INTELLIGENT INTERACTIVE SYNTHESIZER
CONNECTORIZED MODEL: KFSW40110-50

WIDE BANDWIDTH

400 - 1100 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
► Buffered Output

SPECIFICATIONS

Frequency: 400 - 1100 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 45
  - VCO: +5 45
  - Tune: +25 5

Output Power: 0 dBm (Min.)
Spurious Suppression: 75 dB (Typ.)
Harmonic Suppression: 10 dB (Typ.)
Settling Time: 10 mSec (Max.)
Output Impedance: 50 Ohms (Nom.)

Typical Phase Noise:
- Offset Phase Noise
  - @ 1 kHz: -93 dBc/Hz
  - @ 10 kHz: -95 dBc/Hz
  - @ 100 kHz: -122 dBc/Hz

Operating Temperature Range: -40 to +85 °C
Programming: See Application Note: AN7100

Absolute Maximum Ratings
- Storage Temp. Range: -55 to +125 °C
- Bias Voltage (Digital): +5.25 V
- Bias Voltage (Tune): +28 V
- Bias Voltage (VCO): +5.5 V
- DC Voltage Applied to RF Out: ±25 V

DB15 Female Connector Configuration
- Pin 1 - Vcc (Digital)
- Pin 2 - Vcc (Tune)
- Pin 3 - Clock In
- Pin 4 - Data In
- Pin 5 - Error Flag
- Pin 6 - Latch Enable
- Pin 7 - Reset *
- Pin 8 - Lock Detect **
- Pin 9 - Vcc (VCO)
- Pin 10 - Latch Enable
- Pin 11 - Clock In
- Pin 12 - Data In
- Pin 13 - Error Flag
- Pin 14 - Latch Enable

* A low on this input will reset the internal controller. Leave unconnected for normal operation.
** 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; 2,533,623; 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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WIDE BANDWIDTH
400 - 1100 MHz

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTELLIGENT INTERACTIVE SYNTHESIZER
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REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
INTelligent Interactive Synthesizer
ConnectOrIzed Model: KFSW40110-50
Wide Bandwidth 400 - 1100 MHz

Performance Plots

Harmonic Suppression

<table>
<thead>
<tr>
<th>Ref. 10 dBm</th>
<th>Att. 35 dB</th>
<th>SWT 540 ms</th>
<th>1.52556403 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta 1 [T1]</td>
<td>-11.73 dB</td>
<td>2.94 dBm</td>
<td>747.435897436 MHz</td>
</tr>
<tr>
<td>Delta 2 [T1]</td>
<td>-34.57 dB</td>
<td>2.251282051 GHz</td>
<td></td>
</tr>
<tr>
<td>Delta 3 [T1]</td>
<td>-36.65 dB</td>
<td>3.005128205 GHz</td>
<td></td>
</tr>
<tr>
<td>Delta 4 [T1]</td>
<td>-39.08 dB</td>
<td>1.502564103 GHz</td>
<td></td>
</tr>
</tbody>
</table>

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Reference Sideband Suppression

<table>
<thead>
<tr>
<th>Ref. 10 dBm</th>
<th>Att. 35 dB</th>
<th>SWT 12 s</th>
<th>1.431563077 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta 1 [T1]</td>
<td>-84.44 dB</td>
<td>2.91 dBm</td>
<td>750.000000000 MHz</td>
</tr>
<tr>
<td>Delta 2 [T1]</td>
<td>-85.24 dB</td>
<td>-533.653846154 kHz</td>
<td></td>
</tr>
<tr>
<td>Delta 3 [T1]</td>
<td>-86.04 dB</td>
<td>687.500000000 kHz</td>
<td></td>
</tr>
<tr>
<td>Delta 4 [T1]</td>
<td>-86.38 dB</td>
<td>-1.451923077 MHz</td>
<td></td>
</tr>
</tbody>
</table>

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