

ABSTRACT

Experimental research the generation of wide band antenna has proved hypothesis “ antenna is a matching impedance between free space and transmission line”. From that there are many travelling wave antenna without load has been retained, such as binomial parallel-twin lead-dwitunggal antenna.

The most important thing in analysis binomial parallel-twin lead-dwitunggal antenna is radiation pattern or course diagram, it's can be basic theory to make unidirectional or omnidirectional multibranch broadband antenna at $VSWR \leq 2,0$.

At this final project the software for radiation pattern simulation, and determine bandwidth, impedance, and gain of parallel-twin lead-dwitunggal antenna based on Matlab has been made, and the radiation pattern of parallel-twin lead-dwitunggal antenna has been analyze. The characteristic of parallel-twin lead-dwitunggal antenna which has been analyze from simulation data using software Matlab are broadside radiation pattern for $\ell < \lambda$ and endfire radiation pattern for $\ell \geq \lambda$, antenna gain influence by antenna length (ℓ) and spacing between lead (s), antenna impedance and bandwidth influence by the stage of binomial transformator.

Key word: Matlab software, dwitunggal antenna, twin lead