

Abstract

This work describes the operation of the fault tolerant inverter. The consequences of the switch defect in a traditional voltage inverter are analyzed. The studied failures are the short-circuit defect and the opening defect. The consequences of transistor defect leading to a final state of short-circuit or open circuit are discussed. It was proposed to implement a topology of fault-tolerant inverter with four-arms. The use of this inverter allows the increase in the availability of the converter. All simulations were done with the PSIM 7.1.2 software