ABSTRACT

The development of communication technology in this era is growing rapidly. One of the communication technologies that is developing quite rapidly is telecommunications technology. In telecommunications technology that is quite developed is satellite communication. Satellite communication is a relay station and repeater microwave communication that uses space as its delivery medium. Using satellites makes it easy for users to access data quickly, especially in areas that are difficult to reach with cable media. In this study the design of the shipping side is the simulation of High Power Amplifier vsat c-band. This final project is limited to designing a High Power Amplifier with the results of parameters namely Gain, Bandwidth, Linearity, and Backoff. High Power Amplifier is a device that has a function that is to perform an RF signal amplification that will be sent via air media with the aim that the RF signal sent does not exceed the limit and does not interfere with other earth satellites. The results generated in the final project testing the resulting gain value of 10.379 dB, the linearity of this final project is illustrated with a graph to see the results, the backoff value or input output impedance has a Z Source value of 170.305 + j144.129 and Z Load of 11,973-j43,171, and the last parameter measured is bandwidth with a value of 1290 MHz.

Keywords: High Power Amplifier, Gain, Linearity, Backoff, Bandwidth