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Battery/Supercapacitor Emulator for Chargers Functionality Testing

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Abstract : In this paper, design of solid-state battery/super capacitor emulator based on dc-dc boost converter is described. The emulator mimics charging behavior of any storage device based on a predefined behavior set by the user. The device is operated by a two-level control structure: high-level emulating controller and low-level input voltage controller. Simulation and experimental results are shown to demonstrate the emulator operation.

Keywords: battery, charger, energy, storage, super capacitor

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