ABSTRACT

Experimental research the generation of broadband antenna has proved hypothesis “the antenna is matching impedance between the intrinsic propagation space and the characteristic impedance of the radio transmission”. The purpose to obtain the physical size antenna is small and broadband antenna. Thus, it will produce some of travelling wave antenna from line type in transverse wave without the expense.

The most important thing in analysis bicula antenna is radiation pattern or course diagram, so it’s can be basic theory to make unidirectional or omnidirectional multi branches broadband antenna at VSWR ≤ 1.5.

At this final assignment the software for radiation pattern simulation, and determine impedance, bandwidth, and gain of bicula antenna based on matlab has been made, and the radiation pattern of bicula antenna has been analyze. The characteristic of bicula antenna which has been analyze from simulation data using software matlab are unidirectional radiation pattern, 2700MHz for bandwidth, and gain is 7.34 dBi for space is 5.0 cm and antenna length is 11 cm. Antenna gain is influenced by antenna length (ℓ), and spacing between lead and ground plane (s), while antenna impedance is influenced by the antenna length to-n (cm) of triangle gradual transformer.

Key words: Matlab, bicula antenna, triangle gradual transformer