repetitive peak forward voltage (at $T = 25^\circ\text{C}$ )	$V_{RRM}$	600	V
RMS on-state current (at $T = 25^\circ\text{C}$ )	$I_T$	16	A (RMS)
Non-repetitive surge peak current (at $T = 25^\circ\text{C}$ , $p=20\mu\text{s}$ )	$I_{TSM}$	160	A
Non-repetitive surge peak current (at $T = 25^\circ\text{C}$ , $p=16.6\mu\text{s}$ )		176	
Forward breakover time (at $T = 25^\circ\text{C}$ , $p=10\mu\text{s}$ )	$t_t$	128	μs
Gate trigger current (at $T = 125^\circ\text{C}$ , $I_G = 2 \times I_{GT}$ , $f=100\text{Hz}$ )	$dI/dt$	100	A/μs
		50	
Peak gate current (at $T = 125^\circ\text{C}$ , $p=20\mu\text{s}$ )	$I_{GM}$	4	A
Peak gate power (at $T = 125^\circ\text{C}$ )	$P_G$	0.5	W
Peak gate power	$P_{GM}$	10	W
Peak voltage (at $T = 25^\circ\text{C}$ ; $p=20\mu\text{s}$ ; $f=100\text{Hz}$ ; $V_{GT}$ ; FIG. 8)	$V_p$	1	kV

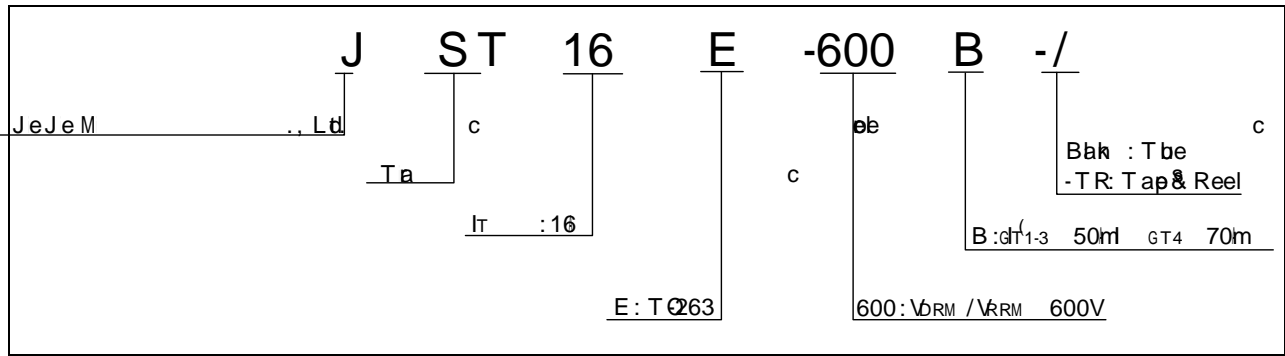
ELECTRICAL CHARACTERISTICS

Symbol	Test Condition	Quadrant	Value	Unit
$t_{BT}$	$V_D=12V R_L=33$	- -	MAX. 50	m
			70	
$V_{GT}$		ALL	MAX. 1	V
$V_{GD}$	$V_D=V_{DRM} T=125$ $R_L=3.3K$	ALL	MIN. 0.2	V
$I_L$	$I_B=1.2I_{BT}$	- -	MAX. 70	m
			100	
$t_H$	$I_T=500m$		MAX. 60	m
$dV/dt$	$V_D=400V$ Gate Op $T=125$		MIN. 1200	$V/\mu s$
	$T=125$		MIN. (12)	$V/\mu s$
$t_o$	$I_B=80m I=400m I_R=40m$ $T=25$		5	$\mu s$
$t_{tr}$			50	

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=22.5t_p=380 \mu s$ $T=25$	1.5	$V$
$V_{TO}$	Threshold Voltage $T=125$	0.77	$V$
$R_D$	Drain Resistance $T=125$	30	$m\Omega$
$I_{BRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T=25$	5
$I_{RRM}$		$T=125$	0.4

ORDERING INFORMATION



MARKING

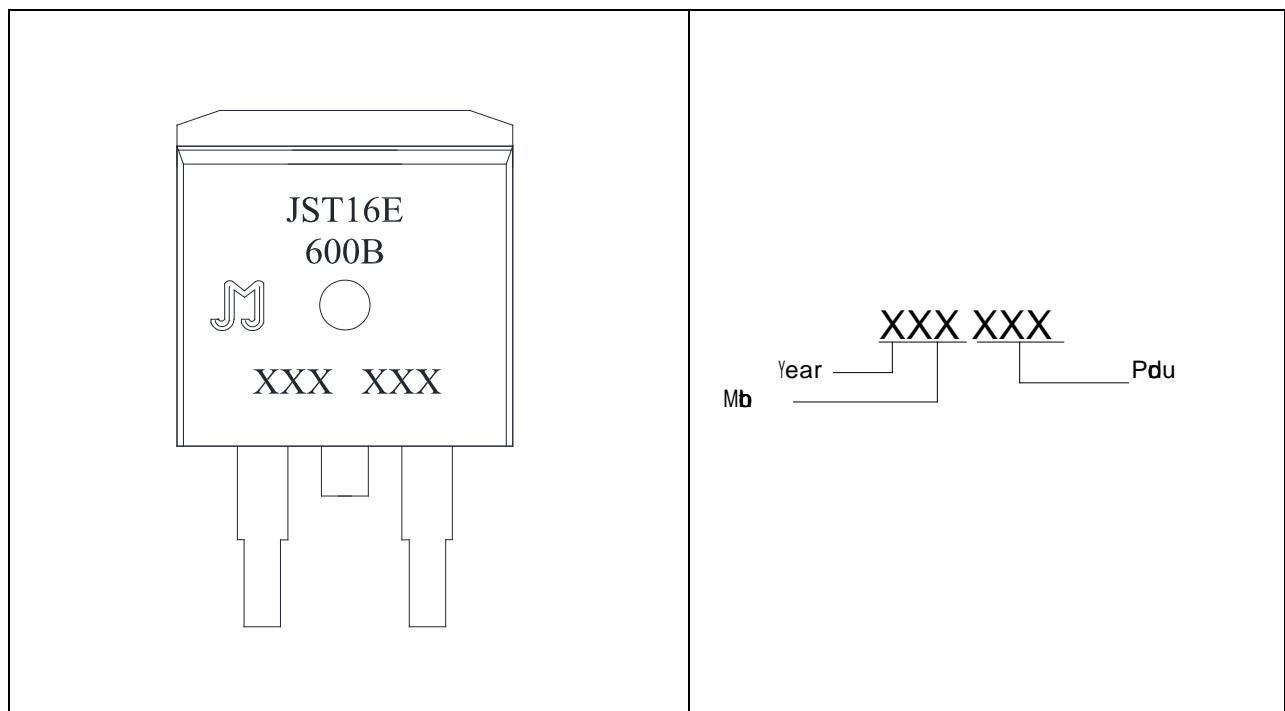


FIG.1 Maximum RMS

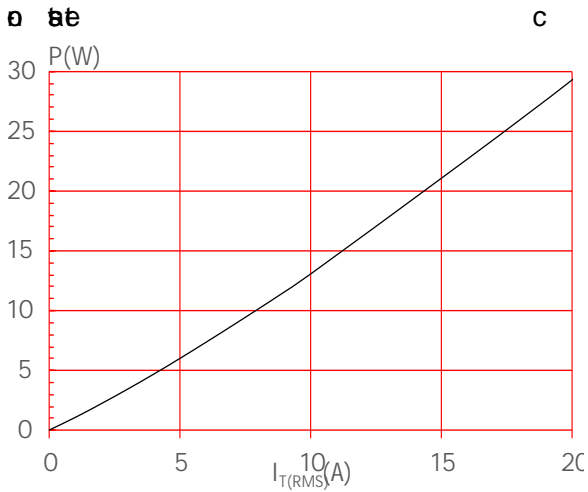


FIG.2: RMS current

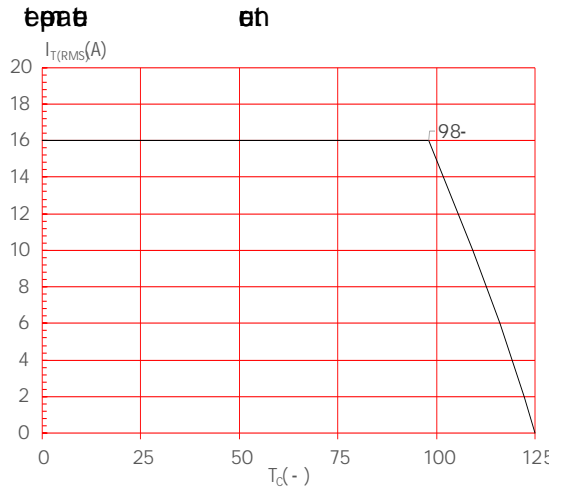


FIG.3: RMS current

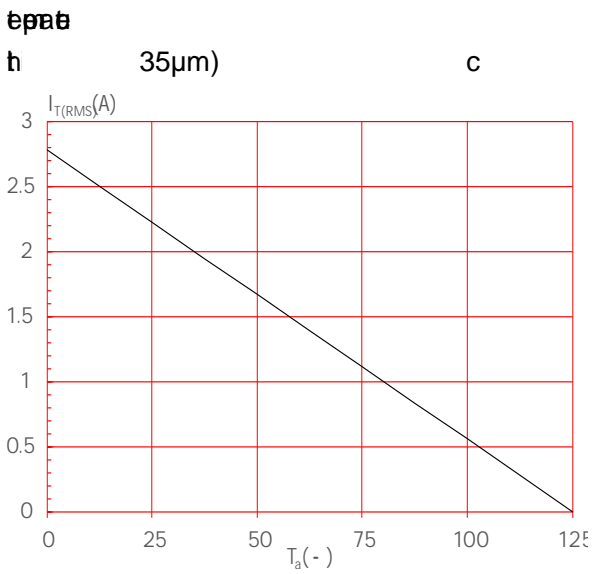


FIG.4: Surge peak current

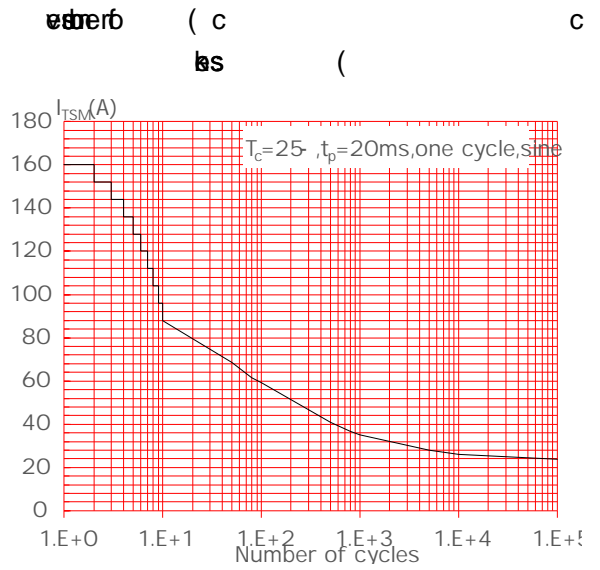


FIG.5: On-state

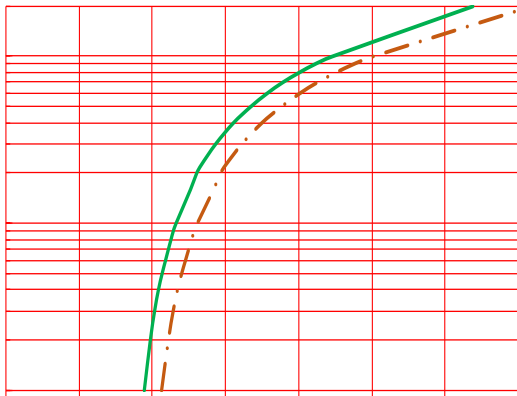
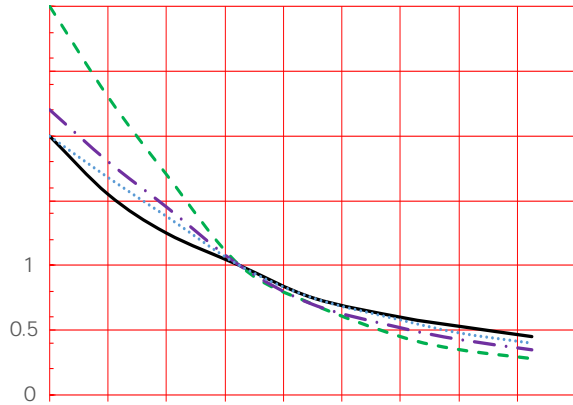
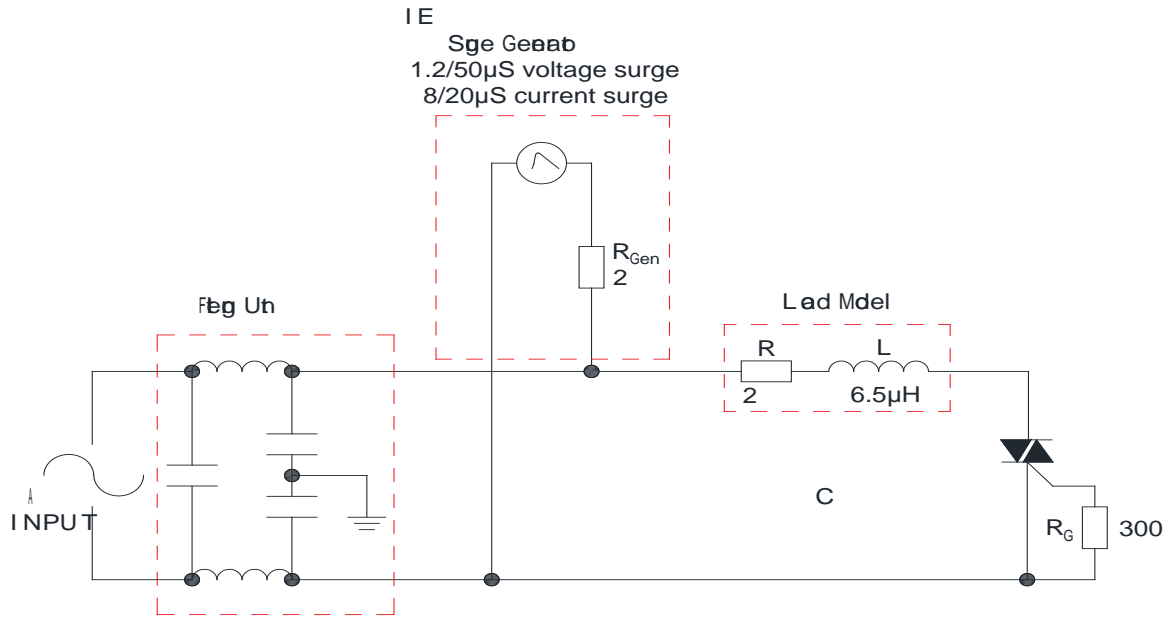


FIG.6: No-load surge peak current

$t_p < 20\mu s$   
 $dI/dt \leq 100A/\mu s$ ;  $dI/dt \leq 50A/\mu s$

FIG.7: Relative humidity vs. storage time





SOLDERING PARAMETERS

Ref

Pb-free asy

C

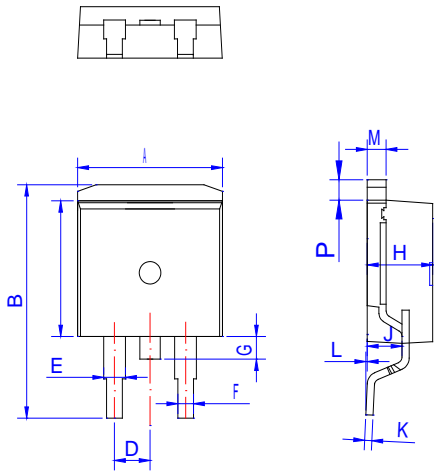
## ORDERING INFORMATION

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		H- I- J	K			
JST16E-600B	600	50	70	TO-263	50	Tube
JST16E-600B-TR					800	Tape & Reel

**Document Revision History**

Date	Rev	Label
Apr. 14, 2023	A. 1.0	Launched

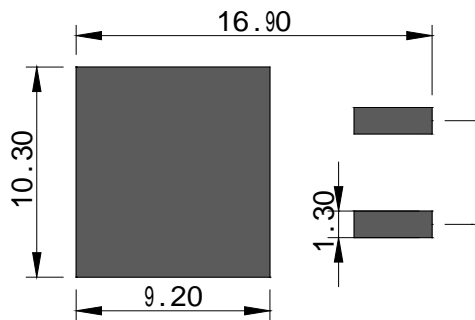
PACKAGE MECHANICAL DATA



Ref.	Dmm					
	Mates			In		
	Mn	Tp	Max	Mn	Tp	Max
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
	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

C


FOOTPRINT TO-263 (dimensions in mm)





DELIVERY MODE



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