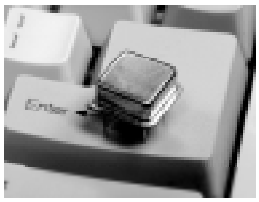
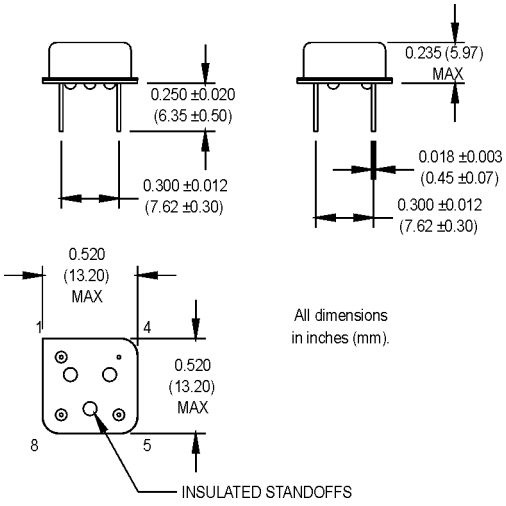
MH Series Half-Size 5.0 Volt HCMOS/TTL Compatible Oscillators





See page 90 for gull wing configuration.

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

Pin Connections

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	.625		67	MHz	
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vdd	4.5	5.0	5.5	V	
	Input Current	Idd			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	Tr/Tf			10	ns	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
	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	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% Vdd 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% Vdd and 90% Vdd with HCMOS load.

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