ABSTRACT

Wideband antenna is essential for economical channel of multichannel radio system, either broadcast, point to point, or cellular communication, antenna has an important role. Antenna is a transition form to match the intrinsic impedance of propagation space with transmission channel of impedance characteristic. Antenna has been developed rapidly, therefore, antenna with high quality and reasonable price is ubiquitous.

In this final project, a wide band antenna is designed which specified as 0.3 GHz-3.0 GHz Bidirectional Binomial Bicula Antenna with SWR ≤1.5, 50 Ω SMA terminal, and Monopole Feed. This antenna is based on two wires in strip line form with dielectric material inserted by using triangle monopole feed with 50 Ω SMA connector.

From the measurement, the result obtained is VSWR ≤ 1.492 in frequency of 621.9 MHz-2645.2 MHz. Antenna impedance which approaches the impedance of 50 Ohm terminal is 48.45∠-7.54□ Ω in the frequency of 2460 MHz, bidirectional radiation pattern, polarization is closed to linier (ellips), gain obtained is 8.395 dBi in 1800 MHz and 6.964 dBi in frequency of 2400 MHz.

Keywords : wide band, binomial, triangle monopole.