

Abstracts

H_{sub} 01/ Mode Circular Waveguide Components

D.A. Lanciani. "H_{sub} 01/ Mode Circular Waveguide Components." 1954 Transactions on Microwave Theory and Techniques 2.2 (Jul. 1954 [T-MTT]): 45-51.

A convenient method of launching the H_{sub} 01/ mode in round waveguide is described. Four resonant slots are employed in a compact end-feed transition design. Construction details and performance curves are given. Also described is a developmental bend which avoids the H_{sub} 01-E_{sub} 11/ mode degeneracy problem by employing a superimposed pair of "E" and "H" plane rectangular waveguide bends. A mode absorber is described which is capable of reducing the mode impurities inherent in the transition design to a level of less than 0.1% of the emerging H_{sub} 01/ mode power. Other possible applications of the H_{sub} 01/ wave to problems other than low loss microwave transmission are briefly considered.

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