Abstracts

De-Embedding of MMIC Transmission-Line Measurements

P. Heymann, H. Prinzler and F. Schnieder. "De-Embedding of MMIC Transmission-Line Measurements." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1045-1048.

The determination of transmission-line characteristic impedance and propagation constants from two-port S-parameter measurements is disturbed by half-wavelength resonances. We demomonstrate this effect for on-wafer measurements of coplanar lines. Two networks representing end effects embed the line and strongly enhance the resonant effect. The de-embedding consists in determining these networks and subtracting them from the measured chain matrix. It is shown that simple shunt admittances are sufficient for modeling of the end effects. Three methods of de-embedding are presented.

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