

ABSTRACT

Antenna is the one of the most important tool device in a radio communication. On radio communication, the electromagnetic waves is guided to channel of transmission, and the electromagnetic waves free space is guided in the air or in the empty space.

Newly hypothesis said that antenna is a thing that will match intrinsic impedance of propagation space on the characteristic impedance to intrinsic impedance of dielectric propagation space. This is based on Intrinsic impedance on the air is 120π ohm or 377 ohm and the impedance of channel transmission usually is 50 ohm.

This project aims to design and realization to the Design and Realization Traveling-Wave Antennas in Frequency 800 MHz - 950 MHz, $SWR \leq 1,5$, 50 Ω Terminal. Traveling wave antenna is an antenna that is based on two parallel wires of a certain diameter, where along the wire is composed of parallel dipoles, with $VSWR \leq 1.5$ with a unidirectional radiation pattern. This antenna built to fulfill the specifications frequency range 800 MHz - 950 MHz, the radiation pattern is unidirectional, linear polarization with a value ≥ 2.14 dBi gain, and use N connector 50 Ω N.

In this project, we must pay attention to the use of the feeder we shouldn't use the feeder in VSWR measurement (Network Analyzer) because it can make the loss.

Keyword : *antenna, frequency, traveling-wave.*