

Isolation between three Antennas at 700 MHz: for Handheld Terminals

Author(s) - Institution(s):

Pevand Bahramzy, AAU/Intel
Simon Svendsen, Intel
Gert F. Pedersen, AAU

Corresponding author email: pevand.bahramzy@intel.com

Corresponding WG group: SWG 1.1

Abstract:

To address the antenna design challenges posed by the many frequency bands, introduced with LTE deployment, this paper proposes the use of separate Transmit (Tx) and Receive (Rx) narrow-band antennas. In addition, a Diversity Rx (Dx) antenna is needed for MIMO performance. While the isolation between two antennas at low frequencies (700 MHz) is crucial for the successful implementation of 4G in mobile phones, it becomes more challenging when considering isolation between three antennas (one Tx and two Rx antennas) at low frequencies. This paper presents a method that improves the isolation between the ports of one Tx and two Rx antennas.