



The T0420H-8H 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, T0420H-8H provides a very high switching capability up to junction temperatures of 150°C. From T2 terminals to external heatsink. Package TO-251 is RoHS compliant.

Symbol	Value	Unit	
$I_{T(RMS)}$	4	A	v

Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-150	
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 ($T_c = 128^\circ\text{C}$)	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	40	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$)		44	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	8	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=150^\circ\text{C}$)	di/dt	80	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=150^\circ\text{C}$)	I_{GM}	4	A
Average gate power dissipation ($T_j=150^\circ\text{C}$)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W



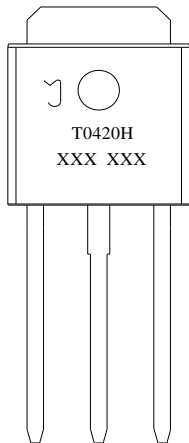
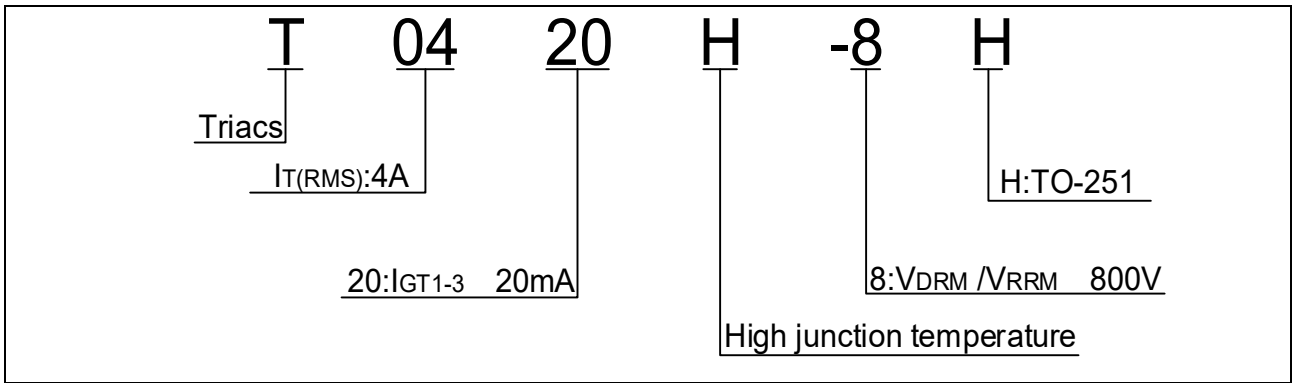
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	4	kV
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($T_j=25$ unless otherwise specified)

I_{GT}	$V_D=12V R_L=33\Omega$	- -	MAX.	20	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	$V_D=V_{DRM} T_j=150$ $R_L=3.3K\Omega$	- -	MIN.	0.2	V
I_L	$I_G=1.2I_{GT}$	-	MAX.	30	mA
				40	
I_H	$I_T=100mA$		MAX.	25	mA
dV/dt	$V_D=540V$ Gate Open $T_j=150$		MIN.	800	V/ μs
$(dI/dt)_c$	$(dV/dt)_c=20V/\mu s, T_j=150$		MIN.	5	A/ms
t_{on}	$I_G=40mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	3	μs
t_{off}				30	

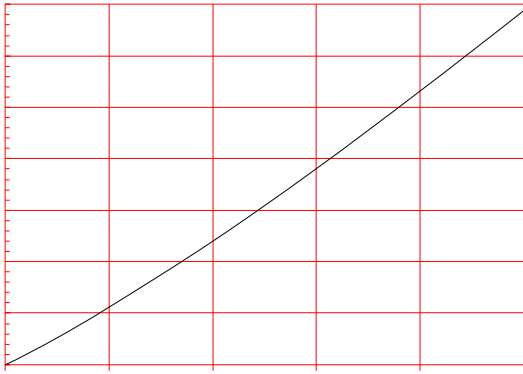
V_{TM}	$I_{TM}=5.5A t_p=380\mu s$	$T_j=25$		1.4	V
V_{TO}	Threshold voltage	$T_j=150$		0.6	V
R_D	Dynamic resistance	$T_j=150$		129	m Ω
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$		5	μA
I_{RRM}		$T_j=150$		1	mA

$R_{th(j-c)}$	junction to case (AC)			4.3	/W
$R_{th(j-a)}$	junction to ambient (AC)			120	/W





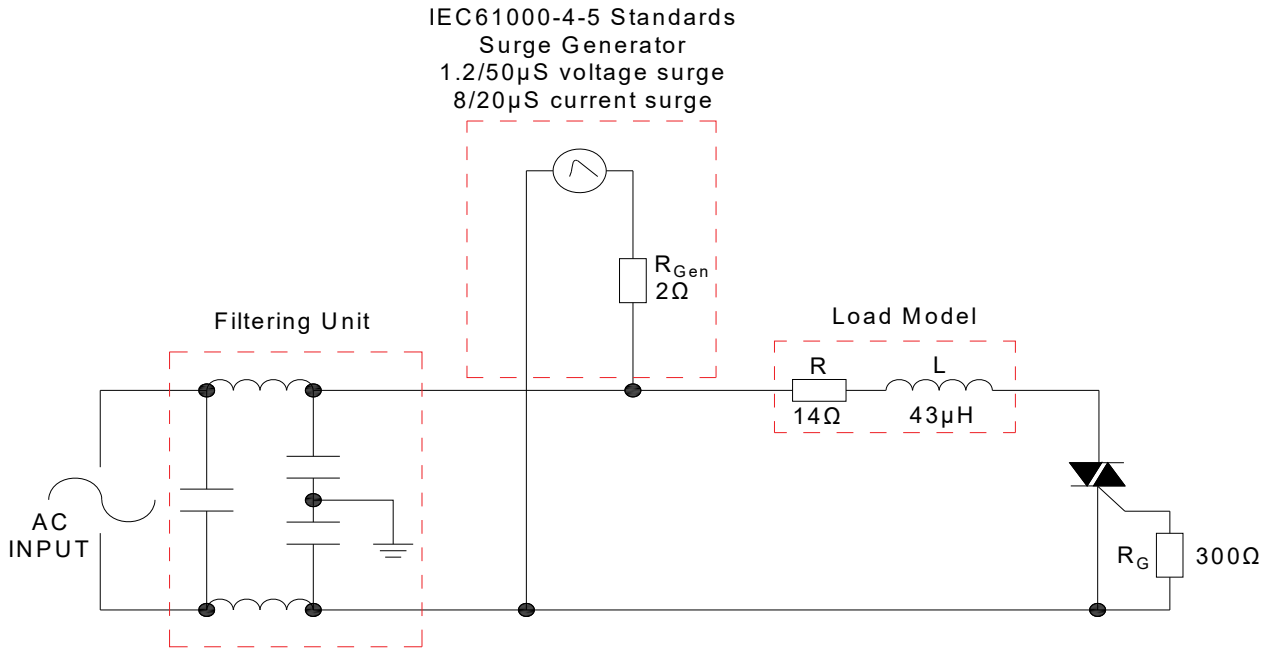
Maximum power dissipation versus RMS
on-state current



RMS on-state current versus case
temperature



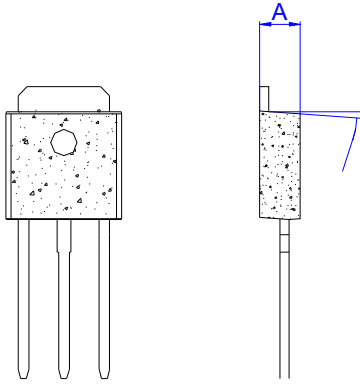
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



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





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