Abstracts

On the synthesis of equivalent circuit models for multiports characterized by frequency-dependent parameters (2002 Vol. II [MWSYM])

R. Neumayer, F. Haslinger, A. Stelzer and R. Weigel. "On the synthesis of equivalent circuit models for multiports characterized by frequency-dependent parameters (2002 Vol. II [MWSYM])." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 721-724 vol.2.

The synthesis of lumped-element equivalent circuits for time-domain analysis of problems with frequency-dependent parameters is of great interest in microwave theory. This paper presents a systematic approach to generate minimal order realizations for passive microwave circuits characterized by either admittance, impedance or scattering parameter data. Also a very efficient method to ensure inherent system properties such as stability and passivity is described. Modeling examples for a two- and four-port system are given.

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