

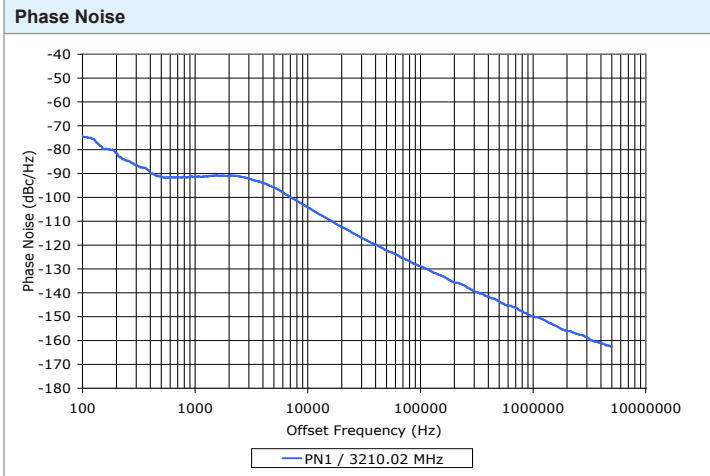
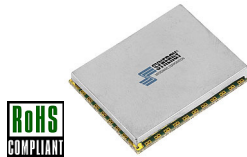
# FIXED FREQUENCY SYNTHESIZER

## SURFACE MOUNT MODEL: FCPH3210-10

3210 MHz

**FEATURES:**

- ▶ Exceptionally Low Phase Noise
- ▶ No Programming Required
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Small Size, Surface Mount



**SPECIFICATIONS (Rev. B 03/28/11)**

Frequency	3210 MHz		
Reference Input Frequency	10 MHz		
Reference Input Voltage	1.0 V p-p to 3.3 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	65
	VCO	+8	35
	Vtune	+8	10
Output Power	+5 dBm ±2 dB		
Spurious & Ref. Sideband	84 dB (Typ.)		
Harmonic Suppression	10 dBc (Max.)		
Settling Time	90 mSec (Max.)		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-90 dBc/Hz	
	@ 10 kHz	-105 dBc/Hz	
	@ 100 kHz	-129 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		

**Absolute Maximum Ratings**

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+5.25 V
Bias Voltage (Tune)	+12.0 V
Bias Voltage (VCO)	+8.5 V
DC Voltage Applied to RF Out	±25 V

**Package #** 197LF

**TOP VIEW**  
Dimensions: 1.250, 1.000, 0.800, 0.600, 0.400, 0.200, 0.000, 0.000, 0.125, 0.325, 0.525, 0.725, 0.925, 1.125, 0.225, 0.425, 0.625, 0.825, 1.025, 1.250

**SIDE VIEW**  
Dimensions: 0.230 MAX, 0.930

**RECOMMENDED PCB LAYOUT**  
Dimensions: 1.290, 1.040, 0.870, 0.820, 0.620, 0.420, 0.220, 0.170, 0.000, 0.145, 0.345, 0.545, 0.745, 0.945, 1.070, 1.145, 0.245, 0.445, 0.645, 0.845, 1.045

REL-PRO® PATENT NO. 7,612,296

OPTIONAL SOLDER AREA FOR HIGH VIBRATION ENVIRONMENT

TOLERANCES ON THREE DECIMAL PLACES = ± 0.015

PACKAGE MOUNTING: SEE APPLICATION NOTES AN7200 & AN7300

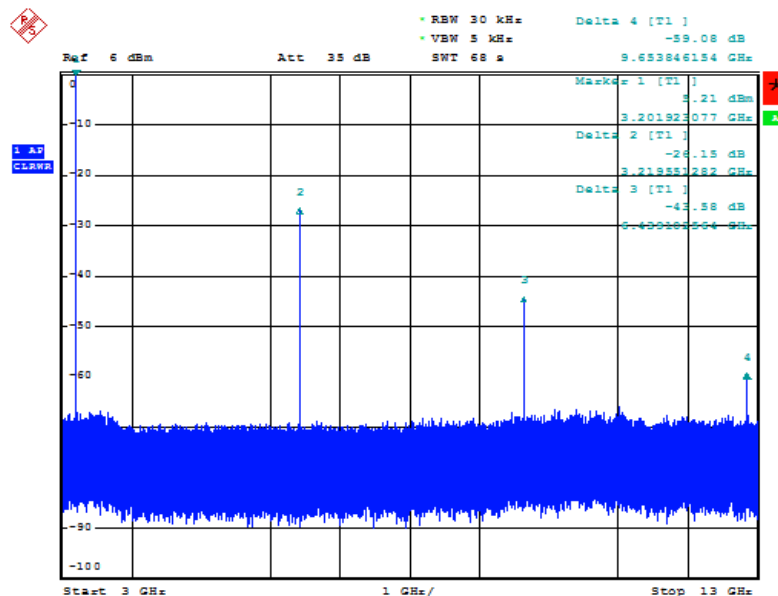
Port Configuration		
Pin 5 - RF Out	Pin 25 - Vcc (VCO)	All Others - Ground
Pin 7 - Lock Detect	Pin 27 - Vcc (Vtune)	NC - No Connection
Pin 21 - Ref. In	Pin 8 to 19, 24, 26, 28 - NC	
Pin 23 - Vcc (Digital)		

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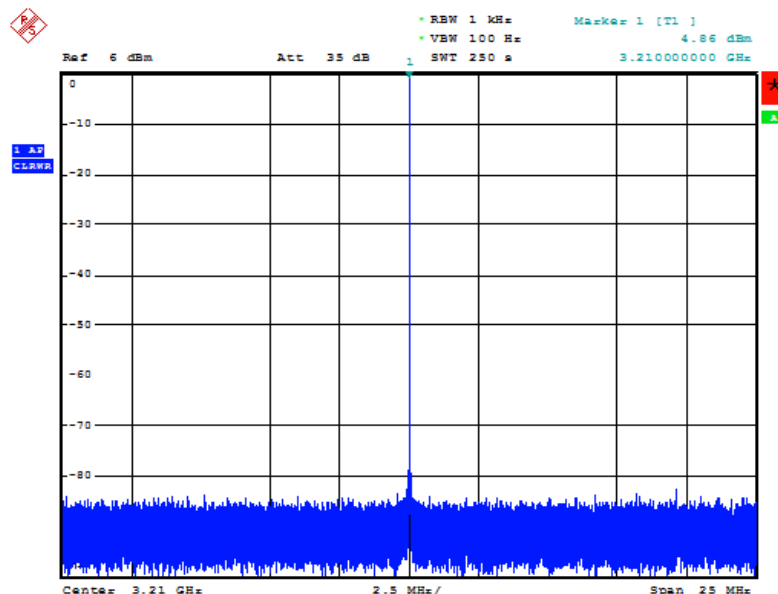
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### HARMONIC SUPPRESSION



### REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS