Abstracts

A new design procedure for single-layer and two-layer three-line baluns

Choonsik Cho and K.C. Gupta. "A new design procedure for single-layer and two-layer three-line baluns." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2514-2519.

This paper describes a design procedure for a class of three-line baluns. It is shown that the three-line balun can be considered as a combination of two identical couplers. Thus, the method developed here uses the design of couplers with an appropriate coupling factor for designing this class of baluns. The derivation leads to the normal mode parameters for the three coupled lines. Physical dimensions are obtained from these parameters. This procedure has been implemented for two-layer configurations and verified by comparison with results from a full-wave electromagnetic simulation and experimental measurement.

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