T0605xH T0609xH

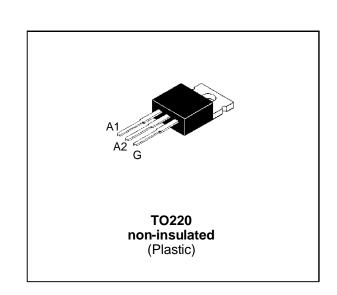
SENSITIVE GATE TRIACS

FEATURES

- $I_{T(RMS)} = 6A$
- $V_{DRM} = 400 \text{V to } 800 \text{V}$
- $I_{GT} \le 5mA$ to $\le 10mA$



The T06xxxH series of triacs uses a high performance MESA GLASS technology. These parts are intended for general purpose applications where gate high sensitivity is required.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit	
I _{T(RMS)}	RMS on-state current (360° conduction angle)	Tc= 100 °C	6	А
I _{TSM}	Non repetitive surge peak on-state current $(T_j \text{ initial} = 25^{\circ}\text{C})$ tp		63	Α
			60	
l ² t	I^2 t Value for fusing tp = 10 ms		18	A ² s
dl/dt	Critical rate of rise of on-state current $I_G = 50 \text{ mA}$ $di_G/dt = 0.1 \text{ A/}\mu\text{s}$. Repetitive $F = 50 \text{ Hz}$		10	A/μs
		Non Repetitive	50	
T _{stg} T _j	Storage and operating junction temperature	- 40, + 150 - 40, + 125	ů	
TI	Maximum lead temperature for soldering dur 4.5mm from case	260	°C	

Symbol	Parameter		Unit			
		D	М	S	N	
VDRM VRRM	Repetitive peak off-state voltage $T_j = 125^{\circ}C$	400	600	700	800	V

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THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth(j-a)	Junction to ambient	60	°C/W
Rth(j-c)	Junction to case for D.C	4	°C/W
Rth(j-c)	Junction to case for A.C 360° conduction angle (F=50Hz)	3	°C/W

GATE CHARACTERISTICS (maximum values)

 $P_{G (AV)} = 1 W$ $P_{GM} = 10 W (tp = 20 \mu s)$ $I_{GM} = 4 A (tp = 20 \mu s)$

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Sens	ensitivity U	
Syllibol			Quadrani		05	09	
lgт	$V_D=12V$ (DC) $R_L=33\Omega$ $T_j=25$ °C		I-II-III-IV	MAX	5	10	mA
V _{GT}	V _D =12V (DC) R _L =33Ω	Tj= 25°C	I-II-III-IV	MAX	1.5		V
V_{GD}	V _D =V _{DRM} R _L =3.3kΩ	Tj= 125°C	I-II-III-IV	MIN	0.2		V
tgt	$V_D=V_{DRM}$ $I_G=40$ mA $I_T=8.5$ A $dI_G/dt=0.5$ A/ μ s	Tj= 25°C	I-II-III-IV	TYP	2		μs
I _H *	I _T = 50mA Gate open	Tj= 25°C		MAX	5	10	mA
ΙL	I _G = 1.2 I _G T	Tj= 25°C	I-III-IV	TYP	5 10		mA
			II	TYP	10	20	
V _{TM} *	I _{TM} = 8.5A tp= 380μs	Tj= 25°C		MAX	1.65		V
I _{DRM}	$V_D = V_{DRM}$	Tj= 25°C		MAX	5		μА
IRRM	$V_R = V_{RRM}$	Tj= 110°C		MAX	2	2	mA
dV/dt *	VD=67%V _{DRM} Gate open	Tj= 110°C		MIN		20	V/µs
				TYP	10		
(dV/dt)c*	(dl/dt)c = 2.7 A/ms	Tj= 110°C TYP		1	2	V/µs	

^{*} For either polarity of electrode A2 voltage with reference to electrode A1

ORDERING INFORMATION

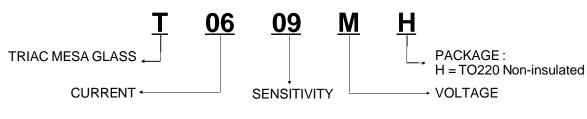


Fig.1: Maximum RMS power dissipation versus RMS on-state current.

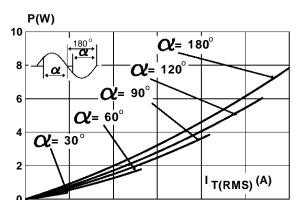


Fig.3: RMS on-state current versus case temperature.

3

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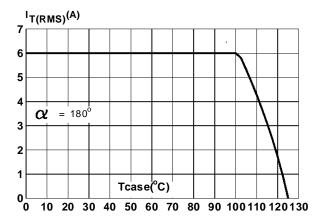


Fig.5: Relative variation of gate trigger current and holding current versus junction temperature.

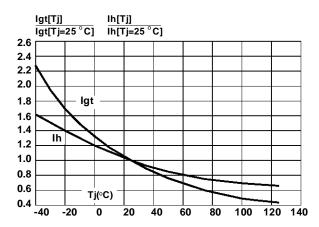


Fig.2: Correlation between maximum RMS power dissipation and maximum allowable temperature (Tamb and Tcase) for different thermal resistances heatsink + contact.

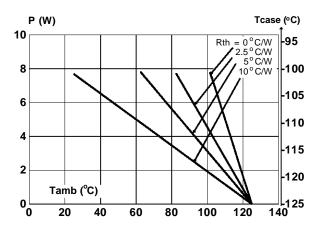


Fig.4: Relative variation of thermal impedance versus pulse duration.

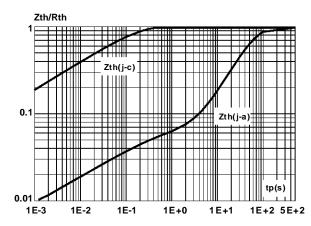
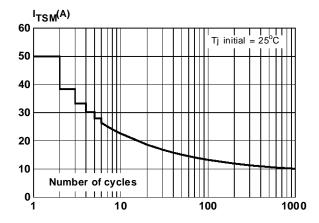


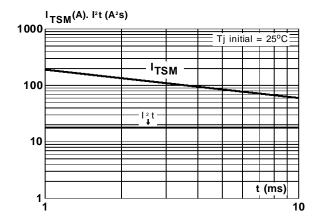
Fig.6: Non repetitive surge peak on-state current versus number of cycles.

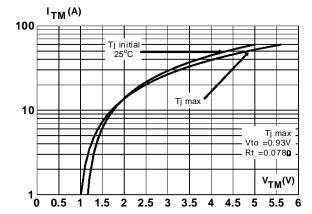


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Fig.7: Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \le 10$ ms, and corresponding value of l^2t .

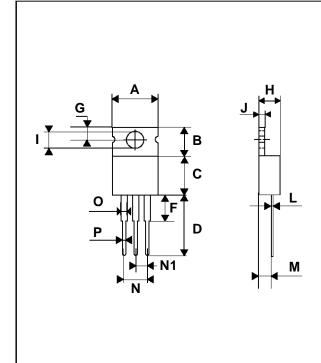
Fig.8: On-state characteristics (maximum values).





PACKAGE MECHANICAL DATA

TO220 Non-insulated (Plastic)



	DIMENSIONS						
REF.	Millimeters			Inches			
	Тур.	Min.	Max.	Тур.	Min.	Max.	
Α			10.3			0.406	
В		6.3	6.5	0.248	0.256		
С			9.1			0.358	
D		12.7			0.500		
F			4.2			0.165	
G			3.0			0.118	
Н		4.5	4.7		0.177	0.185	
I		3.53	3.66		0.139	0.144	
J		1.2	1.3		0.047	0.051	
L			0.9			0.035	
М	2.7			0.106			
N			5.3			0.209	
N1	2.54			0.100			
0		1.2	1.4		0.047	0.055	
Р			1.15			0.045	

Marking: type number

Weight: 1.8 g

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