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Half Bridge Flyback Converter for Photovoltaic (PV) System

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Abstract:This paper presents a comparative analysis of Half Bridge Flyback Converter for photovoltaic (PV) system using Renewable Energy. The proposed converter is the Integration of Half Bridge and Flyback Converter, it provides a compact single-unit solution with maximized energy harvest for photovoltaic (PV) system. The proposed converter consists of High frequency transformer ,which provides a Galvanic isolation , High step up conversion and Zero voltage switching. The proposed converter is simulated in open and closed loop using PI,PID and FUZZY controller. The simulation results are verified experimentally and the output of the proposed converter is free from ripples and has regulated output voltage.

Keywords: Half Bridge Flyback (HBF) Converter, Photovoltaic (PV) system ,Renewable Energy, Galvanic isolation, High step up conversion, Zero voltage switching.

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