

Abstracts

Some Properties of the Matched, Symmetrical Six-Port Junction

G.P. Riblet and E.R.B. Hansson. "Some Properties of the Matched, Symmetrical Six-Port Junction." 1984 Transactions on Microwave Theory and Techniques 32.2 (Feb. 1984 [T-MTT]): 164-171.

Based on the S-matrix element-eigenvalue relations, the basic features of the matched, symmetrical, reciprocal six-port junction are derived. It is shown to be unsuitable for use in a six-port measurement system but can be used to build a five-way power devider. The equivalent admittance of the junction is derived, and, as an application, a stripline five-way power divider is designed. The theory is confirmed by the close agreement between computed and measured performance of an experimental one-to-five power divider.

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