Abstract:
Signal integrity and EMI constraints limit the performance of electronic systems with respect to high data bandwidth, low consumption, and immunity to unwanted disturbances. Nanoelectronics-based integrated circuits including also integrated antennas open new prospects for broad-band wireless data chip-to-chip and board-to-board data transfer and could provide a solution of this problem. In this paper we present the novel design of a self-complementary Hilbert curve (SCHC) fractal broad-band antenna. Combining a Hilbert curve shaped conductor dipole structure with a complementary slot geometry we apply Babinet's principle and fractal structure for broad-banding of the antenna and achieve operation in the frequency range from 6.5 GHz to 11.5 GHz.

Stichworte: Antenna, broad-band antenna, self-complementary antenna, fractal antenna, Hilbert curve antenna, printed antenna

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