

**JST132N2-600D 0.5A TRIAC**

Rev.A.1.1

DESCRIPTION:

The JST132N2-600D 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. Package SOT-89-2L 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}	600	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600	V
RMS on-state current ($T_c=84^\circ\text{C}$)	$I_{T(RMS)}$	0.5	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	6	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		6.6	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	0.18	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	-	50	$\text{A}/\mu\text{s}$
	-	20	
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	1	A
Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.1	W

Peak gate power op0.48;>BDCID 8 351.192MP

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
				10	
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k$	ALL	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	- -	MAX.	10	mA
				20	
I_H	$I_T=50mA$		MAX.	10	mA
dV/dt	$V_D=400V$ Gate Open $T_j=110$		MIN.	60	V/ μs
$(dV/dt)_c$	$(dI/dt)_c=0.3A/ms$, $T_j=110$		MIN.	5	V/ μs
t_{on}	$I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	2.5	μs
t_{off}				25	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=0.85A$ $t_p=380\mu s$	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.98	V
R_D	Dynamic resistance	$T_j=125$	362	m
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	0.15	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	60	/W
$R_{th(j-a)}$	junction to ambient (AC, in free air, $S=5cm^2$)	100	/W

ORDERING INFORMATION

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

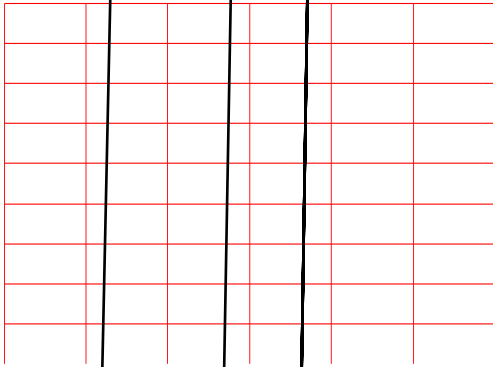


FIG.2: RMS on-state current versus case temperature

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

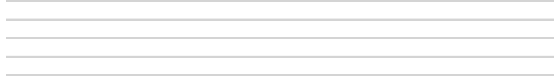
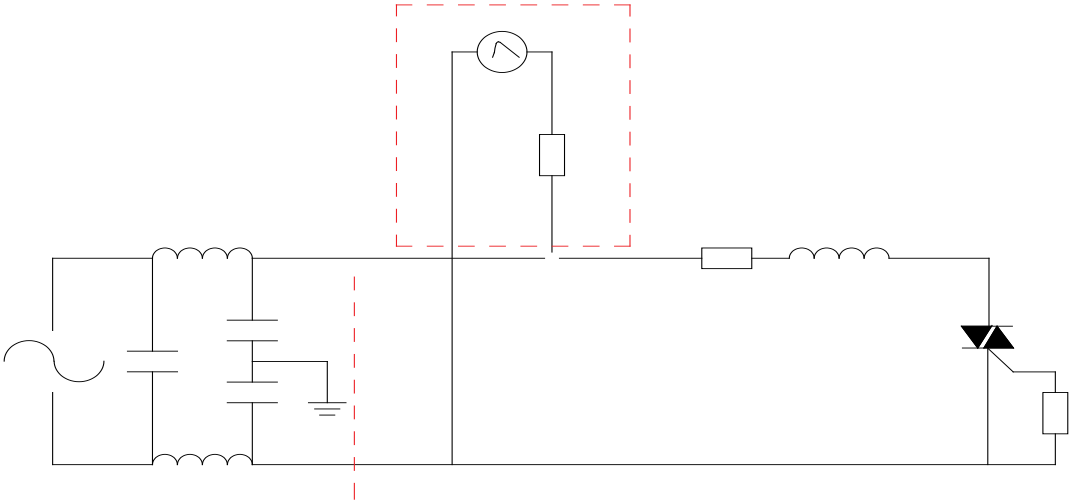


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



JST132N2-600D



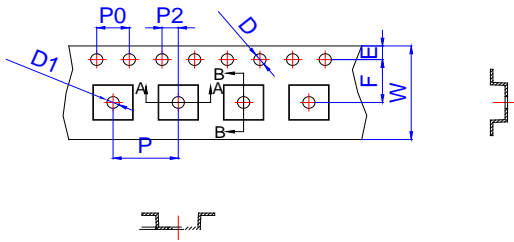
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST132N2-600D	600	5	10	SOT-89-2L	4,000	Tape & Reel

Document Revision History

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL

DELIVERY MODE



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
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
P2	1.90	2.00	2.10	0.075	0.079	0.082
D	-	1.50	1.60	-	0.059	0.063
D1	1.50			0.059		
P0	3.90	4.00	4.10	0.154	0.157	0.161
10P0	39.80	40.00	40.20	1.567	1.575	1.583
W			12.30			0.482
P	7.90	8.00	8.10	0.311	0.315	0.319
A0	5.20	5.30	5.40	0.204	0.208	0.212
B0	4.80	4.90	5.00	0.188	0.192	0.196
K0	1.75	1.85	1.95	0.069	0.073	0.076
t	0.20	0.25	0.30	0.008	0.010	0.012
	3°		5°	3°		5°

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