

# **Performance Analysis of a Switched-Mode Flyback DC-DC Converter with Influence of Non-Ideal Switching Devices**

## **Abstract**

This paper approach for the performance analysis of a dc-dc flyback converter for low power application. Modelling is done with parasitic components for non-ideal flyback converter. Ac and dc input characteristic of the flyback converter are analysed and investigated by PSIM simulations and calculations. The influence of parasitic effects in converter components on input characteristic is studied in continuous conduction mode (CCM). The results of the calculation based on analytical formula and averaged models are in a good accordance with PSIM simulations and calculation. The goal of this project is to compare an ideal and non-ideal condition in order to see the effect on the efficiency and ability of the converter to control the output voltage. The converter is expected to be operated in continuous conduction mode at all time and focus application is low power application that less than 100W.