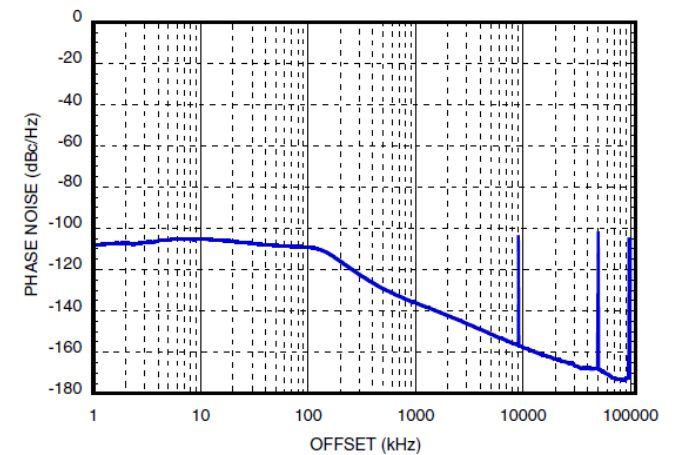
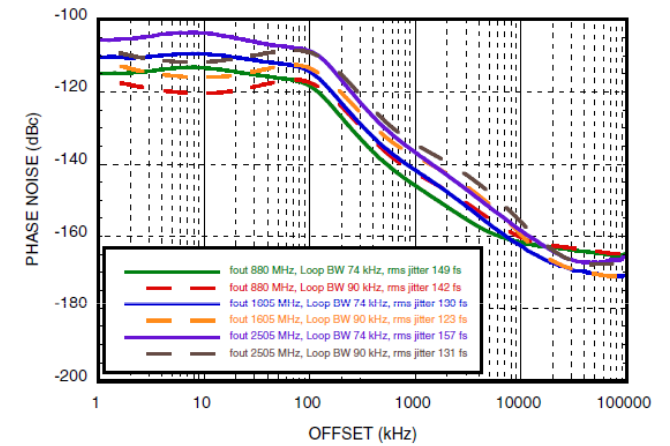
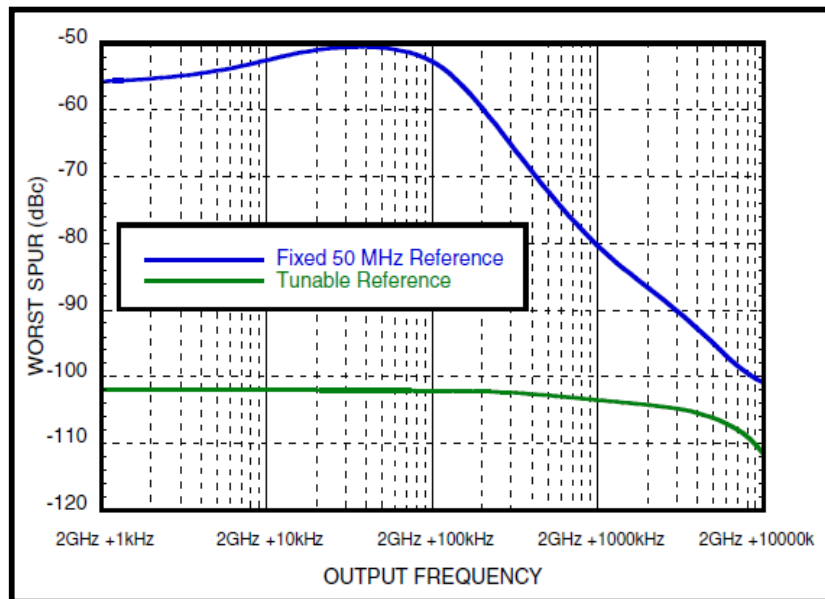
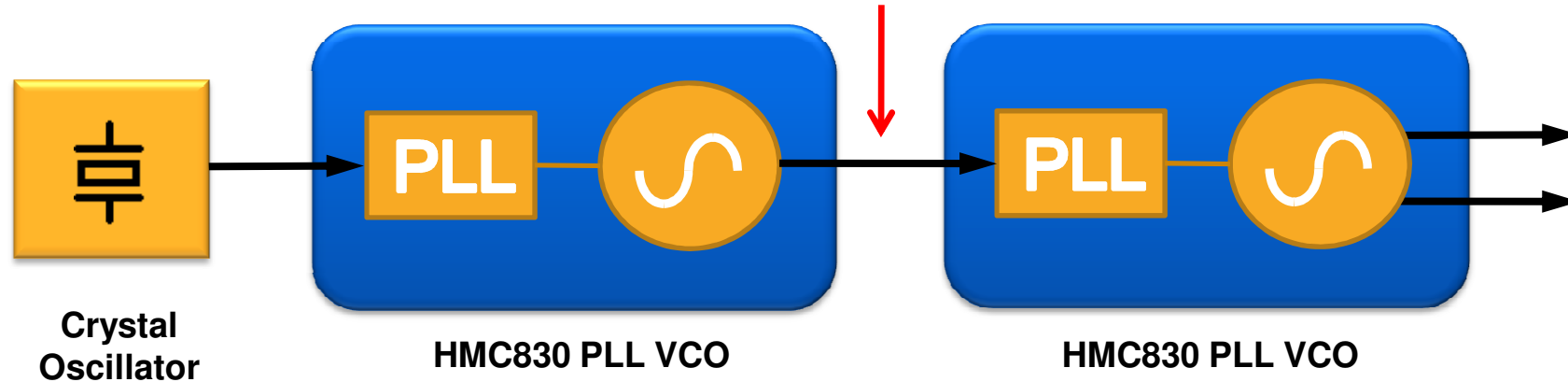


### Fractional Phase Noise and Spurious Performance Demonstration



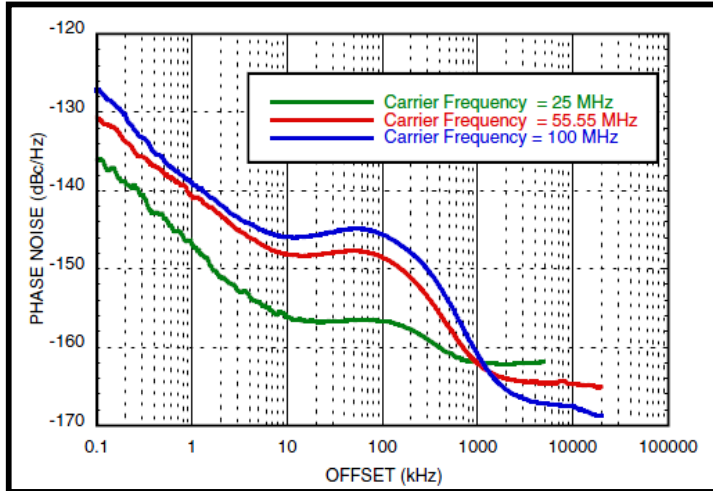
## 25MHz to 100MHz Tunable Reference Output



- Demonstration of a Tunable Reference HMC830 PLL-VCO circuit configuration
- Virtually eliminates spurious emissions

## How?

- One HMC830 PLL-VCO used as a Tunable Reference is cascaded with another PLL-VCO
- Algorithm determines what output value of the Tunable Reference will virtually eliminate the integer boundary spurious at any given VCO frequency



Phase Noise Performance of the HMC830 PLL-VCO when used as a Tunable Reference Source

**Go from a typical -52dBc Spur to a -100dBc Spur !!!**

