ABSTRACT

Indonesia is an archipelago country that has many rivers, forests and mountains as its geographical characteristics. This characteristics make some problems for installing Terrestrial Telecommunication technology due to sloping landform. The nano satellite technology is one kind of solution that can be used by archipelago country for imaging, as well as telecommunication.

Nano-satellite is a small satellite technology which orbiting LEO (Low Earth Orbit). It can be used as imaging technology for areas that hard to reach. Due to its small sized, the components attached to the satellite has to be small sized too. Therefore, the component for transmitting Electromagnetic wave has to be a small sized antenna.

Antenna that works at UHF band relatively large in dimension, therefore a miniaturization technique for antenna is required. The miniaturization technique that used in this final project are adding slits on the patch, using air gap, using FR-04 epoxy as its substrate and using dual feed for its ports. Antenna results obtained from this project had return loss < -12dB, VSWR about 1.53, bandwidth of 119 MHz and gain about 3.857 dBi.

Keywords : slits, dual feed, bandwidth, VSWR, gain, return loss.