Abstracts

Input Impedance of a Coaxial Line Probe Feeding a Circular Waveguide in the TM/sub 01/ Mode (Short Papers)

R.H. MacPhie, M. Opie and C.R. Ries. "Input Impedance of a Coaxial Line Probe Feeding a Circular Waveguide in the TM/sub 01/ Mode (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.3 (Mar. 1990 [T-MTT]): 334-337.

By means of the conservation of complex power technique (CCPT), a formally exact full-wave solution is given for the case of a coaxial line probe feeding a circular waveguide for TM/sub 01/ modal excitation. The overall scattering matrix of the coaxial line probe-circular waveguide system is deduced and numerical results for the impedance as "seen" by the coaxial line are presented and compared with experimental results obtained in the 9.0-11.5 GHz frequency range.

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