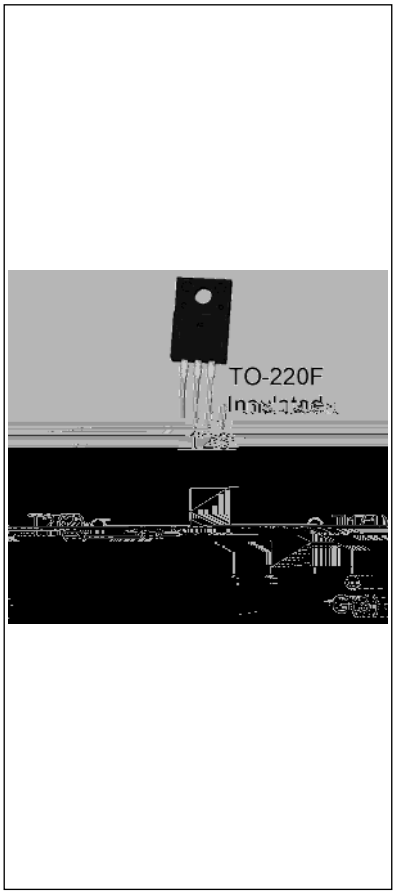
T1210H-6F 12A TRIAC

Rev.A.1.1

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} Ñ/ ñ/ ħ	10/10/10	mA

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

Peak gate current (t_p=20μs , T_j=150Ņ)	I_{GM}	4	A
Average gate power dissipation (T_j=150Ņ)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25Ņ; non-repetitive,off-state;FIG.7)	V_{pp}	4	kV

(T_j=25Ņ unless otherwise specified)

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

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:TO-220F(Ins)

RRM ů 600V

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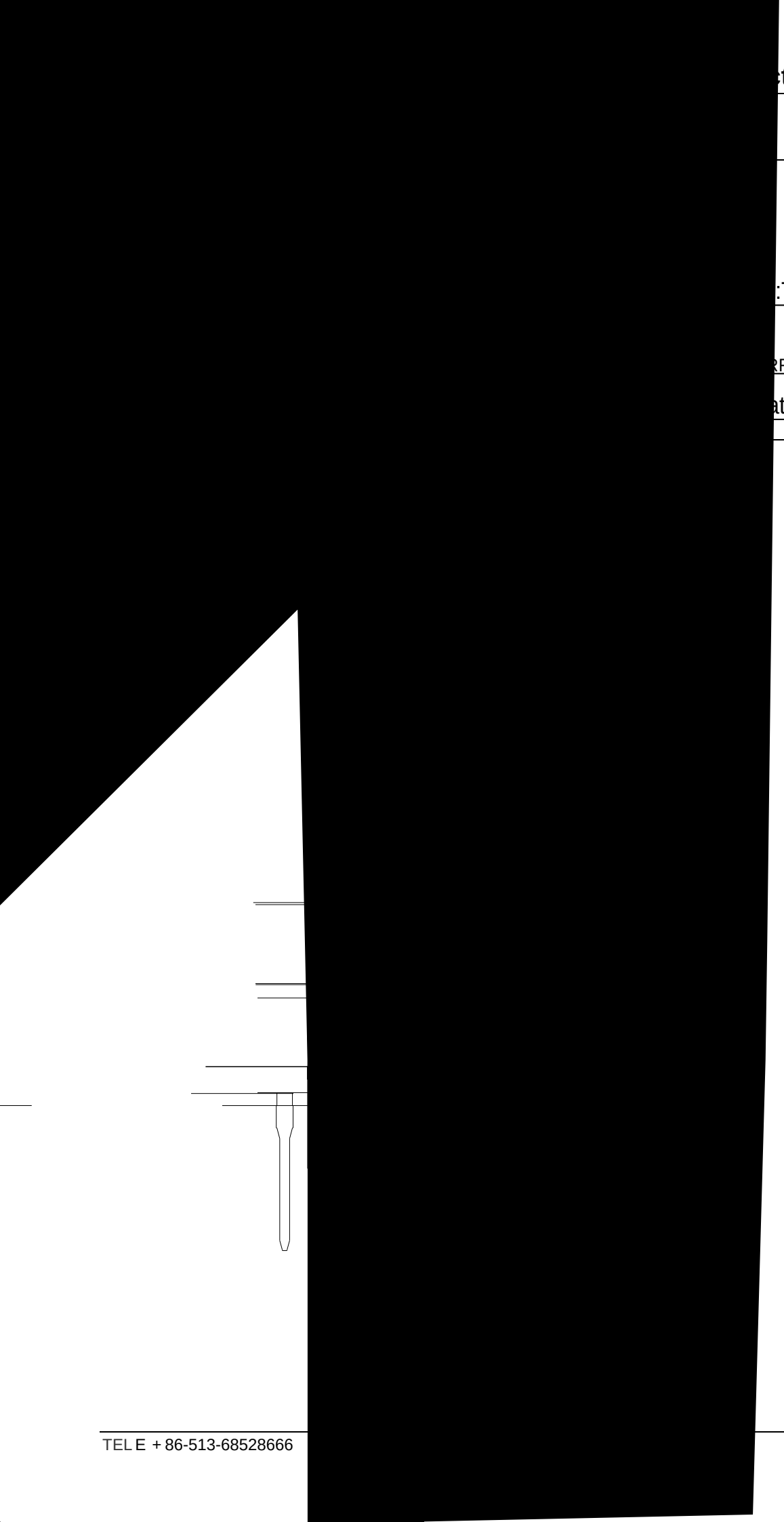


FIG.2: RMS on-state current versus case temperature

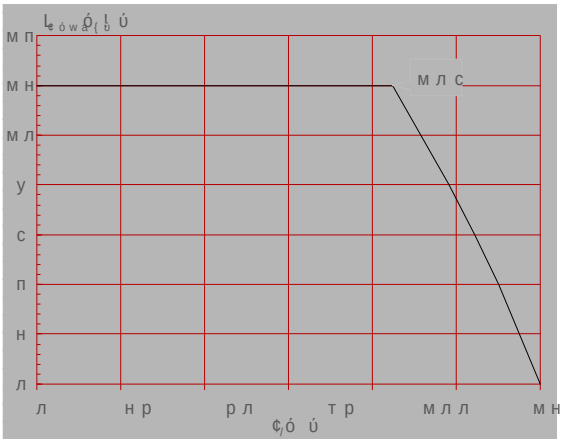
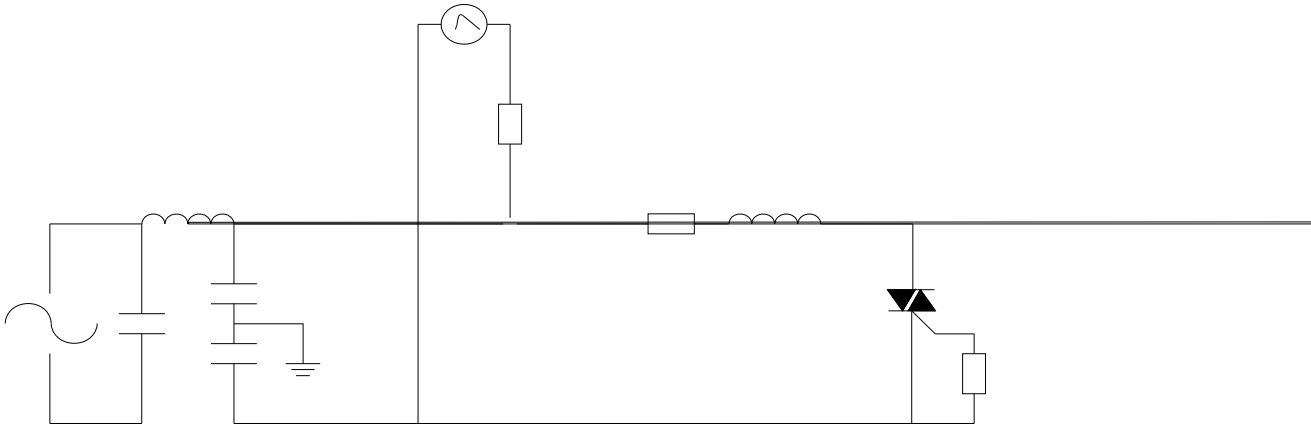


FIG.4: On-state characteristics

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





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