

A Parametric Study Of Broadband Planar Inverted F Antenna (PIFA) For WLAN Application

Abstract

A novel of comprehensive study and useful information for the design of broadband Planar Inverted F antenna (PIFA) is proposed. The antenna including the ground plane has a total dimension $6\text{mm} \times 70\text{mm} \times 30\text{mm}$ has been optimized to be operating within WLAN application standards. The size of this antenna makes it ideally suitable for handheld wireless communicators. The physical parameters of the antenna, including shorting plate width, antenna height and ground plane dimensions, are studied. The influence of various parameters on antenna characteristics has been investigated using simulation software tool. By understanding the effect of each parameter, a novel comprehensive study for a better design of broadband PIFA is proposed. These results are very useful in the design of PIFA.