

Abstracts

Electromagnetic Properties of Shielded Ring Lines and Attenuation of the Fundamental Dipolar Mode

C. Fray and A. Papiernik. "Electromagnetic Properties of Shielded Ring Lines and Attenuation of the Fundamental Dipolar Mode." 1979 Transactions on Microwave Theory and Techniques 27.4 (Apr. 1979 [T-MTT]): 334-340.

This paper presents a theoretical analysis of the electromagnetic properties of the shielded ring line and provides expressions for field components, stored energy, and power flow. The dispersion relation obtained by equating electric and magnetic stored energies is discussed. The shielded ring line is shown to have a fundamental dipolar hybrid mode. The attenuation of this mode is evaluated. Measurements have corroborated the theoretical values.

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