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Inverter high frequency rectification





Overview

How does a resonant inverter work?

The resonant inverter accepts a dc input voltage, and generates very high frequency (VHF) ac, which is processed through the transformation stage to produce different ac voltage and current levels. The resonant rectifier then converts the trans-formed ac power back to dc.

Do homogeneous rectifiers convert high-frequency electromagnetic energy into direct current?

Here, we present homogeneous rectifiers, converting high-frequency electromagnetic energy into direct current, based on low-energy Dirac fermions of topological semimetal-NiTe₂, with state-of-the-art efficiency already in the first implementation.

What is a high-frequency rectifier?

A high-frequency rectifier, converting oscillating electromagnetic field to a direct current, is a pivotal constituent for sensor and detector technologies deployed in applications, such as telecommunications, bioassays, remote sensing, and quality control, to name a few 22.

How MHz LLC converter based inverter improve SR turn-on delay loss?

With the proposed hybrid modulation method and resonant tank optimization process, the MHz LLC converter based inverter is designed and tested. To further improve the SR turn- on delay loss, an external diode is added in parallel with GaN SR and the forward recovery effect of the diode can impact its loss saving performance.



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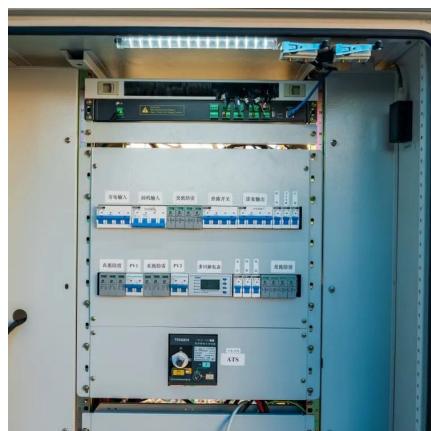
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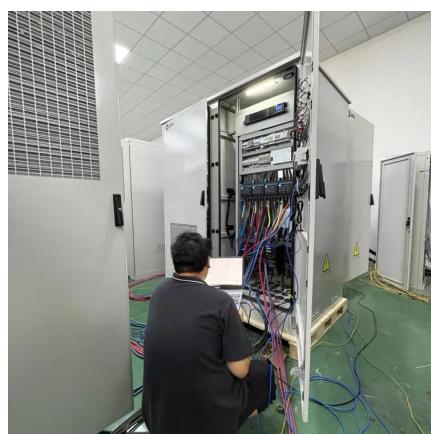
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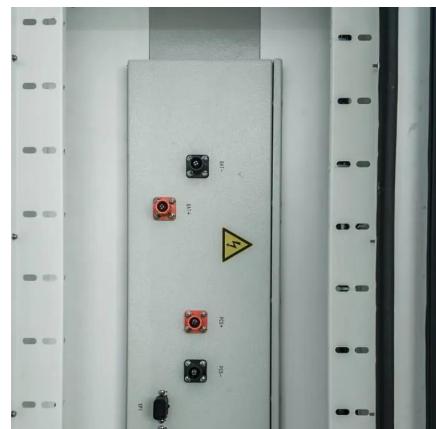
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