



This is a preliminary Specification. An exact Part number and Finalized Specification will be created at the point of order.

## BLILEY P/N: NV47Axxxx

Type: SC Cut Crystal OCXO with Electrical Frequency Adjust

Frequency: 10.0 MHz

Output: (Standard)

- a. Type Sinewave
- b. Level +7 dBm Min  $\pm$  1 dB (Standard)  
( Over -20°C to +70°C and Vs = +5.0  $\pm$  3% )  
(+10 dBm & +13 dBm – Optional)
- c. Load 50 Ohms
- d. Harmonics/Subs -30 dBc Max
- e. Spurious -80 dBc Max

Output: (Optional)

- a. Type TTL or HCMOS
- b. Levels "0" < 0.1(Vs)  
"1" > 0.9(Vs)
- c. Load 100k Ohm // 15 pF
- d. Rise / Fall Time <6 ns (10% to 90%)
- e. Duty Cycle 50%  $\pm$ 5% @ 50% level

Frequency Stability:

- a. Temperature (Standard)  $\pm$  10 ppb max over 0°C to +50°C
- (Optional)  $\pm$  5 ppb max over 0°C to +50°C (Stratum 3E)
- (Optional)  $\pm$  50 ppb max over -20°C to +70°C
- (Optional)  $\pm$  20 ppb max over -20°C to +70°C

*NOTE: Additional Temperature Ranges and Stability options are available – Please consult the factory about your exact needs.*

- b. Aging  $\pm$  1.0 ppb/day max  
 $\pm$  0.3 ppm/year max
- c. Supply  $\pm$  1.0 ppb max for a 1% change


Release Date: **12-2-04**

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Electrical Frequency Adjust:

- a. Range  $\pm 0.5$  ppm Min to  $\pm 1.5$  ppm Max
- b. Sensitivity 2.5 Hz/V Min to 7.5 Hz/V Max
- c. Voltage +0.0 Vdc to +4.0 Vdc
- d. Slope Positive
- e. Input Impedance 10 Kohms to 100 Kohms

Start-Up: 10 MHz output level within 0.5 seconds over  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Short Term Stability:  $\leq 1 \times 10^{-10}$  for 0.1 sec to 1 sec

Phase Noise: Typical  
 (Consult Factory for Improved Phase Noise)

- 115 dBc/Hz at 10 Hz
- 145 dBc/Hz at 100 Hz
- 155 dBc/Hz at 1 KHz
- 160 dBc/Hz at 10 KHz
- 160 dBc/Hz at 100 KHz

Warm-Up: Within  $\pm 0.03$  ppm in 5 Minutes  
 ( Ref. to 30 Minutes on time ) Within  $\pm 0.01$  ppm in 15 Minutes

Supply: +5.0 Vdc  $\pm 5\%$   
 5 Watts Max at Warm-Up  
 2 Watts Max Steady state at  $+25^{\circ}\text{C}$

Vref: +4.0 Vdc  $\pm 0.2$  Vdc at 1 mA Max

Operating Temperature Range:

- a. Standard  $0^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- b. Optional  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

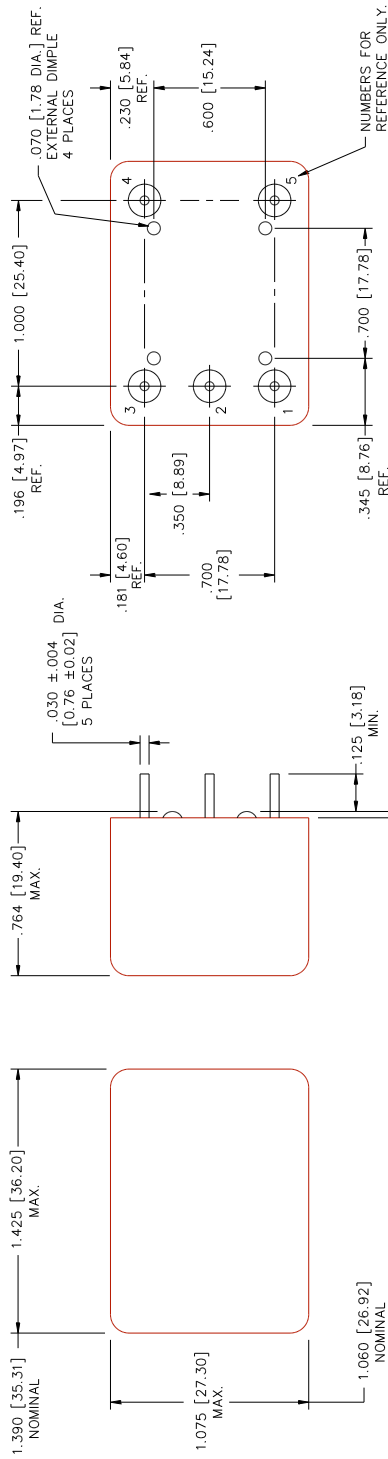
*NOTE: Extended Temperature ranges are available – Please consult the factory about your exact needs.*

Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

Package: Standard CO-08 – Euro Package,  
 See Outline Drawing

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REVISION		
LET	DESCRIPTION	DATE BY
A	REVISED TO STD. PRODUCT	4-25-2003



- PIN CONNECTIONS
1. VOLTAGE CONTROL
  2. V REF.
  3. +VDC
  4. R.F. OUTPUT
  5. R.F. & CASE GROUND

.025 ± .010 [0.64 ± 0.13] RISER, 4 PLACES

DO NOT SCALE PRINT, UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		TOLERANCES:		Holes: .002		ANGLES: .002		FINISH:	
INCHES (UNLESS OTHERWISE SPECIFIED)		MM ± .025		MM ± .025		MM ± .025		AP.	
MATERIAL:		SHIP TYPE:		SUPERSEDES:		DR.:		JPG	
NV47A		811495		811495		CL		AP.	
FINISH:		SIZE:		DRAWING NO.:		REV.:		REV.:	
B		71034		811715		A		A	
SCALE:		DATE DRAWN:		DATE DRAWN:		DATE DRAWN:		DATE DRAWN:	
2:1		1-22-2002		1-22-2002		1-22-2002		1-22-2002	

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OUTLINE DRAWING  
 NV47A



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