

ABSTRAK

Wireless technology that is currently popular is wireless technology based on wifi (wireless fidelity). But wifi is not without its drawbacks, wifi coverage is still very limited. For good access, the distance to the access point must be less than 100m, more than that the wifi signal is usually unstable. Microstrip antennas have a number of disadvantages such as low gain and efficiency, narrow bandwidth and surface waves that damage the radiation pattern.

Microstrip antenna design and see the effect of bolic reflector in increasing wifi signal amplification. The bolic frying pan antenna that is attached to a computer such as a laptop or desktop PC can access the internet with a distance of 1-2 km from the hotspot point. Circular microstrip antenna for 2.4 GHz frequency with FR-4 substrate material which has a dielectric constant of 4.3 and a thickness of 1.6 mm.

The simulation results of the antenna that have been integrated with the bolic griddle working at a frequency of 2.4 GHz get better results than the antenna that has not been integrated with the bolic griddle reflector, the simulation results have a Return Loss of -22.59 dB bandwidth of 68.4 MHz , VSWR is 1.51, gain is 2.9 dBi, and radiation pattern is unidirectional. In the measurement, the Return Loss value is -11.00 dB, the bandwidth is 68.4 MHz, the VSWR is 1.78, the gain is 5.1 dBi, and the radiation pattern is unidirectional.

Keywords: microstrip antenna, bolic wok, wifi.