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(54) A WIRELESS BATTERY CHARGING SYSTEM AND METHOD FOR BATTERY CHARGING AND HANDSHAKING

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(57)ABSTRACT

Provided is coordinated control and use of a transmitter circuit and a receiver circuit for wireless battery charging. with emphasis on using power switches in the receiver circuit not only for handshaking with the transmitter circuit for compatibility check and communication of information but also for charging mode control of the battery. It utilizes extra switching operations of power switches in the receiver circuit (such as those commonly used in the Qi standard for handshaking with the transmitter circuit) to charge the battery directly from the output of the rectifier with the constant-current mode or constant-voltage mode according to a threshold battery voltage without using an extra battery management circuit between the rectifier of the receiver circuit and the battery. Coordinated operations of the transmitter and receiver circuits can be achieved without using any extra wireless communication system for signal synchronization between the two circuits.

