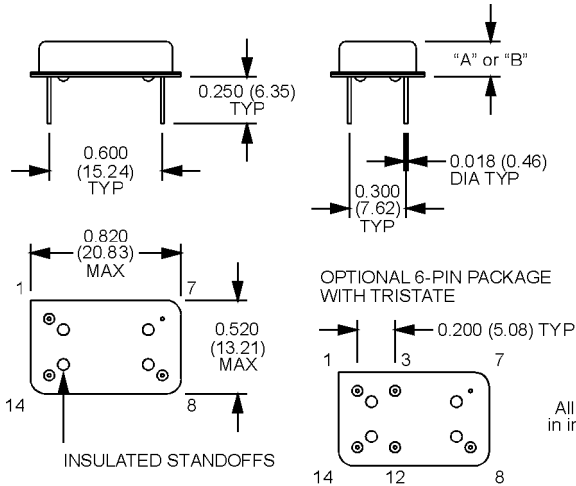


# MV Series HCMOS/TTL Compatible Voltage Controlled Crystal Oscillators (VCXO)



## MV Series Voltage Controlled HCMOS/TTL Compatible Clock Oscillator



All dimensions in inches (mm).

"A" = 0.200 (5.08) Max.  
< 25.000 MHz (V1, V2 only)

"B" = 0.350 (8.89) Max.  
> 25.000 MHz (V1, V2)

"B" = 0.350 (8.89) Max.  
All frequencies (V3)

\* See page 135 for gull wing configuration.

### Pin Connections

PIN	FUNCTION
1	Control Voltage
7	Circuit/Case Ground
8	Output
14	+Vdd

### Pin Connections

PIN	FUNCTION
1	Control Voltage
3	Tristate (6-Pin Pkg. Only)
7	Ground
8	Output
12	N/C (6-Pin Pkg. Only)
14	+Vdd

### Ordering Information

	MV	1	3	V	2	C	D	00.0000 MHz
<b>Product Series</b>								
<b>Temperature Range</b>								
1: 0°C to +70°C								
2: -40°C to +85°C								
6: -20°C to +70°C								
<b>Stability</b>								
1: ±1000 ppm								
2: ±500 ppm								
3: ±100 ppm								
4: ±50 ppm								
5: ±35 ppm								
6: ±25 ppm								
<b>Output Type</b>								
V: Voltage Controlled								
<b>Pull Range (Vc = .5 to 4.5V)</b>								
1: ±50 ppm min.								
2: ±100 ppm min.								
3: ±200 ppm min. (Package "B" only)								
<b>Symmetry/Logic Compatibility</b>								
A: 40/60 CMOS/TTL								
C: 45/55 HCMOS								
<b>Package/Lead Configurations</b>								
D: DIP; Nickel Header								
G: Gull Wing; Nickel Header								
<b>Frequency (customer specified)</b>								

### Available Stabilities vs. Temperature

T	S	1	2	3	4	5	6
1	A	A	S	A	*A	*A	
2	A	A	A	A	*A	*A	
6	A	A	A	A	*A	*A	

A = Available  
S = Standard

\* Contact factory for availability above 25.000 MHz.

### Electrical Specifications

Standard Operating Conditions • 0°C to +70°C; Vdd = 5.0 ±5%; Vc = 2.5 V ±.5 v							
PARAMETERS	TTL Load			HCMOS Load			UNITS
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
<b>Frequency Range</b>	1.500		155.520	1.500		155.520	MHz
<b>Output Load<sup>1</sup></b>							
1.500 to 54.999 MHz			5			15	TTL/pF
55.000 to 155.520 MHz			10			50	TTL/pF
<b>Symmetry<sup>2</sup></b>	40/60		60/40	40/60		60/40	%
<b>Logic "0" Level</b>			0.5			10% Vdd	V
<b>Logic "1" Level</b>	Vdd-0.5			90% Vdd			V
<b>Rise/Fall Time<sup>3</sup></b>							
1.500 to 54.999 MHz			6			10	ns
55.000 to 155.520 MHz			1.5			5	nS
<b>Supply Current<sup>4</sup></b>							
1.500 to 24.999 MHz		7 to 25	35		7 to 25	35	mA
25.000 to 69.999 MHz		35	60		35	60	mA
70.000 to 155.520 MHz		55	90		55	90	mA
<b>Control Voltage, (Vc)</b>	0.5		4.5	0.5		4.5	V
<b>Center Voltage, (Vo)</b>		2.5			2.5		V
<b>Linearity</b>			10			10	%

<sup>1</sup> TTL load - See load circuit diagram #1 on page 137. HCMOS load - See load circuit diagram #2 on page 137.

<sup>2</sup> Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with HCMOS load.

<sup>3</sup> This parameter is frequency dependent and measured between 0.5 V and 2.4 V with TTL load, and at 50% Vdd with HCMOS load.

<sup>4</sup> This parameter is frequency and load dependent.

See page 135, Figure "2" for typical phase noise graph.

See page 135, Figure "3" for pull range graph.

See page 136 for suggested soldering conditions.

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