Abstracts

Use of the FFT to Speed Analysis of Planar Symmetrical 3- and 5-Ports by the Integral Equation Method

G.P. Riblet. "Use of the FFT to Speed Analysis of Planar Symmetrical 3- and 5-Ports by the Integral Equation Method." 1985 Transactions on Microwave Theory and Techniques 33.10 (Oct. 1985 [T-MTT] (Special Issue on Numerical Methods)): 1073-1075.

In a recent paper, it was shown that, for planar two-dimensional problems with symmetry, linear eigenvalue-impedence matrix entry relations may be used to simplify the integral equation method of analysis. In this paper, it is pointed out that, in the case of planar circuits with N-fold rotational symmetry, these linear relations take the form of the discrete Fourier transform (DFT). Consequently, the fast Fourier transform (FFT) may be used in its place to give a further substantial improvement in computational speed.

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