Abstract

In this paper, microstrip patch antennas with six different shapes i.e. rectangular, circular, square, elliptical, pentagonal and hexagonal are implemented using Ansoft HFSS version 13.0.0 software. Antennas are designed on Rogers RT/duroid 5880 material with dielectric constant 2.2 and thickness 3.2 mm. The different performance parameters such as return loss, gain and bandwidth of these antennas are compared. The operating frequency for all these antennas is taken 7.5 GHz. All the antennas are fed with the probe feed. It is found that pentagonal microstrip patch antenna has better results at this frequency than all other shapes.
Comparison of Different Types of Microstrip Patch Antennas

References

- 6x9 Handbook / Antenna Engineering Handbook / Volakis / 147574-5 / Chapter 7
- 6x9 Handbook / Antenna Engineering Handbook / Volakis / 147574-5 / Chapter 7

Index Terms

Computer Science
Antennas
Keywords
Microstrip; Patch; Antenna; Gain; Return; Loss; Bandwidth.