

Title: A reduced size dual port MIMO DRA with high isolation for 4G applications

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Abstract: A dual-port reduced size multiple input multiple output (MIMO) Dielectric Resonator Antenna (DRA) has been studied and proposed. The MIMO antenna consists of a Rectangular Dielectric Resonator antenna, which is fed by two symmetrical feed lines for orthogonal mode excitation. The proposed antenna is suitable for operation over various long term evolution (LTE) bands. A measured bandwidth of 264 MHz for $|S_{11}| < -10\text{dB}$ and isolation of 18 dB at 1.8 GHz has been obtained. Besides, the Envelope Correlation Coefficient, Mean Effect Gain and Diversity Gain have been studied for the presented MIMO DRA using the S-parameters. Based on these results, it can be concluded that the proposed antenna can be a suitable candidate for MIMO applications.