

3D-FDTD Analysis of Rectangular Printed Monopole Antenna for UWB Applications

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Abstract : This paper presents numerical study of ultrawideband(UWB) patch antenna using both the FiniteDifference Time Domain (FDTD) method and Ansoft HFSSSoftware. The patch antenna, which consists of a rectangularmonopole, is fed by microstrip line and operates from 3 to 10.9GHz, covering the UWB frequency band. The numericalresults, obtained from computed FDTD model and HFSSsimulation, are given and compared in terms of reflectioncoefficients and radiation patterns, and show good agreements.

Keywords : Monopole antenna, FDTD method, UWB applications.