

## ABSTRACT

Antenna is a transition form that used to match the intrinsic impedance of propagation space with characteristics impedance of transmission line. Antenna can also be called as receiver and transmitter of electromagnetic energy. The Antenna was developed rapidly, so there are many products of high quality and cheap antenna,

In this final project, wide band antenna was applied. It is Two Strip Bicular Chebyshev – Biderctional Antenna 0,3 – 3,0 GHZ 50  $\Omega$  SMA Terminal, SWR  $\leq$  1,5, Linear Polarization, Gain  $\geq$  2,14 dBi, Without Ferrite. This antenna was a dwitunggal antenna consisted of twins wire which were interpolated with the dielectrics substance without ferrite by using triangle 90<sup>0</sup> monopole to produce wide band frequency. This antenna could work at frequency of 300 – 3000 MHz. That's why, it can be used for GSM 900 MHz, CDMA 800 MHz and 450 MHz, Wifi 2,4 GHz, PCS, and etc.

From the result, which done of the measurement, commonly the result obtained which close from scheme specifications at frequency of 412 MHz-2814 MHz got VSWR all under 1,8. Antenna impedance, which close with terminal coaxial impedance 50 Ohm, was (50,23-j3,975) $\Omega$  in 2100 MHz frequency, radiation pattern bidirectional, polarization close with linear (ellipse), obtained gain 3,2175dBi at frequency of 412 MHz, 6,185dBi at frequency of 1613 MHz , and 5,115dBi at frequency of 2814 MHz.

*Keyword : dwitunggal antenna, wide band, Chebyshev, triangle monopole .*