



JST138C-600D 12A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST138C triac is suitable for general purpose AC switching. It can be used as an ON/OFF applications such as heating regulation, inductive load switching, starting circuits, for phase control, etc. It is not suitable for high speed switching. It is not suitable for high current applications. Package TO-18 is RoHS compliant.

MAIN FEATURES

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature	T _{stg}	-40-150	
Operating temperature	T _j	-40-125	
Repetitive peak forward voltage (T _j = 25°C)	V _{DR}	600	V
Repetitive peak reverse voltage (T _j = 25°C)	V _{RR}	600	V
Non-repetitive surge current (T _j = 25°C, pulse width limited by SOA)	I _{T(R)}	15	A
Non-repetitive surge current (full cycle, t _p = 10ms)	I _{TS}	95	A
Non-repetitive surge current (full cycle, t _p = 100ms)		105	
It is value of $i_p \neq 10 \sin \omega t$ (t = 10ms)	I _{tj}	45	A
Critical rate of rise current (t = 10ms, f = 100Hz, T _j = 25°C)	di/dt	50	A/μs
		2	

Peak gate power	P _G	10	W
Peak pulse voltage (T _j = 25°C; non-repetitive)			

ELECTRICAL CHARACTERISTICS (unless otherwise specified)

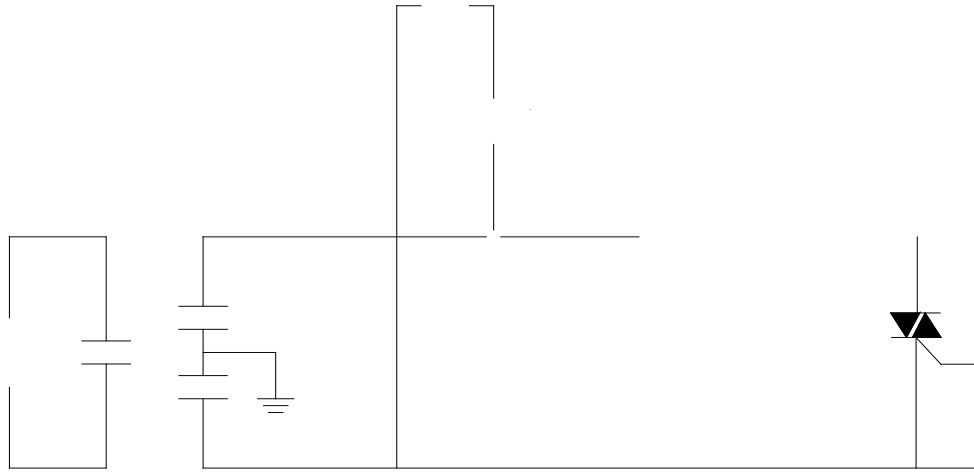
Symbol	Test Condition	Quadrant	Value	Unit
t_T	$V_D=1$ $L=33$	- -	5	AX A
			10	
V_{GT}		ALL	M 1	AX V
V_{GD}	$V_D=V_{DR}$ $T=1$ M $R_L=3.3k$	ALL	M 0.	I V
I_L	$I_T=1.$ t_T	- -	15	AX A
I_H	$I_T=500A$		M 10	AX A
dV/dt	$V_D=400V$ Gate Open $T=1$		M 50	I $V/\mu s$
$(dV/dt)_c$	$(dI/dt)_c=5A/s$, $T=110$		M	I $V/\mu s$
t_{on}	$I_T=0A$ $I_A=00A$ $I_R=0A$	j	T Y	P.
t_{off}	$T_{ff}=\$			
			3 2	μs^2
			30 2	

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit
V_T	$I_T=15A$ $t_{on}=380 \mu s$ $T=$	1. j	V
V_{TO}	Threshold I_{dv} $T=1$ Itage	0.8j	V
R_D	Dynamic resistance $T=1$	41 j	m
I_{BR}	$V_D=V_{DR}$ $V_R=V_{RR}$ $T=$	5 j	μA
I_{RR}	$T=1$	0.4j	Un @ 9

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FIG.7 Test circuit of inductive and resistive loads standards IEC



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST138C-600D	600	5	10	TO-220C	50	Tube

PACKAGE MECHANICAL DATA

