

# INTELLIGENT INTERACTIVE SYNTHESIZER

## SURFACE MOUNT MODEL: FSW300600-100

**WIDE BANDWIDTH**

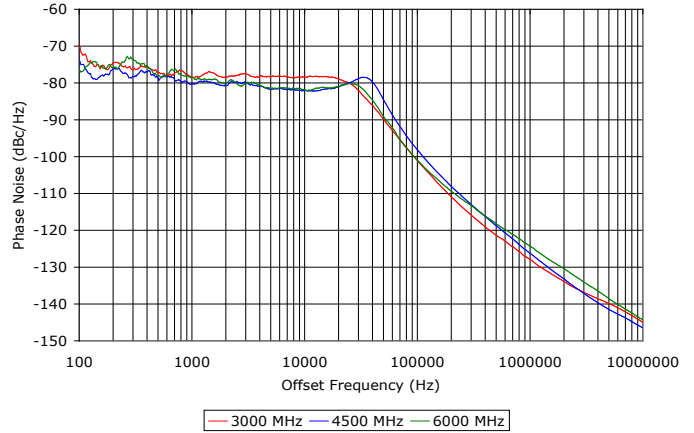
**3000 - 6000 MHz**

**FEATURES:**

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



**Phase Noise**

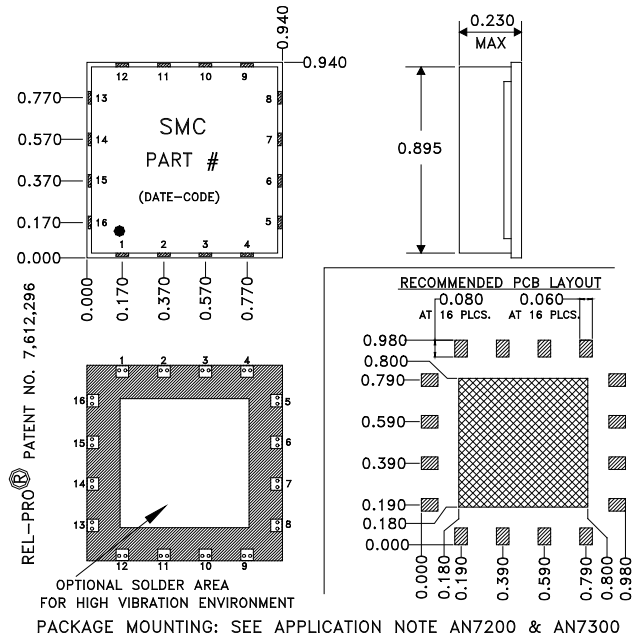


**SPECIFICATIONS (Rev. B 04/04/11)**

<b>Frequency</b>	3000 - 6000 MHz		
<b>Step Size</b>	1000 kHz		
<b>Reference Input Frequency</b>	10 MHz <sup>1</sup>		
<b>Reference Input Voltage</b>	1 V p-p to 3.3 V p-p		
<b>Bias Voltage</b>	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	15
	VCO	+5	50
	Tune	+20	10
<b>Lock Detect Indicator</b>	CMOS 3.3 V		
<b>Output Power</b>	-3 dBm (Min.)		
<b>Spurious Suppression</b>	90 dB (Typ.)		
<b>Harmonic Suppression</b>	20 dB (Typ.)		
<b>Settling Time</b>	3 mSec (Typ.) <sup>2</sup>		
<b>Output Impedance</b>	50 Ohms (Nom.)		
<b>Typical Phase Noise</b>	Offset	Phase Noise	
	@ 1 kHz	-78 dBc/Hz	
	@ 10 kHz	-80 dBc/Hz	
	@ 100 kHz	-100 dBc/Hz	
<b>Operating Temperature Range</b>	-40 to +85 °C		
<b>Programming</b>	See Application Note: AN7100		

<sup>1</sup> Reference input frequency is programmable (See AN7100) in multiples of the step size, 10 MHz is the factory default setting. 150 MHz (Max.)  
<sup>2</sup> From the rising edge of LE to stable lock detect

**Package #** 273LF



**Absolute Maximum Ratings**

<b>Storage Temp. Range</b>	-55 to +125 °C
<b>Bias Voltage (Digital)</b>	+5.25 V
<b>Bias Voltage (VCO)</b>	+5.5 V
<b>Bias Voltage (Tune)</b>	+22 V
<b>DC Voltage Applied to RF Out</b>	±25 V

Port Configuration		
Pin 1,2,3 - 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
Pin 7 - Vcc (Digital)	Pin 15 - Data In	

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

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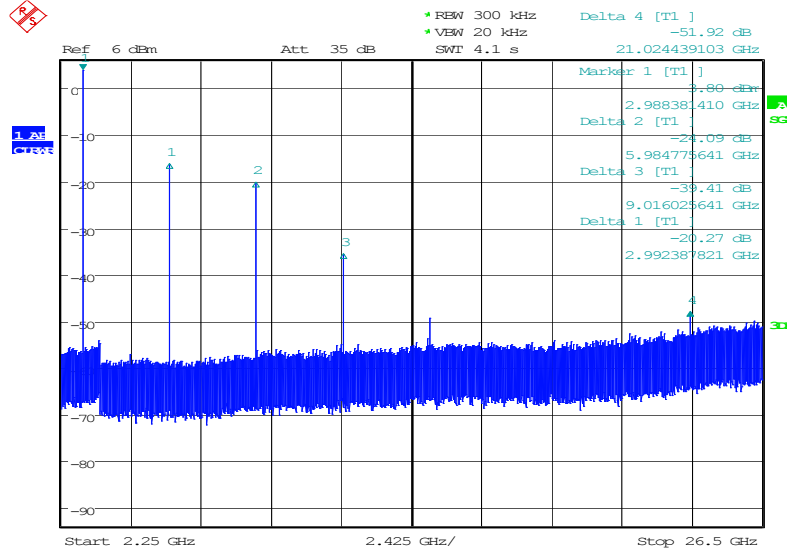
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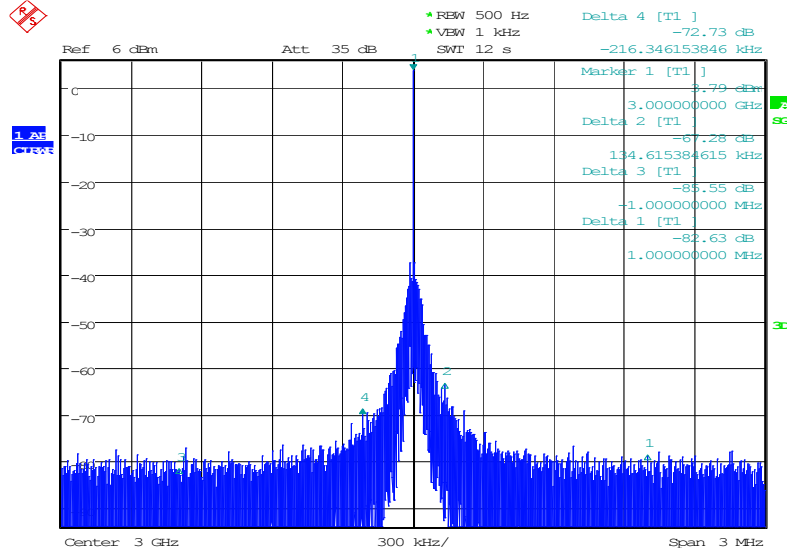
WIDE BANDWIDTH

3000 - 6000 MHz

### HARMONIC SUPPRESSION



### REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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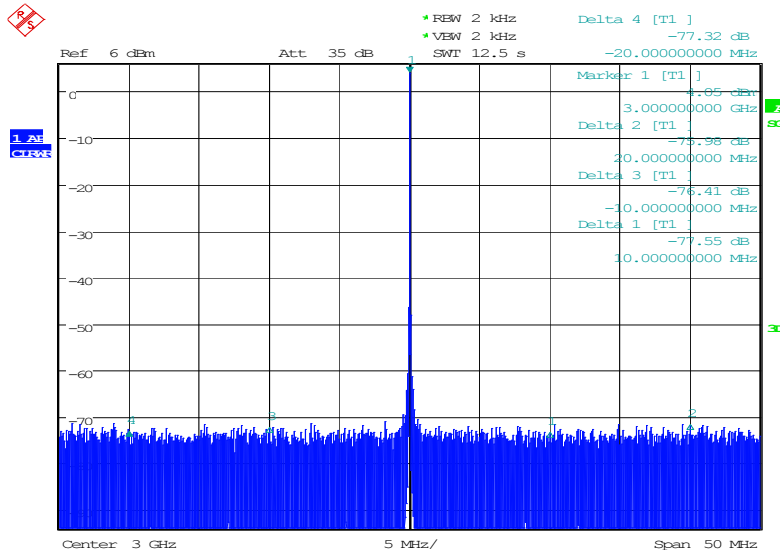
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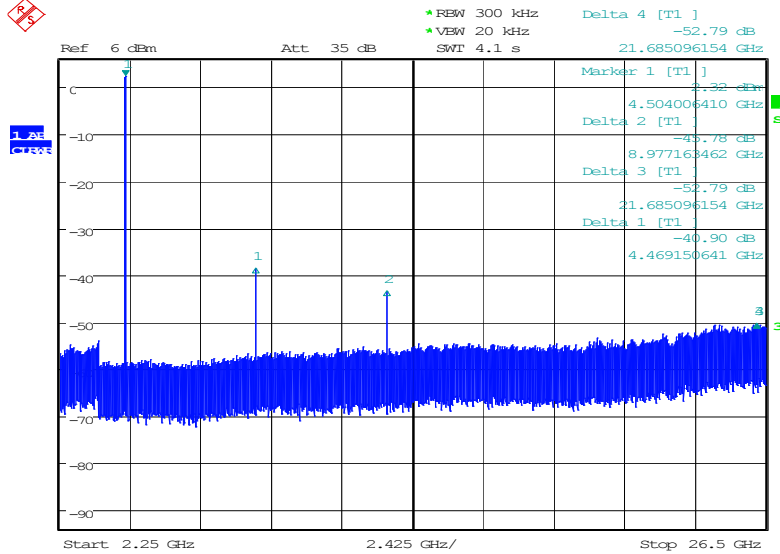
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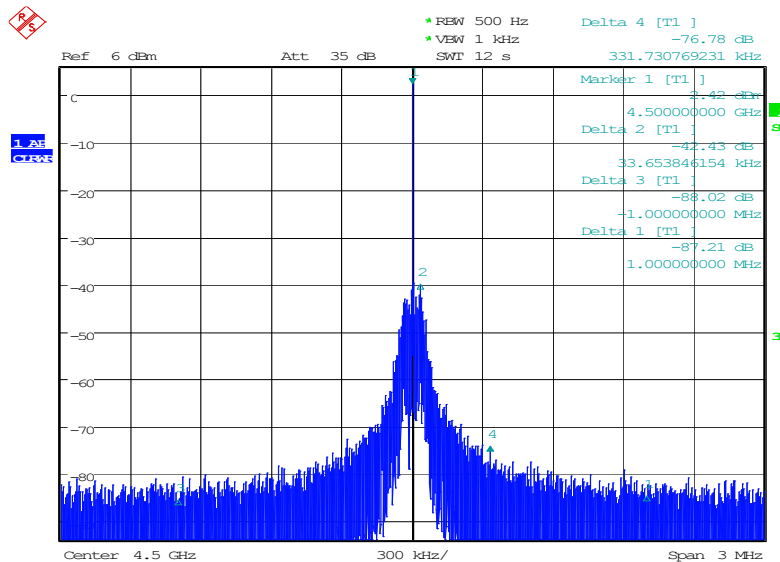
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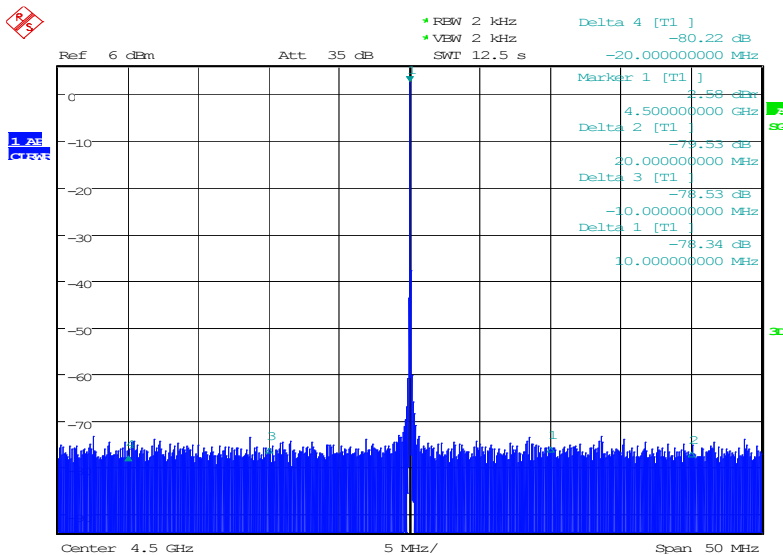
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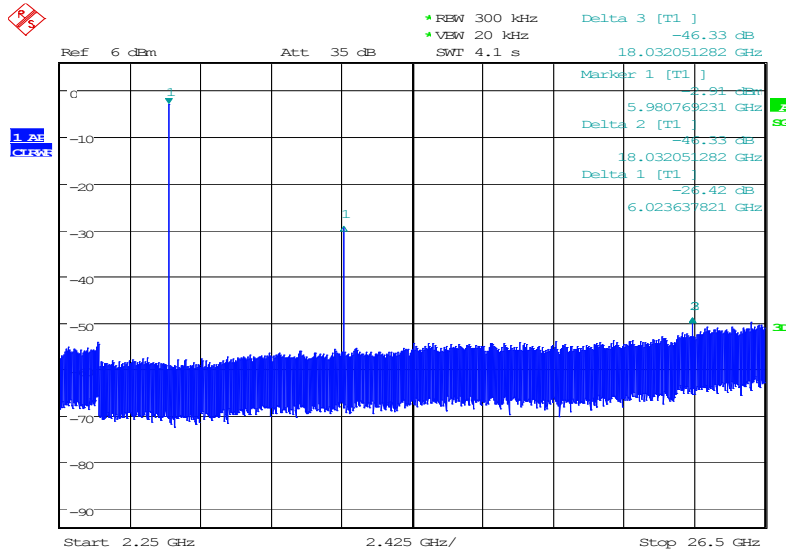
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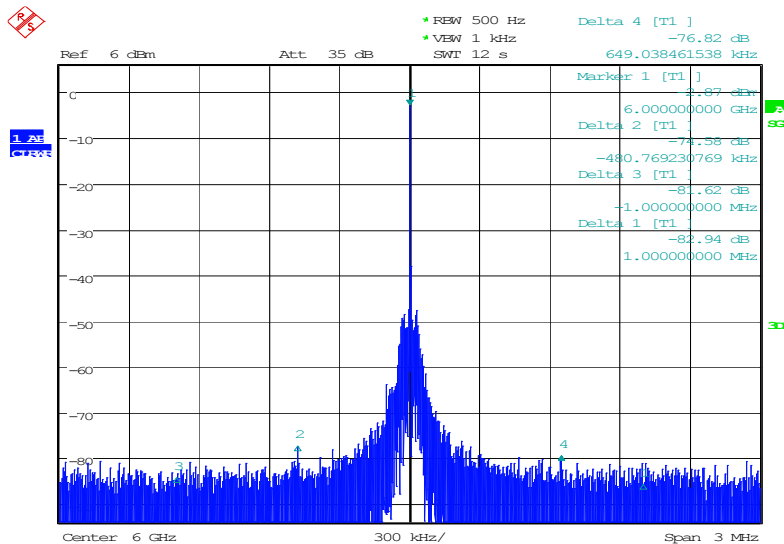
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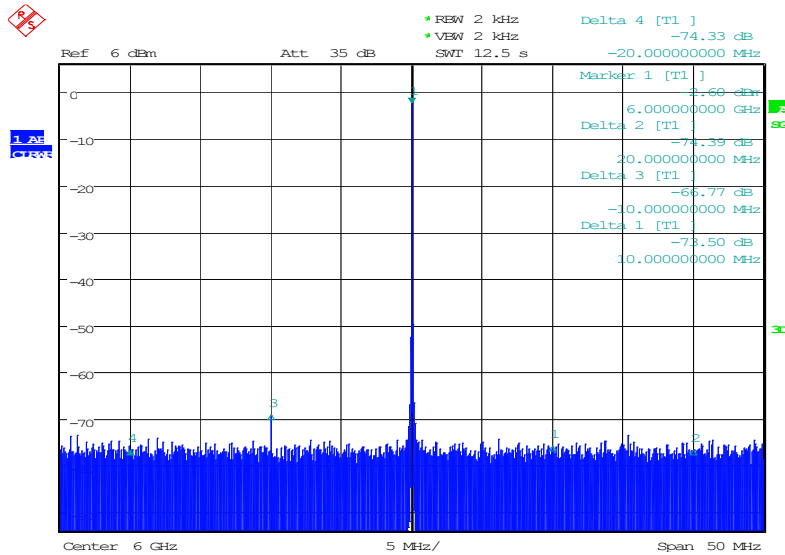
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