JST41SJ-1600BW 40A TRIAC

Rev.A.2.1

DESCRIPTION:

The JST41SJ-1600BW 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. JST41SJ-1600BW snubberless triac is especially recommended for use on inductive loads. Package TO-247J 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}	1600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1600	V
RMS on-state current (T_C 76)	$I_{T(RMS)}$	40	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	400	A
Non repetitive surge peak on-state current (full cycle , t_p			

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	1.2	kV

ELECTRICAL CHARACTERISTICS(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	50	mA
V_{GT}		- -	MAX.	1.3	V
V_{GD}	V_D =V_{DRM} T_j=125 R_L =3.3kΩ	- -	MIN.	0.2	V
I_L	I_G=1.2I_{GT}	-	MAX.	80	mA
				200	
I_H	I_T =500mA		MAX.	100	mA
dV/dt	V_D=1070V Gate Open T_j=125		MIN.	1500	V/μs
(dI/dt)c	(dV/dt)c=20V/μs T_j=125		MIN.	25	A/ms
t_{on}	I_G=80mA I_A=400mA I_R=40mA T_j=25		TYP.	10	μs
t_{off}				70	

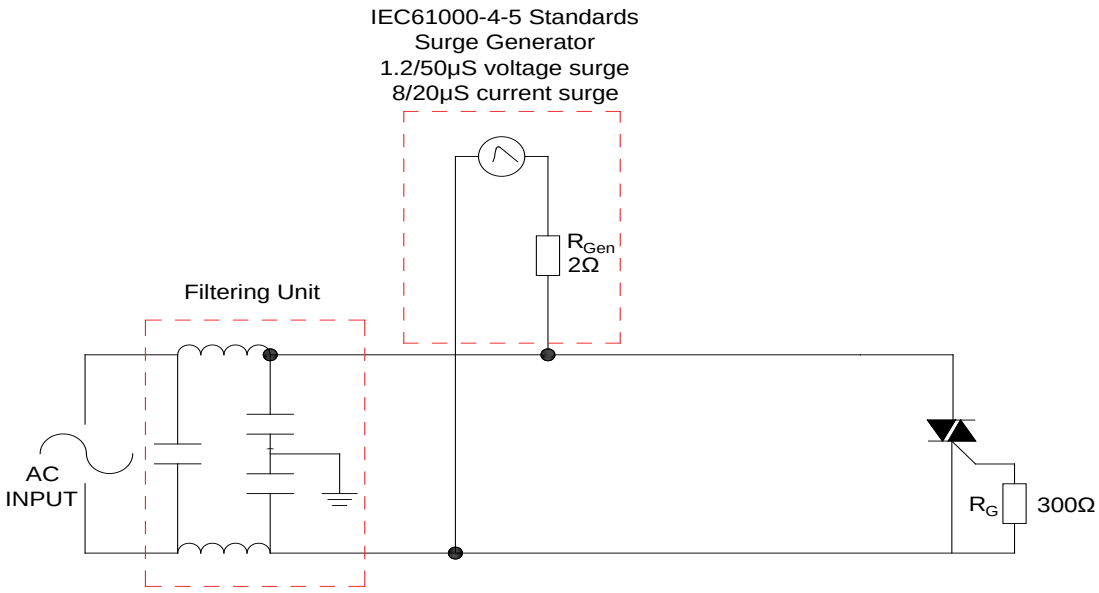
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =60A t_p=380μs	T_j=25	1.8	V
V_{TO}				

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



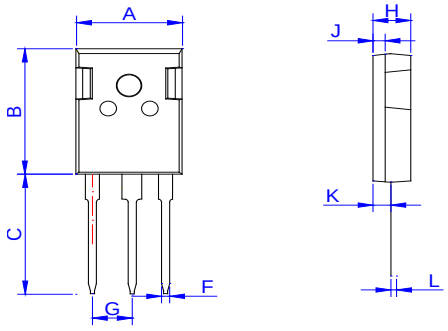
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM}(V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		H I- J			
JST41SJ-1600BW	1600	50	TO-247J	30	Tube

Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Jan.9, 2025	A.2.0	Update Package
Oct.16, 2025	A.2.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA B1 0 15 00 0206PQ3100 00 1
DELIVERY MODE



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50		16.10	0.610		0.634
B1	3.10		3.50	0.122		0.138
C	19.70		20.30	0.776		0.799
D	2.90		3.30	0.114		0.130
E	1.90		2.30	0.075		0.091
F	1.00		1.40	0.039		0.055
G		5.44			0.214	
H	4.80		5.20	0.189		0.205
J	1.90		2.10	0.075		0.083
K	2.20		2.50	0.087		0.098
L	0.41		0.79	0.016		0.031

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