

HIGH PERFORMANCE CRYSTAL OSCILLATOR

PLUG-IN MODEL: HPXO128

Frequency: 128 MHz

FEATURES:

- ▶ Excellent Performance
- ▶ Oven / Voltage Controlled
- ▶ Ultra Low Phase Noise
- ▶ High Stability
- ▶ Standard Compact Package
- ▶ Low-G-sensitivity



SPECIFICATIONS (Rev. A 07/15/14)

Frequency	128 MHz	
Frequency Tuning Range ¹	±5 ppm (Typ.)	
Frequency Stability Over Temperature	±0.2 ppm (Typ.) / ±0.5 ppm (Max.)	
Aging	±0.3 ppm/year (Typ.)	
Warm-Up Time	300 Sec. (Min.)	
Phase Noise	dBc/Hz (Max.)	dBc/Hz (Typ.)
100 Hz	-133	-138
1 kHz	-158	-160
10 kHz	-168	-172
1 MHz	-178	-180
Jitter ²	6 fs (Typ.) / 10 fs (Max.)	
Allan Variance	See Plot	
Output Power	+10 dBm (Min.) / +15 dBm (Typ.)	
Harmonics	-35 dBc (Typ.) / -25 dBc (Max.)	
Supply Voltage V _s	Minimum	Typical
	+11.4 V	+12 V
Supply Current I _s	Minimum	Typical
	+11.4 V	+12 V
Steady State @ +25 °C	120 mA (Max.)	
During Warm-up	300 mA (Max.)	
Temperature Range (OTR)	Min.	Max.
Operating	-20 °C	+60 °C
Storage	-35 °C	+85 °C

¹ for V_{tune} = 1 to 10 VDC
² 100 Hz to 10 MHz

Patent : <http://www.synergymwave.com/patents>

Package #	379
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1.420 (36.068) MAX
1.065 (27.051) MAX
0.020 (0.5)
0.670 (17.018) MAX
0.035 (0.889) PLS.
0.250 (6.350)
1.000 (25.400)
0.600 (15.24)
0.700 (17.780)
0.700 (17.780)
0.079 (2) x 4 plcs.

BOTTOM VIEW

DIMENSIONS: INCHES(MILLIMETERS)
TOLERANCE ON THREE DECIMAL PLACES = ± 0.015(0.381mm)

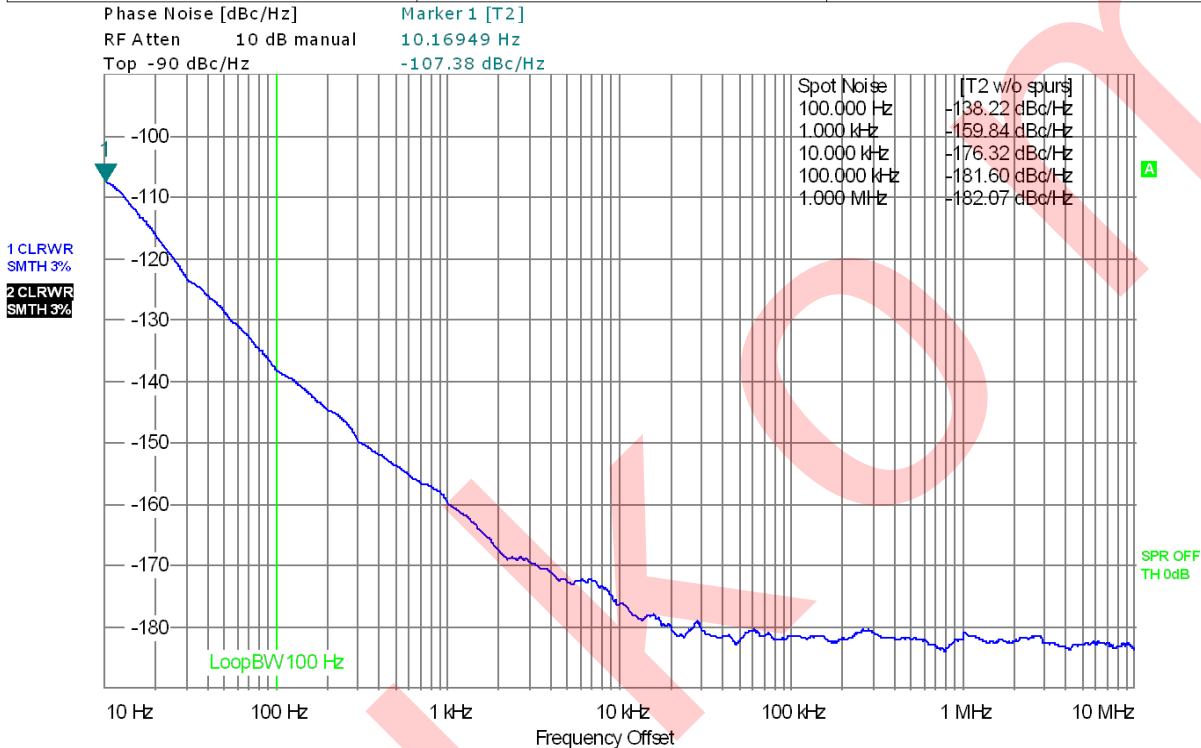
Port Configuration				
Tuning Voltage V _T	Supply Voltage V _s	RF Output	GND.	NC
1	3	4	5	2

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Settings	R&S FSUP 26 Signal Source Analyzer		LOCKED	
	Residual Noise [T2 w/o spurs]		Spur List	
Signal Frequency:	128.000002 MHz	Int PHN (10.0 .. 10.0 M) -99.8 dBc	32.435 Hz	-115.43 dBc
Signal Level:	11.54 dBm	Residual PM 831.155 μ s	35.702 Hz	-109.20 dBc
Cross Corr Mode	Harmonic 1	Residual FM 18.312 Hz	60.000 Hz	-102.07 dBc
Internal Ref Tuned	Internal Phase Det	RMS Jitter 0.0180 ps	71.458 Hz	-108.40 dBc

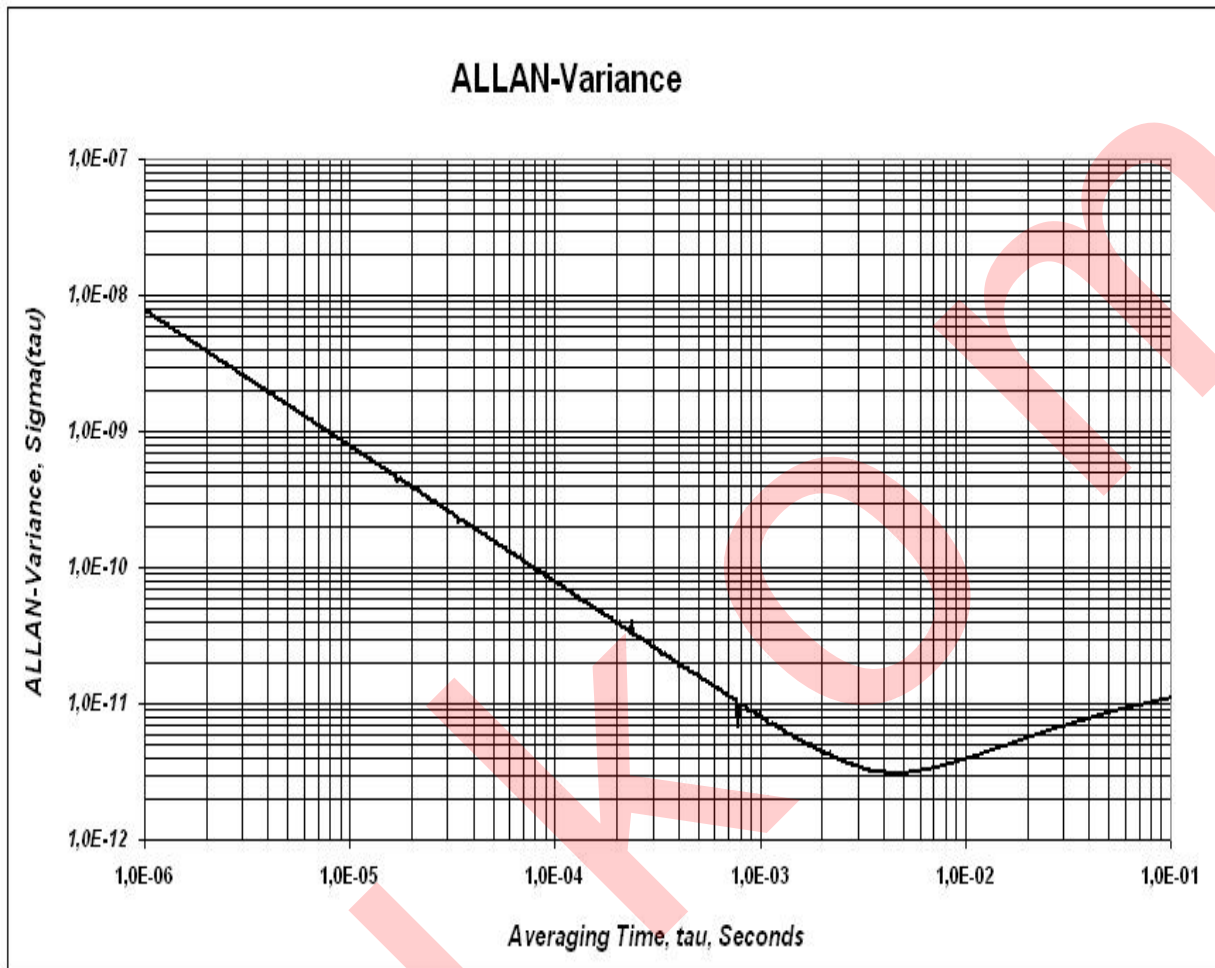


PERFORMANCE PLOTS

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