Abstracts

An Ideal Six-Port Network Consisting of a Matched Reciprocal Lossless Five-Port and a Perfect Directional Coupler

E.R.B. Hansson and G.P. Riblet. "An Ideal Six-Port Network Consisting of a Matched Reciprocal Lossless Five-Port and a Perfect Directional Coupler." 1983 Transactions on Microwave Theory and Techniques 31.3 (Mar. 1983 [T-MTT]): 284-288.

A six-port consisting of a matched reciprocal lossless five-port in series with a perfect directional coupler is shown to have ideal six-port properties according to the theory developed by Engen. The q points are separated by 120° on a common circle. The matched five-port itself is shown to function as a four-way divider network and bears an interesting analogy with a matched nonreciprocal lossless three-port (circulator). This analogy is used to design several styles of matched symmetrical stripline five-ports for use in making six-port measurements.

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