T1220H-8E 12A TRIAC

Rev.A.1.0

DESCRIPTION:

The T1220H-8E 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, T1220H-8E provides a very high switching capability up to junction temperatures of 150°C. Package TO-263 is RoHS compliant.

MAIN FEATURES

ABSOLUTE MAXIMUM RATINGS

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}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	4.5	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33	- -	MAX.	20	mA
V_{GT}		- -	MAX.	1	V
V_{GD}	V_D =V_{DRM} T_j =150 R_L =3.3K	- -	MIN.	0.2	V
I_L	I_G =1.2I_{GT}	-	MAX.	25	mA
				55	
I_H	I_T =500mA		MAX.	25	mA
dV/dt	V_D=540V Gate Open T_j =150		MIN.	400	V s
(dI/dt)c	G 9 G W F j=9150V 7		MIN.	3	A/ms
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	3	s
t_{off}				60	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX .)	Unit
V_{TM}	I_{TM} =17A t_p=380 s	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=150	0.75	V
R_D	Dynamic resistance	T_j=150	37	P
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	A
I_{RRM}		T_j=150	2	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.3	/W
$R_{th(j-a)}$	junction to ambient (AC, in free air, S=2cm^2)	45	/W

ORDERING INFORMATION

T 12 20 H -8 E -/

- T: Triacs
- 12: IT(RMS):12A
- 20: IGT1-3 020 mA
- H: High junction temperature
- -8: VDRM /VRRM 1800 V
- E: TO-263
- -/: Blank:Tube; -TR:Tape & Reel

MARKING

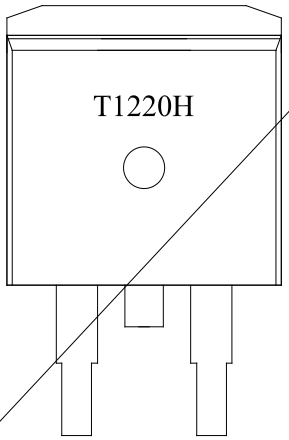


FIG.1 Maximum power dissipation versus RMS on-state current

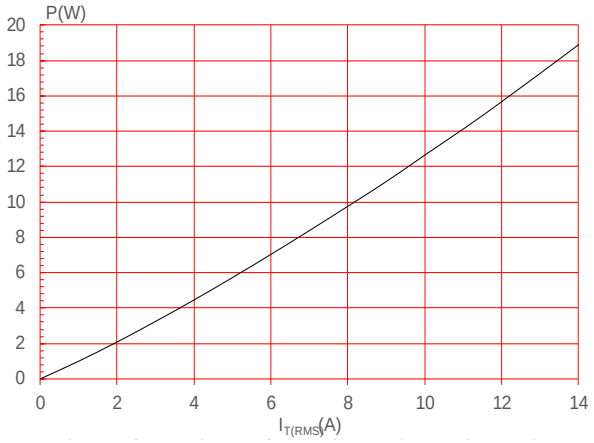


FIG.2: RMS on-state current versus case temperature

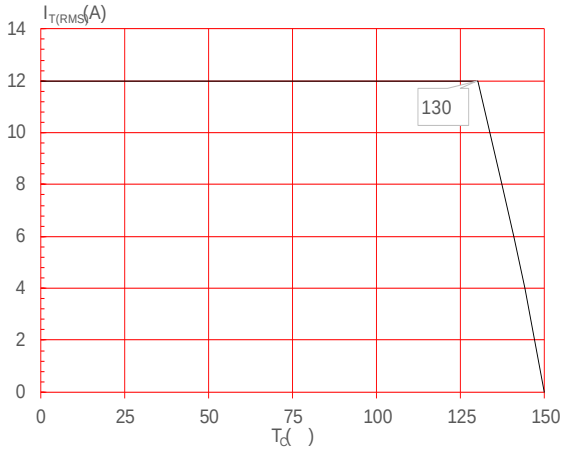


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

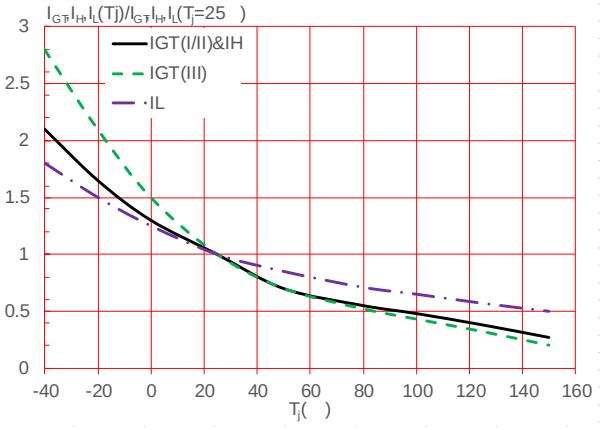
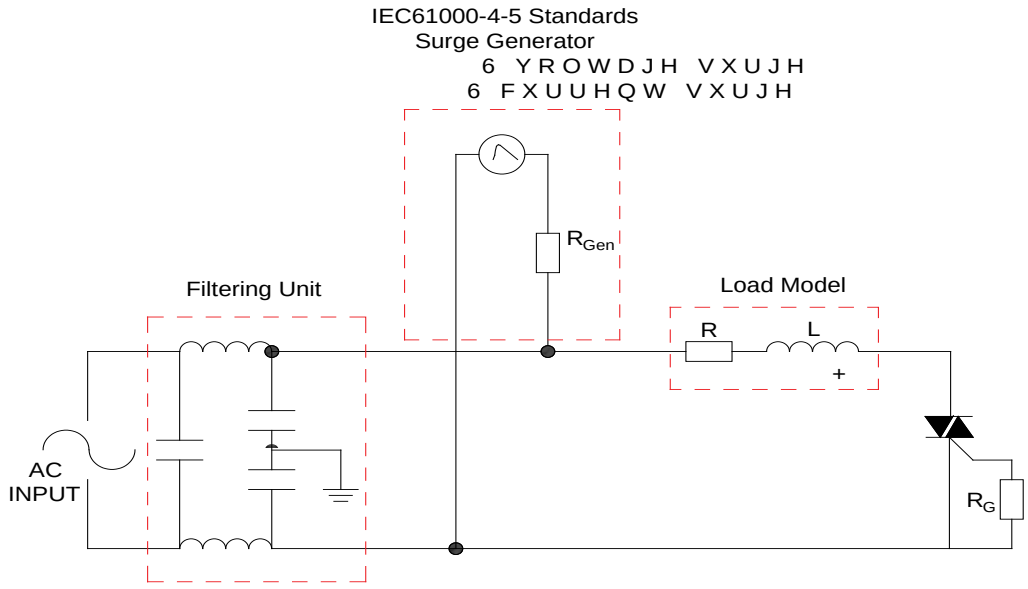


FIG.8 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards



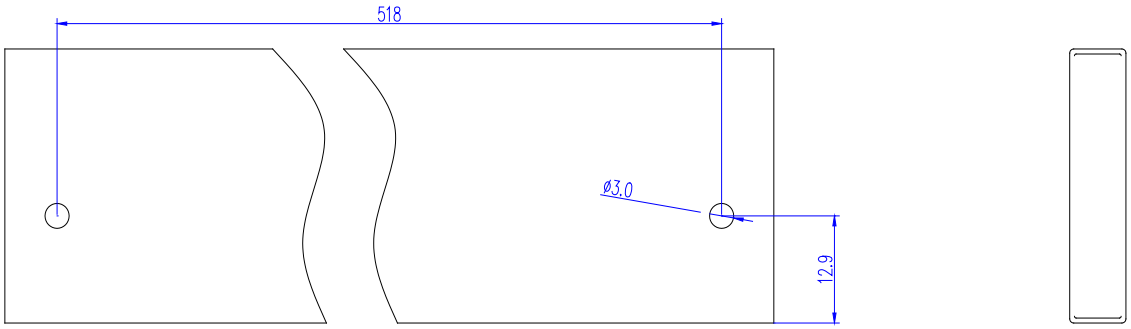
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T1220H-8E	800	20	TO-263	50	Tube
T1220H-8E-TR				800	Tape & Reel

Document Revision History

Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated

DELIVERY MODE



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