# Abstracts

## Super compact RFIC inductors in 0.18/spl mu/m CMOS with copper interconnects (2002 Vol. I [MWSYM])

*H. Feng, G. Jelodin, K. Gong, R. Zhan, Q. Wu, C. Chen and A. Wang. "Super compact RFIC inductors in 0.18/spl mu/m CMOS with copper interconnects (2002 Vol. I [MWSYM])." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 553-556 vol.1.*

Design of super compact on-chip inductors with deep-shrunk dimension of 22/spl mu/m/spl times/23/spl mu/m, as opposed to several hundreds /spl mu/m by several hundreds /spl mu/m, is reported. Implemented in a 6-metal all-copper 0.18/spl mu/m CMOS process, a flat inductor value of 10nH up to 4GHz, satisfactory to many typical RFIC applications, is achieved. The aggressive shrinkage reduces parasitic capacitance substantially and makes it realistic and cost-effective to realize single-chip RFICs in very deep sub-micron technologies. A new inductor model is proposed for accuracy. A 2.4GHz LNA circuit with on-chip matching using the compact inductor is demonstrated.

❑ Return to main document.