ABSTRACT

Currently, almost all regions in Indonesia can feel the speed of 4G, which will soon be replaced by 5G networks. The installation of this 5G network takes a long time to be enjoyed by all regions in Indonesia. Therefore we need an antenna that can change the working frequency according to the existing network conditions.

In this final project, a reconfigurable antenna will be designed which can work according to the existing conditions. The antenna is designed in two conditions, namely when the condition off the frequency that will work is found to be 3.5 GHz, and the condition on the frequency that will work is found to be 1.8 GHz. When the 5G network situation is better, the antenna will work on the 5G frequency (3.5 GHz), while when the 4G network situation is better, the antenna will work on the 4G frequency (1.8 GHz).

From the simulation results in the off condition, the parameter values VSWR at a frequency of 3.5 GHz are 1,051. Meanwhile, when the condition on gets parameter values, namely VSWR at a frequency of 1.8 GHz is 1,099. In the off condition measurement results, the value of VSWR is 1,424. While the measurement results in the condition on is 1,274.

Key Words : Reconfigurable Antenna, Microstrip Antenna, 5G, 4G.