

SELECTABLE FREQUENCY SYNTHESIZER

SURFACE MOUNT MODEL: FCPL610-10

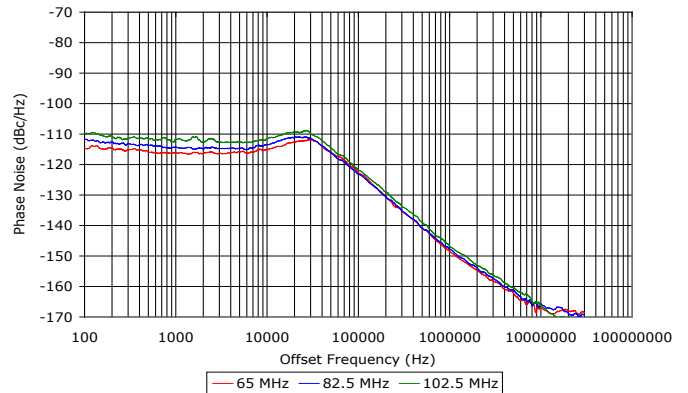
65 - 102.5 MHz

FEATURES:

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



Phase Noise



SPECIFICATIONS (Rev. B 01/02/12)

Frequency	65 - 102.5 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.)
	Vcc 1 (Digital)	+5	10
	Vcc 2 (Vtune)	+5	30
	Vcc 3 (VCO)	+15	3
Lock Detect Indicator	CMOS 5 V		
Output Power	-2 dBm (Min.)		
Spurious Suppression	-70 dB (Typ.)		
Harmonic Suppression	12 dB (Typ.)		
Power Up Time	10 mSec (Typ.) ¹		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-111 dBc/Hz	
	@ 100 kHz	-121 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		

¹ From stable power on to stable lock detect.

Binary Frequency Selection Table

D3*	D2*	D1*	D0*	Freq. (MHz)
0	0	0	0	65
0	0	0	1	67.5
0	0	1	0	70
0	0	1	1	72.5
0	1	0	0	75
0	1	0	1	77.5
0	1	1	0	80
0	1	1	1	82.5
1	0	0	0	85
1	0	0	1	87.5
1	0	1	0	90
1	0	1	1	92.5
1	1	0	0	95
1	1	0	1	97.5
1	1	1	0	100
1	1	1	1	102.5

-- Reserved for future use.

* Voltage levels: 0V or gnd. / +5V or open.

Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+5.25 V
Bias Voltage (VCO)	+5.5 V
Bias Voltage (Tune)	+16 V
DC Voltage Applied to RF Out	± 25 V

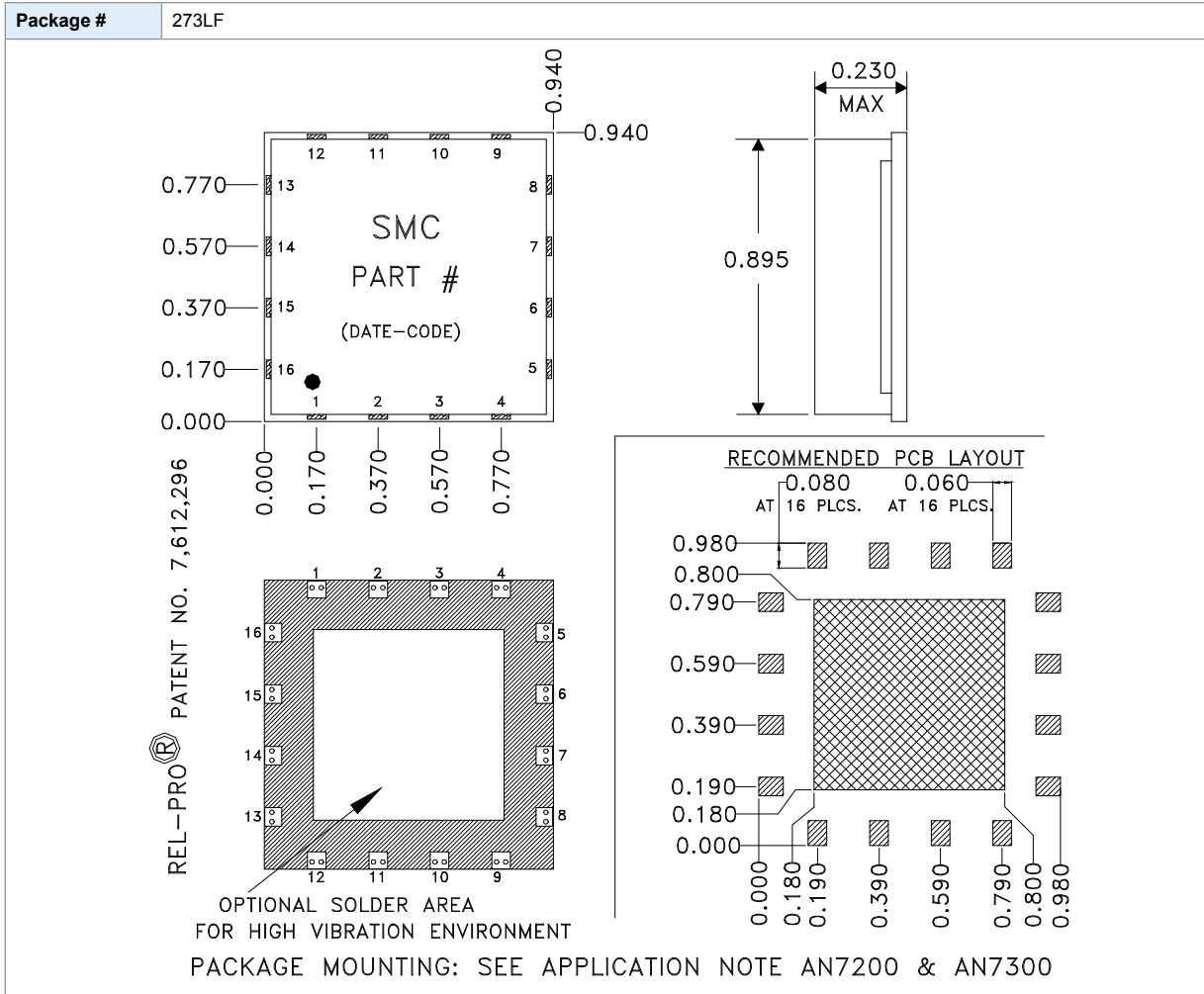
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PERFORMANCE PLOTS



Port Configuration

Pin 1 - NC	Pin 5 - D3	Pin 9 - VCC3 (VCO)	Pin 13 - RF Out
Pin 2 - D0	Pin 6 - Ref. Input	Pin 10 - Ground	Pin 14 - Lock Detect *
Pin 3 - D1	Pin 7 - VCC1 (Digital)	Pin 11 - Ground	Pin 15 - NC
Pin 4 - D2	Pin 8 - VCC2 (Vtune)	Pin 12 - Ground	Pin 16 - NC

* High when locked (source/sink 500 uA)

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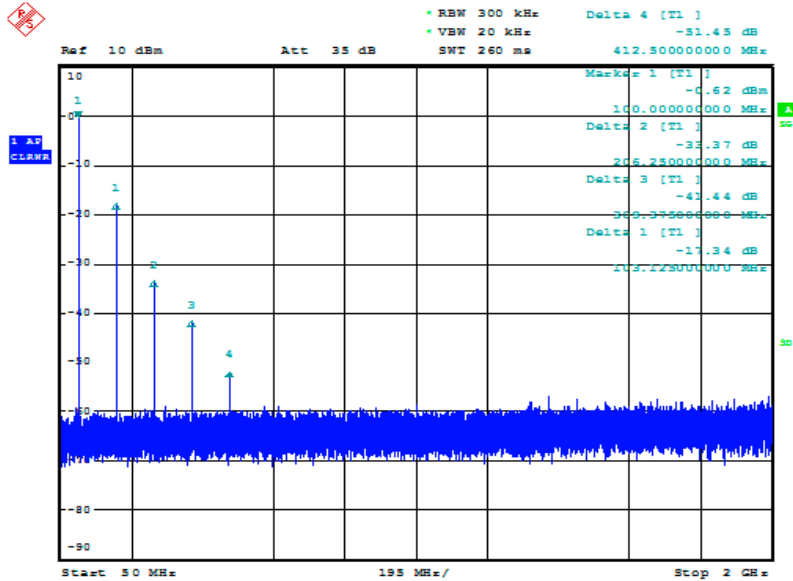


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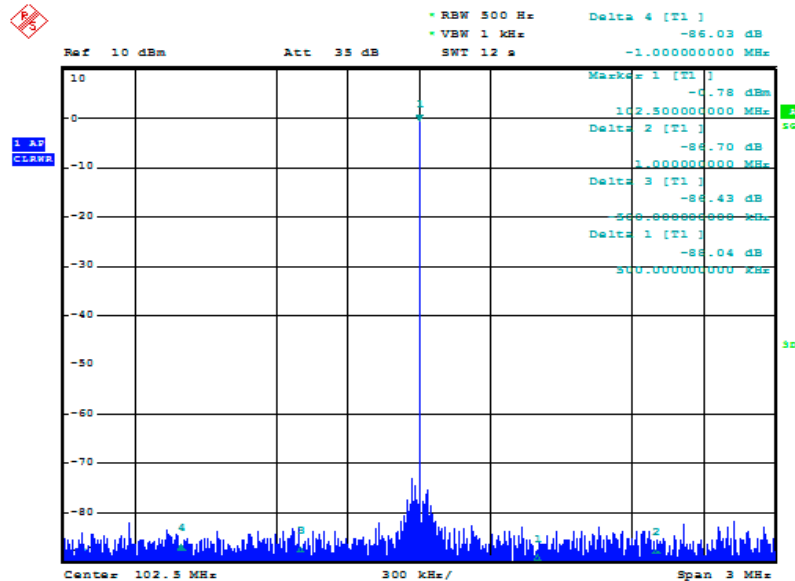
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HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



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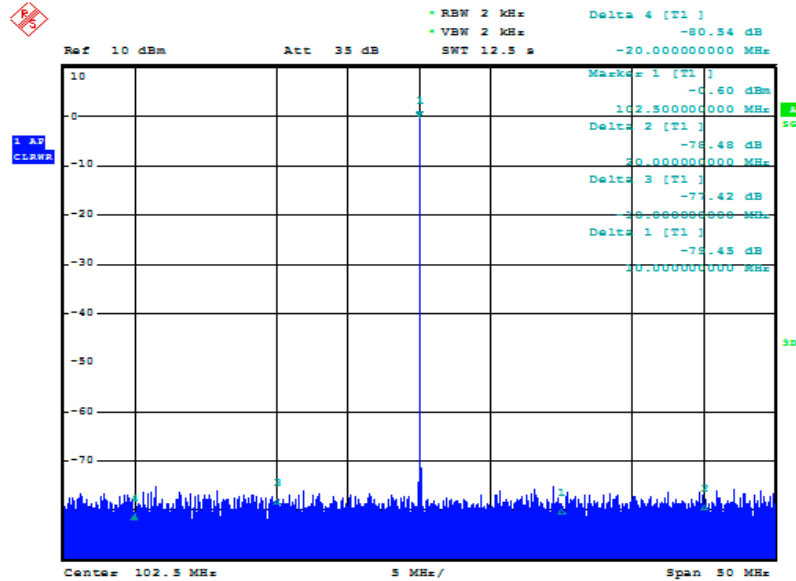
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CLOSE IN SPURIOUS SUPPRESSION



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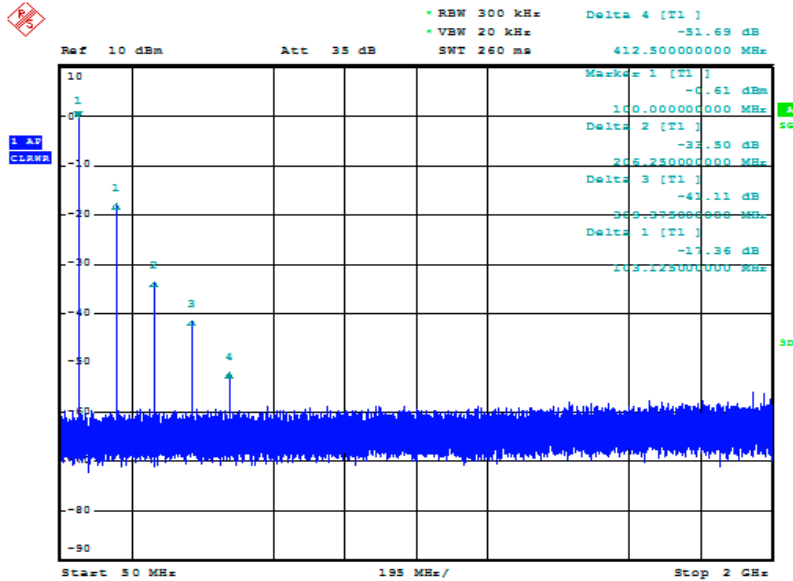


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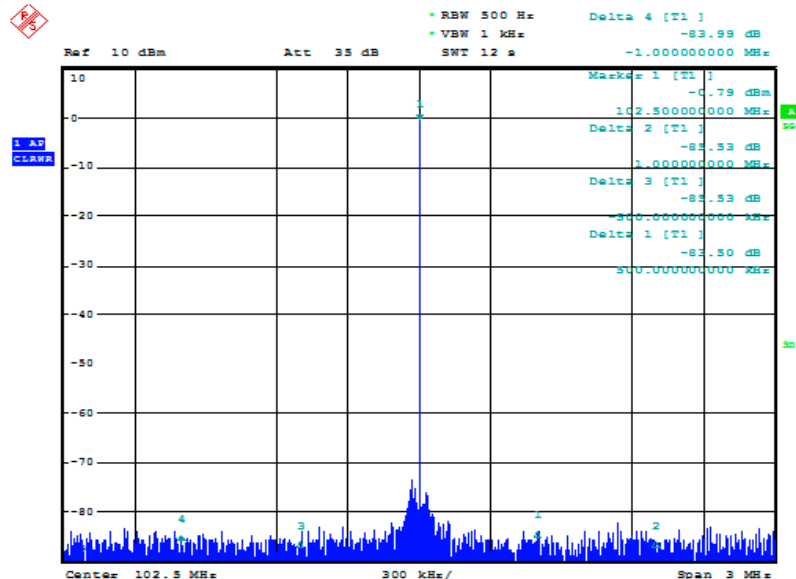
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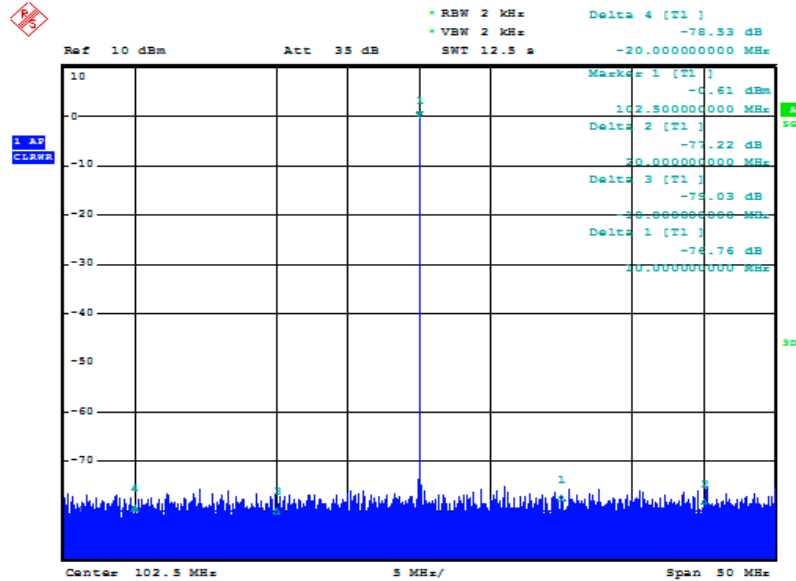
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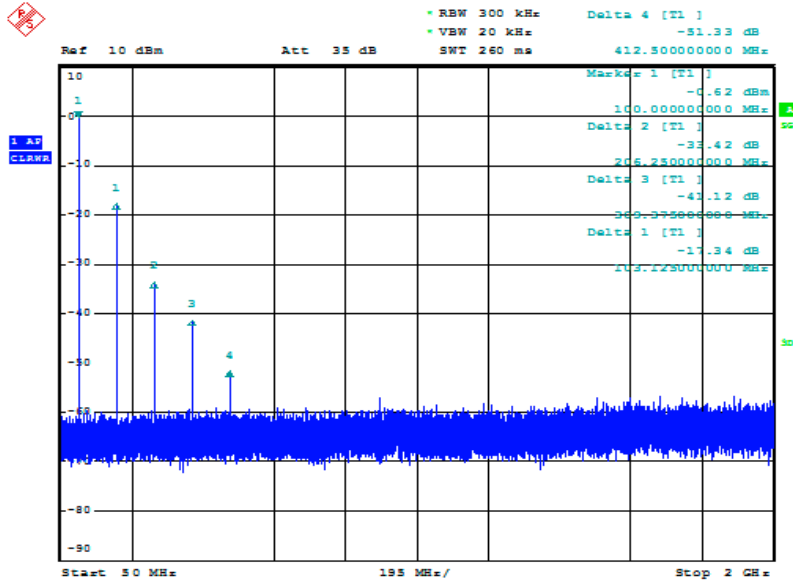
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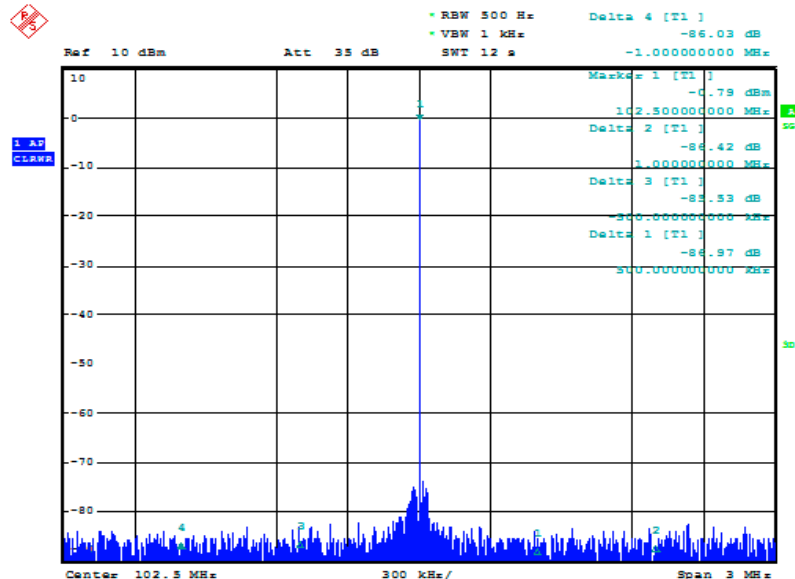
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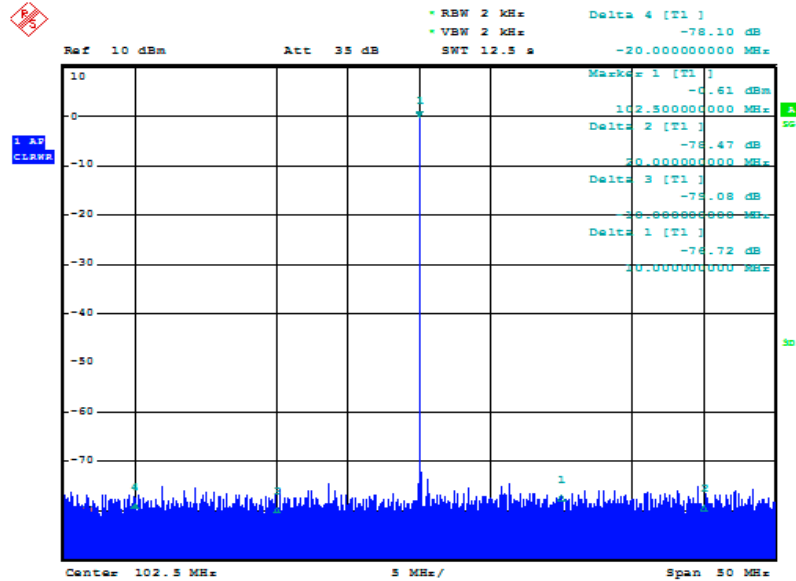
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