



Independent University, Bangladesh

Design and Implementation of an Immittance Conversion Circuit for Dynamic Loads

An undergraduate senior project submitted by

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in consideration of the partial fulfillment of the requirements for the degree of

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DECLARATION

I do hereby solemnly declare that the research work presented in this undergraduate thesis has been carried out by me and has not been previously submitted to any other University / Institute / Organization for an academic qualification / certificate / diploma or degree.

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Date: April 15, 2012

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ABSTRACT

The characteristics of a proposed π -CLCL immittance converter, which is a combination of the typical π - and T-type configurations, for constant current output applications are evaluated. The input-output characteristics and efficiency characteristics are analyzed experimentally. The experimental results are compared to the simulation results of the proposed immittance converter. It is observed that the experimental results agree with those of the simulation ones, and confirm that the π -CLCL configuration is more efficient than the typical π - and T-type immittance converters while maintaining a nearly constant output current and thus applicable for dynamic loads.

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