ABSTRACT

Along with the development of technology in the fields of electronics, a wide range of electronic devices arecreated with many kinds of models and usability to help humans in solving existing problems like in telecommunications fields. Of the various kinds of goods or electronic devices that we encounter today, will we find that almost all its parts are run by one-way power sourceas DC motor speed control, electric cars, battery chargers, electronic equipment, voltage regulator for nanosatellite, and industrial chemicals. In nanosatellite, power needed in each sub systems have a different value, to change input voltage from source become output voltage that suitable with each subsystem can use some components like IC (Integrated Circuit) which can be for the realization of switching regulator circuit by using a buck converter (step-down).

In this final project designed a switching regulator with input voltage from solar cell of 11 volts and battery of 7.4 volts. To decrease (step down) output voltage using IC voltage regulator, capacitor, inductor, diode, and resistor by using switching method.

Of testing and analysis has been performed, the resulting output voltage of each device is 3.3 volts and 5 volts. Theseresults are in accordance with the use of switching regulator buck converter method.

***Keywords**: DC to DC Converter, switching converter, step down, buck converter*