

ABSTRACT

Broadband access based of wireless or Broadband Wireless Access (BWA) is access technology that can offer the data access/internet with high speed and be able to give service anytime and anywhere that use wireless. One of standard technology that being developed and fought to be global standard for BWA service is Wi-Fi. Wi-Fi stands for Wireless Fidelity ,is a set of standard that use to wireless local network (WLAN) that based on IEEE 802.11 specification. To satisfy of service data and internet access needs, there are spectrum of radio frequencies had been allocated for standard of Wi-Fi technology 2.400 MHz (2.400 MHz – 2.483 MHz), 3.400 MHz (3.300 MHz – 3.400 MHz), and 5.800 MHz (5.725 MHz – 5.830 MHz).

In this final project, has been designed of multiband microstrip antenna with the shape of patch is rectangular that worked in frequencies 2.400 MHz, 3.400 MHz and 5.800 MHz. Matching line that used in this final project was a single transformer $\lambda / 4$ in order to wideband. Software that used in this antenna design was Ansoft HFSS v10 as simulator.

From the results of measurements, in general, the results obtained to near from designed specification were in frequency 2.400 MHz with VSWR 1,483; 3.400 MHz with VSWR 1,427; and 5.800 MHz with VSWR 1,468. The shape radiation pattern was unidirectional, polarization was ellipse (near to linier), and the gain were 8,54 dBi for frequency 2.400 MHz; 8,79 for in frequency 3.400 MHz; and 8,475 dBi for fequencyi 5.800 MHz.

Key words: Wi-Fi and Multiband Microstrip Antenna