Abstracts

The Application of the FDTD Method to Millimeter-Wave Filter Circuits Including the Design and Analysis of a Compact Coplanar Strip Filter for THz Frequencies

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The finite difference time domain (FDTD) method is applied to the analysis of microwave, millimeter-wave and submillimeter-wave filter circuits. In each case, the validity of this method is cofirmed by comparison with measured data. In addition, the FDTD calculations are used to design a new ultra-thin coplanar-strip filter for feeding a THz planar-antenna mixer. In this instance, the FDTD analysis is confirmed by microwave scale model measurements and by simulations performed with Hewlett Packard's Microwave Design System (MDS).

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