

The role of high frequency resonance inverter





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.

What is a high-frequency inverter circuit?

A high-frequency inverter circuit is a combination of a low-frequency power inverter circuit and RF power amplifier circuit, so, drawing on various types of switching mode power amplifiers in RF circuits to be applied to the WPT system is a very sensible choice.

How does a high frequency resonant switch work?

It operates with a much reduced voltage Φ stress across the switch (slightly over twice the input voltage) and breaks the tight link between semiconductor capacitance, output power, and frequency found in many high frequency resonant designs.

What are the features of a high frequency inverter?

to operation at very high frequencies and to rapid on/off control. Features of this inverter topology include low semiconductor voltage stress, small passive energy storage requirements, fast dynamic response, and good design flexibility. The structure and operation of the proposed topology are described, and a design procedure is introduced. Exp



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