Blue Tops RF Modules > Low Noise Frequency Divider

Features:
- Output Frequency to 1.25 MHz
- Division Factors: 2 or 4
- Output Waveform: Sine or Square
- Intrinsic Phase Noise to -167 dBC/Hz
- Optional Output Bandpass Filter
- Low Power Consumption

Applications:
- Synthesizer Building Block
- Communication Systems
- Radar Systems
- Electronic Warfare Systems

Description:
The LNFD is a frequency divider module with division factors of 2 or 4 for input frequencies up to 100 MHz. This module features a divider, an output bandpass filter for excellent harmonic suppression and a low noise voltage regulator for power supply spurious rejection, all integrated into a single housing. The output bandpass filter can be included as required or bypassed for a broadband response (TTL compatible square wave output).

### Electrical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division Factor</td>
<td>2 or 4</td>
</tr>
<tr>
<td>Input Frequency</td>
<td>5 MHz to 100 MHz, fixed</td>
</tr>
<tr>
<td>Input Level</td>
<td>+13 dBm to +20 dBm, fixed (±1 dB)</td>
</tr>
<tr>
<td>Output Frequency</td>
<td>down to 2.5 MHz (sine); to 10 kHz (square)</td>
</tr>
<tr>
<td>Output Waveform</td>
<td>Sine or Square</td>
</tr>
<tr>
<td>Output Level</td>
<td>to +13 dBm (±2 dB)</td>
</tr>
<tr>
<td>Square (TTL Compatible)</td>
<td>≤ 0.8 VDC (LO); +4.8 VDC (HI)</td>
</tr>
<tr>
<td>Phase Noise, Residual (Intrinsic, Output Referred, 100 MHz Model)</td>
<td>-167 dBC/Hz (100 kHz offset)</td>
</tr>
<tr>
<td>Harmonics</td>
<td>≤ -30 dBc (sine)</td>
</tr>
<tr>
<td>Sub-Harmonics</td>
<td>≤ -50 dBc (sine)</td>
</tr>
<tr>
<td>Spurious (Excluding Supply Line Related Spurs)</td>
<td>≤ -80 dBc</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>+15 VDC ±5%</td>
</tr>
<tr>
<td>Current Draw</td>
<td>≤ 60 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to +50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to +85°C</td>
</tr>
</tbody>
</table>

### Ordering Information:

- **LNFD-2**
  - Division Factor (2 or 4)
  - Waveform (Sine for Sine; 0 for Square)
  - Input Frequency (5 to 100 MHz)
  - Output Level (dBm, 0 to +13); Square (TTL)
  - Output Level (dBm, +13 to +20)

### Mechanical

- Dimensions: 2" x 1.25" x 0.8""
Blue Tops RF Modules > Low Noise Frequency Divider

Connections

- RF In
- RF Out
+ Supply Voltage
- Case Ground

Label this side

1.25" C_L

2.00"

0.345"

0.250" Label this side

0.075"

0.80" C_L

1.08"

1.83"

#2-56 Threaded Insert, 4 places, 0.150" deep

Wenzel Associates, Inc. • 2215 Kramer Lane, Austin, Texas 78758-4002 • www.wenzel.com
Phone: 512-835-2038 • Fax: 512-719-4086 • sales@wenzel.com