Ultra Low Phase Noise OCVCXO

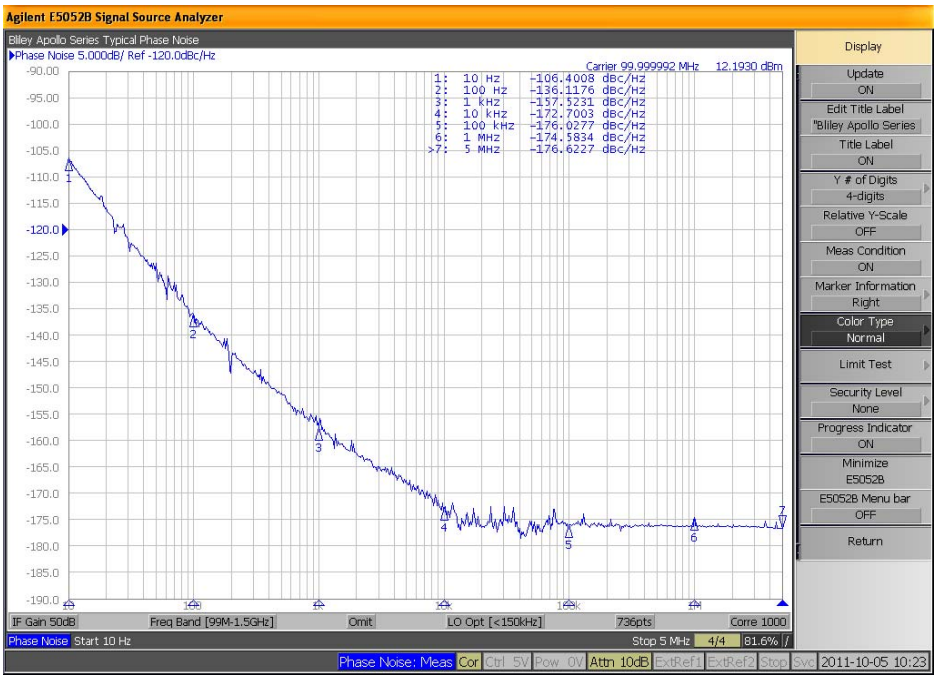
"Apollo" Series

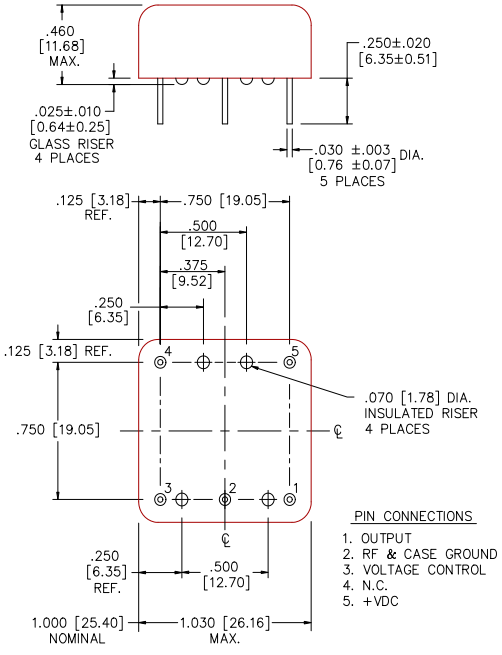
Description:

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**





Output:

Sinewave: 10 dBm Typical - 15 dBm Max.

Harmonics: -30 dBc Max. Spurious: -80 dBc Max.

Frequency Range: 30 MHz - 130 MHz

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Phase Noise: (Options are worst case performance for 100 MHz Unit)

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

Frequency Stability Versus Temperature:

Temp. range Option	F vs. T (Option A)	F vs. T (B)	F vs. T (C)	F vs T (D)
0C to 50C (A)	+/- 50 ppb	+/- 100 ppb	+/- 250 ppb	+/- 500 ppb
-20C to 70C (B)	N/A	+/- 100 ppb	+/- 250 ppb	+/- 500 ppb
-40C to 70C (C)	N/A	N/A	+/- 250 ppb	+/- 500 ppb
-40C to 85C (D)	N/A	N/A	+/- 250 ppb	+/- 500 ppb

Frequency Versus Voltage (Vcontrol = 0V to 10V)

Option A	Option B
+/- 2 ppm Positive Pull	+/- 1 ppm Positive Pull

Voltage and Power Consumption:

Option A		Option B	
12 Vdc +/- 5%		15 Vdc +/- 5%	
Turn-on Power	4.8 W max.	Steady-State	1.5 W typ. at 25C

Aging:

Frequency	Timeframe	Aging
100 MHz	After 30 Days	+/- 5 ppb/day Typ.
	For 1 Year	+/- 0.50 ppm Typ.
	For 10 Years	+/- 1.00 ppm Typ.
	For 20 Years	+/- 1.50 ppm Typ.

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

Ordering Options:

Model	Phase Noise	Temp. Range	Freq. Vs. Temp Stability	Frequency Vs. Voltage	Supply Voltage	Operating Frequency*
NV45AD For Leaded Part	**A**	**A**	**A**	**A**	**A**	**30M0**
	B	**B**	**B**	**B**	**B**	**To**
NVG45AD For ROHS Part	**C**	**C**	**C**			**130M**
	D	**D**	**D**			

Note: Not All Combinations Are Available

*Trailing Zeros will be omitted in final part number