

# Abstracts

## Advanced passive devices for enhanced integrated RF circuit performance (2002 [RFIC])

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*D. Coolbaugh, E. Eshun, R. Groves, D. Harame, J. Johnson, M. Hammad, Z. He, V. Ramachandran, K. Stein, S. St Onge, S. Subbanna, D. Wang, R. Volant, X. Wang and K. Watson. "Advanced passive devices for enhanced integrated RF circuit performance (2002 [RFIC])." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 341-344.*

State of the art passive devices have been developed for optimum RF circuit performance. These devices include a hyperabrupt junction varactor with tunability ( $C_{max}/C_{min}$ ) of 3.3, an accumulation mode MOS varactor, high capacitance nitride metal-insulator-metal capacitors, a BEOL TaN resistor and very high Q inductors with a peak Q of 28 at 3.5 GHz. VCO simulations using several of these elements show a significant reduction in VCO gain variation, phase noise, and power consumption.

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