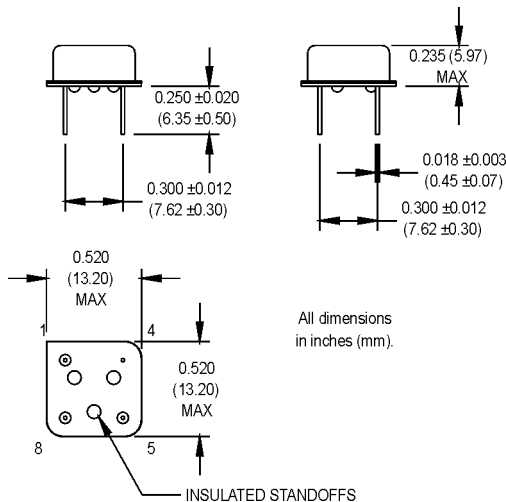


MH Series Half-Size 5.0 Volt HCMOS/TTL Compatible Oscillators



See page 90 for gull wing configuration.

Pin Connections

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

Ordering Information

	MH	1	3	F	A	D	00.0000 MHz
Product Series							
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							
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.

Available Symmetry

FREQUENCY RANGE	STD.	OPTIONS
0.625 to 50.000 MHz	A	B, C, D
50.001 to 60.000 MHz	A	B, C
60.001 to 67.000 MHz	A	C

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Frequency Range	F	.625		67	MHz	
Frequency Stability	$\Delta F/F$	(See Ordering Information)				
Operating Temperature	T _A	(See Ordering Information)				
Storage Temperature	T _S	-55		+125	°C	
Input Voltage	V _{dd}	4.5	5.0	5.5	V	
Input Current	I _{dd}			40	mA	0.625 to 40.000 MHz
				60	mA	40.001 to 67.000 MHz
Symmetry (Duty Cycle)		(See Ordering Information)				See Note 1
Load		10 TTL or 50 pF				See Note 2
Rise/Fall Time	T _r /T _f			10	ns	See Note 3
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
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				
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C				
Vibration		Per MIL-STD-202, Method 201 & 204				
Wave Solder Conditions		260°C for 10 s max.				
Hermeticity		Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm.cc/s of helium)				
Solderability		Per EIAJ-STD-002				

1. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with HCMOS load.

2. TTL load - See load circuit diagram #1 on page 92. HCMOS load - See load circuit diagram #2 on page 92.

3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with HCMOS load.

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