

ABSTRACT

Fadel Muhammad Affan, 2019. Design of Battery Charger Controller with Supercapacitor as Buffer

Supercapacitor is a new technology which is a development of conventional capacitors, Supercapacitors are developed for various types of electronic technology, one of its goal to support modern energy storage systems. Supercapacitors are used here specifically as buffers on batteries to minimize voltage and current fluctuations in case of partial shading if the system is used on vehicles that use solar panels that indirectly increase battery life-time in terms of voltage and current behaviour. For this reason, a charge controller system is designed that can control the input and output voltage and current on a battery, integrated with the supercapacitor where the charge controller has a voltage, current display so the voltage fluctuation can be reduce 60% with 1,67F and 80% with 16,67F Supercapacitor.

Keywords: Supercapacitor, buffer, battery, fluctuation, voltage, current.