Abstracts

Modeling of 3-D planar conducting structures on lossy silicon substrate in high frequency integrated circuits

J. Zheng, J.-P. Li and A. Weisshaar. "Modeling of 3-D planar conducting structures on lossy silicon substrate in high frequency integrated circuits." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1265-1268 vol.2.

This paper describes simple yet accurate models for 3-D planar conducting structures such as substrate contacts and bond pads in high frequency and mixed-signal integrated circuits on lossy silicon substrate. The modeling approach is based on a rigorous 3-D EM characterization followed by equivalent circuit model extraction. The simple equivalent circuit models for coupled conducting structures are based on the physical structure. The frequency response of the models shows good agreement with the EM solution.

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