Abstracts

Dispersion Analysis of a TLM Mesh Using a New Scattering Matrix Formulation

V. Trenkic, T.M. Benson and C. Christopoulos. "Dispersion Analysis of a TLM Mesh Using a New Scattering Matrix Formulation." 1995 Microwave and Guided Wave Letters 5.3 (Mar. 1995 [MGWL]): 79-80.

An equivalent scattering matrix for the TLM symmetrical condensed node is derived by rearranging the order of node ports. The new matrix is given in a partitioned form with zero blocks on the main diagonal. It enables a transformation of the general dispersion relation from a 12th- to a 6th-order eigenvalue equation, thus significantly simplifying the problem of finding a closed algebraic form of the dispersion relation for the symmetrical condensed node.

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