

ABSTRACT

WiMAX (*Worldwide Interoperability for Microwave*) be present as solution for access restrictiveness in Wi-Fi. This technology that use OFDM can give data service with 70 Mbps speed in 50 km radius. Radius that quite make WiMAX as broadband telecommunication network replacing fixedline. Therefore to support WiMAX technology can't be separated with device called filter. In communication system, filter is a tool used for filter work frequency area that allow frequency disireable (passband) and muffle frequency undesireable (stopband), Filter can be realized with microstrip

In this final project designed and realized a filter BPF (Bandpass Filter) type for WiMAX network in 3,3 – 3,5 GHz band frequency. Filter that is realized using transmission canal that be microstrip canal. Microstrip canal is a transmission canal that consist from patch and groundplane that separated by substrate with certain characteristic material. Substrate that be used is epoxy with $\epsilon_r = 3,38$; thick (h) = 1,575 mm specification. Besides, filter made by trisection method.

Information about the working and prototype characteristic that has been getting from measurement using *Network Analyzer*. Having measurement can be got the result that middle frequency filter is 3,4 GHz, *insertion loss* = 2,571 and *VSWR* = 1,410

Key word : microstrip, *trisection*, WiMAX