Abstracts

Conductor Loss in Hollow Waveguides Using a Surface Integral Formulation (Nov. 1992 [T-MTT])

M. Swaminathan, T.K. Sarkar, P. Petre and T. Roy. "Conductor Loss in Hollow Waveguides Using a Surface Integral Formulation (Nov. 1992 [T-MTT])." 1992 Transactions on Microwave Theory and Techniques 40.11 (Nov. 1992 [T-MTT]): 2034-2041.

The power-loss method along with a surface integral formulation has been used to compute the attenuation constant in hollow waveguides of arbitrary cross-section. An E-field integral equation is developed for the surface electric currents which is transformed into a matrix equation using the method of moments. An iterative technique, i.e., Muller's method is used to obtain the relation between the propagation constant and frequency. The attenuation constants have been calculated and formulated for various waveguides and are in good agreement with published data.

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