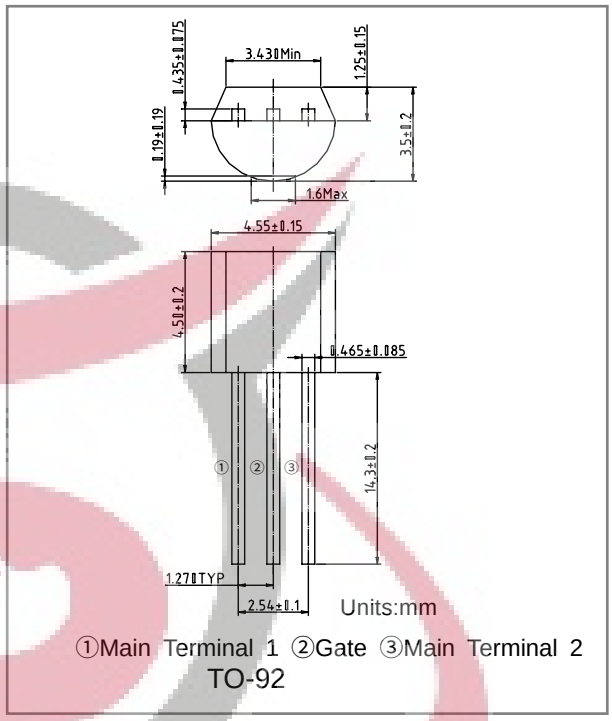
0.8A TRIACS

MAIN FEATURES:

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM}/V_{RRM}	600	V
$I_{GT(Q1)}$	5	mA

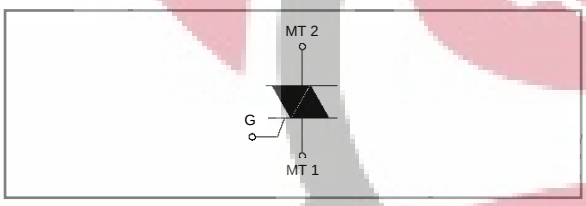


①Main Terminal 1 ②Gate ③Main Terminal 2

TO-92

DESCRIPTION

The Z0607 is suitable for low power AC switching applications, such as fan speed, small light controllers... Thanks to low gate triggering current, it can be directly driven by microcontrollers.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter			Value	Unit
$I_{T(RMS)}$	RMS on-state current (full sine wave)		TI=50°C	0.8	A
I_{TSM}	Non repetitive surge peak on-state current (full cycle, Tj initial=25°C)	F=50Hz	t=20ms	9	A
		F=60Hz	t=16.7ms	9.5	
I^2t	I^2t Value for fusing	tp=10ms		0.45	A^2s
dI/dt	Critical rate of rise of on-state current I_G=2*I_{GT}, tr≤100ns	F=120Hz	Tj=110°C	20	A/μs
I_{GM}	Peak gate current	tp=20μs	Tj=110°C	1	A
$P_{G(AV)}$	Average gate power dissipation		Tj=110°C	0.1	W
T_{stg}	Storage junction temperature range			-40 to +150	°C
T_j	Operating junction temperature range			-40 to +110	

ELECTRICAL CHARACTERISTICS (Tj = 25°C, unless otherwise specified)

Symbol	Test condition	Quadrant		Value	Unit
I_{GT}(1)	V_D=12V R_L=30Ω	I - II - III	MAX.	5	mA
		IV		7	
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	V_D=V_{DRM} R_L=3.3KΩ Tj=110°C	ALL	MIN.	0.2	V
I_H(2)	I_T=200mA		MAX.	5	mA
I_L	I_G=1.2I_{GT}	I - III - IV	MAX.	10	mA
		II		20	
dV/dt(2)	V_D=67%V_{DRM} gate open Tj=110°C		MIN.	10	V/μs
(dV/dt)c(2)	(dV/dt)c=0.35A/ms Tj=110°C		MIN.	1.5	V/μs

STATIC CHARACTERISTICS

Symbol	Test condition			Value	Unit
V_{TM}(2)	I_{TM}=1.1A tp=380μs	Tj=25°C	MAX.	1.5	V
V_{to}(2)	Threshold voltage	Tj=110°C	MAX.	0.95	V
R_d(2)	Dynamic resistance	Tj=110°C	MAX.	420	mΩ
I_{DRM}	V_{DRM}=V_{RRM}=600V	Tj=25°C	MAX.	5	μA
I_{RRM}		Tj=110°C		0.1	mA

Note 1: minimum IGT is guaranted at 5% of IGT max.

Note 2: for both polarities of Main Terminal 2 referenced to Main Terminal 1

THERMAL RESISTANCES

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

PRODUCT SELECTOR

Part Number	Voltage	Sensitivity	Type	Package
Z0607	600V	5mA	Standard	TO-92

Fig. 1: Maximum power dissipation versus RMS on-state current (full cycle).

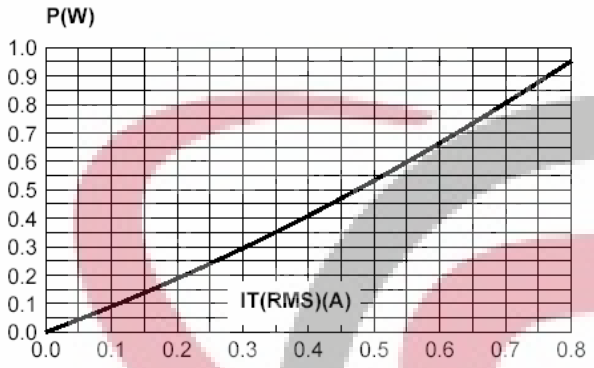


Fig. 2: RMS on-state current versus ambient temperature (full cycle).

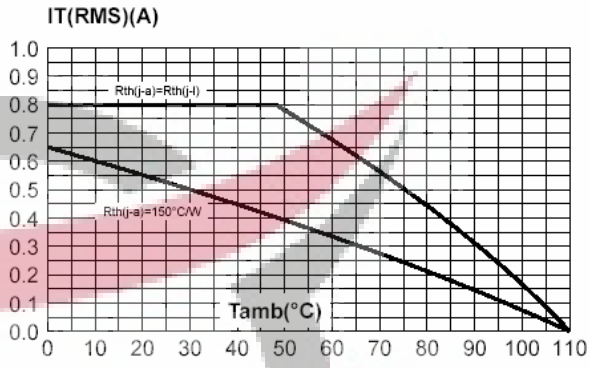


Fig. 3: Relative variation of thermal impedance junction to ambient versus pulse duration.

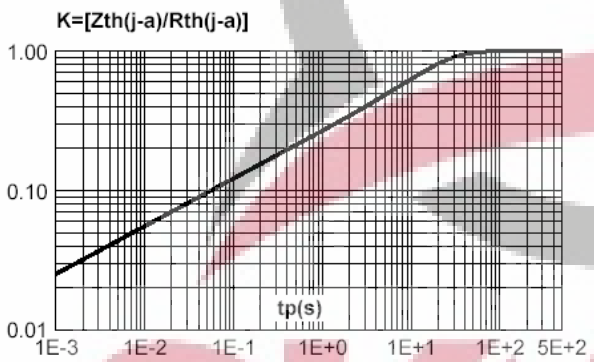


Fig. 4: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

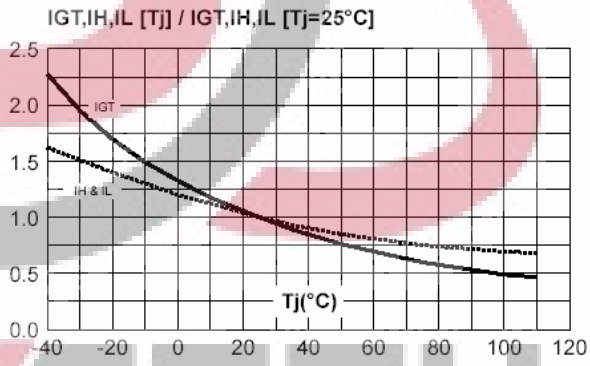


Fig. 5: Surge peak on-state current versus number of cycles.

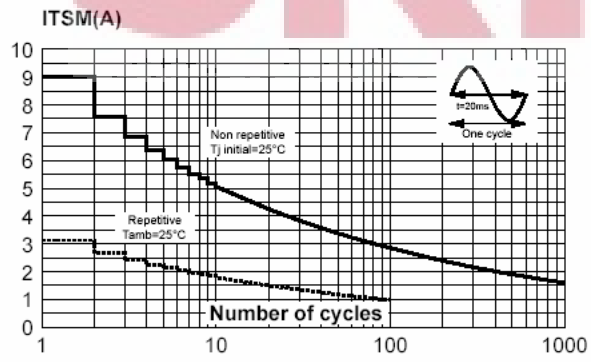


Fig. 6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp < 10ms, and corresponding value of I^2t.

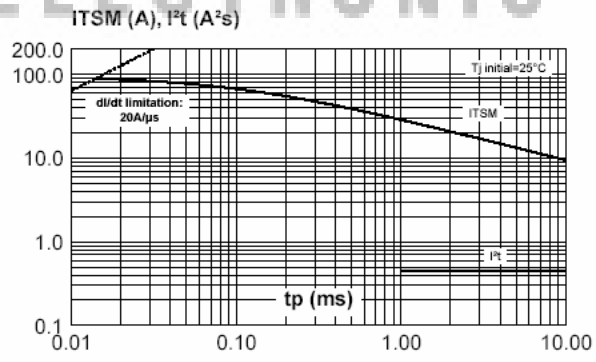


Fig. 7: On-state characteristics (maximum values).

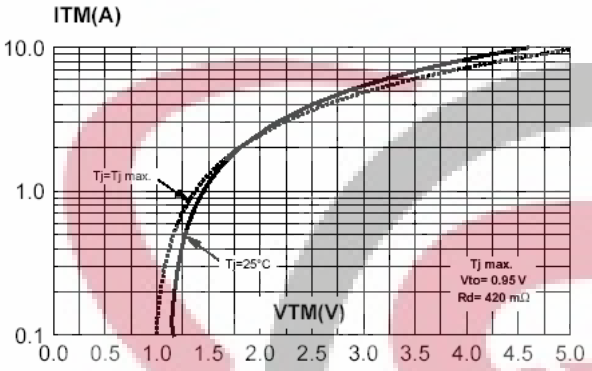


Fig. 8: Relative variation of critical rate of decrease of main current versus (dV/dt)c (typical values).

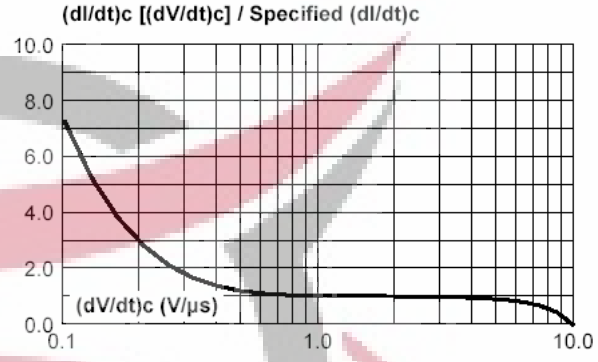


Fig. 9: Relative variation of critical rate of decrease of main current versus junction temperature.