



JST01V-1000SW 1A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST01V-1000SW 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-1000SW 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}	1000	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1000	V
RMS on-state current ($T_C=100^\circ\text{C}$)	$I_{T(RMS)}$	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	A^2s
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	A/s
Peak gate current ($t_p=20\text{ }\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	1	A



Peak pulse voltage ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG.8)	V_{pp}	4	kV
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ELECTRICAL CHARACTERISTICS (unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT} $V_{GT}--$	$V_D=12V$ $R_L=33\Omega$ MAXMAX	- -	MAX.	10	mA

ORDERING INFORMATION

J	ST	01	V	-1000	SW
JieJie Microelectronics Co., Ltd.	Triacs	$I_T(RMS):1A$	$V:SOT-223$	$1000:V_{DRM}/V_{RRM} \quad 1000V$	$SW:I_{GT1-3} \quad 10mA$

MARKING

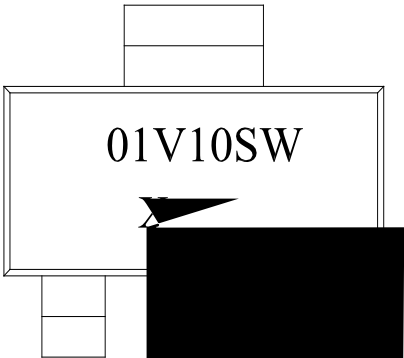


FIG.1: Maximum power dissipation versus RMS on-state current

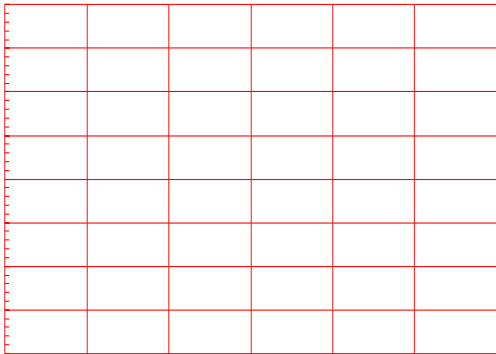


FIG.2: RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

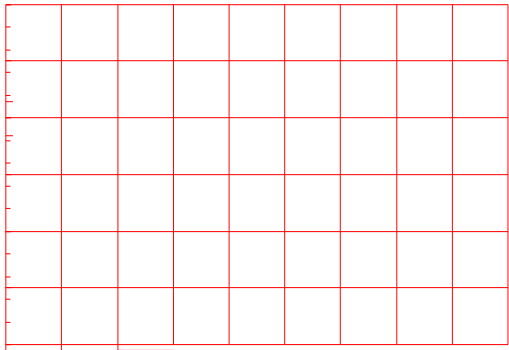


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST01V-1000SW	1000	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 R

PACKAGE MECHANICAL DATA

Ref.	Dimensions				
	Millimeters			Inches	
	Min.	Typ.	Max.	Min.	Typ.

DELIVERY MODE

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W						
E						

Information furnished