A Design of E-Shaped Rectangular Fractal Antenna by using Line Feeding Technique

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Abstract

This paper presents a design of E-shaped rectangular fractal antenna and the excitation is provided by using the microstrip line feeding technique. FR4 glass epoxy is used as a substrate material with relative permittivity 4.4, thickness 1.6mm and the resonant frequency is taken as 3.2GHz for the designing of proposed antenna. The three iterations is designed and simulated by using HFSS V13 (High Frequency Structure Simulator Version 13) software. Antenna parameters such as return loss, VSWR, gain and bandwidth are simulated and observed. The simulated result shows that the designed antenna works on five different resonant frequencies where the return losses are below the acceptable level -10dB. The designed antenna can be used for various wireless applications such as WLAN, long distance communications, space communication etc.

References


Index Terms

Computer Science Circuits and Systems

Keywords

HFSS, return loss, E-shaped, Fractal.