Abstracts

Design and modeling of compact on-chip transformer/balun using multi-level metal windings for RF integrated circuits

Tao Liang, J. Gillis, D. Wang and P. Cooper. "Design and modeling of compact on-chip transformer/balun using multi-level metal windings for RF integrated circuits." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 117-120.

A compact integrated balun transformer is analyzed that meets the size demand of highly integrated RFICs for the wireless industry. The design of a balun transformer with 4:1 impedance ratio using multi-level windings significantly reduces the silicon area compared to that occupied by an equivalent planar design. Its application is demonstrated in a highly efficient, linear amplifier design which achieved first pass design success.

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