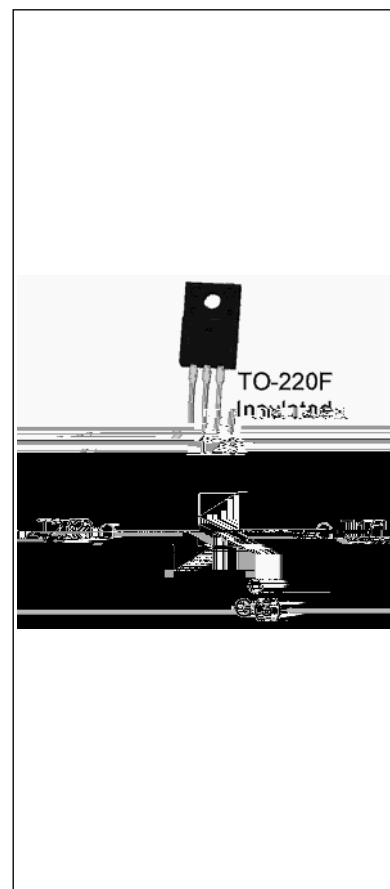


The T1210H-6F triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T1210H-6F provides 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
$I_{GTn}/D/\eta$	10/10/10	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-150	°C
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 ($T_C \leq 106^{\circ}C$)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (full cycle , $t_p=20ms$, $T_j=25^{\circ}C$)	I_{TSM}	120	A
Non repetitive surge peak on-state current (full cycle , $t_p=16.6ms$, $T_j=25^{\circ}C$)		132	
I^2t value for fusing ($t_p=10ms$, $T_j=25^{\circ}C$)	I^2t	72	A ² s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100Hz$, $T_j=150^{\circ}C$)	di/dt	100	A/ μ 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
Peak pulse voltage ($T_j=25^\circ C$; non-repetitive, off-state; FIG. 7)	V_{pp}	4	kV

(T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12V$ $R_L=33\Omega$	$\text{h} - \text{D} - \eta$	MAX.	10	mA
V_{GT}		$\text{h} - \text{D} - \eta$	MAX.	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=150^\circ C$ $R_L=3.3k\Omega$	$\text{h} - \text{D} - \eta$	MIN.	0.2	V

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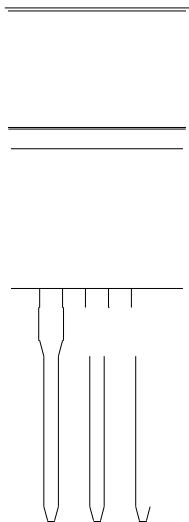
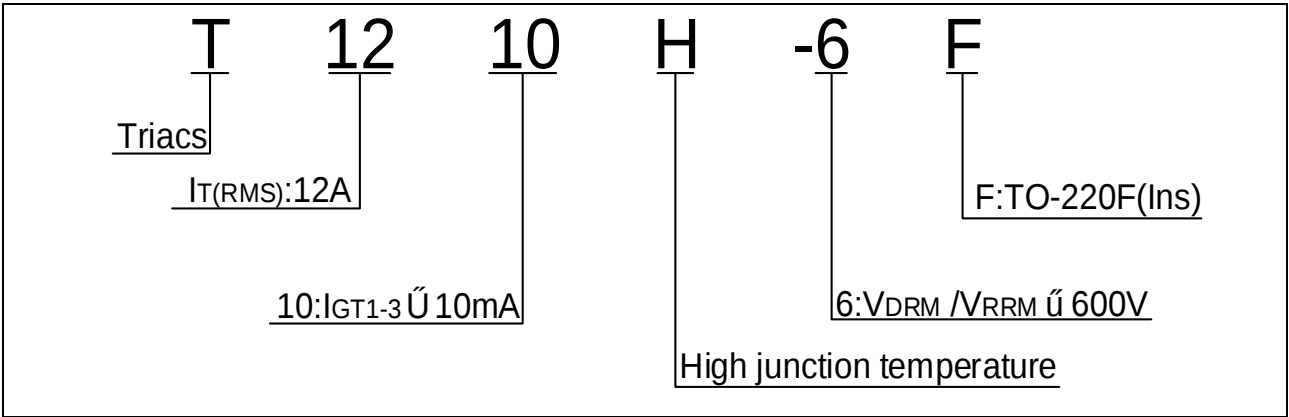


FIG.2: RMS on-state current versus case temperature

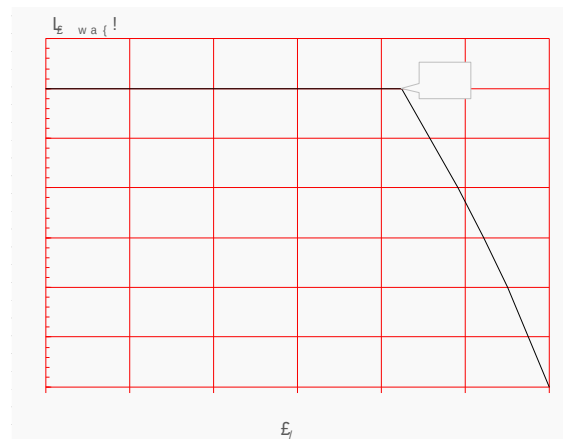
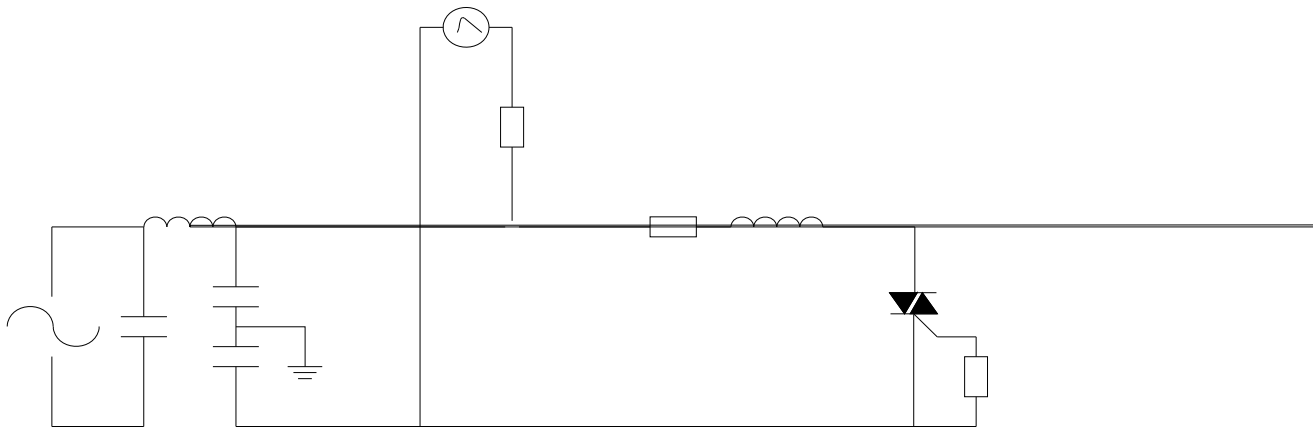


FIG.4: On-state characteristics

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





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