

ABSTRACT

The growth of communication technology in modern world is going faster and immeasurable, so a lot of new technology standard emerging progressively and more sophisticated. Antenna play an important role in telecommunication growth especially telecommunication with radio communication. On this case, antenna is a device directly connected with transmission media, which have some usefulness. Antenna have function to change the guided wave that passed through transmission channel to be free space wave vice versa.

In this final project had been realized unidirectional antenna using tricola as an exciter which have technical specifications: bandwidth reach up to 1000 MHz at range 2000 ± 500 MHz with limited $VSWR \leq 1,5$. The expected gain is ≥ 15 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 1251.69 MHz at 1496,65 MHz – 2748,34 MHz frequency with limited $VSWR \leq 1,5$. While, gain equal to 22,703 dBi at 2122,49 MHz frequency. Radiation pattern from measurement test is close to unidirectional characteristic and it's polarization in form of ellipse.