ABSTRACT

In the present Wi-Fi device has become a basic requirement for internet access. One of the unlicensed frequency bands for high speed access is 5.8 GHZ, using Wi-Fi with IEEE 802.11n / ac standard. Wi-Fi working system is supported by existing devices on the side AP (Access Point) and client side, on each side each has a transmitter and receiver.

In this final project is to design band pass filter (BPF) for Wi-Fi application 5.8 GHZ . Band pass filter is designed using hairpin line method and using the response frequency Chebyshev with ripple 0.1 dB, Filter is designed using Roger 5880.

The result of measurement of BPF realization resulted BPF with return loss value: -17.252 dB, insertion loss: -5.117 dB and impedance: 53.664 + j42.196 Ohm. The measurement of those parameters approximates the BPF specification target for IEEE 802.11 n / ac.

Keywords : Wi-Fi , filter, bandpass, hairpin line, Chebyshev