Jitter Results

**Period Jitter:** Period jitter compares the length of each cycle to the average period of an ideal clock using the long term averaging frequency.

**Cycle to Cycle Jitter:** Cycle to cycle jitter compares the difference in the cycle length of adjacent cycles.

**Time Interval Error Jitter:** TIE Jitter is the variation in the clock’s transition from its ideal position over many cycles.

Jitter measurements are done on a LeCroy WaveMaster 8600A digital oscilloscope, 10K samples.

Also included is the calculated jitter for the 12 kHz to 20 MHz offset band, using an Agilent E5052A.

<table>
<thead>
<tr>
<th>Output MHz</th>
<th>Period RMS ps</th>
<th>P/P ps</th>
<th>Cycle to Cycle RMS ps</th>
<th>P/P ps</th>
<th>TIE RMS ps</th>
<th>P/P ps</th>
<th>Measured on Agilent E5052A 12kHz - 20MHz (fs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>110.0000</td>
<td>3.0</td>
<td>23.7</td>
<td>5.2</td>
<td>39.2</td>
<td>2.6</td>
<td>22.2</td>
<td>211.2</td>
</tr>
<tr>
<td>139.2640</td>
<td>3.1</td>
<td>23.2</td>
<td>5.4</td>
<td>40.0</td>
<td>2.4</td>
<td>19.4</td>
<td>204.1</td>
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<td>155.5200</td>
<td>3.1</td>
<td>23.2</td>
<td>5.4</td>
<td>39.6</td>
<td>2.4</td>
<td>22.0</td>
<td>197.1</td>
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<tr>
<td>161.1328</td>
<td>2.9</td>
<td>23.8</td>
<td>5.1</td>
<td>41.5</td>
<td>2.5</td>
<td>22.0</td>
<td>192.9</td>
</tr>
<tr>
<td>167.3316</td>
<td>3.1</td>
<td>23.3</td>
<td>5.5</td>
<td>38.1</td>
<td>2.4</td>
<td>20.5</td>
<td>192.9</td>
</tr>
<tr>
<td>200.0000</td>
<td>3.1</td>
<td>24.5</td>
<td>5.3</td>
<td>41.8</td>
<td>2.2</td>
<td>20.5</td>
<td>213.2</td>
</tr>
</tbody>
</table>

Table of typical jitter values for the VC-710 series of oscillators
VC-710 Phase noise and Jitter measurement

Phase Noise Results

Phase noise measurements were performed on an Agilent E5052A signal source analyzer (SSA). The E5052A is has a phase noise to jitter integration calculation feature and devices were characterized in the 12kHz-20MHz band. Please contact Vectron for other offset integration bands.

VC-710-DFC-GFA 110.000 Phase Noise test

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VC-710 Phase noise and Jitter measurement

VC-710-DFC-GFM-139.264 Phase Noise test

VC-710-DFF-GFA-155.520 Phase Noise test

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VC-710 Phase noise and Jitter measurement

VC-710-DFF-GFA-200.000 Phase Noise test

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