Abstracts

Miniaturization of MMIC Inductors Using a 3D FDTD Approach with a SI Method

M. Rittweger, M. Werthen, R. Kulke, B. Hopf, P. Pogatzki and I. Wolff. "Miniaturization of MMIC Inductors Using a 3D FDTD Approach with a SI Method." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1297-1300.

An alternative design for a MMIC inductor as a compromise between a galvano plastic coil and a thin one using an evaporated layer (gate metallization) is investigated. As a method for the analysis of such a component the three-dimensional finite difference time-domain technique has been applied. Due to a problem with convergency of the transfer function in frequency domain the System Identification method has been used for S-parameter extraction. The method is verified by a comparison of measured and simulated results for selected inductors incorporating specific properties of the investigated structure.

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