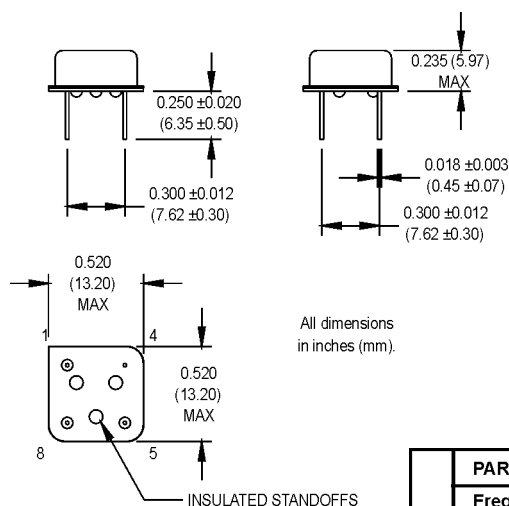


M3H & MH Series

8 DIP, 5.0 or 3.3 Volt, HCMOS/TTL, Clock Oscillators



See page 146 for gull wing configuration.

Pin Connections

PIN	FUNCTION
1	N/C or Tri-state
4	Circuit/Case Ground
5	Output
8	+Vdd

Ordering Information

	M3H/MH	1	3	F	A	D	00.0000 MHz
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 (1.000 MHz and up)							
Symmetry/Logic Compatibility							
A: 40/60 CMOS/TTL							
B: 45/55 TTL (MH series only)							
C: 45/55 CMOS							
D: 45/55 CMOS/TTL							
Package/Lead Configurations							
D: DIP; Nickel Header							
G: Gull Wing; Nickel Header							
Frequency (customer specified)							

*Contact factory for availability.

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
	Frequency Range ¹	F	1.5 .625		67 67	Mhz MHz	M3H MH
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	T _A	(See Ordering Information)				
	Storage Temperature	T _s	-55		+125	°C	
	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	mA mA	1.500 to 50.000 MHz 50.001 to 67.000 MHz
	MH	I _{dd}			40 60	mA mA	0.625 to 40.000 MHz 40.001 to 67.000 MHz
	Symmetry (Duty Cycle) ²		(See Ordering Information)				
	Load ³		2 TTL or 15 pF 10 TTL or 50 pF				M3H MH
	Rise/Fall Time ⁴	Tr/Tf			10	ns	
	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
	Cycle to Cycle Jitter			7	18	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 ⁻⁸ atm.cc/s of helium)					
	Solderability	Per EIAJ-STD-002					

1. Contact the factory for availability of higher frequencies.
2. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with HCMOS load.
3. TTL load - See load circuit diagram #1 on page 148. HCMOS load - See load circuit diagram #2 on page 148.
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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