Abstracts

A Coupled-Line Model for Dispersion in Parallel-Coupled Microstrips (Short Papers)

H.J. Carlin and P.P. Civalleri. "A Coupled-Line Model for Dispersion in Parallel-Coupled Microstrips (Short Papers)." 1975 Transactions on Microwave Theory and Techniques 23.5 (May 1975 [T-MTT]): 444-446.

A new circuit model is derived for parallel-coupled microstrip consisting of two separate pairs of coupled lines. Each pair consists of a homogenoeus TEM line coupled to a homogeneous TE line. One pair represents the hybrid even mode, the other represents the odd mode. Data calculated from the model are compared with experimental dispersion data for various parallel-coupled microstrip geometries. Agreement is excellent. The procedure for deriving the equivalent circuit is an example of a general technique for using coupled lines to model longitudinally uniform but transversely inhomogeneous lossless waveguide.

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