

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: LFSW190410-100

WIDE BANDWIDTH

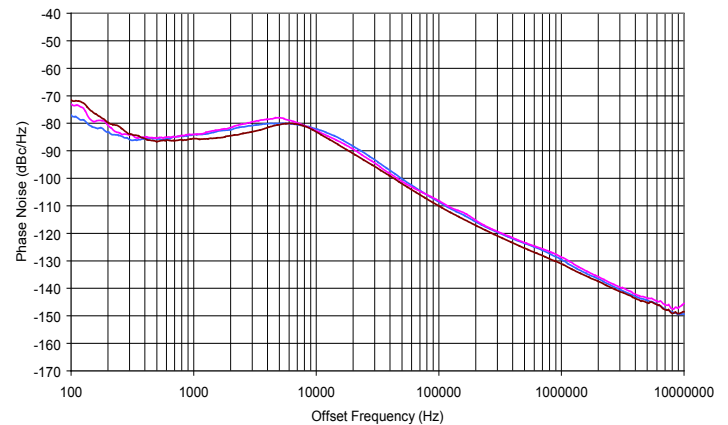
1900 - 4100 MHz

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ Interactive Communication
- ▶ Standard Programming Interface
- ▶ Ultra Wide Tuning Range
- ▶ Lead Free - RoHS Compliant
- ▶ Patent Pending REL-PRO® Technology
- ▶ Small Size, Surface Mount



Phase Noise



— PN1 / 1900.01 MHz / 9.62 dBm — PN2 / 3000.02 MHz / 10.4 dBm — PN3 / 4100.03 MHz / 4.42 dBm

SPECIFICATIONS (Rev. G 12/13/06)

Frequency	1900 - 4100 MHz		
Step Size	1000 kHz		
Reference Input Frequency	10 MHz*		
Reference Input Voltage	1 V p-p to 3.3 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	65
	VCO	+5	50
	Converter	+5	25
Output Power	+7 dBm (Min.)		
Spurious Suppression	70 dB (Max.)		
Harmonic Suppression	10 dB (Typ.)		
Settling Time	10 mSec (Typ.)**		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-85 dbc/Hz	
	@ 10 kHz	-85 dbc/Hz	
	@ 100 kHz	-110 dbc/Hz	
Operating Temperature Range	-20 to +70 °C		
Programming	See Application Note: AN7100		

* Reference input frequency is programmable in multiples of the step size, 10 MHz is the default setting. 150 MHz (Max.).
 **From the rising edge of LE to stable lock detect

Package #	197LF
Package Style	Surface Mount

TOP VIEW

SIDE VIEW

PIN-OUT

- Pin 5 - RF Out
- Pin 7 - Lock Detect Out
- Pin 9 - Data In
- Pin 10 - Error Flag
- Pin 11 - Clock In
- Pin 16 - Reset
- Pin 19 - Latch Enable In
- Pin 21 - Ref In
- Pin 23 - Vcc(Digital)
- Pin 24 - Vtune
- Pin 25 - Vcc(VCO)
- Pin 26[†] - VouT(Converter)
- Pin 27[†] - Vcc(Tune)
- Pin 28 - Vcc(Converter)
- Pin 8,12,13 - No Connection
- Pin 14,15,17 - No Connection
- All Others - Ground

[†]Connect externally. Bypassed with a 10uF 35V Tantalum Capacitor.

RECOMMENDED PCB LAYOUT

TOLERANCES ON THREE DECIMAL PLACES= ± 0.015

OPTIONAL SOLDER AREA FOR HIGH VIBRATION ENVIRONMENT

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

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 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787



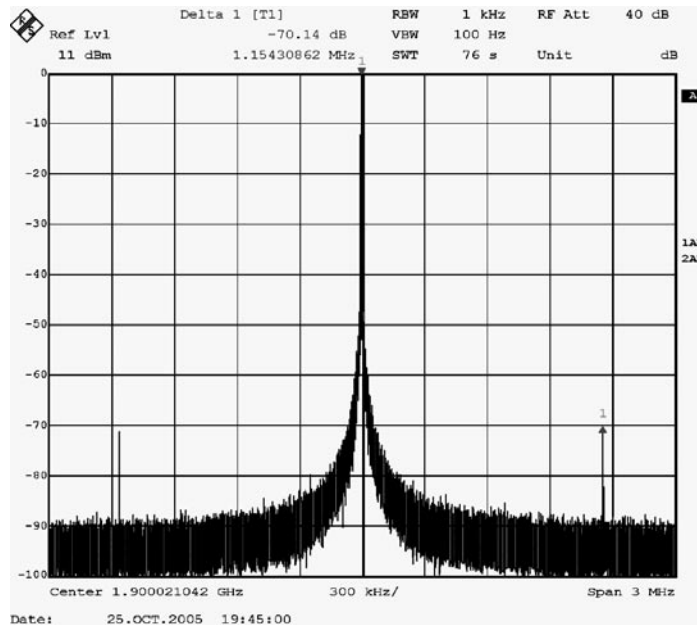
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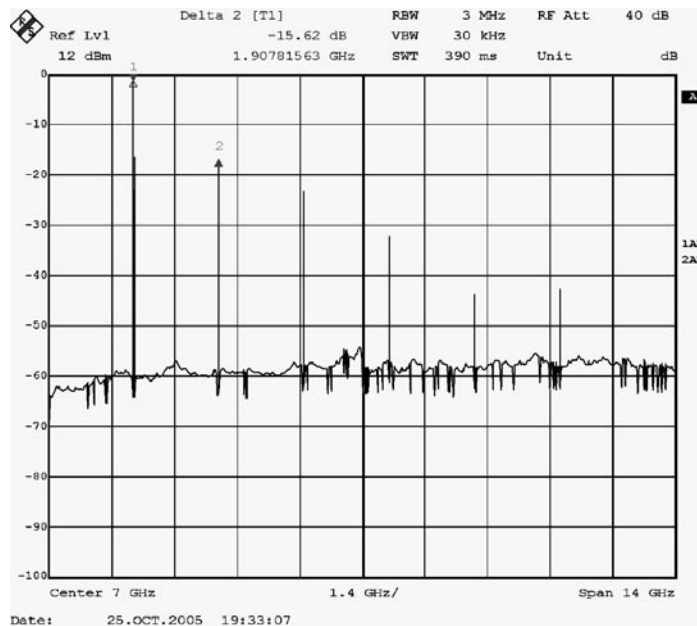
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1900 - 4100 MHz

REFERENCE SIDEBAND SUPPRESSION



TYPICAL HARMONIC REJECTION



PERFORMANCE PLOTS

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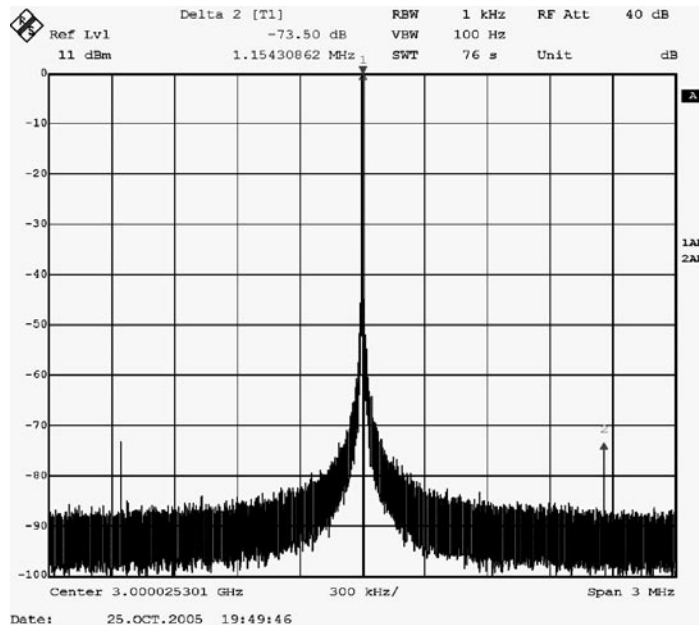
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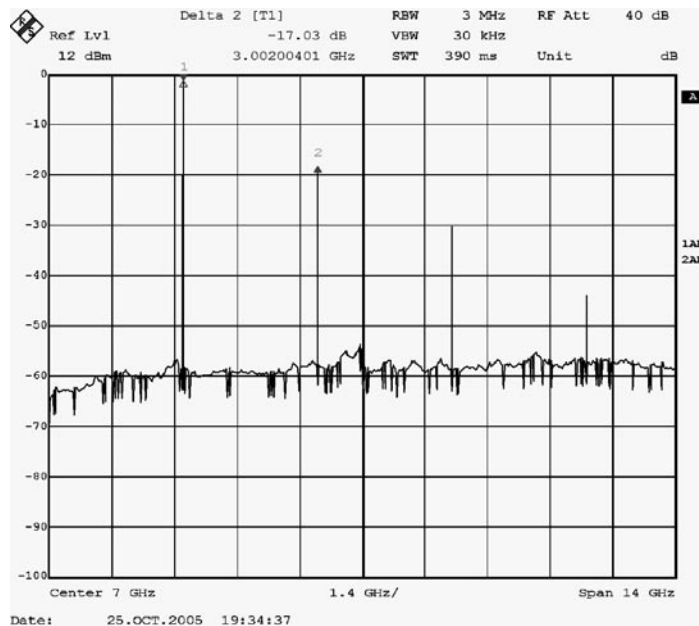
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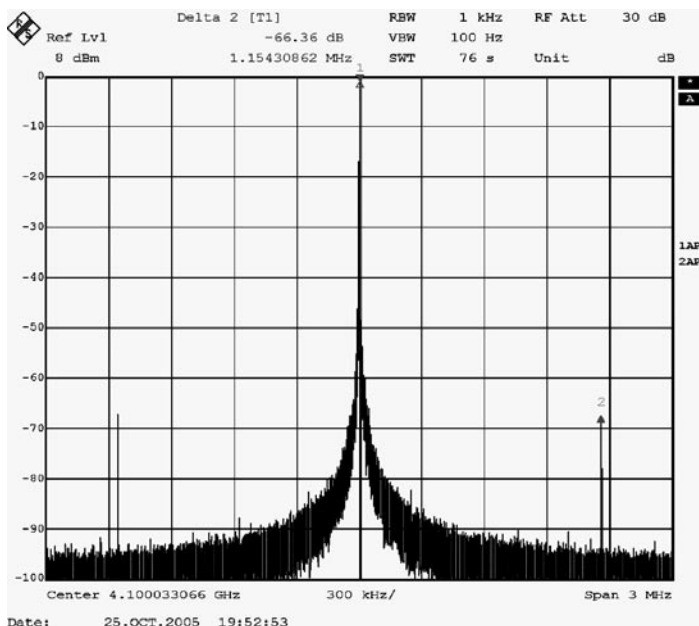
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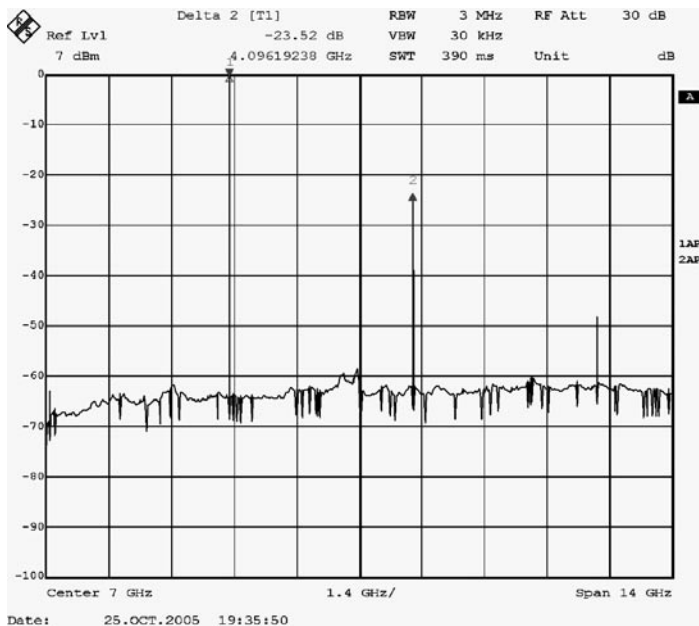
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