Circuit Simulation Project

https://esim.fossee.in/circuit-simulation-project

Title: Design and Analysis of Single Phase Matrix Converter

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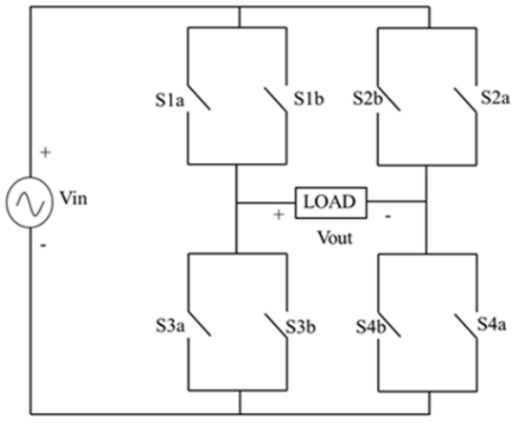
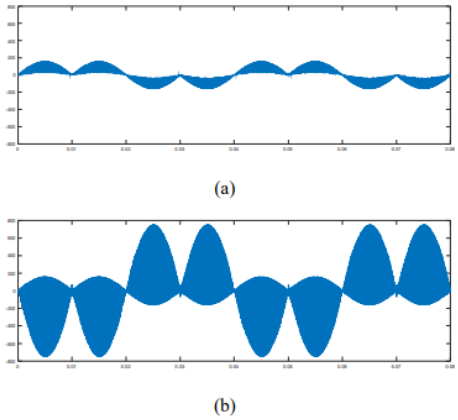
Description: Matrix converter applications in the power electronics field eliminate the common practice of reactive power storage in the system. Due to its universal converter applicability, the Single Phase Matrix Converter (SPMC) is used as a frequency changer, an inverter, a rectifier, and a chopper. The SPMC topology consists of four bidirectional switches that allow reverse blocking and bidirectional current flow. This paper presents the implementation of SPMC as an AC/AC converter with passive load conditions.

Circuit Diagram:



Input and Output waveform:



. Simulation results of SPMC at 25 Hz, (a) R & (b) RL load.

Reference paper: Simulation of AC/AC Converter using Single Phase Matrix Converter for Wave Energy Converter

Author(s): Jariyani Burhanudin, Ahmad Shukri Abu Hasim, Asnor Mazuan Ishak, Syed Mohd, Akram Abdul Azid ,

Reference: (PDF) Simulation of AC/ AC Converter using Single Phase Matrix Converter for Wave Energy Converter