

ABSTRACT

Systems and Methods for Management of Asymmetrical Multi-Tapped Battery Packs

This disclosure describes a battery pack that includes a plurality of asymmetrical banks, with different capacities and/or voltages, and multiple taps, coupled to the corresponding banks, to power electrical loads. The battery pack also comprise a balancing circuit and a battery management unit. The battery pack may regulate voltages among the banks and/or balance the states of charge among the asymmetrical banks, by moving charges among the banks, by controlling one or more converters. The battery pack monitors the status of its banks and communicate with a host system via the battery management unit. Based on the monitored information and/or communication, the battery management unit generates control signals to drive the one or more converters.

Figure 3