

M3H & MH Series

8 pin DIP, 3.3 or 5.0 Volt, HCMOS/TTL Clock Oscillator



- 3.3 or 5.0 Volt Versions
- RoHS Compliant Version available
- Low Jitter

Ordering Information

00.0000
MHz

M3H / MH 1 3 F A D -R

Product Series
M3H = 3.3 Volt
MH = 5.0 Volt

Temperature Range
1: 0°C to +70°C 2: -40°C to +85°C
3: -55°C to +105°C 4: -55°C to +125°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

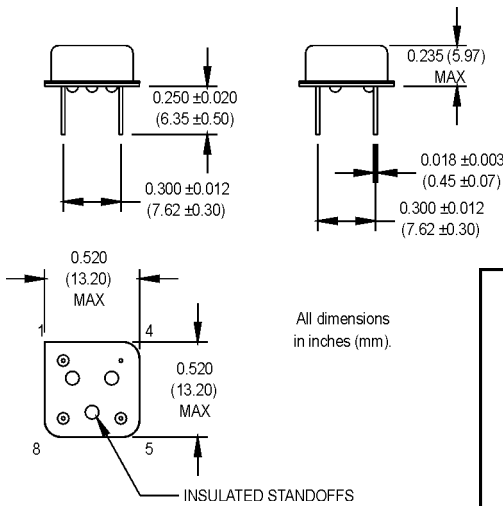
Output Type
F: Fixed T: Tristate

Symmetry/Logic Compatibility
A: 40/60 HCMOS/TTL B: 45/55 TTL (MH series only)
C: 45/55 HCMOS D: 45/55 HCMOS/TTL (MH to 50 MHz only)

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
4	Circuit/Case Ground
5	Output
8	+Vdd

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	1.5 1.0		100 80	MHz MHz	M3H MH See Note 1
Operating Temperature	T _A	(See Ordering Information)				
Storage Temperature	T _s	-55		+125	°C	
Frequency Stability	ΔF/F	(See Ordering Information)				
Aging						
1st Year			±3		ppm	
Thereafter (per year)			±2		ppm	
Input Voltage	V _{dd}	3.135 4.5	3.3 5.0	3.465 5.5	V V	M3H MH
Input Current (M3H)	I _{dd}			25 35 55	mA mA mA	1.500 to 50.000 MHz 50.001 to 67.000 MHz 67.001 to 100.000 MHz
Input Current (MH)	I _{dd}			40 60	mA mA	1.000 to 40.000 MHz 40.001 to 80.000 MHz
Output Type		HCMOS/TTL				
Load		2 TTL or 15 pF 10 TTL or 50 pF				M3H MH See Note 2
Symmetry (Duty Cycle)		(See Ordering Information)				
Logic "1" Level	V _{oh}	90% V _{dd} V _{dd} -0.5			V V	HCMOS Load TTL Load
Logic "0" Level	V _{ol}			10% V _{dd} 0.5	V V	HCMOS Load TTL Load
Output Current				±4 ±16	mA mA	M3H MH
Rise/Fall Time	T _r /T _f			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	R _j		5	12	ps RMS	1-Sigma

1. Contact the 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% V_{dd} with HCMOS load.
4. Rise/Fall times are measured between 0.4 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with HCMOS 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.