

## عنوان مقاله:

Improved Symmetric Switched-Inductor/Capacitor Quasi Z-Source Inverter with Ability Uplifted-Boost

## محل انتشار:

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## نویسندگان:

Alireza Karbalaei - Department of electrical and electronics engineering, shiraz university and technology, Iran

Mohammad Mardaneh - Shiraz University of Technology, Electrical Machines Expert

## خلاصه مقاله:

This paper proposes a topology of switched-inductor/capacitor quasi z-source inverter (SIC-qZSI), which based on the classic qZSI. This topology is symmetric and has a high boost factor in the low duty cycle and high modulation index. Also, the low voltage stress on the capacitors and the low current ripple of the inductors and the input source are other advantages. In addition, the current of all inductors and the input current are equal, and the voltage across all the inductors, as well as the voltage across all diodes, are equal. This inverter has continuous current in the input source, and has common ground between the input voltage source and the inverter bridge. In order to express the features of the proposed inverter, it is compared experimentally in similar conditions relative to the Enhances Boost quasi Z-Source inverter (EB-qZSI). The performance of the proposed topology is confirmed with MATLAB/SIMULINK software and the simulation results and obtained relations are accredited by using a prototype of the proposed inverter.

## کلمات کلیدی:

Boost factor, impedance network, quasi Z-source inverter (q-ZSI), voltage stress

## لینک ثابت مقاله در پایگاه سیویلیکا:

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