

# PARALLEL ADDRESSABLE SYNTHESIZER

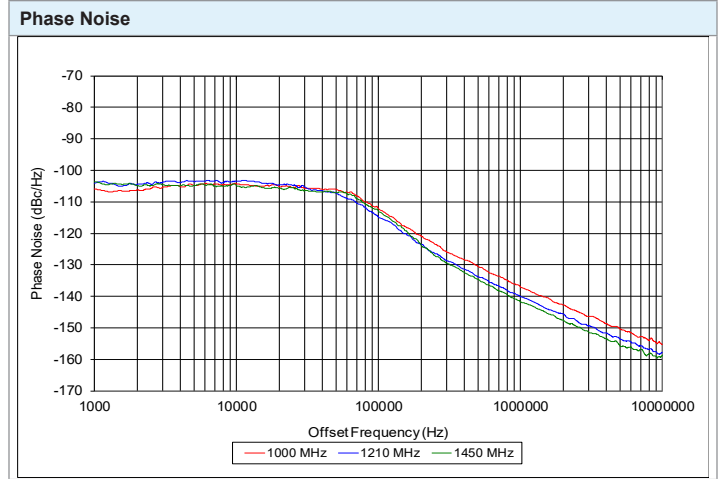
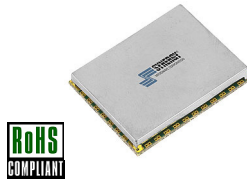
## SURFACE MOUNT MODEL: LFCPH100145-10

SELECTABLE FREQUENCY

1000 - 1450 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. B 07/25/19)**

Frequency	1000 - 1450 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	50
	Vcc 2 (VCO)	+5	40
	Vcc 3 (Converter)	+5	60
Voltage Levels (D0, D1, D2, D3)	0 / +5 Volts		
Output Power	+7 dBm (Min.)		
Spurious Suppression	70 dB (Typ.)		
Harmonic Suppression	10 dB (Typ.)		
Power Up Time *	90 mSec (Max.)		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-103 dBc/Hz	
	@ 100 kHz	-113 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	1000
0	0	0	1	1030
0	0	1	0	1060
0	0	1	1	1090
0	1	0	0	1120
0	1	0	1	1150
0	1	1	0	1180
0	1	1	1	1210
1	0	0	0	1240
1	0	0	1	1270
1	0	1	0	1300
1	0	1	1	1330
1	1	0	0	1360
1	1	0	1	1390
1	1	1	0	1420
1	1	1	1	1450

-- 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

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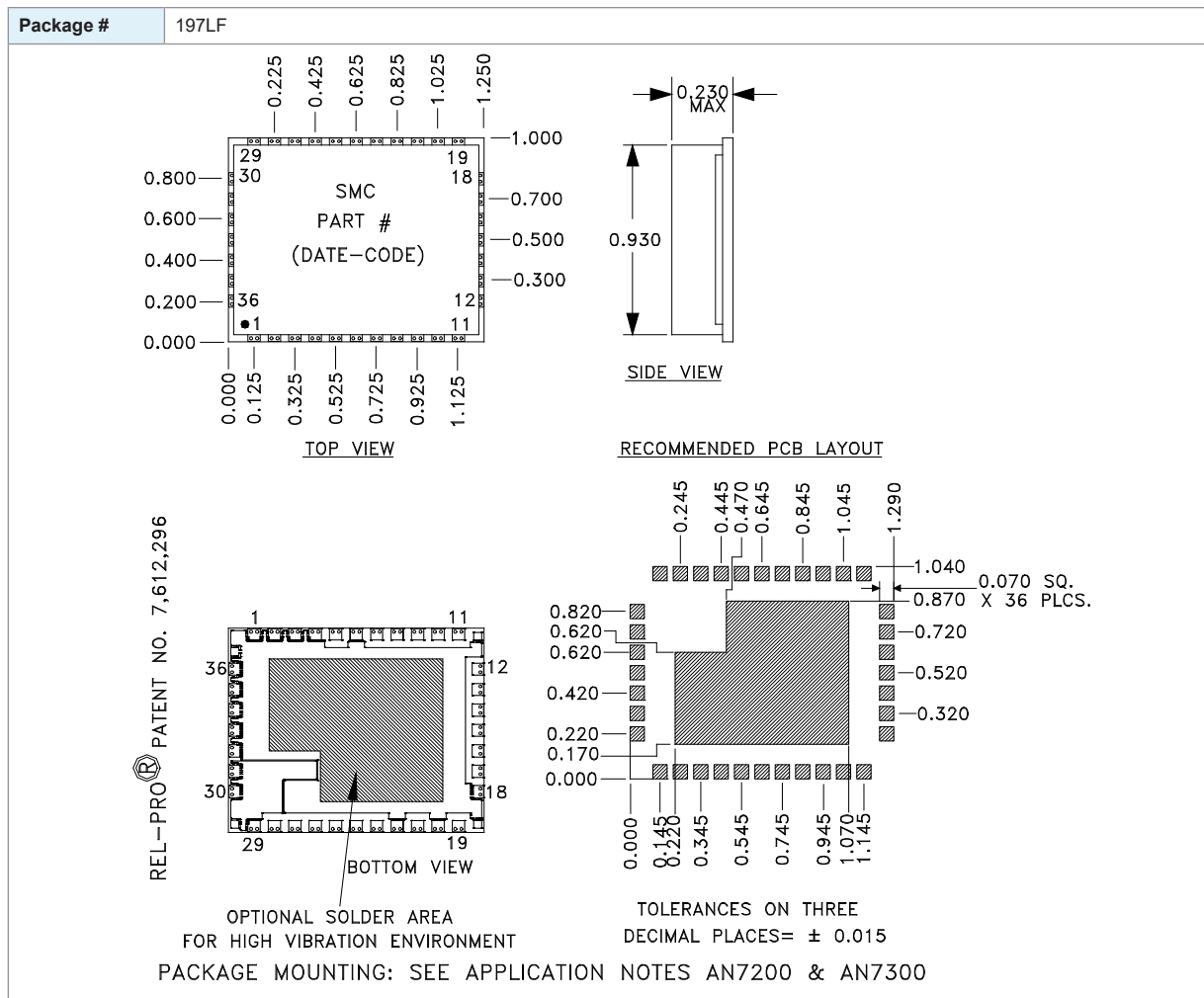
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PERFORMANCE PLOTS



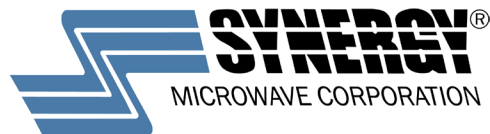
### Port Configuration

Pin 5 - RF Out	Pin 12 - D3	Pin 19 - NC	Pin 27* - Vcc(Tune)
Pin 7 - Lock Detect Out	Pin 13 - VCO On / Off**	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) (NC)	
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.

\*\* VCO on (NC) / VCO Off (Ground)

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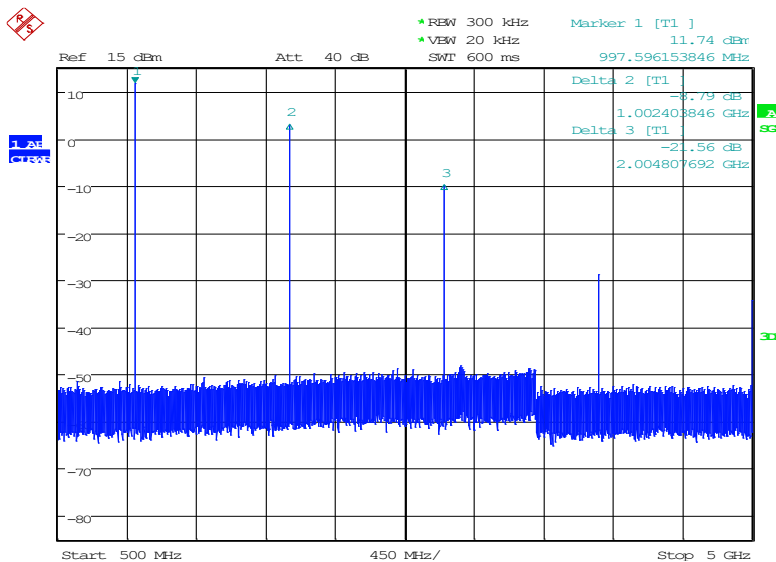


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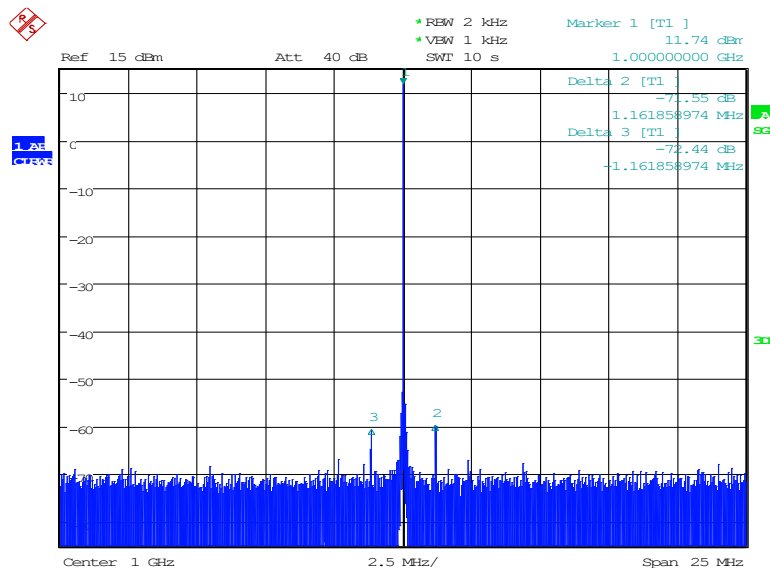
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## HARMONIC SUPPRESSION

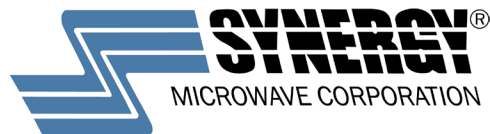


## REFERENCE SIDEBAND SUPPRESSION



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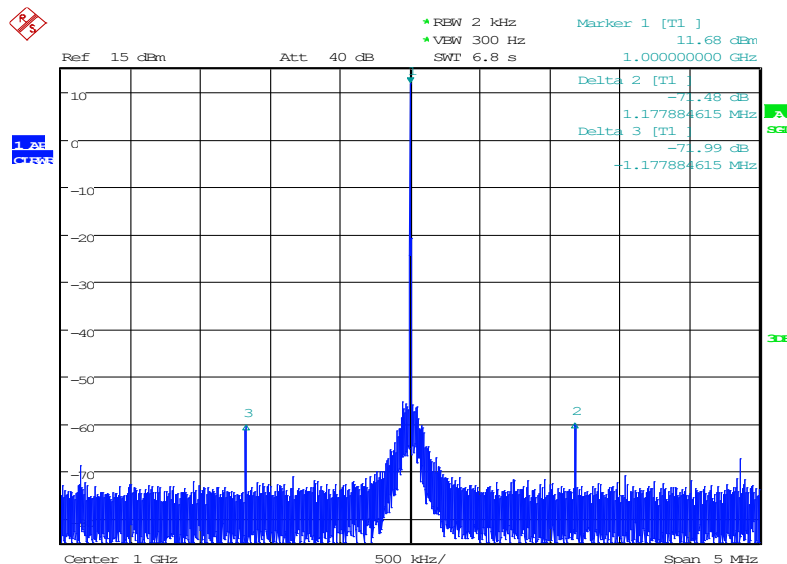


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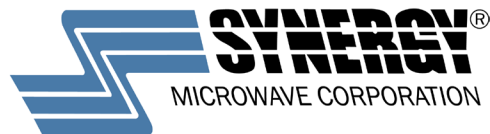
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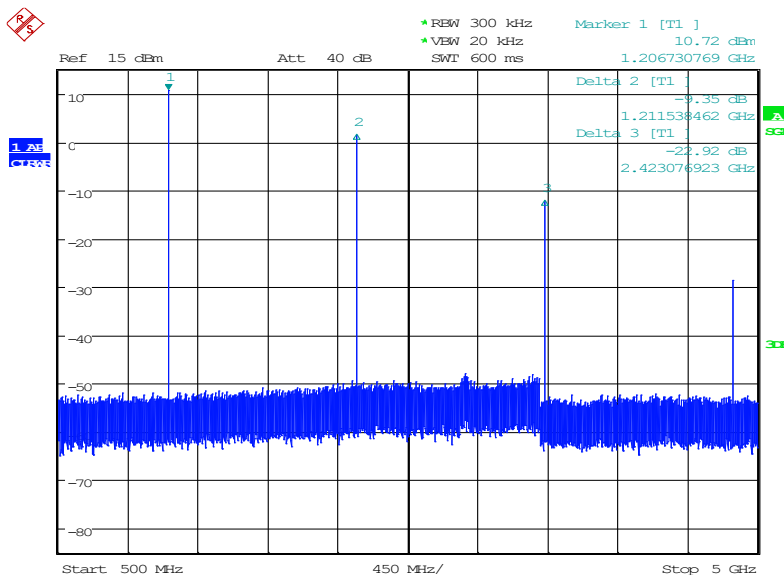
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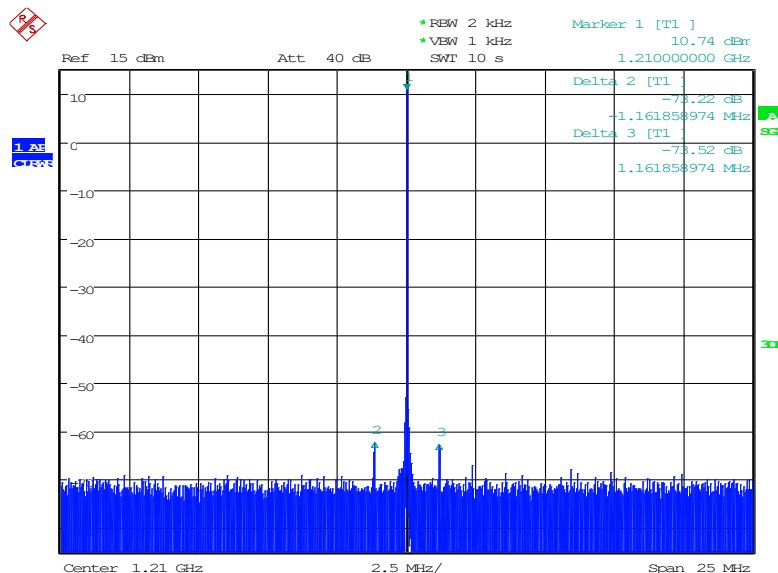
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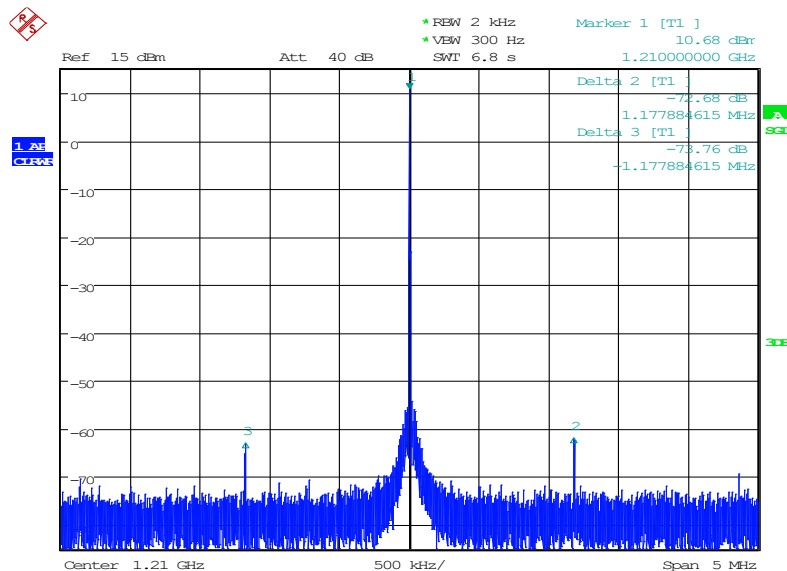


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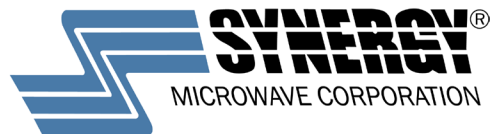
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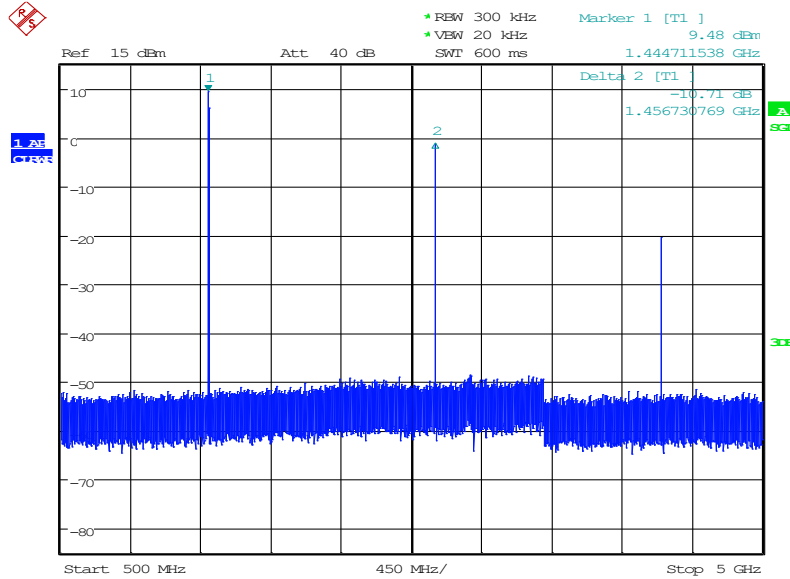
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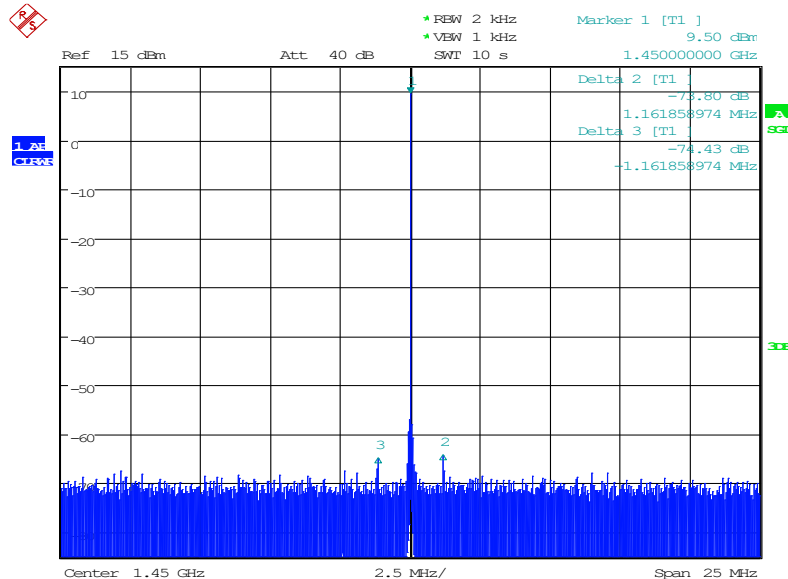
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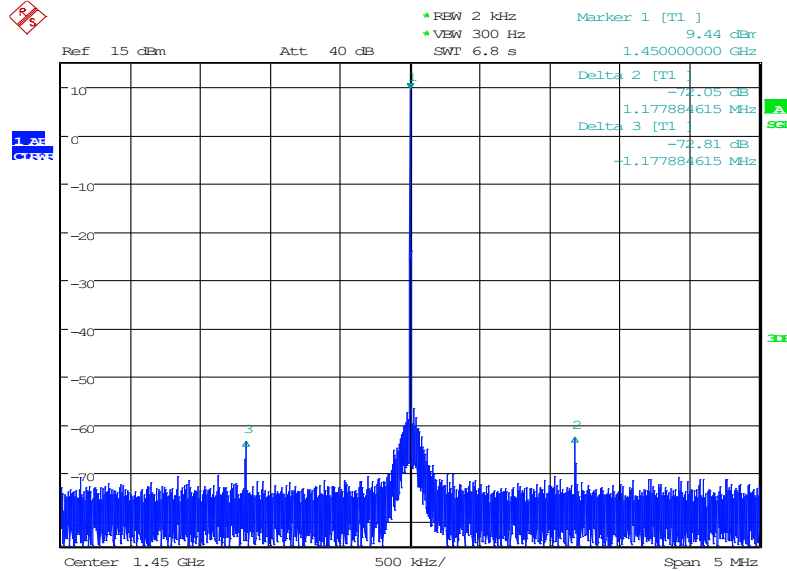


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