T0650H-6E 6A TRIAC

Rev.A.1.1

DESCRIPTION:

The T0650H-6E 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, T0650H-6E provides a very high switching capability up to junction temperatures of 150°C. Package TO-263 is RoHS compliant.

MAIN FEATURES

[redacted]

Value	Unit
-40-150	
-40-150	
600	V
600	V
6	A
60	A
66	
18	A^2s
100	A s
4	A
1	W
10	W

Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	4	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33	- -	MAX.	50	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.	70	mA
				100	
I_H	I_T =100mA		MAX.	50	mA
dV/dt	V_D=400V Gate Open T_j =150		MIN.	1500	V s
(dI/dt)c	G 9 G W F j=9150V 7		MIN.	5	A/ms
t_{on}	I_G=80mA I_A=400mA I_R=40mA T_j=25		TYP.	5	s
t_{off}				50	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX .)	Unit
V_{TM}	I_{TM} =8.5A t_p=380 s	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=150	0.8	V
R_D	Dynamic resistance	T_j=150	63	P
I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25	5	A
I_{RRM}		T_j=150	0.8	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	2.3	/W
$R_{th(j-a)}$	junction to ambient (AC, in free air, S=2cm^2)	45	/W

ORDERING INFORMATION

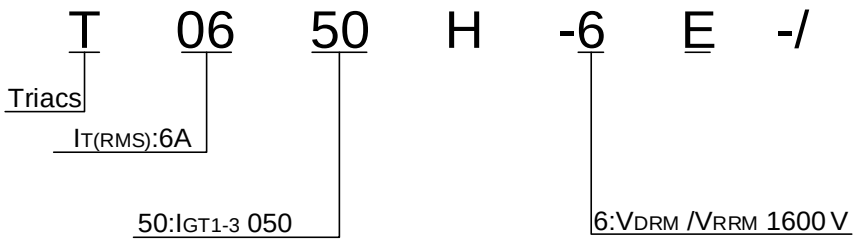


FIG.1: Maximum power dissipation versus RMS on-state current

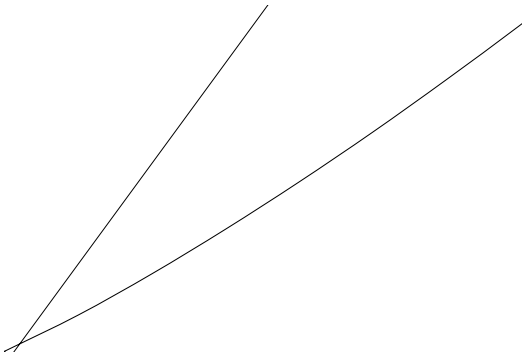
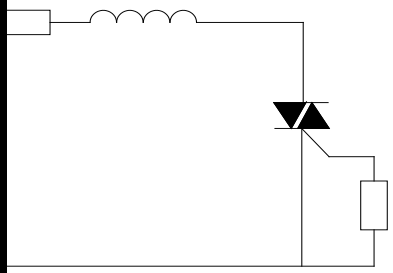


FIG.2: RMS on-state current versus case temperature

to IEC-61000-4-5 standards



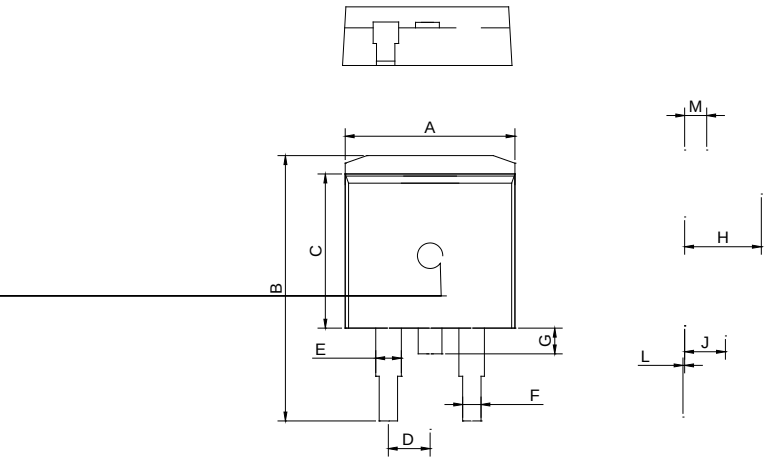
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T0650H-6E	600	50	TO-263	50	Tube
T0650H-6E-TR				800	Tape & Reel

Document Revision History

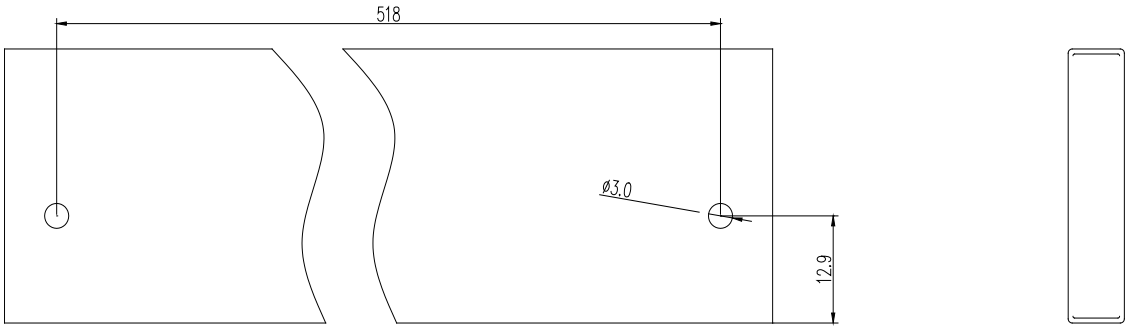
Date	Revision	Changes
Apr.11, 2023	A.1.0	Last updated
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

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		0.059
F	0.75		0.85	0.029		0.033

DELIVERY MODE



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