

ABSTRACT

Antenna is a very important peripheral in wireless technology, as well as voice communications technology and also data. Role of Antenna is important in growth of telecommunications specially telecommunications with wave radio. Broadband antenna is important for system of multi channel radio. As far as telecommunication development, was created some antennas model; with acquirement 3,14 dBi up to many more dBi which have broad band region in (300-3000) MHz. In this case antenna is a direct device that related to media of communications transmission is very needed it's usefulness. Antenna in common function as changer of wave guided overcome at channel of transmission become wave of free space conversely.

In this final project had been realized semi parabolic-grille antenna using tricola as an exciter which have technical specifications: bandwidth reach up to 2700 MHz at range (300-3000) MHz with limited VSWR $\leq 1,5$. The expected gain is ≥ 10 dBi, it has unidirectional radiation pattern and linear polarization.

To know performance of the antenna that created fit with the specification that has been measured, in this final project also doing some measurement and parameters trial. From measurement result, found each antenna parameters specification that are close to the technique specifications.

In realizing this antenna, had found bandwidth equal to 1480.50 MHz at 1519.50 MHz – 3000 MHz frequency with limited VSWR ≤ 1.5 . While, gain equal to 18.233 dBi at 1649.1 MHz frequency. Radiation pattern from measurement test is close to unidirectional characteristic and it's polarization in form of ellipse.

Keywords : VSWR, gain, bandwidth, polarization, semi parabolic, radiation pattern.