

# INTELLIGENT INTERACTIVE SYNTHESIZER

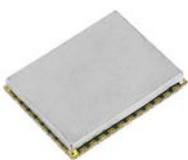
## SURFACE MOUNT MODEL: LFSW190410-100

WIDE BANDWIDTH

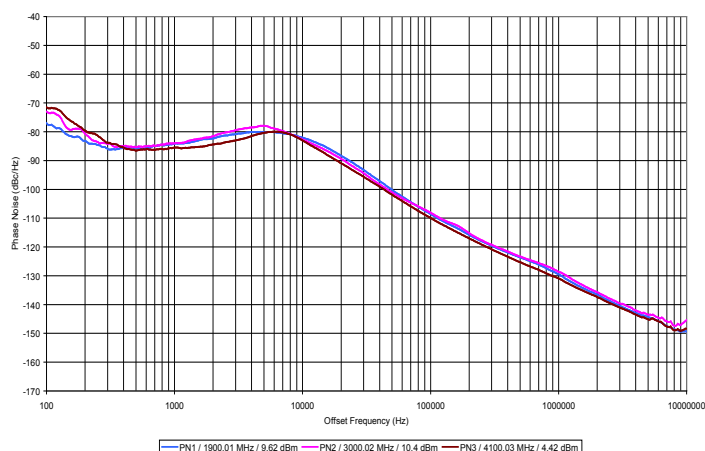
1900 - 4100 MHz

### 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

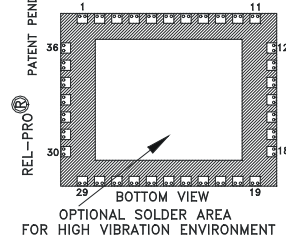
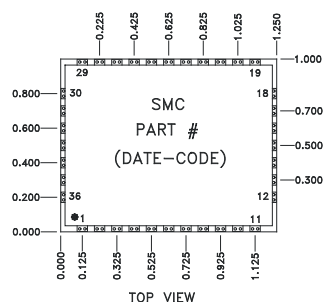


### SPECIFICATIONS (Rev. D 11/04/05)

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 dBc (Max)		
Harmonic Suppression	-10 dBc (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		

Package # 197LF

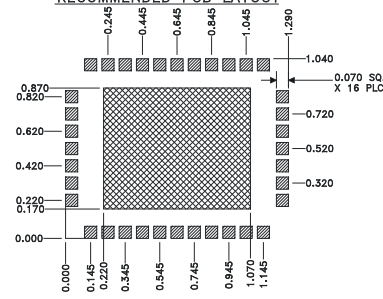
Package Style Surface Mount



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 8,12,13,17 - No Connection  
 Pin 14,15,17 - No Connection  
 All Others - Ground

\*Connect externally. Bypassed with a 10uF 35V Tantalum Capacitor.

### RECOMMENDED PCB LAYOUT



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

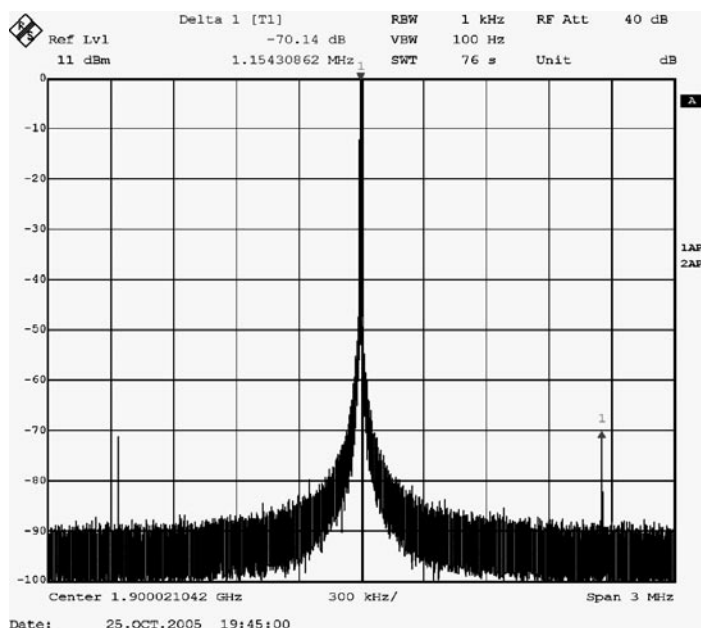
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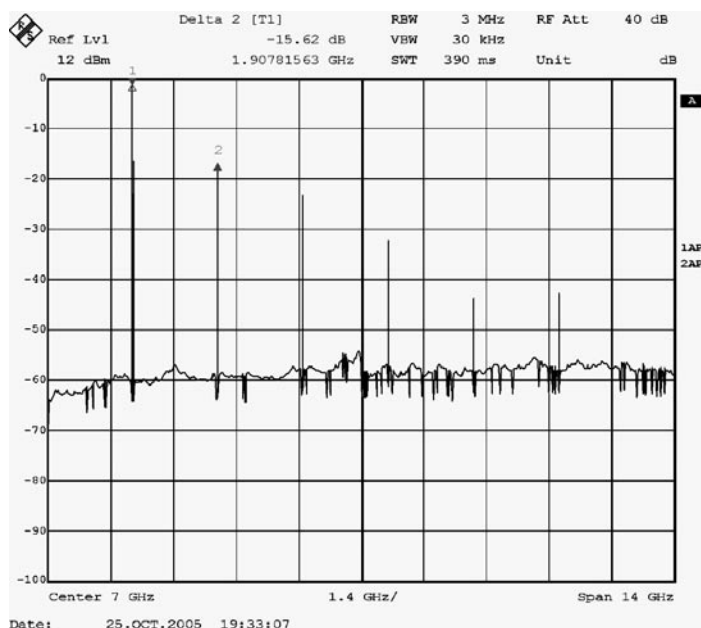
WIDE BANDWIDTH

1900 - 4100 MHz

### REFERENCE SIDEBAND SUPPRESSION



### TYPICAL HARMONIC REJECTION



PERFORMANCE PLOTS

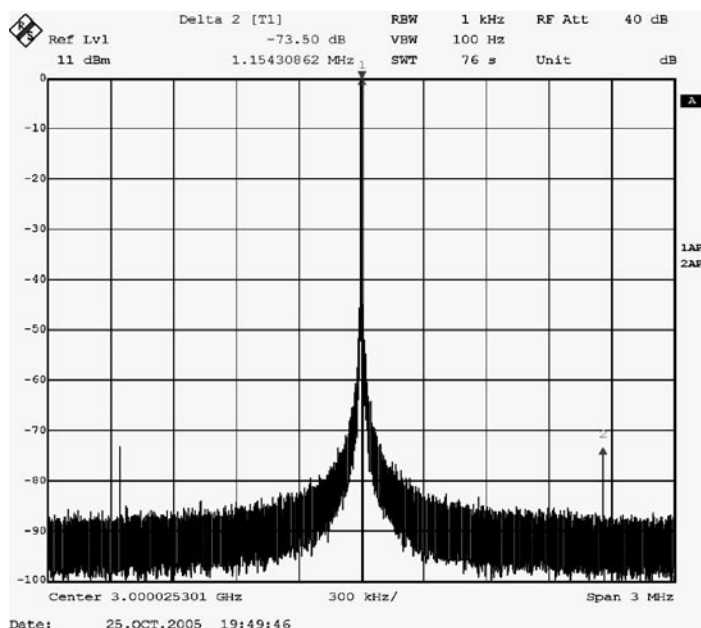
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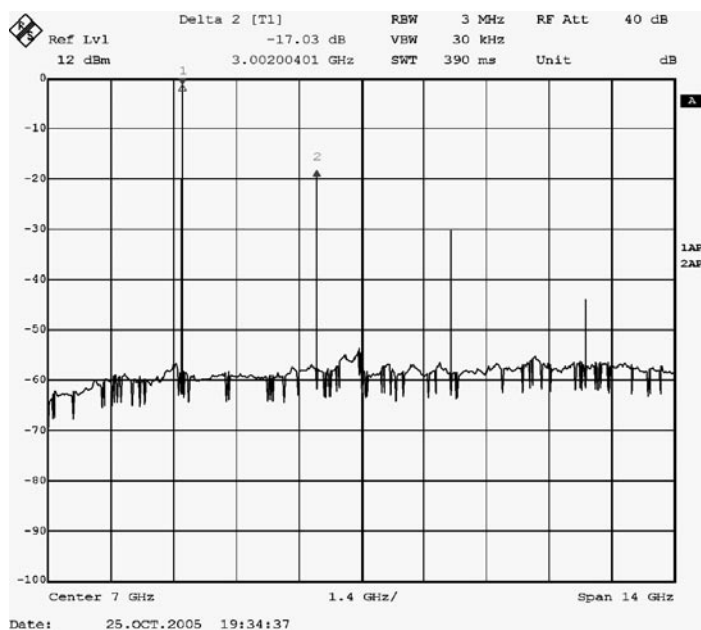
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PERFORMANCE PLOTS

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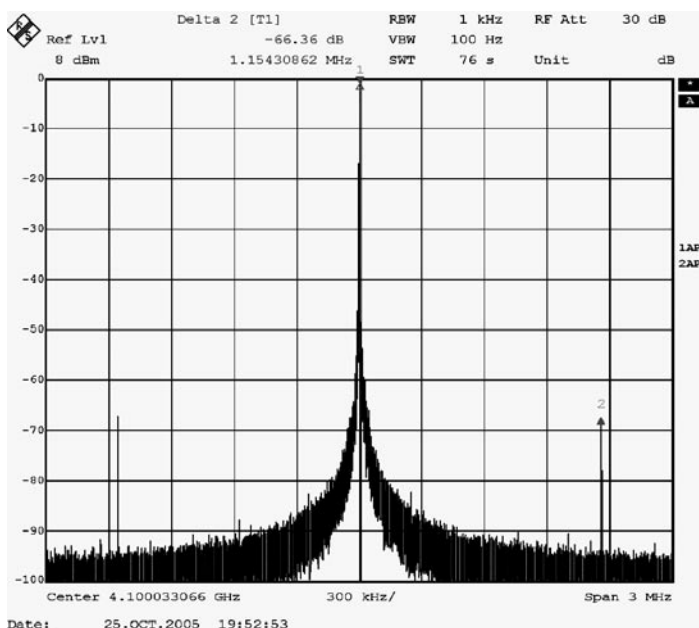
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