

# Abstracts

## Improved Design of Multihole Directional Couplers Using an Iterative Technique

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*R.S. Elliott and Y.U. Kim. "Improved Design of Multihole Directional Couplers Using an Iterative Technique." 1990 Transactions on Microwave Theory and Techniques 38.4 (Apr. 1990 [T-MTT]): 411-416.*

The widely used first-order polynomial representation of the frequency response of a multihole directional coupler is assumed. The roots of this polynomial are displaced iteratively until a desired response is achieved. One possible outcome is a Chebyshev response, but the method is capable of improving on that result if all portions of the passband are not equally important. Further improvement can be achieved if the directivity is made to ripple around a somewhat higher level. This causes a minor sacrifice in bandwidth. Examples are given.

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