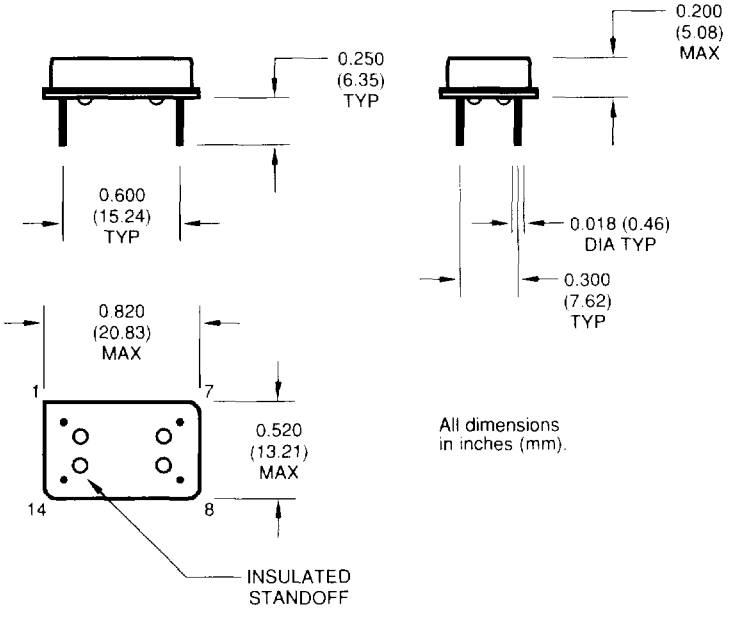
MHO Series HCMOS Oscillators

Competitively Priced HCMOS/TTL Compatible Oscillators



All dimensions in inches (mm).

Part Marking and Numbering MHO 1 3 F A D

Product Series
MHO

Temperature Range
1: 0°C to +70°C 2: -40°C to +85°C
1: -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

Output Type
F: Fixed E: Enable/Disable
C: Dual Complementary

Symmetry/Logic Compatibility
A: 40/60 B: 45/55 TTL *
C: 45/55 CMOS* D: 45/55 both *

Package/Lead Configurations
D: DIP; Nickel Header G: Gull Wing; Nickel Header

**Call factory regarding availability of symmetry codes B, C, or D.*

Pin Connections

PIN	FUNCTION
1	N/C, Enable/Disable, or $\overline{O}$
7	Circuit/Case Ground
8	Output
14	+ V_{dd}

ENABLE/DISABLE
Pin 1 high or floating: clock signal output
Pin 1 low: output disables to logic "1"

Available Stabilities vs Temperature

T \ S	1	2	3	4	5	6	7
1	A	A	S	A	A	A	A
2	A	A	A	A	A	A	A
3	A	A	A	A	N	N	A
4	A	A	A	N	N	N	A
5	A	A	A	A	A	A	A
6	A	A	A	A	A	A	A
7	A	A	A	A	A	A	A

A = AVAILABLE S = STANDARD
N = NOT AVAILABLE

Electrical Specifications

(Standard Operating Conditions 0°C to +70°C; V_{dd} = 5.0 ±10% V DC)

	TTL Load			HCMOS Load			
PARAMETERS	**MIN.**	**TYP.**	**MAX.**	**MIN.**	**TYP**	**MAX.**	**UNITS**
Frequency Range	3.000		25.000	3.000		25.000	MHz
Output Load			10 TTL[1]			50 pF[2]	
Symmetry*	40/60	45/55	60/40	40/60	45/55	60/40	%
Logic "0" Level			0.5		0.1	.1 x V_{dd}	V
Logic "1" Level	V_{dd} -0.5	V_{dd}		.9 x V_{dd}			V
Rise/Fall Time**		5	10		5	10	ns
Supply Current		15	25		15	25	mA

1- See load circuit # 1 on page 32. 2- See load circuit #2 on page 32.
**Symmetry is measured at 1.4 V with TTL load, and at $V_{dd}/2$ with HCMOS load.*
***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.*