



MODERNIZATION SOLAR

# Supercapacitor size specifications and models





## Overview

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What are the nuances of supercapacitor specifications?

Understanding the nuances of supercapacitor specifications is the key to maximizing these performance capabilities. There is some level of standardization for supercapacitor sizes, for example, a 10x30mm can supercapacitor is generally 10 Farads across the industry.

What is the power density of a supercapacitor?

The power density of a supercapacitor is the measure of the energy consumed by the load over time in the circuit. Generally, the power is defined using the below equation: (11)  $P = V^2 / 2 \cdot 3600 \cdot R$  Where P is the Power, V is the discharge voltage, and R is the equivalent series resistance.

What is the specific power of a supercapacitor?

Supercapacitors have a specific power 5 to 10 times greater than that of batteries. For example, while Li-ion batteries have a specific power of 1 - 3 kW/kg, the specific power of a typical supercapacitor is around 10 kW/kg.

What is a supercapacitor configuration?

This configuration aims to enhance energy and power density, as well as to achieve greater cycle life. Ultimately, the goal is to leverage the strengths of both types of electrodes to optimize the performance of the supercapacitor assembly.



## Supercapacitor size specifications and models



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The classical equivalent circuit model illustrated in figure 3 is the simplest of the supercapacitor models and can adequately describe the capacitors performance in slow discharge ...

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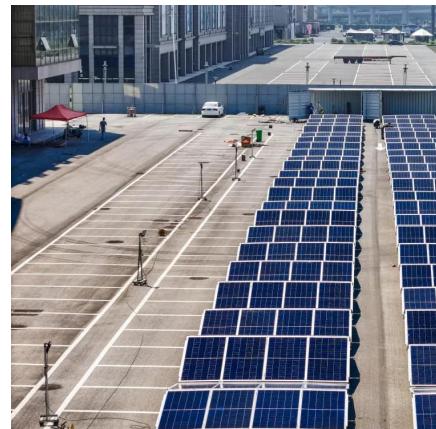
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