A Design of Quad-Band Hexagonal Antenna with Fractal Slots using Inset Feeding Technique

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Authors:
Jaspreet Singh, Narinder Sharma

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Abstract

In this paper, a hexagonal patch antenna is presented for wireless applications. Proposed antenna is designed on low cost FR4 glass epoxy substrate with relative permittivity of 4.4 and thickness 1.6mm. The quad band behavior is obtained by using inset feeding technique. The centre frequencies of the operating bands are 3.55GHz, 5.94GHz, 8.50GHz and 9.47GHz. Values of return loss and VSWR are at the acceptable level for each frequency bands of operation. Antenna parameters like gain, bandwidth and radiation pattern are also observed and analyzed in this paper. HFSS V13 software is used to design and simulating the proposed antenna. The antenna can be used for different applications such as wireless point to point communication, WLAN and X-band.

References


Index Terms

Computer Science

Wireless

Keywords

Hexagonal, VSWR, HFSS, gain, bandwidth.