ABSTRACT

In harvesting energy. It is desirable to harvest the energy as much as possible. However the diode in rectifier will reflect some portion of energy, i.e. the harmonic signals which cause the energy to be harvested, the rectifier ouput is relatively small. This final project is proposed to design an antenna that has a dual function, i.e. capturing the signals while being able to suppress the harmonic signals from entering the rectifier. The second harmonic and third harmonic are being reviewed

The methods used in designing the harmonic suppression antenna are 9 circular slots of DGS technique, inset feed, and notch. The DGS technique has great impact in suppressing harmonic frequencies. Inset feed and notch are used to get better return loss curve and also suppress the harmonic frequencies.

The antenna performance in suppressing the harmonic signals will be displayed in the form of of the antenna return loss curve. The designed antenna can suppress the second and the third harmonic, so the return loss value at frequency 3,6 GHz and 5,4 GHz up to -1,2005 dB and -1,1595 dB.

Keywords: *RF energy harvesting, microstrip patch antenna, harmonic suppression.*