

Study of Battery Charge Using Contactless Transmission System

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Abstract

Contactless power transmission system with the advantages of safety and convenience has been applied to daily supplies. However, general contactless power transmission charger cannot control the current cause there is no charge controller in secondary side and the severe limitation between primary and secondary sides of the battery charger cause difficulty to design. This study provides the charge controller with halfbridge inverter and E-Type core as coupling converter in primary side; A Zeta DC converter is utilized to achieve the outcome of charge with constant voltage and to increase the charging distance between primary and secondary sides. To verify the feasibility of contactless power transmission system, the study completes the contactless charger with the output power of 30 W. The result shows that the overall system efficiency is 57.8 % with 150 V/0.35 A input and 15.2 V/2 A output.

Key words : Charge controller; Contactless power transmission system;

Zeta converter