Abstracts

S Matrix of Slot-Coupled H-Plane Tee Junction Using Rectangular Waveguides (Short Papers)

B.N. Das, A. Chakraborty and N.V.S.N. Sarma. "S Matrix of Slot-Coupled H-Plane Tee Junction Using Rectangular Waveguides (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.6 (Jun. 1990 [T-MTT]): 779-781.

Complex scattering matrix parameters of a slot-coupled waveguide tee junction are determined using a moment method of analysis with entire orthogonal basis functions and including a rigorous analysis of the effect of wall thickness. The variations of the equivalent network parameter, coupling, and return loss with frequency are evaluated and the results are compared with experimental data. The unitary property of the S matrix is verified. The dependence of coupling on slot length, slot width, and thickness is presented.

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