

عنوان مقاله:

A Novel High Voltage Gain and Low Voltage Stress DC-DC Boost Converter for Photovoltaic Applications

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خلاصه مقاله:

Photovoltaic (PV) panels are rely on environmental condition such as irradiation or temperature so, they are required to an interface boost converter. Non-isolated DC-DC boost converters have lower volume, lower costs and lower power dissipation compare to isolated converters. Therefore, a non-isolated boost converter is used in this paper. The proposed structure is controlled by Pulsed Width Modulation (PWM) technique to increase input voltage level. Main advantages of the proposed converter include low input current ripples, low voltage stress on semiconductor switches, high efficiency and low conduction losses. Moreover, maximum power is achieved from PV panels. Based on .mentioned benefits along with simulation and experimental results, this boost converter is desired for PV applications

کلمات کلیدی:

non-isolated DC-DC boost converter, Photovoltaic systems, high voltage gain, Low Voltage Stress, high efficiency

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