PNCS-1 Phase Noise Clock Standard

The PNCS-1 Phase Noise Clock Standard provides an ultra-low phase noise 1 GHz sinewave that can be used as a phase noise reference standard for testing spectrum analyzer phase noise performance. The PNCS-1 is also well suited for use as a system clock for ADCs and DACs, providing a clean reference for optimal performance.

For low phase noise RF applications, the PNCS-1 can be used as a reference for high speed PFDs, or multiplied to higher frequencies for use in translation loop architectures.

**SPECIFICATIONS**

**OUTPUT FREQUENCY**
1 GHz Nominal with 1.5 ppm rear panel frequency adjustment

**RF Input Impedance (SMA connector):** 50Ω nominal

**OUTPUT AMPLITUDE**
+10dBm (± 2dB)

**HARMONICS**
-35dBc Typical

**OPERATING TEMPERATURE (AMBIENT)**
50°F to 95°F (10°C to +35°C)

**SIZE AND WEIGHT**
6.5” x 3.2” x 1.1” (259mm x 183mm x 55mm), 8.96 oz. (256.5 g)

**POWER CONSUMPTION**
4.5 watts sourced from the supplied AC/DC 13.5V wall adapter

**ECCN**
3A001.b.10
SSB PHASE NOISE AT 1 GHz CENTER FREQUENCY

<table>
<thead>
<tr>
<th>Offset Frequency</th>
<th>dBc/Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Hz</td>
<td>-82</td>
</tr>
<tr>
<td>100 Hz</td>
<td>-116</td>
</tr>
<tr>
<td>1 kHz</td>
<td>-138</td>
</tr>
<tr>
<td>10 kHz</td>
<td>-147</td>
</tr>
<tr>
<td>100 kHz</td>
<td>-148</td>
</tr>
<tr>
<td>1 MHz</td>
<td>-149</td>
</tr>
</tbody>
</table>

PNCS-1 tuned to match Holzworth (typical)
HA7402B-245

Units: dBc/Hz
XCorr: 10
Time: 3 min 0 sec
Freq: 999.999 998.0 MHz
Power: 9.3 dBm
2017/1/15 12:46:05