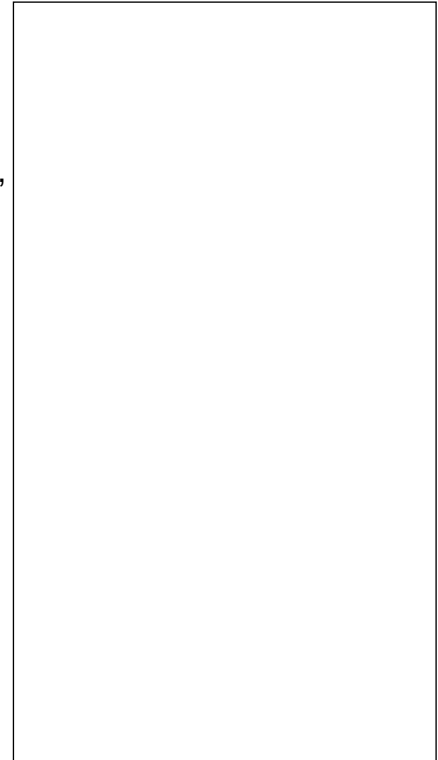




## T0820H-6K 8A TRIAC

Rev.A.1.1

The T0820H-6K 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-6K provides a very high switching capability up to junction temperatures of 150°C. Package TO-252 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT} / /$	20/20/20	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-150	
Repetitive peak off-state voltage ( $T_j=25^\circ C$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	600	V
RMS on-state current ( $T_c = 132^\circ C$ )	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, $t_p=20ms$ , $T_j=25^\circ C$ )	$I_{TSM}$	80	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6ms$ , $T_j=25^\circ C$ )		88	
$I^2t$ value for fusing ( $t_p=10ms$ , $T_j=25^\circ C$ )	$I^2t$	32	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100Hz$ , $T_j=150^\circ C$ )	$di/dt$	80	$A/\mu s$
Peak gate current ( $t_p=20\mu s$ , $T_j=150^\circ C$ )	$I_{GM}$	4	A
Average gate power dissipation ( $T_j=150^\circ C$ )	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	10	W



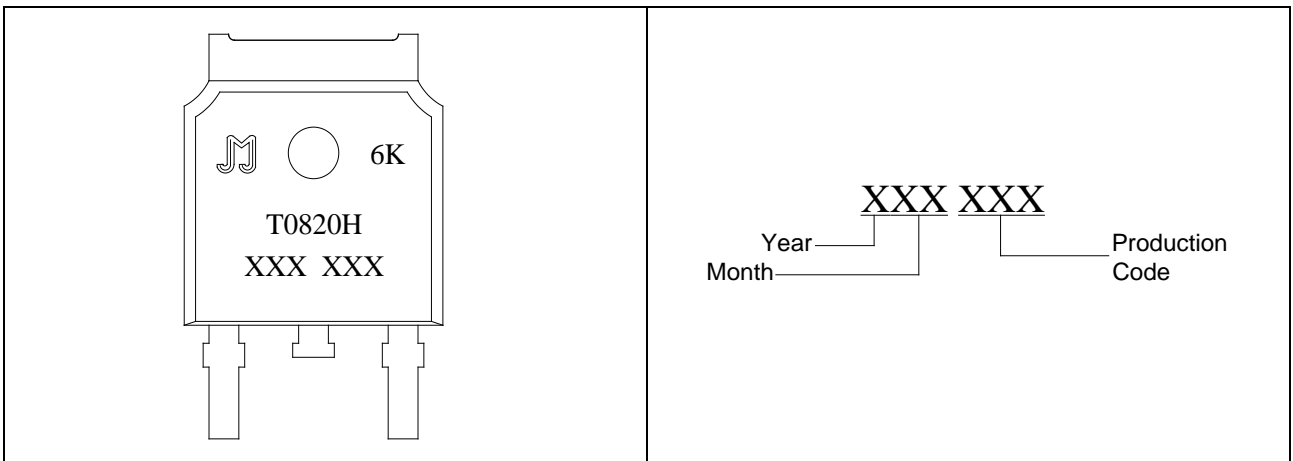
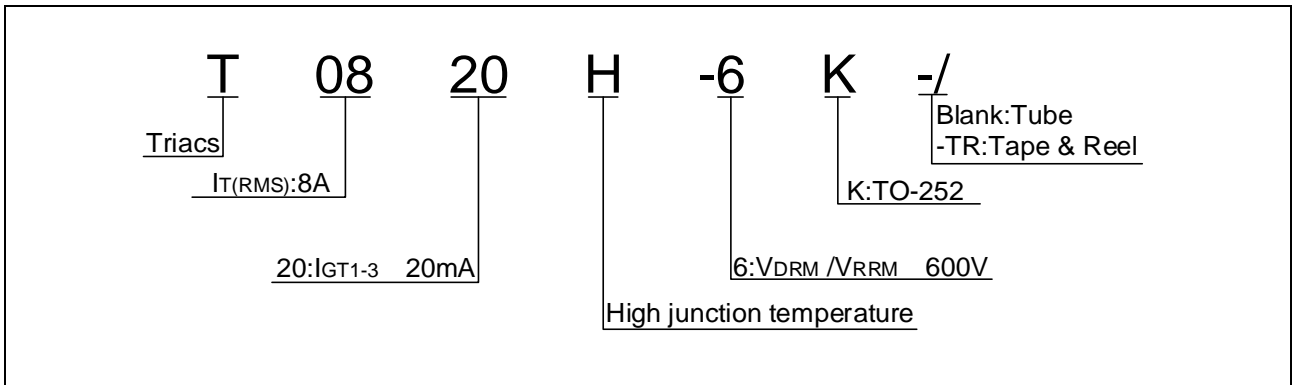




FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

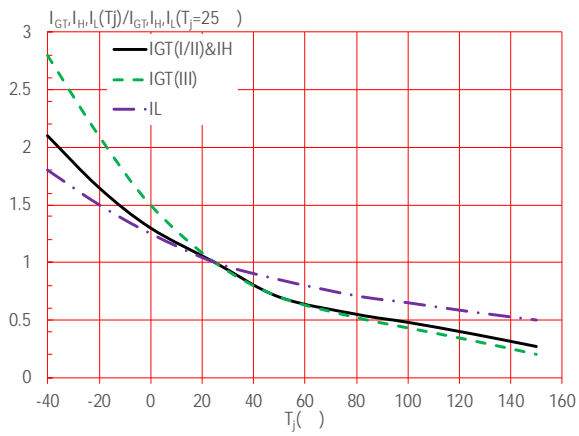


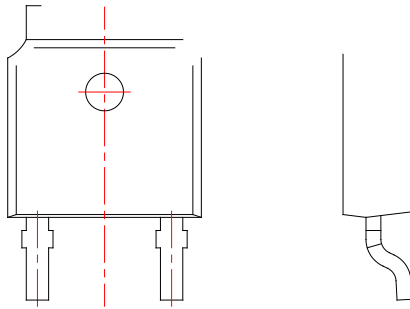
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T0820H-6K	600	20	TO-252	80	Tube
T0820H-6K-TR				2,500	Tape & Reel

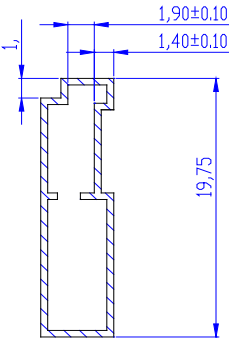
### Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.23, 2023	A.1.1	Change $R_{th(j-c)}$ & $R_{th(j-a)}$




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.15	0		0.006
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1						
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2	0°		6°	0°		6°





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