ABSTRACT

Band pass filter is a device that passes signal with frequencies in the range of lower cut-off frequency to upper cut-off frequency and reject frequencies outside this range. At high frequency, microstrip line is usually used in band pass filter realization. Microstrip line consist of conductor strip and a groundplane,divided by dielectric medium with dielectric constant ε_r.

In this final project has been designed and realized a band pass filter microstrip based using interdigital method. It was constructed by *Roger* 4003 materials with the dielectric constant ε_r= 3.38, thickness of subtrate 0.813 mm, thickness copper plat 0.035, and loss tangent 0.0027. Measuring of filter with Network Analyzer intented on getting information about performance and prototype characteristic that made.

The result of BPF characteristic are: center frequency at 9.3648 GHz with bandwidth 214 MHz. *Insertion loss* at center frequency is 13.2 dB, VSWR $\leq$ 2.1 at operation range frequency.The result aren't closely fit with early design spesification.

Keywords : Band Pass Filter, Microstrip, Interdigital.