Abstracts

A Compact Model for Predicting the Isolation of Ports in a Closed Rectangular Microchip Package

This paper presents the derivation of a compact model for predicting the isolation between ports on opposite sides of a microchip package such as would be used for MMIC chips. The model consists of four current sources, two electric, and two magnetic, representing the port currents and voltages which excite the modes of a cavity formed by the interior of the package. The contribution of each mode to the total electric field is summed, and the average of the total tangential field along the two probes that project into the cavity at the ports is set equal to zero. The model, which runs on a PC, is used to compute data for an actual package, and the data is compared with that produced by a commercial electromagnetic analysis package running on a work station.

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