

## ABSTRACT

The Purpose of this final project is to design and implementation of microstrip power amplifier 2,4 GHz-2,484GHz. Its consist of 2-section  $90^\circ$  hybrid and two BFR 92 transistorized amplifier circuit and microstrip. The microstrip is made from garbage with terminal impedance  $Z_T : 50$  unbalance.

The strip and the groundplane are made from wafer-tin-plate. The thickness of it is 0,4mm. The substrat is fiberglass of 1,4mm thick. The  $\epsilon_r$  of the substrat is measured from a sample-capasitor using network analyzer with the result is  $\epsilon_r = 7.758$

The power amplifier specification test result with network analyzer are  $f_c = 2394 \pm 22$  MHz, gain 6.996 dB. But the design specification are  $f_c = 2442 \pm 42$  MHz with minimum gain 10 dB. The test result is scaled into the design specification with scale factor 1.06.