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2014 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2014
23 February 2015, Article number 7047434
2014 IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2014; Berjaya
Hotels and Resorts Kuala LumpurKuala Lumpur; Malaysia; 25 November 2014 through ; Category numberCFP14YAG-
ART; Code 112417

A battery charge balancing system with reducing inrush high spike current for electric vehicle (Conference Paper)

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Abstract

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A charge equalizer system is suggested for use in the future battery-packs employed in plug-in vehicles or house used in UPS-based supply systems deriving energy for supplementing the grid-connected main supply. Such applications are becoming common in Distributed Generation on spot from sources of solar (or wind), especially when grid connected power-supply is interrupted for some reason. The charge equalizer circuit is using resonant circuit, being operated by the switching frequency showing results the effect of when compared to the resonant frequency. The inrush current raises in the switching components of the resonant circuit due to inductor components. This inrush current may damage the switching component and increase the total system cost. In this work, flyback snubber circuit consisting of diode and capacitor has been used for reducing inrush high spike current. In addition, Zero current switching is achieved in this system for reducing the circuit losses. © 2014 IEEE.

Author keywords

BCB Flyback snubber Inrush current Resonant

Funding details

Funding number	Funding sponsor	Acronym
	Ministry of Higher Education	

ISBN: 978-147998041-3

Source Type: Conference Proceeding

Original language: English

DOI: 10.1109/ICSIMA.2014.7047434

Document Type: Conference Paper

Sponsors:

Publisher: Institute of Electrical and Electronics Engineers Inc.

References (15)

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