ABSTRACT

Development of mobile wireless telecomunication technology today is more fast and various, one of the technology is WIMAX (world interoperability of microwave access). At WIMAX technology, antenna is very important as transformator from and to freespace. The antenna implemented nicely for mobile wireless communication such as WIMAX technology is the antenna that has small dimention and fill the frequency for mobile wireless.

At this final project had been designed circular ring antenna that combined with a circular microstrip antenna for dual band WIMAX aplication (2,5 GHz and 3,5 GHz). After the antenna had been designed, then the antenna was realized and then analysed for some diferent parameters such as VSWR, bandwidth, input impedance and radiation pattern.

The antenna that had been realized and measured, it has VSWR $\leq$ 1,5, but the resonant frequency turn to the left, it becomes smaller than the simulation result. The antenna has impedance 55,901 - j19,828 Ω at band frequency 2,5 GHz and 50,099 - j11,154 Ω at band frequency 3,5 GHz. Radiation pattern of this antenna is bidirectional.

Keywords : circular microstrip antenna, circular ring microstrip antenna, WIMAX