

# INTELLIGENT INTERACTIVE SYNTHESIZER

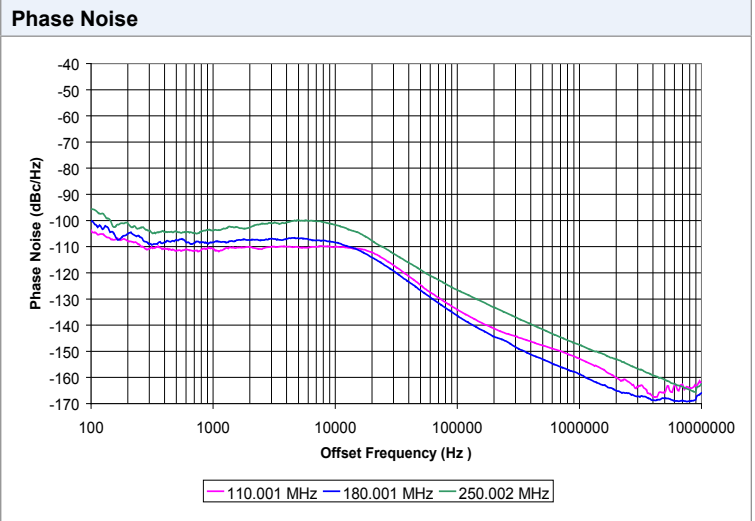
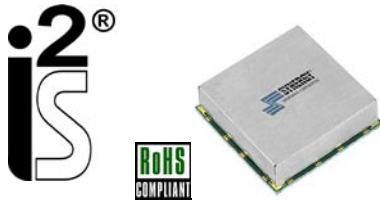
## SURFACE MOUNT MODEL: FSW1125-50

WIDE BANDWIDTH

110 - 250 MHz

**FEATURES:**

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



**SPECIFICATIONS (Rev. E 10/27/06)**

Frequency	110 - 250 MHz		
Step Size	500 kHz		
Reference Input Frequency	10 MHz (Min.)*		
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	40
	Tune	+15	10
Output Power	+5 dBm (Min.)		
Spurious Suppression	90 dB (Typ.)		
Harmonic Suppression	12 dB (Typ.)		
Settling Time	10 mSec (Max.)**		
Output Impedance	50 Ohms (Nom.)		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-108 dbc/Hz	
	@ 10 kHz	-105 dbc/Hz	
	@ 100 kHz	-130 dbc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7100		

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

**Package #** 273LF

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

**RECOMMENDED PCB LAYOUT**

AT 16 PLCS. AT 16 PLCS.

OPTIONAL SOLDER AREA FOR HIGH VIBRATION ENVIRONMENT

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200

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  
 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  
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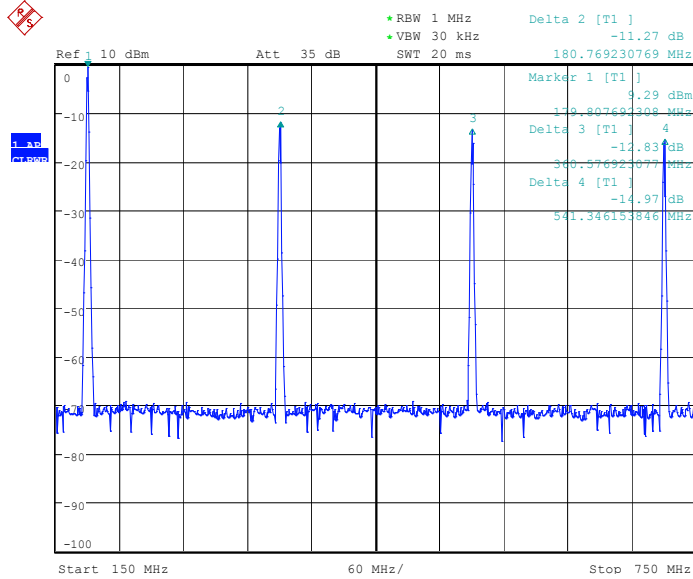
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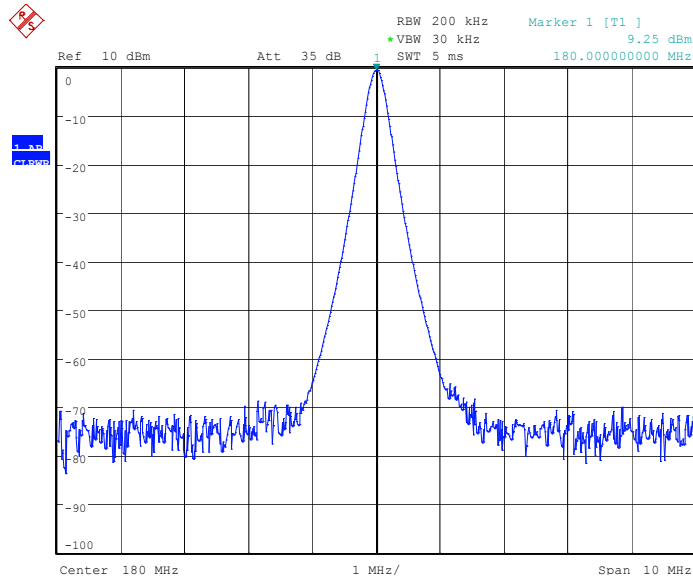
WIDE BANDWIDTH

110 - 250 MHz

### TYPICAL HARMONIC REJECTION



### REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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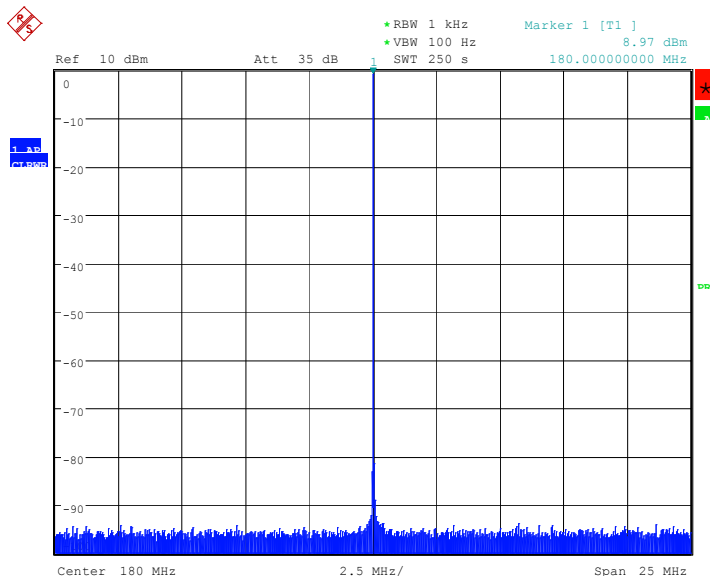
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