Abstracts

Beam Waveguide Excitation by the Aperture Field of a Tubular Waveguide (Correspondence)

F. Schwering and A. Zarfler. "Beam Waveguide Excitation by the Aperture Field of a Tubular Waveguide (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.3 (Mar. 1967 [T-MTT]): 191-192.

The excitation of a lens-type beam waveguide by the aperture field of a conventional wavegrride of circular cross section is treated, assuming that a superposition of an H/sub 11/-mode and a E/sub 11/-mode is propagating in the metallic waveguide. The launching efficiency for the dominant beam mode depends on the amplitude ratio of the H/sub 11/- and E/sub 11/-modes and on the ratio of the beam mode parameter to the radius of the tabular waveguide. If both quantities are chosen appropriately a theoretical launching efficiency of 98.3 percent can be achieved.

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