Design of Microstrip Patch Antenna by Introducing Defected Ground Structure

Abstract

This paper proposes a novel Inset Feed Microstrip patch antenna with Z and F shape defect in ground plane. Initially simple inset feed rectangular Patch Antenna is designed and results are analyzed. Further this design is modified by etching Z and F shaped defect on ground plane. Defected Ground Structure is studied to enhance the performance parameters of microstrip patch antenna. Proposed antenna provides wide bandwidth and reduced return loss. Designed antenna cover the WLAN 5. 2 GHz (5. 15-5. 35 GHz) band. Performance parameters Return loss, bandwidth, gain, directivity, and voltage standing wave ratio (VSWR) have been analyzed for proposed multiband Microstrip Patch Antenna by using Finite element method based High
Design of Microstrip Patch Antenna by Introducing Defected Ground Structure

Frequency Structure Simulator software (HFSS).

References


Index Terms

Computer Science

Antennas

Keywords

Dgs, Hfss Software, Microstrip Patch Antenna, Return Loss, Vswr