Abstracts

Attenuation and Power-Handling Capability of T-Septum Waveguides

Y. Zhang and W.T. Joines. "Attenuation and Power-Handling Capability of T-Septum Waveguides." 1987 Transactions on Microwave Theory and Techniques 35.9 (Sep. 1987 [T-MTT]): 858-861.

In this paper, the attenuation characteristics and power-handling capabilities of single T-septum waveguides are presented.The analysis is based upon numerical solutions employing the Ritz-Galerkin technique. The analysis was verified by applying it to the known results obtained for the ridged waveguide, which is treated as a special case of the T-septum guide. A good agreement has been achieved compared with the results from Hopfer. It is found that the single T-septum guide can handle less power, but has lower attenuation than the single-ridged guide with identical gap parameters. Equations and charts are presented to facilitate the design of T-septum waveguides.

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