Single-phase dual-Buck inverter

What is a dual Buck inverter?
The dual-buck inverter is a unidirectional topology; more information about its features can be found in Ref. . The APD circuit is placed between the dual-buck inverter and the PV source.

What is a single-stage single-phase dual Buck structured buck-boost inverter?
In this paper, a single-stage single -phase dual buck structured buck-boost inverter is presented. The single-phase inverter is studied and analyzed various features like high reliability, low output ac voltage distortion and high efficiency.

Are dual-Buck structured single-stage buck-boost inverters reliable?
Abstract-- In this paper,dual-buck structured single-stage,single-phase buck-boost inverters that use power MOSFETs are presented. The proposed inverters require fewer number of switches,and achieve inverting action through single stage operation. They have no shoot-through problem; therefore,high system reliabilitycan be obtained.

Does a single-phase dual-Buck PV inverter reduce DC-link voltage pulsating?
To verify the proposed scheme,both simulations and experiments on a 2.1kW single-phase single-stage dual-buck PV inverter are conducted. The results confirm that the proposed method not only reduces the dc-link voltage pulsatingbut also improves the MPPT accuracy.

Abstract--This work proposes a novel single-phase trans-formerless dual buck-based grid-connected inverter. The proposal features only two power semiconductors in the ...

In this paper, a dual-buck, single-phase, transformerless inverter is proposed to provide a common ground with high reliability. The proposed inverter is employed with a simple unipolar ...

In this paper, a single-phase dual-mode four-switch Buck-Boost transformerless PV inverter is proposed, analyzed and verified. By directly connecting the grid neutral point to ...

In this paper, a novel six-switch dual-output inverter is proposed. The three-switch leg in the proposed inverter is implemented with the dual-buck structure. Hence, it retains all ...

Conventional dual buck and boost inverter with a single input dc source (DBBI-SIDS) has the satisfactory performance of high efficiency, low total capacitance, and no ...

A family of single-phase single-stage high-gain dual-buck split-source inverters (SSIs) is proposed that provide high reliability by eliminating shoot-through issues, increase switching frequency ...

This paper proposes a single-phase single-stage dual-buck photovoltaic (PV) inverter with an active power decoupling (APD) strategy. Using this strategy, the dc-link ...

The APD strategy can be universally applied in single-stage PV inverters regardless of the topology connected to the utility grid. To verify the proposed scheme, both simulations ...

This paper proposes a synchronous reference frame (SRF) control strategy for a single-phase, three-level, dual-buck photovoltaic (PV) inverter. The ...

This paper proposes a single-phase dual-mode four-switch Buck-Boost transformerless PV inverter with inherent ground leakage current elimination. Via directly ...

In this paper, a single-stage single -phase dual buck structured buck-boost inverter is presented. The single-phase inverter is studied and analyzed various features like ...

This article presents two unique common-ground high-reliability dual-buck single-phase inverters suitable for photovoltaic applications. The proposed inverters directly connect ...

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