

A 1.8 GHz CMOS VCO with Reduced Phase Noise

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Abstract

A 2 V, 6 mA, 15% tuning range, 1.8 GHz VCO implemented in a standard $0.35\mu\text{m}$ CMOS process is presented. The phase noise of the VCO has been greatly reduced by means of on-chip filters and one off-chip low frequency inductor. The phase noise measured at 3 MHz offset from the carrier is between -141.5 dBc/Hz and -138.5 dBc/Hz over the whole tuning range.