# Abstracts

## Phase, Attenuation, and Impedance Characteristics of Coaxial Transmission Lines with Thin Tubular Conductors

*E.J. Post. "Phase, Attenuation, and Impedance Characteristics of Coaxial Transmission Lines with Thin Tubular Conductors." 1963 Transactions on Microwave Theory and Techniques 11.2 (Mar. 1963 [T-MTT]): 129-136.*

The phase, attenuation, and impedance characteristics of coaxial lines are discussed in some detail, stressing the improvements which can be obtained by removing conductor material that is not effective in the main part of the frequency interval for which the line is used. The ensuing attenuation is higher for the low frequencies but lower for the high frequencies, in comparison with the solid conductor line. The corresponding phase (that is, total phase minus the constant delay) is substantially more linear than for solid conductor lines in the frequency interval of interest. The real part of the characteristic impedance is more independent of frequency than for the solid conductor case. The reactive part of the characteristic impedance increases faster for low frequencies, but can be very nearly represented by a pure capacity, thus enabling a more ideal and simple line termination with lumped elements.

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