

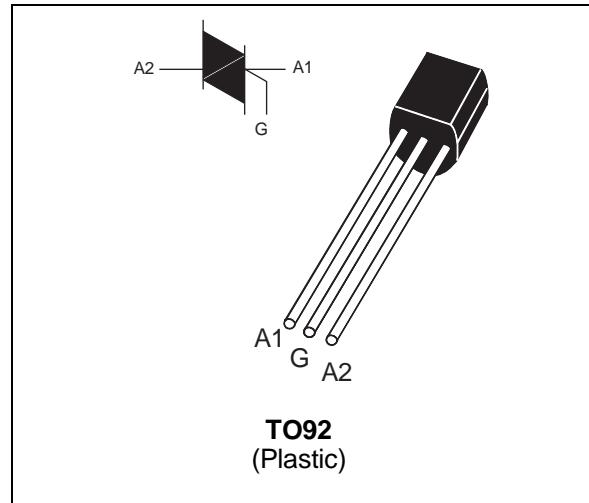
SENSITIVE GATE TRIACS

FEATURES

- $I_{T(RMS)} = 0.8A$
- $V_{DRM} = 400V$ and $600V$
- $I_{GT} = 5mA$

DESCRIPTION

The Z006607xA triacs are intended for general applications where high gate sensitivity is required.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit
$I_{T(RMS)}$	RMS on-state current (360° conduction angle)	0.8	A
I_{TSM}	Non repetitive surge peak on-state current (T_j initial = 25°C)	$t_p = 8.3 \text{ ms}$	A
		$t_p = 10 \text{ ms}$	
	Non repetitive surge peak on-state current (T_j initial = 110°C, full cycle)	$F = 60\text{Hz}$	
I^2t	I^2t Value for fusing	$t_p = 10 \text{ ms}$	A^2s
T_{stg} T_j	Storage and operating junction temperature range	- 40, + 150 - 40, + 110	°C
T_l	Maximum lead temperature for soldering during 10s	260	°C

Symbol	Parameter	Z00607xA		Unit
		D	M	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage $T_j = 110^\circ\text{C}$	400	600	V

Z00607DA / Z00607MA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-a)}	Junction to ambient	150	°C/W
R _{th(j-l)}	Junction to lead	60	°C/W

GATE CHARACTERISTICS (maximum values)

P_{G (AV)}= 0.1 W P_{GM} = 2 W (tp = 20 μs) I_{GM} = 1 A (tp = 20 μs)

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions	Quadrant		Sensitivity	Unit
				07	
I _{GT}	V _D =12V (DC) R _L =140Ω	T _j = 25°C	I-II-III	MAX	5 mA
			IV	MAX	7
V _{GT}	V _D =12V (DC) R _L =140Ω	T _j = 25°C	I-II-III-IV	MAX	1.5 V
V _{GD}	V _D =V _{DRM} R _L =3.3kΩ	T _j = 110°C	I-II-III-IV	MIN	0.2 V
t _{gt}	V _D =V _{DRM} I _G = 25mA I _T = 1.0A dI _G /dt = 0.25A/μs	T _j = 25°C	I-II-III-IV	TYP	2 μs
I _H *	I _T = 200 mA Gate open	T _j = 25°C		MAX	5 mA
I _L	I _G = 1.2 I _{GT}	T _j = 25°C	I-III-IV	MAX	10 mA
			II	MAX	20
V _{TM} *	I _{TM} = 1.1A tp= 380μs	T _j = 25°C		MAX	1.5 V
I _{DRM} I _{RRM}	V _D = V _{DRM} V _R = V _{RRM}	T _j = 25°C		MAX	10 μA
		T _j = 110°C		MAX	0.1 mA
dV/dt *	V _D =67%V _{DRM} Gate open	T _j = 110°C		MIN	10 V/μs
(dV/dt)c *	(dI/dt)c = 0.35 A/ms	T _j = 110°C		MIN	1.5 V/μs

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

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

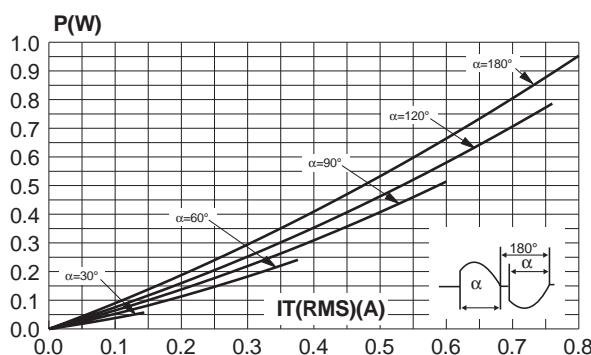


Fig 2: Correlation between maximum power dissipation and maximum allowable temperatures (T_{amb} and T_{lead}).

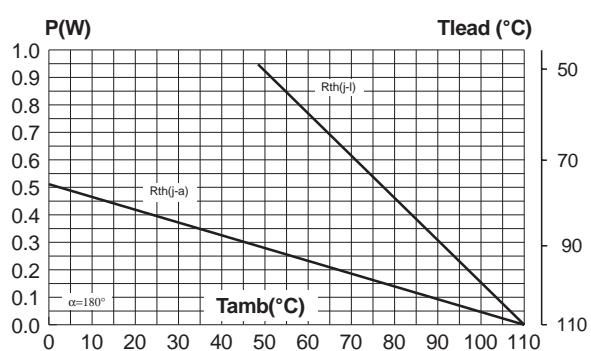


Fig 3: RMS on-state current versus ambient temperature.

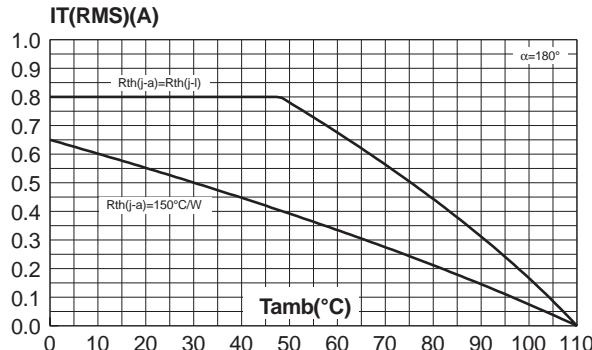


Fig 4: Relative variation of thermal impedance junction to ambient versus pulse duration.

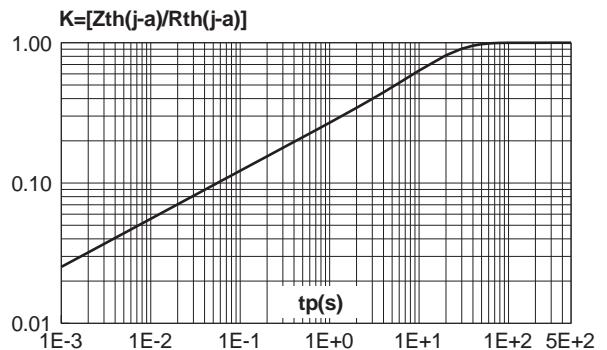


Fig 5: Relative variation of gate trigger current and holding current versus junction temperature (typical values).

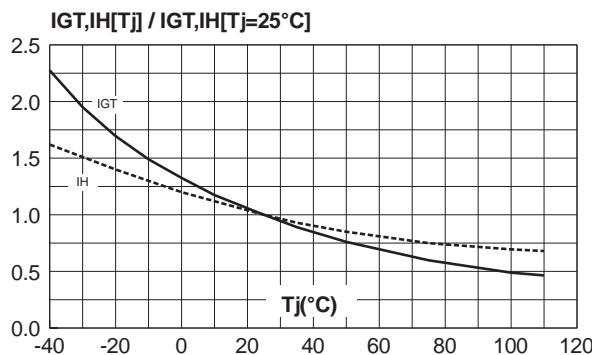


Fig 6: Non repetitive surge peak on-state current versus number of cycles.

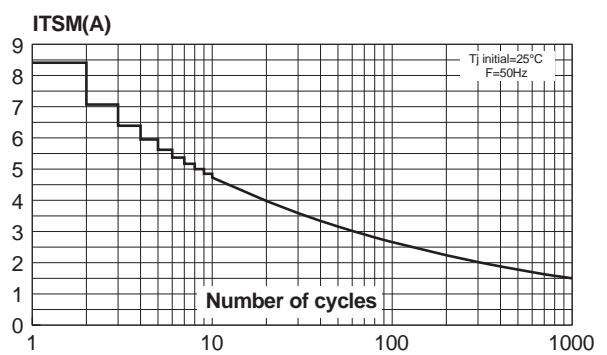


Fig 7: Non repetitive surge peak on-state current for a sinusoidal pulse with width $tp < 10ms$, and corresponding value of I^{2t} .

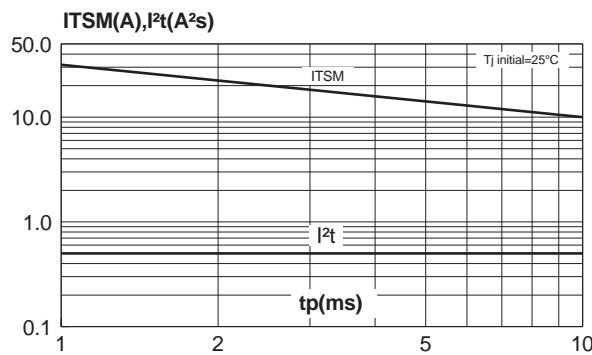
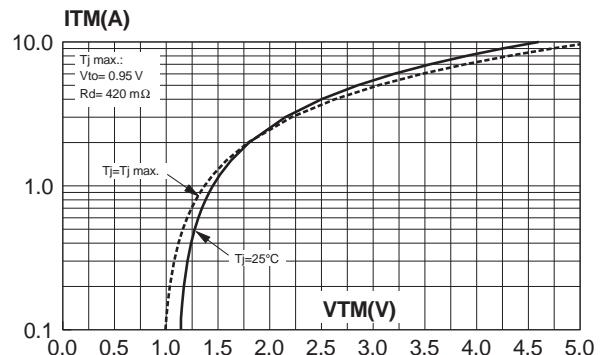


Fig 8: On-state characteristics (maximum values).



Z00607DA / Z00607MA

PACKAGE MECHANICAL DATA TO92 (Plastic)

REF.	DIMENSIONS					
	Millimeters			Inches		
	Typ.	Min.	Max.	Typ.	Min.	Max.
A	1.35			0.053		
B			4.70			0.185
C	2.54			0.100		
D		4.40			0.173	
E		12.70			0.500	
F			3.70			0.146
a			0.45			0.017

Ordering type	Marking	Package	Weight	Base qty	Delivery mode
Z00607DA 1BA2	Z0607DA	TO92	0.2g.	2500	Bulk
Z00607MA 1BA2	Z0607MA	TO92	0.2g.	2500	Bulk

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