ABSTRACT

The presence of an filter at device is very important, because it serves as a used to pass certain frequency by allowing the frequency signal that is wanted (pass band) and attenuating the unwanted signal (stop band).

In this final project has been designed and realized a Interddigital bandpass filter based on microstrip with Epoxy substrate or FR-4 that has $\varepsilon_{r = 4.4}$ *and 1.65mm height. The shape of interdigital BPF attenuation characteristic was designed based on mathematical approximation Chebychev (equal ripple). Filter was tested using Network Analyzer. The measure result from BPF characteristic is : center frequency 2300 MHz with bandwidth 150 MHz (at 5.72 dB), insertion loss 4.822 dB, VSWR = 2.317* $\geq$ *2 (input) dan VSWR = 1.373* $\leq$ *2 (output), the change of phase with frequency is constant, and terminal impedance 47.899* Ω *+ j 13.169 Ω (input) dan 47.469 Ω + j 5.950 Ω (output).*

Key words: *microstrip, Interdigital bandpass filters, chebyshev*