

ABSTRACT

Along with the changing times, technology, Wi-Fi so a top priority because everyone is very supportive to communicate anytime and anywhere. And a growing number of technologies that lead to the use of Wi-Fi. Therefore, it needs an antenna that can work at frequencies between 2.4 - 2,484 GHz to meet the needs of Wi-Fi.

One of the antennas that meet those needs is a microstrip antenna. Microstrip antenna is an antenna made of metal separated by a dielectric material. This antenna has a wide variety of forms, one of which is shaped fractal koch. Koch fractal is a shape of a triangle that is iterated and designed using a software. This form has small dimensions, so it is expected to work optimally at frequencies between 2.4 - 2,484 GHz.

Having designed and realized, koch fractal-shaped microstrip antenna antenna characteristics that have resulted in 3,604 dBi gain, bandwidth of 84 MHz, with $VSWR \leq 1.5$ in the amount of 1,034 who works at a frequency of 2.4 GHz, and gain omnidirectional radiation pattern, so it can receive signal from any position, but with different power levels.

Keywords: *Wi-Fi, microstrip antennas, fractal koch, and gain 3,604.*