Abstract

This paper discusses the new approach of control mechanism for dc to dc converters. Using this technique, fast response and steady-state output can be achieved. Model predictive controller will predict the future output by suitable training of the present and past occurrences. Conventional PI controllers will get the output at a lesser response and vast deviation from the output. In this algorithm, single input and single output is developed to describe the boost converter. The control objectives of voltage tracking are used by weighted cost function. The proposed algorithm of Model Predictive Controller is done by simulation using MATLAB. Comparative analysis and results of MPC and PI control are observed.

Reference


**Index Terms**

Computer Science  
Control Systems

**Key words**

Model Predictive Controller  
Boost converter  
PI control