Abstracts

Microwave Inductors and Capacitors in Standard Multilevel Interconnect Silicon Technology

J.N. Burghartz, M. Soyuer and K.A. Jenkins. "Microwave Inductors and Capacitors in Standard Multilevel Interconnect Silicon Technology." 1996 Transactions on Microwave Theory and Techniques 44.1 (Jan. 1996 [T-MTT]): 100-104.

Spiral inductors and metal-to-metal capacitors for microwave applications, which are integrated on a silicon substrate by using standard 0.8 µm BiCMOS technology, are described. Optimization of the inductors has been achieved by tailoring the vertical and lateral dimensions and by shunting several interconnect metal layers together. Lumped element models of inductors and capacitors provide detailed understanding of the important geometry and technological parameters on the device characteristics. The high quality factors of nearly 10 for the inductors are among the best results in silicon, particularly when using standard silicon technology.

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