Abstracts

Analysis of a Transition Between Rectangular and Circular Waveguides (Short Papers)

B.N. Das and P.V.D.S. Rao. "Analysis of a Transition Between Rectangular and Circular Waveguides (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.2 (Feb. 1991 [T-MTT]): 357-359.

This paper presents analysis of a transition between rectangular and circular waveguides coupled by a rectangular slot in a metallic wall of finite thickness in the common transverse cross section. Expressions for VSWR and admittance are obtained using a moment method formulation with entire basis and testing functions. Numerical data on the variation of input VSWR with frequency are obtained and a comparison between the theoretical and experimental results is presented. The variations in the values of minimum VSWR with change in slot dimensions are also studied.

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