

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: FSW1857-100

WIDE BANDWIDTH

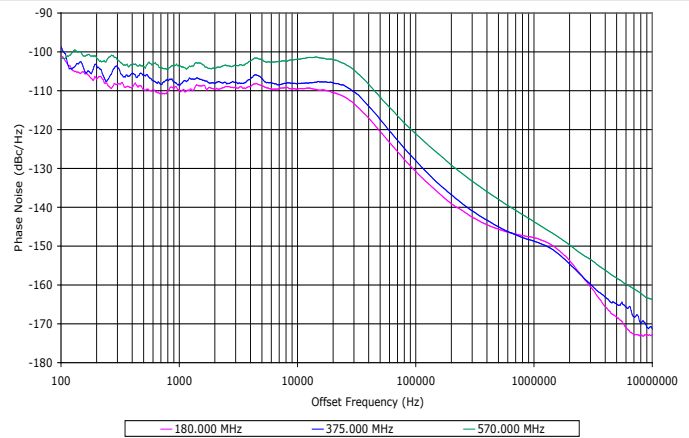
180 - 570 MHz

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

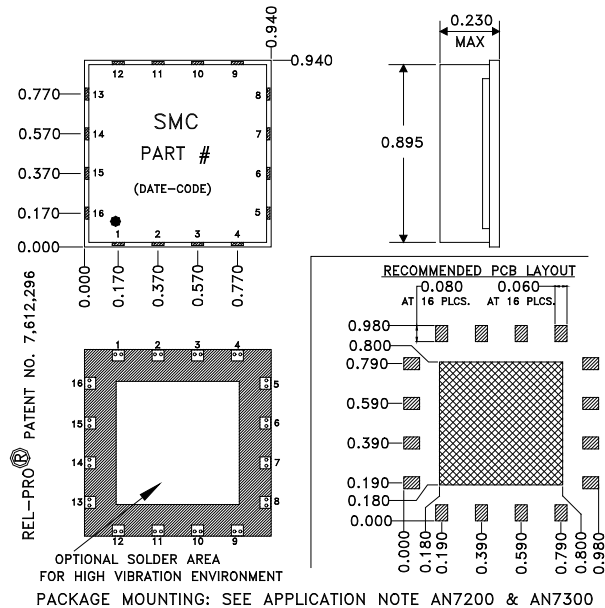


SPECIFICATIONS (Rev. H 03/24/11)

Frequency	180 - 570 MHz		
Step Size	1 MHz		
Reference Input Frequency	10 MHz ¹		
Reference Input Voltage	1.0 V p-p to 3.3 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	15
	VCO	+5	32
	Tune	+24	10
Output Power	+3 dBm (Min.)		
Spurious Suppression	90 dB (Typ.)		
Harmonics Suppression	15 dB (Typ.)		
Settling Time	3 mSec (Typ.) ²		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3.3 V		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-107 dbc/Hz	
	@ 10 kHz	-107 dbc/Hz	
	@ 100 kHz	-126 dbc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7100		

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

Package # 273LF



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

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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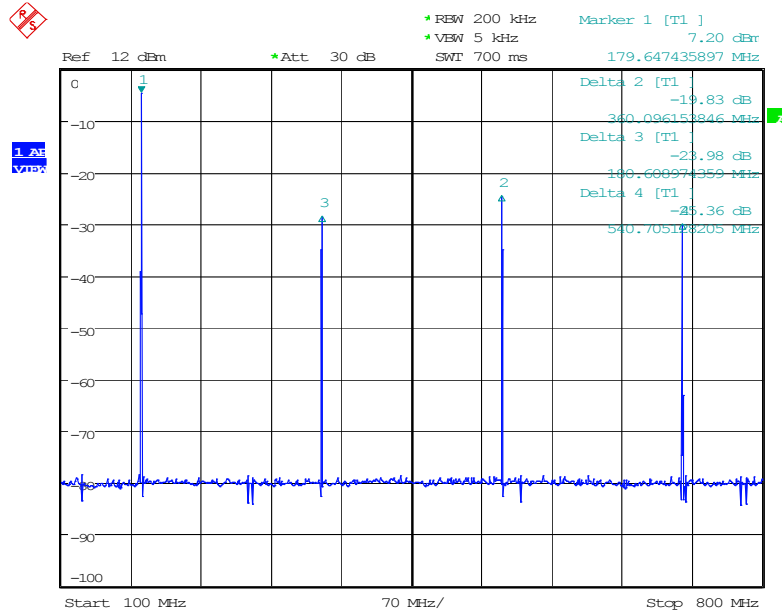
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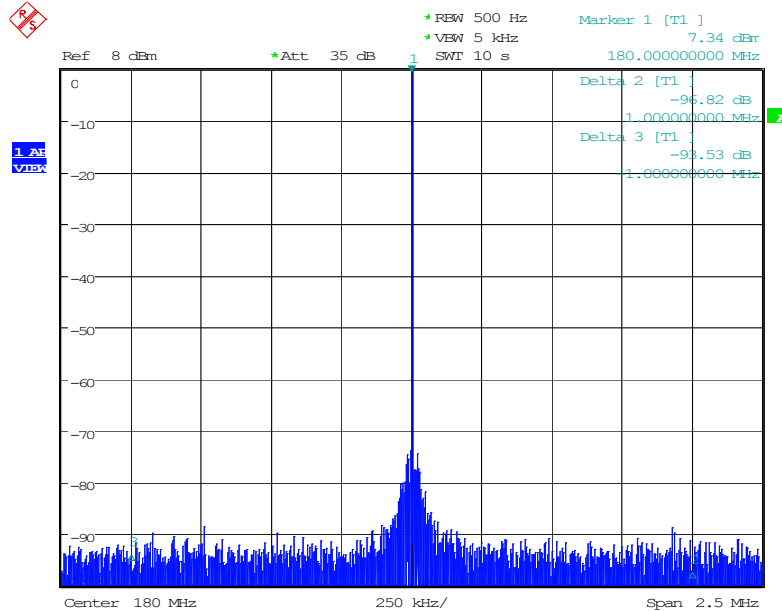
WIDE BANDWIDTH

180 - 570 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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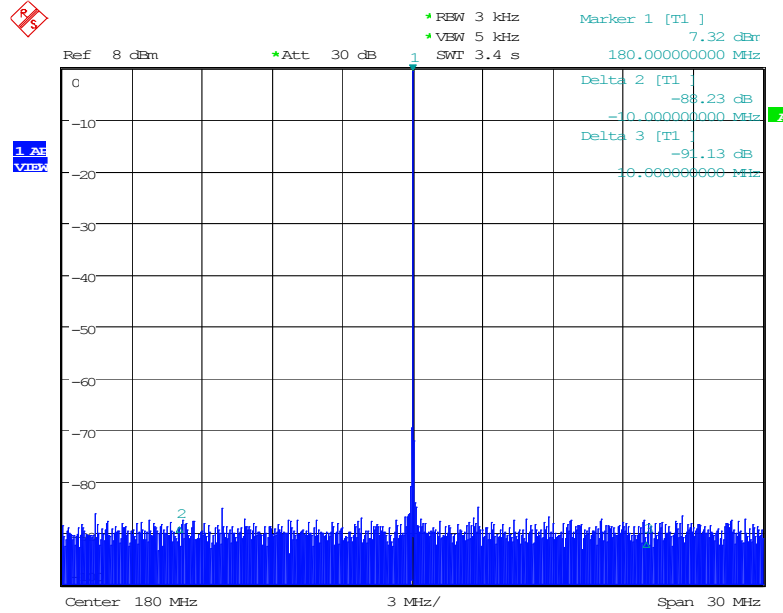
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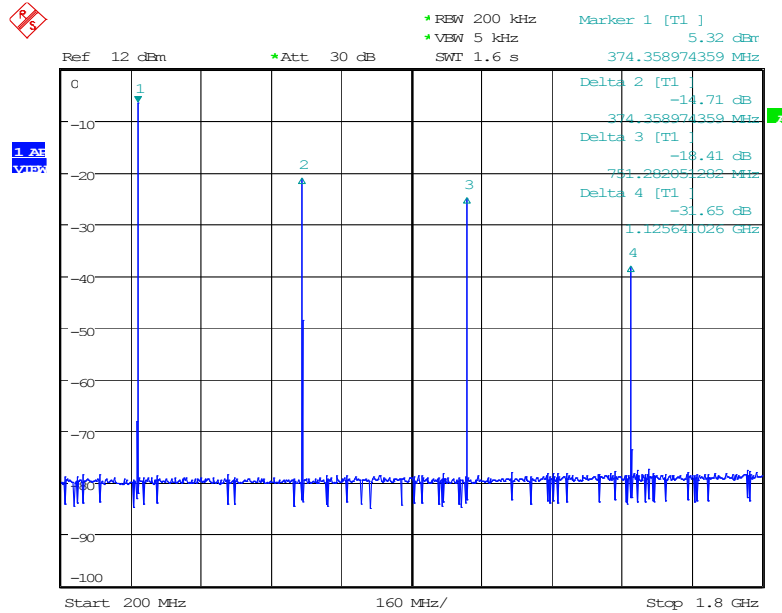
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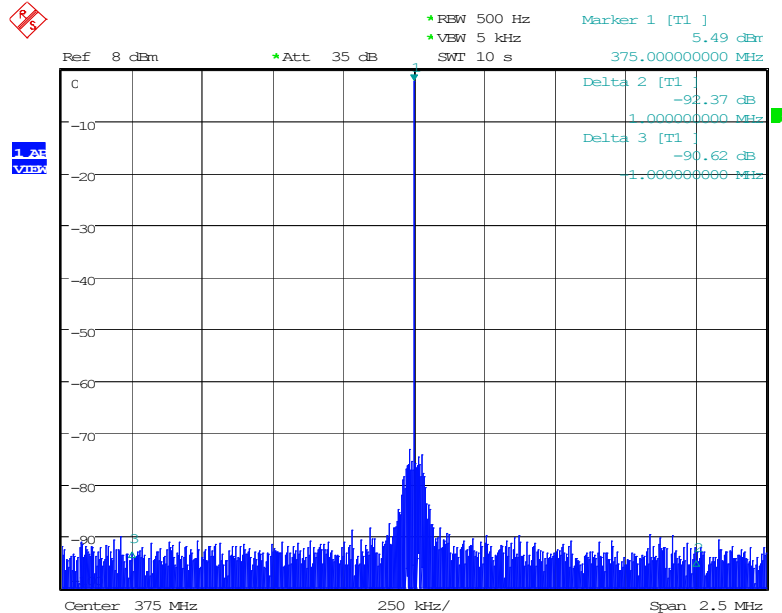
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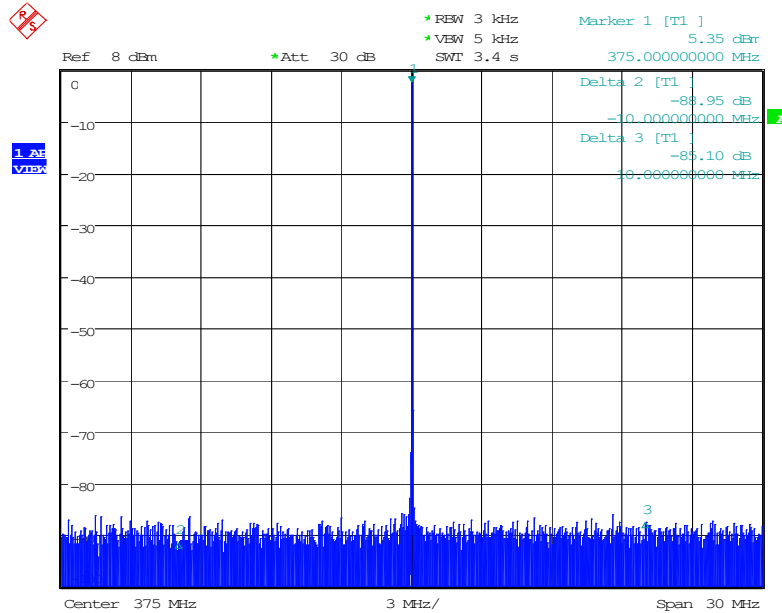
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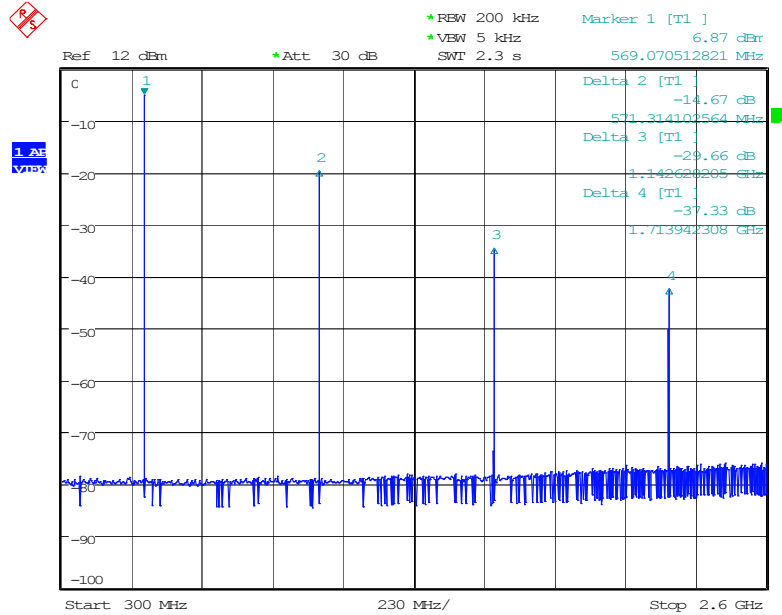
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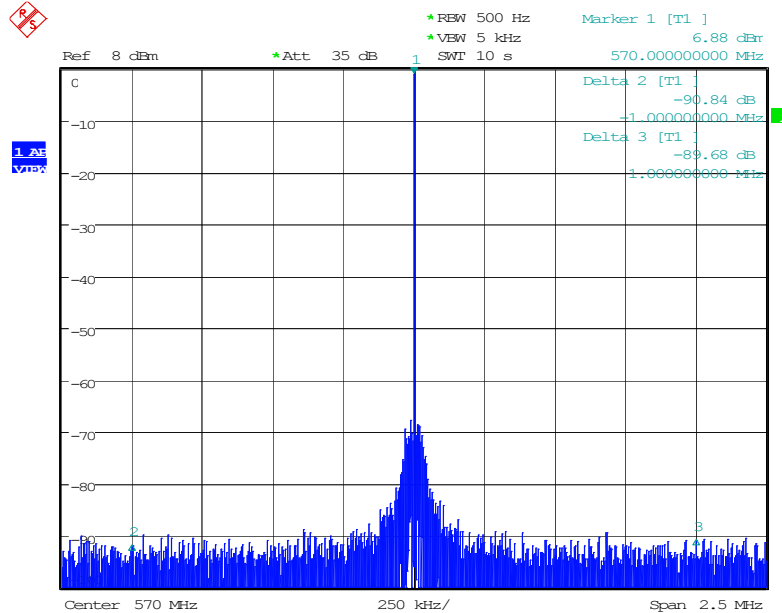
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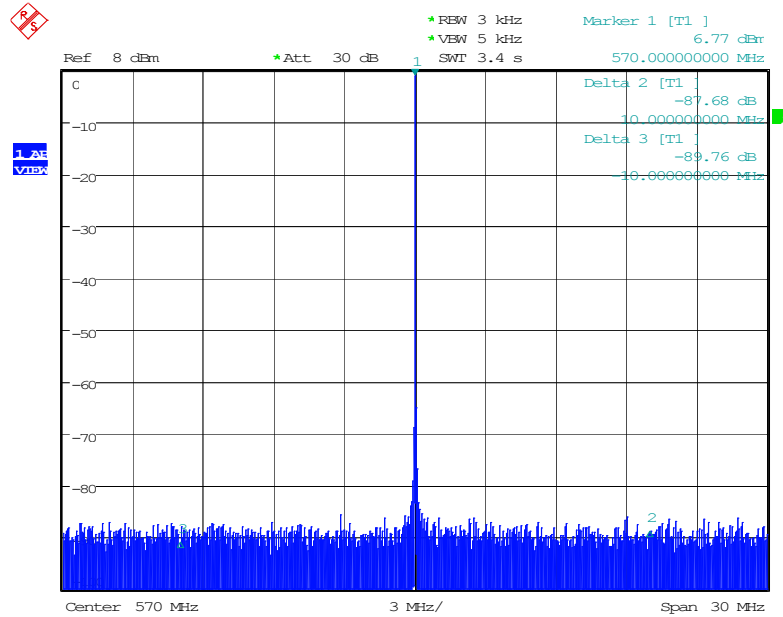
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