

# INTELLIGENT INTERACTIVE SYNTHESIZER

## SURFACE MOUNT MODEL: FSH127171-50

**OPTIMIZED BANDWIDTH**

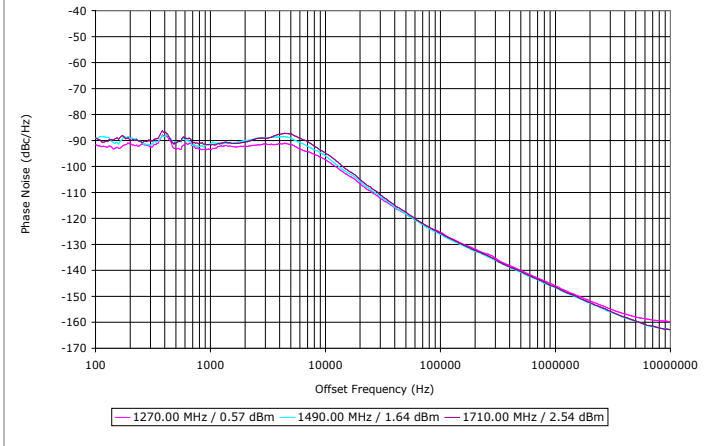
**1270 - 1710 MHz**

**FEATURES:**

- ▶ Exceptionally Low Phase Noise
- ▶ Optimized Reference Sidebands
- ▶ Lead Free - RoHS Compliant
- ▶ Patent Pending REL-PRO® Technology
- ▶ Small Size, Surface Mount



**Phase Noise**



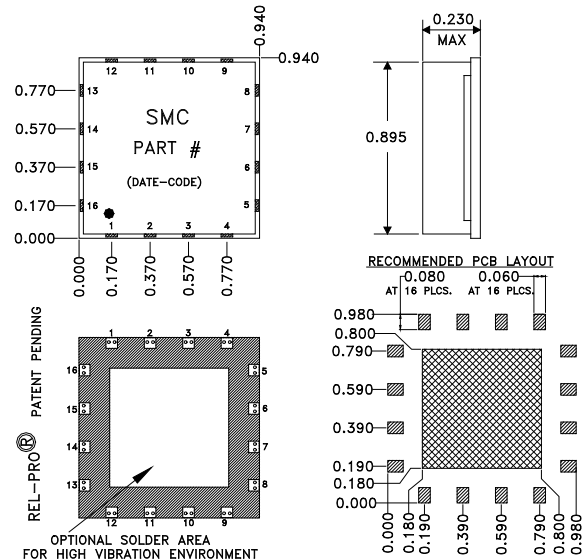
**SPECIFICATIONS (Rev A 02/23/07)**

Frequency	1270 - 1710 MHz		
Step Size	500 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	40
	VCO	+5	40
	Tune	+18	5
Output Power	+1 dBm (Min.)		
Spurious Suppression	-70 dBc (Max.)		
Harmonic Suppression	-14 dBc (Max.)		
Settling Time	15 mSec (Max.)		
Output Impedance	50 Ohms		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-90 dBc/Hz	
	@ 10 kHz	-95 dBc/Hz	
	@ 100 kHz	-122 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7100		

**Absolute Maximum Ratings**

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+5.25 V
Bias Voltage (Tune)	+28 V
Bias Voltage (VCO)	+5.5 V
DC Voltage Applied to RF Out	±25 V

**Package #** 273LF



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

**PORT CONFIGURATION**

Pin 1 - Reset **	Pin 7 - Vcc (Digital)	Pin 15 - Data In
Pin 2,3 - NC	Pin 8 - Vcc (Tune)	Pin 16 - Clock In
Pin 4 - Error flag	Pin 9 - Vcc (VCO)	All Others - Ground
Pin 5 - Latch Enable In	Pin 13 - RF Out	
Pin 6 - Ref. In	Pin 14 - Lock Detect Out *	NC - No Connection

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

\*\* A low on this input will reset the internal controller. Leave unconnected for normal operation.

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 Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834;  
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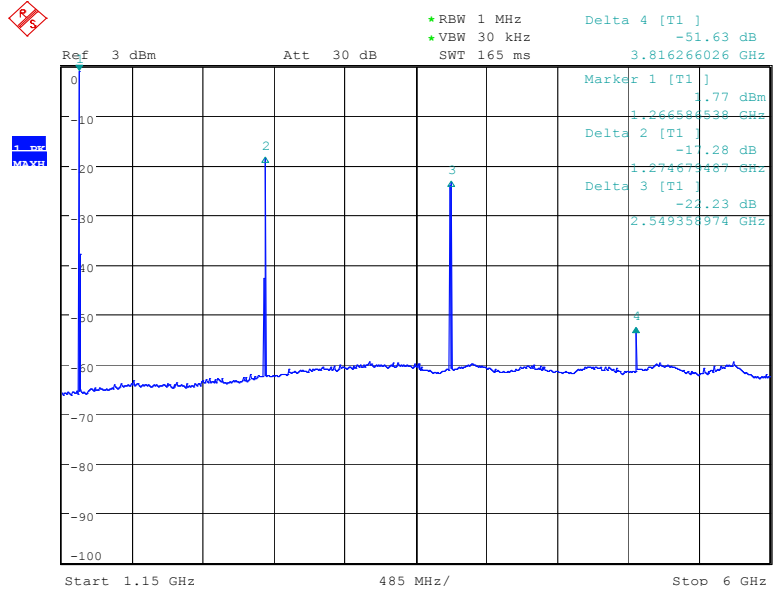
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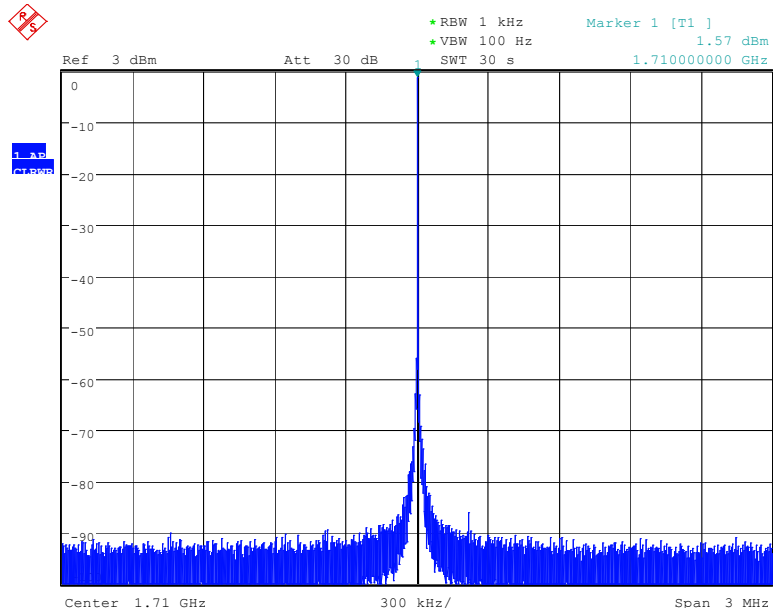
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1270 - 1710 MHz

### TYPICAL HARMONIC REJECTION



### REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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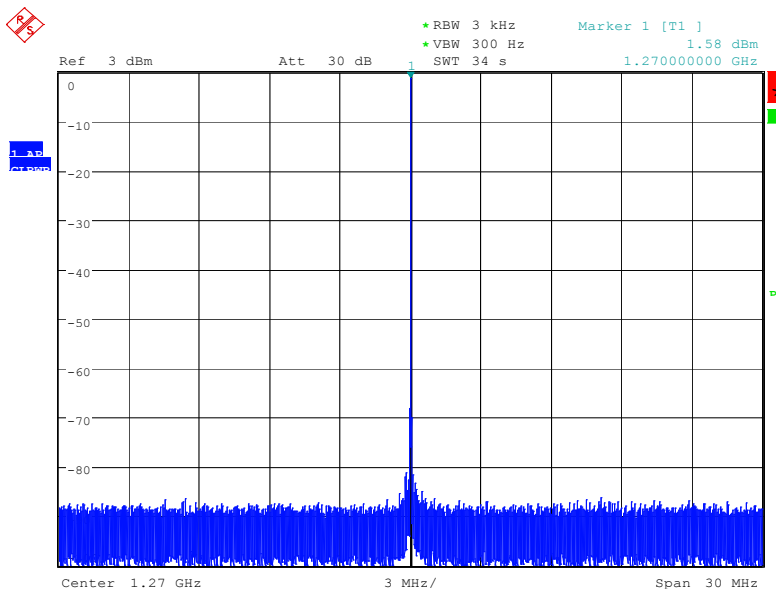
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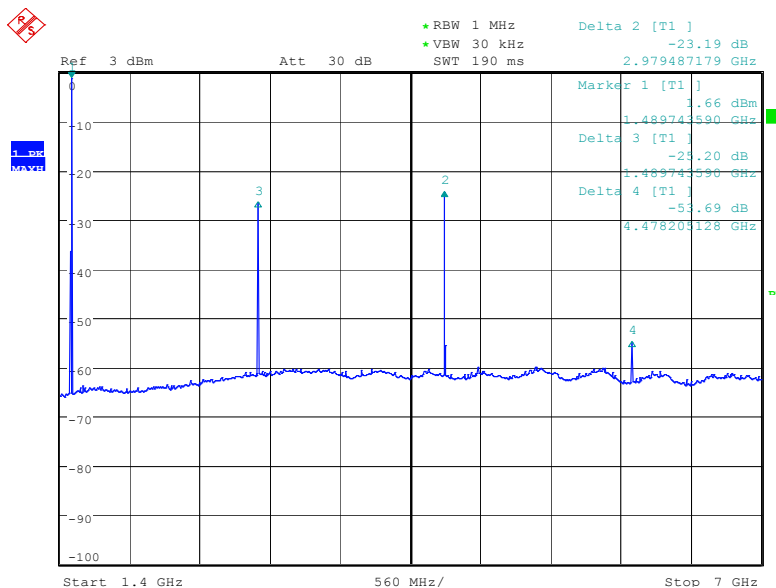
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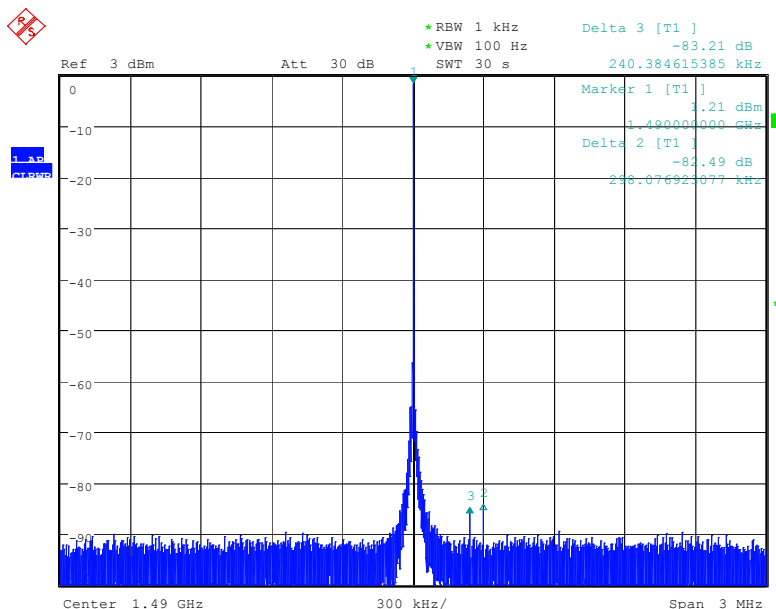
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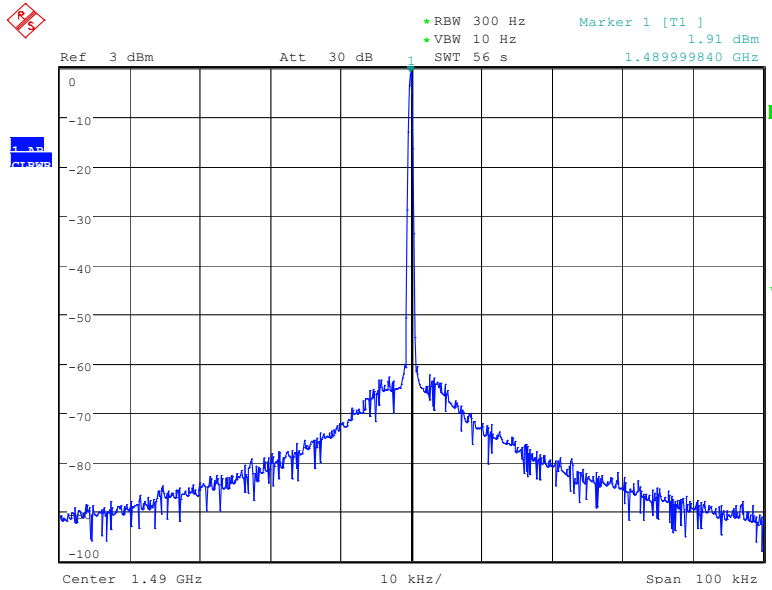
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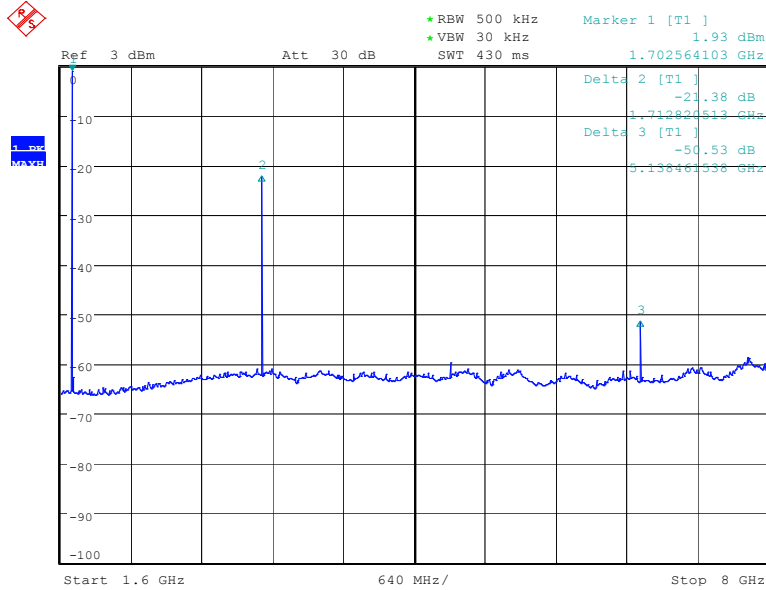
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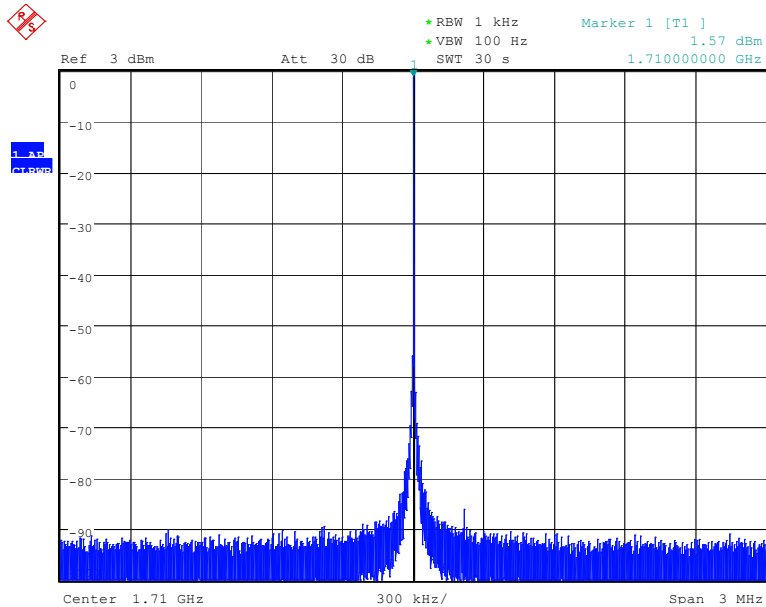
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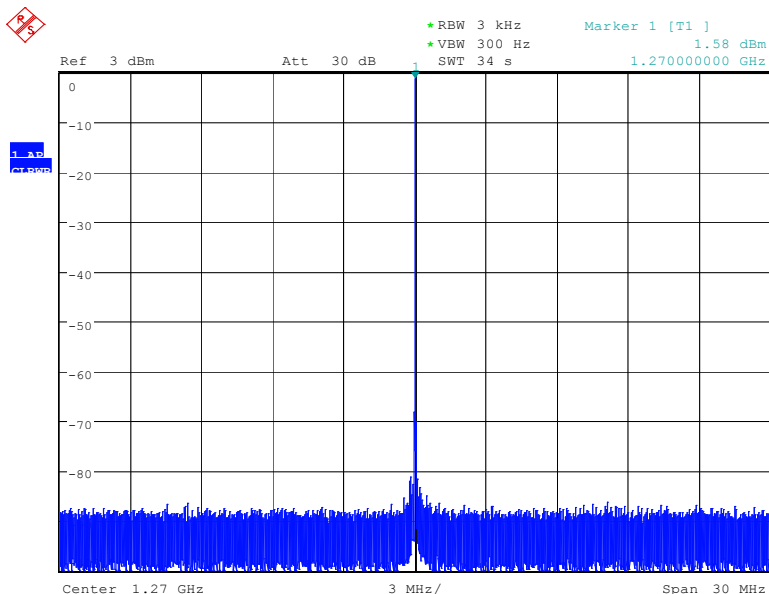
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