Abstract

This paper presents a three-stage 1.8V ring VCO in a 0.18μm CMOS technology with wide tuning range and a good phase noise differential ring oscillator. The oscillator architecture is a three stage differential ring with Multi pass path using push-pull inverters. The circuit was implemented and the measured tuning range of the from 3.8741 GHz to 5.913 GHz, phase noise is -106dBc/Hz from center frequency 5.9GHz and Power Dissipation 28.392dBm at Control Voltage 1Volt.

References

Wide Tuning Range CMOS VCO for Radio Frequency Application

- Timár, Á. Vámos, G. Bognár, "Comprehensive design of a high frequency PLL synthesizer for ZigBee application"; IEEE DDECS, Prague, April 2006.

Index Terms

Computer Science
Circuits & Systems
Keywords

CMOS  low power  phase noise  tail current  voltage controlled oscillator (VCO)