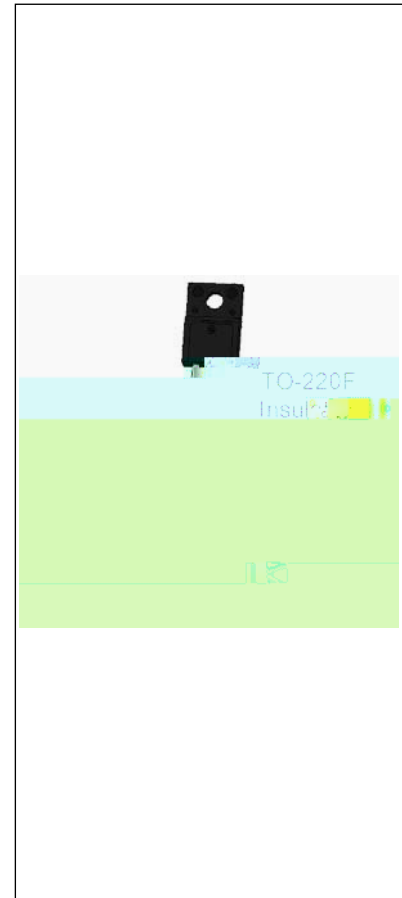




## JST06F-800TW 6A TRIAC

Rev.A.1.1

The JST06F-800TW 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. JST06F-800TW snubberless triac is especially recommended for use on inductive loads. It can be driven directly through the MCU I/O port. By using an external plastic package, JST06F-800TW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	6	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT} / /$	5/5/5	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-125	
Repetitive peak off-state voltage ( $T_j=25^\circ C$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	800	V
RMS on-state current ( $T_c=98^\circ C$ )	$I_{T(RMS)}$	6	A
Non repetitive surge peak on-state current (full cycle, $t_p=20ms$ , $T_j=25^\circ C$ )	$I_{TSM}$	65	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6ms$ , $T_j=25^\circ C$ )		72	
$I^2t$ value for fusing ( $t_p=10ms$ , $T_j=25^\circ C$ )	$I^2t$	21	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100Hz$ , $T_j=125^\circ C$ )	$di/dt$	50	$A/\mu s$

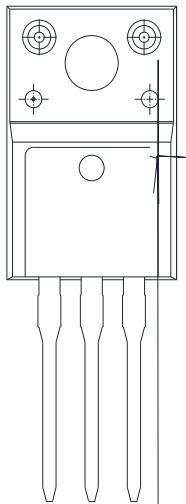
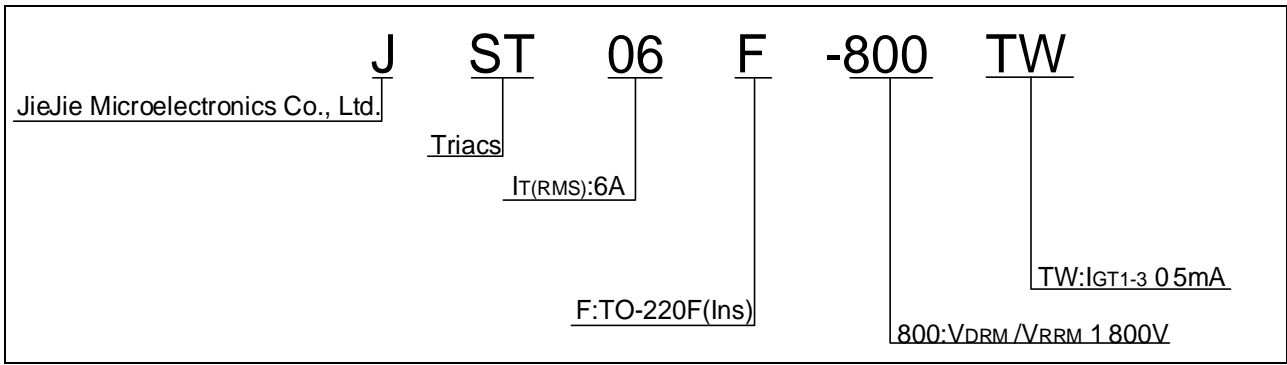
Peak gate current ( $t_p=20\mu s$ , $T_j=125$ )	$I_{GM}$	4	A
Average gate power dissipation ( $T_j=125$ )	$P_{G(AV)}$	0.5	W
Peak gate power	$P_{GM}$	10	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	3.5	kV

( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V$ $R_L=33$	- -	MAX.	5	mA
$V_{GT}$		- -	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k$	- -	MIN.	0.2	V
$I_L$	$I_G=1.2I_{GT}$	-	MAX.	10	mA
				15	
$I_H$	$I_T=100mA$		MAX.	10	mA
$dV/dt$	$V_D=540V$ Gate Open $T_j=125$		MIN.	100	V/ $\mu s$
$(dI/dt)_c$	$(dV/dt)_c=10V/\mu s$ , $T_j=125$		MIN.	0.5	A/ms
$t_{on}$	$I_G=10mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	2	$\mu s$
$t_{off}$				20	

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=8.5A$ $t_p=380\mu s$	$T_j=25$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=125$	0.82	V
$R_D$	Dynamic resistance	$T_j=125$	57	m
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	5	$\mu A$
$I_{RRM}$		$T_j=125$	0.3	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	3.2	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W



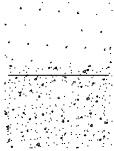


**JST06F-800TW**

Order code	Voltage V <sub>DRM</sub> /V <sub>RRM</sub> (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
<b>JST06F-800TW</b>	<b>800</b>	<b>5</b>	<b>TO-220F(Ins)</b>	<b>50</b>	<b>Tube</b>

**Document Revision History**

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.13, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



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