

ABSTRACT

Antenna is a transition form which used to match the intrinsic impedance of propagation space with characteristics impedance of transmission line. In this final project, wide band antenna was applied. It is Bidirectional Ditunggal Antenna Balanced On Chebyshev In Frekuensi 300MHz – 3000MHz Using Monotriangular Feed. This antenna was a dwitunggal antenna consisted of twins wire which were interpolated with seven dielectrics substance by using monotriangular 90° to produce wide band frequency.

From the result, which done of the measurement, commonly the result obtained which close from scheme specifications at frequency of (926,1-2651,8)MHz got VSWR all under 1,5. Antenna impedance, which close with terminal coaxial impedance 50 Ohm, was $(49,84 - j6,421)\Omega$ in 1600 MHz frequency, radiation pattern bidirectional, polarization close with linear (ellipse), obtained gain 11,39dBi at frequency of 1418,4 MHz and 9,85dBi at frequency of 1650MHz .

At this final project the software for radiation pattern simulation of bidireksional dwitunggal balanced on chebyshev and determine impedance, bandwidth and gain had been made using Matlab. From the result of simulation had been be analysis the characteristic of dwitunggal antenna, and then can be resulted value of impedance which be influenced by the stage of chebyshev transformator, and also gain of antenna influence antenna length (l) and spacing between lead (s).

Keyword : Bidireksional, Ditunggal. Chebyshev, Gain, Monotriangular, Matlab.