

## ABSTRACT

The development of wireless communication technology very fast and varied. This will cause the development of transmission equipment, antenna is one of them.

At this time more and more applications in the frequency band 0.3 GHz - 3.0 GHz, such as television, GSM, CDMA, and WiMAX. However, the antenna that used is for a one-antenna technology. There is a need an antenna that can cover everything, so an unloaded Rhombic antenna is created. Ferrite transformer is used to match antenna and coaxial impedance

In this final project have made an unloaded Rhombic antenna that supports several applications of information technology in the frequency band 0.3 GHz - 3.0GHz with a VSWR 2:1. In the realization, obtained the frequency range 827-2684 MHz with  $VSWR \leq 2$ . Gain from the measurement results is 5.677 dBi (1650 MHz). The radiation pattern is unidirectional and the polarization is ellipse.

Giving capacitor or making space between filament wire and coaxial can decrease reactance value so that the bandwidth became wider. To get a more accurate measurement results, used pencil beam antenna and anechoic chamber

*Keyword : Unloaded Rhombic, more applications*