

Two-Port MIMO Cylindrical Dielectric Resonator Antenna For LTE Systems

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

Abstract : In this paper, a single cylindrical dielectric resonator antenna (CDRA) is designed and proposed for multi-input multioutput (MIMO) wireless communications. The proposed antenna is excited from two ports and operated around the same frequency 1.9 GHz, suitable for the 33 and 35 LTE bands. The proposed design exhibits high isolation between the two ports, with a transmission coefficient less than -35 dB. The electromagnetic analysis is carried out using CST microwave studio and HFSS software. The numerical results, obtained from simulation, show a good agreement in terms of S-parameters and radiation patterns.

Keywords : cylindrical dielectric resonator antenna (CDRA), multi-input multioutput (MIMO)