

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: MFSH480540-100

OPTIMIZED LOOP PARAMETER

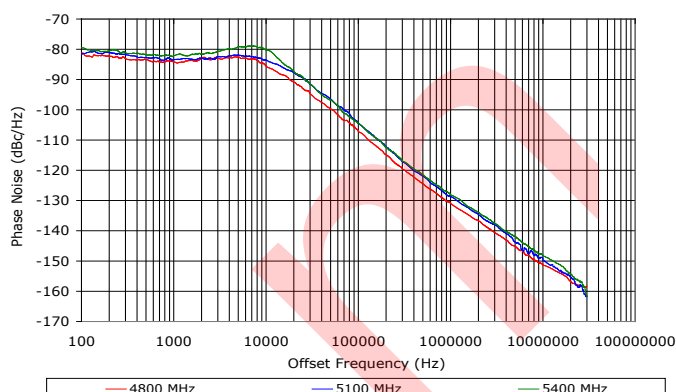
4800 - 5400 MHz

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	4800 - 5400 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	+25	5
Output Power	+2 dBm (Min.)		
Spurious Suppression	70 dB (Typ.)		
Harmonic Suppression	15 dB (Typ.)		
Settling Time	10 mSec (Typ.) ²		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3.0 V		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-83 dBc/Hz	
	@ 100 kHz	-103 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7500		

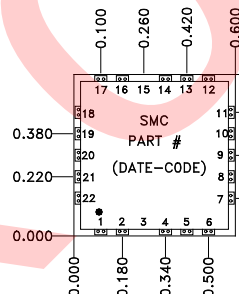
¹ Reference input frequency is programmable (See AN7500) in multiples of the step size, 10 MHz is the factory default setting. 150 MHz (Max.)

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)	+25.25 V
DC Voltage Applied to RF Out	±25 V

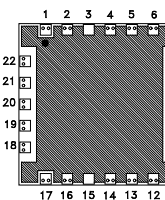
Package # 367



PINOUT
 1-VCC3(TUNE)
 7-RF OUT
 8-VCC1(VCO)
 9-VCC2(DIGITAL)
 10-REF
 17-NC
 18-LE
 19-DATA
 20-CLK
 21-LD*
 22-NC
 NC=NO CONNECTION
 ALL OTHER GND

RECOMMENDED PCB LAYOUT

REL-PRO® PATENT NO. 7,612,296



TOLERANCES ON THREE DECIMAL PLACES= ± 0.015

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200 & AN7300

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

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; 7,292,113; 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
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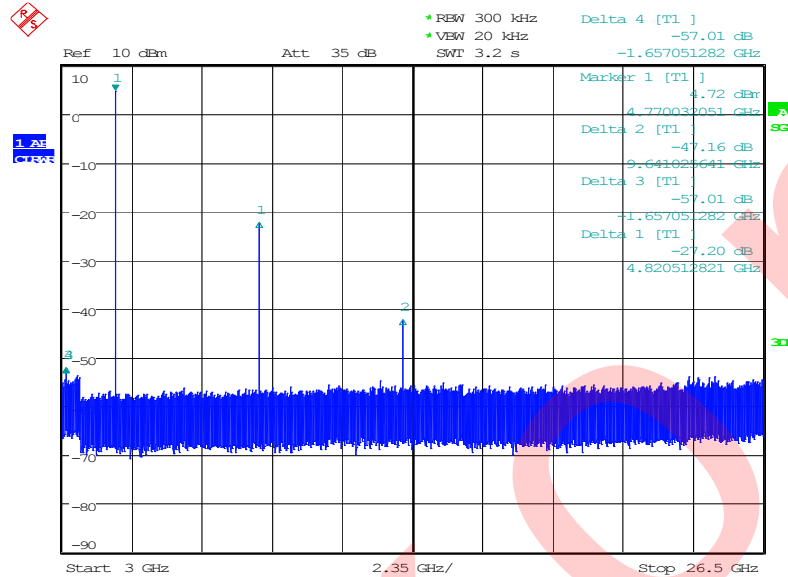
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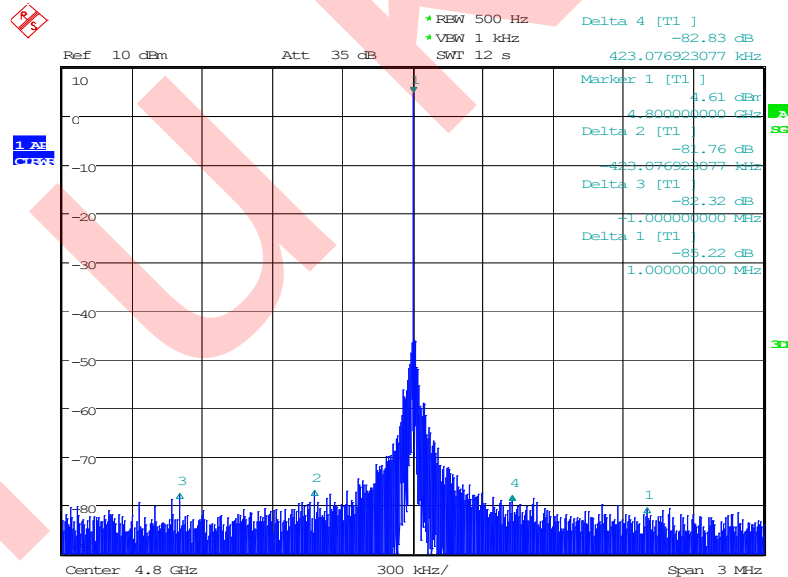
OPTIMIZED LOOP PARAMETER

4800 - 5400 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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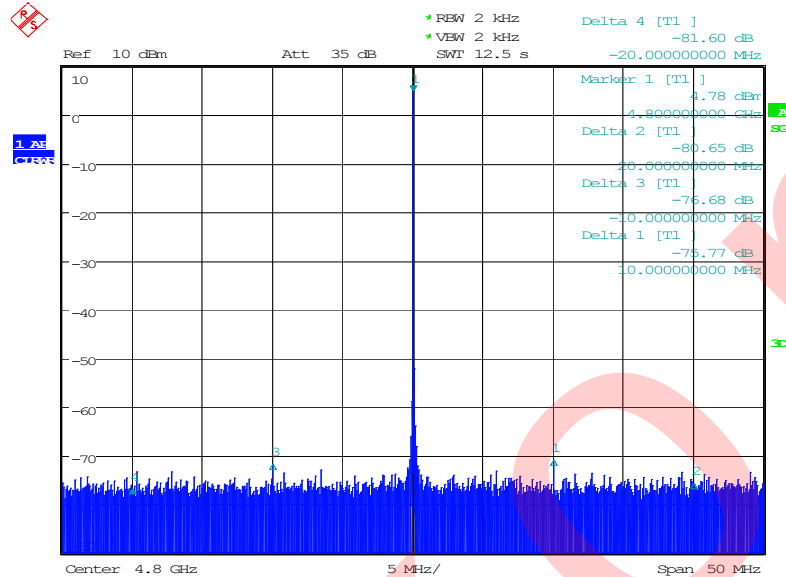
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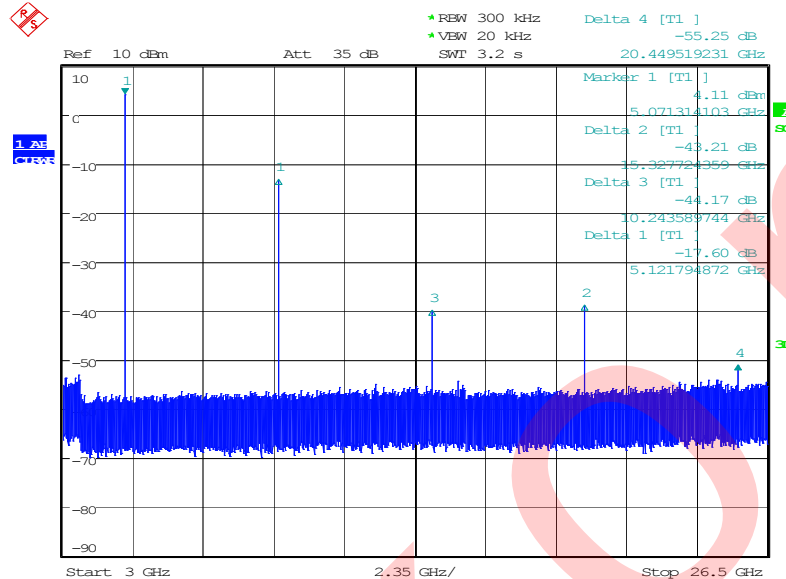
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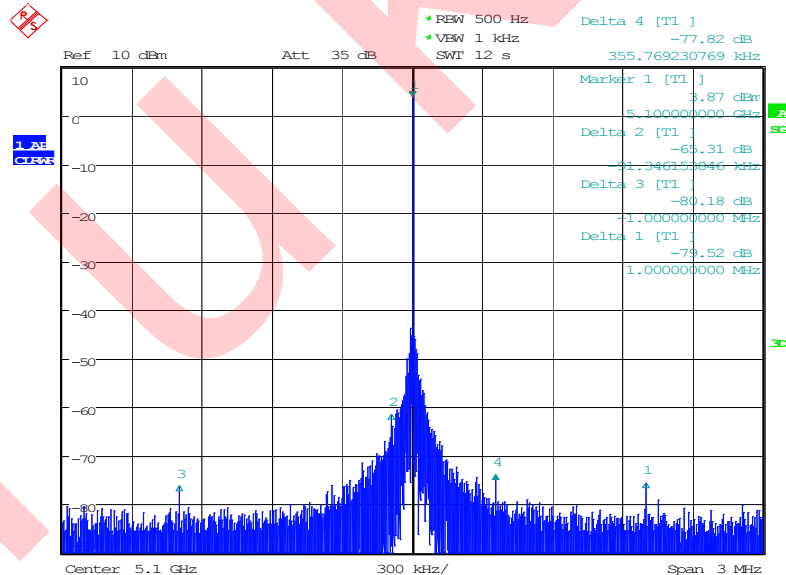
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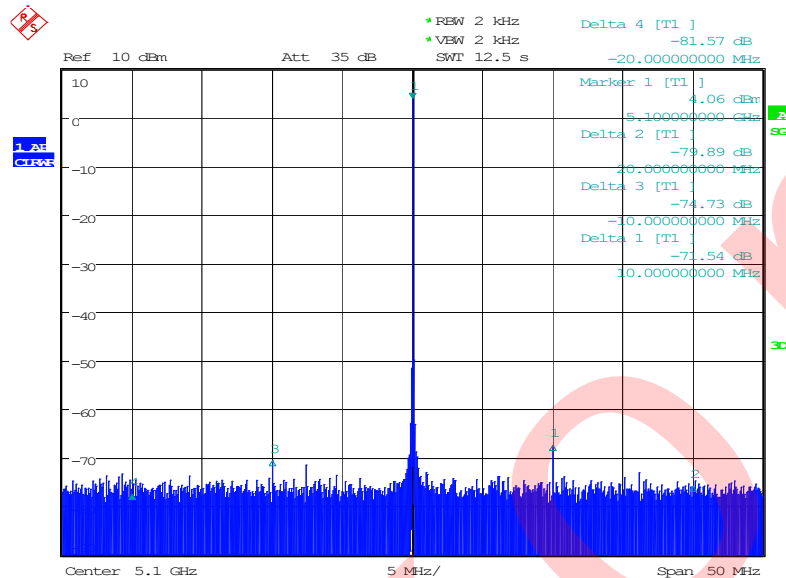
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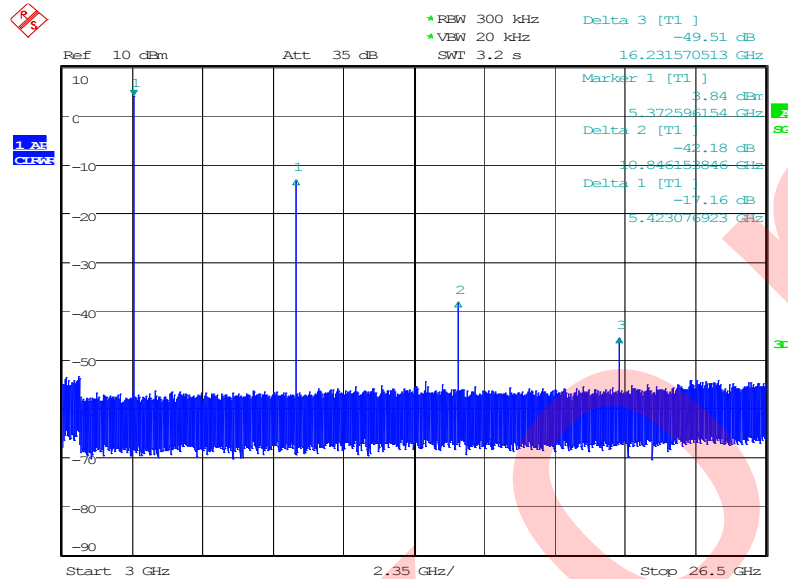
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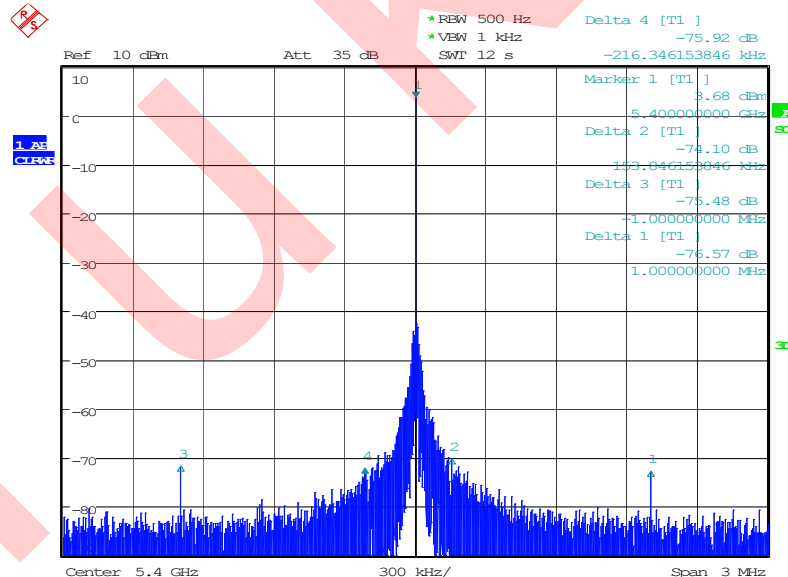
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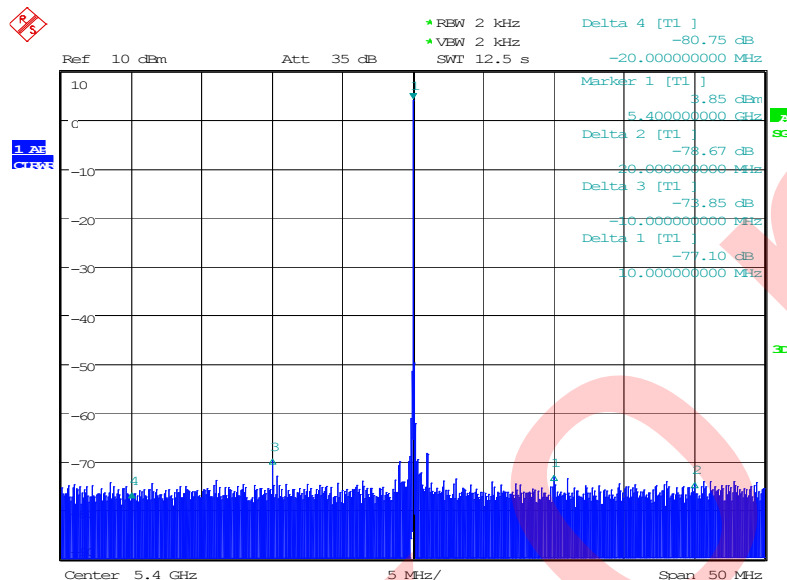
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