

Abstract

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Compact MIMO Antenna for 4G Transceiver Application

A design for a novel microstrip planar MIMO antenna for 4G application is presented. A decoupling network is added to improve the MIMO antenna ports isolation. The decoupling network is compact and consists of two elements having similar dimensions. The MIMO antenna resonates at 5.1GHz, 5.29GHz, 6GHz, 6.1GHz, 11.4GHz and 11.92GHz. The MIMO antenna exhibits good isolation below -20 dB at the required bands which reduces the mutual coupling between the antenna ports. A prototype of the MIMO antenna system was fabricated using thin film and photolithographic technique, and then measured by using vector network analyzer. Good agreement was found between the simulated and measured results.