Abstracts

Techniques for Correcting Scattering Parameter Data of an Imperfectly Terminated Multiport When Measured with a Two-Port Network Analyzer (Short Papers)

J.C. Rautio. "Techniques for Correcting Scattering Parameter Data of an Imperfectly Terminated Multiport When Measured with a Two-Port Network Analyzer (Short Papers)." 1983 Transactions on Microwave Theory and Techniques 31.5 (May 1983 [T-MTT]): 407-412.

Two techniques are described which correct scattering parameter data taken on an N-port device measured with N-2 imperfect terrniuations and a two-port network analyzer. The first technique rises a simple iterative algorithm and may be easily implemented in software. Each iteration reduces the error due to imperfect terminations typically by one decade. The second, more complicated, technique uses a general closed-form solution which requires specially developed Gamma-R parameters of which S-, Y-, and Z-parameters are particular cases. The closed-form solution is completely valid for any termination. The closed-form solution is the limit to which the iterative solution converges. The iterative technique has been implemented in software controlling an HP 8409 automated microwave network analyzer.

❑ Return to main document.