

ABSTRACT

The development of information and communication technology at this time is fairly rapid, with the increasing human population continues to be, then information and communication technology is becoming a basic necessity at this time. One of them is navigation technology, a navigation technology system that currently operates globally is the Global Positioning System (GPS) system. Users of this GPS system need a GPS signal receiver (GPS receiver) to receive and process signals from satellites. The antenna is one of the main components of the GPS receiver that will process the signals received so that it will largely determine the performance of the GPS receiver itself. In this Final Project, the researcher designed a GPS receiver antenna using a microstrip antenna so that it is easily integrated with a GPS communication device. From the simulation results obtained parameters that are in accordance with the standard specifications of microstrip antennas with a frequency of 1575 MHz, namely the VSWR value at a working frequency ≤ 1.484 , Return Loss of -32.35 dB, Gain of 6.4 dB, and Bandwidth of 175 MHz. Based on all the fabrication test results that have been carried out, there is a shift of ± 25 MHz to 1608 MHz with a VSWR parameter ≤ 1.410 , a Return Loss of -15.38 dB, a Gain of 13.3 dB, and a 45 MHz Bandwidth caused by the incompatible substrate specifications that used when simulating and measuring.

Keywords: Microstrip Antenna, *Circular Patch*, GPS