

ABSTRACT

Meteorological satellite mission is to monitor the weather condition parameters such as clouds, surface temperature on land and sea, rainfall, level of humidity and many others including bad weather phenomena such as tropical storms and volcanic ash storms. Geo Kompsat-2A (GK-2A) is a geostationary satellite that orbits in GEO (Geosynchronous Orbit) at the altitude of 35,786 km above the earth surface and longitudinal of 128.2°E. GK-2A is equipped with a payload named Advanced Meteo Imager (AMI) which functions to monitor the earth. Hence, an antenna is needed as a means of receiving and transmitting from satellites to earth stations.

Antenna used in this Final Project is a parabolic antenna with linear polarized microstrip feed point with a working frequency of 1.7 GHz. A parabolic antenna was chosen because this antenna requires a high gain to be able to send electromagnetic waves with a very far communication distance between the earth station and the satellite, which is about 35.786 km. The final results acquired by the parabolic antenna is a linear polarized antenna with VSWR of 1,5 on 1692,14 MHz and with gain of 17,45 dB.

Keywords : Geo Kompsat-2A Satellite, Parabolic Reflector, and Microstrip Antenna.