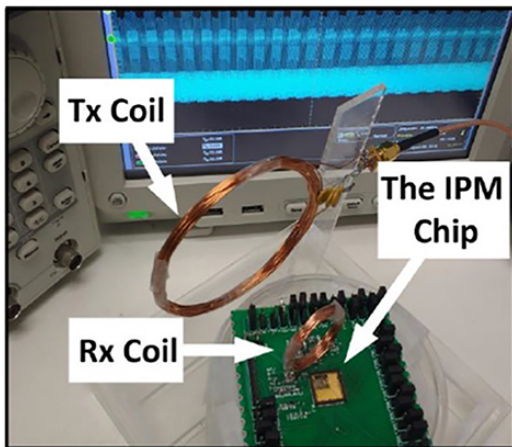


Current-Based Resonant Power Delivery for Extended-Range Pwr Transfer

ID# 2016-4443



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Example power transfer setup

Technology Summary

This invention comprises a new current-based resonant power delivery technique that switches the series-connected Rx LC-tank of the inductive link in a unique fashion to effectively use it as a current source. Therefore, an optimal AC-DC voltage conversion with high voltage conversion efficiency (greater than one) can be achieved in the Rx side by only adding a single switch to the conventional inductive link. This helps to extend the range of inductive power transmission, particularly for applications that involve low-power consumption in the Rx side, or require a large load voltage.

Application & Market Utility

Inductive power transmission has extensively been used over the past decades for contactless energy transfer to power a device or recharge its battery. It has covered a wide range of applications with different power requirements from μW to kW. Some examples include powering radio frequency identification (RFID) tags and implantable medical devices (IMDs), and recharging batteries of handheld mobile devices and electric vehicles.

Next Steps

Technology is protected by a U.S. patent. The research team seeks licensing opportunities.

TECHNOLOGY READINESS LEVEL

4-7

Seeking

Investment | Licensing | Research

Keywords

- Inductive links
- wireless power transmission
- near field
- power management
- power transmission efficiency

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