

# SELECTABLE FREQUENCY SYNTHESIZER

## SURFACE MOUNT MODEL: FCPL65120-10

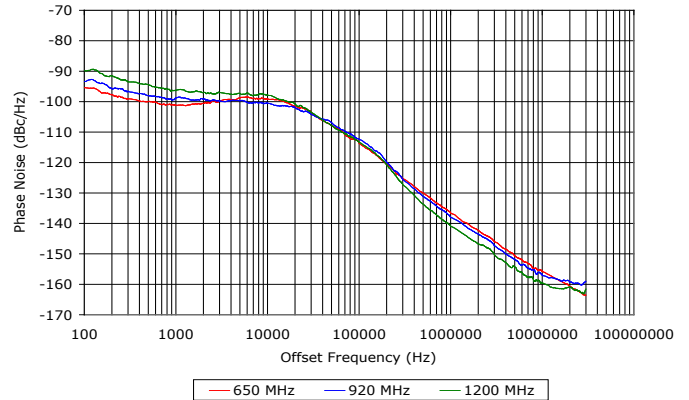
650 - 1200 MHz

### FEATURES:

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



### Phase Noise



### SPECIFICATIONS (Rev. L 12/11/13)

Frequency	650 - 1200 MHz		
Reference Input Frequency	10 MHz		
Reference Input Voltage	1.0 V p-p to 3.3 V p-p		
Bias Voltage	<b>Vcc</b>	<b>V (Vdc)</b>	<b>I (mA Max.)</b>
	Vcc 1 (Digital)	+5	15
	Vcc 2 (Vtune)	+12	10
	Vcc 3 (VCO)	+5	58
Lock Detect Indicator	CMOS 3.3 V		
Output Power	+6 dBm (Min.)		
Spurious Suppression	100 dB (Typ.)		
Harmonic Suppression	15 dB (Typ.)		
Power Up Time	90 mSec (Typ.) <sup>1</sup>		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	<b>Offset</b>	<b>Phase Noise</b>	
	@ 10 kHz	-98 dBc/Hz	
	@ 100 kHz	-113 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		
<sup>1</sup> From stable power on to stable lock detect.			
<b>Patent :</b> <a href="http://www.synergymwave.com/patents">http://www.synergymwave.com/patents</a>			

### Binary Frequency Selection Table

D3*	D2*	D1*	D0*	Freq. (MHz)
0	0	0	0	790
0	0	0	1	860
0	0	1	0	1010
0	0	1	1	915
0	1	0	0	920
0	1	0	1	1090
0	1	1	0	800
0	1	1	1	725
1	0	0	0	700
1	0	0	1	750
1	0	1	0	710
1	0	1	1	--
1	1	0	0	--
1	1	0	1	--
1	1	1	0	--
1	1	1	1	--

-- 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 (Tune)	+26 V
Bias Voltage (VCO)	+5.5 V
DC Voltage Applied to RF Out	± 25 V

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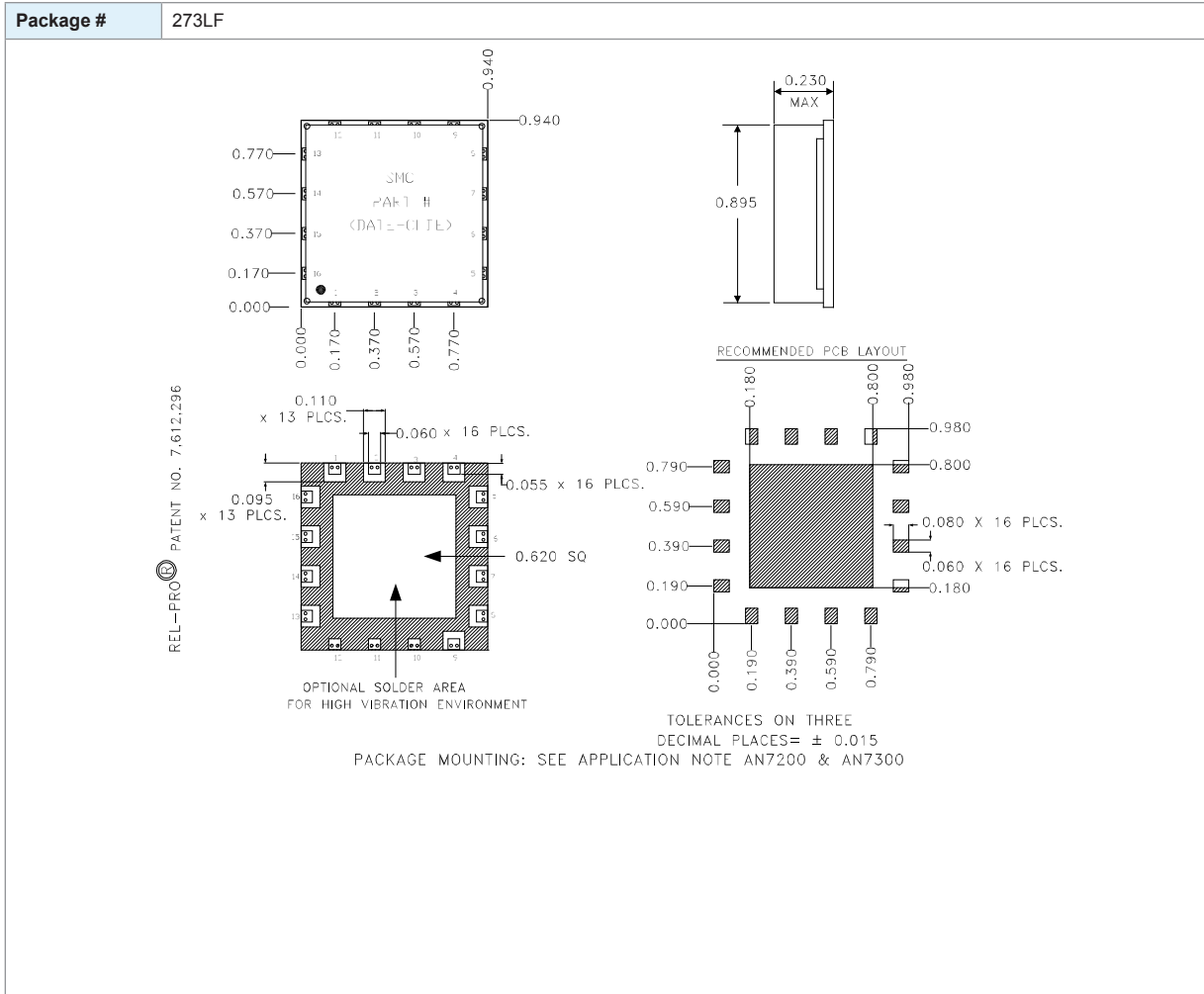


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### Port Configuration

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

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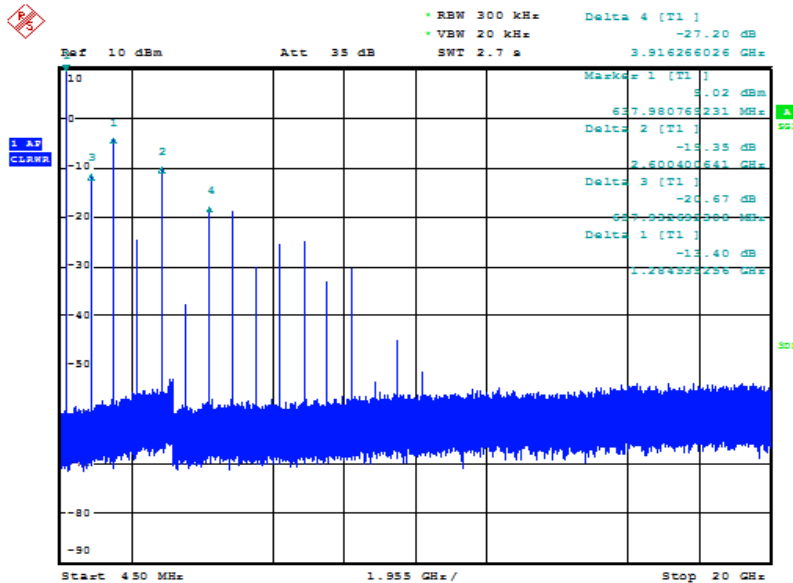


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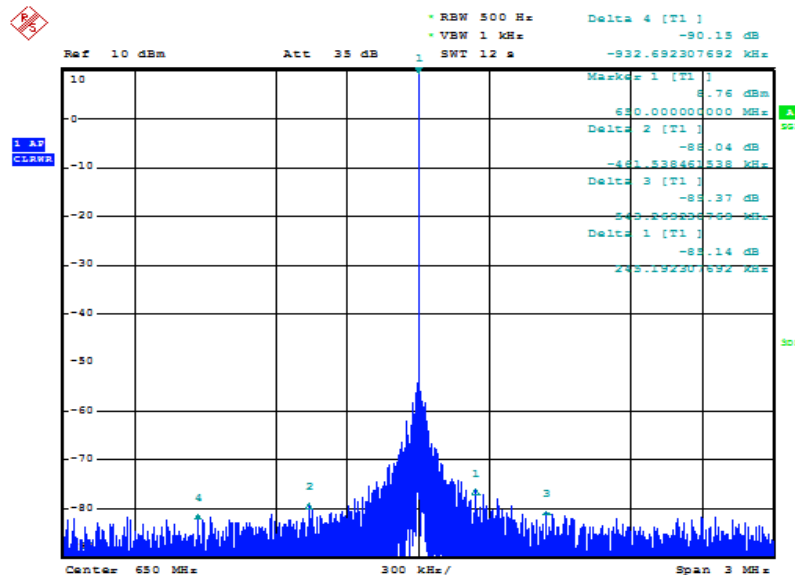
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HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



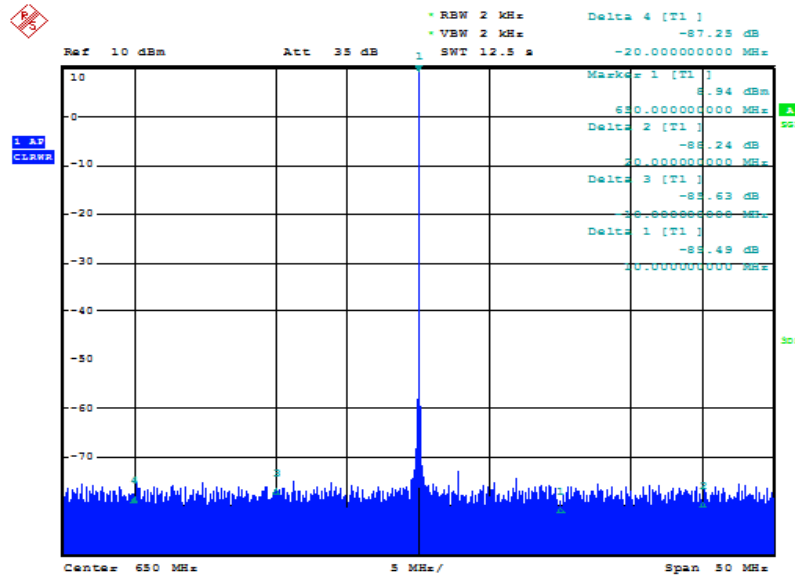
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650 - 1200 MHz

CLOSE IN SPURIOUS SUPPRESSION



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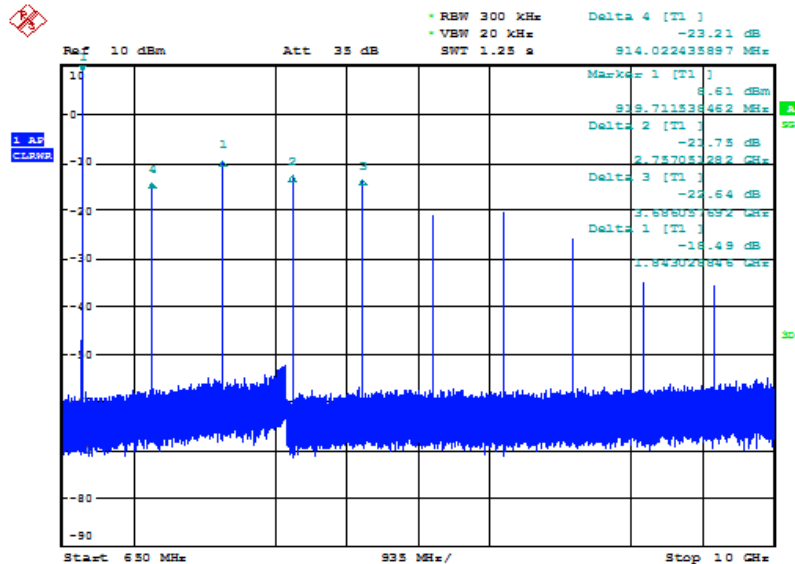


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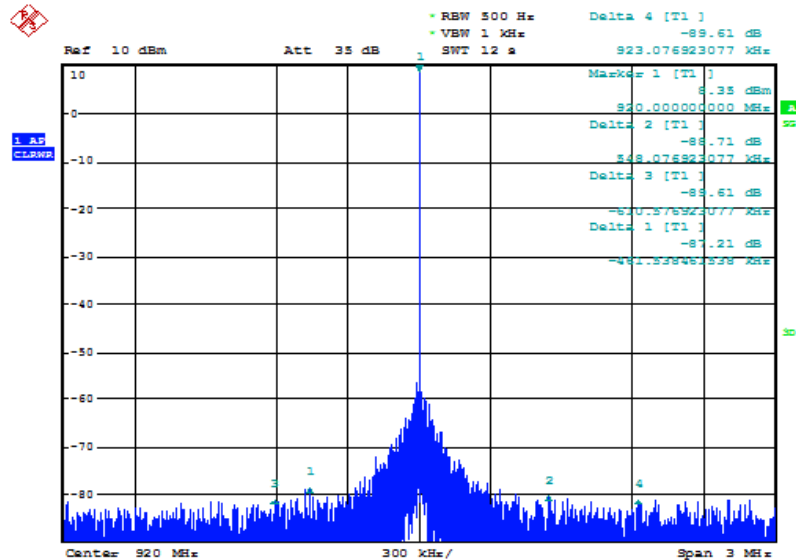
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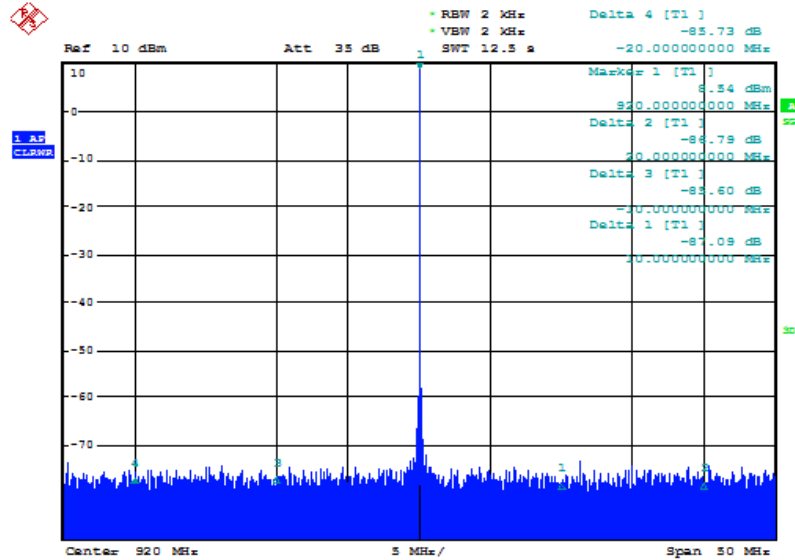
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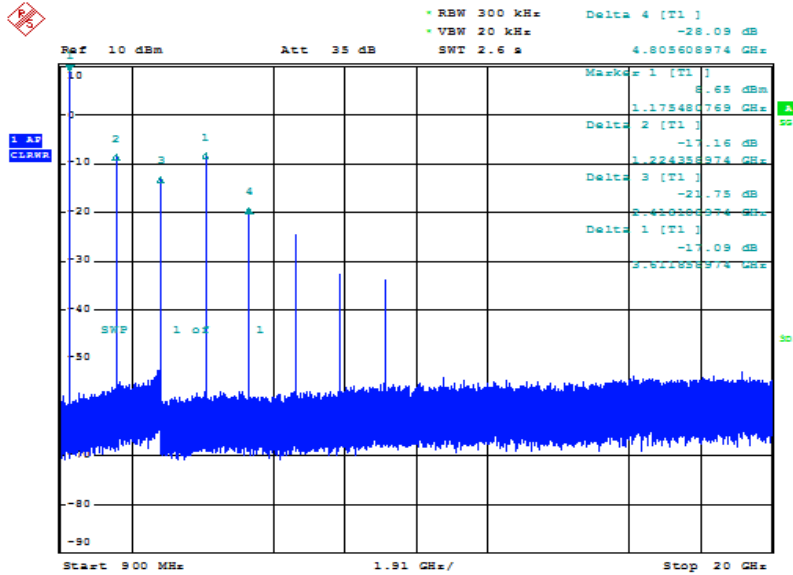


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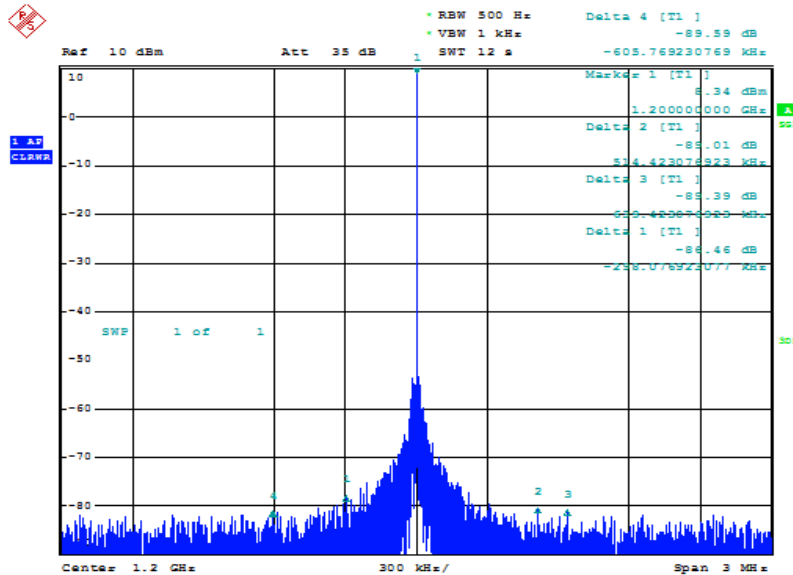
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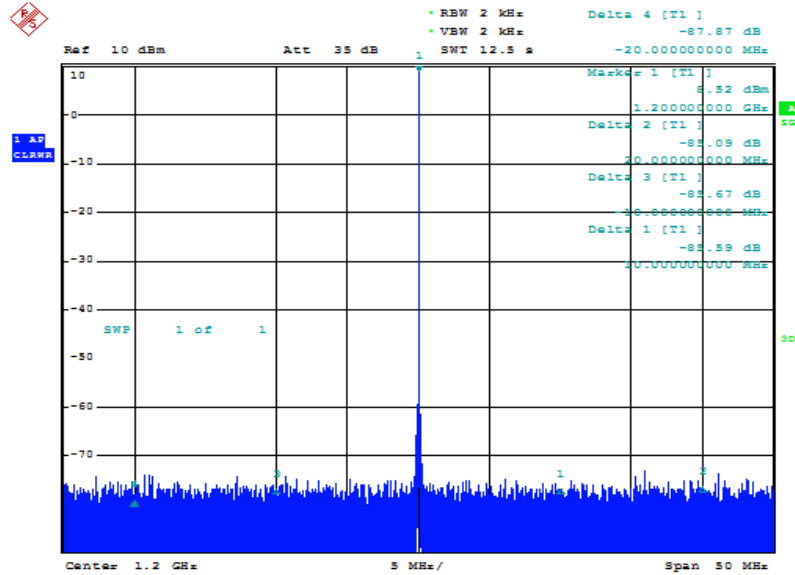
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