

### **ABSTRAC**

*Microwave slotted line or microwave slotted channel is a basic measuring tool that can be used in the frequency range 500 MHz - 3 GHz. With a slotted line, the standing wave pattern of the electric field in coaxial transmission lines can be determined more easily.*

*Slotted line system configuration consists of several blocks, there are signal generator, circulator, slotted line, and sliding voltmeter. Slotted line that will be made on this final project will be realized by using aluminum pipe with one conductor.*

*Technical specifications of the microwave slotted line in the final project there are  $50\Omega$  characteristic impedance, with aluminium pipe, working frequency 500MHz-3GHz and using lime dielectric material. The most important thing in making this slotted line is how to design the material in order to obtain the characteristic impedance of  $50\Omega$ .*

*The aim of this project are to produce a slotted line which can be used as study materials and also as a transmission line simulation in the Dasar Transmisi Laboratory, Telkom Institute of Technology. Slotted line that will be made is designed to improve the existing slotted. The method used in this design are material constant measurement and analysis.*

*Key words: Characteristic impedance, dielectric, slotted line.*