

Abstracts

A Generalized Theory of Tapered Transmission Line Matching Transformers and Asymmetric 180° Couplers Supporting Non-TEM Modes

P. Pramanick and P. Bhartia. "A Generalized Theory of Tapered Transmission Line Matching Transformers and Asymmetric 180° Couplers Supporting Non-TEM Modes." 1987 MTT-S International Microwave Symposium Digest 87.1 (1987 Vol. I [MWSYM]): 361-364.

This paper presents a generalized Fourier transform pair for the analysis and synthesis of tapered transmission lines supporting a non-TEM mode. The Fourier transform pair first pointed out by Bolinder, and subsequently used by Klopfenstein for TEM lines can be shown to be a special case of the present transform pair. A step by step synthesis method has been described for exact designs of matching transformers and asymmetric 180° directional couplers.

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