



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
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ELECTRICAL CHARACTERISTICS (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
$(dI/dt)_c$	$V_D=150V$ $T_j=150$		MIN.	3	A/ms
t_{on}	$I_G=40mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	3	s
t_{off}				60	

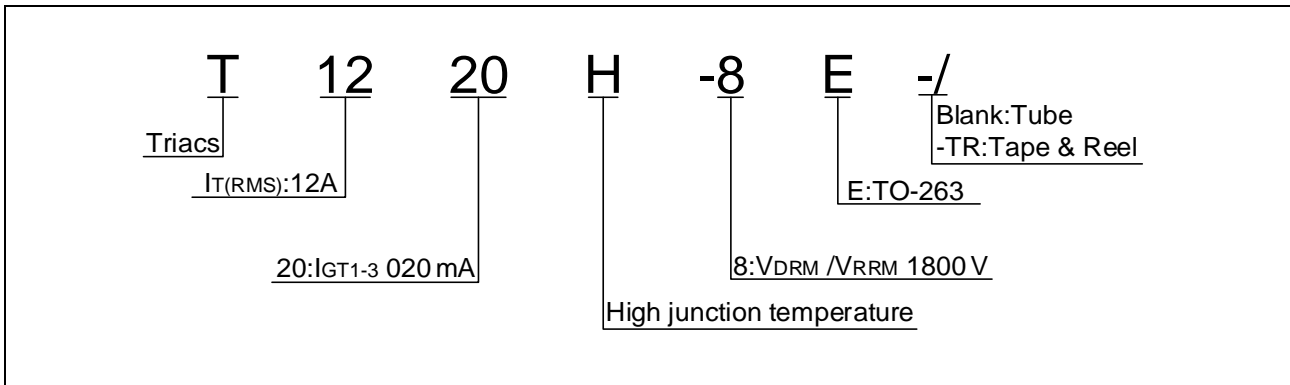
STATIC CHARACTERISTICS

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	$^{\circ}W$
$R_{th(j-a)}$	junction to ambient (AC, in free air, $S=2cm^2$)	45	$^{\circ}W$

ORDERING INFORMATION



MARKING

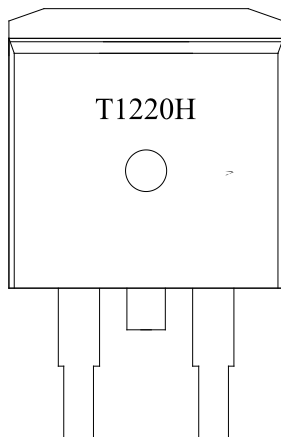


FIG.1 Maximum power dissipation versus RMS on-state current

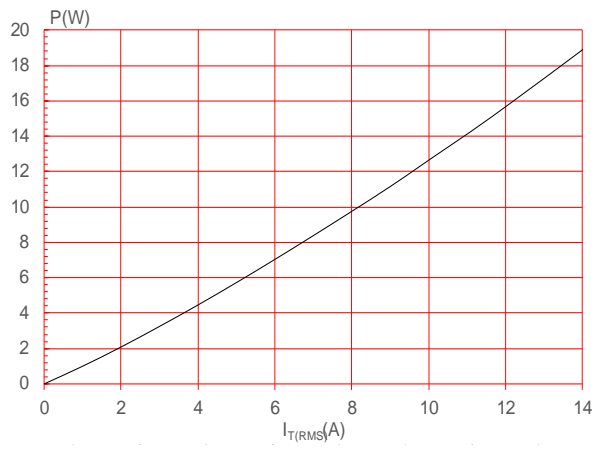


FIG.2: RMS on-state current versus case temperature

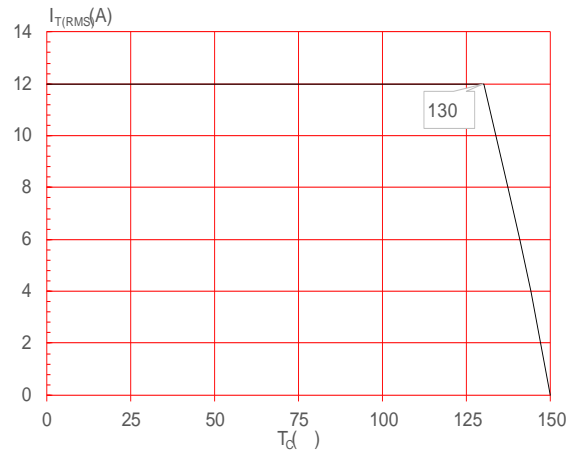
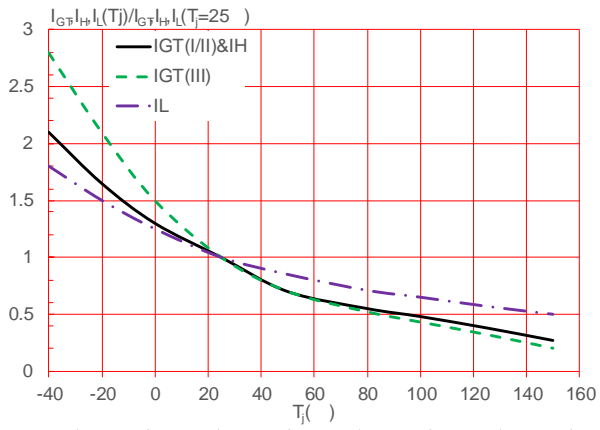
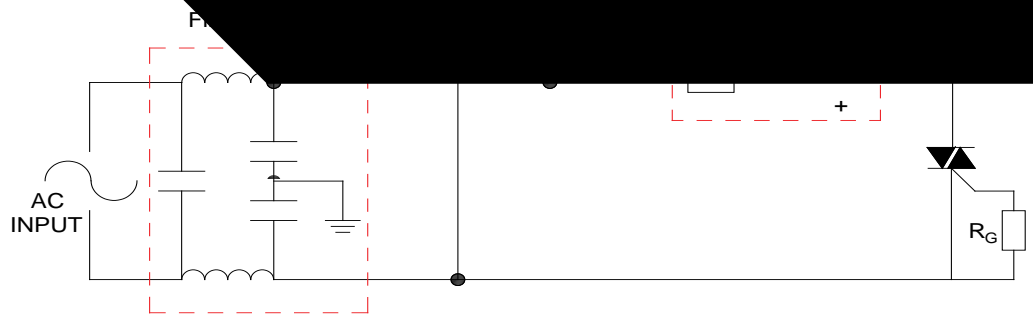


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature





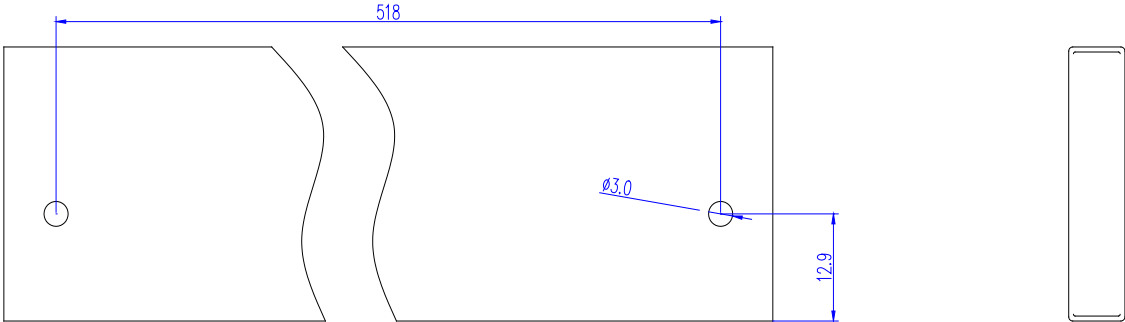
ORDERING INFORMATION

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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