JST12E-600BW 12A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST12E-600BW 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. JST12E-600BW snubberless triac is especially recommended for use on inductive loads. Package TO-263 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}	600	V

Repetitive peak re (tTc 0.006 TwTc -0.002 Tw 12 0 0 1276.88 360.6 253.32 0.482 0 4.48 re f 4964

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	4.5	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	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.	70	mA
				90	
I_H	I_T =500mA		MAX.	50	mA
dV/dt	V_D=400V Gate Open T_j =125		MIN.	2000	V/μs
(dI/dt)c	(dV/dt)c=20V/μs T_j=125		MIN.	20	A/ms
t_{on}	I_G=80mA I_A=400mA I_R=40mA T_j=25		TYP.	5	μs
t_{off}				50	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =17A t_p=380μs	T_j=25	1.5	V
V_{TO}	Threshold voltage	T_j=125	0.77	V
R_D	Dynamic resistance	T_j=125	35	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.4	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.3	/W
$R_{th(j-a)}$	junction to ambient (AC, in free air, S=2cm^2)	45	/W

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

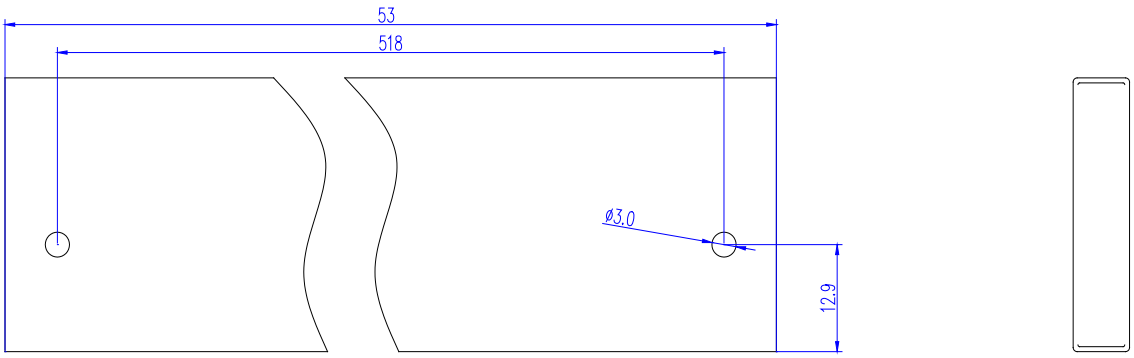
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
JST12E-600BW	600	50	TO-263	50	Tube
JST12E-600BW-TR				800	Tape& Reel

Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.20, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

DELIVERY MODE



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