

24/08/2021

Dear Prof. Jung-Ik Ha
Editor-in-Chief of
Journal of Power Electronics

We would like to submit the enclosed manuscript entitled “Generalized Model of Modular Two Element Compensated IPT Systems with Common DC-Bus” which we wish to be considered for publication in Journal of Power Electronics. The paper is an original piece of work and it has not been published in whole or in-part previously, and not under consideration for publication elsewhere.

The paper presents a generalized mathematical model for power distribution of modular multi-Rx inductive power transfer systems with common DC-Bus. The mathematical model is established to four different topologies: receiver series/parallel compensations with series/parallel module connections. In addition to power distribution, the topologies are compared in terms of fault tolerance, semiconductor stress, efficiency and size of the resonant capacitor. The paper presents topology selection suggestions for multi-Rx systems with common DC-Bus by considering power distribution and these features for future works. The proposed mathematical models are verified with simulation and experimental results. A good agreement with the mathematical, simulation, and experimental results was achieved.

The paper is composed according to Journal of Power Electronics submission format. No conflict of interest exists in the submission of this manuscript, and manuscript is approved by all authors for publication.

I appreciate your consideration of our manuscript, and I look forward to receiving comments from the reviewers.

Kind regards,
Ozan Keysan