

### 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.

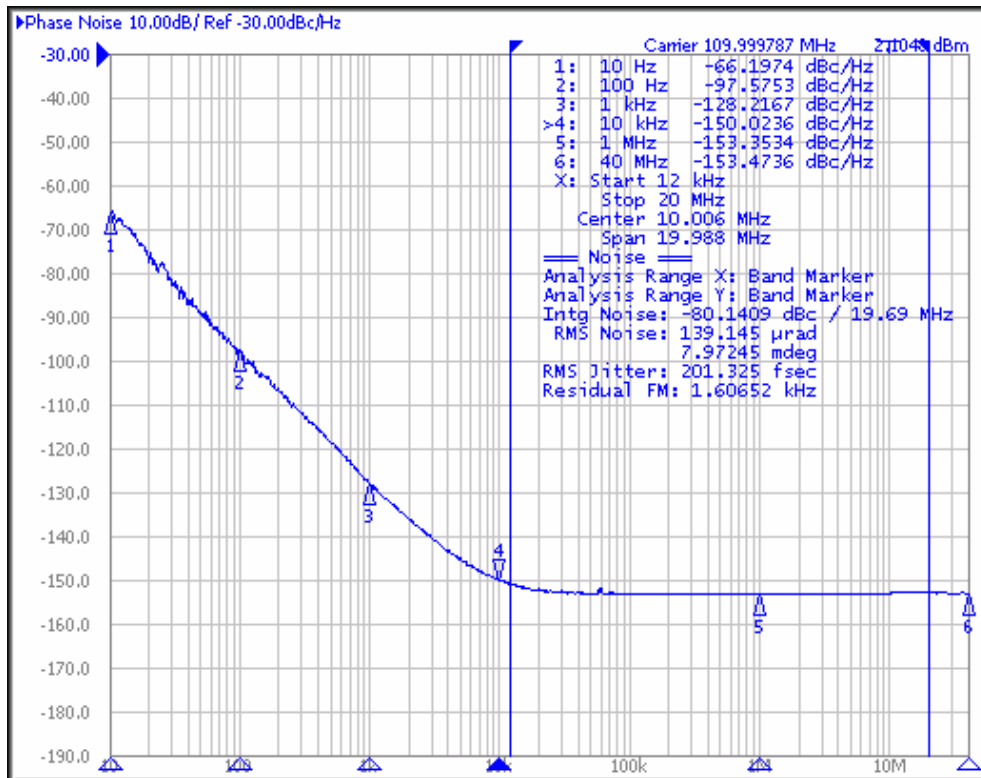
Output MHz	Period		Cycle to Cycle		TIE		Measured on Agilent E5052A
	RMS ps	P/P ps	RMS ps	P/P ps	RMS ps	P/P ps	RMS 12kHz - 20MHz (fs)
<b>110.0000</b>	3.0	23.7	5.2	39.2	2.6	22.2	211.2
<b>139.2640</b>	3.1	23.2	5.4	40.0	2.4	19.4	204.1
<b>155.5200</b>	3.1	23.2	5.4	39.6	2.4	22.0	197.1
<b>161.1328</b>	2.9	23.8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

**Table of typical jitter values for the VC-710 series of oscillators**

# VC-710 Phase noise and Jitter measurement

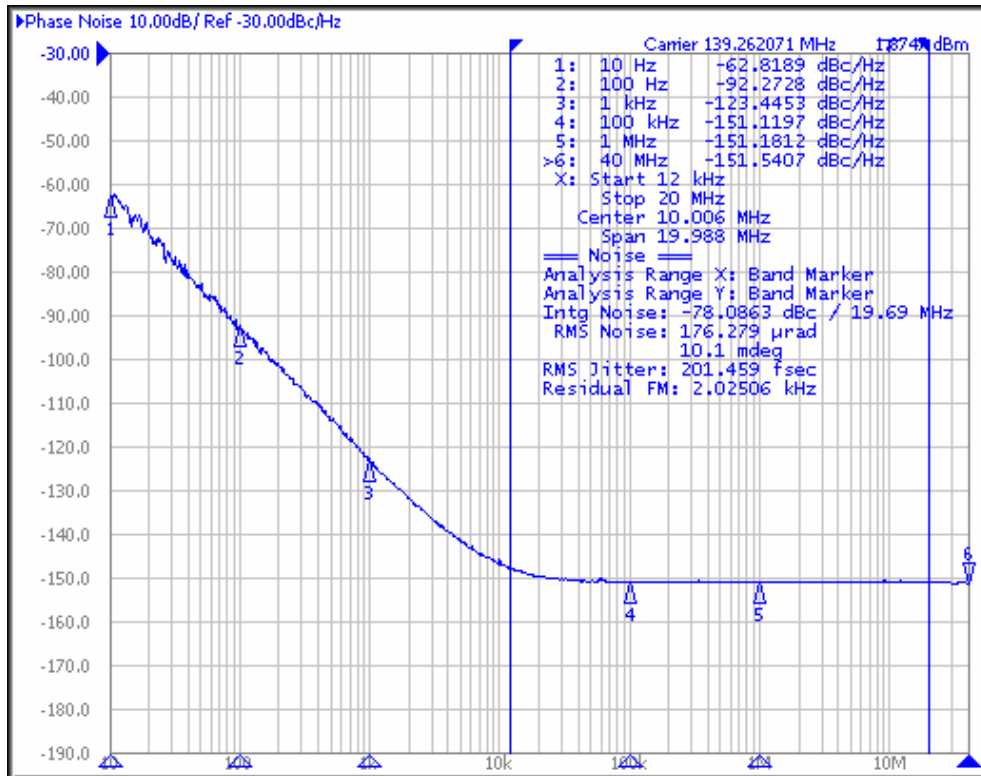
## Phase Noise Results

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.

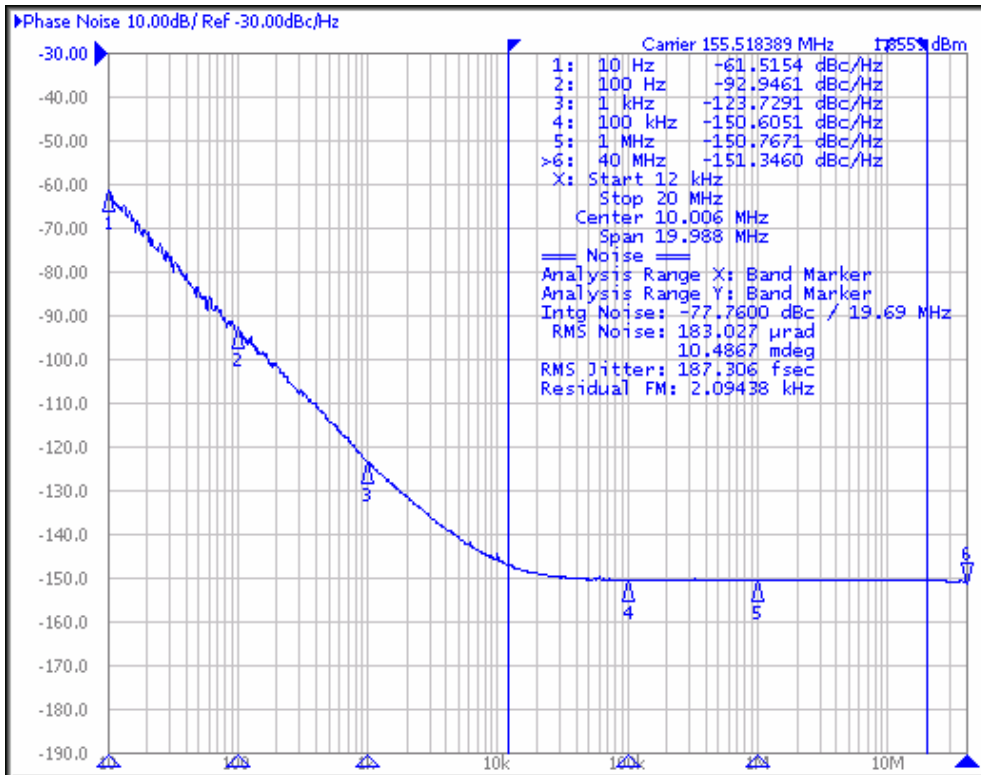


VC-710-DFC-GFA 110.000 Phase Noise test

# VC-710 Phase noise and Jitter measurement

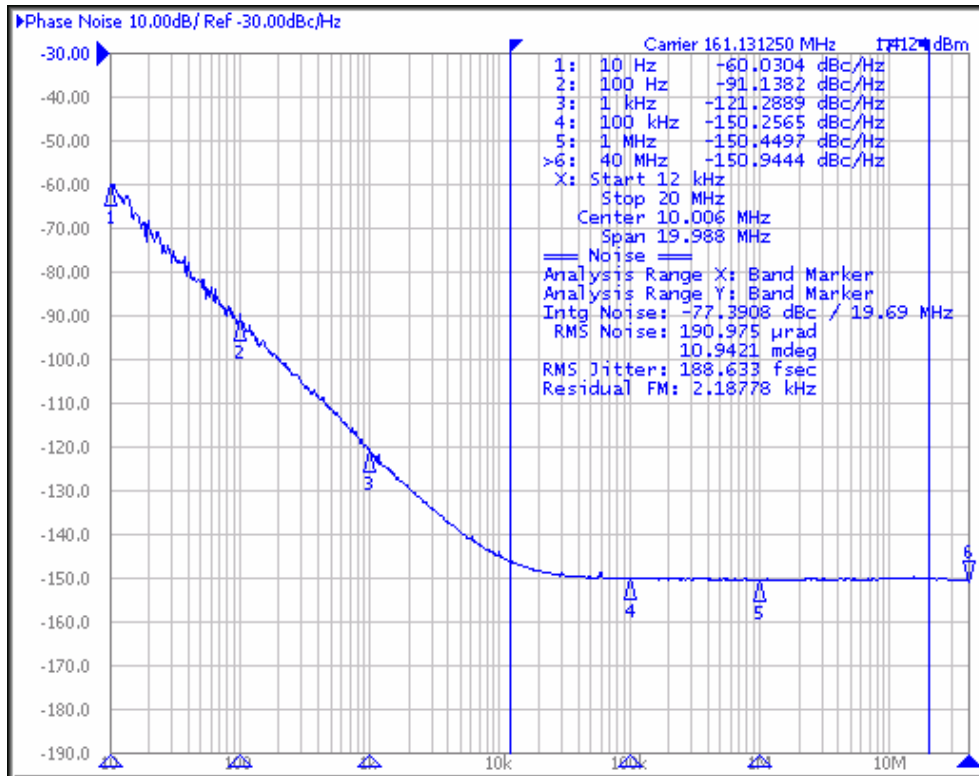


VC-710-DFC-GFM-139.264 Phase Noise test

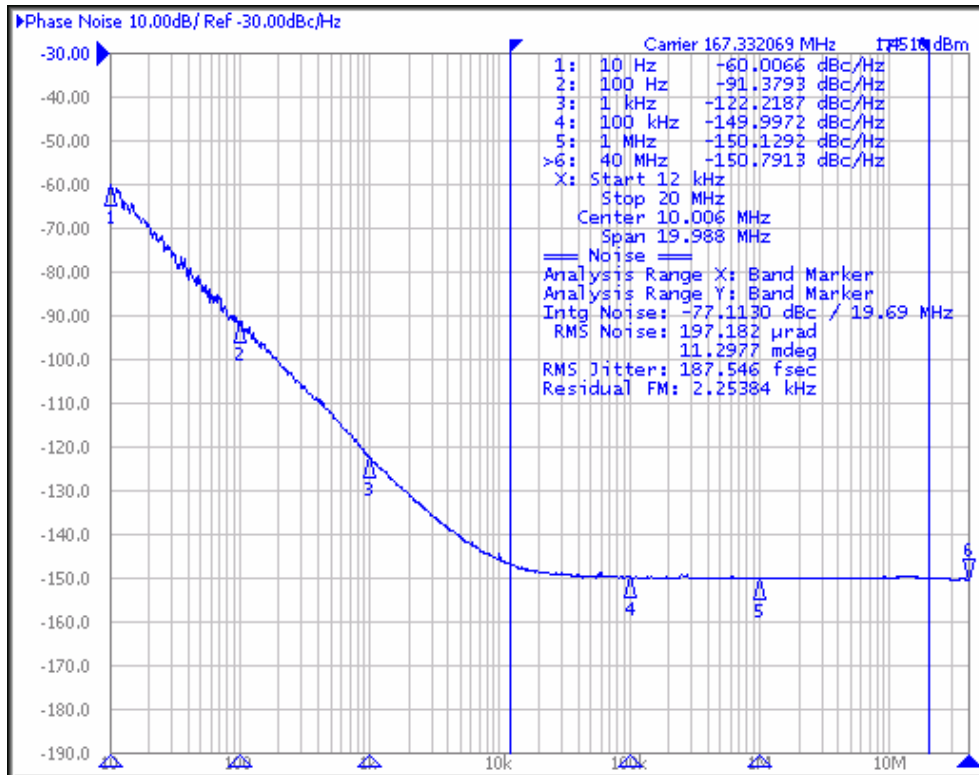


VC-710-DFF-GFA-155.520 Phase Noise test

## VC-710 Phase noise and Jitter measurement

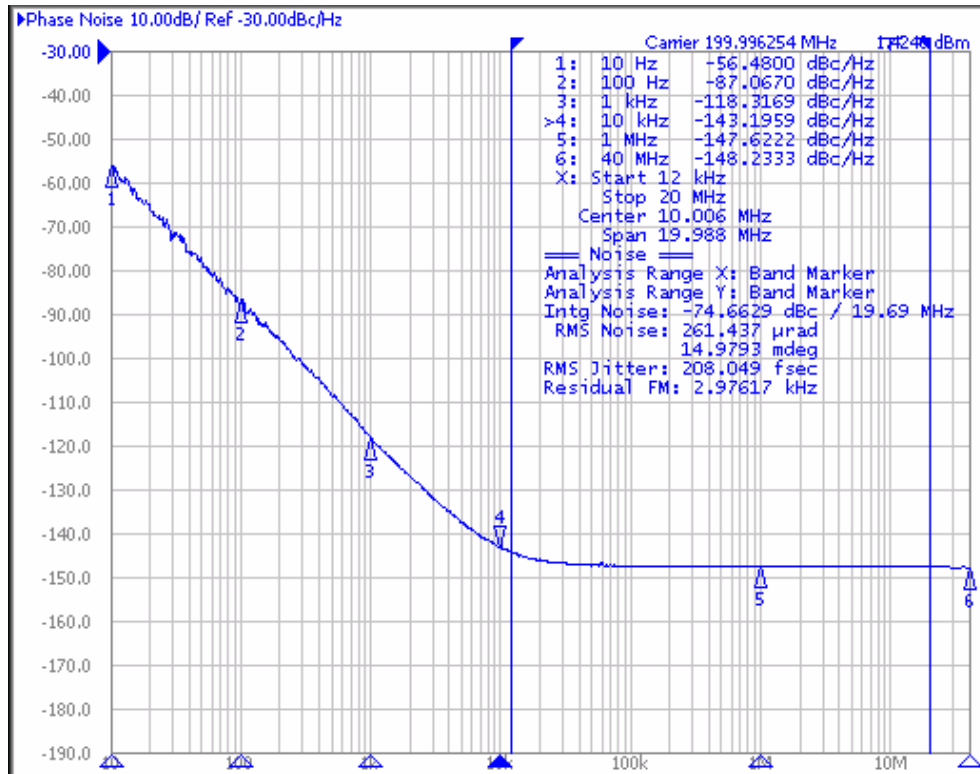


VC-710-DFF-GFA-161.1328 Phase Noise test



VC-710-DFF-GFA-167.3316 Phase Noise test

## VC-710 Phase noise and Jitter measurement



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

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