

Abstracts

UHF Strip Transmission Line Hybrid Junction

I. Tatsuguchi. "UHF Strip Transmission Line Hybrid Junction." 1961 Transactions on Microwave Theory and Techniques 9.1 (Jan. 1961 [T-MTT]): 3-6.

A hybrid junction has been developed using a symmetrical strip transmission line for application in the UHF range. It has a frequency band of \pm 20 per cent where the input voltage standing-wave ratios at all ports are less than 1.26 (2 db), the power divisions are within 0.1 db, and the difference in power between the series input and parallel input ports is less than 0.3 db. The isolation is greater than 40 db and 24 db, respectively, for the two pairs of conjugate ports. These circuits are relatively small, light-weight, simple to build and reproduce, and are inexpensive. The approximate equivalent circuit of the configuration assuming transmission in the TEM mode is presented. The results of the analysis and the important features in the design and fabrication and a few modifications of the configuration are discussed.

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