Abstract

The Space Vector Pulse Width Modulation (SVPWM) is used for three phase bridge Inverter to produce AC output voltage of desired magnitude and frequency. The purpose of controller is to produce regulated output voltage with low distortion under varying load conditions. A triangular carrier based space vector pulse width modulation is developed in MATLAB using Xilinx block set and executed in Field Programmable Gate Array (FPGA). The gate switching pulses required for 3-Ø bridge inverter are generated through FPGA controller which are further amplified to turn on IGBT switches by the use of driver circuit.

References

Implementation of Triangular Carrier based Space Vector Modulation for 3Ø Bridge Inverter using FPGA

- Xilinx System Generator V2. 1 Reference Guide.
- Computation, X. (2010). Getting started with the Xilinx Virtex-6 FPGA MI-605 evaluation Kit.
Keywords
Field programmable gate arrays (FPGA) triangular carrier based space vector pulse width modulation current controlled voltage source inverter (CC-VSI)