

M3A & MAH Series

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



Ordering Information

00.0000
MHz

M3A/MAH 1 3 F A D -R

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

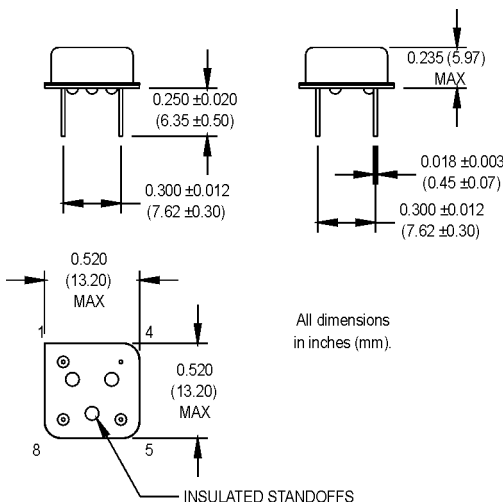
Symmetry/Logic Compatibility
A: 40/60 AC MOS/TTL B: 45/55 TTL
C: 45/55 AC MOS

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.



All dimensions in inches (mm).

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	$\Delta F/F$	(See Ordering Information)					
	Operating Temperature	T _A	(See Ordering Information)					
	Storage Temperature	T _s	-55		+125	°C		
	Input Voltage	V _{dd}	3.135	3.3	3.465	V	M3A	
			4.75	5.0	5.25	V	MAH	
	Input Current	I _{dd}		30	50	mA	M3A	
				70	90	mA	MAH	
	Symmetry (Duty Cycle)		(See Ordering Information)					See Note 1
	Load				50	Ω	See Note 2	
	Rise/Fall Time	Tr/Tf		1	2.5	ns	See Note 3	
					2	ns	See Note 3	
	Logic "1" Level	V _{oh}	90% V _{dd}			V	AC MOS Load	
			V _{dd} -0.5			V	TTL Load	
Logic "0" Level	V _{ol}			10% V _{dd}	V	AC MOS Load		
				0.5	V	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 ⁻³ atm.cc/s of helium)						
Solderability	Per EIAJ-STD-002							

1. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with AC MOS 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% V_{dd} and 90% V_{dd} with AC MOS load.

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Please see www.mtronpti.com for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.