

Title (en)

MINIATURIZED HIGHLY-EFFICIENT DESIGNS FOR NEAR-FIELD POWER TRANSFER SYSTEM

Title (de)

MINIATURISIERTE HOCHEFFIZIENTE ENTWÜRFE FÜR EIN NAHFELD-ENERGIEÜBERTRAGUNGSSYSTEM

Title (fr)

CONCEPTIONS MINIATURISÉES EXTRÊMEMENT EFFICACES POUR SYSTÈME DE TRANSFERT D'ÉNERGIE EN CHAMP PROCHE

Publication

EP 3497774 A4 20190814 (EN)

Application

EP 17840412 A 20170814

Priority

- US 201662374578 P 20160812
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- US 2017046800 W 20170814

Abstract (en)

[origin: WO2018032009A1] Disclosed herein are embodiments of near-field power transfer systems that include antenna elements that are constructed or printed close to each other in a meandered arrangement. In a meandered arrangement, neighboring antenna elements conduct currents that flow in opposite directions. This current flow entirely or almost entirely cancels out any far field RF radiation generated by the antennas or otherwise generated by the electromagnetic effects of the current flow. In other words, for a first current flowing in a first path, there may be a second current flowing in a second cancellation path, which cancels the far field radiation produced by the first current flowing in the first path. Therefore, there may be no radiation of power to the far field. Such cancellation, however, may not occur in a near-field active zone, where the transfer of power may occur between the transmitter and the receiver. Furthermore, a ground plane may block the leakage of power from the back of a transmitter and/or a receiver.

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

- [XYI] WO 9508125 A1 19950323 - TERADYNE INC [US]
- [Y] WO 2007070571 A2 20070621 - UNIV KANSAS [US], et al
- [A] WO 9831070 A1 19980716 - CHECKPOINT SYSTEMS INC [US]
- [A] EP 2747195 A1 20140625 - STICHTING IMEC NEDERLAND [NL]
- See references of WO 2018032009A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

US 2017046800 W 20170814; CN 201780062480 A 20170814; EP 17840412 A 20170814; JP 2019507785 A 20170814; KR 20197007062 A 20170814