

CLOCK OSCILLATORS

STANDARD FEATURES:

- 0.800" (L) X 0.500" (W) X 0.240" (H)* Full Size
- 0.500" (L) X 0.500" (W) X 0.240" (H)* Half Size
- Dual Inline Spacing
- High Reliability
- Resistance Welded

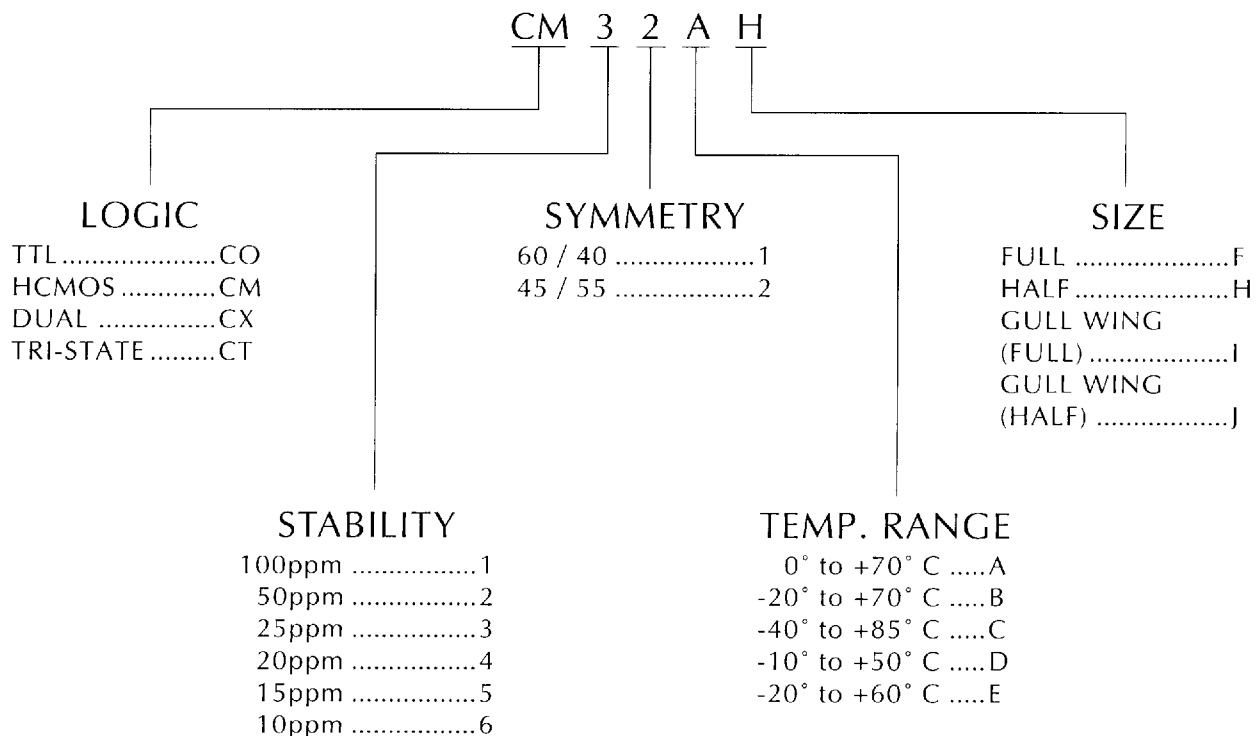
OPTIONS:

- Surface Mount (gull wing)
- Extended Temperature Ranges
- 45 / 55 Symmetry
- 25 ppm
- 15 ppm
- 10 ppm



State of the art oscillator plating system allows us to finish up to 500 oscillators per hour.

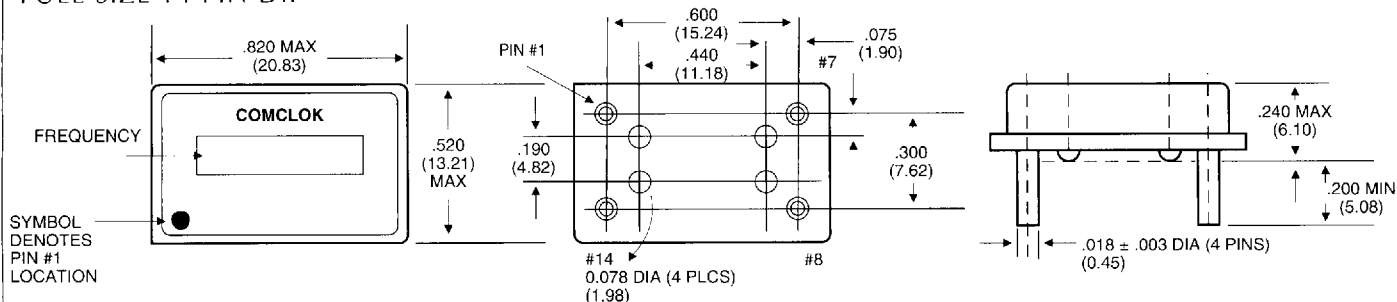
OSCILLATOR PART NUMBER GUIDE:



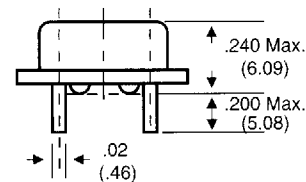
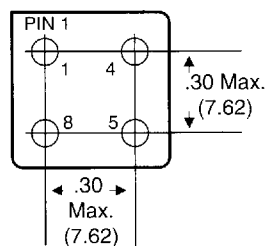
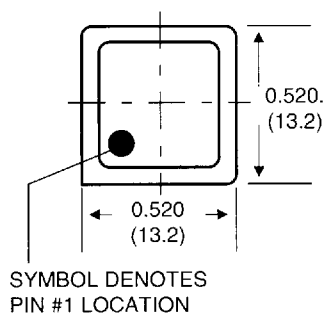
* (includes insulated stand offs)

DIMENSIONS

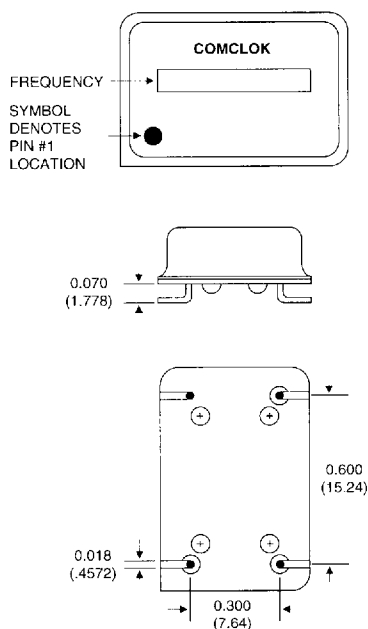
FULL SIZE 14 PIN DIP



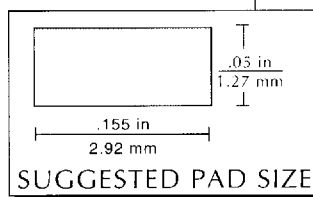
HALF SIZE 8 PIN DIP



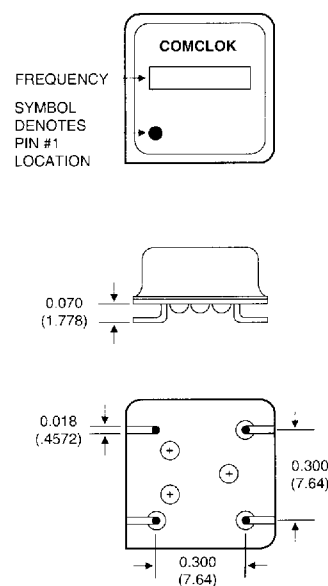
14-pin DIP Compatible, Gull Wing Leads



INCHES (MM)



8-pin DIP Compatible, Gull Wing Leads



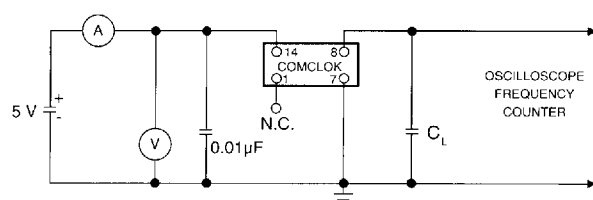
HCMOS SPECIFICATIONS

HCMOS CLOCK OSCILLATORS (FULL & HALF SIZE)

Frequency Range3.5 - 50.0 MHz *
 Frequency Stability100ppm, 50ppm, 25ppm
 Temperature Range
 Operating0° to 70° C
 Storage-55° to +125° C
 Input Voltage+5 VDC +/-10%
 Input Current
 3.5 - 19.999 MHz15 mA MAX.
 20.0 - 39.999 MHz30 mA MAX.
 40.0 - 50.0 MHz40 mA MAX.
 Symmetry60 / 40 @ 50% VCC
 Rise & Fall Time10ns MAX.
 Logic "1"4.5 VDC MIN.
 Logic "0"0.5 VDC MAX.
 Output Load15 to 50 pF

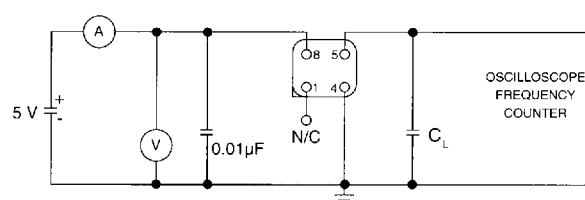
* (50.0 - 70.0 MHz under development)

Test Circuit
Full Size



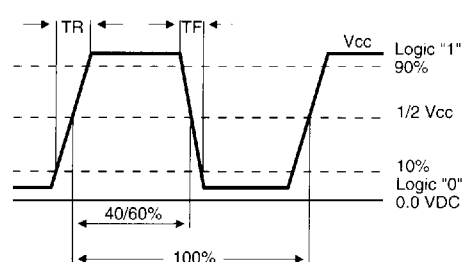
* Note: $C_L = 15\text{pF}$ Includes probe and jig capacitance.

Test Circuit
Half Size



* Note: $C_L = 15\text{pF}$ Includes probe and jig capacitance.

Wave Shape



FULL SIZE

HCMOS	
PIN	CONNECTIONS
1	N.C.
7	GND
8	OUTPUT
14	+5 VDC +/-10%

HALF SIZE

HCMOS	
PIN	CONNECTIONS
1	N.C.
4	GND
5	OUTPUT
8	+5 VDC +/-10%

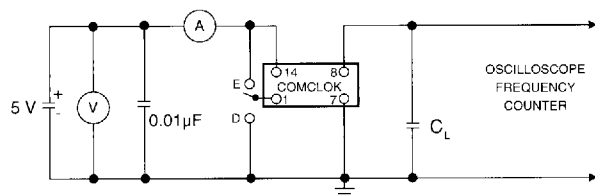
TRI-STATE SPECIFICATIONS

HCMOS / TTL / TRI-STATE ENABLE / DISABLE OSCILLATORS (FULL & HALF SIZE)

Frequency Range	10 - 50 MHz*
Frequency Stability	100ppm, 50ppm, 25ppm
Temperature Range	
Operating	0° to 70° C
Storage	-55° to +125° C
Symmetry	60 / 40 @ 50% VCC
Rise & Fall Time	10 ns MAX. (CMOS LEVEL)
Logic "1"	4.5 VDC MIN.
Logic "0"	0.5 VDC MAX.
Input Voltage	+ 5 VDC +/-10%
Input Current	
10.0 - 19.999 MHz	15 mA MAX.
20.0 - 39.999 MHz	30 mA MAX.
40.0 - 50.0 MHz	40 mA MAX.
Enable Input	
Enable	Logic "1" 2.0 VDC MIN.
Disable	Logic "0" 0.5 VDC MAX.
Output Current	16 mA
Output Load	10 TTL GATES
	MOS LOAD 50 pF

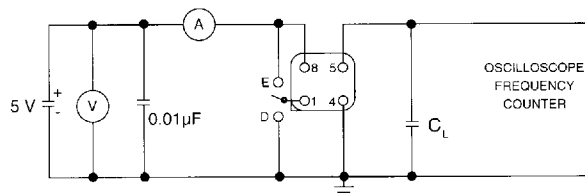
* (50 - 70 Mhz under development)

Test Circuit
Tri-State



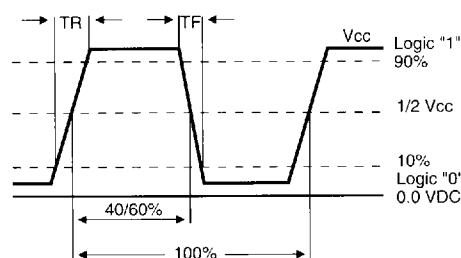
* Note: $C_L = 15\text{pF}$ Includes probe and jig capacitance.

Test Circuit
Tri-State



* Note: $C_L = 15\text{pF}$ Includes probe and jig capacitance.

Wave Shape



FULL SIZE

TRI-STATE	
PIN	CONNECTIONS
1	ENABLE/DISABLE
7	GND
8	OUTPUT
14	+5 VDC +/-10%

HALF SIZE

TRI-STATE	
PIN	CONNECTIONS
1	ENABLE/DISABLE
4	GND
5	OUTPUT
8	+5 VDC +/-10%

TTL SPECIFICATIONS

TTL CLOCK OSCILLATORS (FULL SIZE)

Frequency Range	250 KHz - 4.0 MHz	4.0 - 25.0 MHz	25.0 - 70.0 MHz
Frequency Stability	100ppm, 50ppm, 25ppm	100ppm, 50ppm, 25ppm	100ppm, 50ppm, 25ppm
Temperature Range			
Operating	0° to 70° C	0° to 70° C	0° to 70° C
Storage	-55° to +125° C	-55° to +125° C	-55° to +125° C
Input Voltage	+5 V DC +/-10%	+5 V DC +/-10%	+5 V DC +/-10%
Input Current.....	80 mA MAX.	50 mA MAX.	50 mA MAX. 25.0 - 50.0 MHz 65 mA MAX. 50.0 - 70.0 MHz
Symmetry	60/40% 1.4 VDC	60/40% @ 1.4 VDC	60/40% @ 1.4 VDC
Rise and fall time	10ns MAX.	10ns MAX.	10ns MAX. 25.0 - 50.0 MHz 6ns MAX. 50.0 - 70 MHz
"0" Level	+0.5V MAX.	+0.5V MAX.	+0.5V MAX.
"1" Level	+2.4V MIN.	+2.4V MIN.	+2.4V MIN.
Output load	1-10 TTL Gates	1-10 TTL Gates	1-10 TTL Gates 25.0 - 50.0 MHz 1-5 TTL Gates 50.0 - 70.0 Mhz

TTL (HALF SIZE)

Frequency Range	10.0-50.0 MHz
Frequency Stability	100ppm, 50ppm, 25ppm
Temperature Range	
Operating	0° to 70° C
Storage	-55° to +125° C
Input Voltage	+5 VDC +/-10%
Input Current.....	50mA MAX.
Symmetry	60/40 @ 1.4 VDC Level
Rise & Fall time	10ns MAX.
"0" Level	+0.5 VDC MAX.
"1" Level	+2.4 VDC MIN.
Output	1-10 TTlGates

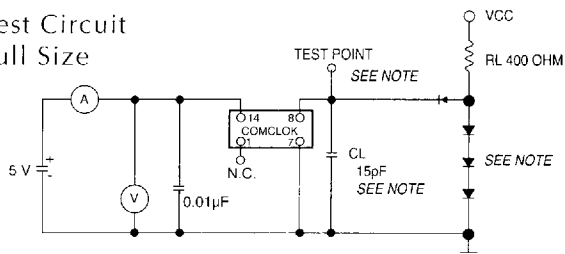
FULL SIZE

TTL	
PIN	CONNECTIONS
1	N.C.
7	GND
8	OUTPUT
14	+5 VDC +/-10%

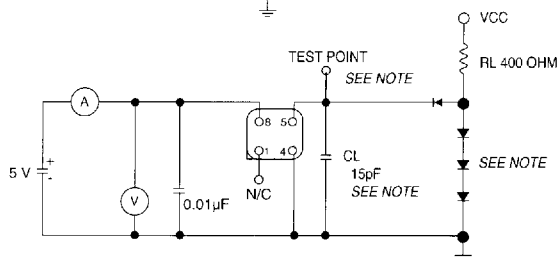
HALF SIZE

TTL	
PIN	CONNECTIONS
1	N.C.
4	GND
5	OUTPUT
8	+5 VDC +/-10%

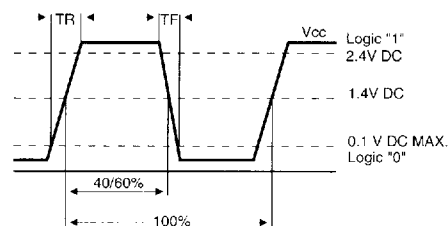
Test Circuit
Full Size



Test Circuit
Half Size



Wave Shape



Note:

1. Capacitance includes probe and jig capacitance.
2. All diodes are 1N914 or 1N43064 or equivalent.
3. Use a frequency meter for output frequency measurement and an oscilloscope for wave shape measurements.