

Abstracts

Optimum Design of Stepped Transmission-Line Transformers

S.B. Cohn. "Optimum Design of Stepped Transmission-Line Transformers." 1955 Transactions on Microwave Theory and Techniques 3.3 (Apr. 1955 [T-MTT]): 16-20.

This paper describes the optimum stepped-transmission-line transformer structure for matching two unequal characteristic impedances. For any specified bandwidth, the steps are designed to yield a Tchebycheff-type (or equal-ripple) reflection-coefficient response. Over this band, the maximum vswr is less than that obtainable with any other stepped-transformer having the same number of steps. Design method and technique for eliminating discontinuity-capacitance effects are given. The measured results for a coaxial and a waveguide model are presented and found to verify the method.

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