The document contains information about an intelligent interactive synthesizer. The product is a surface mount model named LFSW150320-50. It operates within a bandwidth of 1500 - 3200 MHz. The specifications include features such as extremely low phase noise, interactive communication, standard programming interface, ultra wide tuning range, lead-free RoHS compliant technology, small size, and a surface mount design. The unit also provides buffered output.

The features are:
- 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
- Buffered Output

### 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
- Buffered Output

### SPECIFICATIONS (Rev. I 04/08/11)

- **Frequency**: 1500 - 3200 MHz
- **Step Size**: 500 kHz
- **Reference Input Frequency**: 10 MHz
- **Reference Input Voltage**: 1.0 V p-p to 3.3 V p-p
- **Bias Voltage**:
  - Vcc
  - V (Vdc)
  - I (mA Max.)
  - Digital
  - +5
  - 65
  - VCO
  - +5
  - 30
  - Converter
  - +5
  - 60
- **Output Power**: +10 dBm (Min.)
- **Spurious Suppression**: 70 dB (Typ.)
- **Harmonic Suppression**: 15 dB (Typ.)
- **Settling Time**: 10 mSec (Typ.)
- **Output Impedance**: 50 Ohms (Nom.)
- **Lock Detect Indicator**: CMOS 3.3 V
- **Phase Noise**:
  - Offset Phase Noise
  - @ 1 kHz -80 dBc/Hz
  - @ 10 kHz -85 dBc/Hz
  - @ 100 kHz -110 dBc/Hz
- **Operating Temperature Range**: -30 to +70 °C
- **Programming**: See Application Note: AN7100

### Absolute Maximum Ratings

- **Storage Temp. Range**: -55 to +125 °C
- **Bias Voltage (Digital)**: +5.25 V
- **Bias Voltage (Converter)**: +8.0 V
- **Bias Voltage (VCO)**: +5.5 V
- **DC Voltage Applied to RF Out**: ±25 V

### Package #

- **197LF**

### Port Configuration

- Pin 5 - RF out
- Pin 7 - Lock Detect Out *
- Pin 9 - Data In
- Pin 10 - Error Flag
- Pin 11 - Clock In
- Pin 13 - VCO (On/Off)****
- Pin 19 - Latch Enable In
- Pin 21 - Ref. In
- Pin 23 - Vcc (Digital)
- Pin 24 - Vtune (Output)
- Pin 25 - Vcc (VCO)
- Pin 26 - Vout (Converter) ***
- Pin 27 - Vcc (Tune)***
- Pin 28 - Vcc (Converter)

* High when locked (source/sink 500 uA)
** Connect externally. Bypassed with a 10uF 35V tantalum capacitor.
*** NC if unused.

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E-Mail: sales@synergymwave.com • World Wide Web: http://www.synergymwave.com
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: LFSW150320-50

WIDE BANDWIDTH
1500 - 3200 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS

Date: 21.MAR.2006  10:00:59
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SURFACE MOUNT MODEL: LFSW150320-50

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Date: 21.MAR.2006  10:05:08