

## Effects of changing material on the Planar Inverted-F Antenna Performances

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### Abstract:

with the rapid growth of the wireless mobile communication technology, the future technologies need a very small antenna with a good performance, the advantage of planar inverted-F antenna (PIFA) make them very popular in many applications requiring a low profile antenna.

This letter is aimed at addressing this problem by investigating the effects of changing the material of the planar inverted-F antenna on the impedance bandwidth, resonance frequency and gain .It is shown that a PIFA with a good performance can be achieved by optimizing the material of the radiating plate and the ground plane.

As the antenna was successfully researched and well optimized, and the desired results were achieved in the Ansoft High Frequency Simulator Software (HFSS).

