T1220H-8E 12A TRIAC

Rev.A.1.1

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	V
RMS on-state current ($T_C \leq$ 130)	$I_{T(RMS)}$	12	A 12

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 =33Ω	- -	MAX.	20	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.	25	mA
				55	
I_H	I_T =500mA		MAX.	25	mA
dV/dt	V_D=540V Gate Open T_j =150		MIN.	400	V/μs
(dI/dt)c	(dV/dt)c=20V/μs, T_j=150		MIN.	3	A/ms
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	3	μs
t_{off}				60	

STATIC CHARACTERISTICS

Symbol

ORDERING INFORMATION

T 12 20 H -8 E -/

- T: Triacs
- 12: $I_{T(RMS)}$:12A
- 20: $I_{GT1-3} \leq$ 20mA
- H: High junction temperature
- -8: V_{DRM} /$V_{RRM} \geq$ 800V
- E: TO-263
- -/: Blank:Tube; -TR:Tape & Reel

MARKING

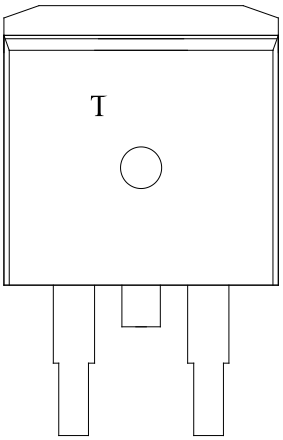


FIG.1: Maximum power dissipation versus RMS on-state current

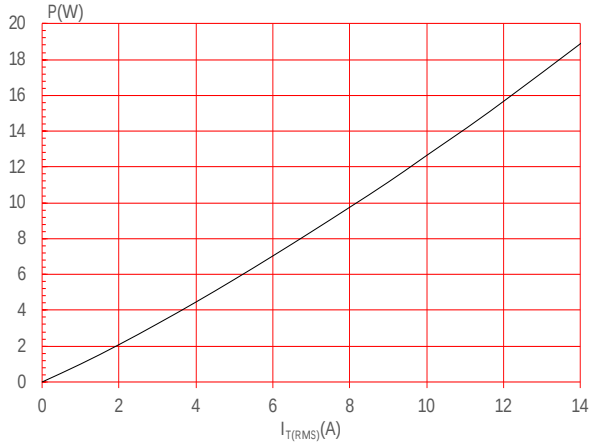
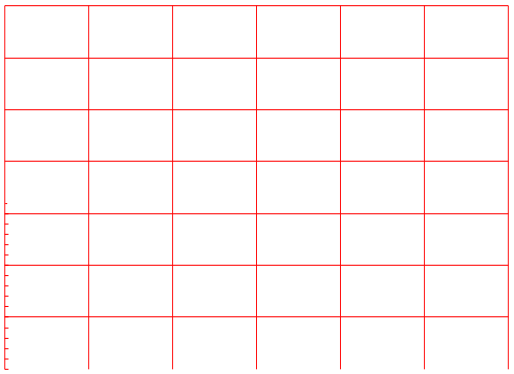
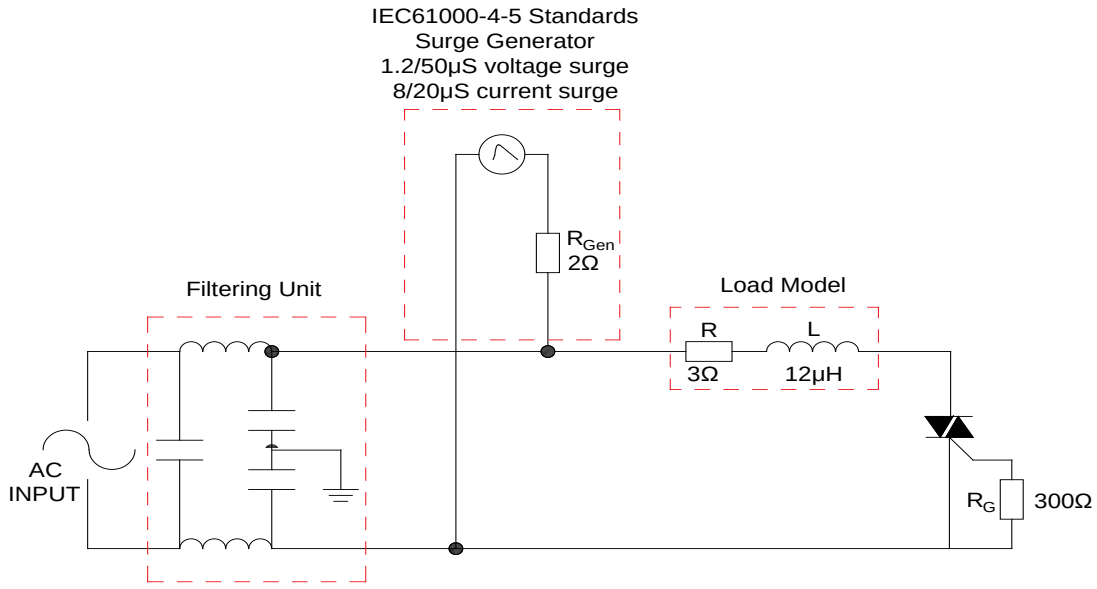


FIG.2: RMS on-state current versus case temperature



A) RMS) θ (

FIG.8 Test 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
Oct.17, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.370		0.378
D	2.40			0.094		
E	1.20		1.50	0.047(0)]TJ $0 Tm@Tw<3C0		
F						

DELIVERY MODE

