

研究简报

正多边形外导体-圆形内导体同轴传输线特性阻抗的计算

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摘要

本文提出一种计算正多边形外导体-圆形内导体同轴传输线特性阻抗的方法。由它可以得到正三(四、五、六)边形外导体-圆形内导体同轴传输线特性阻抗的可靠的上限和下限值。当 $r/R < 0.5$ (0.6)时,由它得到的上限和下限值十分接近,有一定的实用价值。

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分类号

CHARACTERISTIC IMPEDANCE OF COAXIAL TRANSMISSION LINE WITH REGULAR POLYGONAL OUTER AND CIRCULAR INNER CONDUCTOR

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Abstract

The method of calculating the characteristic impedance of the coaxial transmission line with regular polygonal outer and circular inner conductor is presented. With this method the reliable upper and lower limits of the characteristic impedance are obtained for the transmission lines with equilateral triangular outer, square outer, regular pentagonal outer, regular hexagonal outer and circular inner conductor respectively. The error of this method is low, so it has a certain practical value.

Key words [Transmission line](#) [Coaxial transmission line](#) [Characteristic impedance](#)

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