



JST01V-800SW 1A TRIAC

Rev.A.1.1

**DESCRIPTION:**

The JST01V-800SW 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. JST01V-800SW snubberless triac is especially recommended for use on inductive loads. It can be driven directly through the MCU I/O port. Package SOT-223 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 ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	800	V
RMS on-state current ( $T_C \leq 100^\circ\text{C}$ )	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	15	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		16.5	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	1.25	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ )	$di/dt$	100	$\text{A/s}$
Peak gate current ( $t_p=20 \mu\text{s}$ , $T_j=125^\circ\text{C}$ )	$I_{GM}$	1	A

Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	4	kV
--	----------	---	----

### ELECTRICAL CHARACTERISTICS (unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	10	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.	20	mA
				40	
$I_H$	$I_T=100mA$		MAX.	15	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	300	V/s
(dI/dt) <sub>c</sub>	(dV/dt) <sub>c</sub> =10.9 $V_j=725$		MIN.	1	A/ms
$t_{on}$	$I_G=20mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	2.5	s
$t_{off}$				25	

### STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=1.4A t_p=380 \mu s$	$T_j=25$	1.3	V
$V_{TO}$	Threshold voltage	$T_j=125$	0.93	V
$R_D$	Dynamic resistance	$T_j=125$	146	m
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	A
$I_{RRM}$		$T_j=125$	0.15	mA

### THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	20	/W

ORDERING INFORMATION .

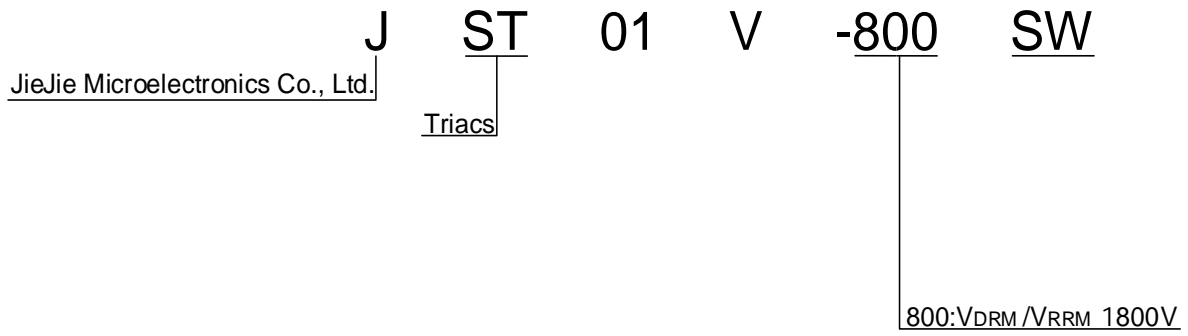


FIG.1: Maximum power dissipation versus RMS on-state current

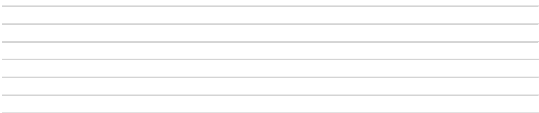


FIG.2: RMS on-state current versus case temperature





## ORDERING INFORMATION

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		H- I- J			
JST01V-800SW	800	10	SOT-223	4,000	Tape & Reel

## Document Revision History

Date	Revision	Changes
Apr.10, 2023	A.1.0	Last updated
Oct.24, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.50		1.80			
	2.90		3.10			
	0.60		0.86	-3.394	Td [(2)-.0 0 1B-. ]	TJ 01

H  
J

## DELIVERY MODE

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-		12.30	-		0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0		1.55	1.60		0.061	0.063
D1		-	-			
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20		1.575	1.583
A0	6.85	6.95	7.05			
B0	7.15	7.25	7.35			
K0	1.95	2.05	2.15			
T	0.20	0.25	0.30			

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelect(i)6 (1.29 P <</ ) fue M