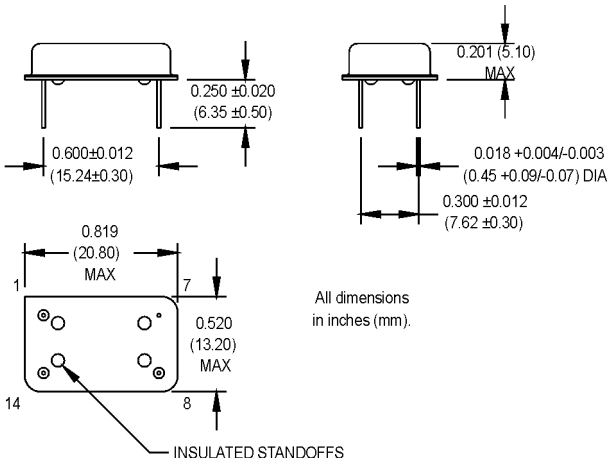
MHO3 Series

14 pin DIP, 3.3 Volt, HCMOS/TTL, Clock Oscillator



All dimensions in inches (mm).

Ordering Information

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MHO3 1 3 F A D -R MHz

Product Series

Temperature Range
- **1:** 0°C to +70°C
- **2:** -40°C to +85°C
- **5:** -10°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
- **7:** +0/-200 ppm
- ***8:** ±20 ppm

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

Symmetry/Logic Compatibility
- **A:** 40/60 HCMOS/TTL
- **C:** 45/55 HCMOS

Package/Lead Configurations
- **D:** DIP; Nickel Header
- **G:** Gull Wing; Nickel 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 Tristate
7	Circuit/Case Ground
8	Output
14	+Vdd

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
	Frequency Range	F	1.5		80	MHz	See Note 1
	Operating Temperature	T_A	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Aging						
	1st Year			±3		ppm	
	Thereafter (per year)			±2		ppm	
	Input Voltage	Vdd	3.135	3.3	3.465	V	
	Input Current	Idd			25	mA	1.500 to 50.000 MHz
					35	mA	50.001 to 67.000 MHz
	Output Type						HCMOS/TTL
	Load		2 TTL or 15 pF				See Note 2
	Symmetry (Duty Cycle)		(See Ordering Information)				See Note 3
	Logic "1" Level	Voh	90% Vdd			V	HCMOS Load
			Vdd -0.4			V	TTL Load
	Logic "0" Level	Vol			10% Vdd	V	HCMOS Load
					0.4	V	TTL Load
	Output Current				±4	mA	
	Rise/Fall Time	Tr/Tf			10	ns	See Note 4
	Tristate Function		Input Logic "1" or floating; output active Input Logic "0"; output disables to high-Z				
	Start up Time			5		ms	
	Random Jitter	Rj		5	12	ps RMS	1-Sigma

1. Consult factory for availability of higher frequencies.
2. TTL load - See load circuit diagram #1. HCMOS load - See load circuit diagram #2.
3. Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with HCMOS load.
4. Rise/Fall times are measured between 0.4 V and 2.4 V with TTL load, and between 10% Vdd and 90% Vdd with HCMOS load.

MtronPTI Lead Free Solder Profile