Abstracts

Calibration and Normalization of Time Domain Network Analyzer Measurements

T. Dhaene, L. Martens and D. De Zutter. "Calibration and Normalization of Time Domain Network Analyzer Measurements." 1994 Transactions on Microwave Theory and Techniques 42.4 (Apr. 1994, Part I [T-MTT]): 580-589.

In this paper, we present a new advanced calibration and normalization procedure for time domain reflection and transmission (TDR/T-) measurements. Our approach reduces the systematic error of the time domain network analyzer significantly. The error correction is based on a twoport error model, as already known for network analyzers. All measurements proceed in the time domain, while the error correction itself proceeds completely in the frequency domain. This new algorithm calculates the normalized (time domain) TDR/T-pictures as well as the calibrated (frequency domain) S-parameters.

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