

CDR Antenna with Dual-Band 1.9/2.7 GHz for MIMO-LTE Terminals

I. Messaoudene, T. A. Denidni, A. Benghalia

Abstract: In this letter, we present a compact dual-band dielectric resonator antenna for multi-input multi-output antenna is designed and fabricated. The proposed antenna consists of a single cylindrical dielectric resonator antenna (CDRA) excited from two orthogonal ports. The electromagnetic analysis is performed using the CST microwave studio software. To validate the proposed concept, experimental measurements are also performed. The measured results show that the CDRA provides two bands around 1.9 and 2.7 GHz, suitable for LTE applications. Moreover, the proposed design allows a very good isolation between the two ports and a low envelop correlation coefficient.

Keywords : Dielectric resonator antenna, multi-input multioutput systems, LTE bands, isolation, envelop correlation coefficient