

HIGH PERFORMANCE CRYSTAL OSCILLATOR

PLUG-IN MODEL: HPXO100

Frequency: 100 MHz

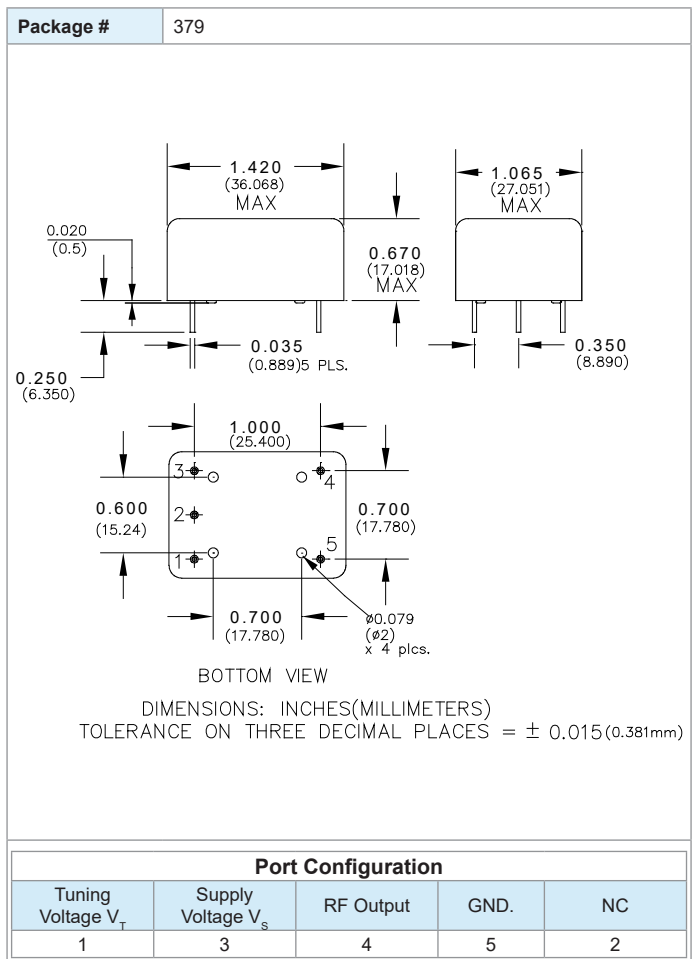
FEATURES:

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



SPECIFICATIONS (Rev. B 11/25/13)

Frequency	100 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	-135	-140		
1 kHz	-160	-162		
10 kHz	-170	-174		
1 MHz	-180	-183		
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	Maximum	
	+11.4 V	+12 V	+12.6 V	
Supply Current I_s				
	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				

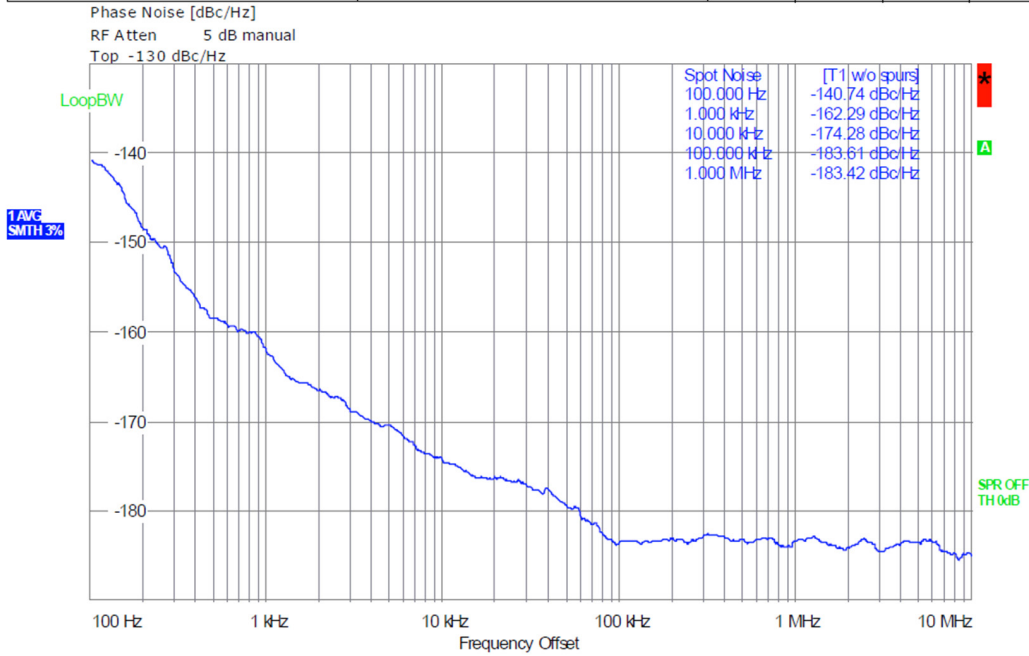


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Typical phase noise characteristic

Settings		Residual Noise [T1 w/o spurs]		Phase Detector +40 dB	
Signal Frequency:	100.000190 MHz	Int PHN (100.0 .. 10.0 M)	-113.2 dBc		
Signal Level:	15 dBm	Residual PM	176.813 μ e		
Cross Corr Mode	Harmonic 1	Residual FM	15.395 Hz		
Internal Ref Tuned	Internal Phase Det	RMS Jitter	0.0049 ps		



PERFORMANCE PLOTS

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