Abstracts

Polygonal Coaxial Line with Round Center Conductor (Short Papers)

W. Lin. "Polygonal Coaxial Line with Round Center Conductor (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.6 (Jun. 1985 [T-MTT]): 545-550.

The complex potential function W = A (In z + C /sub n/z/sup n/) generates a zero-potential line approximating a regular polygon of N sides very closely, except in the nearly field-free region. By means of this function we work out the characteristic impedance, the power-carrying capacity, and the attenuation constant of the polygonal line of N sides wtth a round inner coaxial conductor in a closed form of elementary functions with good accuracy compared to more complex solutions. Results for N = 3 are believed to he nearly as good as those available in the literature.

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