

Planar inverted-F antenna with slotted ground plane

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Abstract

By embedding a group of parallel slots in the ground plane, novel dual-frequency operations of a single-feed planar inverted-F antenna (PIFA) are presented. Simulation based upon the method of moments (MoM) is used to model the performance of the antenna. An example of the proposed antenna is fabricated to validate the simulation, and the experimental results show that the 10-dB return-loss impedance bandwidths are about 9% and 8.4% for frequency bands of 1.9 and 2.4 GHz, respectively. In addition, the measured radiation patterns in the two frequency bands are similar to that of a conventional planar inverted-F antenna.

Key words : Dual-frequency; PIFA