ABSTRACT

Microwave slotted line in this final project is a slotted line that was constructed looked like coaxial cable. The slotted line was made of gips as a main ingredient for dielectric component. It uses gips that usually was used for treating patient. Reason of this final project is to make a simple telecomunication measurement tool that can be used in practicum activity on Basic transmision laboratory.

The Microwave slotted line was designed has a caracteristic impedance 50Ω, VSWR ≤ 1,5, and will be operated on range of frequency 800 Mhz – 1100Mhz. This range of frequency was decided because of the background of this final project as practicum module of Basic transmision laboratory. It is because of signal generator device whose by Basic transmision laboratory has range of frequency is 800 Mhz – 1100Mhz.

The VSWR measurement result of this final project that fulfilled the spesification is in range frequency 200 MHz and frequency 513,4 MHz 830 MHz – 850 MHz, 900 MHz – 920 MHz, 970 MHz – 990 MHz dan 1050 MHz – 1100 MHz for port 1. For port 2 in range frequency 200 MHz and frequency 513,4 MHz 830 MHz – 850 MHz, 890 MHz – 910 MHz, 970 MHz – 990 MHz, dan 1050 MHz – 1100 MHz. The caracteristic impedance measurement result of this final project that be measured closest to 50 Ω is measured impedance on frekuensi 980 MHz. That is 50,77 + j1,972 Ω for pada port 1 and 51,68 + j1,066 Ω for port 2. For 200 MHz is about 50,8-j1.3 at port 1 and 50,97-j1,7 at port 2. For 513.4 MHz is about 50,6-j2.8 at port 1 and 51,09-j2,3 at port 2. VSWR value that closest to one is vswr value at frequency 980 MHz. It is about 1,044 at port 1and 1,038 at port 2. Also at 200 MHz and at 513,4 MHz. For 200 MHz it is about1,08 at port 1and 1,09 at port 2. For 513.4 MHz is about 1,07 at port 1 and 1,09 at port 2. After troubleshooting, it was gotten standing wave pattern that fullfilled theory at 200 MHz.

Keyword: *Microwave Slotte Line*, VSWR, Karacteristic Impedance, Basic Transmission Laboratory