Abstracts

A quadrature-hybrid design using a four-port elliptic patch

Kin-Lung Chan, F.A. Alhargan and S.R. Judah. "A quadrature-hybrid design using a four-port elliptic patch." 1997 Transactions on Microwave Theory and Techniques 45.2 (Feb. 1997 [T-MTT]): 307-310.

Available designs of quadrature hybrids have used transmission lines, and recently, circular-disk patches. This paper introduces a four-port quadrature hybrid using a microstrip elliptic patch. It is shown that this configuration has good performance as a quadrature hybrid over a fairly large bandwidth. The performance is improved by the introduction of matching networks. The analysis is carried out using the cavity model Green's function with appropriate corrections for the fringing fields. A comparison of experimental and theoretical results show good agreement.

❑ Return to main document.