

Abstracts

A complete physical frequency dependent lumped model for RF integrated inductors

J. Sieiro, J.M. Lopez-Villegas, J. Cabanillas, J.A. Osorio and J. Samitier. "A complete physical frequency dependent lumped model for RF integrated inductors." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 121-124.

A new development in the modeling of planar inductors is presented. The inductance is evaluated by means of analytical expressions, taking into account a full geometry description and the frequency dependence. Moreover, the model predicts the behavior of the ohmic losses and the magnetically induced losses. Finally, a new electric model interpretation of the self-resonant frequency based on physical assumptions is given.

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