Ultra Low Phase Noise "Apollo" Series

Bliley Technologies Inc.
2545 W Grandview Blvd
Erie, Pa 16506
Factory +1-814-838-3571

Description:

The Apollo Series from the Olympian OCVCXO Family is a high frequency range product specifically designed for applications requiring superior noise performance out to a 100KHz offset. It is ideal for phase-locked microwave signal sources such as DRO's, low noise test equipment, microwave com-systems, and radar applications.

Features:

- **Tight Stabilities**
- **+/- 50 ppb over temp.**
- **High power output of 15 dBm available**
- **Frequency Range from 30 MHz to 130 MHz**
- **Low profile package 0.460 inches max.**
- **Excellent long-term aging**
- **Low Power Consumption 1.5 Watt typical at 25C**
- **ROHS Compliant Version Available**
- **Low G-Sensitivity performance Optionally available to 0.2ppb/g @100MHz** *

*Consult Factory for Low G-Sensitivity performance at other Frequencies

Titles	Min.	Typ.	Max.	Unit of Measure	Notes/Comments
Frequency range	30		130	MHz	
Output Level		10	15	dBm	
Harmonics			-30	dBc	
Spurious			-80	dBc	
Temperature range (option)					
(A)	0		50	°C	
(B)	-20		70	°C	
(C)	-40		70	°C	
(D)	-40		85	°C	
Frequency Stability (option)					Option / Value
0 to 50°C	+/-50		+/-500	ppb	A = +/- 50ppb
-20C to 70°C	+/-50		+/-500	ppb	B = +/- 100ppb
-40C to 70°C	+/-50		+/-500	ppb	C = +/- 200ppb
-40C to 85°C	+/-50		+/-500	ppb	D = +/- 500ppb
					E = +/- 75ppb
Aging:					100MHz unit, @25°C (room), EFC open.
After 30 Days		+/- 5		ppb/day	
For 1 Year		+/- 0.50		ppm	
For 10 Years		+/- 1.00		ppm	
For 20 Years		+/- 1.50		ppm	
EFC Voltage Range	0	5(center)	10	Vdc	
EFC slope		Positive			

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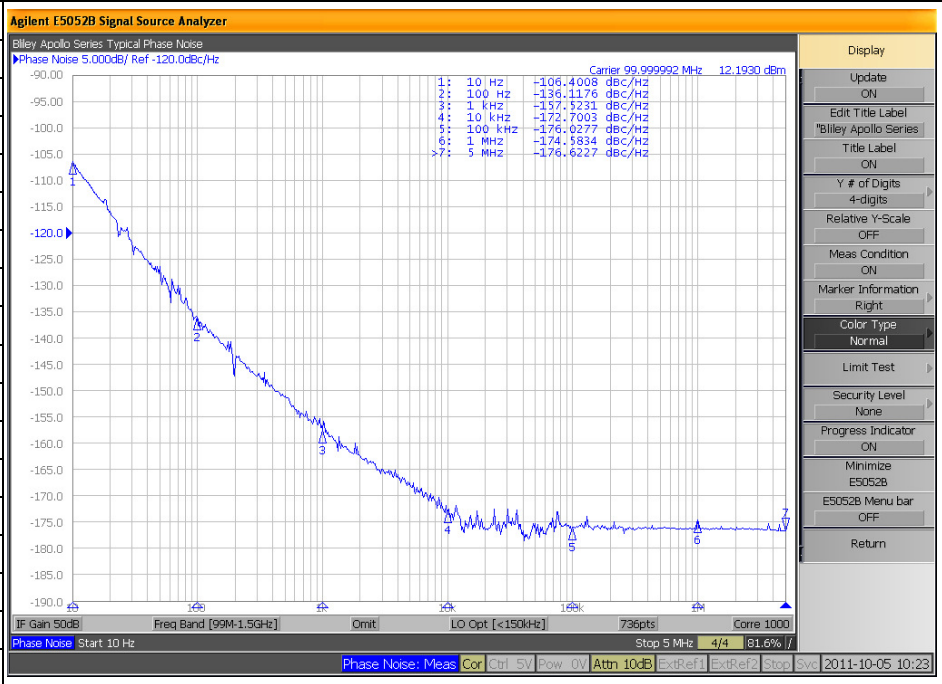
Titles	Min.	Typ.	Max.	Unit of Measure	Notes/Comments
EFC Pullability					
Option A	2			ppm	
Option B	1			ppm	
Supply Voltage					
Option A	11.4	12	12.6	%	+/-5%
Option B	14.25	15	15.75	%	+/-5%
Power consumption					
Startup/Turn-on Power			4.8	Watts	
Steady-State Power		1.5		Watts	@25°C ambient
Environmental:					
Storage Temperature (Atmosphere)					-55C to 95C
MTTF (RELEX 2011)					153,300 Hours
Shock (MIL-STD-202)					Method 213 Condition C
Sine Vibration (MIL-STD-202)					Method 204 Condition A
Random Vibration (MIL-STD-810)					Method 514 Procedure I

Phase noise options and results, (tested w/ 100MHz Oscillator, at 25°C ambient, EFC set Center Voltage)

	Option A	Unit
10 Hz	-103	dBc/Hz
100 Hz	-133	dBc/Hz
1000 Hz	-157	dBc/Hz
10000 Hz	-170	dBc/Hz
100000 Hz	-174	dBc/Hz
	Option B	
10 Hz	-100	dBc/Hz
100 Hz	-130	dBc/Hz
1000 Hz	-155	dBc/Hz
10000 Hz	-168	dBc/Hz
100000 Hz	-172	dBc/Hz
	Option C	
10 Hz	-95	dBc/Hz
100 Hz	-125	dBc/Hz
1000 Hz	-155	dBc/Hz
10000 Hz	-165	dBc/Hz
100000 Hz	-170	dBc/Hz
	Option D	
10 Hz	-90	dBc/Hz
100 Hz	-120	dBc/Hz
1000 Hz	-153	dBc/Hz
10000 Hz	-165	dBc/Hz
100000 Hz	-170	dBc/Hz

Phase Noise Options



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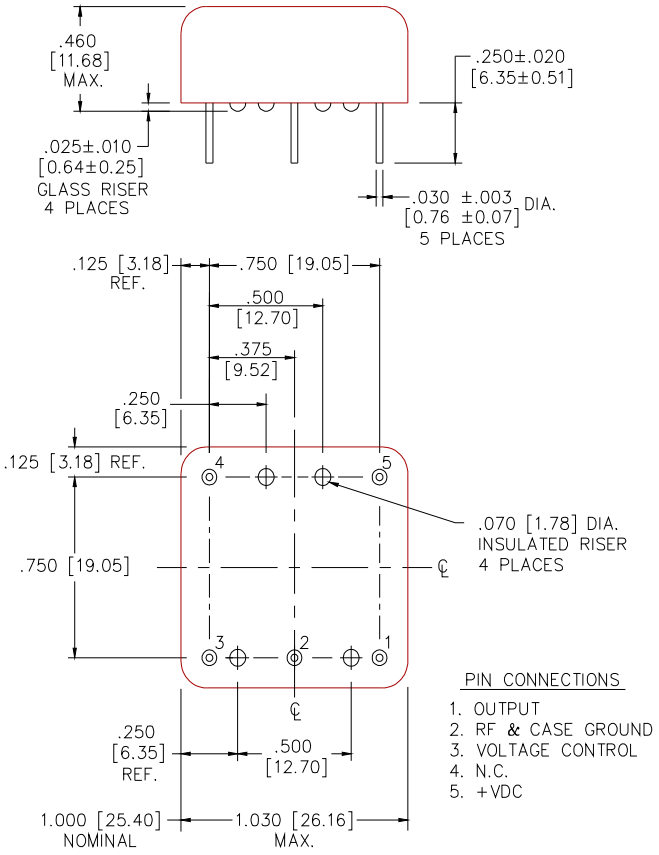

Ordering Options:

Note: Not All Combinations Are Available

Model	Phase Noise	Temp. Range	Freq. Vs. Temp Stability	Frequency Vs. Voltage	Supply Voltage	Operating Frequency*1
NV45AD For Leaded Part	**A**	**A** (0to50°C)	**A** (+/-50ppb)	**A** (>2ppm)	**A** (12)	**30M0**
	B	**B** (-20to70°C)	**B** (+/-100ppb)	**B** (>1ppm)	**B** (15)	**To**
NVG45AD For ROHS Part	**C**	**C** (-40to70°C)	**C** (+/-200ppb)			**130M**
	D	**D** (-40to85°C)	**D** (+/-500ppb)			
			E (+/- 75ppb)			

*1 Trailing Zeros will be omitted in final part number