Abstracts

Theoretical and Practical Applications of Capacitance Matrix Transformations to TEM Network Design (1966 [MWSYM])

R.J. Wenzel. "Theoretical and Practical Applications of Capacitance Matrix Transformations to TEM Network Design (1966 [MWSYM])." 1966 G-MTT International Microwave Symposium Digest 66.1 (1966 [MWSYM]): 94-100.

An important aspect of TEM quarter-wave network synthesis and design is the multiplicity of physical configurations that give identical response characteristics. Different network configurations are often, required to realize the same basic response for moderate changes in design parameters because of the small range of realizable impedance values. In most design procedures, practical circuit element values are obtained by application of suitable equivalent circuit relationships. In a previous paper a systematic method of obtaining equivalent circuits using transformations of the static capacitance matrix of a parallel coupled line array was introduced and applied to the exact design of interdigital bandpass filters. These transformations can also be used to give a simple physical interpretation to familiar transmission line identities and can be applied to the design of many TEM microwave devices.

❑ Return to main document.