

# MAX2605/MAX2606/MAX2608/MAX2609 VCO Phase Noise Measurements

*Phase noise performance is measured and presented for Maxim's IF voltage-controlled oscillators (VCOs). The phase noise of the VCOs tested rolled-off at 20dB/decade between 10kHz and 1MHz offset. All measurements were taken with Maxim Evaluation kits.  $V_{CC} = +2.75V$ ,  $T_A = +25^\circ C$ , and  $V_{TUNE} = 1.4V$ .*

The MAX2605-MAX2609 are compact, high-performance intermediate-frequency (IF) voltage-controlled-oscillators (VCOs) designed specifically for demanding portable wireless communication systems. They combine monolithic construction with low-noise, low-power operation in a tiny 6-pin SOT23 package. These low-noise VCOs feature an on-chip varactor and feedback capacitors that eliminate the need for external tuning elements, making the MAX2605-MAX2609 ideal for portable systems.

This application note describes phase-noise measurements performed on these parts, using Maxim Evaluation kits.  $V_{CC} = +2.75V$ ,  $T_A = +25^\circ C$ , and  $V_{TUNE} = 1.4V$ .

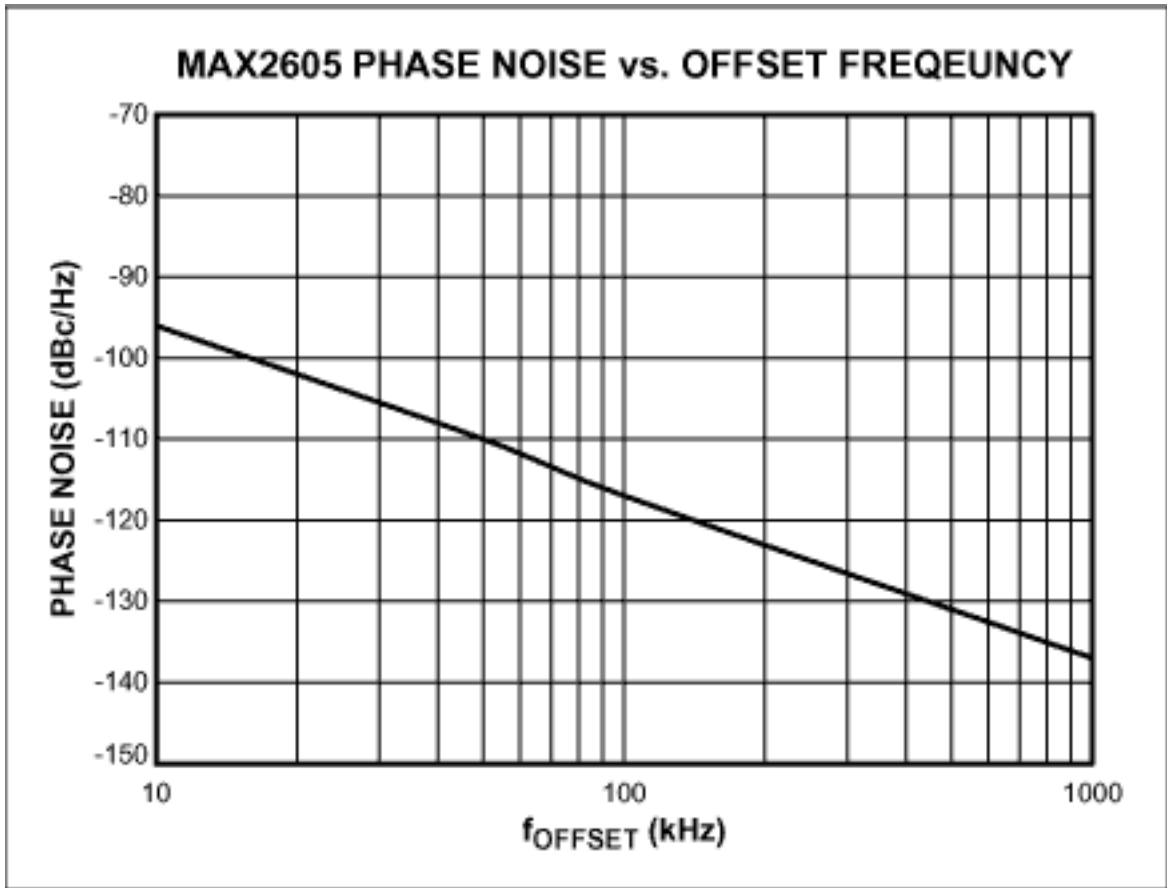


Figure 1.

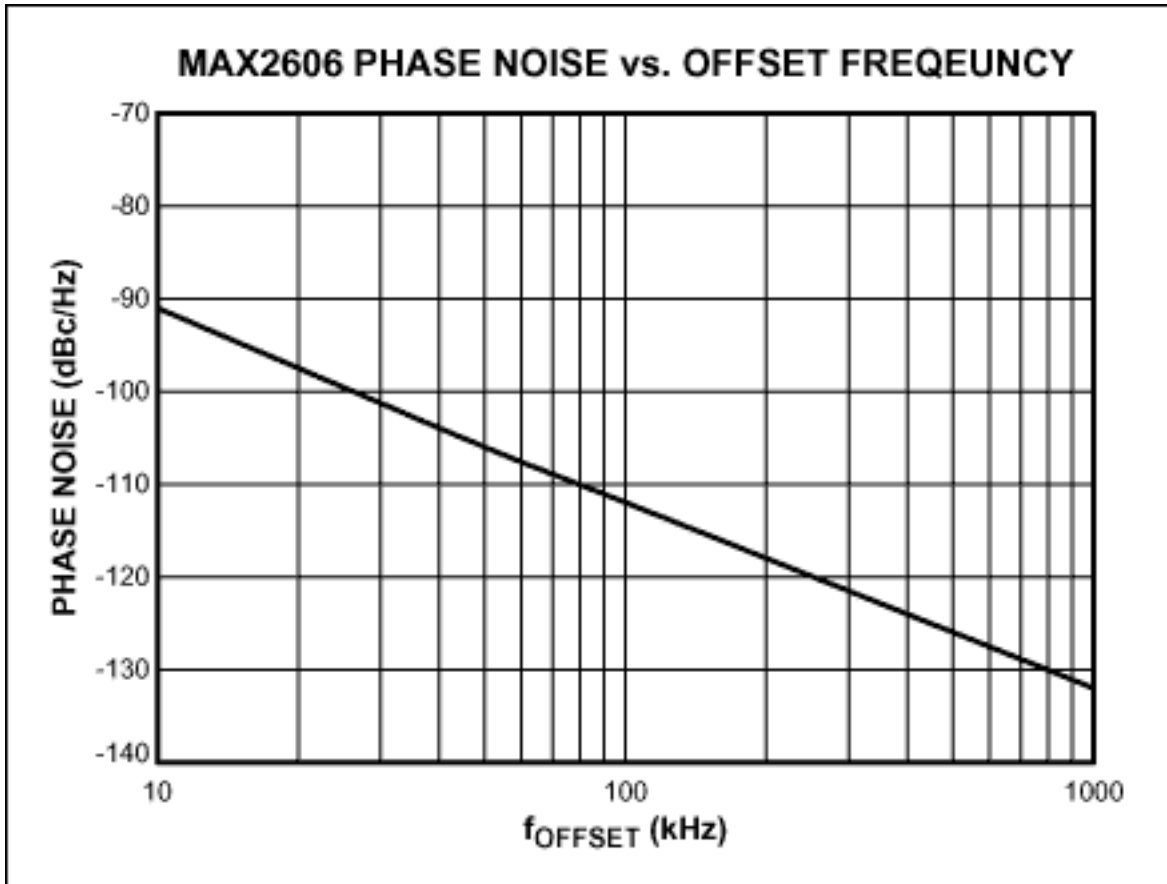


Figure 2.

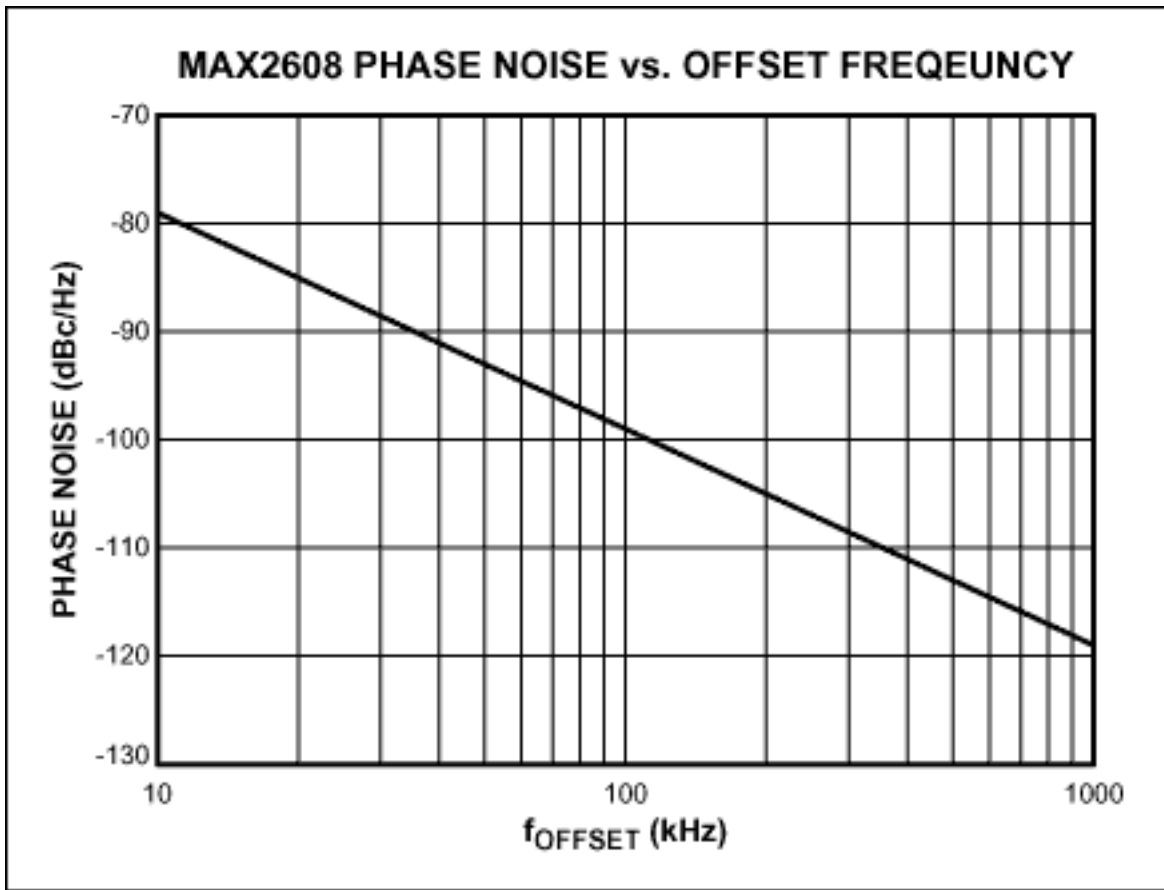


Figure 3.

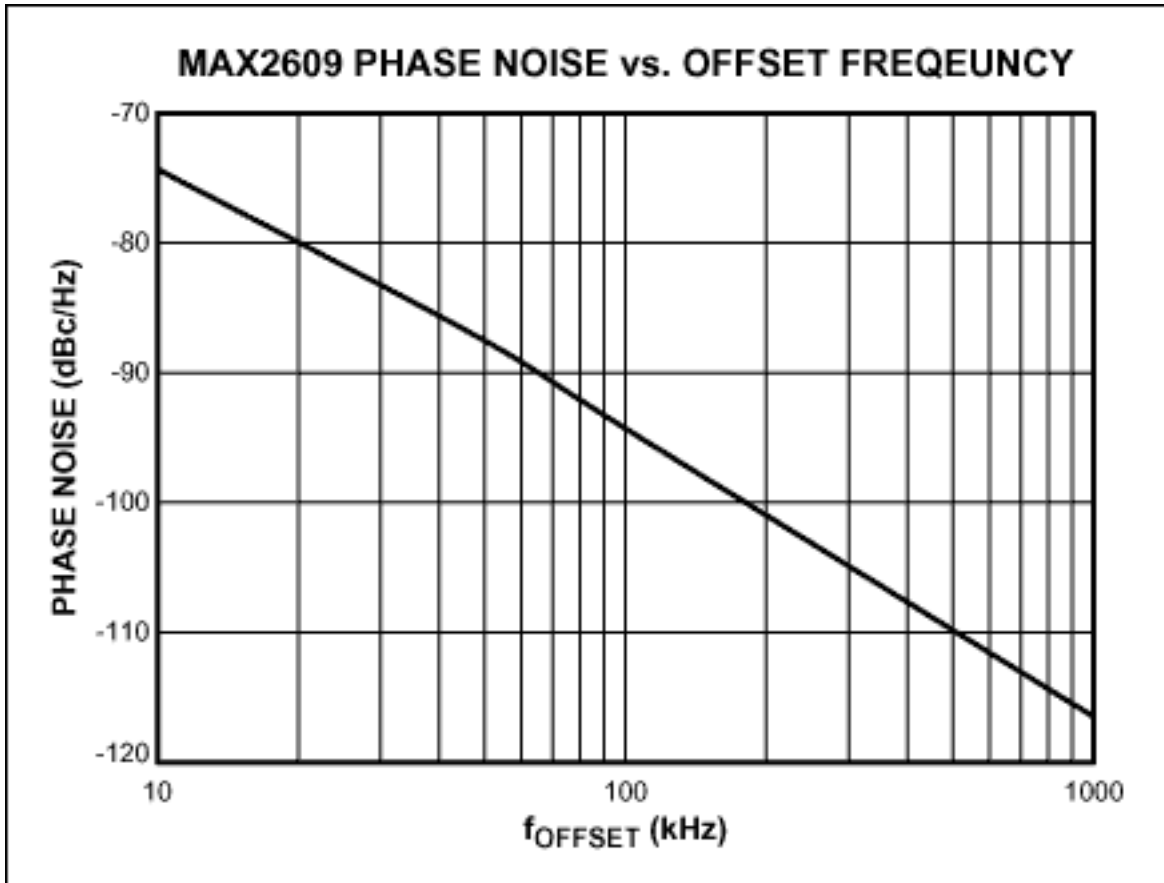


Figure 4.

Note that in each graph presented, the phase noise follows the expected 20dB per decade roll-off. The MAX2607 was not measured for this application note, so a graph was not prepared. Expect the phase noise of the MAX2607 to follow the same roll-off exhibited by all the VCOs in this family.

### **More Information**

MAX2605: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

MAX2606: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

MAX2608: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

MAX2609: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)