INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: LFSW2476-10

WIDE BANDWIDTH

240 - 760 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
► Buffered Output

Phase Noise

OFFSET FREQUENCY (Hz)
100 1000 10000 100000 1000000 10000000

OFFSET PHASE NOISE (dBc/Hz)
-170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70

240 MHz 500 MHz 760 MHz

SPECIFICATIONS (Rev. F 04/07/11)

Frequency
240 - 760 MHz

Step Size
100 kHz

Reference Input Frequency
10 MHz

Reference Input Voltage
1 V p-p to 3.3 V p-p

Bias Voltage
Vcc V (Vdc) I (mA Max.)
Digital +5 50
VCO +5 30
Converter +5 60

Lock Detect Indicator
CMOS 3.3 V

Output Power
+5 dBm (Min.)

Spurious Suppression
70 dB (Typ.)

Harmonic Suppression
15 dB (Typ.)

Settling Time
20 mSec (Typ.)

Output Impedance
50 Ohms (Nom.)

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. 100 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 (Converter)
+8 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 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)

Pin 21, 23, 24, 25, 26, 27, 28 - NC

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

Absorption Factor

0.080 0.070 0.060 0.050 0.040 0.030 0.020 0.010 0.000

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15 dB (Typ.)

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REFERENCE SIDEBAND SUPPRESSION
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REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
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HARMONIC SUPPRESSION

REFERENCE SIDE BAND SUPPRESSION

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