

عنوان مقاله:

A Novel Non-Isolated Single Switch Step-Up DC-DC Converter with Positive Output Polarity

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خلاصه مقاله:

In this paper, a new topology of high step up DC-DC converter has been proposed. Employing of a single switch is one of brilliant features of mentioned topology. The voltage ratio of proposed converter is a modified form of voltage ratio in conventional boost and buck-boost one. Moreover, high voltage ratio of proposed converter has been made up with only one switch and three diodes. Operational details, steady state analysis and mathematical relations of efficiency have been done in Continuous Conduction Mode (CCM). In addition, mentioned topology has created same ground for input source and load due to its positive output polarity. Furthermore, proposed topology has been compared with other typologies in literature. Simulation engine which has been used in this study was PLECS. At the .end, simulation results have been reported to prove the correctness of theoretical relations of mentioned study

کلمات کلیدی:

High gain DC-DC converter, non-isolated DC-DC converter, positive output voltage, single switch

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