

**MODELING AND CONTROL OF DC/DC BUCK CONVERTER
USING THE AVERAGING TECHNIQUE WITH
PROPORTIONAL INTEGRAL DERIVATIVE (PID) CONTROLLER**

This thesis is presented in partial fulfillment for the award of the
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ABSTRACT

This paper presents an Averaging technique to obtain the small signal model of Buck converter with proportional integral derivative (PID) controller. The model is used for compensator design to regulate the output voltage. The proportional integral derivative (PID) controller is employed in designing the closed-loop buck converter. The output results is compare between small signal model of Buck converter with proportional integral derivative (PID) controller and small signal model of Buck converter without proportional integral derivative (PID) controller. Their principle characteristics are illustrated using Matlab and the Simulink block diagram along with the experimental result.

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