

INTELLIGENT INTERACTIVE SYNTHESIZER

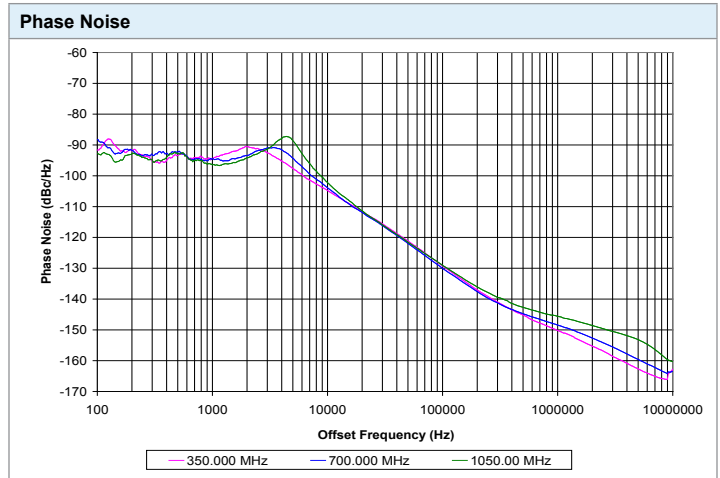
SURFACE MOUNT MODEL: LFSW35105-50

WIDE BANDWIDTH

350 - 1050 MHz

FEATURES:

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



SPECIFICATIONS (Rev. H 04/07/11)

Frequency	350 - 1050 MHz		
Step Size	500 kHz		
Reference Input Frequency	10 MHz ¹		
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	105
	Analog	+5	5
Output Power	+10 dBm (Min.)		
Spurious Suppression	80 dB (Typ.)		
Harmonic Suppression	20 dB (Typ.)		
Settling Time	10 mSec (Typ.) ²		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3.3 V		

Typical Phase Noise	Offset	Phase Noise
	@ 1 kHz	-95 dBc/Hz
	@ 10 kHz	-103 dBc/Hz
	@ 100 kHz	-130 dBc/Hz
Operating Temperature Range	-30 to +75 °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 (VCO)	+5.5 V
Bias Voltage (Analog)	+5.25V
DC Voltage Applied to RF Out	±25 V

This product is manufactured under one or more of the following patents. Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 7,580,693; 7,586,381; 7,605,670; 7,636,021; 2,533,623 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,563,174; 7,580,693; 7,612,296; 2,524,751

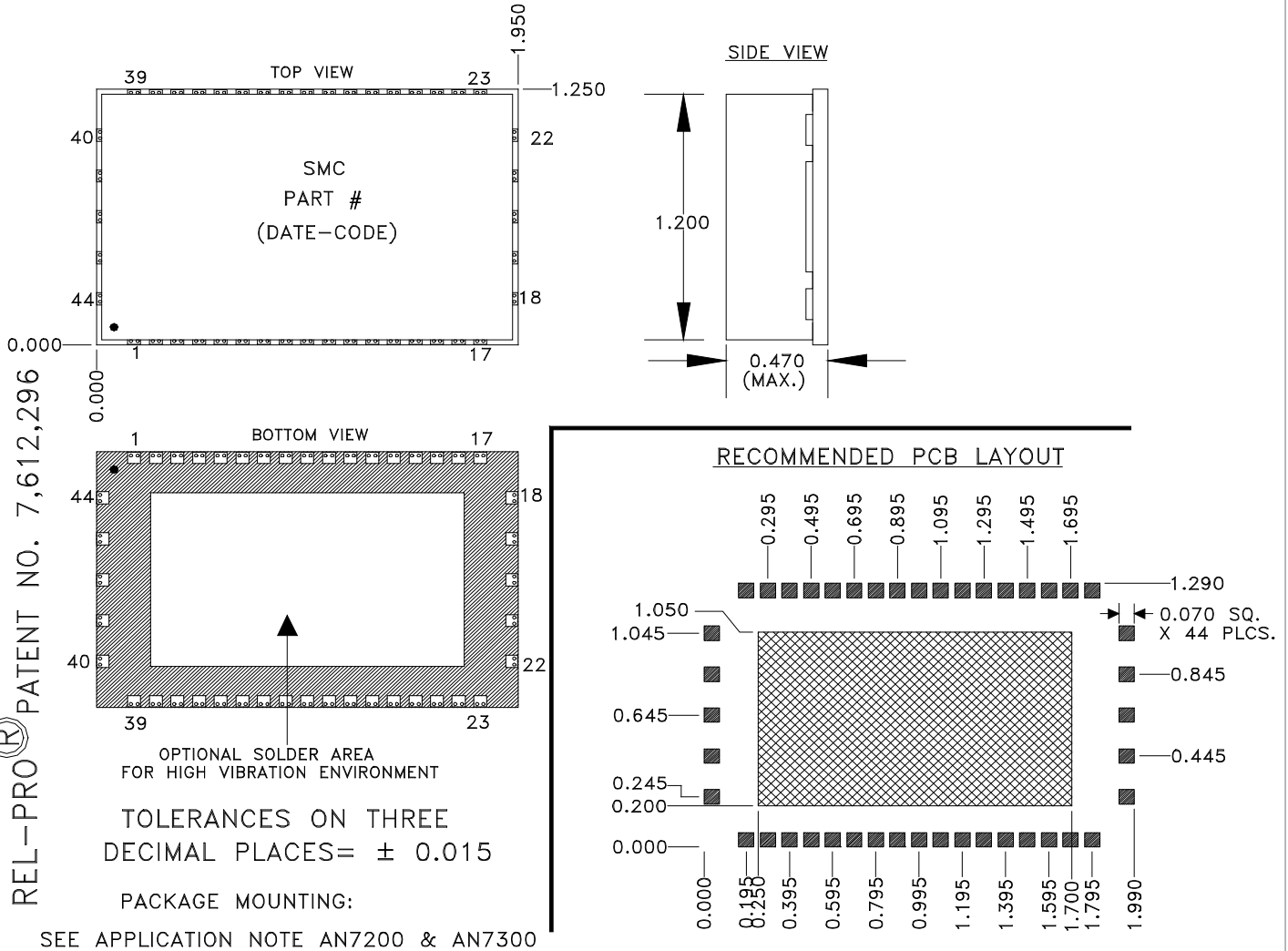
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Package # 280LF



Port Configuration

Pin 6 - RF Out	Pin 26 - Data In	Pin 10, 19-22, 24, 29 - NC
Pin 8 - Ref In	Pin 27 - Error Flag	Pin 30,32,33 - NC
Pin 9 - Vcc(VCO) ****	Pin 28 - Clock In	All Others Ground
Pin 12 - Lock Detect Out*	Pin 31 - VCO (On/Off) *****	
Pin 14 - Vcc(Tune) ***	Pin 34 - Vcc(Digital) ****	NC - No Connection
Pin 16 - Vout(Converter) ***	Pin 36 - Vtune Output	
Pin 25 - Latch Enable In	Pin 38 - Vcc(Analog) ****	

* High when locked (source/sink 500 uA)
 *** Connect pins 14 and 16 together externally and add 10uF tantalum bypass capacitor to ground.
 ***** Supply external filtering for pin 9, 34 and 38
 ***** Logic high or NC for normal operation, Logic Low to switch off.

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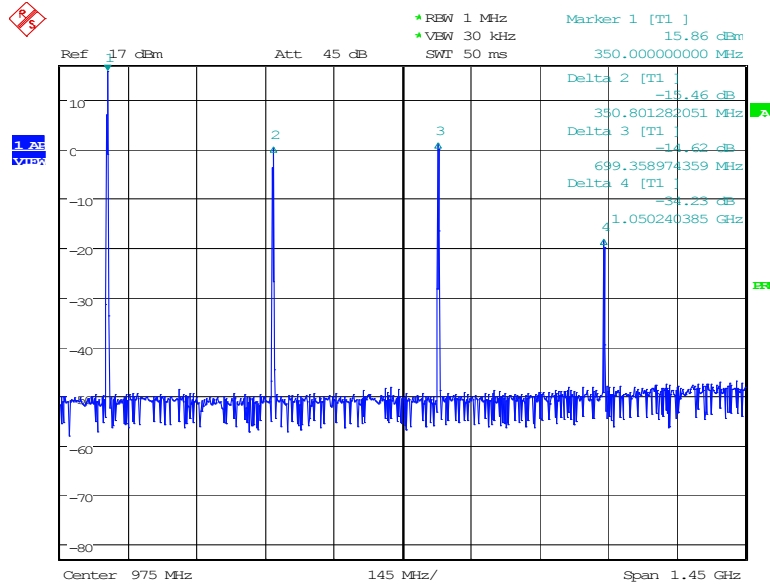
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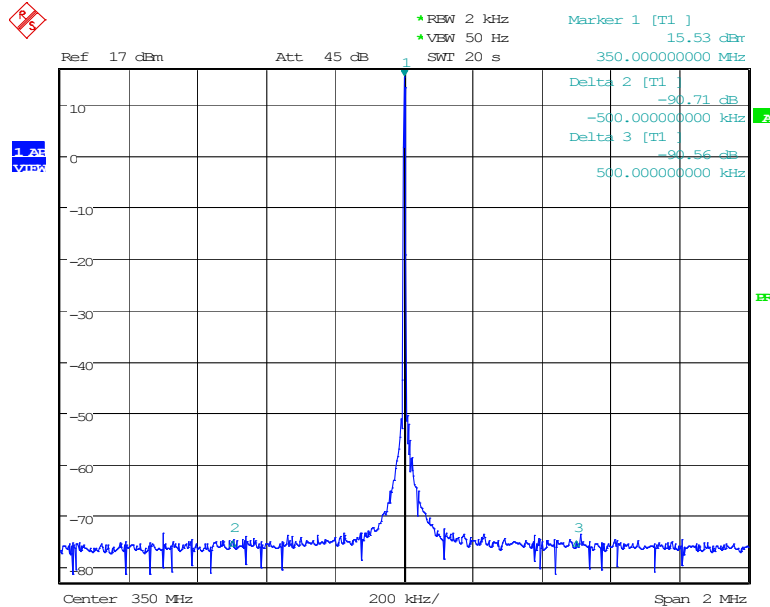
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HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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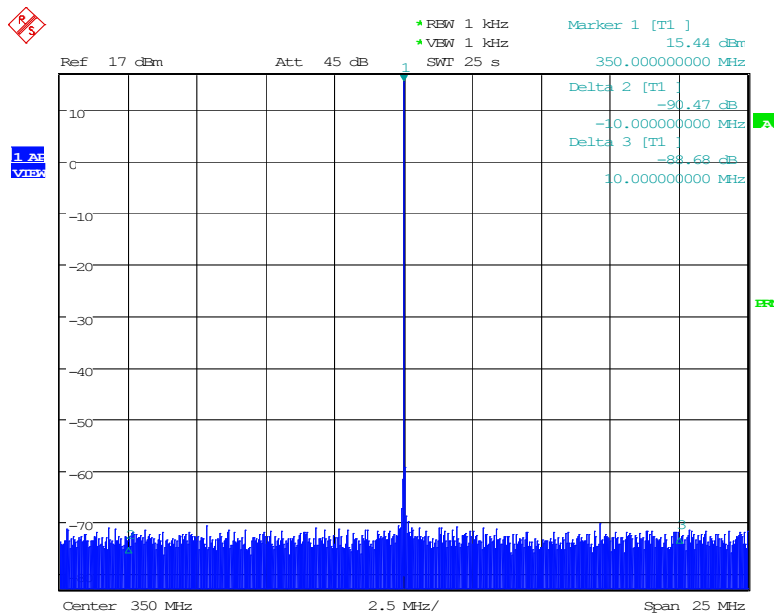
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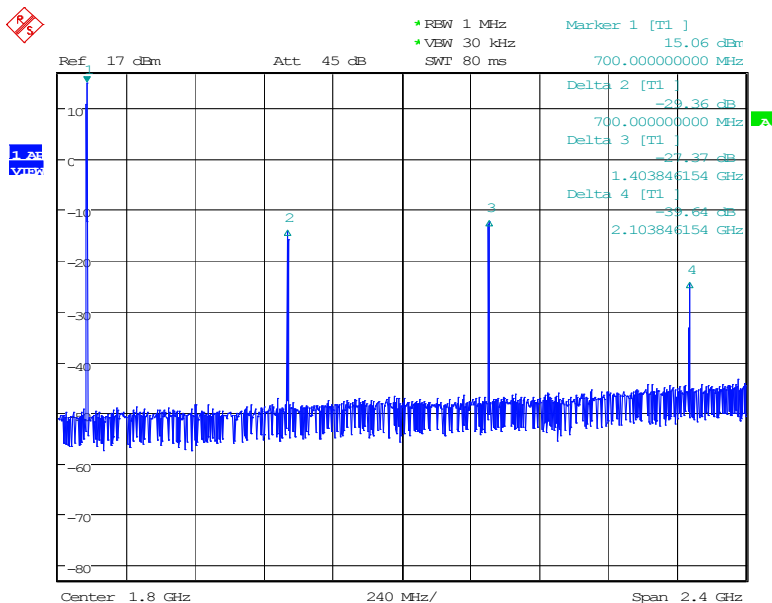
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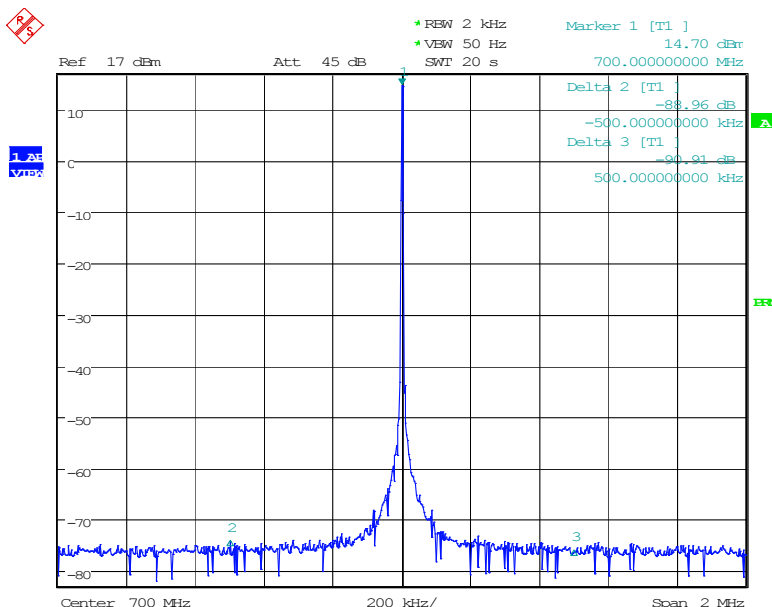
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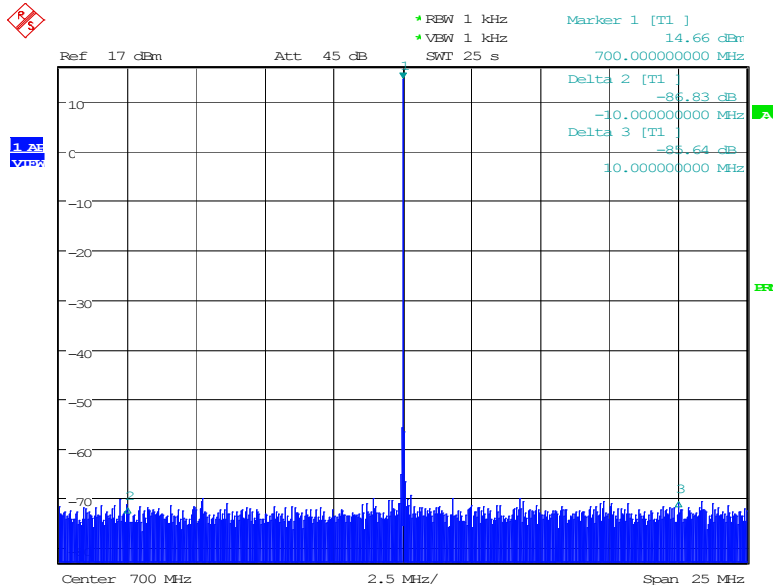
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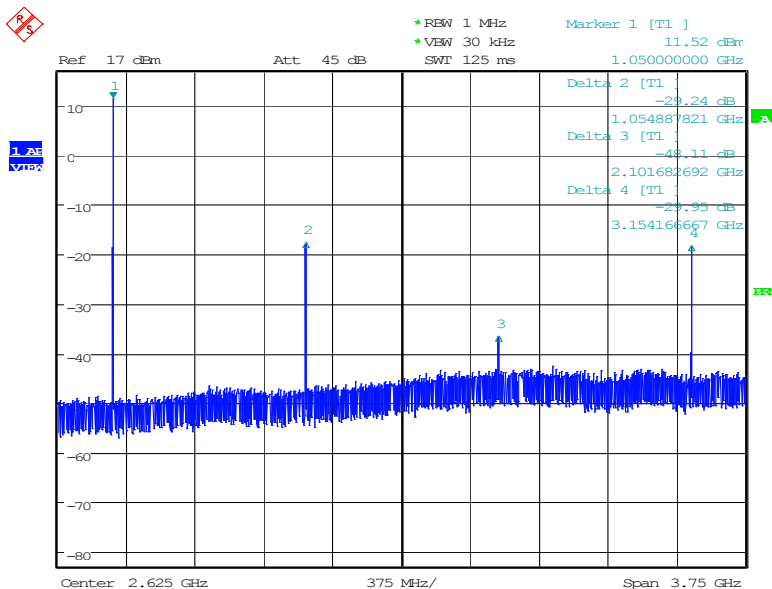
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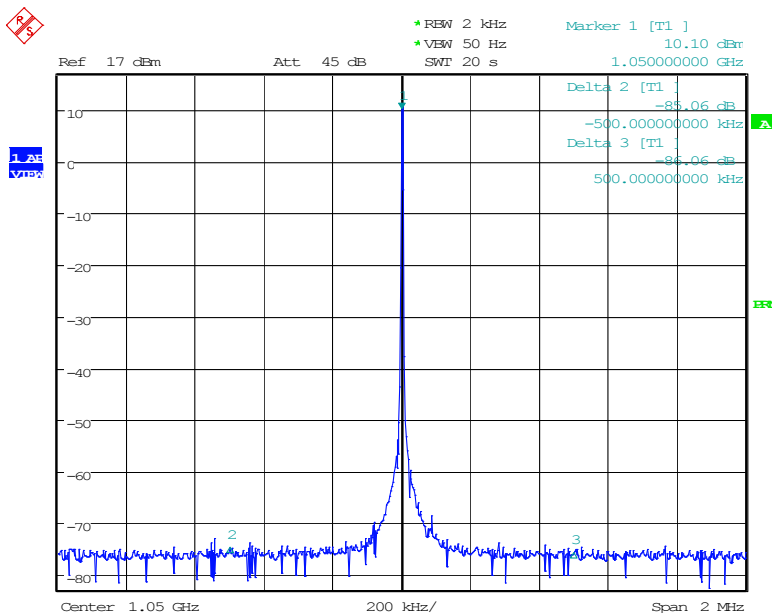
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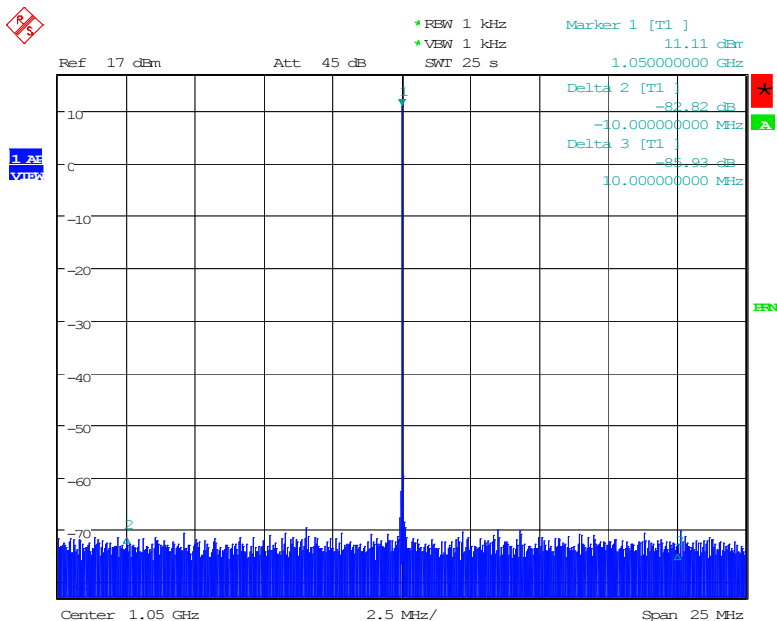
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