Abstracts

Simplified design technique for high-performance microstrip multisection couplers

D.K.Y. Lau, S.P. Marsh, L.E. Davis and R. Sloan. "Simplified design technique for high-performance microstrip multisection couplers." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2507-2513.

A new design technique has been developed which improves the design of a microstrip multisection coupler by a simplified version of the nonuniform coupler method. The technique achieves the performance of a smooth, discontinuity free, nonuniform coupler with a sectional breakdown of the coupling along the structure that can be simply and quickly optimized in a commercial simulator such as Libra. The design is further improved by the use of the "saw-tooth" odd- and even-mode equalization technique, and the effectiveness of this is verified experimentally. The measured results demonstrate an improved performance over the multisection coupler in terms of coupling performance and bandwidth, while the size and the fabrication tolerance are better than the nonuniform line coupler.

❑ Return to main document.