

Abstracts

A Coaxial Magic-T

T. Morita and L.S. Sheingold. "A Coaxial Magic-T." 1953 Transactions on Microwave Theory and Techniques 1.2 (Nov. 1953 [T-MTT]): 17-23.

A coaxial hybrid junction is described whose performance is analogous to a waveguide magic-T. The design of three different types of coaxial magic-T is discussed. Standing-wave characteristics of an experimental model of each type are given. Experimental results indicate that standing-wave ratios less than 2 looking into any arm can be obtained easily over a frequency band of about 10 per cent. Owing to the structural symmetry of the device, the decoupling between shunt and series arm is of the order of 40 db. An application of the coaxial magic-T to phase measurements is described. This method of phase measurement is independent of the amplitude of the unknown signal.

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