

## ABSTRACT

Today's technology develops so rapidly. Including the increasing number of devices that are wireless technologies like cell phones, Radio Frequency Identification (RFID), wireless embedded sensor, etc.. The techniques used to provide a ration voltage for these devices generally are using the battery, solar cell or a magnetic coupling. But of these rationing techniques still have limitations.

One technique that can be used as an alternative rationing is Rectenna. Rectenna is a technology that consists of Rectifier and Antenna, serves to convert electromagnetic waves into DC current source. With the rectenna, the radiation of electromagnetic waves emanating from the Access Point (AP) wi-fi or from Transiever Base Stations (BTS) cell phones can be used for a source voltage to other devices without using batteries.

At the end of this project was designed and realized a Rectenna consisting of antenna and broadband frequency rectifier circuit. Parameters measured at this rectenna testing is RF-DC conversion efficiency and sensitivity. RF-DC conversion of the testing was obtained for 46,99%. While the sensitivity is from -72dBm.

*(keywords : Antenna, Rectifier, DC, microwave)*