



JST08E-600BW 8A TRIAC

Rev.A.1.1

DESCRIPTION:

T_{08E} -600BW 8A TRIACby It_{ON} / OFF inP_{ON} inP_{OFF} inin P_{ON} ST08E -600BWP_{ON}P_{OFF} -63 dB in

MAIN FEATURES

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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature	T_s	-40 ~ 150	
Operating temperature	T_j	-40 ~ 150	
Repetitive peak reverse voltage ($f \leq 100$ Hz)	V_{DRM}	600	V
Peak reverse voltage ($f \leq 100$ Hz)	V_{RRM}	600	V
RMS current ($T_c \leq 107^\circ\text{C}$)	$I_{T(RMS)}$	8	A
Non-repetitive peak current ($t_p \leq 10$ ms, $T_j \leq 150^\circ\text{C}$)	I_{TSM}	80	A
Non-repetitive peak current ($t_p \leq 16.6$ ms, $T_j \leq 150^\circ\text{C}$)		88	
Peak surge current ($p = 10$ ms, $T_j \leq 150^\circ\text{C}$)	$I^2 t$	32	A ² s
Gate trigger current ($I_G = 2 \times I_{GT}$, $f = 100$ Hz, $T_j \leq 150^\circ\text{C}$)	dI/dt	100	A/ μ s
Peak gate current ($p = 10$ μ s, $T_j \leq 150^\circ\text{C}$)	I_{GM}	4	A
Average power dissipation ($T_j \leq 150^\circ\text{C}$)	$P_{G(AV)}$	0.5	W
Peak power dissipation	P_{GM}	10	W

P_{tot} ($T_j=25^\circ\text{C}$; $\theta_{JA}=100^\circ\text{C/W}$; $R_{\theta JA}=8^\circ\text{C/W}$)	V_p	2.5	V
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ELECTRICAL CHARACTERISTICS

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=1\text{V}$ $R_s=33\Omega$	- -	MA	50	μA
V_{GT}		- -	MA	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=25^\circ\text{C}$ $R_s=3.3\Omega$	- -	MIN	0.2	V
I	$I_G=1 \cdot I_{GT}$	-	MA	50	μA
				90	
I_H	$I_T=100\mu\text{A}$		MA	50	μA
dV/dt	$V_D=400\text{V}$ V_{DO} $T_j=25^\circ\text{C}$		MIN	2000	V/ μs
(dI/dt)	$(dV/dt)=20\text{V}/\mu\text{s}$ $T_j=25^\circ\text{C}$		MIN	12	A/ μs
t_o	$I_G=80\mu\text{A}$ $I_A=40\mu\text{A}$ $I_R=40\mu\text{A}$ $T_j=25^\circ\text{C}$	TP		5	μs
t_b				50	

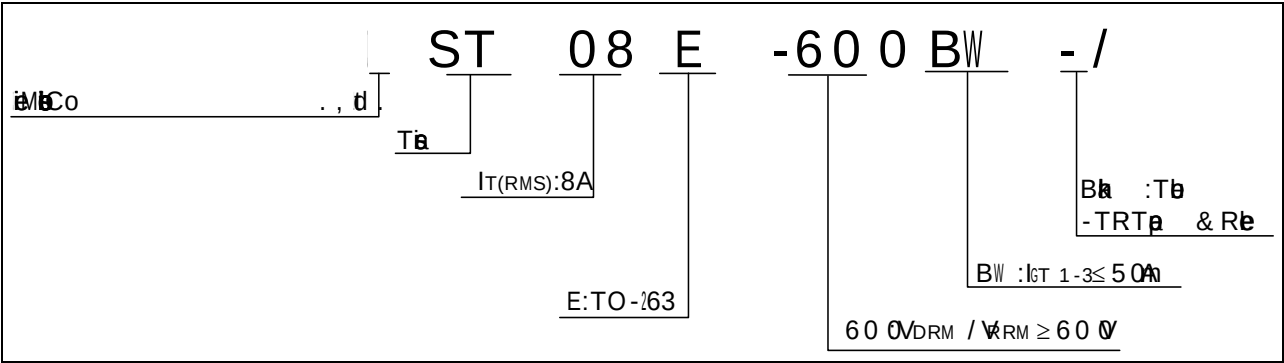
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=11\text{A}$ $t_p=38\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
V_{TO}	T_{th}	$T_j=25^\circ\text{C}$	0.8	V
R_D	D_{th}	$T_j=25^\circ\text{C}$	44	m Ω
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=25^\circ\text{C}$	0.25	μA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{\theta JA}$	$R_{\theta JA}(AC)$	1.6	$^\circ\text{C/W}$
$R_{\theta JA}$	$R_{\theta JA}(AC)$, $\text{if } S=2\text{m}^2$	45	$^\circ\text{C/W}$

ORDERING INFORMATION



MARKING

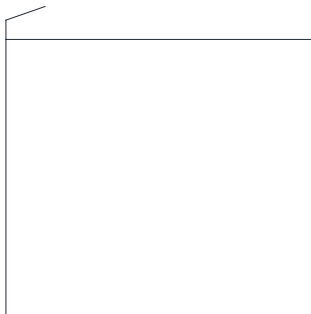


FIG.1: $P_{T(RMS)}$

$P(W)$

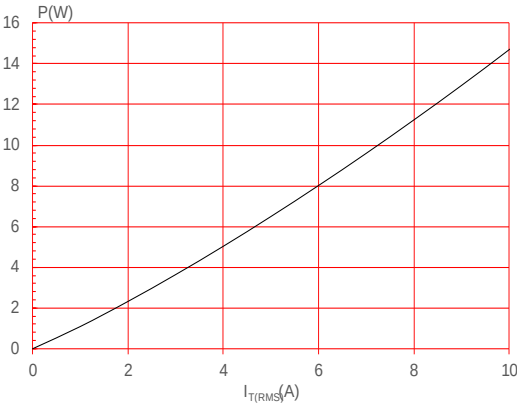


FIG.2: RMS θ t_a t_{es0}

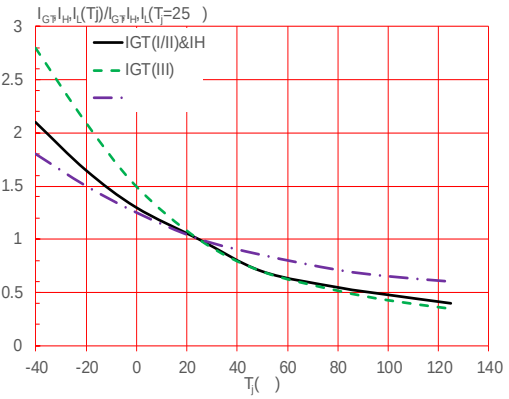
θ

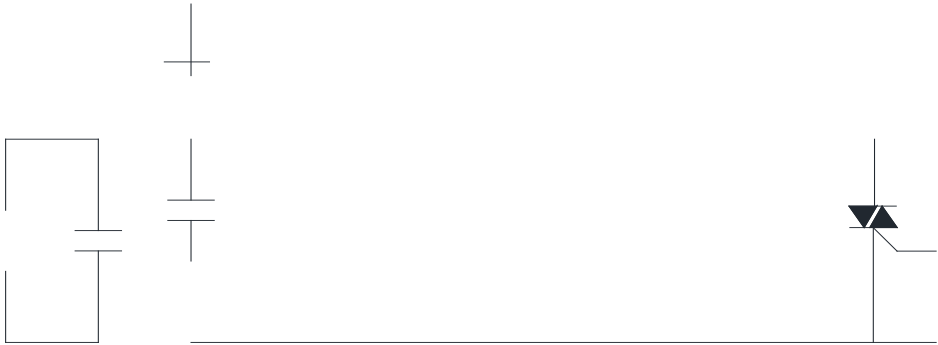


FIG.7: R_{DS(on)}

Unit

mΩ

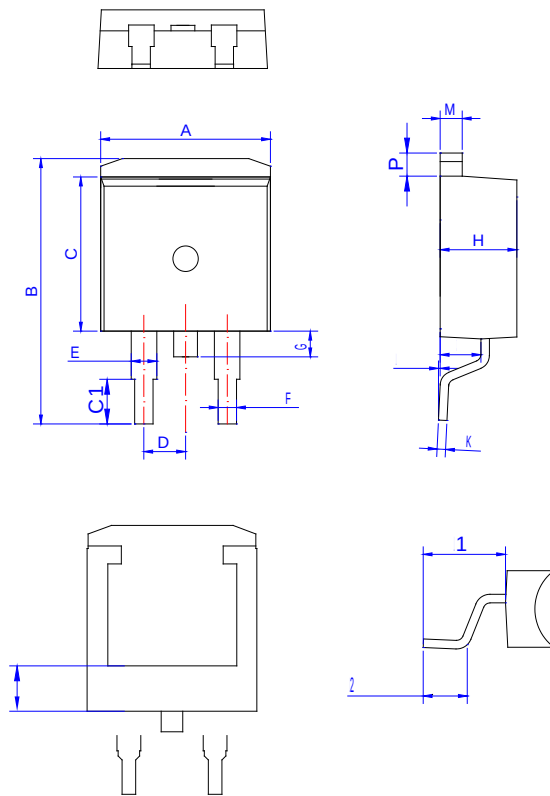




ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST08E-600BW	600	50	TO-263	50	Tube
JST08E-600BW-TR				800	

PACKAGE MECHANICAL DATA



Ré	Don					
	Min			Ils		
	Min	Typ	Ma	Min	Typ	Ma
A	9.90		10.10	0.390		0.400
B	14.70		15.80	0.579		0.600
C	9.40		9.60	0.370		0.378
D	1.40		1.70	0.094		0.106
E	1.10		1.50	0.047		0.059
F	0.75		0.85	0.019		0.033

-m