



## JST12F-800TW 12A TRIAC

Rev.A.1.1

### DESCRIPTION:

The JST12F-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. JST12F-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, JST12F-800TW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.

### MAIN FEATURES

### ABSOLUTE MAXIMUM RATINGS

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 ( $T_j=25$ )	$V_{DRM}$	800	V

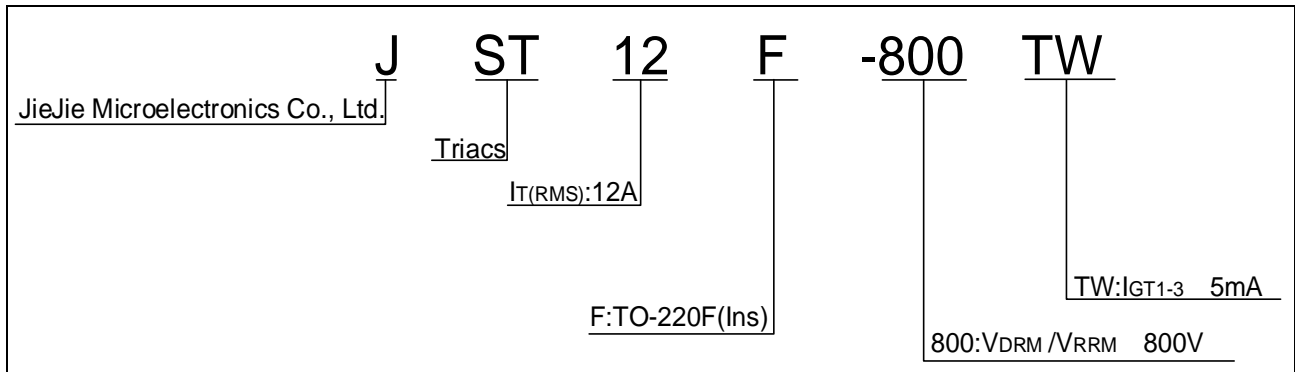
Repetitive peak rever I

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

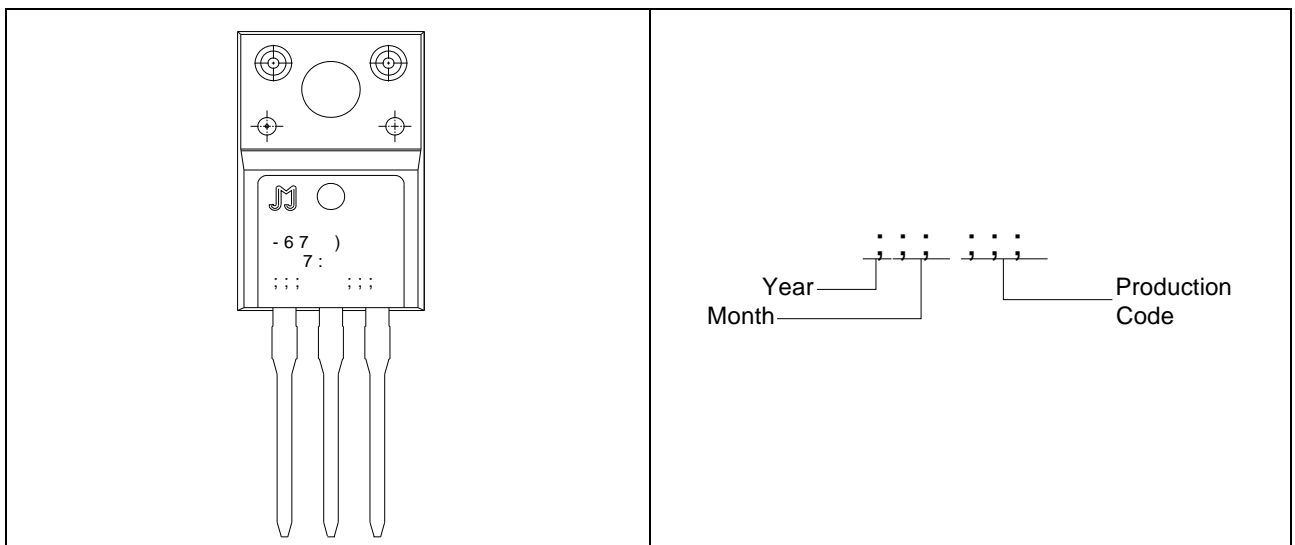
## ELECTRICAL CHARACTERISTICS ( $T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	5	mA
$V_{GT}$		- -	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM} T_j=125$				

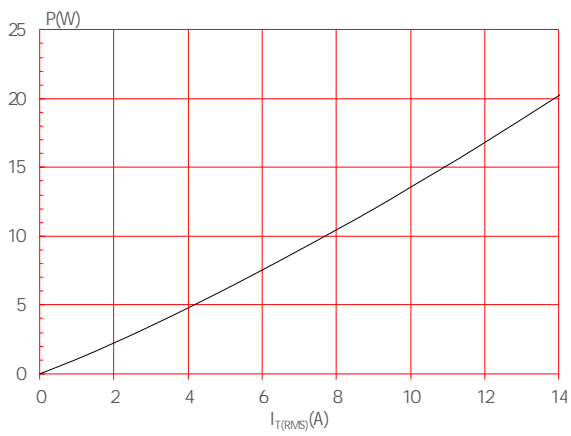
ORDERING INFORMATION



MARKING



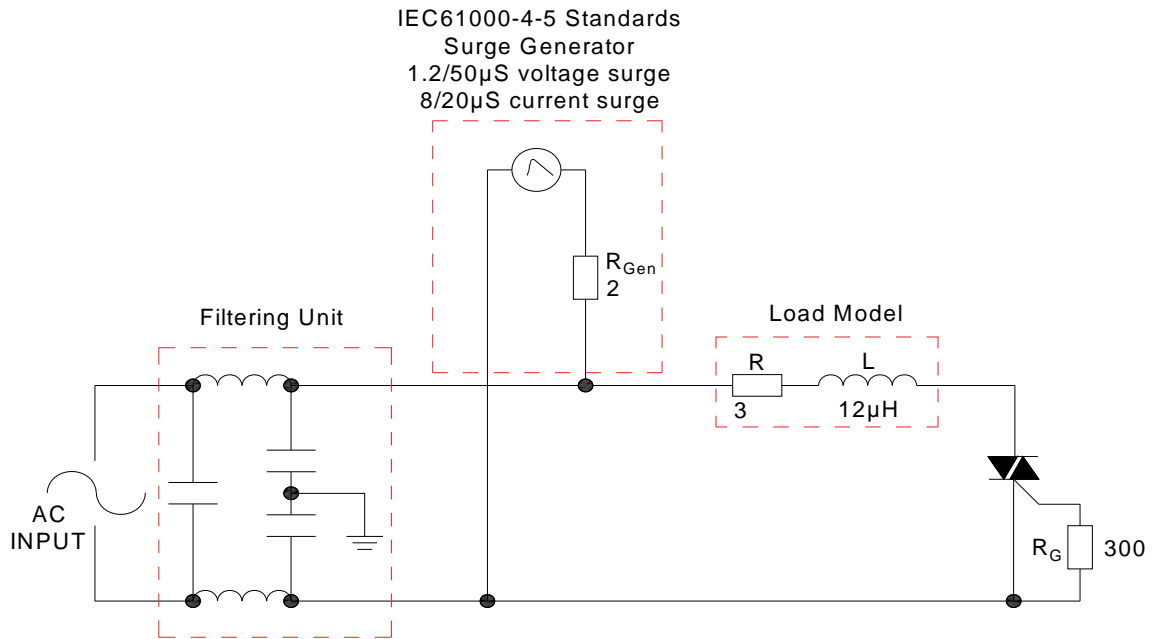
**FIG.1:** Maximum power dissipation versus RMS on-state current



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



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



## LEAD FORMING AND SOLDERING

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics.

**ORDERING INFORMATION**

Order code	Voltage V <sub>DRM</sub> /V <sub>RRM</sub> (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		H- I- J			
<b>JST12F-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

**PACKAGE MECHANICAL DATA**



Information furnished in this doc