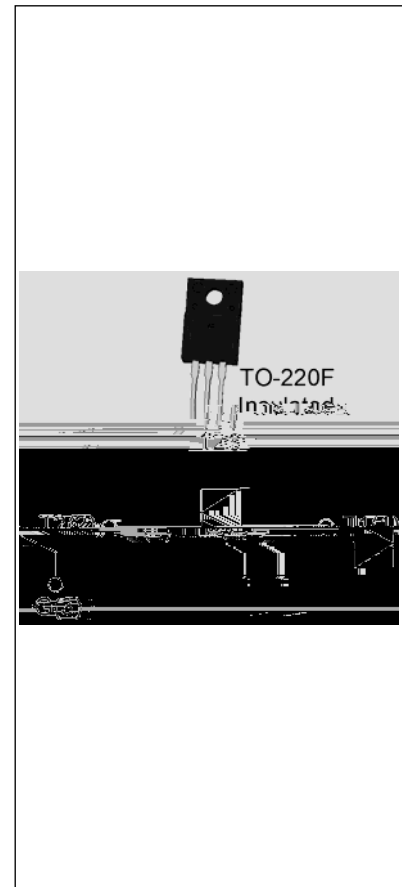




The T1210H-6F triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T1210H-6F provides 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 external plastic package, T1210H-6F provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	12	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT} / /$	10/10/10	mA

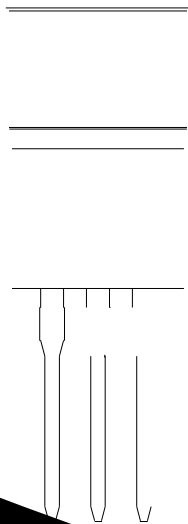
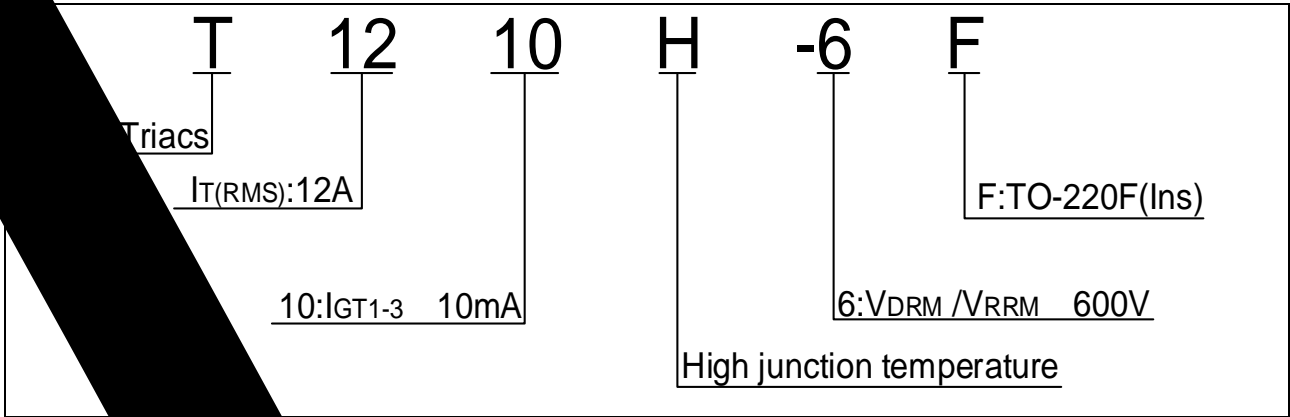
Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-150	
Repetitive peak off-state voltage ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	600	V
RMS on-state current ( $T_c = 106^\circ\text{C}$ )	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	120	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		132	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	72	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \cdot I_{GT}$ , $f=100\text{Hz}$ , $T_j=150^\circ\text{C}$ )	$di/dt$	100	$\text{A}/\mu\text{s}$

Peak gate current ( $t_p=20\mu s$ , $T_j=150$ )	$I_{GM}$	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)	$V_{pp}$	4	kV

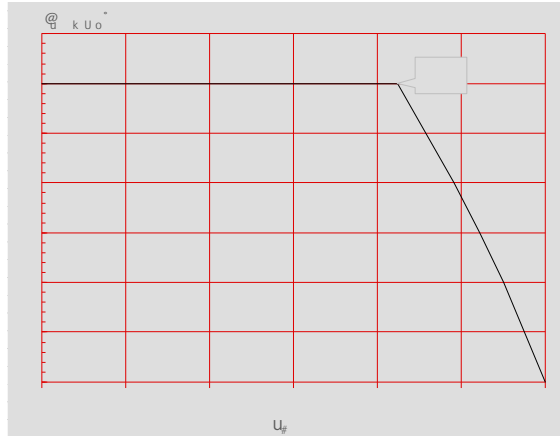
( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V$ $R_L=33$	- -	MAX.	10	mA
$V_{GT}$		- -	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=150$ $R_L=3.3k$	- -	MIN.	0.2	V

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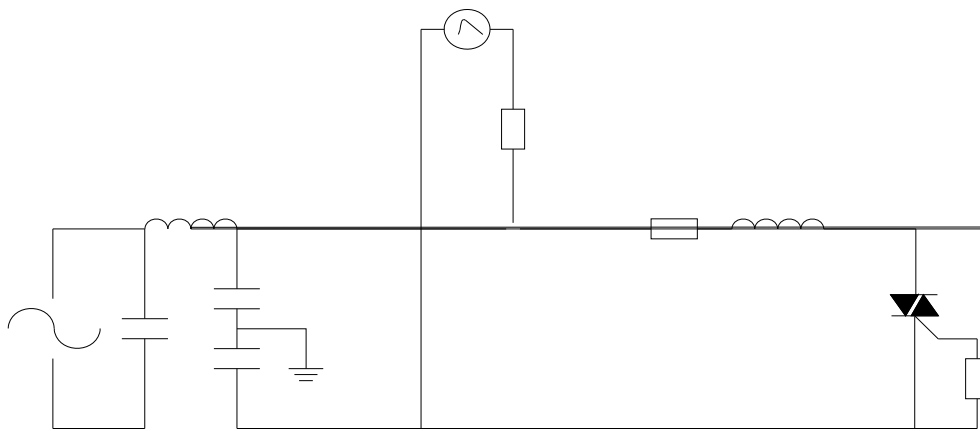


**FIG.2:** RMS on-state current versus case temperature



**FIG.4:** On-state characteristics

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







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