

Abstracts

An Equivalent Circuit for the "Centipede" Waveguide

T.M. Reeder. "An Equivalent Circuit for the "Centipede" Waveguide." 1966 Transactions on Microwave Theory and Techniques 14.4 (Apr. 1966 [T-MTT]): 200-205.

An equivalent circuit is presented for the "centipede" coupled-cavity waveguide. The "centipede" waveguide, which is typical of the class of slow-wave structures suitable for use in a wide-band high-power traveling-wave tube, has two pass bands which may interact strongly with a small-diameter electron beam. The equivalent circuit is able to represent both of these pass bands. A detailed comparison with an S-band "centipede" waveguide shows that the equivalent circuit can represent the dispersion, interaction, and loss characteristics of the waveguide within a few percent.

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