Abstracts

Direct measurement of crosstalk between integrated differential circuits

D.E. Bockelman and W.R. Eisenstadt. "Direct measurement of crosstalk between integrated differential circuits." 2000 Transactions on Microwave Theory and Techniques 48.8 (Aug. 2000 [T-MTT]): 1410-1413.

Silicon integrated-circuit test structures have been fabricated that allow direct measurement of crosstalk between differential transmission lines and between single-ended transmission lines in the presence of metal ground plane. The differential test structures are characterized with mixed-mode scattering parameters (common mode, differential mode, and mode conversion), as measured with the pure-mode vector network analyzer. Comparisons with simulation show good agreement for differential-mode crosstalk, and the dependence of crosstalk on transmission-line separation is presented. Difficulties in simulating crosstalk fur even simple structures illustrate the utility of direct measurement of crosstalk.

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