Abstracts

Analysis of Cascaded Sections of T Junctions Between Rectangular and Circular Waveguides

B.N. Das and P.V.D.S. Rao. "Analysis of Cascaded Sections of T Junctions Between Rectangular and Circular Waveguides." 1991 Transactions on Microwave Theory and Techniques 39.1 (Jan. 1991 [T-MTT]): 92-97.

This paper presents an analysis of the cascaded sections of a number of slot coupled T junctions between rectangular, circular waveguides taking into account the mutual interactions of all possible modes generated by the discontinuities, as well as the effect of wall thickness. The formulation is based on solving a set of coupled integral equations resulting from the boundary conditions at the two interfaces of the waveguide sections representing the coupling slots. The integral equations are transformed into sets of matrix equations using the moment method with entire basis, testing functions. Numerical results on input VSWR, coupling are presented for the case of cascaded section of two air-filled T junctions for different frequencies, different values of interelement spacing.

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