ABSTRACT

The nanosatellite is a satellite that weighs less than 10kg and has an orbit height of 500km. For sat-u sat2 has a 3U structure and has a payload that is Automatic Dependence Surveillance-Broadcast (ADS-B) which is used as an aircraft data transmission system by broadcast. The long-distance delivery and the number of disturbances that occur in the environment around outer space cause the information signal received to have very weak power. Therefore a Low Noise Amplifier (LNA) amplifier is needed so that the information signal received by the antenna is amplified and suppresses the resulting noise so that it can be processed to the next stage.

In this final project, LNA is designed and realized that can work at ADS-B working frequency, which is 1090 MHz with gain ≥10dB, noise figure ≤ 2 dB. Simulation with software in the design before it is realized and using the Spectrum Analyzer after it is realized.

Keywords **: ADS-B, LNA,** ***Gain, Noise Figure***