ABSTRACT

The development of wireless communications technology in the present is very fast. Increased technological developments at this very moment. Consumers or wireless users are now in various places around us where and in the future this wireless technology will require improvements in quality as more quantity of technology needed is also good quality. IEEE as the international standardization institute for electronic devices has applied standardization for. In 1997, IEEE has experienced and defined IEEE 802.11 as the standard for wireless network usage.

In this study, planar microstrip antennas for 802.11 ac technology at 5.2 GHz frequency. The design of the antenna is done by using FR-4 (Epoxy) substrate with dielectric constant εr = 4,6 and thickness h = 1,6 mm. Antenna works at a frequency of 5 GHz with bandwidth above 100 Mhz. Planar array antennas are simulated with placement position at a certain point to analyze the best condition of the simulation result.

The result of antenna measurement of 2x2 planar array antenna with bi-directional radiation pattern, return loss 34,068 dB ,, bandwidth obtained 270 Mhz. Nlai VSWR 1.04. Gain 4.06 dBi, impedance value 52.01 -, 004 j40 ohms, and results indicating the antenna according to the required specifications.

Keyword : Microstrip Antenna, planar array, 5,2GHz, 802.11 ac