Abstracts

Utilization of the Matrix Pencil Technique for Determining Modal Propagation Characteristics of Printed Circuits

T.K. Sarkar, R.S. Adve, Z.A. Maricevic and M.S. Palma. "Utilization of the Matrix Pencil Technique for Determining Modal Propagation Characteristics of Printed Circuits." 1996 MTT-S International Microwave Symposium Digest 96.1 (1996 Vol. I [MWSYM]): 167-170.

First the surface current distributions on finite microstrip structures of arbitrary shape are solved for by the method of moments utilizing a conventional delta gap excitation. The Matrix Pencil Techniques is then used to decompose the currents along the feed and terminating lines into forward and backward traveling waves, yielding scattering parameters of device. This approach has been utilized to predict the input parameters of leaky wave antennas and for predicting scattering parameters of printed circuits. Experimental verification has been carried out to validate the theory.

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