ABSTRACT

Filtering frequency range required in transmision field could be reached by using an equipment called filter(functional unit). Filter is equipment which is used to filtering a frequency range, by passing frequency required(*pass band*) and blocking frequency unrequired(*stop band*).

In this final project, it will be designed and realized a low pass filter (LPF) Chebyshev prototype with cut off frequency at 2 GHz ang HPF Chebyshev prototype with *cut off* frequency at 1.5 GHz. Those will be realized by using microstrip line as transmision line

To evaluate the filter performance, it is done by using *Network Analyzer* to get information about its performance and characteristics, the parameter filter prototype wich evaluated are *frequency response, phasa, SWR, and return loss.*

From evaluation, it is got this filter characteristics is having different with filter design specification. It is showed on the difference on the *cut off* frequency at response frequency. For LPF wich has cut off frequency at 2,0 GHz in design, has *cut off* frequenc*y* at 1,826 GHz in realization, and for HPF wich has *cut off* frequency at 1.5 GHz has *cut off* frequency at 0,949GHz in realization.