

INTELLIGENT INTERACTIVE SYNTHESIZER

CONNECTORIZED MODEL: KFSW40110-50

WIDE BANDWIDTH

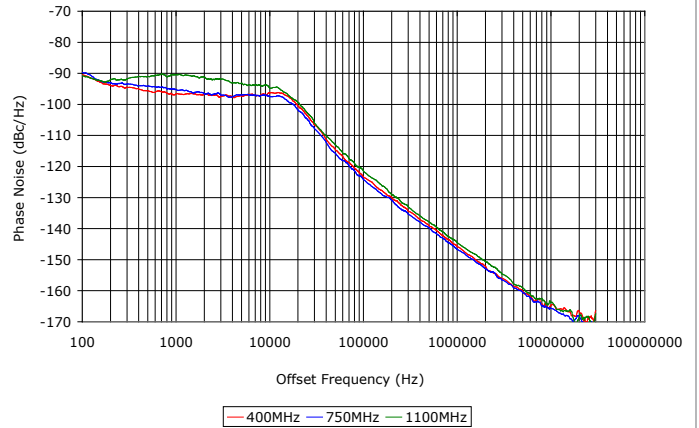
400 - 1100 MHz

FEATURES:

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



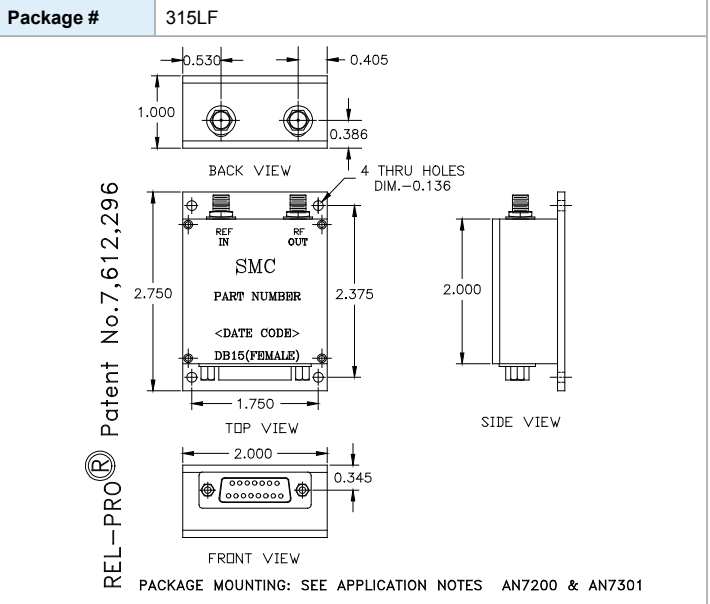
Phase Noise



SPECIFICATIONS

Frequency	400 - 1100 MHz		
Step Size	500 kHz		
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	45
	VCO	+5	45
	Tune	+25	5
Output Power	0 dBm (Min.)		
Spurious Suppression	75 dB (Typ.)		
Harmonic Suppression	10 dB (Typ.)		
Settling Time	10 mSec (Max.) ²		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-93 dBc/Hz	
	@ 10 kHz	-95 dBc/Hz	
	@ 100 kHz	-122 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 factory default setting. 150 MHz (Max.)
² From the rising edge of LE to stable lock detect



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

DB15 Female Connector Configuration

Pin 1 - Vcc (Digital)	Pin 6 - Latch Enable	Pin 11 to 14 - NC
Pin 2 - Vcc (Tune)	Pin 7 - Reset *	
Pin 3 - Clock In	Pin 8 - Lock Detect **	NC - No Connection
Pin 4 - Data In	Pin 9 - Vcc (VCO)	
Pin 5 - Error Flag	Pin 10, 15 - Ground	

* A low on this input will reset the internal controller. Leave unconnected for normal operation.
 ** High when locked (source/sink 500 uA)

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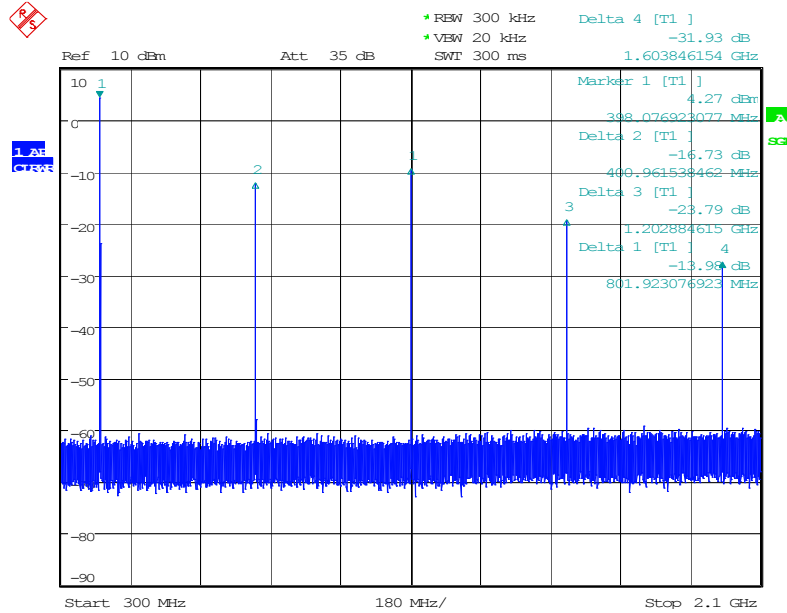
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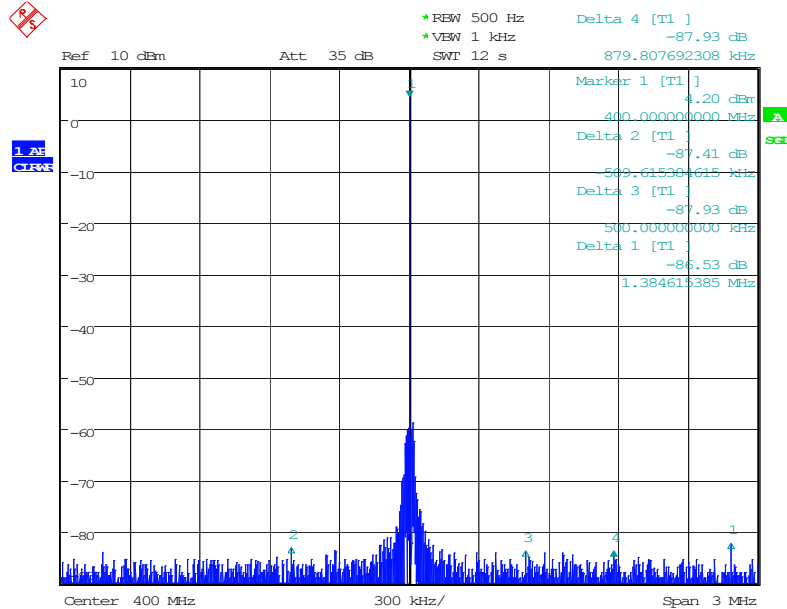
WIDE BANDWIDTH

400 - 1100 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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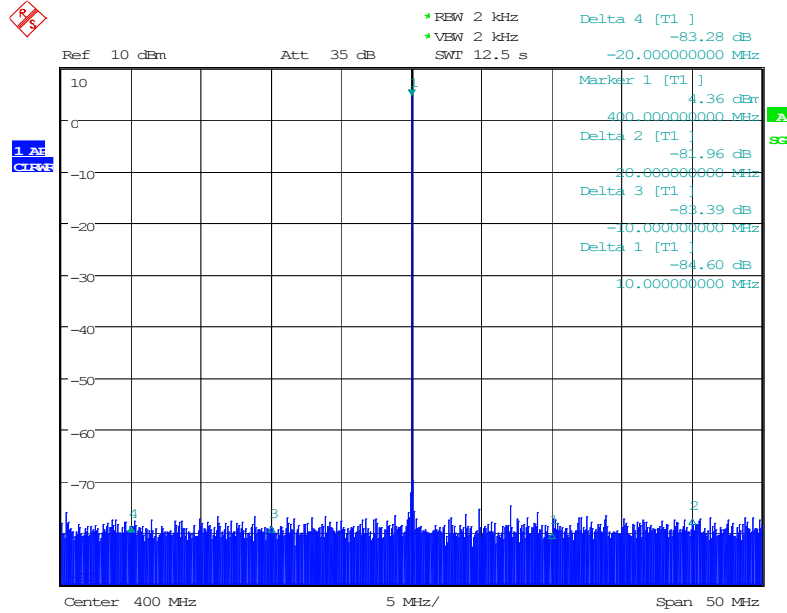
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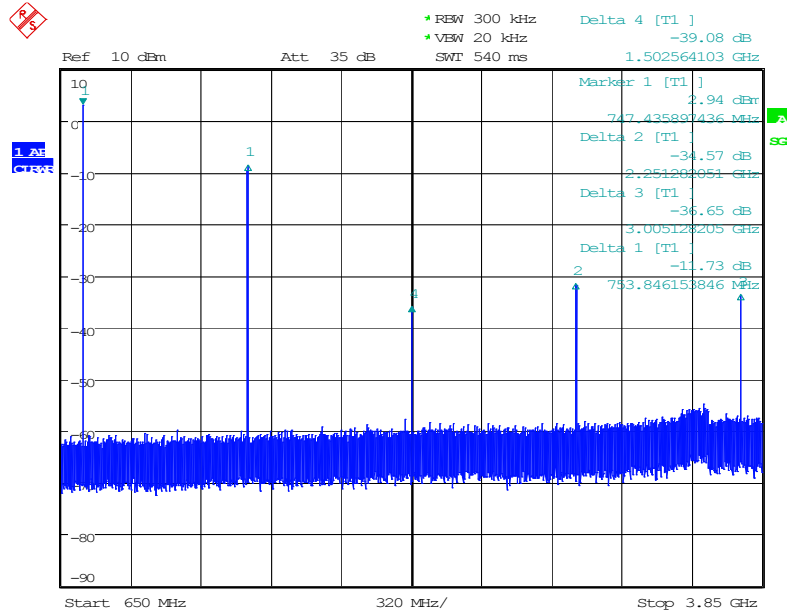
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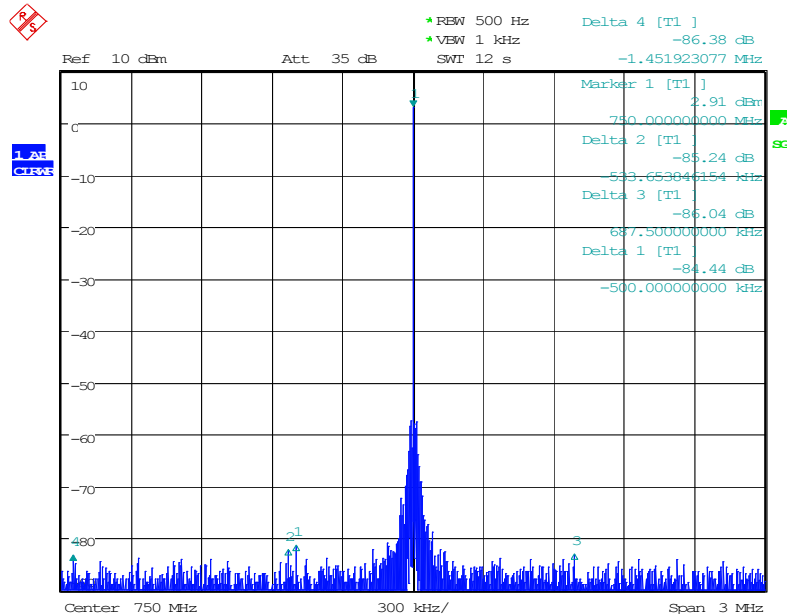
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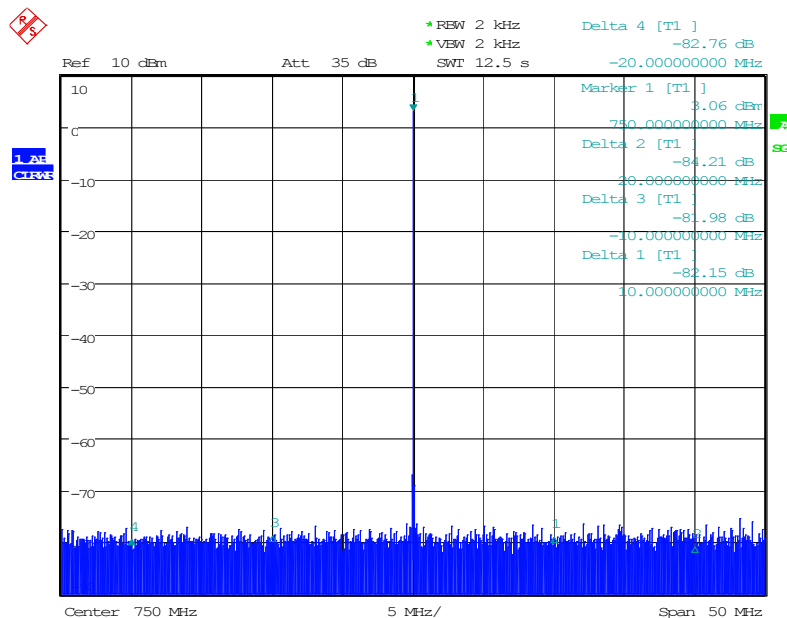
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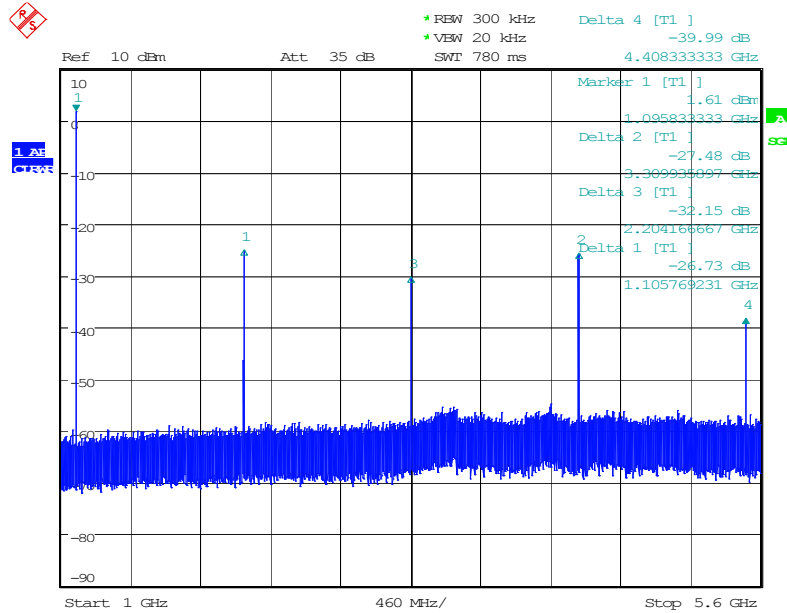
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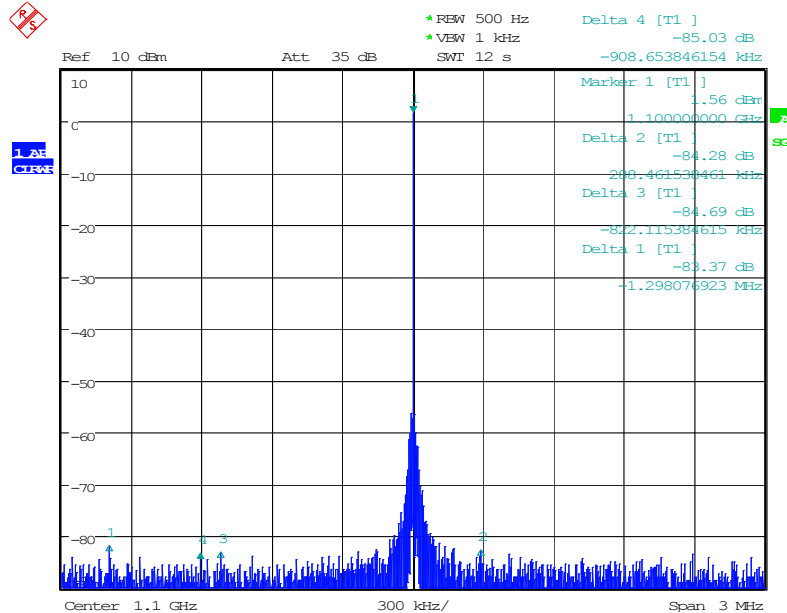
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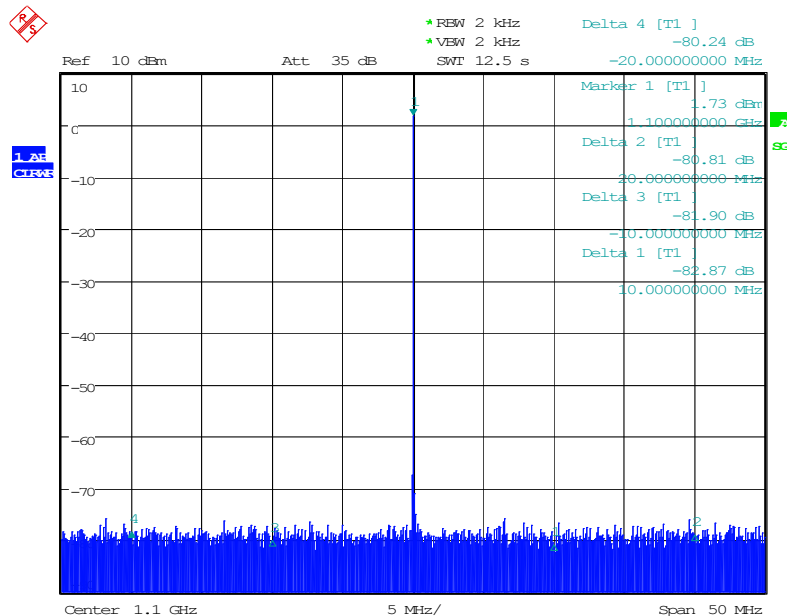
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