REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FCTS1000-100-5

FIXED FREQUENCY

1000 MHz

FEATURES:
► Ultra-Low Phase Noise
► No Programming Required
► Lead Free - RoHs Compliant
► Patented REL-PRO Technology
► Small Size, Surface Mount

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1000 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Input Frequency</td>
<td>100 MHz $^1$</td>
</tr>
<tr>
<td>Reference Input Voltage</td>
<td>1.0 to 3.3 V p-p</td>
</tr>
</tbody>
</table>

Bias Voltage

<table>
<thead>
<tr>
<th>Offset</th>
<th>Phase Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 100 Hz</td>
<td>-80 dBC/Hz</td>
</tr>
<tr>
<td>@ 1 kHz</td>
<td>-115 dBC/Hz</td>
</tr>
<tr>
<td>@ 10 kHz</td>
<td>-141 dBC/Hz</td>
</tr>
<tr>
<td>@ 100 kHz</td>
<td>-156 dBC/Hz</td>
</tr>
</tbody>
</table>

Operating Temperature Range

-20 to +70 °C

$^1$ External 100 MHz reference sources should have phase noise better than -120 dBc/Hz @ 50 Hz offset to achieve published specifications.

Absolute Maximum Ratings

| Storage Temp. Range | -40 to +85 °C |
| Bias Voltage (Digital) | +5.25 V |
| Bias Voltage (Tune) | +13.0 V |
| Bias Voltage (VCO) | +5.5 V |

PORT CONFIGURATION

Pin 6 - Ref. Input
Pin 7 - Vcc 1 (Digital)
Pin 8 - Vcc 2 (Tune)
Pin 9 - Vcc 3 (VCO)
Pin 13 - RF Out
Pin 14 - Lock Detect
Pin 10, 11, 12 - GND
NC - Not Connected

* High when locked (source/sink 500 uA)


Copyright © Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 USA
Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • Website: http://www.synergymwave.com
Patents : http://www.synergymwave.com/patents
REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FCTS1000-100-5

FIXED FREQUENCY

1000 MHz

PERFORMANCE PLOTS

@ -20 ºC

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

Copyright © Synergy Microwave Corporation
201 McLean Boulevard • Paterson, New Jersey 07504 USA
Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymwave.com • Website: http://www.synergymwave.com
Patents : http://www.synergymwave.com/patents
REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FCTS1000-100-5

1000 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS

@ -20 ºC
REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FCTS1000-100-5

1000 MHz

HARMONIC SUPPRESSION

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS @ +25 ºC
REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FCTS1000-100-5

FIXED FREQUENCY

1000 MHz

REFERENCE SIDEBAND SUPPRESSION

PERFORMANCE PLOTS
@ +25 ºC