Abstracts

Determining Attenuation of Waveguide from Electrical Measurements on Short Samples

A.F. Pomeroy and E.M. Suarez. "Determining Attenuation of Waveguide from Electrical Measurements on Short Samples." 1956 Transactions on Microwave Theory and Techniques 4.2 (Apr. 1956 [T-MTT]): 122-129.

An improved method for accurately determining the attenuation of waveguide from measurements on very short samples is presented. First, two samples are measured separately and then in tandem. When the measurements are properly made, the sum of the attenuations when the samples are measured separately agrees with the attenuation when measured in tandem at each frequency of measurement. Second, the average effective resistivity is found over a band of frequencies. Using the average effective resistivity, the attenuation at any frequency in the band can be determined. Results for WR159 copper waveguide are shown.

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