Abstracts

Iterative Solution of the Waveguide-Horn Junction

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A solution for the fields at a waveguide-horn junction is derived using the iterative technique of overlapping regions. By dividing the junction into semi-infinite rectangular and sectoral regions and using the Green's functions for the sub-regions, the problem is reduced to the solution of a system of integral equations of the Fredholm type. The solution is relatively simple and the method is shown to be efficient and reliable in comparison with other techniques particularly for the reflection coefficient in the feed waveguide.

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