

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: MFSH495550-100

OPTIMIZED LOOP PARAMETER

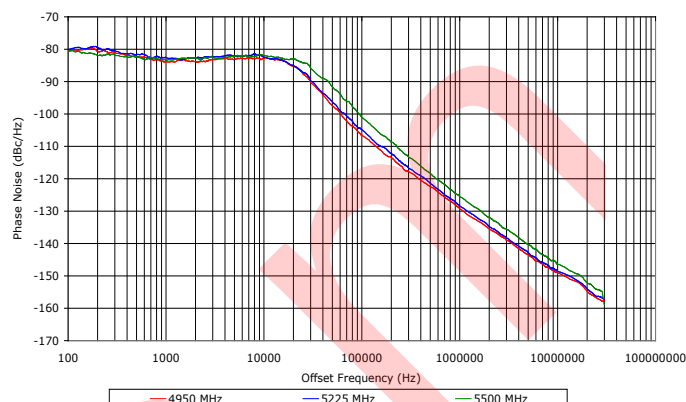
4950 - 5500 MHz

FEATURES:

- ▶ Small Size, Surface Mount (0.6" x 0.6")
- ▶ Exceptionally Low Phase Noise
- ▶ Standard Programming Interface
- ▶ Ultra Wide Tuning Range
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Buffered Output



Phase Noise



SPECIFICATIONS (Rev. B 04/22/11)

Frequency	4950 - 5500 MHz		
Step Size	1 MHz		
Reference Input Frequency	10 MHz ¹		
Reference Input Voltage	0.5 V p-p to 1.0 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	VCO	+5	55
	Digital	+3	18
	Tune	+12	5
Output Power	+2 dBm (Min.)		
Spurious Suppression	72 dB (Typ.)		
Harmonic Suppression	24 dB (Typ.)		
Settling Time	10 mSec (Typ.) ²		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3.3 V		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-82 dBc/Hz	
	@ 100 kHz	-103 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7500		

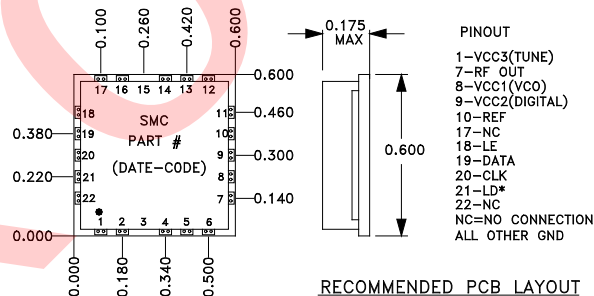
¹ Reference input frequency is programmable (see AN7500) in multiples of the step size, 10 MHz is the factory default setting. 150 MHz (Max.)

² From the rising edge of LE to stable lock detect

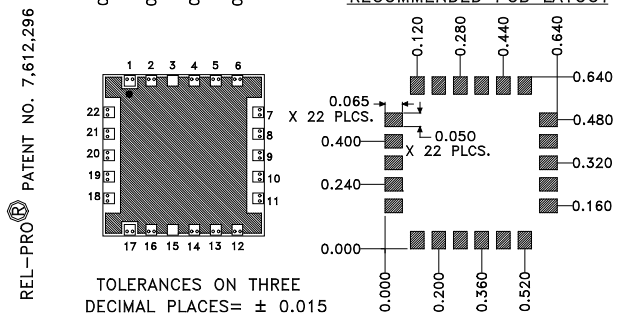
Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+3.6 V
Bias Voltage (VCO)	+5.5 V
Bias Voltage (Tune)	+12.25 V
DC Voltage Applied to RF Out	±25 V

Package # 367



RECOMMENDED PCB LAYOUT



* High when locked (source / sink 500uA).

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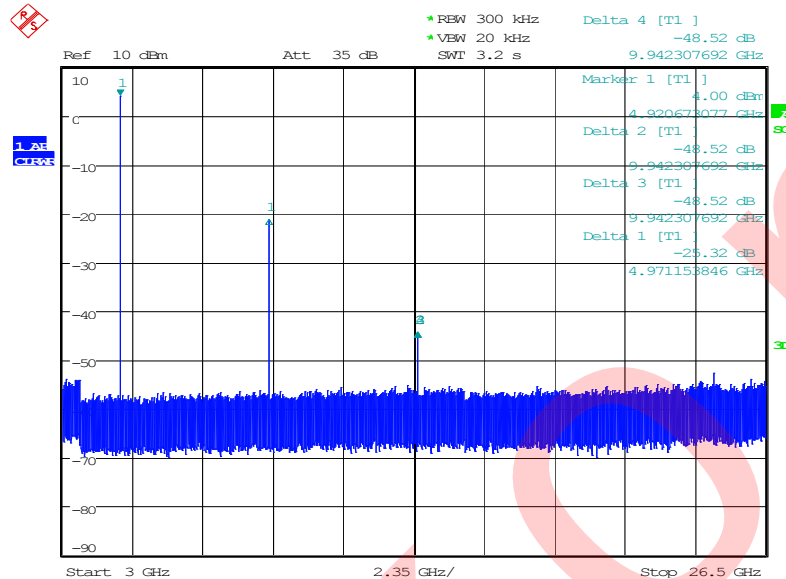
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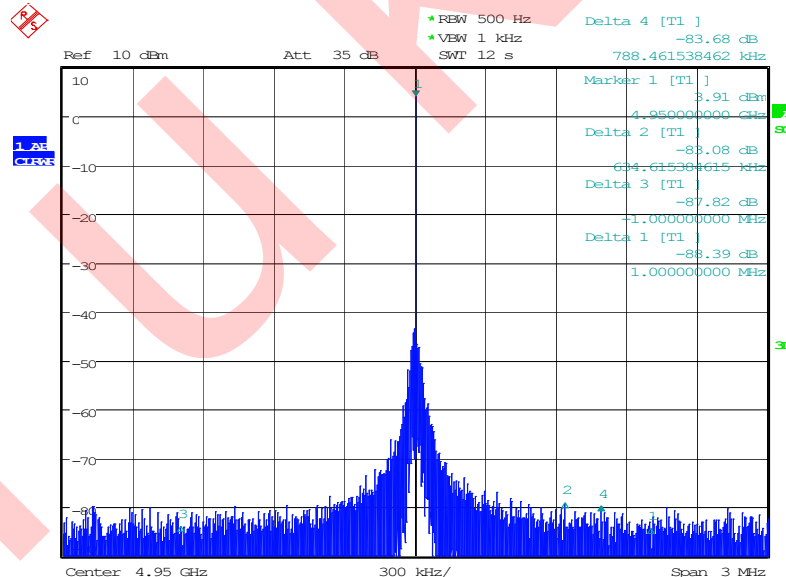
OPTIMIZED LOOP PARAMETER

4950 - 5500 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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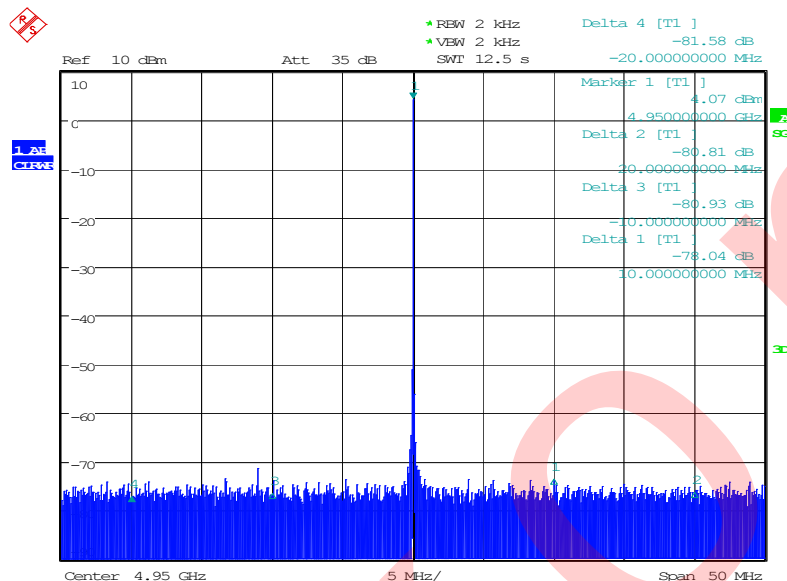
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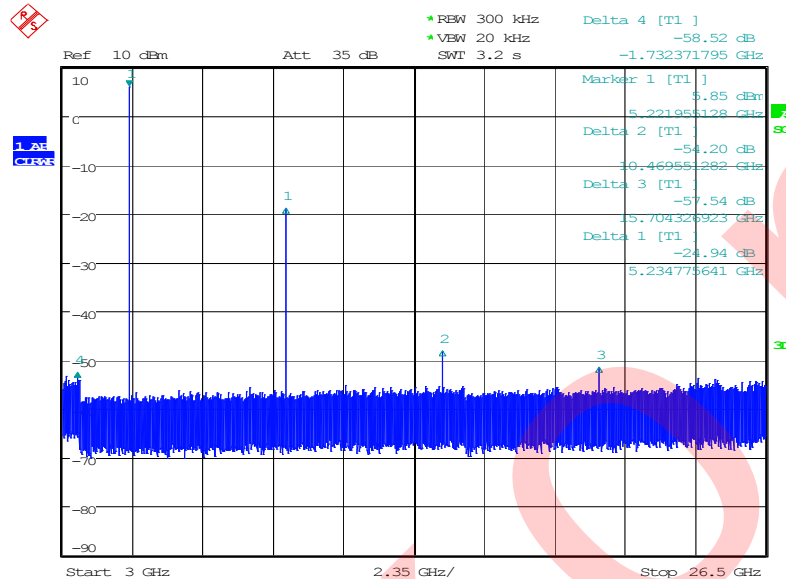
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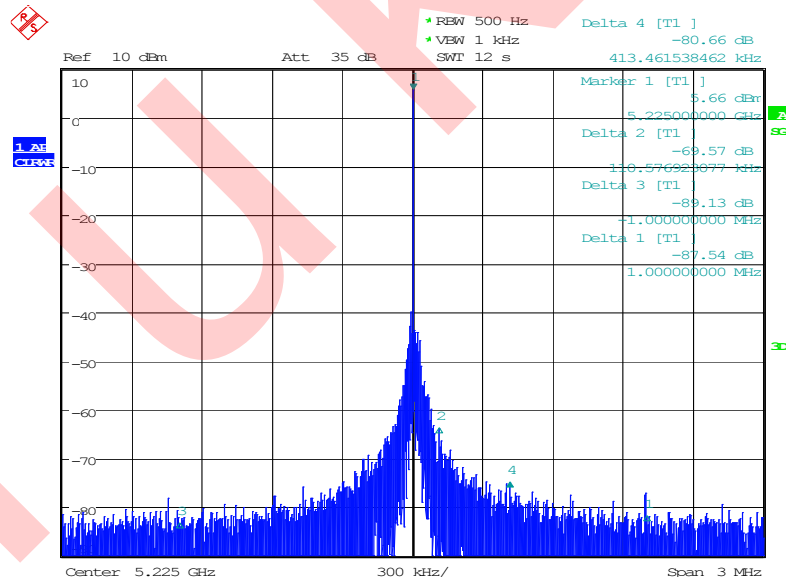
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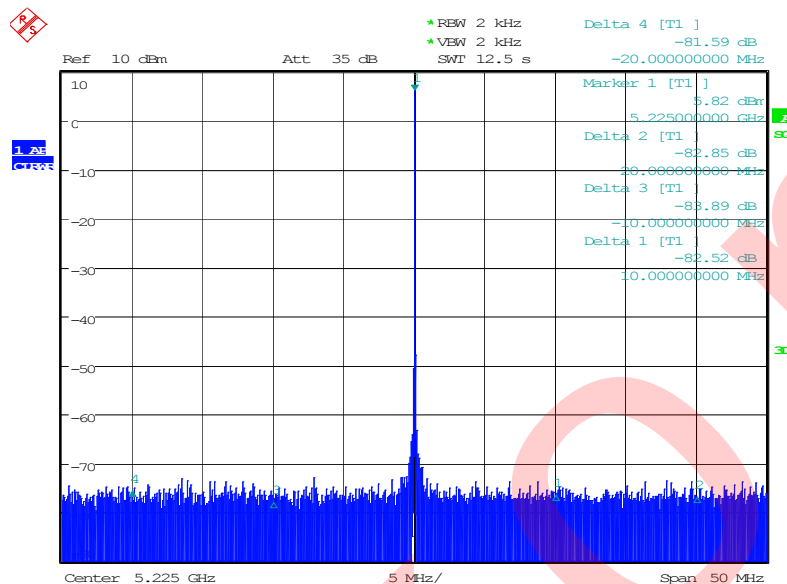
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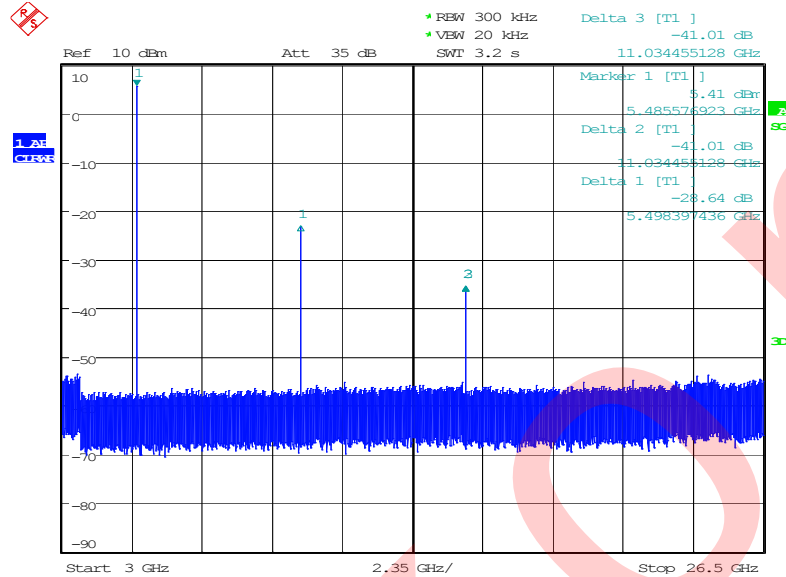
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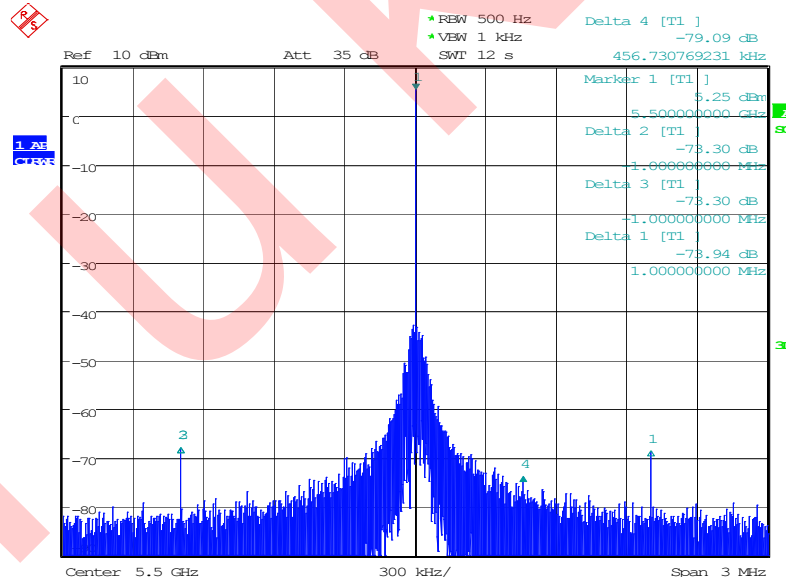
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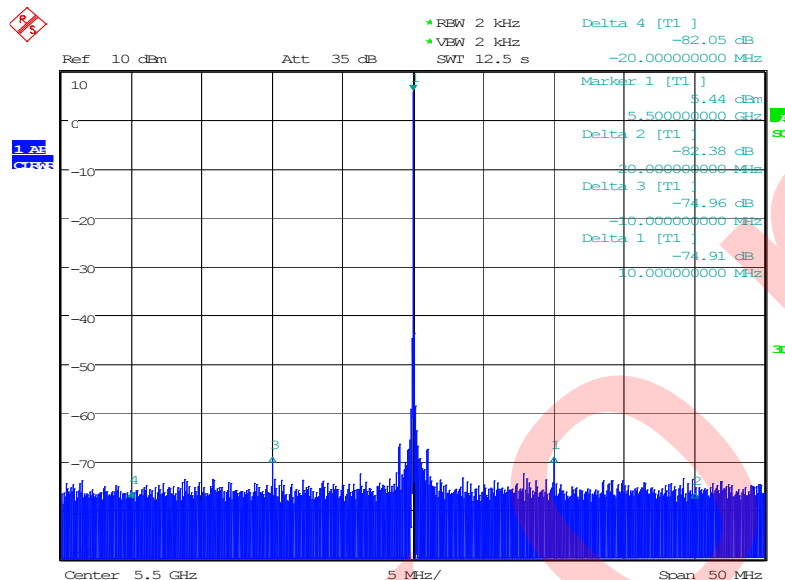
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