Abstracts

Propagation characteristics of a dielectric-coated coaxial helical waveguide in a lossy medium

T. Iyama and J.-i. Takada. "Propagation characteristics of a dielectric-coated coaxial helical waveguide in a lossy medium." 1997 Transactions on Microwave Theory and Techniques 45.4 (Apr. 1997 [T-MTT]): 557-559.

In this paper, the authors discuss the propagation characteristics of a dielectric-coated coaxial helical waveguide in a lossy medium. The authors place emphases on the phase constant, propagation modes, magnetic fields distribution, and attenuation constant, when permittivity of the internal region is relatively small, two propagation modes exist and dominant components of their magnetic fields are different. Lastly, the authors discuss the relation between the attenuation constant and permittivities.

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