Abstracts

Coaxial Bandpass Filter Design

W.A. Davis and P.J. Khan. "Coaxial Bandpass Filter Design." 1971 Transactions on Microwave Theory and Techniques 19.4 (Apr. 1971 [T-MTT]): 373-380.

A technique is described for synthesis of coaxial bandpass filters based on an improved design of impedance inverters. This technique is applicable to filters having bandwidths between approximately 1 percent and 20 percent of the center frequency. The inverter used to realize the filters is a section of either low-Z/sub 0/ line or high-Z/sub 0/ line and is synthesized as a distributed element rather than as a lumped shunt capacitance or lumped series inductance, respectively. Three methods of accommodating the discontinuity capacitance associated with an abrupt change in the characteristic impedance are reviewed. The first two methods are most useful for filters with a fractional bandwidth/spl gsim/ 10 percent and the third for a fractional bandwidths /spl lsim/10 percent. Numerical and experimental verification of the design procedure is provided.

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