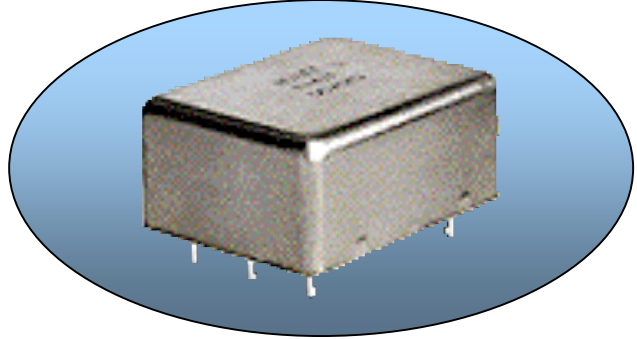


N47x / NV47x – CO-08 Euro Package OCXO

Series Features

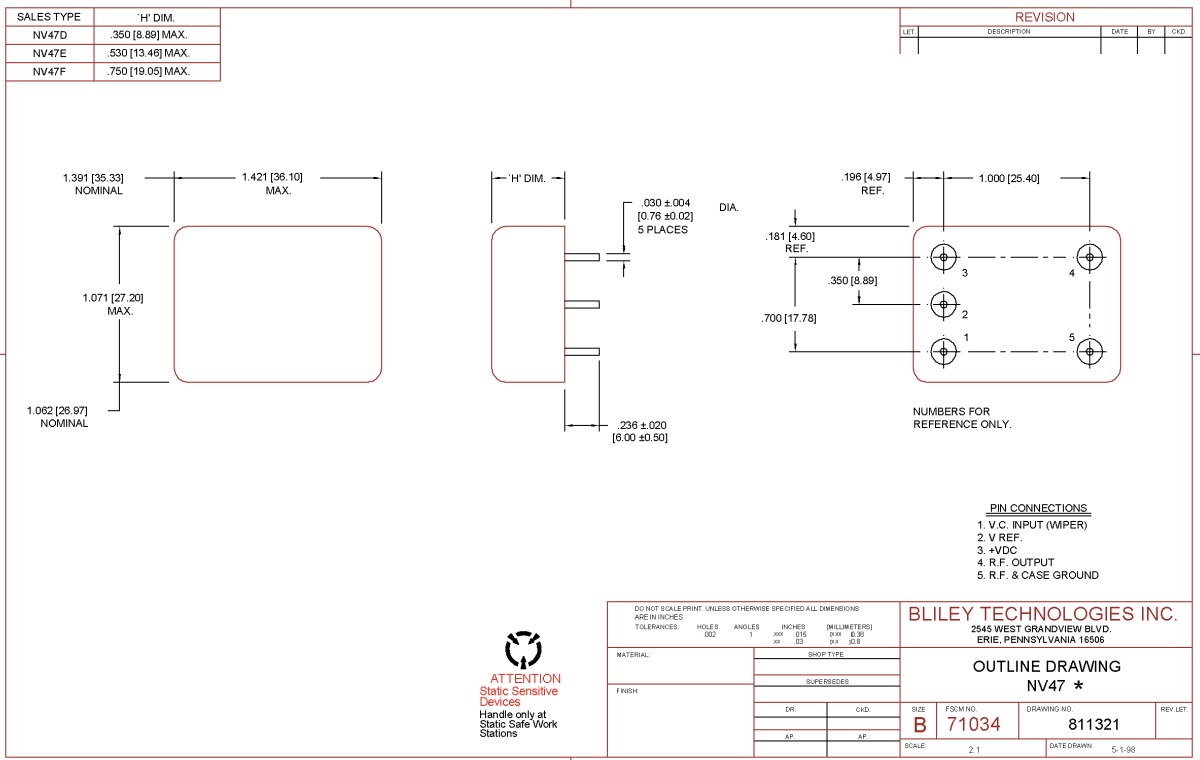
Freq Range: 5 MHz to 100 MHz
 Outputs: HCMOS or Sinewave
 Supply: +3.3, +5, +12 or +15 Vdc
 Package: Standard CO-08 footprint
 Height: 8.89, 13.46 or 19.05 mm
 0.35", 0.53" or 0.75"



Standard Frequencies:	10, 13, 20 & 40 MHz Available at any frequency between 5 MHz and 100 MHz		
Output:	Sinewave or HCMOS		
Sine Output Levels: (+/-3 dBm into 50Ω)	+3 dBm (Standard for +3.3 or +5 Vdc Supply) +7 dBm (Standard for +12 or +15 Vdc Supply) +10 dBm & +13 dBm available with +12 or +15 Vdc		
Harmonics: Spurious:	-20 dBc max -80 dBc max		
HCMOS Output Levels: (15 pF load) Rise / Fall Time: Duty Cycle:	"0" < 0.1(Vs) "1" > 0.9(Vs) <6 ns (10% to 90%) 50% ±5% @ 50% level		
Power Supply (Vs): At warm up Steady State @ +25°C	+3.3 Vdc ±5% 3.0 Watts 1.0 Watts	+5 Vdc ±5% 3.0 Watts 1.0 Watts	+12 or +15 Vdc ±5% 4.0 Watts 1.5 Watts
Freq vs Temperature:	5 MHz to 15 MHz		
0 to +50°C	±1 x 10 ⁻⁹	±1 x 10 ⁻⁸	±2 x 10 ⁻⁸
0 to +70°C	±5 x 10 ⁻⁹	±1 x 10 ⁻⁸	±3 x 10 ⁻⁸
-20 to +70°C	±5 x 10 ⁻⁹	±2 x 10 ⁻⁸	±5 x 10 ⁻⁸
-40 to +85°C	±1 x 10 ⁻⁸	±3 x 10 ⁻⁸	±1 x 10 ⁻⁷
Freq vs Temperature:	15.01 MHz to 40 MHz		
0 to +50°C	±5 x 10 ⁻⁹	±1 x 10 ⁻⁸	±3 x 10 ⁻⁸
0 to +70°C	±1 x 10 ⁻⁸	±2 x 10 ⁻⁸	±5 x 10 ⁻⁸
-20 to +70°C	±1 x 10 ⁻⁸	±3 x 10 ⁻⁸	±1 x 10 ⁻⁷
-40 to +85°C	±1 x 10 ⁻⁸	±3 x 10 ⁻⁸	±1 x 10 ⁻⁷

Freq vs Temperature: 0 to +50°C 0 to +70°C -20 to +70°C -40 to +85°C	40.01 MHz to 100 MHz $\pm 5 \times 10^{-9}$ $\pm 1 \times 10^{-8}$ $\pm 3 \times 10^{-8}$ $\pm 1 \times 10^{-8}$ $\pm 2 \times 10^{-8}$ $\pm 5 \times 10^{-8}$ $\pm 1 \times 10^{-8}$ $\pm 3 \times 10^{-8}$ $\pm 1 \times 10^{-7}$ $\pm 1 \times 10^{-8}$ $\pm 3 \times 10^{-8}$ $\pm 1 \times 10^{-7}$			
<i>(Note: The above temperature ranges are standard. The stabilities listed for each show Best to Good to Easy. Custom Temperature ranges and stabilities are welcomed – please let us know your exact requirements if not listed above.)</i>				
Aging (After 7 Days):	5×10^{-10} 1.5×10^{-8} 1×10^{-7}	1×10^{-9} 1×10^{-7} 1×10^{-6}	3×10^{-9} 3×10^{-7} 3×10^{-6}	Per Day Per Year For 10 Years
<i>(Note: The above aging rates are standard. The aging rates listed for each show Best to Good to Easy. Aging rates are highly dependent on the frequency, cut and overtone of the crystal used – not all aging rates are available with all combinations of Frequency and Temperature Stability.)</i>				
Frequency vs Supply: Frequency vs Load:	1×10^{-9} per Percent change 1×10^{-9} per Percent change			
Short Term Stability:	2×10^{-11} for tau = 1 second 6×10^{-11} for tau = 10 seconds			
Warm up:	@ +25°C (referenced to frequency @ 2 hours) $\pm 1 \times 10^{-7}$ in 3 minutes			
EFC: Tuning Range: Linearity: Tuning Slope: Control Voltage Range: Center Frequency:	Electronic Frequency Control $\pm 2 \times 10^{-7}$ to $\pm 6 \times 10^{-7}$ (Typical – Consult factory) $< \pm 20\%$ Positive or Negative (Positive is typical) 0 to +5Vdc +2.5 Vdc ± 0.5 Vdc			
Phase Noise (Typical): With +5 Vdc or +15 Vdc Supply <i>Contact Factory for Improved phase noise</i>	<u>Offset</u> 10 Hz 100 Hz 1k Hz 10k Hz 100k Hz	<u>10 MHz</u> -120 -145 -155 -160 -160 (dBc/Hz)	<u>20 MHz</u> -110 -135 -145 -155 -155 (dBc/Hz)	<u>80 MHz</u> -95 -130 -145 -155 -155 (dBc/Hz)

Outline Drawing and Pin Out



Environmental

Storage temperature: - 65 to +125 °C

Mechanical shock: 500 G's, half-sine pulse @ 0.1 mSec, 3 axis

Vibration: 20 G's swept sine, 10 to 500 Hz

How to Request:

 (See last page for Request Form)

- Specify Output Frequency – **Between 5 MHz and 100 MHz**
- Specify Output type – **HCMOS or Sinewave (& Output Level)**
- Specify Supply voltage - **+3.3, +5, +12 or +15 Vdc**
- Specify Temperature Range and Stability over Temperature
(see page 1 for standard offerings)

Note: Stability vs Temperature is the biggest cost driver – do not over specify – units will be 100% tested over temperature.

- Specify Max Package Height. – **8.89 or 13.46 or 19.05 mm**

Note: Not all stability and aging options are available with the lower can heights.

- Specify any additional requirements – Tuning slope (Positive or Negative), Aging, Phase Noise, Frequency Adjust or Fixed Frequency,.....

Engr RAA 4-23-04

SM RHW 4-23-04

Rev-23Apr04

Attn:	Sales @ Bliley Fax: 814-833-2712 Phone: 814-838-3571 Email: info@bliley.com Web: www.bliley.com Date: _____
From:	Name: _____ Company: _____ Fax: _____ Phone: _____ Email: _____ Quantities to Quote: _____ Target Price: \$ _____ Application / Reference #: _____

CO-08 OCXO Request Form

1. Frequency: _____ MHz (5 MHz to 100 MHz available)
2. Output Type: **HCMOS, Sine: +3 dBm +7 dBm +10 dBm +13 dBm**
 (circle one) (..... ≥ +12 Vdc only
3. Supply Voltage: **+3.3 Vdc +5 Vdc +12 Vdc +15 Vdc** other: _____
 (circle one)
4. Temperature Range: _____ Stability vs. Temp: _____ PPB
5. Max Package Height: **8.89 mm 13.46 mm 19.05 mm** other _____ mm
 (circle one)

Additional Specs: