

ABSTRACT

WiMAX (Worldwide Interoperability for Microwave Access) is a wireless technology , the IEEE 806.16 standard . Indonesia has a frequency band allocation of BWA (Broadband Wireless Access), ie 2.3 , 3.3 , 5.8 GHz . WiMAX systems work supported by the device on the side of the BTS (Base Transceiver Station) and the receiver side , on each side of each - each have transciever and receiver, bandpass filters are used on every device transciever and receiver available on the BTS and the receiver side .

In this study, designed and realized a band pass filter that works at a frequency of 3300 - 3400 MHz, bandpass filter has a bandwidth of 100 MHz, and has a 5 order. Designing bandpass filter using a coupled line compact, and use the Chebyshev frequency response that is expected to form the wide bandwidth generated. Dielectrics used is FR4 with permitifitas relative value of 4.3.

The results obtained in the bandpass filter is able to pass the frequency band 3300 MHz - 3400 MHz with a bandwidth of 100 MHz, has a VSWR of 1.163, - 2.991 dB insertion loss and return loss of -17.8 dB, the results are in accordance with defined specifications diantena microstrip rectangular with DGS, with 3300 MHz - 3400 MHz with a bandwidth of 100 MHz, has ≤ 1.5 VSWR, insertion loss ≤ -3 dB and return loss ≥ 10 dB.