



Design of Microstrip Patch Circular Monopole Fractal Antenna For Wireless Applications

P Subbulakshmi¹, A Akalya²

Dept of Electronics and Communication Engineering
RVS Technical Campus, RVS Faculty of Engineering
Coimbatore, Tamilnadu^{1,2}

Abstract: The modern telecommunication system requires an antenna with wider bandwidth and smaller dimension than conventional antennas. This has initiated antenna research in various dimensions, one of which is used by a fractal shaped antenna element. Fractal is a concept being demanded for multi band operation. In this paper a circular shaped monopole fractal antenna using CoPlanar Waveguide feed (CPW) for wideband application has been proposed. The circular fractal patch and modified ground plane are employed to achieve the desired wideband characteristics. The antenna is optimized for a multi band operation. This antenna is simulated using Ansoft HFSS 11.0. For this design, low cost and readily available FR-4 substrate of relative permittivity of 4.8 and height 1mm has been used. The measured antenna parameters such as gain, radiation patterns and VSWR of the proposed antennas are found well for multi band operation.

Keywords: Microstrip Patch Antenna, Fractal Antenna, Co-Planar Waveguide Feed, HFSS, FR4 substrate.

