Abstracts

Fullwave analysis of transverse and longitudinal couplings in silicon RFIC. Effect of buried diffusions

S. Wane, D. Bajon, H. Baudrand and P. Gamand. "Fullwave analysis of transverse and longitudinal couplings in silicon RFIC. Effect of buried diffusions." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1233-1236 vol.2.

Couplings in Si based RFICs result from the combination of the effects of the substrate resistivity, homogenous and localized buried diffusions as well as metallic losses. A fullwave analysis is performed and longitudinal and transverse coupling coefficients are defined from a generalized equivalent circuit. Concurrently, considerable improvement of isolation performances are demonstrated by inserting localized buried diffusions.

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