

Design and Simulation a Low Phase Noise CMOS LC VCO for IEEE802.11a WLAN Applications

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Abstract : This work proposes a structure of AMOS-varactors. A 5GHz LC-VCO designed in TSMC 0.18 μ m CMOS to improve phase noise and tuning range performance. The tuning range is from 5.05GHz to 5.88GHz. The phase noise is -154.9dBc/Hz at 1MHz offset from the carrier. It meets the requirements for IEEE 802.11a WLAN standard.

Keywords : CMOS LC VCO, spiral inductor, varactor, phase noise, tuning range

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