Abstracts

A Unified Mathematical Approach to Two-Port Calibration Techniques and Some Applications

R.A. Soares, P. Gouzien, P. Legaud and G. Follot. "A Unified Mathematical Approach to Two-Port Calibration Techniques and Some Applications." 1989 Transactions on Microwave Theory and Techniques 37.11 (Nov. 1989 [T-MTT]): 1669-1674.

A rigorous mathematical treatment of microwave network analyzer calibration and de-embedding procedures for the two-port error network representation is employed in order to explain current calibration techniques in a succinct and homogeneous manner. It is demonstrated that the essence of through-delay de-embedding techniques consists in the use of two known two-port calibration standards to obtain pairs of similar matrices for the input and output error adapters. Once the characteristic vectors for these matrices are obtained, a number of different approaches may be employed in order to solve for the scaling constants.

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