Abstracts

Circular cylindrical waveguide filled with uniaxial anisotropic media electromagnetic fields and dyadic Green's functions

Le-Wei Li, Shenghong Liu, Mook-Seng Leong and Tat-Soon Yeo. "Circular cylindrical waveguide filled with uniaxial anisotropic media electromagnetic fields and dyadic Green's functions." 2001 Transactions on Microwave Theory and Techniques 49.7 (Jul. 2001 [T-MTT]): 1361-1364.

Electromagnetic fields in a circular cylindrical conducting waveguide filled with uniaxial anisotropic media are formulated in this paper by using Fourier transformations. These fields are obtained as a superposition of the TE (or ordinary) and TM (or extraordinary) modes satisfying, respectively, different characteristic equations. Lastly, the dyadic Green's function is derived using the Ohm-Rayleigh method and represented by vector wave functions expansion.

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