M3A & MAH Series

8 pin DIP, 5.0 or 3.3 Volt, ACMOS/TTL, Clock Oscillators

RoHS Compliant

Ordering Information

M3A/MAH 1 3 F A D -R 00.0000 MHz

Product Series
M3A = 3.3 Volt
MAH = 5.0 Volt

Temperature Range
1: 0°C to +70°C **2:** -40°C to +85°C
6: -20°C to +70°C **7:** 0°C to +85°C

Stability
1: ±1000 ppm **2:** ±500 ppm
3: ±100 ppm **4:** ±50 ppm
5: ±35 ppm **6:** ±25 ppm
***8:** ±20 ppm

Output Type
F: Fixed **T:** Tristate

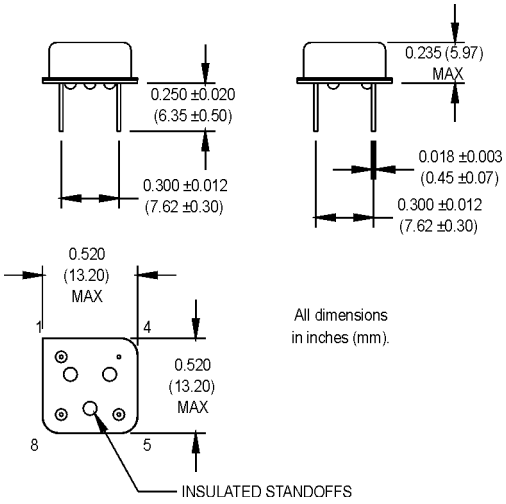
Symmetry/Logic Compatibility
A: 40/60 ACMOS/TTL **B:** 45/55 TTL
C: 45/55 ACMOS

Package/Lead Configurations
A: DIP; Gold Flash Header **D:** DIP; Nickel Header
G: Gull Wing; Nickel Header **X:** Gull Wing; Gold Flash Header

RoHS Compliance
Blank: non-RoHS compliant part
-R: RoHS compliant part

Frequency (customer specified)

*Contact factory for availability.



Pin Connections

PIN	FUNCTION
1	N/C or Tri-state
4	Circuit/Case Ground
5	Output
8	+Vdd

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	30		133	MHz	
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vdd	3.135 4.75	3.3 5.0	3.465 5.25	V V	M3A MAH
	Input Current	Idd		30 70	50 90	mA mA	M3A MAH
	Symmetry (Duty Cycle)		(See Ordering Information)				See Note 1
	Load				50	Ω	See Note 2
	Rise/Fall Time M3A	Tr/Tf		1	2.5	ns	See Note 3
	MAH				2	ns	See Note 3
	Logic "1" Level	Voh	90% Vdd Vdd-0.5			V V	ACMOS Load TTL Load
	Logic "0" Level	Vol			10% Vdd 0.5	V V	ACMOS Load TTL Load
	Cycle to Cycle Jitter			5	15	ps RMS	1 Sigma
	Tri-State Function		Input Logic "1" or floating; output active Input Logic "0"; output to high-Z				
Environmental	Mechanical Shock		Per MIL-STD-202, Method 213, Condition C				
	Vibration		Per MIL-STD-202, Method 201 & 204				
	Wave Solder Conditions		See page 147				
	Hermeticity		Per MIL-STD-202, Method 112 (1 x 10^{-8} atm.cc/s of helium)				
	Solderability		Per EIAJ-STD-002				

1. Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with ACMOS load.
2. See load circuit diagram #6.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% Vdd and 90% Vdd with ACMOS load.