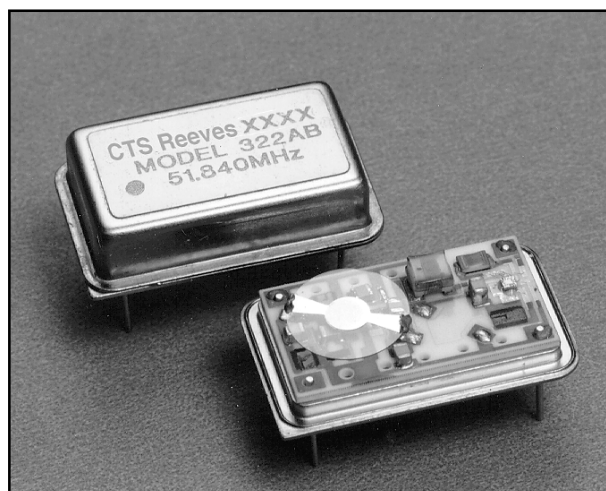


Features:

- Frequency Range 1 to 100 MHz
- Low Cost
- Internal SMT Construction
- HCMOS/TTL Compatible
- 14 Pin DIP Compatible Package
- Standard Frequencies

The CTS Reeves Model 322 is a low cost VCXO, enclosed in a 14 Pin DIP Package for use in Phase Lock Loop Applications. It's small size means more application flexibility. The Model 322 is available with a variety of pullability and stability options and is useful in almost any VCXO application. Low noise means superior jitter performance in communication applications.



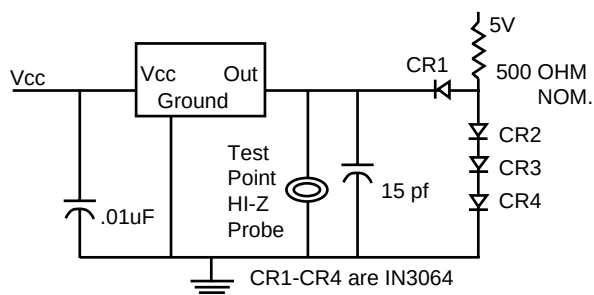
Electrical Specifications:

Parameter	Frequency Range (MHz)			
	1.0 to < 12	12 to < 25	25 to < 30	30 to < 100
Supply Voltage Maximum Operating	7 Vdc			
	5 Vdc $\pm 5\%$			
Current (ma.) ₁	35	25	35	75
Output Type	HCMOS	TTL	TTL	HCMOS
Fanout ₁	5 TTL (25pf)			
Rise and Fall Times ₁ 0.8 Vdc to +2.4 Vdc	< 7 ns	< 7 ns	< 5 ns	< 3 ns
Aging 1st Year ₁ (PPM) 10 Years ₁	3	4	5	7
	12	12	15	18
Duty Cycle in %	50 ± 5	50 ± 10	50 ± 10	50 ± 10
Voltage Stability ₁ PPM Over Supply Range	5	5	5	6
Start Up Time (ms.)	10	10	8	8
Control Voltage	0.5 to 4.5 Vdc			
Input Impedance	100 K Minimum			
Linearity A, B, & C Deviation D Deviation	$\pm 10\%$ of Best Straight Line			
	$\pm 20\%$ of Best Straight Line			
Deviation Response at -3 dB	10 kHz Min.			
Deviation Slope	Positive			

Notes: 1 - Values stated in the table are maximum
 2 - Frequency Stability is referred to the frequency at +25°
 3 - Center Frequency occurs between +0.5 Vdc. & +4.5 Vdc.

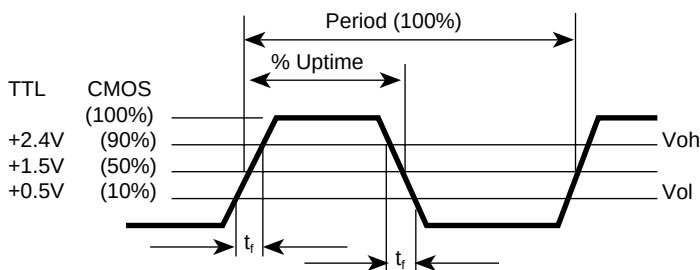
Equivalent Test Load:

5 TTL LOADS

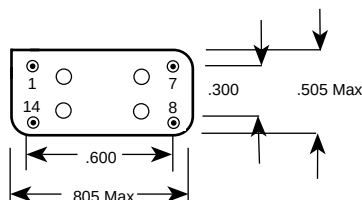
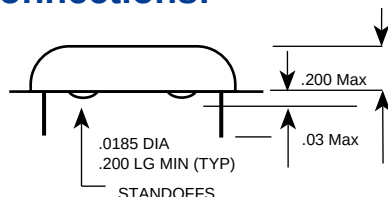


Note: Do Not Use TTL Load For CMOS Measurements

Waveform Conditions:



Outline Drawing and Pin Connections:



Pin Connections

PIN	FUNCTION
1	AFC
7	Case/CKT GND
8	Output
14	+5 VDC

Mechanical Specifications:

Case:

Metal, hermetically sealed

Leads:

Nickel plated with solder coating, or gold plated

Seal:

Resistance weld

Fine Leak Test:

Mass spectrometer leak rate less than 5×10^{-8} atmosphere-cc/sec of helium

Solderability:

95% solder coverage, using RMA flux
63 Sn / 37 Pb solder at $+245^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Temperature:

Operating: See Chart
Storage: -55 to 125°C

Vibration:

20 G's rms, 20 to 2000 Hz

Mechanical Shock:

1000 G's 5ms pulse (3 shock/plane)

Ordering Information:

Model Type 322 -

MO

Temperature Stability Options	
A	± 20 ppm 0°C to $+70^{\circ}\text{C}$
B	± 50 ppm 0°C to $+70^{\circ}\text{C}$
C	± 25 ppm -20°C to $+70^{\circ}\text{C}$
D	± 25 ppm -40°C to $+85^{\circ}\text{C}$

Frequency Deviation Options	
A	± 50 ppm to ± 90 ppm
B	± 75 ppm to ± 135 ppm
C	± 100 ppm to ± 180 ppm
D	± 200 ppm to ± 360 ppm

Frequency in MHz