

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 plays 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 tricola omnidirectional antenna using exponentiel to get ultra wideband which have technical specifications: bandwidth reach up to 2700 MHz at range 300-3000 MHz with limited VSWR = 1,5. The expected gain is ± 6 dBi, it has omnidirectional radiation pattern and linear polarization.

To know performance of the antenna that created 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 three bandwidth equal to 1101,59 MHz at (1898,41–3000)MHz and at range (1480,2-1802,3)MHz, and (1088,6-1302,15) MHz with limited VSWR = 1,5. While, gain equal to 8,805 dBi at 2397,5 MHz frequency. Radiation pattern from measurement test is close to omnidirectional characteristic and it's polarization in form of ellipse.

Key words : ultra wideband antenna, exponentiel, tricola antenna