

This paper presents the design, simulation, and experimental validation of a load-independent class E inverter tailored for biomedical implant applications.

In this work, a graphical tool is introduced based on a class E inverter in-depth analysis. The presented design method is generic and can be applied to any set of output power (or input voltage), switching ...

Abstract--This paper presents a unified framework for the modeling, analysis, and design of load-independent Class E and Class EF inverters and rectifiers.

Class E inverters are widely used in very high-frequency power converters due to their ease of driving, their high efficiency, and their low component count.

To simultaneously resolve both load sensitivity and high voltage stress--two persistent challenges in Class E design--this paper proposes a novel clamped load-independent Class E inverter.

This paper introduces a design methodology that enables rapid synthesis of class E inverters that maintain ZVS operation over a wide range of resistive loads. We also show how the proposed ...

We describe some recent research advances and implementations of class-E rec-tifiers and dc-to-dc converters at ultrahigh frequency (UHF) and beyond.

Our paper presents a high-efficiency CC class-E inverter with the LAC that includes an external Q factor to achieve the target output without relying on an LC element implementation.

Based on these facts, this paper mainly intends to understand the comparative performances of the class E and selected enhanced class E inverters in various configurations ...

This document summarizes the design, modeling, simulation, and experimental testing of a 323W, 1MHz Class E inverter with 97% efficiency. The inverter uses a new generation CoolMOS transistor and ...

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