

ABSTRACT

Antenna is an instrument that very important in the telecommunication world. Antenna matches the impedance between intrinsic impedance in propagation room with the characteristic impedance of electromagnetic radio frequency waveguide in radio frequency. One kind of antenna in the telecommunication system is yagi, it is ordinary used as television signal receiving antenna. Antenna yagi is an antenna which is composed by three elements, they are driven element, director element, and reflector element.

This final project intends to peg out and make a yagi antenna prototype that work in 1500 – 2500 MHz range frequency, it have 50 Ω of impedance, unidirectional radiation pattern, ellips polarization, and it have ≥ 9 dBi of gain.

In this final project, had been implemented a prototype of Yagi Dipole Magnetic Tie Unidirectional Antenna which has bandwidth specification 831.02 MHz or 38.19% that is limited by VSWR ≤ 1.5 , and antenna impedances are $49.49 - j8.65 \Omega$ in the 2000 MHz frequensi. This antenna has unidirectional radiation pattern, ellips polarization, and gain 10.288 dBi in the frequensi 2000 MHz.

With this prototype realization hoped can be useful for education and developed latter.