Abstracts

Analysis of Circular Horn Antennas Using the FD-TD Method.

Application of the vector two-dimensional FD-TD method to the analysis of circular horn antennas is presented. An antenna should maintain axial symmetry of boundary conditions and can be arbitrarily shaped in two others directions - in the cylindrical coordinate system. Medium filling the antenna can be inhomogeneous. Modes of excitation of sinusoidal dependence on angle can be considered. A full-wave solution is obtained. An example of a circular horn antenna has been computed and compared with experimental data.

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