

MAC97 Series

Preferred Device

Sensitive Gate Triacs

Silicon Bidirectional Thyristors

Designed for use in solid state relays, MPU interface, TTL logic and any other light industrial or consumer application. Supplied in an inexpensive TO-92 package which is readily adaptable for use in automatic insertion equipment.

Features

- One-Piece, Injection-Molded Package
- Blocking Voltage to 600 Volts
- Sensitive Gate Triggering in Four Trigger Modes (Quadrants) for all possible Combinations of Trigger Sources, and especially for Circuits that Source Gate Drives
- All Diffused and Glassivated Junctions for Maximum Uniformity of Parameters and Reliability
- Pb-Free Packages are Available*

MAXIMUM RATINGS (T_J = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Repetitive Off-State Voltage (T _J = -40 to +110°C) (Note 1) Sine Wave 50 to 60 Hz, Gate Open	V _{DRM} , V _{RRM}	200 400 600	V
On-State RMS Current Full Cycle Sine Wave 50 to 60 Hz (T _C = +50°C)	I _{T(RMS)}	0.6	A
Peak Non-Repetitive Surge Current One Full Cycle, Sine Wave 60 Hz (T _C = 110°C)	I _{TSM}	8.0	A
Circuit Fusing Considerations (t = 8.3 ms)	I ² t	0.26	A ² s
Peak Gate Voltage (t ≤ 2.0 μs, T _C = +80°C)	V _{GM}	5.0	V
Peak Gate Power (t ≤ 2.0 μs, T _C = +80°C)	P _{GM}	5.0	W
Average Gate Power (T _C = 80°C, t ≤ 8.3 ms)	P _{G(AV)}	0.1	W
Peak Gate Current (t ≤ 2.0 μs, T _C = +80°C)	I _{GM}	1.0	A
Operating Junction Temperature Range	T _J	-40 to +110	°C
Storage Temperature Range	T _{stg}	-40 to +150	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

1. V_{DRM} and V_{RRM} for all types can be applied on a continuous basis. Blocking voltages shall not be tested with a constant current source such that the voltage ratings of the devices are exceeded.

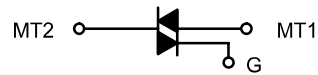
*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.



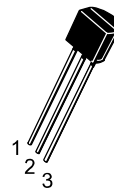
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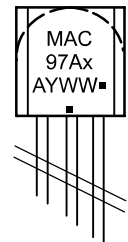
TRIACS
0.8 AMPERE RMS
200 thru 600 VOLTS



MARKING DIAGRAMS



TO-92 (TO-226AA)
CASE 029
STYLE 12



MAC97Ax = Device Code
x = 4, 6, or 8
A = Assembly Location
Y = Year
WW = Work Week
■ = Pb-Free Package

(Note: Microdot may be in either location)

PIN ASSIGNMENT

1	Main Terminal 1
2	Gate
3	Main Terminal 2

ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 6 of this data sheet.

Preferred devices are recommended choices for future use and best overall value.