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(54) **SEMICONDUCTOR PRE-CHARGER MODULE IN BATTERY SYSTEM**

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(57) **ABSTRACT**

There is provided a battery system including: a controller; a main switch controlled by the controller to supply or cut off a voltage of a battery to a load; and a semiconductor pre-charger module including a semiconductor switch connected in parallel with the main switch and configured to supply or cut off the voltage of the battery to the load according to a control signal output from the controller, and a semiconductor switch driver configured to receive the control signal from the controller and output a single pulse signal for driving the semiconductor switch to turn on and off the semiconductor switch. Here, the semiconductor switch driver of the semiconductor pre-charger module includes an isolation element configured to electrically isolate the controller and the battery voltage, and the semiconductor switch of the semiconductor pre-charger module is a MOS-controlled thyristor (MCT).