



Reconfigurable Antenna and Performance Optimization Approach

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Abstract

Reconfigurable antenna plays a tremendous role in the modern wireless communication engineering. Already lot of works has been proposed by researchers related to every aspect of the reconfigurable antenna development. For the future of communication engineering, researchers have to develop power efficient multiband antenna which can resonance at high frequency. For this, every design phase of reconfigurable antenna need to re-watch, start from the selection of substrate material, feeding technology, design structure to switching techniques. This review paper covers all the proposed techniques and methods for each design aspect and analysis them to determine deficiency and problem and propose as the future scope. Conclusion of each aspect will help researchers to start working in new untouched areas which will enhance the antenna performance.

Keywords Microstrip patch antenna (MPA) · Reconfigurable · Substrate material · Design techniques · Feeding techniques

1 Introduction to Reconfigurable Antenna

For the development of future communication, researchers need to discover new emerging techniques to develop energy efficient, low cost, high speed and compact devices. Beyond this, multi-functionality and reusability are the hot areas for the research. One of the most important part, antenna can be targeted to modify and convert into a reconfigurable antenna. Reconfigurable antenna can be achieved by explore multiple band through novel modification in the antenna structure and deployment of switching circuits. Reconfigurable antenna can work for various applications through the different wireless communication technology. Hence for a large and complex system, deployment of reconfigurable antenna reduces the need of different antennas so it overall improves the existing system. In comparison to traditional single band and multiple band antennas, reconfigurable antennas

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