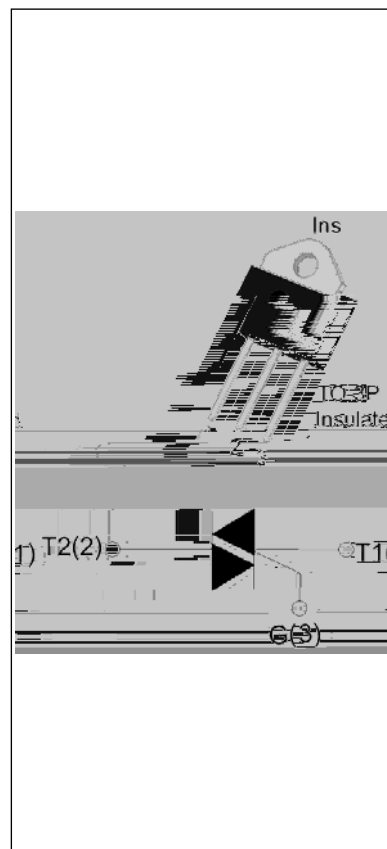




The JST30Z-1200BW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. JST30Z-1200BW snubberless triac is especially recommended for use on inductive loads. By using an internal ceramic pad, JST30Z-1200BW provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-3P is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	30	A
V_{DRM}/V_{RRM}	1200	V
$I_{GT} / /$	50/50/50	mA

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}	1200	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1200	V
RMS on-state current ($T_C \leq 79^\circ\text{C}$)	$I_{T(RMS)}$	30	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	300	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		330	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	450	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	di/dt	100	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	4	A



Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG. 7)	V_{pp}	2.5	kV

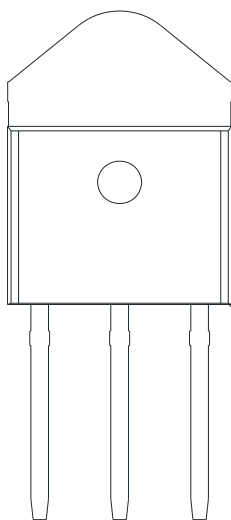
($T_j=25^\circ\text{C}$ unless otherwise specified)

I_{GT}	$V_D=12\text{V}$ $R_L=33\Omega$	-	-	MAX.	50	mA
V_{GT}		-	-	MAX.	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3\text{k}\Omega$	-	-	MIN.	0.15	V
I_L	$I_G=1.2I_{GT}$	-		MAX.	90	mA
					100	
I_H	$I_T=500\text{mA}$			MAX.	80	mA
dV/dt	$V_D=800\text{V}$ Gate Open $T_j=125^\circ\text{C}$			MIN.	1200	V/ μs
$(dI/dt)_C$	$(dV/dt)_C=20\text{V}/\mu\text{s}$ $T_j=125^\circ\text{C}$			MIN.	25	A/ms
t_{on}	$I_G=80\text{mA}$ $I_A=400\text{mA}$ $I_R=40\text{mA}$ $T_j=25^\circ\text{C}$			TYP.	10	μs
t_{off}					70	

V_{TM}	$I_{TM}=42\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
V_{TO}	Threshold voltage	$T_j=125^\circ\text{C}$	0.73	V
R_D	Dynamic resistance	$T_j=125^\circ\text{C}$	25	$\text{m}\Omega$
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	10	μA
I_{RRM}		$T_j=125^\circ\text{C}$	4	mA

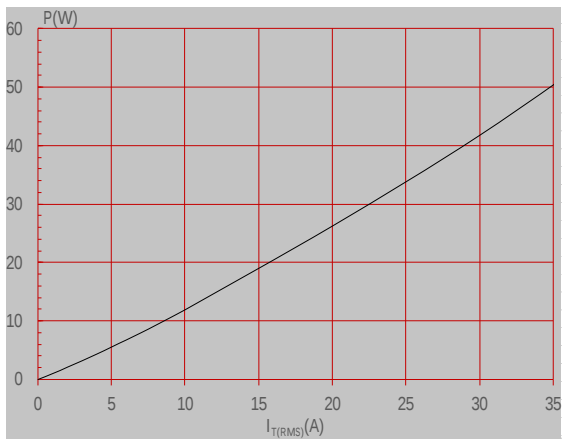


<u>J</u>	<u>ST</u>	<u>30</u>	<u>Z</u>	<u>-1200</u>	<u>BW</u>
JieJie Microelectronics Co., Ltd.	Triacs	$I_{T(RMS)}: 30A$	$Z: TO-3P(Ins)$	$1200: V_{DRM} / V_{RRM} \geq 1200V$	$BW: I_{GT1-3} \leq 50mA$

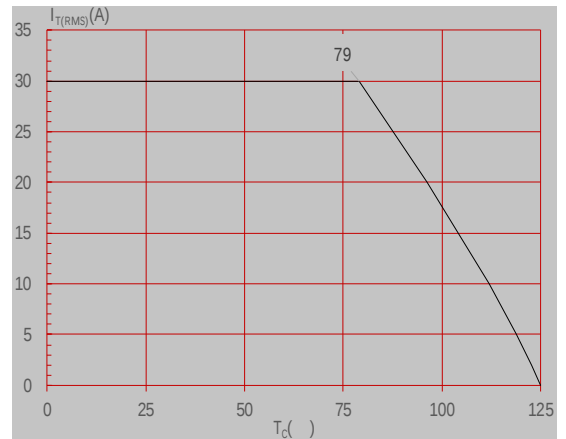




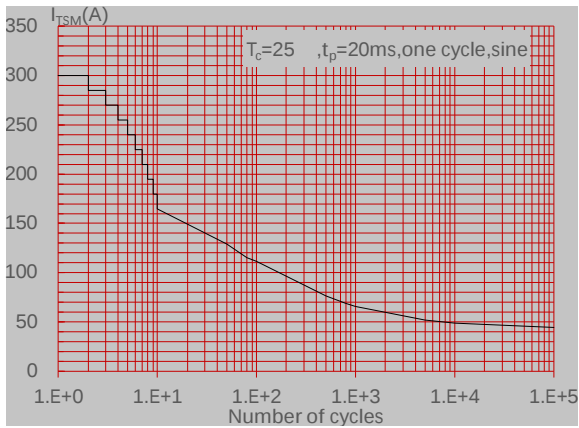
Maximum power dissipation versus RMS on-state current



RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles



On-state characteristics

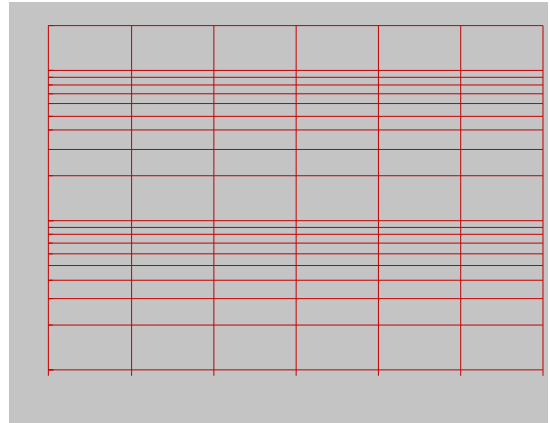
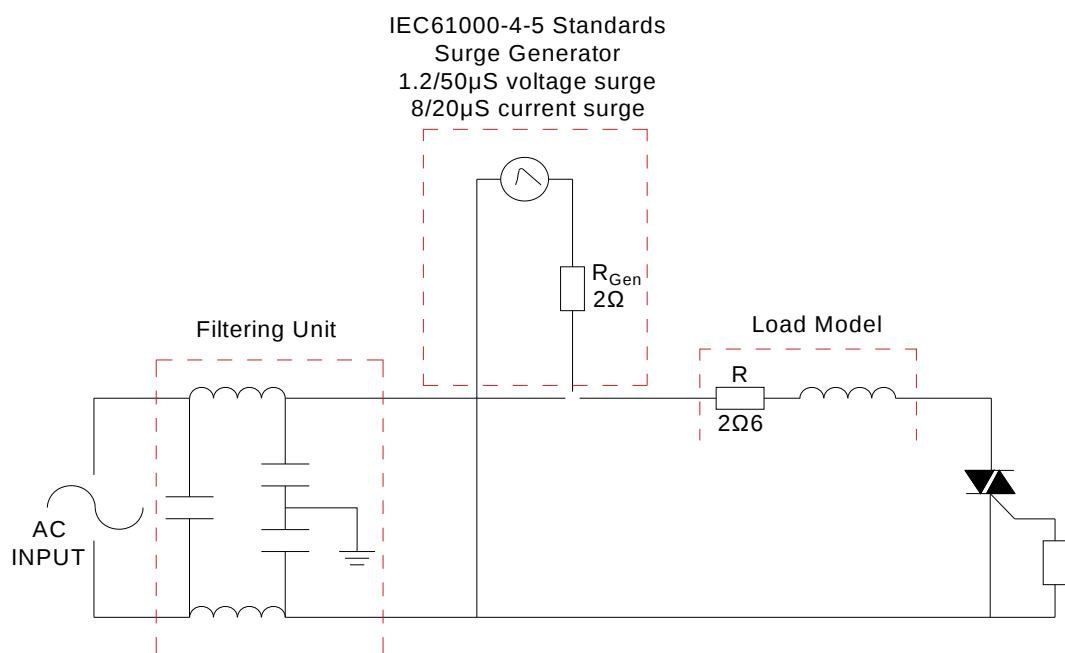




FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards







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