The T0820H-6H 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, T0820H-6H 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
$I_{T(RMS)}$	8	A

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}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
RMS on-state current ($T_C \leq 119$)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	80	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		88	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	32	A^2s
Critical rate of rise of on-state current ($I_G=2\times I_{GT}$, f=100Hz , T_j=150)	dI/dt	80	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

[redacted]

[redacted]

[redacted]

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.	20	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.	40	mA
				55	
I_H	I_T =100mA		MAX.	30	mA
dV/dt	V_D=400V Gate Open T_j =150		MIN.	1000	V/μs
(dI/dt)c	(dV/dt)c=20V/μs, T_j=150		MIN.	3	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} =11A t_p=380μs	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=150	0.78	V
R_D	Dynamic resistance	T_j~~=150~~	55	mΩ

I_{DRM}

V

T 08 20 H -6 H

Triacs

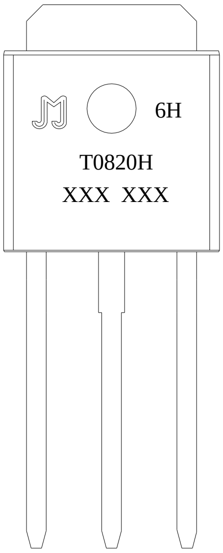
$I_{T(RMS)}$:8A

20:$I_{GT1-3} \leq 20mA$

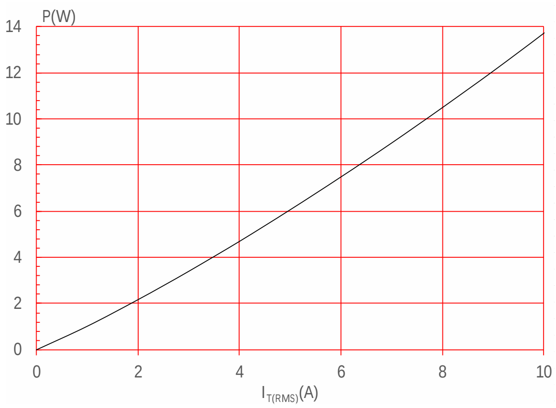
High junction temperature

6:V_{DRM} /$V_{RRM} \geq 600V$

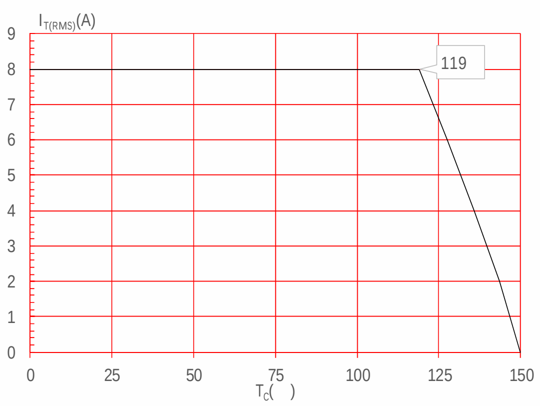
H:TO-251



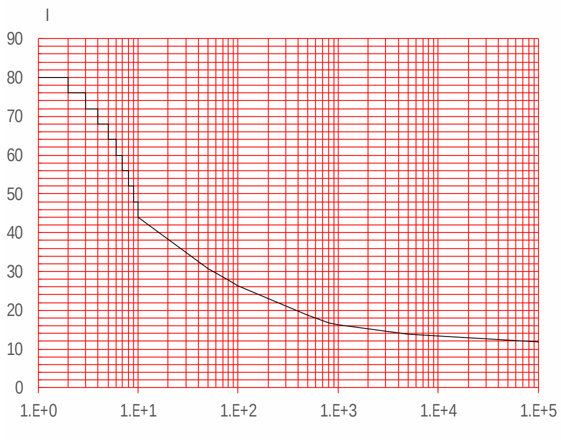
Maximum power dissipation versus RMS on-state current



RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles



On-state characteristics

FIG.7