Abstracts

Modeling and Electrical Characterization of Parasitic Effects for GaAs Integrated Circuits - Experimental Validation and CAD Formulas

N. Hassaine, M. Lecours and G.Y. Delisle. "Modeling and Electrical Characterization of Parasitic Effects for GaAs Integrated Circuits - Experimental Validation and CAD Formulas." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1077-1080.

This study investigates the computing of the inductance and capacitance coefficients of short links (gold wire connections, vias, interconnection crossing and coupled lines). The [L] and [C] matrix calculations are performed with the vector and scalar potential given in an integral form, taking into account the current density distribution on the conductors. Analytical formulas easy to use in CAD are derivedfiom the numerical results using a least square method. The formulas have been shown to agree, with a precision in the order of 3%, with simulation results and with experimental results obtained on test boards in the frequency range 1-30 GHz.

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