ABTRACT

SIMULATION OF MICROSTRIP FILTER BUTTERWORTH AND CHEBYSEV DESIGN USING MATLAB

In a few time lately, filter is very important in instrumental and industry of RF and microwave communications. Do not like generally filter which we have learned previously, filter with the radio frequency and microwave designed using structured distribution element for some section of transmission channel.

Kinds of channel transmisi structure which cann be used to design a low pass, high pass, band pass, or band stop, like coaksial, microstrip, strip line, and waveguide coplanar. But, just microstrip and waveguide often used in integrated network making have radio frequency or microwave because its shape is planar, light and small size measure, and cost – effective price.

This project have purposed to make a software which can be used as simulation of design microstrip filter, as well as a means of assist the design, where designed using MATLAB. Then, the caracteristic filter will be compared to the theory to look the right of this simulator. All filter can be designed using this software, such as LPF, HPF, BPF, and BSF whith respon binomial pass band (flat Butterworth or maximally) and also Chebysev (equall ripple), with the attenuation maximum is 3 dB and attenuation minimum between 10 dB until 30 dB.

This software also provide the user interface as media to input the parameters that we need to design a filter, and also provide a graph of performance filter, so we can evaluation result the filter design.

Keyword : microstrip, Butterworth, Chebysev