

Analysis of the X-junction between two rectangular waveguides and a circular waveguide

G.G. Gentili and A. Melloni. "Analysis of the X-junction between two rectangular waveguides and a circular waveguide." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 245-247.

The paper describes a method for the analysis of the four-port junction (X-junction) between two rectangular waveguides and a circular waveguide. The method is based on the computation by an efficient technique of the generalized admittance matrix (GAM) of the structure (conveniently divided into subblocks) with no restrictions on the geometrical dimensions, a typical analysis with about 100 modes in the overall structures requires 1-4 s per frequency point on a typical medium-power workstation.

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