ABSTRACT

Telecommunications technologies that are being developed today is LTE technology, this technology offers a better quality of communication technologies before. One of the tools that are needed is antenna technology. MIMO antenna techniques is a technique that can improve the quality of the performance and capacity of LTE systems. This system uses multiantenna both the transmitter side and the receiver side.

In this final project will be designed and realized a MIMO Bowtie antenna for LTE at the center frequency of 2.3 GHz , the frequency range frekuensi 2,2647 GHz - 2,3336 GHz with achieving ≥ 2 dB gain and bandwidth up to 60 MHz .

From the results of simulation using CST software, available bandwidth is already qualified VSWR ≤ 1.5 and gain are around 1,02 dB. In the measurement results showed antenna VSWR ≤ 1.5 with a bandwidth of 60 MHz on the first antenna, the second antenna 60 MHz. Gain on the first antenna, 1.02 dBi on the second antenna,1 .02 dB. Bidirectional shaped radiation pattern obtained when the simulation and measurement. Elliptical polarization is obtained. From the design frequency, bandwidth and gain, then it can be used as an indoor antenna on LTE technology .

Keyword: AntennaMIMO, BOWTIE MICROSTRIP Antenna,LTE