



JST41Z-1600BW 40A TRIAC

Rev.A.1.1

The JST41Z-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. JST41Z-1600BW snubberless triac is especially recommended for use on inductive loads. By using an internal ceramic pad, JST41Z-1600BW provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906).



Average gate power dissipation ($T_j=125$)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	40	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	1.2	kV

($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value	Unit	
I_{GT}	$V_D=12V R_L=33$	- -	MAX.	50	mA
V_{GT}		- -	MAX.	1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125$ $R_L=3.3k$	- -	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
$(dI/dt)_c$	$(dV/dt)_c=20V/\mu s T_j=125$		MIN.	25	A/ms
t_{on}	$I_G=80mA I_A=400mA I_R=40mA$ $T_j=25$		TYP.	10	μs
t_{off}				70	

Symbol	Parameter	Value(MAX.)	Unit
V_{TM}	$I_{TM}=60A t_p=380\mu s$ $T_j=25$	1.8	V
V_{TO}	Threshold voltage $T_j=125$	0.78	V
R_D	Dynamic resistance $T_j=125$	27	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$ $T_j=25$	20	μA
I_{RRM}	$T_j=125$	10	mA

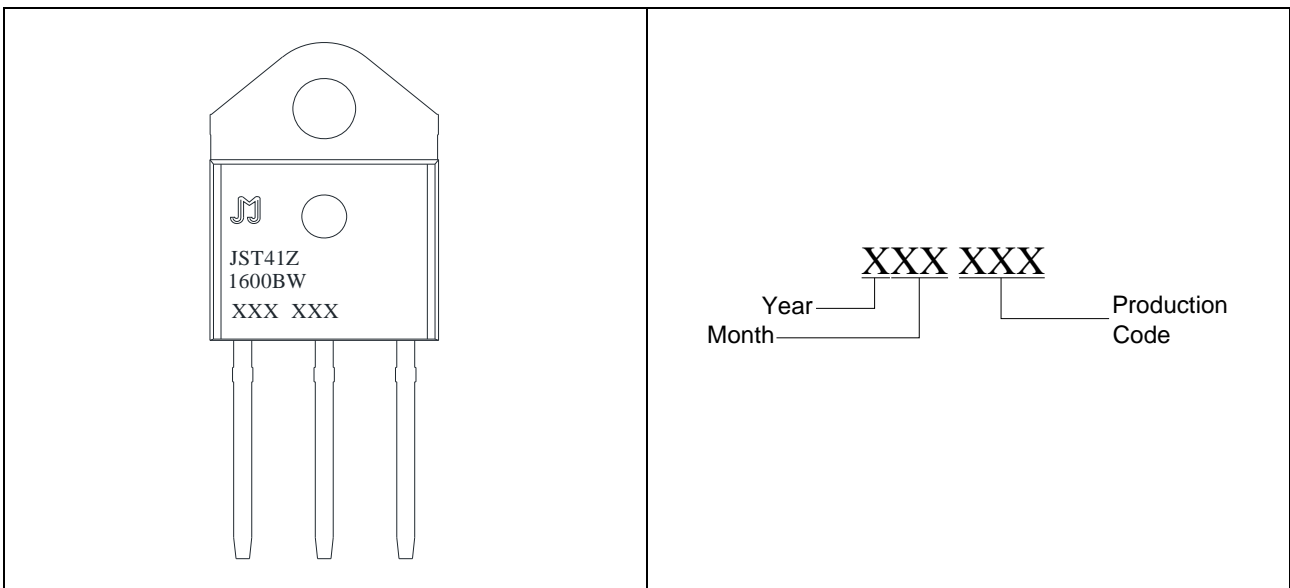
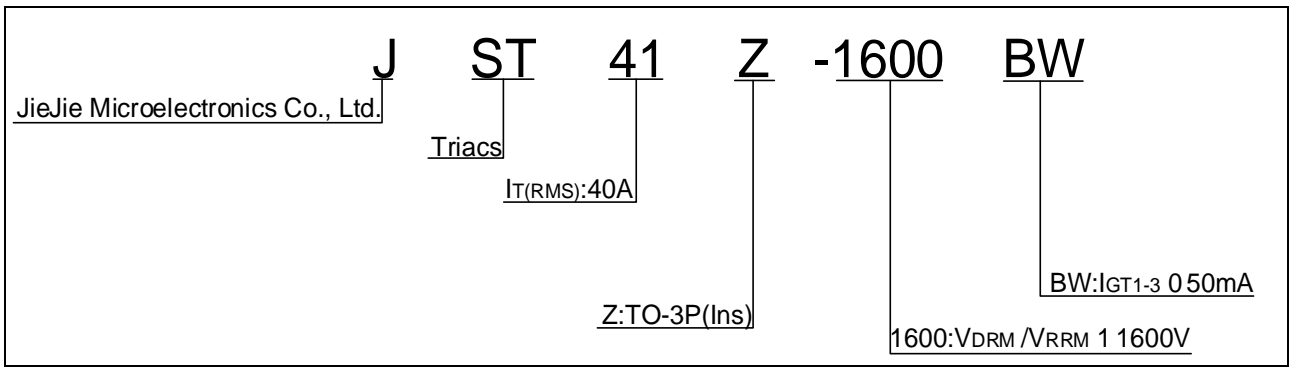




FIG.1: Maximum power dissipation versus RMS on-state current

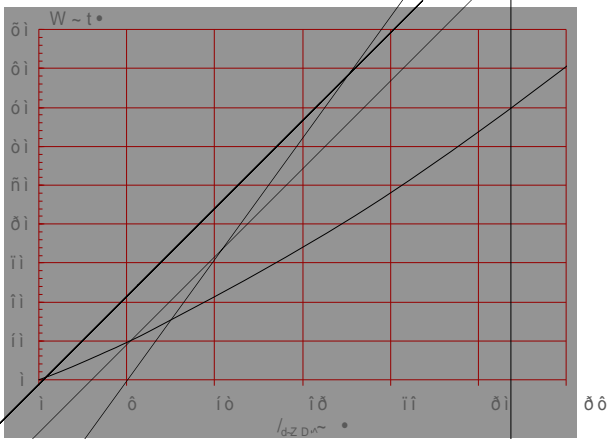


FIG.2: RMS on-state current versus case temperature

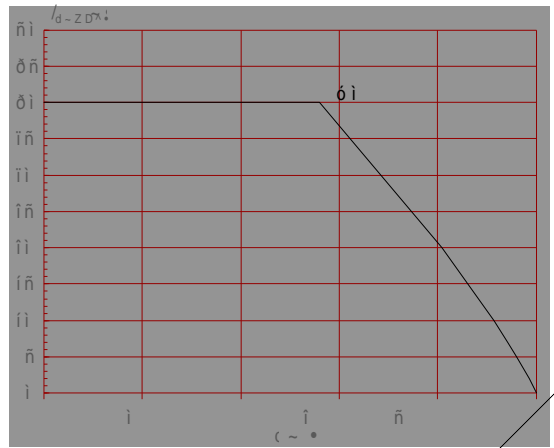


FIG.3: Surge peak on-state current versus number of cycles

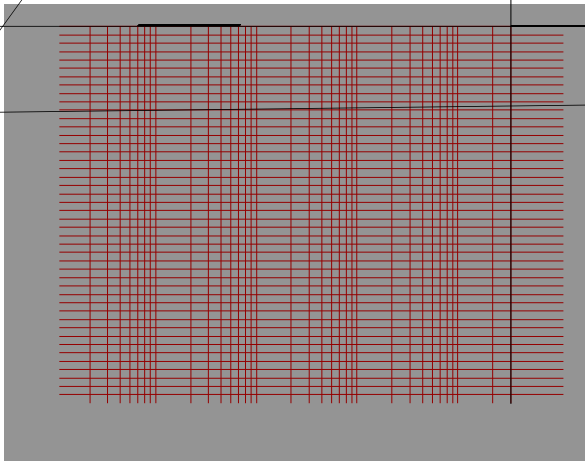
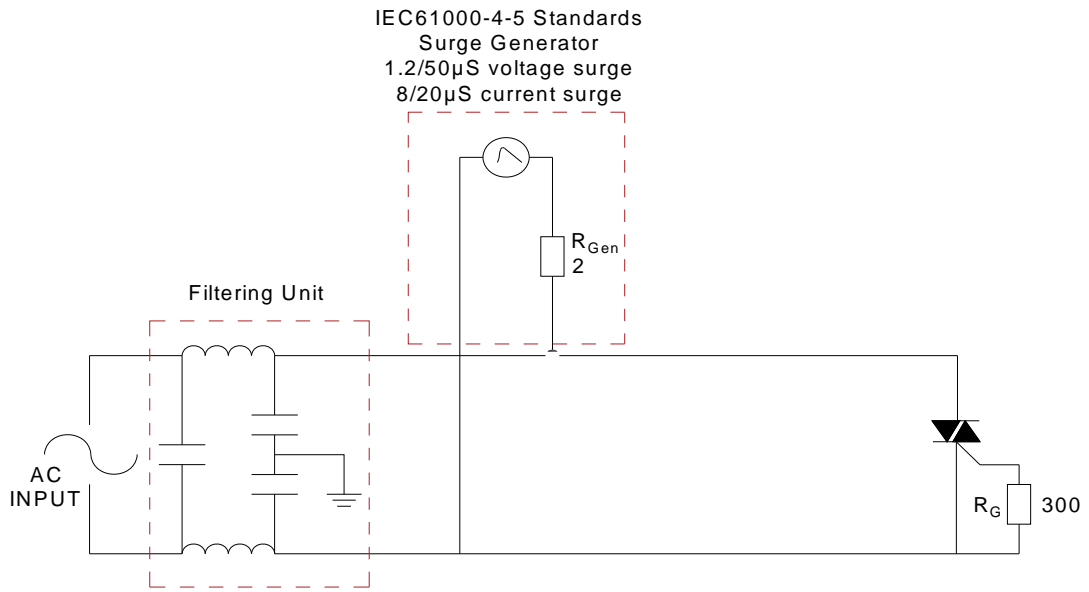


FIG.4: On-state characteristics

FIG.7 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards





Order code	Voltage V _{DRM} /V _{R_{RRM}} (V)	IGT(mA) -	Package	Base qty. (pcs)	Delivery mode
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