

ABSTRACT

Gain factor is very important in a power amplifier. Because the most functionable is as transmitted power. The substance and its parameter, selected by specification and availability of the substance which needed. So that its gotten a stable amplifier (single class).

The Purpose of this final project is to design and implementation of power amplifier based on microstrip at 2000 ± 500 MHz and use BFR 91-A transistor. The other specification are $Z_T: 50\Omega$ unbalance, Gain 5-10dB, and $VSWR \leq 1,5$.

From the analyze and BFR 91-A datasheet, that transistor BFR 91-A is conditioned stability transistor. While the passives component have been realized with discrete component, in this case are resistors and capacitors. To facilitate the realization, inductors passives component have been realized using microstrip. Selected substrate is RO4003C because its have a accurate physical data (datasheet RO4003C).

This realization result of a prototype Power Amplifier that can work at 1.830,11-2.177,08 MHz with Gain 6,264-8,519 dB. This power amplifier have bandwidth about 346,97 MHz (34,7%).