# Abstracts

## On the Use of a Microstrip Three-Line System as a Six-Port Reflectometer

*R.J. Collier and N.A. El-Deeb. "On the Use of a Microstrip Three-Line System as a Six-Port Reflectometer." 1979 Transactions on Microwave Theory and Techniques 27.10 (Oct. 1979 [T-MTT]): 847-853.*

The scattering parameters for a coupled symmetrical three-line system in an inhomogeneous dielectric medium (e.g., microstrip) are derived directly in terms of a set of three orthogonal modes. The obtained results show that the condition for isolation of nonadjacent ports (e.g., ports 1 and 3 in Fig. 1) does not result from putting the corresponding per unit length immittance parameters equal to zero (i.e., z/sub 13/ =y/sub 13/ = 0). The use of such a three-line system as a six-port reflectometer is analyzed in terms of the derived scattering parameters. The reflectometer discussed in this paper allows an unknown impedance to be measured using a standard impedance.

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