

Improvement and Miniaturization RFID Patch Antenna by Inclusion the Complementary Metamaterials

Authors : Seif Naoui, Lassaad Latrach, Ali Gharsallah

Abstract : This paper is specialized to highlight the method of miniaturization and improvement the patch antenna by using the complementary metamaterial. This method is presented by a simple technique is composed a structure of patch antenna integrated in its surface a cell of complementary split ring resonator. This resonator is placed at the middle of the radiating patch in parallel with the transmission line and with a variable angle of orientation. The objective is to find the ultimate angle where the best results are obtained on improving the characteristics of the considered antenna. This motif widespread at the traceability applications by wireless communication for RFID technology at the operation frequency 2.45 GHz. Our contribution is based on studies empirical often presented in this article. All simulation results were made by the CST Microwave Studio.

Keywords : complimentary split ring resonators, computer simulation technology microwave studio, metamaterials patch antennas, microstrip patch antenna, radio frequency identification

Conference Title : ICSPCA 2015 : International Conference on Signal Processing and Communications Applications

Conference Location : Venice, Italy

Conference Dates : June 22-23, 2015