ABSTRACT

Along changing times, wireless technology becomes increasingly popular among us because it ensures communication anytime, anywhere. But this is contrary to the available frequency spectrum, frequency spectrum efficiency is considered to be critical. Ultra Wideband is a wireless technology that promises delivery of information in a very wide spectrum. This technology is able to be a solution to the problem of spectrum efficiency due to be operated on the same frequency region but not mutually interfere with the allocation that has existed. Therefore, it takes a special antenna to the specifications that have wide bandwidth.

In this final project has been made planar antenna with an elliptical patch using coplanar waveguide fed. In some studies, for elliptical patch can be an effective radiator for ultra wideband applications. The use of coplanar waveguide fed is intended to widen the existing bandwidth. Before the realization of the parameter studies performed using software Ansoft HFSS 13 which aims to study the relationship between the variables with the characteristics of the antenna. Observations and analysis of the microstrip antenna experiments in this final project more emphasis on VSWR parameters.

The results showed that the realization of planar elliptical antenna with coplanar waveguide fed ultra wideband able to work from the frequency 3.1 to 7.6 GHz and 8.6 to 9.8 GHz.

Keyword: elliptical patch, coplanar waveguide, ultra wideband, Ansoft HFSS 13