

# M3H & MH Series

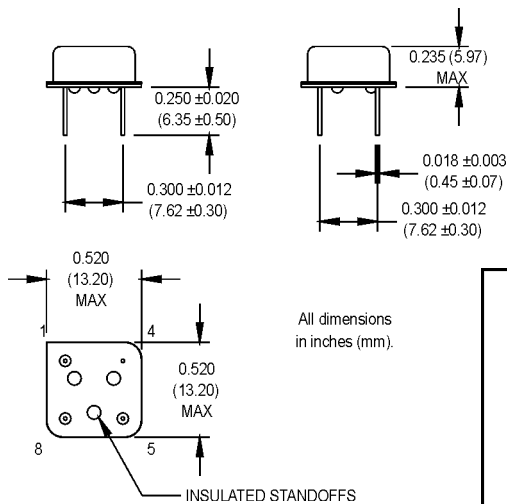
## 8 pin DIP, 3.3 or 5.0 Volt, HCMOS/TTL Clock Oscillator



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

Ordering Information		M3H / MH	1	3	F	A	D	-R	00.0000	MHz
<b>Product Series</b>										
M3H = 3.3 Volt										
MH = 5.0 Volt										
<b>Temperature Range</b>										
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										
<b>Stability</b>										
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								
<b>Output Type</b>										
F: Fixed		T: Tristate								
<b>Symmetry/Logic Compatibility</b>										
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)								
<b>Package/Lead Configurations</b>										
D: DIP; Nickel Header		G: Gull Wing; Nickel Header								
<b>RoHS Compliance</b>										
Blank: non-RoHS compliant part										
-R: RoHS compliant part										
<b>Frequency (customer specified)</b>										

\*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		100	MHz	M3H MH See Note 1
Operating Temperature	Ta	(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	M3H
		4.5	5.0	5.5	V	MH
Input Current (M3H)	Idd			25	mA	1.500 to 50.000 MHz
				35	mA	50.001 to 67.000 MHz
				55	mA	67.001 to 100.000 MHz
Input Current (MH)	Idd			40	mA	1.000 to 40.000 MHz
				60	mA	40.001 to 80.000 MHz
Output Type						HCMOS/TTL
Load		2 TTL or 15 pF				M3H
		10 TTL or 50 pF				MH See Note 2
Symmetry (Duty Cycle)		(See Ordering Information)				See Note 3
Logic "1" Level	Voh	90% Vdd			V	HCMOS Load
		Vdd - 0.5			V	TTL Load
Logic "0" Level	Vol			10% Vdd	V	HCMOS Load
				0.5	V	TTL Load
Output Current				±4	mA	M3H
				±16	mA	MH
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. 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% 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.

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