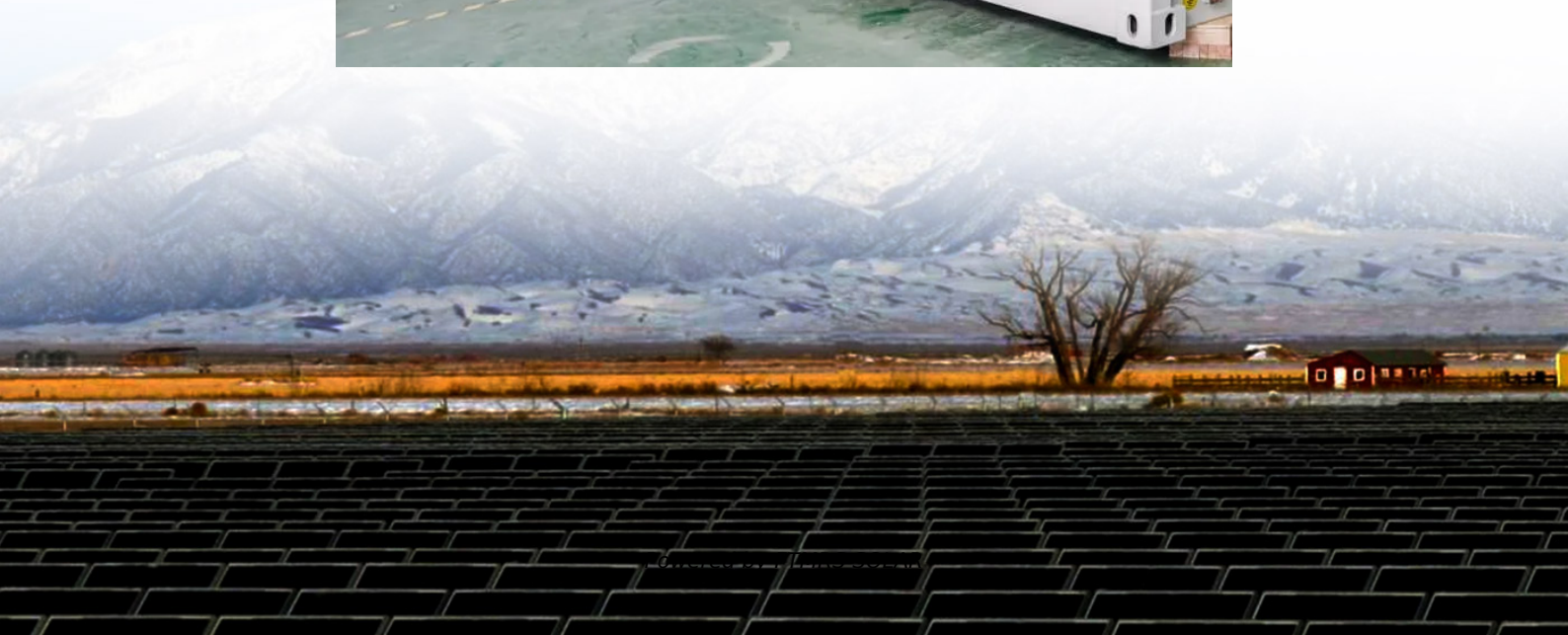


Charge the super farad capacitor with a few k resistor





Overview

How do you charge a super capacitor?

Most super capacitors (supercaps) can be discharged down to 0 V and recharged to their maximum voltage with the manufacturer recommended charge current. A simple voltage regulating LED driver with constant current, usually regulated by sensing a low side, series current sense resistor, then a voltage clamp can be used to charge a super capacitor.

How to charge a supercapacitor?

You can charge a supercapacitor by connecting its positive and negative terminal to the power supply's positive and negative end, respectively. Applying more voltage than the supercapacitor's limit can damage the component, so you should be cautious. In this case, ensure that the charging voltage exceeds 90% of the capacitor voltage rating.

Can a supercapacitor charge more than rated voltage?

A common rule of thumb is to limit the charging current to the supercapacitor's rated current. The charging voltage should not exceed the supercapacitor's rated voltage, to prevent overvoltage damage. A voltage regulation circuit is necessary.

Why does a super capacitor charge at a constant voltage?

Eventually, the super capacitor voltage, and therefore the charging circuit's operating efficiency, increases so the capacitor charges at the desired constant (fast or max) charge current, ICHG, until it reaches and remains at constant voltage (CV) regulation voltage, VREG.



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