Battery/Supercapacitor Emulator for Chargers Functionality Testing

Authors : S. Farag, A. Kuperman

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.