ABSTRACT

In the utilization of technology developed many sophisticated devices for wider utilization, one of the utilization of radio waves for SAR devices which is a RADAR system for remote sensing imaging, used For geographical, military, topography or other applications because it has reliability on the sensing side and communication that is resistant to weather disorders or other channel disorders.

In this final task discusses the characteristics of the antenna composition model (array antenna) in the simulation for the use of SAR that works at a C-Band frequency (5.7 GHz) with a circular patch form as well as using 2 array antenna models. The antenna configuration uses copper material and RF-4 epoxy substrate (4.4) and the feeding technique (microstrip line). From the simulation results of the two array models antenna is done comparing characteristic values.

At this final task obtained results from two simulated antenna arrays working at a frequency of 5.7 GHz. Planar array modeling is better than the circular array, the value of Bandwidth $\geq$ 591.8 MHz, Gain $\leq$ 6.53 dBi, Return Loss $\leq$ -10.696 dB, polarization Produced for the circular and planar models are linear polarization. With unidirectional radiation patterns.

Keywords: C-Band, Antenna, Circular Polarization, Circular Array, Planar Array