

# INTELLIGENT INTERACTIVE SYNTHESIZER

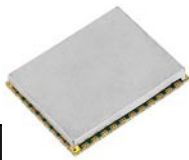
## SURFACE MOUNT MODEL: LFSW290342-100

WIDE BANDWIDTH

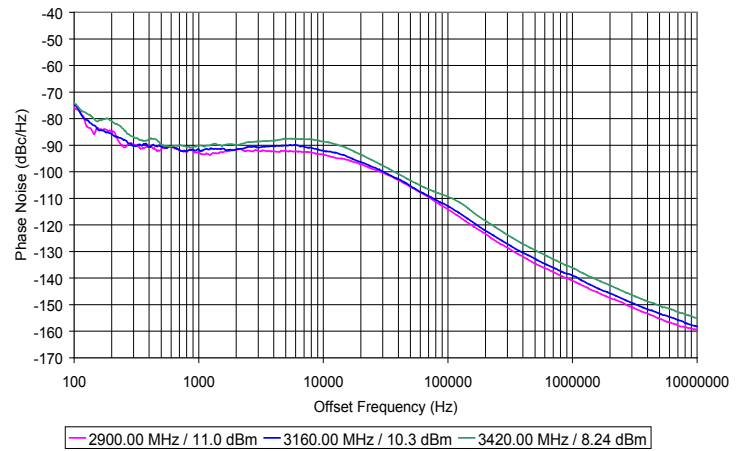
2900 - 3420 MHz

**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**



**SPECIFICATIONS (Rev. E 11/17/06)**

Frequency	2900 - 3420 MHz		
Step Size	1000 kHz		
Reference Input Frequency	10 MHz		
Reference Input Voltage	1 V p-p to 2.5 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max)
	Digital	+5	60
	VCO	+5	60
	Converter	+5	60
Output Power	+7 dBm (Min)		
Spurious Suppression	70 dBc (Min)		
Harmonic Suppression	10 dBc (Min)		
Settling Time	15 mSec (Max)*		
Output Impedance	50 Ohms		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-85 dbc/Hz	
	@ 10 kHz	-87 dbc/Hz	
	@ 100 kHz	-107 dbc/Hz	
Operating Temperature Range	-30 to +85 °C		
Programming	See Application Note: AN7100		

\* From the rising edge of LE to stable lock detect

Package #	197LF
Package Style	Surface Mount

TOP VIEW

SIDE VIEW

**REL-PRO® PATENT PENDING**

BOTTOM VIEW

OPTIONAL SOLDER AREA FOR HIGH VIBRATION ENVIRONMENT

RECOMMENDED PCB LAYOUT

TOLERANCES ON THREE DECIMAL PLACES= ± 0.015

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

**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 29 - 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.

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  
 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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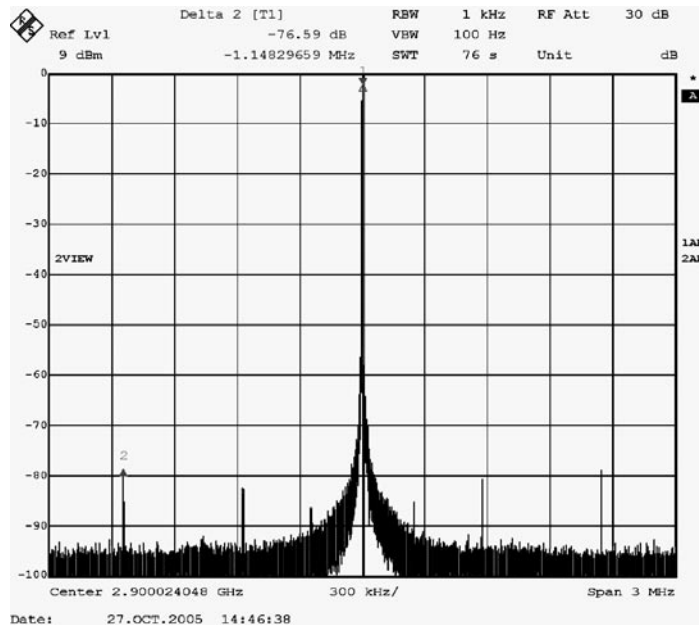
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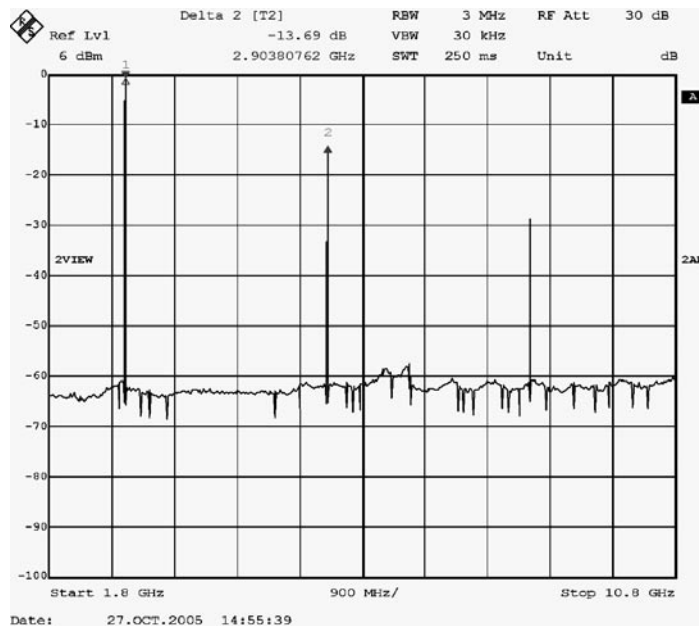
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2900 - 3420 MHz

### REFERENCE SIDEBAND SUPPRESSION



### TYPICAL HARMONIC REJECTION



PERFORMANCE PLOTS

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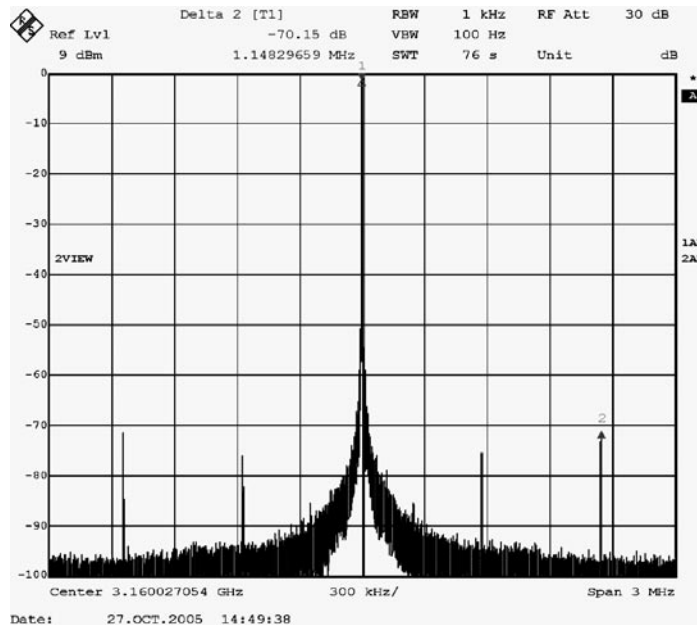
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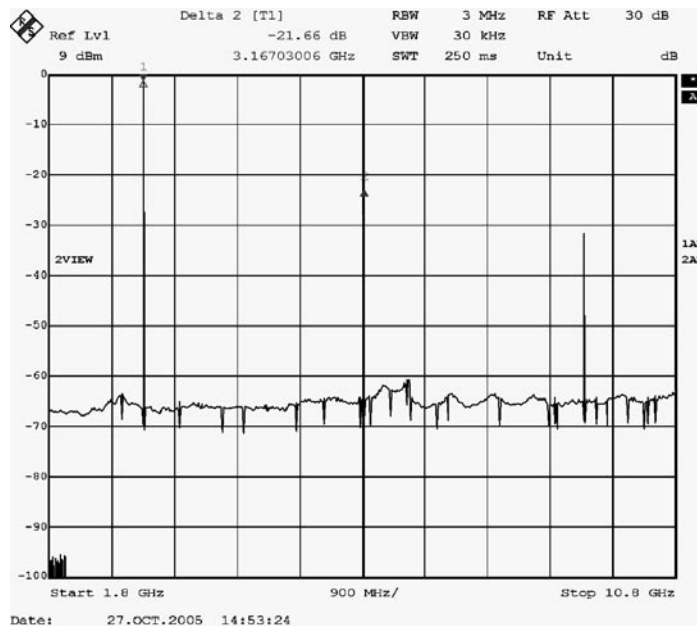
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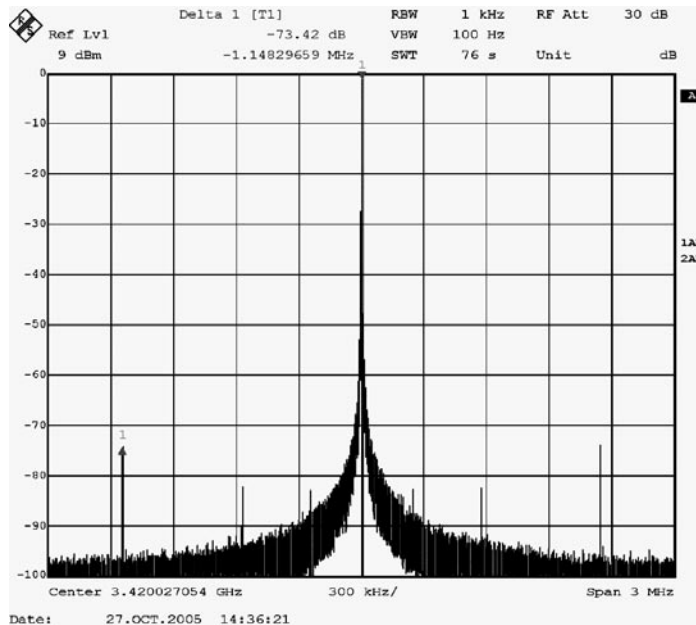
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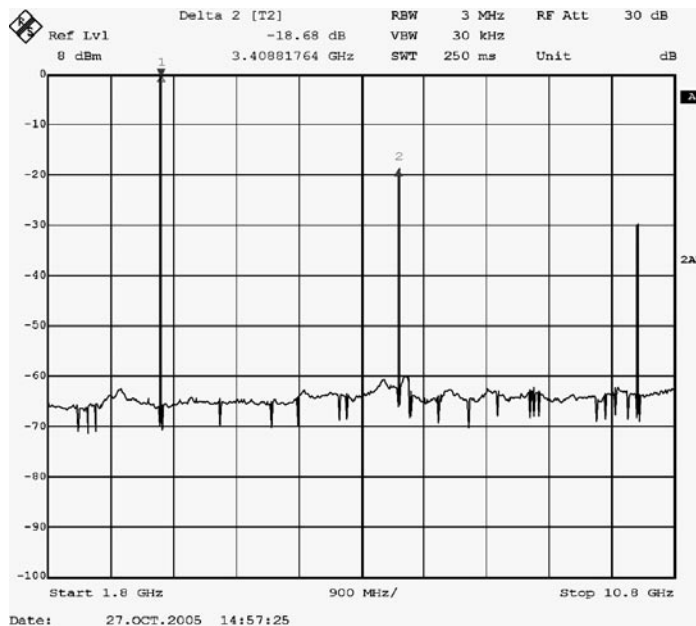
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