

ABSTRACT

There are four WLAN technologies proposed by the IEEE 802.11 standard consisting of the following elements: IEEE 802.11 standard (2.4 GHz at 2 Mbit/s), IEEE 802.11a standard (5 GHz intensity 5.4 Mbit/s), and IEEE 802.11 b. Standard (2,4 Mbit/s - GHz-2.5 GHz) and IEEE 802.11g standard (2.4 GHz at 54 Mbps). This research was conducted to design a microstrip antenna with a rectangular double slit patch using the proximity coupled method which can be applied to Wi-Fi running at a frequency of 2.4 GHz and the type of substrate used is FR4 epoxy, this design process is carried out using CST STUDIO software. SUITE 2019. This antenna has been successfully designed according to the initial purpose of the study by obtaining a return loss value = -42.06 dB, a bandwidth value = 121.8 MHz, a VSWR value = 1.015, and a gain value of 3.546 dBi. Increased return loss = 249.33%, bandwidth = 53.38%, VSWR = 58.09%, gain = 33.86%. This happens because of changes in antenna specifications and the use of the proximity coupled method on the antenna which has the advantage of increasing the bandwidth.

Keywords: Microstrip Antenna, Patch Rectangular, FR4 epoxy, Proximity Coupled, WiFi