Abstract

Microstrip patch antennas became very popular in mobile and radio wireless communication, due to ease of their analysis, fabrication, and attractive radiation characteristics. The use of Microstrip antenna in wireless communication found advantageous compared to other types of antenna due to their low fabrication cost, small size, supporting character to linear as well as circular polarization, robustness when mounted on rigid surfaces. However, they have their own limitations due to low efficiency, narrow bandwidth, surface wave loss and low gain. Electromagnetic Band Gap (EBG) materials, as superstrate is used to overcome the limitations of Microstrip patch antenna. The main aim of this paper is to implement EBG antenna and compare their characteristics at the frequency 2.4GHz using simulation. These designs are simulated using High Frequency Structure Simulator (HFSS) tool.

References


- C. Balanis: "Antenna Theory Analysis and Design."

**Index Terms**

Computer Science Wireless Communications

**Keywords**

Microstrip Antenna Ebg Metamaterial Structure Simulator Gain Bandwidth Surface Waves
Voltage Standing Wave Ratio.