Abstracts

Design of Stepped Transmission Line Matching Circuits by Optimization Methods

S. Rosloniec. "Design of Stepped Transmission Line Matching Circuits by Optimization Methods." 1994 Transactions on Microwave Theory and Techniques 42.12 (Dec. 1994, Part I [T-MTT]): 2255-2260.

The new numerical algorithms for the design of two-, three-, and four-section stepped transmission line matching circuits are presented. These circuits make it possible to match two complex impedances with the equal ripple insertion loss function over a given frequency band. The characteristic feature of the circuits under consideration is that they are composed of transmission line segments whose characteristic impedances are limited on both sides. The extreme values of the characteristic impedance, practically realizable, are assumed freely at the beginning of a design process. It is confirmed by numerous design examples that matching circuits of this type are adequate for many applications at UHF and microwave frequencies.

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