

# Abstracts

## A fully integrated 5.35-GHz CMOS VCO and a prescaler

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Chih-Ming Hung, B.A. Floyd and K.K. O. "A fully integrated 5.35-GHz CMOS VCO and a prescaler." 2000 Radio Frequency Integrated Circuits (RFIC) Symposium 00. (2000 [RFIC]): 69-72.

A 5.35-GHz monolithic VCO and a prescaler have been fabricated in a 0.25- $\mu\text{m}$  CMOS process. The VCO has a tuning range of 336 MHz and phase noise of -117 dBc/Hz at a 1-MHz offset and 7-mW power consumption. The low phase noise is achieved by using only PMOS transistors in the VCO core and by optimizing the resonator layout. The prescaler utilizes a variation of the source coupled logic and consumes only 4.1 mW at  $V_{DD}=1.5$  V and 5.4 GHz. A second prescaler operating at 9.96 GHz and 2.5-V  $V_{DD}$  is also demonstrated.

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