Abstracts

Highly Accurate Design of Spiral Inductors for MMIC's with Small Size and High Cut-Off Frequency Characteristics (1984 [MCS])

M. Parisot, Y. Archambault, D. Pavlidis and J. Magarshack. "Highly Accurate Design of Spiral Inductors for MMIC's with Small Size and High Cut-Off Frequency Characteristics (1984 [MCS])." 1984 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 84.1 (1984 [MCS]): 91-95.

High precision experimental and theoretical procedures are presented for obtaining very compact inductors (diameter 80 to 200 µm) with values up to 5 nH and cut-off frequencies ranging from 20 to 100 GHz for L < 2 nH. The maximum phase and amplitude measurement error is of the order to ± 2 degrees and 1% respectively with typical measurement reproducibility of 0.1%. A new lumped element theory is presented predicting the electrical characteristics of spiral inductors with a maximum error of only 5%.

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