



**T1235H-8E 12A TRIAC**

Rev.A.1.0

**DESCRIPTION:**

The T1235H-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,

Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	4.5	kV
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**ELECTRICAL CHARACTERISTICS** ( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V$ $R_L=33$	- -	MAX.	35	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.	30	mA
				60	
$I_H$	$I_T=500mA$		MAX.	30	mA
$dV/dt$	$V_D=540V$ Gate Open $T_j=150$		MIN.	500	V/ $\mu s$
$(dI/dt)_c$	$(dV/dt)_c=20V/\mu s$ , $T_j=150$		MIN.	5	A/ms
$t_{on}$	$I_G=40mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$		TYP.	3	$\mu s$
$t_{off}$				60	

**STATIC CHARACTERISTICS**

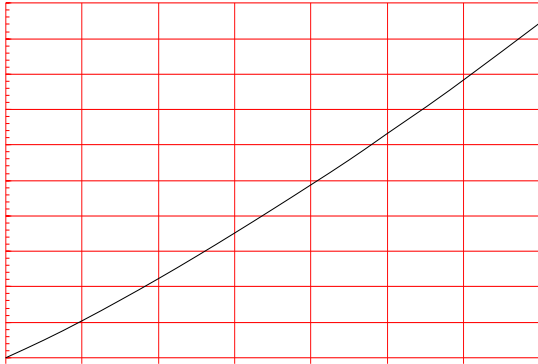
Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=17A$ $t_p=380\mu s$	$T_j=25$	1.4	V
$V_{TO}$	Threshold voltage	$T_j=150$	0.75	V
$R_D$	Dynamic resistance	$T_j=150$	37	m
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	5	$\mu A$
$I_{RRM}$		$T_j=150$	2	mA

**THERMAL RESISTANCES**

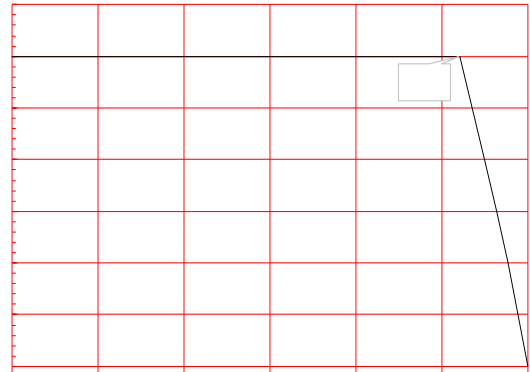
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.3	$^{\circ}W$
$R_{th(j-a)}$	junction to ambient (AC, in free air, $S=2cm^2$ )	45	$^{\circ}W$



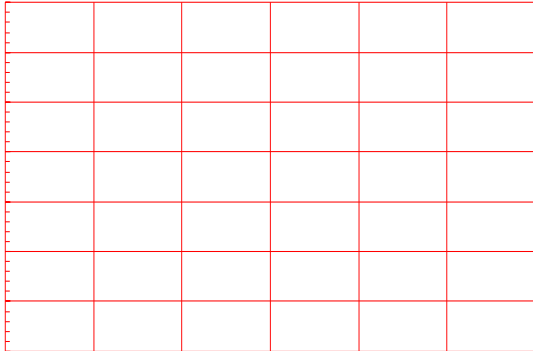
**FIG.1** Maximum power dissipation versus RMS on-state current



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



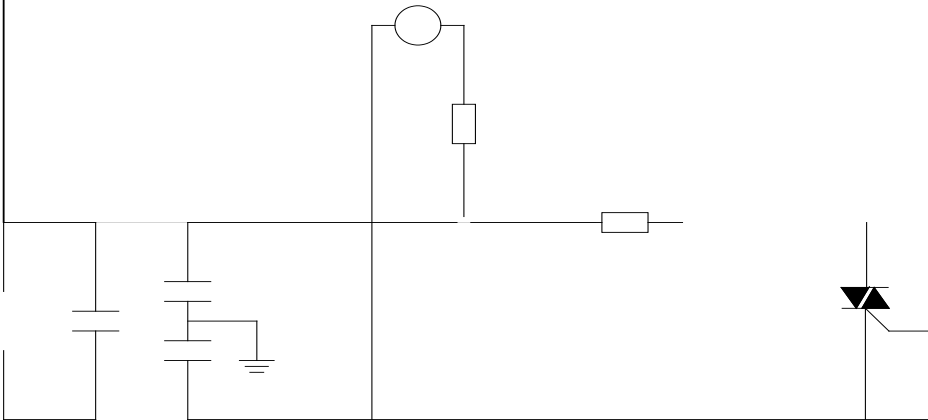
**FIG.3:** RMS on-state current versus ambient temperature (printed circuit board FR4,copper thickness:35μm)(full cycle)



**FIG.4:** Surge peak on-state current versus number of cycles



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



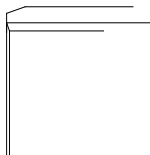
## ORDERING INFORMATION

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T1235H-8E	800	35	TO-263	50	Tube
T1235H-8E-TR				800	Tape & Reel

## Document Revision History

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

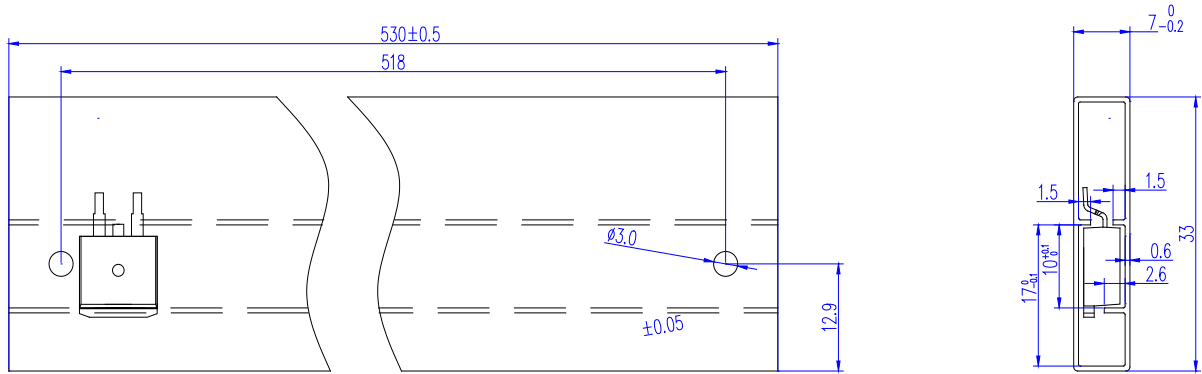
PACKAGE MECHANICAL DATA 0.059



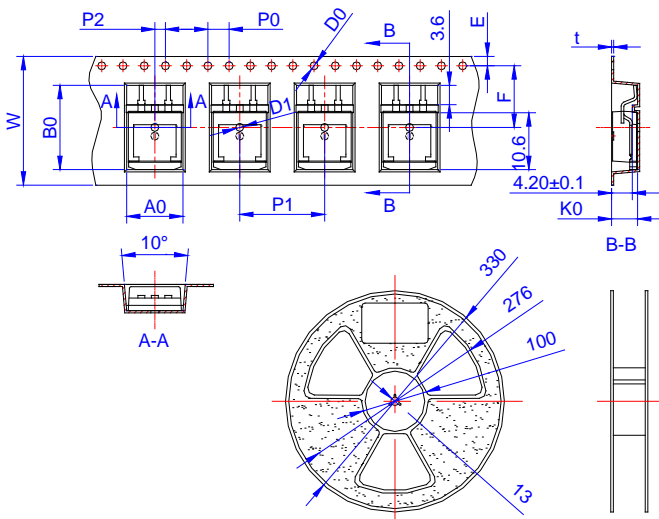
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.37		0.378
D	2.40			0.094		
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033
G			1.50			
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0		0.25			
M	1.25		1.35			



DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-263	TUBE	50	1,000	5,000



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	23.70	24.00	24.30	0.933	0.945	0.957
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
D0	-	1.50	1.60	-	0.059	0.063
D1	-	1.50	1.60	-	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	15.90	16.00	16.10	0.626	0.630	0.634
P2	1.90	2.00	2.10	0.075	0.079	0.083
A0	10.80	10.90	11.00	0.425	0.429	0.433
B0	16.20	16.30	16.40	0.638	0.642	0.646
K0	4.80	4.90	5.00	0.189	0.193	0.197
t	0.35	0.40	0.45	0.014	0.016	0.018

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