

M3H & MH Series

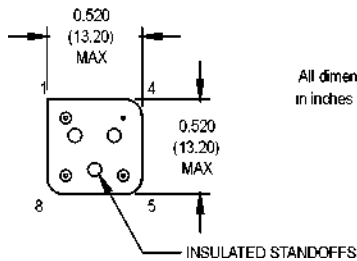
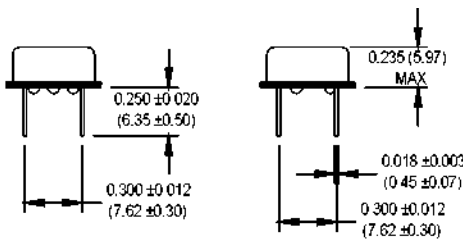
8 pin DIP, 3.3 or 5.0 Volt, HCMOS/TTL Clock Oscillator



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

Ordering Information		00.0000
Product Series	M3H / MH	1 3 F A D -R MHz
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



All dimensions in inches (mm).

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	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	3.3	3.465	V	M3H
		4.5	5.0	5.5	V	MH
Input Current (M3H)	I _{dd}			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)	I _{dd}			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)				
Logic "1" Level	V _{oh}	90% V _{dd}			V	HCMOS Load
		V _{dd} - 0.5			V	TTL Load
Logic "0" Level	V _{ol}			10% V _{dd}	V	HCMOS Load
				0.5	V	TTL Load
Output Current				±4	mA	M3H
				±16	mA	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	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% 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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