

Generation of high frequency components of inverter





Overview

What is a high frequency variable load inverter architecture?

This thesis presents a high frequency variable load inverter architecture along with a physical prototype and efficiency optimizing controller. The inverter architecture consists of two constituent inverters, one connected directly through the load and the other connected through an impedance converter, which acts as a lossless power combiner.

What is a high frequency inverter?

I. INTRODUCTION Many applications – ranging from industrial plasma generation to wireless power transfer – require inverters (or power amplifiers) that can deliver power at high frequency (HF, 3-30 MHz).

Can inverters provide efficient delivery of high-frequency power into variable load impedances?

VI. CONCLUSION This paper introduces an inverter architecture and associated control approach for providing efficient delivery of high-frequency power into variable load impedances while maintaining resistive/inductive loading of the constituent inverters for ZVS soft switching.

Can a high-frequency variable load inverter directly drive widely variable loads?

Typically a tunable matching network is used to transform the varying load into a efficiency and impairing transient response. This thesis presents the design, physical prototype, controller, and experimental results of a high-frequency variable load inverter architecture (referred to as HFVLI) that can directly drive widely variable loads.



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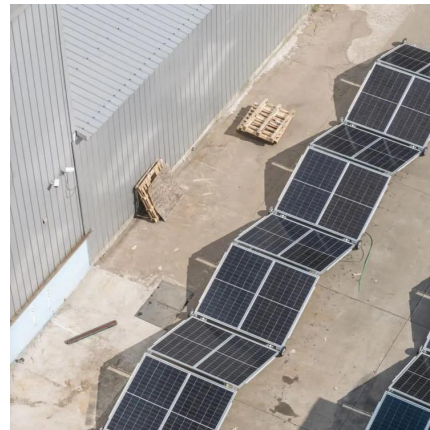


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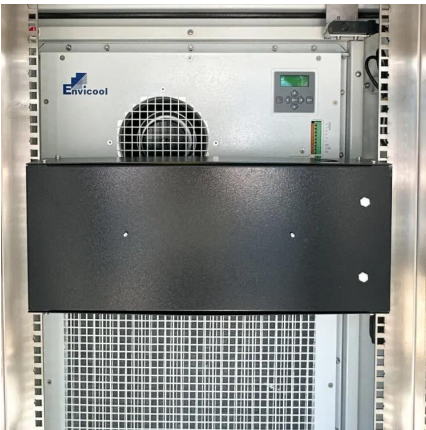
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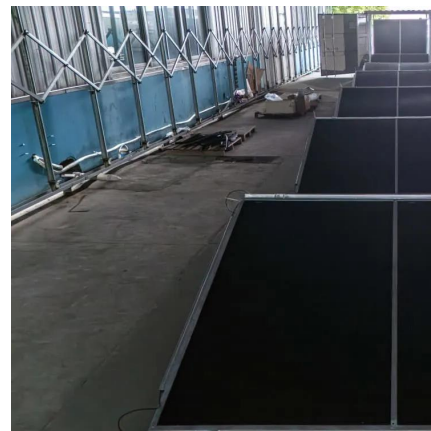


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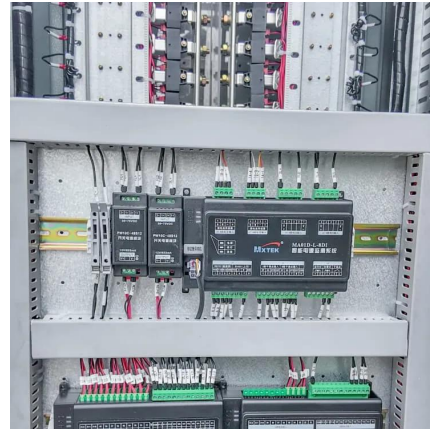
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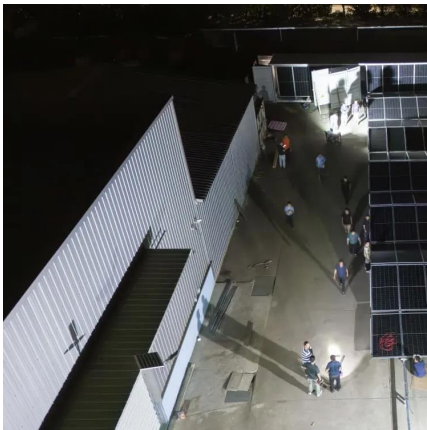
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