Abstracts

Compensating differences between measurement and calibration wafer in probe-tip calibrations

G. Carchon, W. de Raedt and E. Beyne. "Compensating differences between measurement and calibration wafer in probe-tip calibrations." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1837-1840 vol.3.

Differences in probe-tip-to-line geometry and substrate permittivity between measurement and calibration wafer deteriorate measurement accuracy. In this paper, we compare the accuracy of several models for the probe-to-line transition based on measurements as well as 3-D simulations of various GaAs CPW lines. This shows that 3-D simulations may be used to determine the parasitics at the probe tip as an alternative to measurement based methods. In general, models using 4 error-parameters are preferred to the Y/sub p/- or TL-based model as they provide a higher accuracy while the same amount of measurements is required to implement them.

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