INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: LFSW190410-12

WIDE BANDWIDTH
1900 - 4100 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

SPECIFICATIONS (Rev. A 04/19/11)

Frequency
1900 - 4100 MHz
Step Size
125 kHz
Reference Input Frequency
10 MHz
Reference Input Voltage
1.0 V p-p to 3.3 V p-p

Bias Voltage

<table>
<thead>
<tr>
<th></th>
<th>Vcc (Vdc)</th>
<th>(mA Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital</td>
<td>+5</td>
<td>65</td>
</tr>
<tr>
<td>VCO</td>
<td>+5</td>
<td>50</td>
</tr>
<tr>
<td>Converter</td>
<td>+5</td>
<td>25</td>
</tr>
</tbody>
</table>

Output Power
+7 dBm (Min.)

Spurious Suppression
70 dB (Typ.)

Harmonic Suppression
15 dB (Typ.)

Settling Time
30 mSec (Typ.)

Output Impedance
50 Ohms (Nom.)

Lock Detect Indicator
CMOS 3.3 V

Typical Phase Noise

<table>
<thead>
<tr>
<th>Offset Frequency (Hz)</th>
<th>Phase Noise (dBc/Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kHz</td>
<td>-82 dBc/Hz</td>
</tr>
<tr>
<td>10 kHz</td>
<td>-82 dBc/Hz</td>
</tr>
<tr>
<td>100 kHz</td>
<td>-105 dBc/Hz</td>
</tr>
</tbody>
</table>

Operating Temperature Range
-20 to +70 °C

Programming
See Application Note: AN7100

1 Reference input frequency is programmable (See AN7100) in multiples of the step size, 10 MHz is the default setting. 150 MHz (Max.)

2 From the rising edge of LE to stable lock detect

Absolute Maximum Ratings

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temp. Range</td>
<td>-55 to +125 °C</td>
</tr>
<tr>
<td>Bias Voltage (Digital)</td>
<td>+2.5 V</td>
</tr>
<tr>
<td>Bias Voltage (VCO)</td>
<td>+5.5 V</td>
</tr>
<tr>
<td>Bias Voltage (Converter)</td>
<td>+8.0 V</td>
</tr>
<tr>
<td>DC Voltage Applied to RF Out</td>
<td>±25 V</td>
</tr>
</tbody>
</table>

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; 7,612,296; 2,524,751

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SURFACE MOUNT MODEL: LFSW190410-12

WIDE BANDWIDTH
1900 - 4100 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: LFSW190410-12

WIDE BANDWIDTH

1900 - 4100 MHz

HARMONIC SUPPRESSION

REFERENCE SIDEBand SUPPRESSION
INTELLIGENT INTERACTIVE SYNTHESIZER
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WIDE BANDWIDTH
1900 - 4100 MHz

REFERENCE SIDEBAND SUPPRESSION

Performance Plots

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