ABSTRACT

Uncertain weather condition and extreme could cause disaster , so that required a technologies that could be knowledge of weather with quickly and correctly by the use of a that can help a man detect natural phenomena to predict weather .An instrument used use sending out radio wave propagation or more known as radar. One who required in radar system that is amplifier the power on waves rf to the power issued large enough

This Final task makes a high power amplifiers (HPA) whereby on the block diagram radar hpa is one part which is very much needed in a system radar on a system radar , hpa is a component a crucial to strengthen power which will continued to antennae then emitted by raising the level of signal power in entries on frequencies as specified until with the level of the power desired in its output. The methodology that was used is by using matching impedance single stub in the sight of the input and output using mikrostripline.

The final task is actually designed for the implementation and realized a HPA weather radar C-band who works at the frequency of 5,5-5,7 GHz .Some major consideration in design hpa of them stability (k) , efficiency , the gain , dc bias , a standing wave voltage ratio (VSWR) , power input and power output .Active component and used in designing hpa namely the MIC for 2 + .The design and simulation software HPA performed with advanced design system (ADS) .The results of the hpa simulation at the frequency of 5.6 GHz produce the gain as much as 27,695 dB , as much as 61 % efficiency , VSWR 1,016 input as much as , VSWR 1.008 output as much as .HPA measurement result at the frequency of 5.6 ghz produce the gain as much as 25,470 dB , VSWR 1,131 input as much as , vswr 1,522 output as much as , efficiency of 39,15 % and bandwidth 200 Mhz . ~

Keywords: Weather Radar, Power Amplifier, C-band