

ABSTRACT

Communication system important Power Amplifier to increase the signal power . Same with Microwave Communication is used to increase signal power also have to stable. There is Slotted line system at basic transmission Laboratory use signal generator with limited input. So, is needed Power Amplifier to increase signal power and to get stability is used Branch Line Coupler. This Amplifier is called Balance Amplifier.

At this final project is designed Balance Amplifier which consist of Power Amplifier and Branch Line Coupler, at 2 GHz with gain 10 dB. Design of Power Amplifier using NPN transistor (BFR 91A). DC bias using dikrit komponen, for matching impedance using FR4 PCB(Printed Circit Board).

Based on datashee BFR91 A unstable, so have to make circle stability. Permittivity (ϵ_r) of FR4 is 4.2 – 4,6 . At design experiment Power Amplifier and Branch Line Coupler is different block, therefore easy to measured and analysis.

Keyword : Power Amplifier, Balance Amplifier, stability, Slotted Line, Branch line Coupler, Permittivity.