



JST41Z-800B 40A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST41Z-800B 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. By using an internal ceramic pad, JST41Z-800B provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-3P 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 ($T_c = 81^\circ\text{C}$)	$I_{T(RMS)}$	40	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	420	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		462	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	1000	A^2s
Critical rate of rise of on-state current ($I_G=2 \sim 10\text{mA}$, $f=100\text{Hz}$, $T_j=25^\circ\text{C}$)	di/dt	100	$\text{A}/\mu\text{s}$

Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	0.9	kV
--	----------	-----	----

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value	Unit	
I_{GT}	$V_D=12V$ $R_L=33$	- -	MAX.	50	mA
				70	
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.	80	mA
				160	
I_H	$I_T=500mA$		MAX.	80	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$		MIN.	1200	V/ μs
(dV/dt) _c	(dI/dt) _c =20A/ms, $T_j=125$		MIN.	20	V/ μs
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}	$I_{TM}=60A$ $t_p=380\mu s$ $T_j=25$	1.4	V	
V_{TO}	Threshold voltage $T_j=125$	0.73	V	
R_D	Dynamic resistance $T_j=125$	10	m	
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	0.85	/W
$R_{th(j-a)}$	junction to ambient (AC)	50	/W

ORDERING INFORMATION

J ST 41 Z -800 B

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

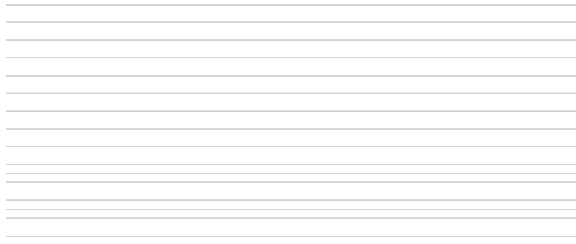


FIG.2: RMS on-state current versus case temperature

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
		-	-			
JST41Z-800B	800	50	70	TO-3P(Ins)	30	Tube

Document Revision History


Date	Revision	Changes
Apr.14, 2023	A.1.0	Last update
Oct.17, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright © 2025 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.