

ABSTRACT

WiMAX is a standard for MAN technology which is made as solution of frequency spectrum that has been limited (known as 802.16 standard). Narrow range of frequency and larger bandwidth, makes WiMAX network really easy to interference with other network, so that, a filter device that has a good selectivity response for blocking signal from other frequency is needed. Because of that, filter which made in this final project operate at frequency of 2.3-2.4 GHz. This has bandwidth about 90 MHz.

The method that used for making this filter is selective Filters with single pair of transmission zeros method where filter response will have single pair of attenuation. This method will give response that has a good characteristics and appropriate with the specification needed. For getting this result, filter has to be optimized. Finally, filter that has been designed and fabricated operates at range frequency of 2.287-2.394 GHz, frequency center of 3.244 GHz and Bandwidth of 107 MHz with the loss of 3.9 dB. stop frequency that has been detected is in the frequency of 2.343 GHz with the attenuation of 40dB. It means that there is no interferece between WiMAX network and the network beside its, e.g. WiFi.

Key word :Filter, Microstrip, Selective filters with single pair of transmission zeros