Abstracts

Hybrid-Ring Directional Coupler for Arbitrary Power Divisions

C.Y. Pon. "Hybrid-Ring Directional Coupler for Arbitrary Power Divisions." 1961 Transactions on Microwave Theory and Techniques 9.6 (Nov. 1961 [T-MTT]): 529-535.

A directional coupler in the form of a hybrid ring is described in this paper. A theoretical analysis using the scattering matrix has been carried out and experimental verification of the theoretical result has been achieved in a stripline network. Simple design equations which enable one to design a directional coupler with any degree of coupling have been derived. This coupler differs from the commonly used couplers in that the voltages at the output arms are either in-phase or opposite-phase with respect to each other. In addition, its geometrical symmetry makes it very convenient for use in symmetrical networks, particularly as a power divider in antenna feeding systems.

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