

Analysis and Maximizing RF Harvesting System based on Antenna Shapes for Aviation Applications

This paper presents designing and analysis of microstrip patch antenna at 900 MHz frequency for aviation applications. Comparative analysis is presented on the basis of geometry of patch of antenna, rectangular, circular and triangular. Patch is used to compare the results. Inset feed is used due to which proposed antenna achieves size reduction. Antennas are designed on FR4 material with dielectric constant 4.2 and thickness 1.6 mm. The different performance parameters such as return loss, gain and bandwidth of these antennas are compared. From the results obtained, the rectangular dual band patch achieved the highest percentage bandwidth performance at 900 MHz while the triangular patch achieved the highest gain and smallest size. Wireless transmission method used to verify the transmission and receiving process.

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