

ABSTRACT

Improvement of new features needs, forced us to use more voltage and power. Using battery, magnetic coupling or solar cell can supply main load so the load can still operating and useful, are an usual things to be done but it has some limitation in use. In this final project, we are made a new methode of mobile telephone power supply by using microwave radiation around us. This methode is using microstrip antenna and then we connect it to the DC Power processing to give two polarity that is positive and negative voltage.

In this final project presented design, implementation and composition characteristic rectifier antenna to supply mobile telephone from microwave radiation. Every element of antenna has a rectifier with diode in the dimension (for Rectenna I), and than for Rectenna II has a own combination rectifier that separate from the antenna, outputs are connected serially (for Rectenna I array) to get conditional voltage and power at 40% efficiency.

Material constant that effected is permitivity constant (ϵ_r). Every materials have it and can be counted from calculating capacitance that get from materials measurement by using Network Analyzer. Beside that, we also get it from measuring rectifier antenna output power and voltage by using Spectrum Analyzer.