

ABSTRACT

To improved communication needs of the community with other people anytime and anywhere to make technological progress, especially in the field of wireless communications growing rapidly. Not only that develops wireless technology, but also increasingly developing technology that is multitasking where in one device can have more than one function that uses multiband technology. One of the most important part to realize this is the antenna

Fractal antenna is an antenna that has a fractal geometry that can result in some frequency resonant or multiband with small dimensions and has a big gain. While the printed antenna is a type of antenna that has the form of a thin, lightweight, and simple making it suitable for use in wireless technology.

In this final task, will be designed fractal-shaped microstrip antennas Sierpinski gasket that works on 4 frequencies using Rogers 4003 substrate. The antenna is designed to operate at a frequency of 1.8 GHz, 3.6 GHz, 7.2 GHz, and 14.4 GHz with $VSWR \leq 2$. For this antenna design and simulation, the authors use 3D Simulator software assistance, to obtain the desired dimensions and specifications. Next will be the realization of the antenna with the fabrication and testing of antenna parameters.

Keywords: fractal antenna, substrate Rogers 4003, fractal Sierpinski gasket, multiband