ABSTRACT

Microstrip antenna is one type of antenna that shaped a thin board and able to work at a very high frequency. This antenna has a varying patch pattern, one of that pattern is fractal sierpinski carpet. This form has a very compact structure and easy to manufactur and integrated with the circuit below. Otherwise, sierpinski carpet fractal antenna can also work on some frequency.

At this final project, it had done The Design And Implementation of Fractal Sierpinski Carpet Microstrip Antena For Frequency 900 MHz And 1800 Mhz with limited VSWR ≤ 2. Rationing on this antenna is using microstrp line rationing with stratified binomial $\lambda/4$ transformer. This designed antenna is intended to be used for GSM applications that have operating frequency allocation 900 MHz and 1800 MHz.

From the measurement result, for the value for VSWR ≤ 2 locate at frequency's of 684.70 MHz-1087.71 MHz and 1685.17 MHz - 2167.78 MHz. While the gain that obtained for 7,9325 dBi at the frequency 900 MHz and 6.415 dBi at the frequency with uni directional radiation pattern and polarization ellipses-shape.

Key Words : Microstrip, Fractal Sierpinski Carpet, GSM