

Abstracts

A compact planar magic-T junction with aperture-coupled difference port

M. Davidovitz. "A compact planar magic-T junction with aperture-coupled difference port." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 217-218.

The operating principles of a compact planar magic-T junction are described and experimentally validated. The distinguishing feature of this component is the placement of the difference port on a layer separated from the other three ports by a ground plane. Moreover, the two parts of the component are electromagnetically coupled through a slot-aperture in the ground plane. The component is inherently multilayer, i.e., the transition between the circuit layers is a functional part of the device. The tested microstrip prototype performs well over a frequency range of about 40%.

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