

Abstracts

Error Bound for the Approximate Fourier Transformation Relationship for Nonuniform Transmission Lines (Short Papers)

R. Finkler and R. Unbehauen. "Error Bound for the Approximate Fourier Transformation Relationship for Nonuniform Transmission Lines (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.3 (Mar. 1996 [T-MTT]): 482-484.

In this paper, an error bound is presented for Bolinder's well-known approximate formula relating the input reflection coefficient and the local reflectivity parameter of a lossless nonuniform transmission line (NTL) via the Fourier transformation. Despite modern computers allowing an accurate analysis, Bolinder's formula is still of interest. First, it makes possible an approximate synthesis of NTL's which can be used in a subsequent optimization. Second, it supports an intuitive grasp for the electrical properties of NTL's.

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