



Search

Return to Search Results

My Tools ▾

Search History

Marked List 10



Save to EndNote online



4 of 10

Bidirectional Flyback Inverter with Low Output Voltage THD

By: [Andreescu, GD](#) (Andreescu, Gheorghe-Daniel)^[1]; [Comea, O](#) (Comea, Octavian)^[2]; [Muntean, N](#) (Muntean, Nicolae)^[2]; [Guran, E](#) (Guran, Emil)^[2]

Book Group Author(s): [IEEE](#)

[View ResearcherID and ORCID](#)

2015 IEEE 10TH JUBILEE INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI)

Pages: 95-99

Published: 2015

Conference

Conference: 10th Jubilee IEEE International Symposium on Applied Computational Intelligence and Informatics

Location: Timisoara, ROMANIA

Date: MAY 21-23, 2015

Abstract

This paper develops a single-phase voltage source inverter mainly containing a high frequency flyback bidirectional DC-DC converter - as a previous stage, and a full-bridge module. The flyback bidirectional converter generates a rectified sinusoidal voltage waveform across the output capacitor. The full bridge transistors switch two times in one AC period in order to transform the output capacitor voltage in an AC waveform. The converter ensures also galvanic insulation between input and output, and a possible high conversion voltage ratio given by transformer. A state-space averaging model for the proposed converter was used for stability analysis and to design a tracking controller for output capacitor voltage. Digital simulations validate inverter proper operations and a low output voltage THD value.

Keywords

KeyWords Plus: [CONVERTER](#)

Author Information

Reprint Address: Andreescu, GD (reprint author)

Politehn Univ Timisoara, Automat & Appl Informat Dept, Timisoara, Romania.

Addresses:

[1] Politehn Univ Timisoara, Automat & Appl Informat Dept, Timisoara, Romania

[2] Politehn Univ Timisoara, Dept Elect Engrn, Timisoara, Romania

E-mail Addresses: daniel.andreescu@upt.ro; octavian.comea@upt.ro; nicolae.muntean@upt.ro; emil.guran@upt.ro

Publisher

IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA

Categories / Classification

Research Areas: Computer Science; Engineering

Web of Science Categories: Computer Science, Artificial Intelligence; Computer Science, Theory & Methods; Engineering, Electrical & Electronic

Document Information

Document Type: Proceedings Paper

Language: English

Citation Network

0 Times Cited

14 Cited References

[View Related Records](#)

[View Citation Map](#)

[Create Citation Alert](#)

(data from Web of Science™ Core Collection)

All Times Cited Counts

0 in All Databases

0 in Web of Science Core Collection

0 in BIOSIS Citation Index

0 in Chinese Science Citation Database

0 in Data Citation Index

0 in Russian Science Citation Index

0 in SciELO Citation Index

Usage Count

Last 180 Days: 0

Since 2013: 0

[Learn more](#)

This record is from:
Web of Science™ Core Collection

Suggest a correction

If you would like to improve the quality of the data in this record, please [suggest a correction](#).

Accession Number: WOS:000380397800019
ISBN: 978-1-4799-9911-8

Other Information

IDS Number: BF1HP
Cited References in Web of Science Core Collection: 14
Times Cited in Web of Science Core Collection: 0

