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Performance Analysis of Unipolar SPWM Inverter: Resistive load and Inductive load

Abstract

This paper presents the performance analysis of the Unipolar SPWM Inverter for the resistive and inductive load testing. The common criteria reported in various technical papers where the resistive load will produce a unity power factor correction and lagging power factor behaviour for inductive load. This paper is to demonstrate the performance of both loads that are tested to the single phase Unipolar SPWM inverter under the modulation ratio of 0.8. The performances will be covered in term of the waveform behavior and THDv performance. The project are carried out through the simulation using PSIM software and real implementation to the real hardware. The selection of filter for this paper is the low pass passive LC filter.