Abstract

This paper covers two aspects of Microstrip antenna designs. The first is the analysis and design of single element rectangular Microstrip antenna which operates at the centre frequency of 2.4 GHz. The second aspect is the design of dual band rectangular microstrip antenna which operates at 2.4 GHz and 3.6 GHz used in 802.11b/g/n and 802.11y WLAN channels respectively. Both antennas are modeled, designed and simulated. Here for the rectangular patch, Inset Line Feed technique is used to design both the antennas. First, the design parameters for single element of rectangular patch antenna is calculated from the transmission line model equation and then the antenna design is extended to operate in dual band using the slots at radiating edges and near the inset feed line and obtained good radiation characteristics. The simulation process has been carried out in Advanced Design System(ADS) with the specifications \( r=4.6 \) and \( h=1.6 \text{mm} \) and \( f_r=2.4 \text{GHz} \).

References

Index Terms

Computer Science Wireless Communications

Keywords

Microstrip Antenna Rectangular Patch Antenna Dual Frequency Antenna Inset Fed slot Antenna
S-Parameters