MAC97A8G

0.8A 4Quadrants TRIACs

Product Summary

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM} V_{RRM}	600 / 800	V
V_{TM}	1.55	V

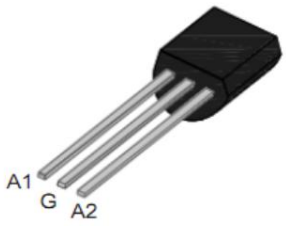
Feature

With high ability to withstand the shock loading of large current,With high commutation performances, 4 quadrants products especially recommended for use on inductive load.

Application

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on.

Package



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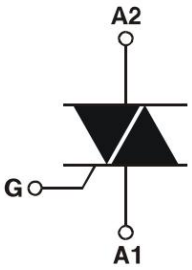
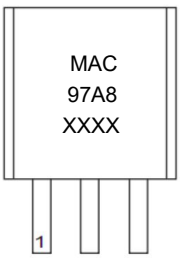
Circuit diagram



Marking



Absolute maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value		Unit
Repetitive peak off-state voltage	V_{DRM}	600 / 800		V
Repetitive peak reverse voltage	V_{RRM}	600 / 800		V
RMS on-state current	$I_{T(RMS)}$	0.8		A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	8		A
I^2t value for fusing (tp=10ms)	I^2t	0.32		A^2s
Critical rate of rise of on-state current (I_G =2×I_{GT})	dI/dt	Ⅰ-Ⅱ-Ⅲ	50	A/μs
		Ⅳ	10	
Peak gate current	I_{GM}	1		A
Average gate power dissipation	$P_{G(AV)}$	0.5		W
Junction Temperature	T_J	-40 ~ +125		℃
Storage Temperature	T_{STG}	-40 ~ +150		℃

Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition		Value		Unit
Gate trigger current	I_{GT}	V_D =12V I_T = 0.1A T_j =25℃	Ⅰ-Ⅱ-Ⅲ	MAX.	5	mA
			Ⅳ		7	
Gate trigger voltage	V_{GT}		Ⅰ-Ⅱ-Ⅲ-Ⅳ	MAX.	1.2	V
Gate non-trigger voltage	V_{GD}	V_D =V_{DRM} T_j =125℃		MIN.	0.2	V
latching current	I_L	V_D =12V I_{GT} = 0.1A T_j =25℃	Ⅰ-Ⅲ-Ⅳ	MAX.	10	mA
			Ⅱ		15	
Holding current	I_H		Ⅰ-Ⅱ-Ⅲ-Ⅳ	MAX.	10	mA
Critical-rate of rise of commutation voltage	dV/dt	V_D=2/3V_{DRM} Gate Open T_j =125℃		MIN.	30	V/μs
STATIC CHARACTERISTICS						
Forward "on" voltage	V_{TM}	I_{TM} =1.2A tp=380μs		MAX.	1.55	V
Repetitive Peak Off-State Current	I_{DRM}	V_D =V_{DRM} V_R =V_{RRM}	T_j=25℃	MAX.	5	μA
Repetitive Peak Reverse Current	I_{RRM}		T_j=125℃	MAX.	100	μA
THERMAL RESISTANCES						
Thermal resistance	Rth(j-c)	Junction to case(AC)		TYP.	60	℃/W
	Rth(j-a)	Junction to ambient		TYP.	150	℃/W

Typical Characteristics

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

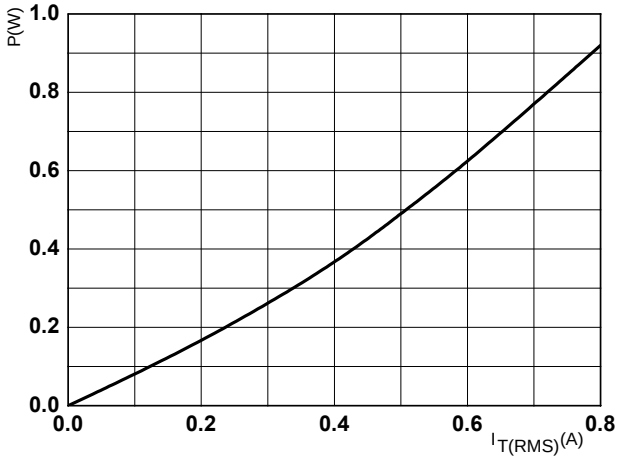


FIG.2: RMS on-state current versus case temperature (full cycle)

FIG.3: Surge peak on-state current versus number of cycles

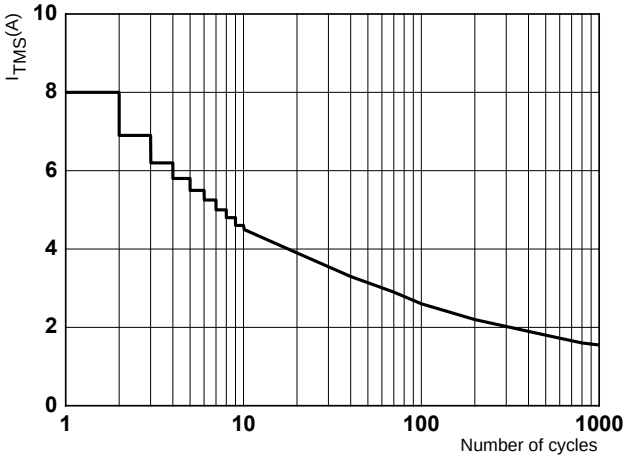


FIG.4: On-state characteristics (maximum values)

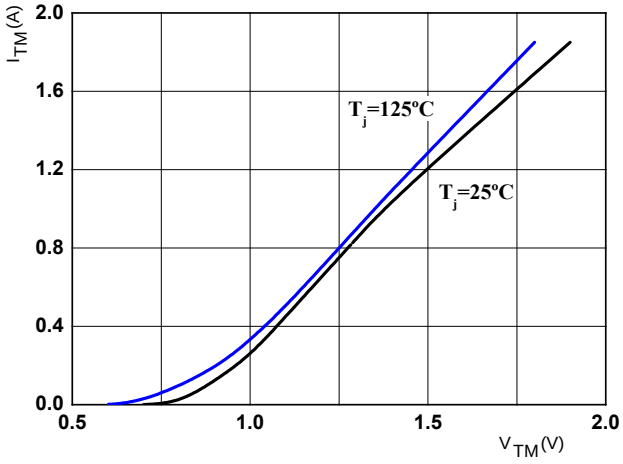


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp < 10ms

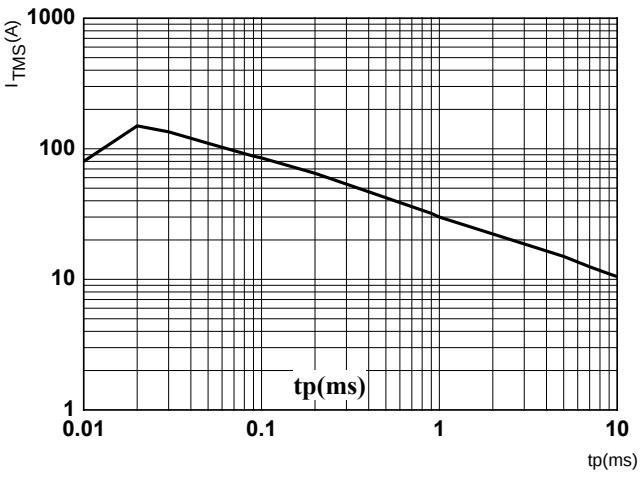
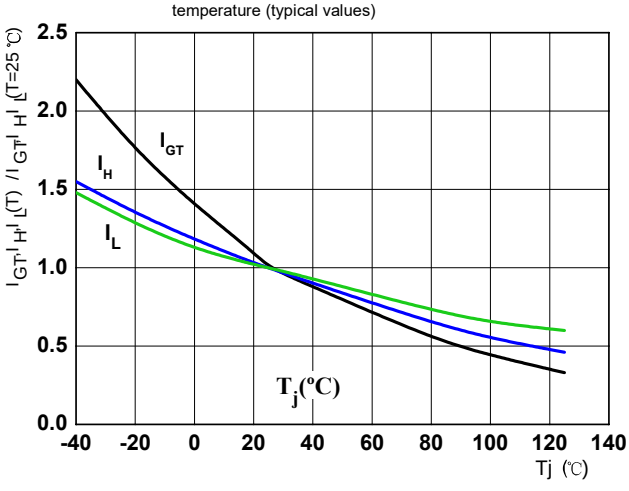
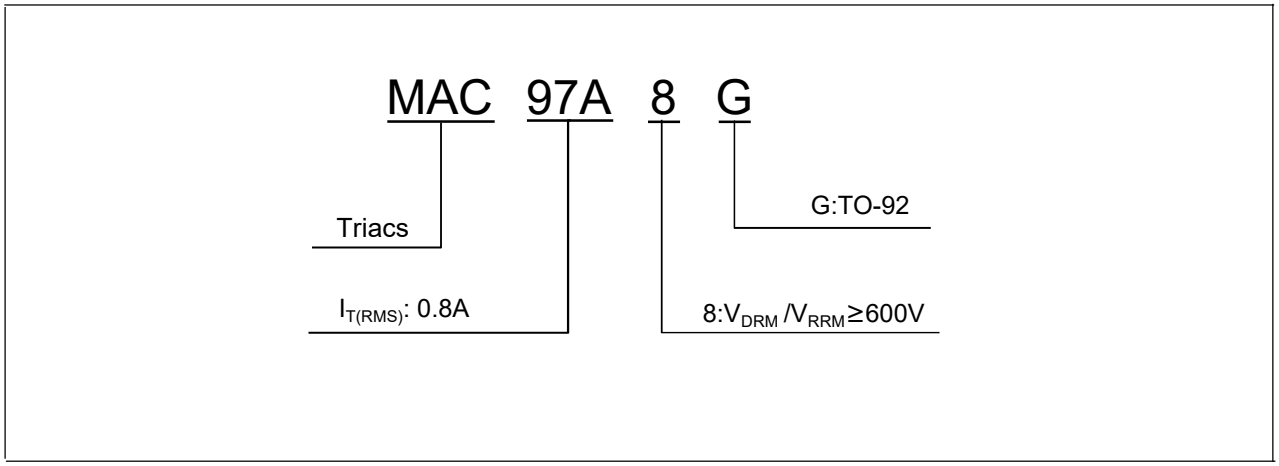


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



Ordering Information



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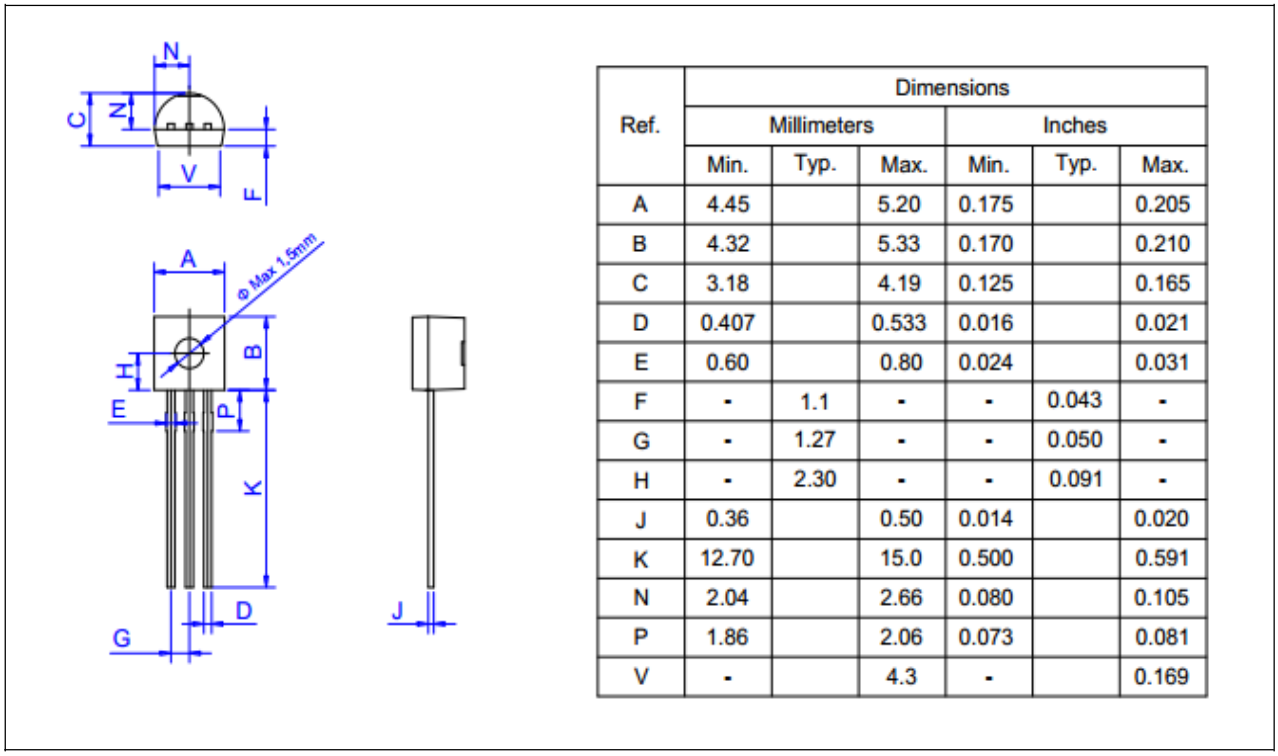

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.60		0.80	0.024		0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169