The PE11S3901 is a Frequency Synthesizer Module that covers a wide frequency band from 25 MHz to 6 GHz with exceptional spurious rejection and phase noise performance. Attenuation range up to 50 dB is adjustable in 1 dB steps across the entire frequency band. This high quality signal source has several outstanding features including a USB 2.0 interface that is powered and command controlled directly by a host PC and a Female SMA output connector, and is VISA compliant which enables seamless cross platform use. The synthesizer can be GUI controlled via Windows®, Macintosh®, or Linux® platforms, or with SCPI compliant VISA commands (downloadable user manual), or with other system design software such as LabVIEW®. The compact size makes it ideal for bench top test and measurement use or for radar and communication systems. Frequency resolution of the PE11S3901 is available in integer and fractional operating modes and the User can select between an internal reference (capable of phase locking) or externally applied reference. The RF Synthesizer Module comes complete with a USB 2.0 A extension and an SMA male to MMCX plug cable.
Internal Reference Frequency | 50 MHz
---|---
Internal Reference Accuracy | 0.5 ppm

### Performance by Frequency

<table>
<thead>
<tr>
<th>Description</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>0.05</td>
<td>3</td>
<td>6</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Phase Noise @ 100 kHz Offset (with internal reference)</td>
<td>-104</td>
<td>-95</td>
<td>-86</td>
<td></td>
<td>dBc/Hz</td>
</tr>
<tr>
<td>2nd Harmonics</td>
<td>-24.66</td>
<td>-26.17</td>
<td>-28.5</td>
<td></td>
<td>dBc</td>
</tr>
<tr>
<td>3rd Harmonics</td>
<td>-10.66</td>
<td>-29</td>
<td>-47.5</td>
<td></td>
<td>dBc</td>
</tr>
<tr>
<td>4th Harmonics</td>
<td>-34.5</td>
<td>-46.83</td>
<td>&gt; -70</td>
<td></td>
<td>dBc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>.025 to 1</td>
<td>1 to 1.5</td>
<td>1.5 to 3</td>
<td>3 to 6</td>
<td>GHz</td>
</tr>
<tr>
<td>Step Size (Integer Mode)</td>
<td>12.5</td>
<td>25</td>
<td>50</td>
<td>100</td>
<td>MHz</td>
</tr>
</tbody>
</table>

Electrical Specification Notes:
Step size specified under default conditions (a 50 MHz reference input with a reference divider of 1).

### Mechanical Specifications

**Size**
- Length: 4.1 in [104.14 mm]
- Width: 0.9 in [22.86 mm]
- Height: 0.645 in [16.38 mm]
- Weight: 0.27 lbs [122.47 g]

**Configuration**
- Package Type: Connectorized
- Reference Connector: MMCX Female
- Output Connector: SMA Female
- Control Connector: USB Type A - Male
- Reference Divider Out Connector: MMCX Female

Mechanical Specification Notes:
The USB Type A - Male connector is used for both Power and Control.

### Environmental Specifications

**Temperature**
- Operating Range: 0 to +55 deg C
- Storage Range: -50 to +100 deg C

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: USB Frequency Synthesizer Module, Phase Locked Loop (PLL), 25 MHz to 6 GHz Output, SMA PE11S3901
USB Frequency Synthesizer Module, Phase Locked Loop (PLL), 25 MHz to 6 GHz Output, SMA

<table>
<thead>
<tr>
<th>Compliance Certifications</th>
<th>(visit <a href="http://www.Pasternack.com">www.Pasternack.com</a> for current document)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoHS Compliant</td>
<td></td>
</tr>
</tbody>
</table>

| Plotted and Other Data    | Notes:                                        |

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USB Frequency Synthesizer Module, Phase Locked Loop (PLL), 25 MHz to 6 GHz Output, SMA

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Synthesizers Technical Data Sheet

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USB Frequency Synthesizer Module, Phase Locked Loop (PLL), 25 MHz to 6 GHz Output, SMA