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High Isolation Microstrip MIMO Antennas for WLAN Systems

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Abstract: This paper introduces a novel design of aperture coupled microstrip antenna for MIMO array applications. The proposed antenna uses 2x4 patches excited from two ports via rectangular slots. HFSS (High Frequency Structure Simulator) and CST (Computer Simulation Technology)softwares are used to simulate the antennas performance. The results are given in term of S-parameters, radiation patterns and gain. In addition a parametric study is done to evaluate the effect of certain antenna parameters on the antenna performances. Form the simulated result, it is concluded that the proposed concept provides a good isolation between the two antenna ports (with low mutual coupling, S_{12}/21).

Keywords : High Isolation, MIMO antenna