

ABSTRACT

Inter-Satellite Link (ISL) is a technology that allows communication between one satellite to another satellite. ISL become one important part in the development of satellite networks. There are several examples of previous missions using multiple satellites with the aim of making the satellite constellation. One crucial part of the system of multiple satellite while in orbit is how can the system communicate with the others, because the information must be shared.

The ISL system required a device used for the transmission medium, an antenna. Designed antenna should have a circular polarization to overcome the effects of faraday rotation that will lead to polarization loss factor (PLF), because rotation ions contained in the atmosphere. In this final project will be designed a microstrip antenna proximity coupled with the addition of elements in the corners of radiating circular polarization to be generated that will be used on a micro-satellite communications.

Designed antenna is simulated with the help of the software simulator and realized with FR-4 Epoxy materials with a value $\epsilon_r = 4.3$ and $h = 1.6$ mm. Antenna working in 2.4 GHz band (S-Band).

Keywords: *Inter-Satellite Link (ISL), Microstrip Antenna, Micro Satellite*