INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW300600-100

WIDE BANDWIDTH
3000 - 6000 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

SPECIFICATIONS (Rev. B 04/04/11)

Frequency 3000 - 6000 MHz
Step Size 1000 kHz
Reference Input Frequency 10 MHz ¹
Reference Input Voltage 1 V p-p to 3.3 V p-p

Bias Voltage

<table>
<thead>
<tr>
<th>Voc</th>
<th>V (Vdc)</th>
<th>I (mA Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital</td>
<td>+5</td>
<td>15</td>
</tr>
<tr>
<td>VCO</td>
<td>+5</td>
<td>50</td>
</tr>
<tr>
<td>Tune</td>
<td>+20</td>
<td>10</td>
</tr>
</tbody>
</table>

Lock Detect Indicator CMOS 3.3 V
Output Power -3 dBm (Min.)
Spurious Suppression 90 dB (Typ.)
Harmonic Suppression 20 dB (Typ.)
Settling Time 3 mSec (Typ.) ²
Output Impedance 50 Ohms (Nom.)

Operating Temperature Range -40 to +85 ºC
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 ºC |
| Bias Voltage (Digital) | +5.25 V |
| Bias Voltage (VCO) | +5.5 V |
| Bias Voltage (Tune) | +22 V |

DC Voltage Applied to RF Out ±25 V

Phase Noise

OFFSET PHASE NOISE
@ 1 kHz -78 dBc/Hz
@ 10 kHz -80 dBc/Hz
@ 100 kHz -100 dBc/Hz

Output impedance 50 Ohms (Nom.)

Applications for high frequency environments

Port Configuration

Pin 1, 2, 3 - NC
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 10 - RF Out
Pin 11 - Lock Detect Out *
Pin 12 - Clock In
Pin 13 - Vcc (Digital)
All Others - Ground

* High when locked (source/sink 500 uA)

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; 2,524,751

Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 1 1/259766; 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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INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW300600-100

WIDE BANDWIDTH
3000 - 6000 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
SURFACE MOUNT MODEL: FSW300600-100

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HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

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PERFORMANCE PLOTS

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

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INTelligent Interactive Synthesizer
Surface Mount Model: FSW300600-100
Wide Bandwidth
3000 - 6000 MHz

Performance Plots

Reference Sideband Suppression

- Reference Sideband Suppression
- Reference: 6 dBm
- Attenuation: 35 dB
- Center Frequency: 6 GHz
- Span: 50 MHz
- RBW: 2 kHz
- VBW: 2 kHz
- SWT: 12.5 s
- Delta 1 [T1]: -73.50 dB
- Delta 2 [T1]: -74.39 dB
- Delta 3 [T1]: -66.77 dB
- Delta 4 [T1]: -74.33 dB

Mark 1 [T1]:
- Span: 50 MHz
- Center: 6 GHz

Marker 1 [T1]:
- Frequency: 10.000000000 MHz
- Power: -2.60 dBm

Delta 1 [T1]:
- Frequency: 20.000000000 MHz
- Power: -74.39 dB

Delta 2 [T1]:
- Frequency: -10.000000000 MHz
- Power: -66.77 dB

Delta 3 [T1]:
- Frequency: -20.000000000 MHz
- Power: -74.33 dB

Delta 4 [T1]:
- Frequency: -20.000000000 MHz
- Power: -74.33 dB

Date: 15 Sep 2008 23:25:07