

An Efficient Wireless Power Transfer Methodology for Electric Vehicle Battery Charging

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Abstract: Usually, electric vehicle systems are supported various modules that ought to make sure the high power and stability of the vehicle on the track. The bulk of those components are linked to the charging mechanism. During this regard, dynamic wireless power transfer is a practical method to resolve electric vehicle range anxiety and reduce the price of onboard batteries. The foremost problem of EV industry is, Battery charging facility, However battery charging problem is still a challenging task for EV industry. In this article, A classical series L-C compensation methodology is proposed. The proposed method is verified by using MATLAB based simulations for pure resistive load. Finally, The results of proposed system is obtained by using MATLAB based simulations rated for 18.702kHz Resonance (switching) frequency. We obtained 48.09V DC output voltage for EV battery charging and 0.48A current range. Therefore, we can transfer A full dynamic power is 23.08W.

Keywords: DC/HFAC Inverter, EV Battery, Wireless Power Transmission System, Series Compensation

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