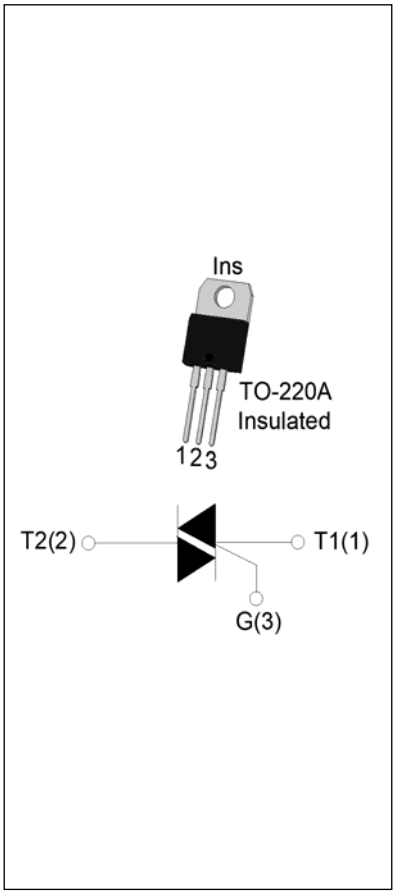
The T0610H-8A triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T0610H-8A provides a very high switching capability up to junction temperatures of 150°C. It can be driven directly through the MCU I/O port. By using an internal ceramic pad, T0610H-8A provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	6	A
V_{DRM} /V_{RRM}	800	V
I_{GT} / /	10/10/10	mA

Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-150	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
RMS on-state current ($T_C \leq$ 123)	$I_{T(RMS)}$	6	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	60	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		66	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	18	A^2s
Critical rate of rise of on-state current (I_G=2 × I_{GT} , f=100Hz , T_j=150)	dI/dt	50	A/μs

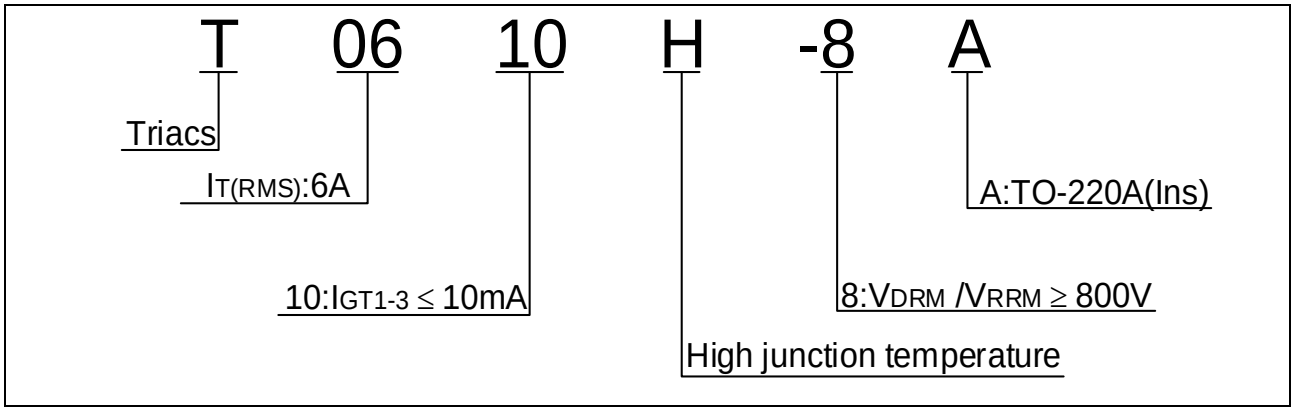
Peak gate current (t_p=20μs , T_j=150)	I_{GM}	4	A
Average gate power dissipation (T_j=150)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	3	kV

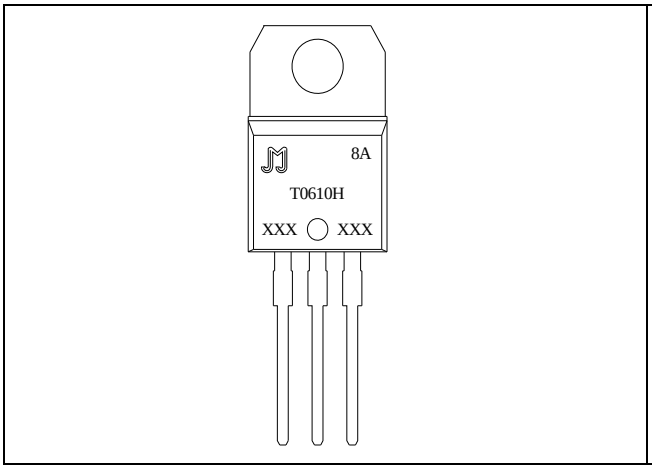
(T_j=25 unless otherwise specified)

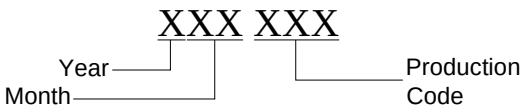
I_{GT}	V_D =12V R_L =33Ω	- -	MAX.	10	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =150 R_L =3.3KΩ	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	20	mA
				35	
I_H	I_T =100mA		MAX.	20	mA
dV/dt	V_D=540V Gate Open T_j =150		MIN.	150	V/μs
(dI/dt)c	(dV/dt)c=20V/μs, T_j=150		MIN.	1.5	A/ms
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25		TYP.	2.5	μs
t_{off}				25	

V_{TM}	I_{TM} =8.5A t_p=380μs	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=150	0.8	V
R_D	Dynamic resistance	T_j=150	63	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=150	1	mA

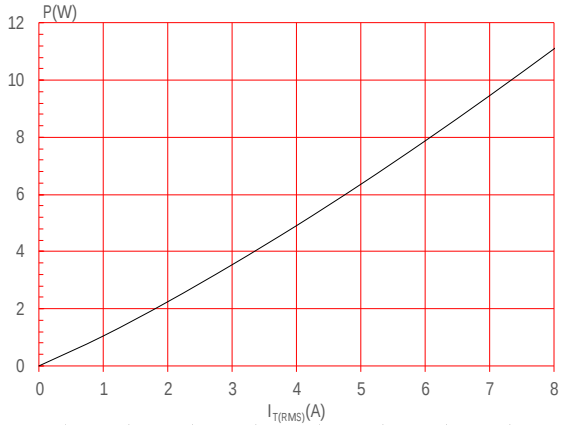
$R_{th(j-c)}$	junction to case (AC)	3.4	/W
$R_{th(j-a)}$	junction to ambient (AC)	60	/W


T 06 10 H -8 A
Triacs
IT(RMS):6A
10:IGT1-3 ≤ 10mA
High junction temperature
8:VDRM /VRRM ≥ 800V
A:TO-220A(Ins)

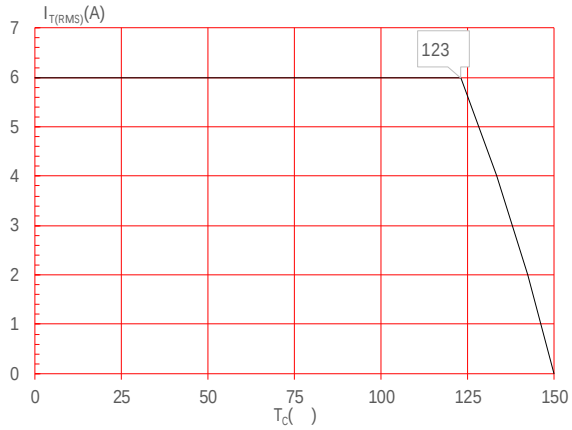

8A
T0610H
XXX XXX


XXX XXX
Year
Month
Production
Code

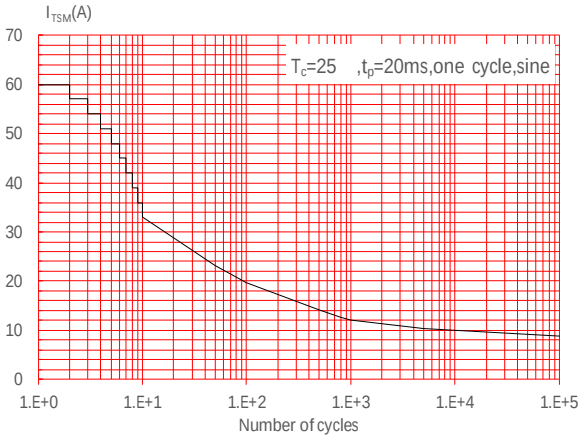
Maximum power dissipation versus RMS on-state current



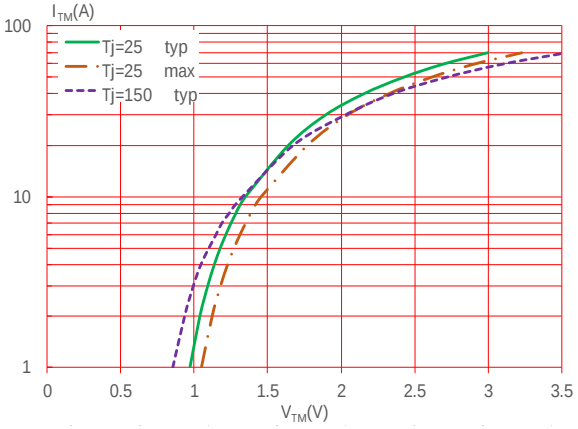
RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles

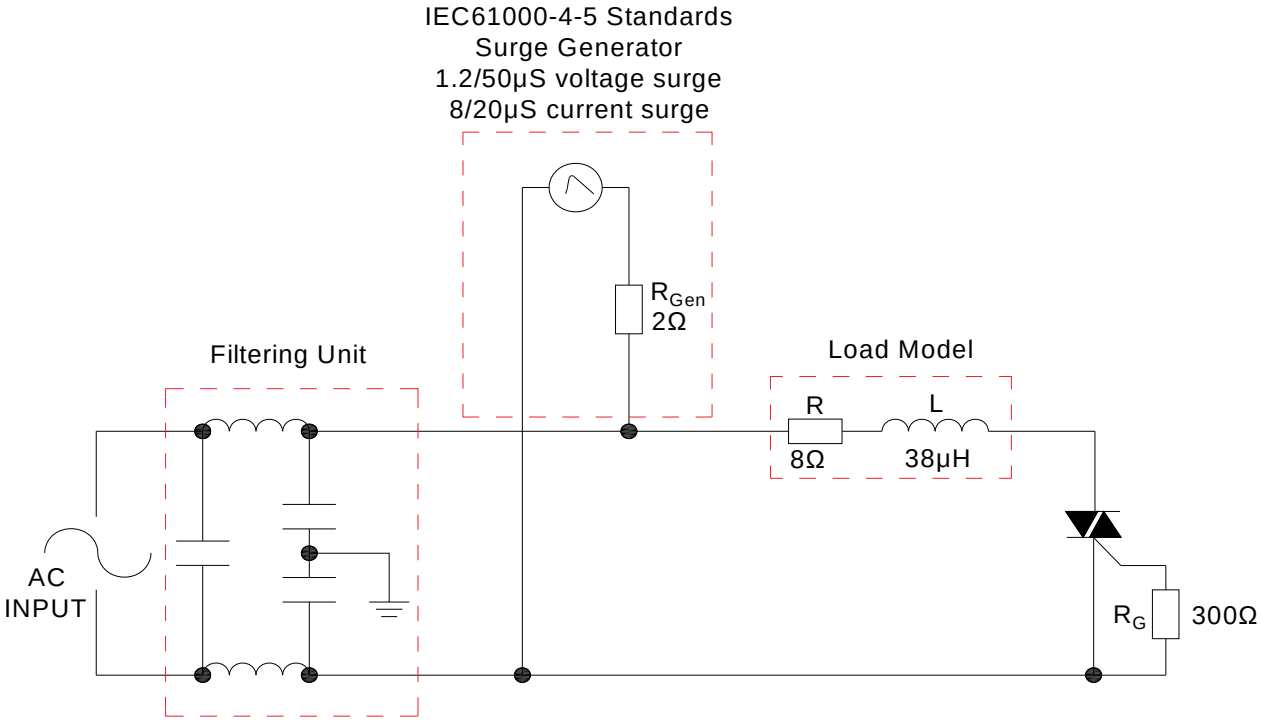


On-state characteristics



Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<20ms, and corresponding value of I^2

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



Refer to Instructions for installation of plastic-sealed in-line power devices released by JieJie

Date	Revision	Changes
Apr.10, 2023	A.1.0	Last updated