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| **Abstract:** |  |
| Abstract— Today's mobile communications systems demand higher communication quality, higher data rates, higher frequency of operation, more channels per unit bandwidth, low power consumption, and smaller size. All these constraints combine to make the whole design of the communication systems including components selections and evaluation quite challenging. One portion of this design is the synthesized oscillator. Typically, synthesized oscillators combine a Voltage-Controlled Oscillator (VCO) with a Phase-Locked Loop (PLL) IC, frequency reference (e.g., Crystal/TCXO), and a loop filter. This paper describes the evaluation of the PLL and VCO and relates those evaluations to information that will allow the circuit designer to optimize the whole oscillator design including the loop filter. Few experimental results are also presented. It is found that the designed circuit works very well. | |