

# PARALLEL ADDRESSABLE SYNTHESIZER

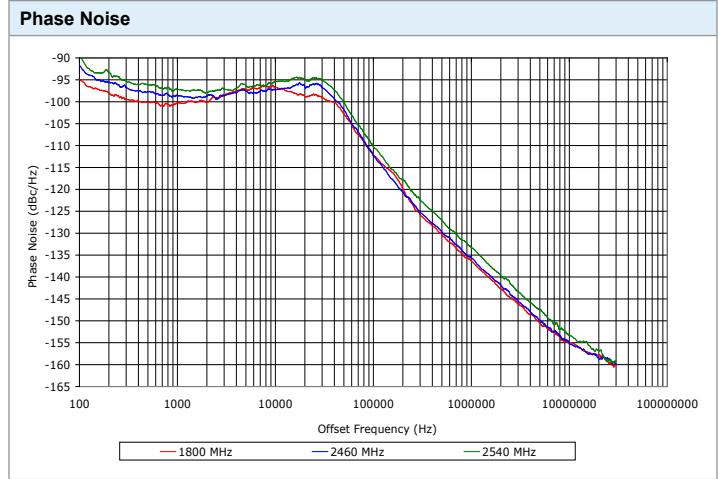
## SURFACE MOUNT MODEL: LFCPH181254-10

**SELECTABLE FREQUENCY**

**1800 - 2540 MHz**

**FEATURES:**

- ▶ Exceptionally Low Phase Noise
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Small Size, Surface Mount
- ▶ Up to 16 selectable frequencies
- ▶ Buffered Output



**SPECIFICATIONS (Rev. C 01/02/12)**

Frequency	1800 - 2540 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	65
	Vcc 2 (VCO)	+5	40
	Vcc 3 (Converter)	+5	55
Voltage Levels (D0, D1, D2, D3)	0 / +5 Volts		
Output Power	+5 dBm (Min.)		
Spurious Suppression	75 dB (Typ.)		
Harmonic Suppression	25 dB (Typ.)		
Power Up Time *	90 mSec (Max.)		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-96 dBc/Hz	
	@ 100 kHz	-110 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		

\* From stable power on to stable lock detect.

**Binary Frequency Selection Table**

D3*	D2*	D1*	D0*	Freq. (MHz)
0	0	0	0	1800
0	0	0	1	1810
0	0	1	0	1820
0	0	1	1	1830
0	1	0	0	1840
0	1	0	1	1850
0	1	1	0	2450
0	1	1	1	2460
1	0	0	0	2470
1	0	0	1	2480
1	0	1	0	2490
1	0	1	1	2500
1	1	0	0	2510
1	1	0	1	2520
1	1	1	0	2530
1	1	1	1	2540

-- 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 (Converter)	+8.0 V
Bias Voltage (VCO)	+5.5 V
DC Voltage Applied to RF Out	± 25 V

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 7,580,693; 7,586,381; 7,605,670; 7,636,021; 2,533,623 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV3136834; 11/263766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,563,174; 7,580,693; 7,612,296; 2,524,751



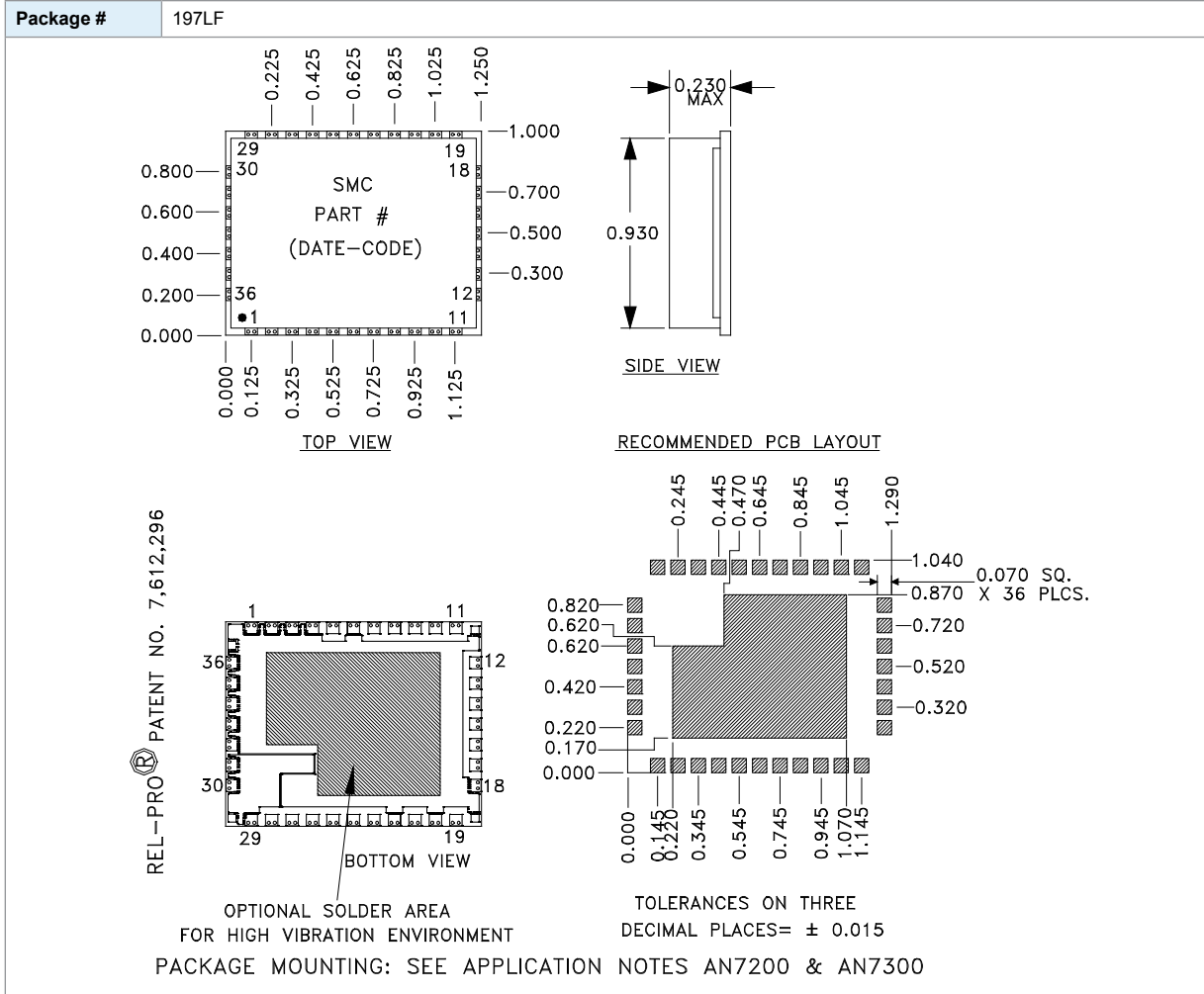
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PERFORMANCE PLOTS



### Port Configuration

Pin 5 - RF Out	Pin 12 - D3	Pin 19 - NC	Pin 27* - Vcc(Tune)
Pin 7 - Lock Detect Out	Pin 13 - VCO On	Pin 21 - Ref In	Pin 28 - Vcc(Converter)
Pin 8 - D0	Pin 14 - NC	Pin 23 - Vcc(Digital)	All Others - Ground
Pin 9 - NC	Pin 15 - D1	Pin 24 - Vtune(Out)	
Pin 10 - NC	Pin 16 - NC	Pin 25 - Vcc(VCO)	NC - No Connection
Pin 11 - NC	Pin 17 - D2	Pin 26* - Vout(Converter)	

\*Connect together externally and bypass to ground with 10uF/30V tantalum capacitor.

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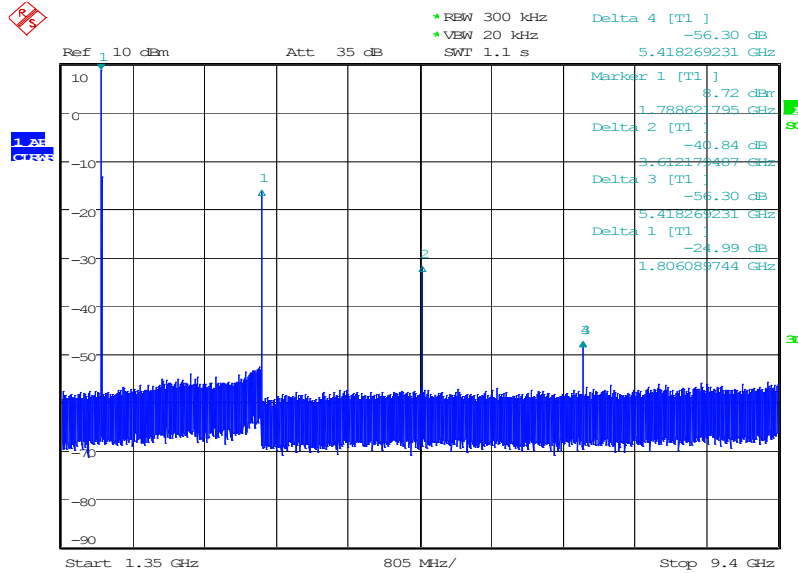


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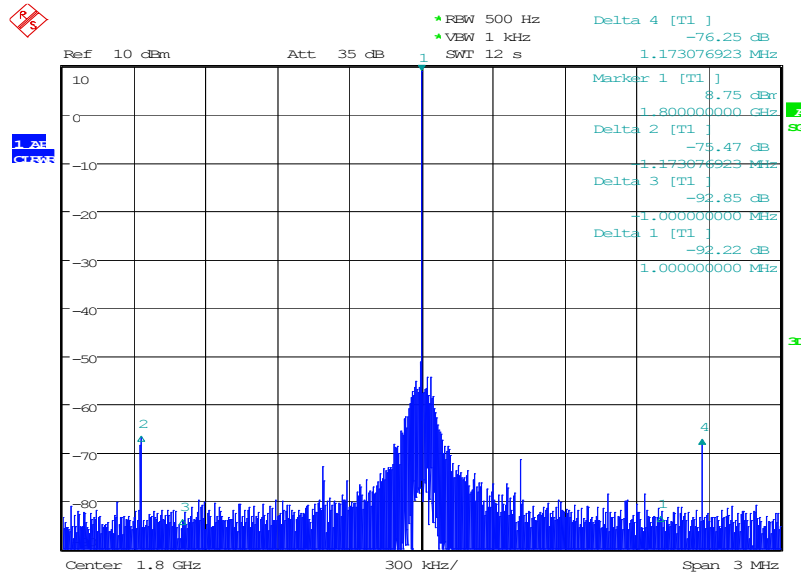
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## HARMONIC SUPPRESSION



## REFERENCE SIDEBAND SUPPRESSION



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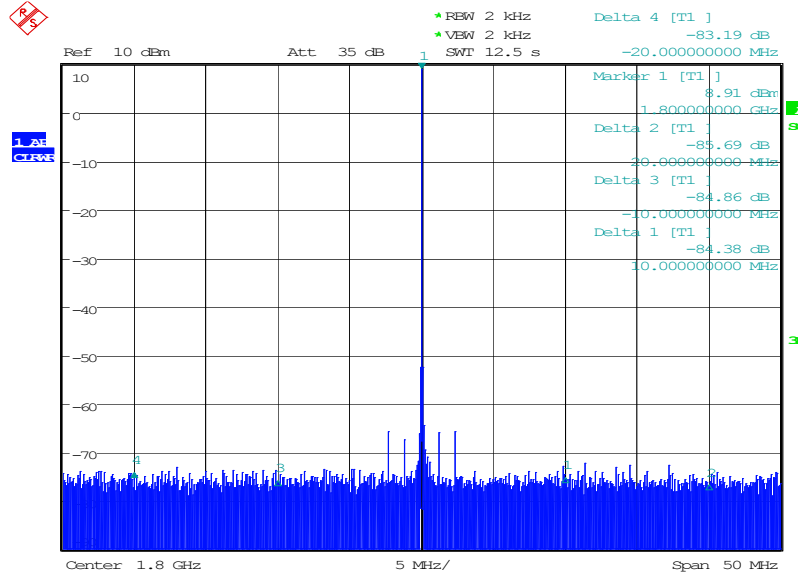


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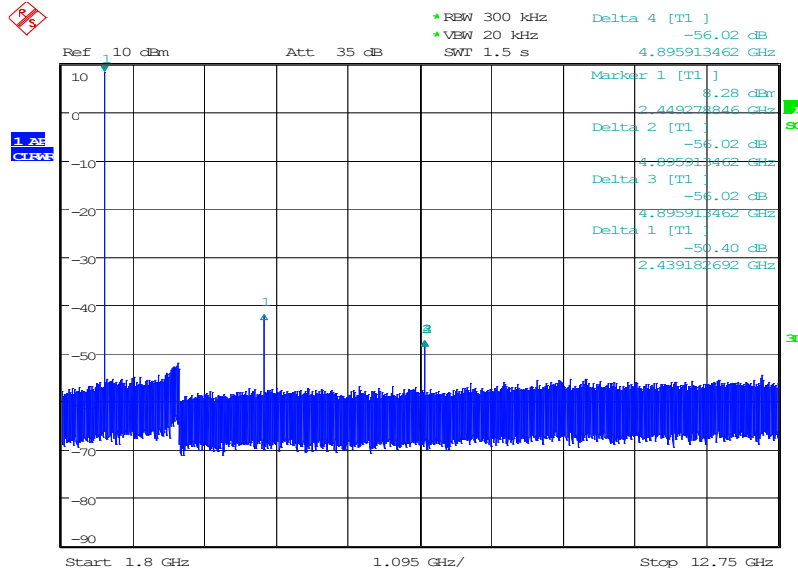
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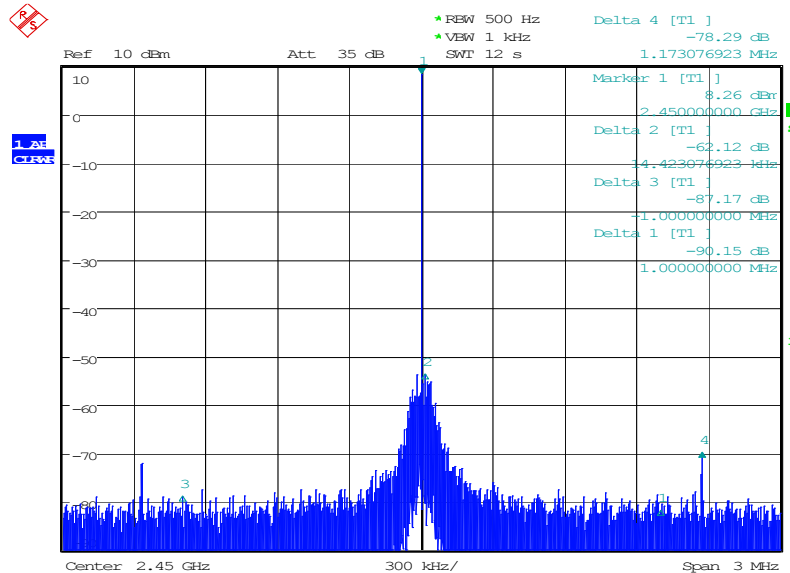
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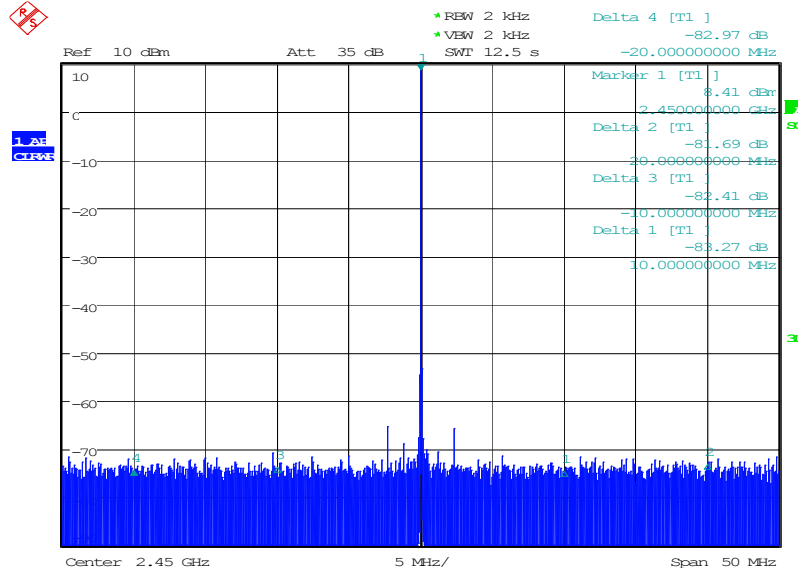
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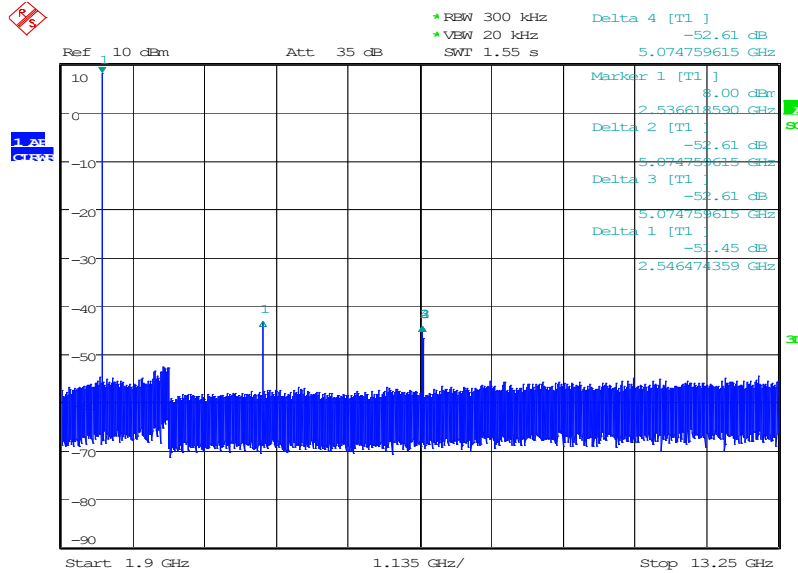


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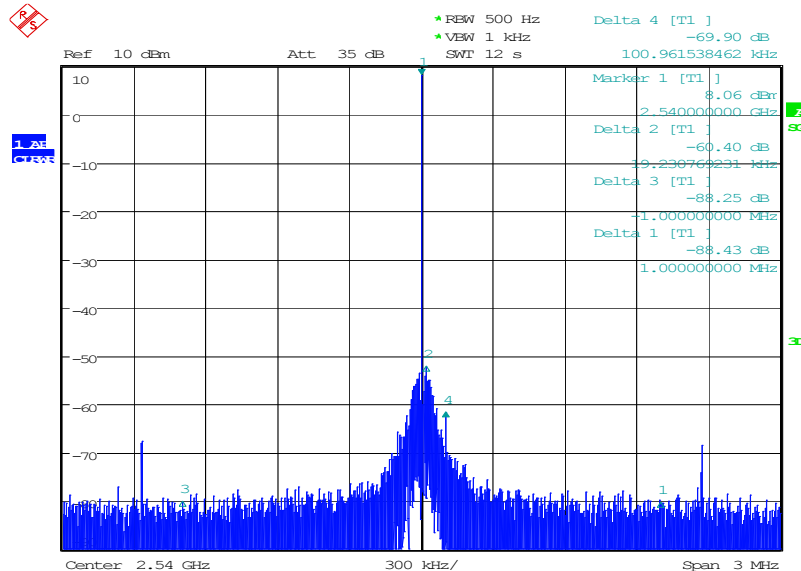
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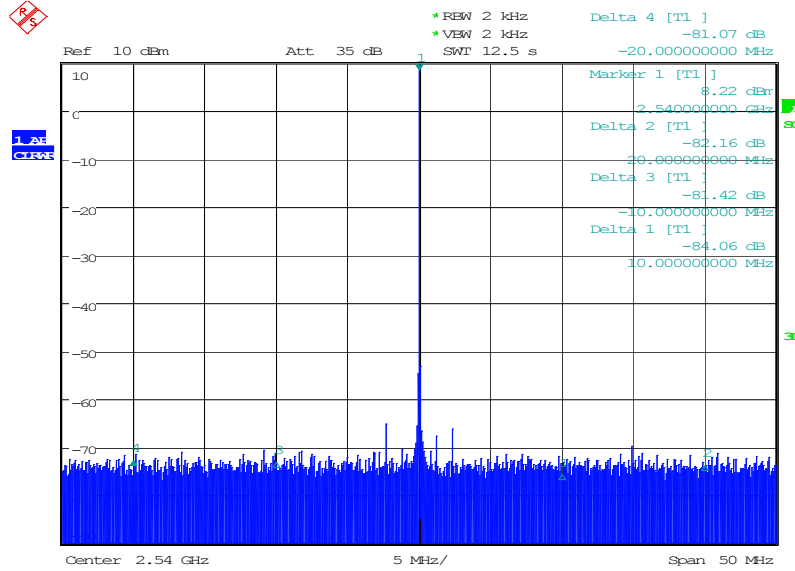
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