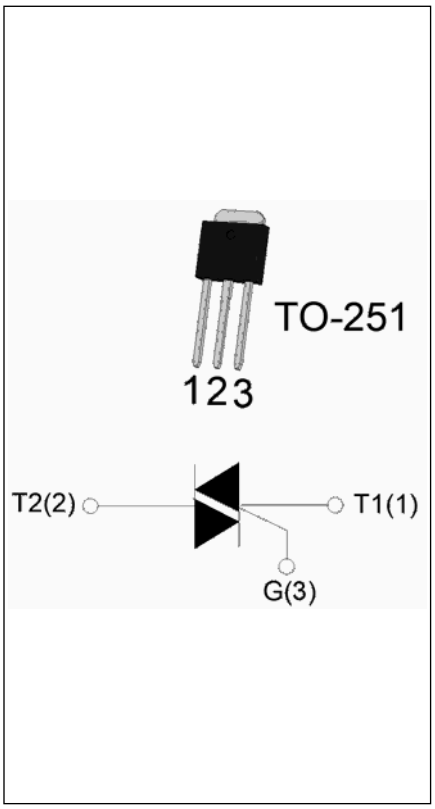
T0410H-6H 4A TRIAC

Rev.A.1.0

The T0410H-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, T0410H-6H provides a very high switching capability up to junction temperatures of 150°C. It can be driven directly through the MCU I/O port. From T2 terminals to external heatsink. Package TO-251 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM} /V_{RRM}	600	V
I_{GT} / /	10/10/10	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)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
RMS on-state current (T_C 128)	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	40	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		44	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	8	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

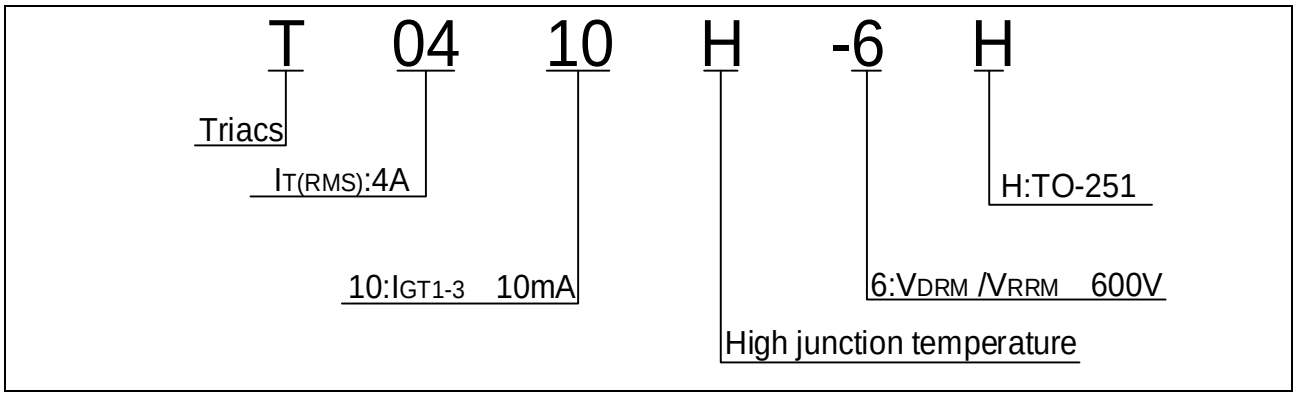
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	3	kV

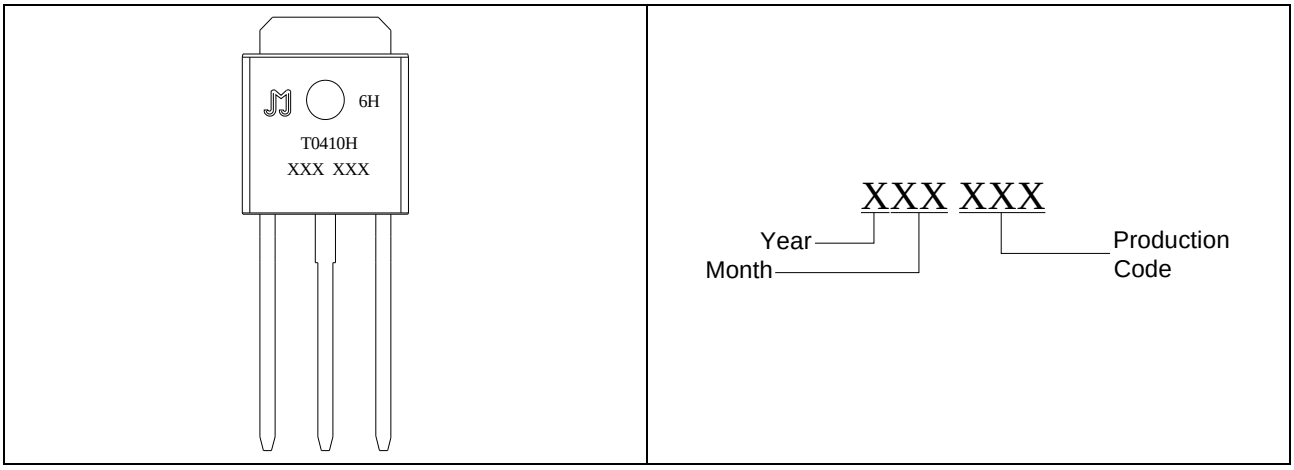
(T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
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=400V Gate Open T_j =150		MIN.	200	V/μs
(dI/dt)c	(dV/dt)c=20V/μs, T_j=150		MIN.	1	A/ms
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25		TYP.	2.5	μs
t_{off}				25	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =5.5A t_p=380μs	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=150	0.6	V
R_D	Dynamic resistance	T_j=150	129	mΩ
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=150	0.8	mA

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


T
04
10
H
-6
H
Triacs
IT(RMS):4A
10:IGT1-3 10mA
High junction temperature
6:VDRM /VRRM 600V
H:TO-251


6H
T0410H
XXX XXX
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Year
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Production
Code

FIG.1 Maximum power dissipation versus RMS on-state current

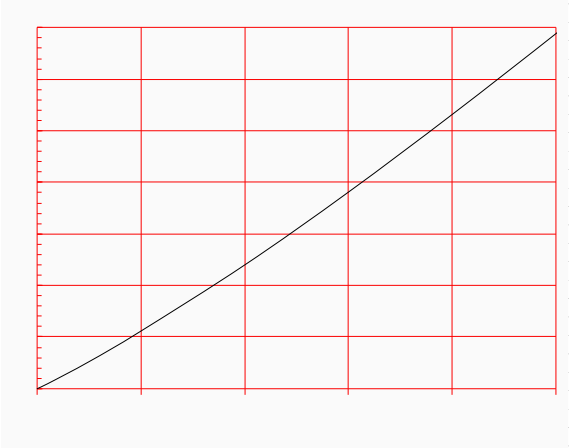
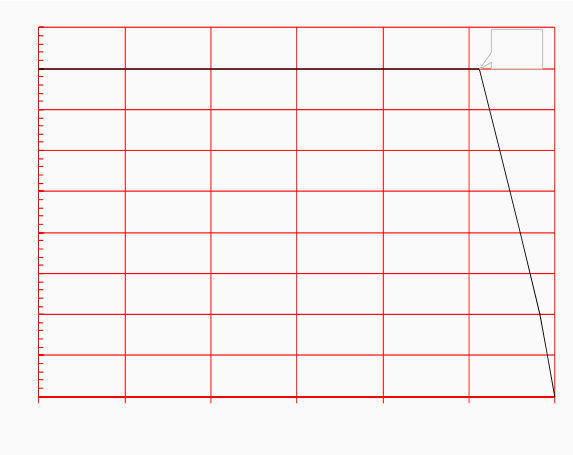


FIG.2: RMS on-state current versus case temperature

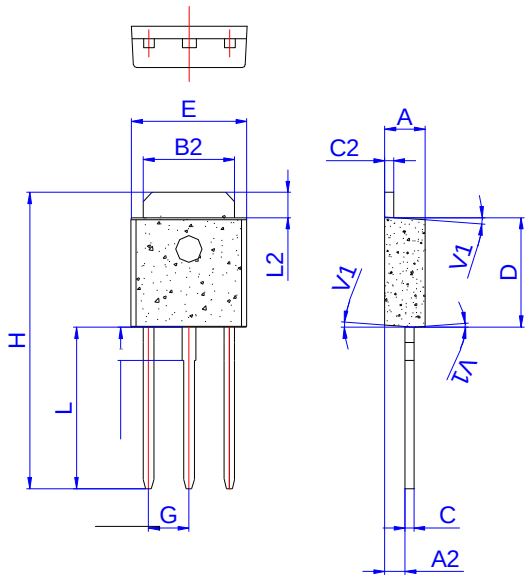


T0410H-6H

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		∫ - ↿ - t			
T0410H-6H	600	10	TO-251	80	Tube

Document Revision History

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


E
B2
L2
H
L
G
A
C2
V1
V1
D
V1
C
A2