

ABSTRACT

Depend on first counselor's hypothesis that "Antenna is a transition construction of transmission line as matching intrinsic impedance of propagation space with a characteristic impedance of electromagnetic radio frequency waveguide" and "Omnidirectional antenna can be realized from some parallel arranging antenna and its value impedance is equal to total impedance each antenna and divided to that number of antennas" thus this experiment does to establish that hypothesis.

In this final project had been Realized Omni Octagonal-Tape Microwave antenna which is appropriate with technical drawing design also bandwidth specification reach up to 1500 MHz at range 1500 MHz – 3000 MHz with limited $SWR \leq 1.5$ and it has omnidirectional radiation pattern.

From measurement test, found each antenna parameters specification are close to the first specification. In realizing Omni Octagonal-Tape Microwave Antenna had found gain 6.68 dBi at frequency 2250 MHz with VSWR equal to 1.648. While, Bandwidth is multiband with optimal frequency bandwidth as 101 MHz at VSWR 1.5. Radiation pattern from measurement test is omnidirectional characteristic and its polarization close to linear (elips).